A History of the Scientific Collections of the Leeds Philosophical and Literary Society's Museum in the Nineteenth Century: Acquiring, Interpreting & Presenting the Natural World in the English Industrial City

Mark Steadman

Submitted in accordance with the requirements for the degree of Doctor of Philosophy

The University of Leeds School of Philosophy, Religion and History of Science 2019 The candidate confirms that the work submitted is his own and that appropriate credit has been given where reference has been made to the work of others.

This copy has been supplied on the understanding that it is copyright material and that no quotation from the thesis may be published without proper acknowledgement.

© 2019 The University of Leeds and Mark John Steadman

The right of to be identified as Author of this work has been asserted by in accordance with the Copyright, Designs and Patents Act 1988.

I ought to be thy Adam; but I am rather the fallen angel

Frankenstein, or, The Modern Prometheus by Mary Wollstonecraft Shelley, 1818.

Acknowledgements

Firstly I wish to express my gratitude to my supervisors, Dr Jon Topham and Professor Greg Radick whose judgement, experience, amity and care made the project possible and my journey both enlightening and enjoyable. I want to also express my debt of gratitude to Professor Graeme Gooday who has continued to extend to me a high level of pastoral care and intellectual support. I am exceedingly grateful for the time, experience and enthusiasm of Clare Brown (Curator of Natural Sciences at Leeds City Museum) who introduced me to the remarkable primary sources at the museum, alongside whom I would also like to thank Antonia Lovelace, Camilla Nichol, Jen Kaines from Leeds City Museum and former Curator of Natural Sciences at Leeds, Adrian Norris, for their part in the project and for making me feel at home. I wish also to thank the Leeds Philosophical and Literary Society and The Leeds Assessment Centre at the University of Leeds for their support, without which the project would have been impossible. I would like to dedicate the thesis to Michèle Steadman whose support, patience and latitude throughout the project became vital to its completion.

The Project would not have been possible without the support of the Arts and Humanities Research Council's Collaborative Doctoral Award.

Abstract

Nineteenth-century Britain witnessed an unparalleled growth of geographically discrete philosophical societies and purpose-built museums, above all, in the rapidly industrialising towns of Northern England. Making use of previously unexamined material connected to the Leeds Philosophical and Literary Society, its purpose-built Philosophical Hall, and the operation of the museum therein, this thesis offers an expansive analysis of an important nineteenth-century museum, its parent philosophical society, and their ever changing relationship with a growing industrial township and the emerging natural sciences. The thesis proceeds in three parts. Part One examines the emergence of the Society in 1818-1819, Philosophical Hall, and the Museum in 1821. Part Two focuses on museum practice in the nineteenth century, and explores three main themes: collecting practices, curatorial practices and public-facing activities such as the displays, exhibitions, events, publicity and the lecture programme. Part Three explores the eventual transition from private society to civic institution by looking at a long period of self-reappraisal undertaken by Society and Museum from the 1860s. The changing institutional horizon of the town and its impact on collecting patterns, advancements within the practice of the natural sciences and shifting sensibilities of the public are all considered, ultimately providing the contextual backdrop to the final transferral of the Society's museum to Leeds Corporation in 1921.

Table of Contents

Acknowledgments	4
Abstract	5
Table of Contents	6
List of Tables	11
List of Illustrations	11
Appendix	12
Abbreviations	14

Introduction	 5
minouucion	

Part 1: Fostering Natural Knowledge in Late Georgian Leeds ..47

- 1.1 Introduction
- 1.2 The Founders
- 1.3 Membership
- 1.4 The Spirit of Improvement: Philosophical Hall and Town Planning
- 1.5 The Museum within a Constitutional Framework
- 1.6 The Opening of Philosophical Hall: Introducing Lectures and Essays
- 1.7 A Note on the No Politics, No Religion Rule

- 1.8 The Museum within Philosophical Hall
- 1.9 Conclusion

Part 2: Museum Practice in the Industrial Township76

Chapter 2: Acquiring and Preserving the Natural World77

- 2.1 Introduction
- 2.2 Introducing the Collections
- 2.3 Collecting Networks: Local Collecting
- 2.4 National Collecting: The Irish Elk
- 2.5 International Collecting: Acquiring the Exotic, the Rare, the Extinct
- 2.6 Conclusion

Chapter 3: Curatorial Ideology and Practice118

- 3.1 Introduction
- 3.2 John Atkinson, Curator 1820-1828: The Making of a Museum
- 3.3 Henry Denny, Curator 1828-1871: Curatorial Production between Worlds
- 3.4 Louis Miall, Curator 1871-1891: Professionalization and the Natural History Curator
- 3.5 Henry Crowther, Curator 1893-1928: The Path towards a Public Museum
- 3.6 Conclusion

Chapter 4: The Presentation of the Natural World150

- 4.1 Introduction
- 4.2 Exhibitions
- 4.3 Philosophical Hall Downstairs: An Overflowing Miscellany
- 4.4 The Changing Use of the Smaller Rooms Downstairs
- 4.5 The Stairs Area
- 4.6 The Society's Library
- 4.7 Philosophical Hall Upstairs: Displays of Natural Science and the 1862 Extension
- 4.8 The Large Zoological Room
- 4.9 The Main Floor of the Large Zoology Room
- 4.10 The Wall-Mounted Cases of the Large Zoology Room
- 4.11 The Conversaziones
- 4.12 Who went to the Conversaziones?
- 4.13 A Typical Conversazione
- 4.14 The Last Conversaziones
- 4.15 Public Lectures
- 4.16 The Development of the Lecturing Programme across the Nineteenth Century
- 4.17 Themes and Speakers

4.18 Our Man in the Field: Museum Correspondence in the Press

4.19 Conclusion

Part 3: From Private to Civic: Public Museums' Long Dawn .. 205

Chapter 5:	Self-reflection and Reappraisal in the Society and Museum,	
1860-1904		.209

- 5.1 Introduction
- 5.2 A Note on the Public
- 5.3 Precursors to the Period of Reappraisal

5.4 From Township to City: The Impact of an Evolving Industrial Town on Its Institutions

5.5 Emerging Discontent

5.6 The Yorkshire College of Science and Its Impact on the Society

- 5.7 Committee on Means of Extending the Usefulness of the Society
- 5.8 Conclusion

Chapter 6: Transfer and the Creation of a Civic Museum243

- 6.1 Introduction
- 6.2 The Society's Committee as an Agent of Change
- 6.3 The Yorkshire College's Takeover Bid
- 6.4 The Town Fights Back and the Bid for a Municipal Museum
- 6.5 Poor Public Identity and the Decline of Collecting Practices

6.6 Plotting Territorial Changes to the Scientific Landscape in Leeds

6.7 Conclusion

Conclusion	273
List of Tables	290
Appendix	291
I Photographic material including plan of Philosophical Hall and the	
locations from which the photographic material was taken	
Bibliography	301

List of Tables

Tabl	e	Page
1.1	Religious, political and occupational status of founders who became	
Prop	rietary Members	290
1.2	Political alliances among LPLS members as a percentage	290
5.1	Visitors to the Museum as a percentage of the town's population	212

List of Illustrations

Figu	re Page
1.0	The advert for the plot that would become Philosophical Hall, including
	details of the owners
2.0	Report of the LPLS for the sessions 1824-25
2.1	Photograph of the Irish Elk in the Large Zoology Room
2.2	A detail of the frontispiece to Richardson's 1846 edition of Facts
	concerning the Natural History of the Gigantic Irish Deer99
3.0	Catalogue for Crowther's lantern slide lectures. Circa 1900146
4.0	Egyptian Mummy (right) and case, circa 1915155
4.1	Philosophical Hall as it would have looked in 1821156
4.2	Areas taken up by Museum displays (hatched), circa 1854157
4.3	Anthropology on display in the entrance room circa 1900158
4.4	Lord Savile's collection of antiquities as displayed inside room D (circa
	1900)
4.5	Development of the staircase area161
4.6	The stairs area after the 1861-1862 extension161
4.7	Photographs taken circa 1890 from inside the Library depicting the
	preparation for the displays of cave deposit material163
4.8	Photographic record made circa 1920, of a set of moose antlers donated by
	John Heaton in 1862

4.9	Thylacine and kangaroo specimens	165
4.10	Upstairs, pre 1861-1822 extension (left) and post 1861-2	
	extension (right)	166
4.11	Photograph of the Large Zoology Room from its gallery	168
4.12	The Bird Room from its gallery, circa 1900	168
4.13	Photographed at the top of the stairs looking towards the North Geologi	cal
	room circa 1915	170
4.14	Entering the Large Zoological Room from the North Geology Room	171
4.15	Photograph of the Tiger donated by William Gott in 1862	172
4.16	The Large Zoological Room (room (z) in Figure 4.10)	173
4.17	Corner wall-mounted display case including specimens of Bison and W	ild
	boar	175
4.18	The displays of marsupial	177
4.19	The displays of primate	177
4.20	The tattooed heads of three Maori Chiefs	178
4.21	The Thrush's Protest	202

Appendix

Philosophical	Hall	downstairs
---------------	------	------------

- Philosophical Hall upstairs
- Photograph a: Several busts of the founders photographed in the Library
- Photograph b: One of only two photographs found of the Lecture Hall
- Photograph c: The Schools Scheme in practice, in the Large Zoology Room
- Photograph d: The Schools Scheme in practice, in the South Geological Room
- Photograph e: The Cave Bear, in the Large Zoology Room
- Photograph f: The collection of stone implements. At the top of the stairs.
- Photograph g: The Large Zoology Room
- Photograph h: The North geology Room's displays of cave remains and cup and circle casts above
- Photograph i: Lias and Oolite fossils. Entrance to the North Geological Room
- Photograph j: Display of the anatomy of feathers in the Bird Room

- Photograph k: View across the gallery to the West wall in the Large Zoology Room
- Photograph 1: From the top of the stairs across to the South Geological Room's doorway
- Photograph m: Display of bird bills in the Bird Room
- Photograph n: The Museum's Moa, displayed in the Bird Room
- Photograph o: The collections of Devonian and Carboniferous fossils in the South Geological Room
- Photograph p: The Large Zoology Room
- Photograph q: Photograph of the back and side of the Irish Elk
- Photograph r: The Bird Room, looking North with the Moa to the direct right
- Photograph s: View across the gallery to the East wall in the Large Zoology Room

Abbreviations

The use of LPLS instead of Leeds Philosophical and Literary Society is found from Chapter 1 where, given the frequency of use, the full title would inhibit the flow of the narrative. Otherwise the use of abbreviations, such as that for the British Association for the Advancement of Science (BAAS) and the Museums Association (MA), are introduced in the body of the text where appropriate.

Introduction

Many hundreds of the skeletons and stuffed animals that populate the modern storerooms of Leeds Museums and Galleries have survived from the original Museum that was established by the Leeds Philosophical and Literary Society in 1819. Such historical natural history collections can appear daunting and at times impenetrable for researchers, perhaps especially so for historians. The difficulties associated with making sense of the multitudes of drawers of apparently identical beetles and butterflies are only compounded by the generations of ledgers, card indexes and databases that accompany them. To these we must add how developments within taxonomy, cladistics, and nomenclature over the decades also create a legacy of different storage configurations, identification numbers, labels, associated boxes and cabinets. Important holotype specimens can be removed from among large reference collections. Preserved and used elsewhere—sometimes in different institutions—such specimens can become disconnected from their original collections.

However, it is precisely by taking notice of the complex and contingent processes by which the collections have come down to us that we can best make sense of them. Three questions loom especially large in relation to that. How were objects acquired by the museum over the years? How were they interpreted by the succeeding generations of curators? How were they presented to the museum's changing audiences? The central aim of this dissertation is to show how the asking of such questions, and the working out of their answers, can shed new light not just on the history of the Leeds museum's collection but on Victorian science generally, including its meanings past and present.

The subject of this thesis is the history of the Leeds museum's collections, starting in the first decades of the nineteenth century and concluding at the start of the twentieth century, when the Society gifted the Museum, building and collections to the Leeds Corporation. Its central focus is on the scientific collections themselves. The thesis looks at how those collections came into being, were used and changed over time. I interpret the collection and the Museum itself as a product of human agency and as such have paid particular attention to the human dimension. This social focus—how the collections were products of human interactions, networks and discourses—has been crucial in fostering an understanding of the social dimension to the sciences in and beyond the town, as reflected through the Museum's activities across this timeframe.¹ This social agency created a continual process of construction and reconstruction at play among the collections and that such contingencies represented a cardinal force within the making of museum form and function.

Despite an increasingly sophisticated and critical body of work surrounding museums, book-length analyses of the trajectory of single museums are rare.² Rarer still are detailed studies of natural history institutions, their collections, and their relevance to the development of the natural sciences, despite greater interest in these areas from within the history of science.³ This dissertation, then, aims to go some way towards addressing these gaps. The museum at the heart of this dissertation was one established and run by a philosophical society.

During the research for the thesis it became clear that the activities of the Museum could not be separated from those of the Society. For this reason the following analysis is necessarily also one of that society. Moreover, revealing the proximity between a museum and its parent society has proved useful for revealing more of the public dimensions of the museum noted above. The portrayal of the Leeds Philosophical and Literary Society that emerges thus places the dissertation among a very few in-depth studies of such societies.⁴

At the heart of this thesis lies a desire to present my findings and reflections around a remarkable set of primary sources. At the University of Leeds Special Collections are the complete extant records of the Leeds Philosophical and Literary Society, especially as they relate to the life of its museum. Alongside these are the similarly extensive 'Collectors Files' and photographic collections

¹ It is adequate at this stage to point to the 'material-turn' of Domanska (2006).

² For examples of those that do exist see Stearn (1981), Follet (1978) and MacDonald (2002).

³ See Jordanova and Porter (eds) (1979), Allen (1976), Bowler and Morus (2005), Kohler (2006), and Johnson (2012).

⁴ For an exception see Elliott (2009).

that detail the Museum's collecting activities and back-of-house life that are preserved at Leeds City Museums and, of course, the many hundreds of objects and collections that have survived from that first Museum. So, included in the research for this thesis have been the printed catalogues of the collections as well as the various reports by the Society. Added to this has been the wider world of correspondence between curators, donors and collectors that has emerged from the collectors files. I have made use of the remarkable contemporaneous glassplate magic-lantern slide collections at Leeds City Museum as well the hundreds of responses that were recorded in the local and national press at the time. Alongside this I have used the objects and collections themselves, their nomenclature, taxonomies, labels and boxes.

This close attention to the primary sources has been essential for reaching the findings that I have reached, even though they have not always led to a cohesive narrative. What emerges is the degree to which disagreement and contestation between individuals and groups alongside the impact of ad hoc and unplanned contingencies were powerful motive forces that shaped practices at Leeds. The thesis reveals conditions of practice and patterns of growth that evolved as a result of the day-to-day, ad hoc demands that the museum faced from the largely unexpected voluntary public responses the museum triggered—the museum's contingencies. A narrative has emerged that interrupts theories and ideas about power and class that have for too long dominated debates within museum historiography.

In the following section 'Understanding Civic Museums' I review these perspectives and show that, while theories grounded in notions of power might be acceptable as a loose metanarrative or overlay, the findings from Leeds indicate discrete socially orientated phenomena that largely stand in contradiction to those prevailing perspectives. Here I highlight the work of those authors with whom my findings agree and whose approach and methods have been helpful.

After this follows the section 'The Complexities of the Collection' in which I offer an overview of my analysis of the collections in the thesis alongside

prevailing historiographic theories. While I argue that the complexity of the Leeds case problematizes the influence of Pearcean collecting theories, I use this opportunity to consider the findings from authors with whom my own findings agree more.

The penultimate section, 'The Spaces and Publics of the Museum' introduces current historiographic debates around museum architecture and space as well their publics. As with the previous sections this gives me the opportunity to discuss the work of authors that represent a revision of dominant historiographic theories while comparing and contrasting such conclusions with my own. The final section to the chapter 'Thesis Overview' provides a summary of each chapter.

Understanding Civic Museums

Since the 1990s Foucauldian museology has done much to establish the ways in which museums exert power over newly forming urban groups. This post-modern paradigm represents museums as having been used to facilitate a shift from 'sovereign power' to what was termed 'governmental power' over the late eighteenth and early nineteenth centuries. Articulated as an apparatus for exerting power, museums have been central to commentaries around legitimising urban identities and elites, creating new forms of professional authority, of policing the working classes and creating modernity.⁵

Superficially, the Museum at Leeds functioned as the prevailing Foucauldian paradigm would predict. The Museum was instrumental in shaping social, cultural and civic identities across Leeds. In accordance with the paradigm it did this via the museum space—its architectonics, the building inside and out, the displays and display cases and the interpretation and presentation of collections as part of its ongoing creation and presentation of knowledge. In addition it was part of a flowering of regional museums that can be seen as a response to

⁵ For an overview of the residing paradigm see Bennett (1995) and Hooper-Greenhill, (1992). For recent critical overviews see the introductions to both Alberti (2009), and Hill (2005), and more generally see Hill (2011b) and (2013).

industrialisation and subsequent urbanisation in the provinces of Britain during the eighteenth and nineteenth-centuries.

However I argue that a Foucauldian interpretation of the Leeds Museum along the lines sketched out above, is sustainable and possible only as a meta-narrative or loose declarative overlay which stands largely in contradiction to the existential and temporal realities—the preoccupations, tensions and contests that my research has revealed from among the primary sources. In short, while the general Foucauldian historiography is sustainable as a meta-narrative, the particulars are more troublesome and the degree to which it is used as a dominant ideology can lead to more misunderstanding than understanding.

In particular, I contend that Foucauldian historiography attributes characteristics to the exertion of power within museums that the primary sources indicate were not possible or effective at the time. The framing of museum agency as 'power' and as being part of a modernist agenda has superimposed a level of intention and conscious purpose onto that agency that overstates the realities. This puts new light on who had power within the museums. What the Leeds case demonstrates is that such institutions struggled to gain control or simply could not gain the type of control necessary to apply any predominant strategy or ideology. Certainly, any such power appears uncontrollable and unpredictable. This thesis also reveals how constitutional structures and conditions would have made it difficult to impose any such strategic control of power. At Leeds, the role of the curator was such that the chain of responsibilities relied on their expertise, affording the curator a form of sovereignty. This may help broaden our understanding of museums, their agency and how museums did or did not legitimise urban identities and elites, police the working classes, create new forms of professional authority and become a bed stone for modernity.

Emerging from the thesis is the idea that, historically, museums have not behaved as we expected them to behave. As much as historians have attempted to prescribe a role for institutions in the direction of reform, progress and cultural cohesion, the specifics of their existence have largely problematized that project and contradicted the socio-cultural roles assumed of them. Jack Morrell's 1985 paper 'Wissenschaft in Worstedopolis' offers an apt historiographic caution when looking at cultural activities in the industrialising provinces. Morrell demonstrated how the study of specific cultural contexts (the Bradford case) can prove to be at odds with the findings produced by similar studies elsewhere and can contradict and weaken the claims of a dominant concept.⁶

In short, I question not so much whether the Foucauldian paradigm of power is applicable for the Leeds case, but rather the degree to which it is significant. The history that is offered here provides an account of an institution that makes use of differing biographies and addresses the complexities and contradictions of that phenomenon in relation to the contingencies that shaped it. In so doing it moves away from a Foucauldian search for ideological coherence.

Recent developments in the historiography of museums have begun to address these issues, specifically problematizing the long-dominant Foucauldian museum historiography. Of particular note is the recent work of Samuel J. M. M. Alberti, who has sought to redefine and expand the approaches used in the current literature. His *Nature and Culture* (2009) makes use of different disciplines and their historiographies and establishes new methodological approaches to researching museums, especially natural history university museums.⁷ Especially valuable are Alberti's use of a multiple biographical approach involving biographies not only of many of the numerous people involved but also of museum objects.

Additionally, Kate Hill's analysis of municipal museums has been vital. Her problematization of Foucauldian historiography has helped contextualise many of the contradictions between the dominant historiographic ideology and the evidence at Leeds.⁸ In particular Hill's *Culture and Class in English Public Museums* reveals similar forces at play to those at Leeds—of contestation and discrete socially orientated forces that shaped much more of museums form and function than existing histories suggest.

⁶ See Morrell (1985) in juxtaposition to Thackray (1974).

⁷ Alberti (2009) is perhaps the most relevant historiographic survey for the field of natural history museums.

⁸ For an overview of such a critique see Hill (2005):1-20.

Alongside these two, Suzanne Macleod's observations on the architectural history of museums and her analysis of the Walker Art Gallery in Liverpool during the late nineteenth century requires highlighting and has been important to this thesis.⁹ It is noteworthy that MacLeod's analysis of the historiography of museum architecture draws similar attention to the need for comprehensive revisions as Kate Hill's analysis does for the history of museums. Each utilises more conceptually complex and plural ways of studying museums similar to those utilised by Samuel Alberti.¹⁰

These authors have undertaken research in scope and approach not dissimilar to my own. They have looked at different institutions, in different locations across different periods and with differing themes in mind but have importantly drawn largely similar conclusions to each other as well as those emerging from this thesis. Each demonstrates contestation and discrete social agency playing a greater role in museum form and function than had previously been understood. Each seeks to broaden the historiographic narratives and offer new ways of studying museums.

Alberti's work is significant not least because of his interest in natural history university museums as well as the author's synthesis of synchronic analysis with broader diachronic contextualisation. Alongside these must be considered Simon Naylor's biographies of place and the analysis of nineteenth-century natural history societies.¹¹ Also noteworthy are the substantial analyses and descriptions of the broader international phenomena available for scholars in academic journals. Specific to museums these have included *Museum History Journal* and the *Journal of the History of Collections*. From the history of science; the *British Journal for the History of Science*, *Studies in the History and Philosophy of Science*, *Isis* and *Social Studies of Science*.¹²

⁹ MacLeod (2013).

¹⁰ See for example Alberti (2005c).

¹¹ See Naylor (2005): 11 and Naylor (2002).

¹² Articles that have been influential to this thesis are cited throughout; however of note here are the thematic issues *Museum History Journal* 8 (2015), and 6 (2013). The first of these presents multiple biographies created from differing perspectives around one subject, that of General Pitt Rivers. Collectively the issue reveals new insights into the work and ideology of Pitt-Rivers.

Kate Hill draws our attention to the useful debates emerging from the history of art museums, such as Daniel Sherman's work on municipal museums in France. Sherman's work describes similar contestation and shifting environments to those found at Leeds. He usefully acknowledges that a more sophisticated and fuller understanding of 'historically specific situations' creates a discord with the ideological meta-narratives generated from the earlier Foucauldian project.¹³ Indeed, this supports Suzanne MacLeod's argument that specific use shaped the museums phenomenon more than the historiography had hitherto articulated. MacLeod's call for histories that 'purposefully set out to link the institution and the lived reality of museum making.'¹⁴

This thesis follows a similar line, rooted in the conviction that studying museums in more conceptually complex ways enables the analysis of these specific temporal and localised determinants or contingencies.¹⁵ I argue that it was these localised and idiosyncratic determinants—the Museums' contingencies—that served as the primary motive force for shaping museum practice at Leeds rather than a coherent ideological meta-narrative across the sector. As pointed out earlier, Kate Hill's work on late nineteenth-century municipal museums challenges the reality of ideological coherence across such museums.¹⁶

I argue in this thesis that whatever the ideology they subscribed to, the people in this story, as they interacted with messily contingent reality, acted in ways that

Article length analyses can provide valuable but brief glimpses into other contexts, disciplines and perspectives. Such thematic issues can therefore provide scholars with greater depth and sustained narratives. This particular issue reveals not just new insights into the motivations and ideology of General Pitt-Rivers but also demonstrates new methodological approaches—the use of multiple biographies from differing perspectives that can reveal new insights into already well considered and debated subjects. The second thematic issue mentioned above offers insights into colonialism by looking at the acquisition, documentation and exhibition of objects, and as such contributes to recent shifts within the historiography discussed elsewhere in this introduction. Of relevance to the discussion here—and why 'Shifting Interpretations of Empire' is particularly noteworthy—is its phenomenological approach, employing discrete sets of inter-disciplinary observations. These include biographies of objects, biographies of collectors, of political and religious imperatives as well as of changing physical geographies and broader spatial contexts in order to reveal something of an the phenomenon.

¹³ See Hill (2005): 2, in which Hill discusses Sherman (1987): 41, as well as Prior (2002).

¹⁴ See MacLeod, (2013): 6-7.

¹⁵ See for example Alberti (2005c).

¹⁶ Hill (2005).

departed from what ideology demanded. The history offered here begins to reveal the complex factors that contributed to this messily contingent reality the flow and quantity of donations being a particularly important one. This messy reality delimited the efficacy of ideology across the museum. In turn, it necessitated sets of reactive, ad hoc, idiosyncratic practices, or, in other words, coping mechanisms. This does not deny the theories arising from the dominant historiography but rather questions the degree to which they were historically effective. I assert that at Leeds it was the discrete day-to-day coping mechanisms that had the greatest impact on the form and function of the Museum.

The largely uninvited influx of new objects that had to be funded, preserved, accessioned, researched, classified, incorporated into existing collections, interpreted, and displayed, and all the debates and contests that circulated around each of these acts, as well as the ongoing preservation of existing collections, their reclassification, updated interpretation and redisplay, represent the predominant agencies involved in the creation of an ever changing museum and practice.¹⁷

As already indicated, this did not stop the Museum from shaping social, cultural and civic identities across Leeds in ways suggested by the Foucauldian paradigm. However, I argue that this was but a small part of a much more complex socially orientated phenomenon at Leeds and, perhaps importantly, was seemingly only ascertainable retrospectively. Any emphasis in other directions would lead to a misunderstanding of the ecology of that phenomenon. Within my approach, those entangled and contradictory broader social and cultural contexts—such as changes to urban identities, the making of scientific knowledge and disciplines, or the hierarchies and geographies of cultural capital—all belong to the complex temporal, discursive contingencies and contests that surround specific collections. As Stephen Weil states:

¹⁷ The thematic edition 'Lost Museums' in *Museum History Journal*, especially the introduction in which Steven Lubar et al. discuss the tensions between notions of permanency in museum history and the fragility and ever changing characteristics of objects, collections and institutions of their realities.

[...] we have too often chosen to ignore the very rich ways in which museums differ and to focus instead on their thin margin of overlap. That we should do so is ironic. Among the most distinctive features of museums is that they deal with the specific and not the general.¹⁸

Although the method adopted in this thesis emerged out of necessity as a way of making sense of the diverse sources and various narratives at Leeds, it has found a welcome accord among the emerging revisionist histories noted above.

What this thesis offers, then, is a historical narrative of a museum that problematizes prevailing generalizations of linear progress and of nineteenthcentury museums as tools of bourgeois power.¹⁹ From my perspective, such generalizations have been largely theoretical superimpositions overlaid onto a differently shaped form. It is the dense social forces and entanglements that existed within complex and shifting cultural contexts—civic and national—that this thesis then attempts to address: the discursive and ad hoc engagements and discrete entanglements that historians are beginning to observe around objects and among collections. It is a narrative away from stasis, continuity and homogeneity—a bottom-up history that requires a suspension of theory and of assumptions not only around what a museum was or ought to have been in the past but also what museums might be today.

The International Council of Museums' (ICOM) current definition of a museum (ratified in 2007) describes foremost a not-for-profit, permanent institution, open to the public and in the service of society and its development. Noteworthy here are the eight amendments made to that definition since it was constituted in 1946–47.²⁰ Indeed, ICOM is at this moment in time undergoing a public consultation for a new museum definition to better reflect the changing environment they find themselves in today.²¹ It seems then that despite attempts

¹⁸ See Weil (1990): xiii-xviii.

 $^{^{19}}$ Tony Bennett's work has become arguably the most influential museum text for the perpetuation of post-modernist Foucaudian museology. See Bennett (1995).

²⁰ See Development of the Museum Definition according to ICOM Statutes (2007-1946). http://archives.icom.museum/hist_def_eng.html.

²¹ See History of ICOM. https://icom.museum/en/about-us/history-of-icom/, also The Report and Recommendations of the Standing Committee for Museum Definition, Prospects and Potentials.

to create a historical synthesis, the cardinal characteristic of museums past and present is their changeability and idiosyncrasy.

The history offered stands at odds with longstanding assumptions within the historiography around the origins and history of museums, such as the progenitorial role of national institutions as well as the ideological influence of antiquarianism and the Wunderkammer culture. As a result of these assumptions, a large section of the literature has thus far concerned itself with extraordinary collectors and the iconic institutions thus established.²² The danger for scholars is that, without a purposeful intention to complicate the existing narratives, such a bias within the history skews broader contextualisation to describe a widespread and diverse historical phenomenon by detailing only certain remarkable cases within it.

My claim here is similar to that of MacLeod's—so far museum historiography has been focussed largely on a linear notion of progress that has required a superficial reading of the museum phenomena.²³ I argue that the lack of similar in-depth historical accounts of more common cases—regional museums from the towns and municipalities—has created a largely untested assumption that the origins of our contemporary museums (and by inference the power they exert) belongs to the elites and that the history of museums represents a linear progression from early cabinets and Wunderkammer to contemporary institutions that has dictated too greatly which institutions are worthy of research. No such lineage was found at Leeds. In fact it was intellectual, ideological, cultural and political independence from traditional seats of authority and privilege that informed the motives and intentions behind Society and Museum.

https://icom.museum/wp-content/uploads/2019/01/MDPP-report-and-recommendations-adoptedby-the-ICOM-EB-December-2018_EN-2.pdf, as well as *Standard Guidelines: Museum Definition*. https://icom.museum/en/activities/standards-guidelines/museum-definition/.

²² This body of work is not to be rejected as it represents a vast collection of detailed descriptive information. For examples see Murray (1904), Findlen (1994), McGreggor (2007) and Arnold (2006).

²³ MacLeod (2013): 17.

That the Society all but disregarded the possibility of a museum in their original plans and that the Museum thereafter dictated the use of almost all of the Society's resources, speaks of the complexities involved. The unplanned, ad hoc and reactive manner in which the Museum at Leeds was devised, came into being and was managed across the nineteenth century stands as a counterpoint to existing historiographic presumptions around nationwide movements, claims around the creation of public museums during that century, as well as theories around the professionalization of curators and the efficacy of the municipal museum movement.²⁴ These are important considerations for this thesis because they impact on ideas of who created and managed the power that museums exerted, which at Leeds related closely to the creation of knowledge—ultimately scientific knowledge.

I suggest, therefore, that if the Leeds case evidences a shift from sovereign power to governmental power it did so largely as a by-product of the negotiation for a necessarily neutral space for scientific enquiry. It seems that what filled that neutral space was an altogether more socially orientated and plural agent than was expected, which brought much less control to the endeavour than the Leeds Philosophical and Literary Society had intended. All along, the Leeds case proves resistant to generalization.

The Complexities of Collections

At Leeds the Society's Council and Museum staff alike were never fully able to gain control of the disorienting side-effects of its contingencies. The consequences of a museum that had rapidly outgrown its resources filtered through the entire system, dictating the short and long-term goals and activities of the Society and Museum. The often embattled discourses that emerged afford us new insights into the history of regional museums—not least the degree to which the everyday lived experience of museum practice, as well as personal and interpersonal motives, could dictate curatorial systems as well as curtail and control the activities of a philosophical society. Again, the complexity of the

²⁴ Gabriela Petkova-Campbell analysis of the creation the municipal museum movement in Bulgaria provides a helpful international comparison. See Petkova-Campbell (2018).

Leeds case makes for awkward conclusions that are difficult to match to the existing historiographic claims. That the main interest for this thesis has been the natural science collections, has added extra layers of complexity.

The material culture embedded in the museology of the 1990s has done much to establish a mode for the study of collections generally.²⁵ The work of Susan Pearce in the field of collecting practices has been considerably influential in museum historiography.²⁶ As a result of the influence of Pearce's work, considerable credence has been afforded to a theoretical taxonomy of collecting.²⁷ Reduced to three essential types—systematic collecting, fetishistic collecting, and souvenirs—the theory aims to represent the essential motives behind collecting. Thus, systematic collecting is supposed to be directed by an underlying theoretical framework whereas fetishistic collecting and souvenirs are instead derived from qualitative forces such as personal needs and emotional responses. It has been a persuasive approach, perhaps canonical, and as such is widely quoted across the historiography.

Natural history collecting is the archetypal example of systematic collecting. Indeed the term was itself borrowed from the natural sciences and has become widely adopted within museology and the history of museums. In these terms, it is a disinterested strategy informed by a theory based on a professional relationship with an academic subject. By contrast, fetishistic collecting and souvenirs are derived from personal needs and feelings such as desire and within the paradigm connote amateur activities.²⁸ This implies a hierarchy that affords intellectual primacy to systematic collecting.

In uncovering the particulars of acquisitions at Leeds this thesis shows that the theory is not altogether indicative of the reality. Instead, sets of personal

²⁵ Kingery (ed.) (1996) and Buchli (ed.) (2002).

²⁶ For the accepted museological perspectives on collecting practices see Pearce (1992), (1994), and (1998).

²⁷ Evidencing this point is the University of Leicester's reader in museum studies, *Interpreting Objects and Collections* (1994). This anthology, edited by Pearce, demonstrates the adoption of the theory among authors as well as in the teaching of museum studies. See also Pearce (1994): 193-205.

²⁸ See Pearce (1992): 69-88, for a fuller description of the modes.

imperatives and preoccupations also served to influence acquisitions. The intellectual processes assumed by Pearcean accounts did not direct the acquisitions of objects nor inform interpretation at Leeds in the way suggested.²⁹ Pearce does herself mention briefly that there may be more to the collecting phenomenon than her framework articulates and accepts that within this subject collecting can reflect a combination of modes.³⁰ When compared to existing theories, the findings from this thesis suggests that an altogether more fundamental problematization and fresh analyses of the theories surrounding the collecting activities of museums might be called for.

There is also a large body of work emerging from history of science's interest in natural history museums as negotiators for scientific knowledge relevant to this thesis.³¹ Leeds was primarily a natural history museum—not one by intent, as we demonstrate in the following chapters, but largely as a reaction to an external social agency, namely the donation and trade in specimens. Natural history museums played a dual role between their lay and scientific publics. This duality or tension became harder to keep knitted together for such institutions as the nineteenth century progressed.³² It seems that the tension between the will to become a municipal museum for Leeds—Leeds City Museum—created an ideological impasse resulting in an inability to reach consensus either way.

Research focused on the history of natural history collections in museums and academic institutions elsewhere broaden the historical context for the Leeds case. The recent work of Geoffrey Swinney on the Edinburgh Museum of Science and Art alongside Alberti's on the Manchester Museum are noteworthy.³³ Alberti demonstrates a possible counterpoint or alternative trajectory for what could

²⁹ See Chapter 2 of this thesis.

³⁰ Pearce (1992): 88.

³¹ Authors who have proved helpful in this thesis include Alberti, (2000), (2001), (2002), Alberti (2005a), (2005b), Allen in Wheeler and Price (eds) (1985), Barretta (ed.) (2005), Daston (2004), Daunton (2005), Desmond (1982), Finnegan (2005), Fyfe and Lightman, (eds) (2007), Forgan (1989), Forgan and Gooday (1996), Golinski (1992), Inkster and Morrell (eds) (1983), Jardine, Secord, Spary, (eds) (1996) as well as the recent follow up edition Curry, Jardine, et al. (eds) (2018), Knell (2000), Livingstone (2003), (2005), Morrell (1997), Naylor (2002), and Wheeler and Price (eds) (1985).

³² See Desmond (2001), as well as Alberti (2001), (2002), (2005a), and (2005b).

³³ See Swinney (1999) and Alberti (2002).

have been possible for the Museum at Leeds. Unlike Leeds, the museum in Manchester evolved out of an earlier eighteenth-century private cabinet, although as Alberti describes, this process was far from linear. As a result, the multiform patterning of social cohesion that formed around the collections at Manchester and Swinney's Edinburgh case provide useful points of comparison for Leeds.³⁴

The Edinburgh case stands out for several reasons—not least because of Wyville Thomson, a contemporary of the Leeds curator Compton Miall. Thomson was employed both as keeper of natural history at the museum and as professor of natural history at the university—a role similar to Miall at Leeds, who held the first chair at the Yorkshire College in 'biology', rather than natural history. Both the Manchester and Edinburgh cases speak of the difficulties experienced in connection with the professor/keeper and university/museum roles emerging towards the end of the nineteenth century within the natural sciences.

Similarly useful has been Caroline Cornish's analysis of Kew's Museum of Economic Botany in the creation of scientific disciplines within an environment of shifting institutional imperatives. Her work speaks to the complexities around the making of knowledge in museums and usefully demonstrates instability and malleability within the academic horizon between nineteenth century museums and the emerging universities later in that century.³⁵

Over recent decades, there has also been increasing attention paid to the subject of museums and colonialism. Kristin Johnson's 2012 exhaustive study of the vast collecting activities of Walter Rothschild and the entomologist Karl Jordan at Tring has been useful in understanding the collecting imperatives behind natural history collections at Tring during the height of imperial expansion at the end of the nineteenth and the start of the twentieth century.³⁶ Johnson identifies the impact of shifting patronage, political unrest abroad, the impact of war and economic crisis as key contingencies. Her biographical approach to the work of

 ³⁴ Alberti (2009): 10-30.
³⁵ Cornish (2015): 8-21.

³⁶ Johnson (2012).

entomologist Karl Jordan on speciation demonstrates that there is a special case to be made around natural science collecting and colonialism.

Usefully, Kate Hill describes how the natural sciences require a master discipline which informs the rationale for the displays. This she contrasts within anthropological collections in which 'the material was central to the construction of identity and difference.³⁷ Alongside this, Janet Hill has described how the systematic collecting of the natural sciences was adopted to create a 'pseudo-scientific' role for ethnographic material.³⁸ However, regardless of the perceived imperatives and importance of the project, the vast collecting practices managed by Karl Jordan proved precipitous and subject to contingencies beyond science's reach. The collapse of trading networks at the outbreak of the First World War in 1914 signalled a dramatic end to the acquisitions and the entire speciation project, such was its dependency on other priorities.

The work of Claire Loughney is important here for providing more insight into colonial interpretations of acquisitions made by provincial museums during the nineteenth century.³⁹ Loughney's 2005 PhD included the Museum at Leeds and, much like Johnson, she submits that the colonial imperative is complicated and entangled with other forces, especially scientific ones.⁴⁰

Indeed, my own findings present a complex ecology at Leeds which has made for a narrative intransigent to generalization. It suggests that sets of discrete, localised and socially entangled priorities and imperatives informed acquisitions more than strategic or ideological ones. While this does not necessarily prohibit colonial interpretations, the authors mentioned above stress that scientific imperatives complicate the issue. However, tackling those scientific imperatives in themselves presents an equally complex ecology that involve sets of interpretational motives and physical aspects which together resist research that is too theoretically led and its conclusions—making for muddy waters indeed.

³⁷ See Hill (2011a).

³⁸ Owen (2006).

³⁹ Loughney (2005).

⁴⁰ Ibid: 290.

Certainly, the imperial networks that served colonialism enabled a marketplace of specimens to prosper between natural history museums around the world. In Chapter 2 we discuss how this facilitated the circulation of a mass of museum reports, societal transactions, periodicals and letters throughout the nineteenth century. Importantly, however, having made the colonial aspect its central focus, Loughney's findings acknowledge that it was the contingencies of collecting, and especially of donations, that dominated the story, and that the big themes of colonial history did not dictate what happened on the ground at the time.

The analysis I make of collecting activities that were connected to imperial networks speaks to Loughney's contingencies but I have tried also to understand the way in which such activities could participate in the exertion of colonialism and could translate into colonial agency. Noteworthy in this thesis is the analysis in Chapter 2 of the Museum's acquisitions of endangered species such as the Thylacine, also known as the Tasmanian Wolf. Here I evidence an ecology of contexts and motivations not just within the Leeds Museum but across the chain of supply. These include the narratives emerging 'in the field', including the preoccupations of Tasmanian land owners and local pest controllers. I align these with individuals associated with institutions and societies such as the Hobart Zoo and the Royal Society of Tasmania—the first such institution constituted outside of Britain—as well as the promotion of the Thyalcine as a desirable object through the publications by the curator at the Australian Museum in Sydney.⁴¹

In this sense the Museum at Leeds did participate in extending colonial power to these historical actors. But in agreement with Loughney this thesis goes some way to temper the emphasis given to historical themes relating to British colonial history. The evidence presents more complex sets of priorities that weave into each other—emerging from the communities, their ideologies and preoccupations, as well as around objects and collections. These preclude broad generalizations and suggest instead characteristics more akin to a consumer-led market place than one defined by colonial imperatives.

⁴¹ See Chapter 2 for a fuller account. In addition see Robinson (2013) for an account of the influence of scientific societies in New Zealand.

In addition, the analysis of the acquisition of Dodo material from Mauritius, alongside that of the Irish Elk, made in Chapter 2, demonstrates the ways in which these sets of complex priorities created a competitive consumer environment for material among museums in which rarity equated to monetary value and a commodification of the phenomenon. This was true for acquisitions made within Britain as much as for those made within the colonies.⁴² Also of significance here is the recent problematization and revisions to the colonial project that can be found in academic journals in the museum history literature. Of particular note here are the thematic issues mentioned above—the *Museum History Journal*'s 'Shifting Interpretations of Empire' (2013) and 'Rethinking Pitt-Rivers and His Legacy' (2015).⁴³

The Spaces and Publics of the Museum

The Leeds Museum had received little or no planning or forethought during the design and build of Philosophical Hall—something that undoubtedly impaired the Society's ability to respond effectively to the demands of its Museum over the following years.⁴⁴ Being so low on the Society's list of objectives it was intended to be established by degrees and only when finances allowed. On these terms it appears that the Museum was somewhat of an after-thought to the Society's original intentions.

Among the primary and secondary sources it is the architect himself—the then Leeds based civic architect, Richard Dennis Chantrell (1793-1872)—who receives greatest attention. Similar primacy is given to Chantrell's training under Sir John Soane at Soane's Lincoln's Inn Fields Museum along with Soane's commission for the Bank of England in London.⁴⁵ Of Philosophical Hall itself, Kitson Clark described 'a quite dignified example of Neo-Grec style which had

⁴² See Chapter 2 Section 2.5.

⁴³ 'Shifting Interpretations of Empire' *Museum History Journal* Vol.6, (2013) and 'Rethinking Pitt-Rivers and His Legacy', *Museum History Journal* Vol. 8, (2015).

⁴⁴ See Chapter 1 Section 1.5.

⁴⁵ Kitson Clark (1924): 22.

become fashionable in the early years of the nineteenth century,' and one that was 'eminently a sensible building which expresses its purpose.'⁴⁶

I argue then that the design of the building had little to nothing to do with any functional demands of the Society and was a generic solution defined by budgets and timescales, built rapidly and in advance of any considerations of function. Given the low status afforded to the idea of a museum it is no surprise that rooms for the library, laboratory and museum were allocated only when the building was nearing completion by a sub-committee of the Society one afternoon and seemingly without broader discussions outside of that sub-committee: '[t]he large room above the stairs was selected for the museum, the Gallery for the Library.'⁴⁷

It was on these terms, therefore, that the possibility of a museum became real in Leeds. As with the surface design of the building, the arrangements within Philosophical Hall were seemingly based on sets of presumptions rather than needs. There are superficial similarities to the arrangement of the well-known Ashmolean Museum on Broad Street in Oxford.⁴⁸ it seems most likely that Chantrell based the designs loosely around Soane's alma mater, the Royal Academy at Strand Block, Somerset House in London.⁴⁹ This suggests that the processes and actions within Philosophical Hall, after the building was constructed, defined the spaces within. This alone makes any theoretical analysis of museums architecture difficult to apply meaningfully to the Leeds case.⁵⁰ Added to the seemingly atypical circumstances of the birth of the Museum is the clear impression from the history offered in this thesis that the processes of function that unfolded over the course of the following century, defined the form of museum spaces rather than the metanarratives of ideology or design.

⁴⁶ Ibid.

⁴⁷ See Chapter 1 Section 1.5 for a full account as well as Kitson Clark (1924): 25.

⁴⁸ See Arthur MacGregor's account of the Ashmolean Museum. MacGregor (2001).

⁴⁹ While this is largely conjecture, it seems most likely that Chantrell based the designs loosely around Soane's alma mater, the Royal Academy at Strand Block, Somerset House in London.

⁵⁰ For an extensive discussion of the problems with the historiography and its dominant ideology see MacLeod (2013).

For these reasons it has been difficult to create a meaningful architectural analysis of the Museum and its spaces despite a large corpus of work on the subject. Recent work on museum architecture and space has been important in establishing my own position if for no other reason than to reiterate the difficulty in recognising the Leeds case from among those conclusions.⁵¹ Indeed, my own conclusions have been made possible by comparing and contrasting my findings with this body of work. This is no doubt born out of the demands of understanding the collections-my primary focus for this thesis-and suggests that more in-depth analyses of the architectural aspects of the Leeds Museum would prove fruitful.

Nonetheless, the findings of this thesis suggest that at Leeds, issues of museum design, of architecture and the architectonics of museum space emerged as an epiphenomenon to day-to-day social entanglements and practices. This position stands in agreement with MacLeod's observations that it is 'the lived reality and complex [museum] processes through which architecture is made.⁵²

The analysis of the spaces used by the Museum within Philosophical Hall outlined in Chapter 4 emerged essentially as a response to understanding the processes connected to the natural history collections. That said, they are still relevant-indeed revealing-for this particular subject. In Chapter 4 I look not just at important specific rooms within the Leeds Museum, such as the Large Zoological Room or the North Geological Room, but also at other spaces utilised informally by the growing collections-the use of the stairs, the use of the entrance hall or the cellars, for example.

Using extensive photographic references of the interiors of the museum alongside the museum's printed catalogues, I have created sets of floor plans of these spaces to demonstrate the spatial use of the interiors of the building through time. The method adopted here suggests that understanding the specific transient

⁵¹ Of note here is analysis from the history of science. See Forgan (1986), (1989), Forgan and Gooday (1996), Alberti (2001), Beratta (ed.) (2005), Finnegan (2005), James (ed.) (1989), Jankovic (2000), Outram (1996), Knell (2000), Livingstone (2003) and (2005): 96, and Naylor (2002). ⁵² MacLeod (2013): 33.

realities of use and circumstance-such as the appropriation of the library for developing new exhibits and displays or the bombing of the Museum in 1941 that left the building half its former size up until its demolition in the 1960s—can contribute something towards an architectural analyses, albeit a largely unorthodox one.

Such conclusions suggest that understanding the role of architecture should involve the practices, contestations, social entanglements and contingencies that occur in and around the building as much as it does the intended surfaces of the edifice. Once again we detect a disconnect between the day-to-day realities of museum making and theoretical metanarratives and ideology.

Suzanne MacLeod's work on museum architecture has proven valuable here in showing how my struggles with this particular subject are justified and in demonstrating new conceptual and methodological approaches to the subject. MacLeod's architectural analysis of the Walker Art Gallery in Liverpool aims to problematize dominant ideologies and to 'reconfigure the co-ordinates of architectural history' by considering use and the everyday, messy realities of museum making.⁵³ Noteworthy here is Macleod's observation that the architectural history of museums has created a lineage, a pedigree family of museums which still direct[s] the majority of research telling us which museums are worthy of study.⁵⁴ This, MacLeod argues, superimposes a limited notion of form and function onto a deeply complex and diverse museum phenomenon.

Like the work of Alberti and Hill mentioned beforehand, MacLeod's revisionist analysis offers a welcome agreement with the approach and findings of this thesis. For MacLeod, museum architecture is 'a medium through which groups and individuals build (unequal) social relationships and experiences'—a socially and culturally produced phenomenon dependent on specific individuals and groups and 'shaped through varying forms of occupation and use.'55

⁵³ Macleod (2013): 7.

⁵⁴ Macleod (2013): 17. ⁵⁵ Ibid.

In the writing of this thesis I found considerable obstacles attached to creating a stable account of the Museum's public. The clarity and extent to which its publics have been recorded varies considerably. Some sources appear to provide clear and vivid accounts, for example societal records. However tempting it is to bias such voluminous user-friendly sources, they generally demonstrate little interest in recording the role of women, among other groups. Here anecdotal rather than systematic evidence provides occasional glimpses.⁵⁶ Aside from this bias, societal records have proven revealing for exhibiting a change in the definition given to the word 'public'. Used during the first half of the nineteenth century to denote Ordinary Members of the Leeds Philosophical and Literary Society, the term changed meaning as the century progressed. It did this in conjunction with the emergence of reforming and professionalising bodies such as the British Association for the Advancement of Science (referred to henceforth as the BAAS) and the Museums Association whose lobbying began from the 1850s.

Kate Hill's recent scholarship challenges Foucauldian representations of mass publics dominated by an orchestrated power that was exerted within the confines of the museum space. She describes instead the creation of complex ecologies of cultural and social identities within and without the museum space, suggesting that;

'just because the working class were in what has always been regarded as a middle-class space, they did not become blank canvasses upon which the middle class could paint.⁵⁷

Hill evidences a far more complex terrain than postmodern museology generally implies and in doing so she has shone a much needed light not just on the subject but on the difficulties involved in rewriting it.⁵⁸ Providing insights into the public-facing activities of natural history societies in Victorian Scotland,

 ⁵⁶ For recent analysis of museums and gender see Hill (2001) and (2016).
⁵⁷ Hill (2001): 200.

⁵⁸ Hill (2011b).
Diarmid Finnegan articulates the need to look beyond what he describes as the disembodied intellectual constructs towards everyday practices and spaces.⁵⁹

Finnegan describes the ways in which scientific practice gained cultural and social agency in provincial Scotland by demonstrating how natural history societies promoted scientific practices as authentic recreation and as being revelatory about the natural world around.⁶⁰ Samuel Alberti has looked at the changing relationships between the Leeds curator Louis Compton Miall and the various amateur natural history groups in the town towards the end of the nineteenth century. Alberti describes how Miall created a separate social and cultural identity for the modernisation of natural science practice within the delicate balance of interactions between the museum, amateur groups and lay public—establishing thus a space for professional practice distinct from others.⁶¹

In this thesis, I build on such work to show that national or metropolitan museums give rather an atypical picture. The Leeds case makes clear that, in some cases at least, and especially before 1851, provincial museums were characterized by pragmatic responses to unplanned contingencies in a voluntarist environment. Understanding those contingencies requires a problematization of prevailing generalizations but in so doing sheds valuable light both on science in the Victorian city and on the character of the surviving collections. As Kate Hill has pointed out, museums did not operate under a singular agenda and cannot be satisfactorily characterised by the superimposition of any one theory, making the observation that such institutions 'could never function in a unified and coherent way to implement a particular agenda; they were not a single project for a single end.'⁶²

The historiographic 'position' adopted across this thesis has therefore been one born largely out of the need to establish more sophisticated and fuller understandings of historically specific situations alongside diachronic analysis. That said, its methodology and arguments are not isolated and, as a result, largely

⁵⁹ Finnegan (2005).

⁶⁰ Ibid.

⁶¹ Alberti (2001).

⁶² Hill (2005): 146.

agree with the methods and conclusions drawn by the revisionist authors discussed above. Encouraged by the narratives emerging from this growing body of literature, the Leeds case demonstrates further the need to adopt new conceptual and methodological approaches for the study of museums that utilises multiple historiographies from across differing academic fields.

Thesis Overview

The thesis seeks to offer a narrative account of the history of the scientific collections while under the management of the Leeds Philosophical and Literary Society from the beginning of the nineteenth century through to the start of the twentieth century. Central to its findings have been the examination of the Society's records held at the University of Leeds alongside a remarkable set of previously unexamined 'Collectors Files' held by Leeds City Museum. Alongside these I have used the objects themselves as well as photographic material and media coverage from the time.

From these an account emerges of how the scientific collections were collected, interpreted and displayed. It takes into account the changing institutional horizon of the town, advancements within the practice of the natural sciences and the shifting values of emerging social groups and considers how these impacted upon the Society, its purpose-built headquarters, called Philosophical Hall, and the operation of the Museum therein. For this reason, the thesis is necessarily also a history of that Society. It has been beyond the scope of an already lengthy study to examine in detail the period of transfer from a collection managed by a museum within a private society to that of a public museum managed by Leeds Town Council. For this reason, the museum under its new management remains a subject for further study by future scholars.

In Part 1 of the thesis: 'Fostering Natural Knowledge in Late Georgian Leeds,' Chapter 1 provides an account of the founding of the Society, the role of the Museum within the new Society and the rapid growth of the collections. In Part 2: 'Museum Practice in the Industrial Township,' Chapters 2, 3 and 4, chart three parallel histories across the middle decades of the nineteenth-century—focusing in turn on each of the core questions concerning acquiring, interpreting, and displaying natural history. In the final section, Part 3: 'From Private to Civic: Public Museums' Long Dawn', the narrative turns through Chapters 5 and 6 to a period of self-reflection and reappraisal as the Museum attempted to adapt through changing times towards the end of that century. Here it considers how the museum traversed the deeply contested debates between the University of Leeds and Leeds Town Council up to its eventual transferal in 1921.

Chapter 1 looks at the events surrounding the establishment of the Leeds Philosophical and Literary Society in 1819. It had an embattled past and the positions and roles within the Society carried significant political value, so here we look at the coming together of the first founders, consisting as it mostly did of previously opposing antagonists. How these conflicting parties called a truce and formed an alliance is detailed, as too is the fragility and imperfection of that alliance. We come to see how a society constructed itself and moreover how a museum became established and in so doing we see the role of contingent forces in shaping agendas and directions.

By examining the building of Philosophical Hall, we are able to place the Society's activities within broader civic-wide initiatives, seeing the Leeds Philosophical and Literary Society very much as a symbol of a new future for the town. But in detailing its construction we are drawn to the marginal role allotted the Museum alongside other facilities and the arbitrary way in which its rooms were selected.

When looking at the opening of the Society and Philosophical Hall we consider in particular the prize-winning essay. This carried with it overt Jacobin references and sparked calls for a re-ballot within the Society for a different prize-winning essay. The essay was published in the Society's first report but with a censorial change to the title, reminding us once again of the difficulties that occur behind the scenes in order to present a cohesive whole and the compromises forced. We close this chapter by detailing the flood of donations made to the Museum, which at the time were met with delight. Considering the behemoth that Museum collection became, this makes for a portentous end to the chapter.

We open Chapter 2 by noting that if establishing a museum had not been high on the agenda for the Leeds Philosophical and Literary Society, then the volume of donations that followed its opening was entirely unexpected. With the Museum's collections as the theme for this chapter we first observe the quantity being acquired and then note that such acquisitions were almost entirely of natural history specimens, regardless of the Society's interests in many other fields. So at this point we make an important observation: that the rate of acquisition and the subjects that these fell into were entirely unplanned.

Scrutinising the mechanisms of collecting in Leeds during the nineteenth century, we next look at how the Museum established, fostered, controlled and depended upon collector networks.. With this particular theme we are able to confront the magnitude and sophistication that the Museum operation had become by the 1850s. We discuss the purchase of a specimen of extinct Giant deer and how the curator used the specimen to launch his stake in the debate on the antiquity of man, which brought him and the Museum face to face with the key protagonists of the time, Richard Owen and Thomas Huxley.

The Giant Deer example affords us the opportunity to also discuss the shifting meanings given to objects, from the bog of Ireland, to a collector's shop in Dublin, to the Museum in Leeds, then illustrated in a scientific paper and finally to the present-day mascot of Leeds Museums and Galleries. It also enables us to look at ideas of value and how such collecting activities commodified nature. Looking at the international dimension to the Museum's collecting activities we delve into the world of the rare and exotic and extend the discussion of value further through the Museum's collecting activities of Thylacine or Tasmanian wolf. Here the increasing rarity of the animal clearly generated increased interest and demand for specimens, with the final extinction of the animal in the wild aided considerably by the collecting activities of museums.

In addition to the themes noted above, Chapter 2 also reveals how the transactions of the Museum were exchanged in extensive international networks. Here not only were hundreds of transactions sent from Leeds to institutions and societies around the world, but they were sent in a reciprocal arrangement. The result, seemingly above that of sharing knowledge, was a sort of trade catalogue for the natural world, in which curators were provided with important information on which specimens to collect, who to collect them from and how much to expect to pay for them.

Chapter 3 then takes as its focus the four men who were behind such activities, the Museum's curators. Together these four span a period from when the Museum was first established in 1819 up to the gifting of it by the Leeds Philosophical and Literary Society to the Corporation of Leeds in 1921. Through these four we are able to observe the emergence of curatorial practice at Leeds, where we find from the very start the acquisition and trading of natural history specimens in a systematic way, producing taxonomically-derived displays and interpretation. Such an early emphasis on natural history certainly ensured that the Museum would continue to be predominantly a museum of natural history, not least because in just four years of office the first curator had filled the Museum with natural history specimens and was lobbying for a larger building.

We get to see how the Museum's first full-time paid curator, living in the basement of Philosophical Hall with his wife, large family and a maid, brought the Museum through some of the most vibrant times for British history and the history of science. We follow collecting activities which were at times commensurate with the British Museum and note the Museum's central position through the cultural and social registers of the time, including key figures such as Huxley, Owen, Hooker, and Darwin among many others.

Additionally, we get the opportunity to discuss the state of curatorial practice during the formation of professional posts within the natural sciences, and not least the gravitational effect of the newly formed Yorkshire College of Science. With a new professional body forming, one with the College of Science as its headquarters, antagonisms increased from within the earlier homogeneity. Groups formed and differentiated themselves from others, with each contesting their own claims over the rightful home for the natural sciences and its rightful caretakers and promoters.

Finally, this chapter plots the decisive shifts that ultimately saw the College of Science wrest the natural science franchise from the Museum, bringing about a changed role for the Museum and the consequential rise of the public curator, popular science activities, schools programmes and magic lantern evenings.

Having accounted for the activities of the Museum's key staff, its curators, Chapter 4 considers the idea of the Museum as a producer of knowledge and so focuses on its key public-facing activities. Dealing first with the layout and management of its displays, this chapter makes extensive use of glass plate slides taken by one of the curators between 1893 and 1928. A rich, vivid and dynamic archaeology of the inside of this important but now lost museum space is undertaken in this chapter.

Alongside the glass plate slides, I have used extensive descriptions of not just the content of the displays but also how they changed over time. These are augmented with sets of drawings produced for this dissertation that chart changes to the physical structure as well as the location that each glass plate slide was taken. Thus we are able to capture vividly how specimens such as a tattooed Maori head were first displayed as ethnography but eventually found their way up into the Large Zoology Room to be displayed with the primates among other human material.

The idea of the Museum as a producer of knowledge is pursued further with sections on the Society's conversazione as well as the 'Our Man in the Field' and 'Wild Nature Week by Week' series of popular newspaper columns written by the curator. The chapter concludes by describing the greatly successful lecture programme held at the Museum, which became in many ways an institution in its own right. As we did in the previous chapter, we gain insight into the influence of the Museum and its position within wider networks by looking across the programme of lectures—a nineteenth-century who's who.

Moving away from the vibrancy marked in the preceding chapter, Chapter 5 darkens the palette somewhat by considering the ways in which the Museum project was perceived to be failing or underachieving. Here the manifold committees and sub-committees that were formed in response to this, from the 1860s, will help identify specific concerns like that of the Committee on the Means of Extending the Usefulness of the Society or the Committee for the Arrangement and Disposal of Collections. Noting that the Museum had been reported as being full in 1824, the problem of space had by the 1860s become a monstrous for the Society.

Changes within the town's layout and to its fiscal arrangement, as well as an increasingly unified national museum sector, were all forces behind such selfdoubt and preoccupations. From around this time many free town museums were being established and run, based on a penny museum tax added to corporation taxes. In this way, the structure of Leeds' Town Council and the structure of the Museum differed to what was seemingly happening elsewhere. So here we find an institution reacting to such changes within its environment. The chapter puts forward the idea that the Society's ensuing debates, remedial actions, and resolutions for yet more committees were all underpinned by, and belie an endemic insecurity over the future of the Society and Museum.

This period is marked also by an outspoken critique of both Society and Museum by members of the public, so the chapter also makes use of accounts found in the local press from the time to highlight the oftentimes rebarbative and colourful exchanges between the Museum and the public. Such contestation not only affords rare evidence of public opinion towards the Museum through debacles like 'Mr Zangwill's Tilt at Science' but with the nerves of the Society and Museum stretched taut thus we also steal a glimpse into the Museum's private attitudes towards the public.

The chapter also looks at the use and meaning of the term *public* within Societal and Museum language and analyses admission charges in terms of income levels within the township, as well as footfall. The public are a notoriously under-

represented group within the history of museums generally. So it is hoped that the account put forward here of a museum's public and how it changed through time, will make a contribution towards filling this gap.

Chapter 6 looks at the last decades of the nineteenth century and the first decades of the twentieth—arguably a period that was to become the most trying in the histories of both the Society and the Museum. This chapter details the takeover attempt by the then Yorkshire College and details how the Town Council replied with allegations of unconstitutional and underhand behaviour against the Yorkshire College, submitting their own plans for the Museum.

Amidst an atmosphere of rumour and suspicion, subterfuge, move and countermove, the Museum and its collections had become a commodity to be haggled over between two vying prospectors. The chapter explores how the Museum became drawn into the maelstrom and the unavoidable damaged it suffered. Amidst the name-calling and mudslinging the Yorkshire College withdrew its interests, turning its back entirely on any previous negotiations.

Having unceremoniously blustered the opposition away, the Town Council then ceased communications with the Society on the subject of transferal. From 1905 up to 1921 the annual reports for the Society returned an unfaltering message: 'No further communication has yet been received from the Town Clerk in relation to a joint arrangement in the interests of the Public and the Society, as suggested in a letter from him dated April 13th, 1905.⁶³ During those sixteen years, a new Great Britain had emerged. In Leeds, the University was now the centre for scientific activity and expertise in the region, as well as the de facto repository for the natural sciences.

As a result, the Museum had seen collecting patterns shift away from themselves, and from the occasional comments in the press, an image emerges of a public that had all but disregarded the Museum and its outmoded displays. When in 1921 Leeds Corporation eventually took over the Museum it was unable to offer

⁶³ See for example the LPLS Annual Reports for (1910-1911) and (1915-1916).

any of the resources and improvements originally laid out by the Town Council. In 1941 half of Philosophical Hall was destroyed by a Luftwaffe bomb and the Museum was obliged to continue in the building until 1966, when it was eventually condemned.

After this, temporary displays in Leeds City Library provided some exposure for the collections that remained otherwise in accessible by the public until the Leeds City Museum opened in 2008, where now a few of the surviving collections and objects of this remarkable story are on permanent display. However, the donations to the Museum continued and despite the obstacles museum work continued. Despite the contingencies of collecting, or perhaps because of them, the Museum's collections became refreshed and renewed. The display redirected to new audiences and became relevant again. On one hand we can describe a downward turn while on the other we observe survival through variability and adaptation.

Taken all in all, then, the thesis demonstrates how acquisitions, interpretation and display at the museum were predominantly shaped by a complex ecology of forces and actors. These proved not to be scientific or museum-based ideologies but were largely uninvited, ad hoc socially orientated contingencies. It was the entangled day-to-day physical reactions to these contingencies that defined museum practice, form and function much more than scientific precepts or museological ideology.

Changes within the town itself also impacted on the collections with new institutions competing with the museum as the de facto sites for scientific endeavour or public education. In consequence, the roles expected of the collections, as well as the ambitions of the Society, were continually compromised by its contingencies and so it was upon this stage that the collections took the form and function they did. The thesis presents the endeavour behind this ill-fitting alliance between ideology and reality in ways that are informative for the history of science and museums as well as for those interested in understanding the collection as it survives.

Part 1

Fostering Natural Knowledge in Late Georgian Leeds

Chapter 1

Philosophical Hall and the Founding of the Leeds Philosophical and Literary Society

1.1 Introduction

Existing accounts of the LPLS attribute a set of letters printed in the Leeds Mercury addressed to its editor Edward Baines during 1818 as bringing the 1819 Society into being. Although the letters were all signed pseudonymously by a 'Leodiensian,' it is widely agreed that Edward Baines' son, Edward Baines Junior, wrote them.¹ The first of Leodiensian's letters appeared in the *Leeds Mercury* in September 1818 and highlighted the lack of any philosophical society in the town, arguing that 'although the town of Leeds is justly celebrated for the number of its benevolent and humane institutions, it can boast of no society for the promotion of intellectual and literary improvement.² This interpretation of the origins of the 1819 LPLS, which has continued unquestioned by more recent historians,³ appears to originate from Thomas Reid's 1883 Memoir of J.D. *Heaton*, *M.D.*, in which the journalist and biographer connected the letters to the origins of the Society, writing that '[t]he seed thus sown by the hand of a boy did not fall upon stony soil. The idea that he [Baines Junior] propounded was taken up by persons of influence and reputation in the town [...].⁴ Later, Kitson Clark used Reid's version in his official history of the Society and since then the story has gone unquestioned.⁵ On the surface, the attribution that Reid and others since have given to the Leodiensian letters seems reasonable. There had been considerable groundswell of support present in Leeds since the end of the eighteenth century for a Lit and Phil Society and we may therefor perhaps ascribe to Leodiensian the role of messenger, to that body of support that the time had come.

¹ Reid (1883): 97.

² *Leeds Mercury*, 26 September 1818.

³ For example see Brears (1989).

⁴ Reid (1883): 97.

⁵ Kitson Clark (1924): 5.

From the Society's very first meeting, which was held in the Court House in Leeds during 1818, 21 of Leeds' most influential individuals were openly associated with the Society in a way very different to that experienced by the earlier attempts.⁶ A contrast indeed to the distinct lack of evidence connected with membership of the earlier societies. At the first meeting of the 1819 LPLS its President, two Vice-Presidents, two Secretaries, a Treasurer, a Curator and Librarian, and 12 council members were elected.⁷ Also, just six months later the decision was made to purchase land and build Philosophical Hall. At the time, a seventeen-strong Building Committee was elected and the Society's subscription membership system established. This system, which had been heavily influenced by the proprietary libraries model, immediately earned the society £3,500 through the release of shares. Below the Proprietary Members, the society instituted a level of Ordinary Members, which cost would-be members a deposit of £3 3s alongside an annual subscription of £2 2s. At the time the LPLS consisted of seventy-seven Ordinary members. By the time it was six months old, the 1819 LPLS had not only instituted a 19-strong office but had also accumulated a capital wealth of nearly £5,000, had bought a plot of land, commissioned an architect⁸ and had begun building Philosophical Hall.⁹ No earlier attempt had met with anything like the involvement from the town's great and good or with such financial support, nor with such broad and open patronage as did the 1819 LPLS. Considering, then, the struggles the Society experienced in 1817, the reception with which the 1819 LPLS met is in some ways analogous to a sudden release of pressure, built-up over time, as if an obstacle had been removed that had previously hindered all energies and ambitions in that direction.

First then, this chapter will consider the men who were involved in the Society's institution—its founders. This group of remarkably diverse political orientations

⁶ For lists of those present at the early meetings and the Society's founders see LPLS *Notebook of draft minutes*.

⁷ Ibid.

⁸ That being Leeds-based architect, Richard Dennis Chantrell (1793-1872), pupil of Sir John Soane (*ODNB*).

⁹ For a basic chronology of the LPLS, Kitson Clark (1924) is accurate. See also the introduction to LPLS *Transactions of the Leeds Philosophical and Literary Society*, 1837.

reminds us of the Society's embattled pre-history and again of the powerful political symbolism the Society represented. So we might expect, perhaps, a rivalry over the roles within the Society. The coming-together, though, of diverse and previously antagonistic representatives like this indicates very strongly a new spirit emerging from the earlier partisanal entrenchments. Perhaps these individuals, regardless of their politics, came to see that the hostilities were ultimately dealing a disservice to their town. Taking the idea that the roles and positions within the Society carried a symbolic value, we turn next to the Society's membership, its structure and constituents, where we observe much the same phenomenon as that observed with the founders, a marked diversity of politics and denominations. After this, we turn to the building of Philosophical Hall and how this was in fact part of a period of wider civic enterprise and improvement in the town. From that we come to focus on the Museum within Philosophical Hall, first by observing the surprisingly low status and marginal role initially assigned to the Society's Museum and then by recounting the arbitrary nature of the selection of its rooms. We look then at the fitting out of the Society's various facilities, noting once more the marginal position afforded the Museum and from there go onto to look at the allocation of curatorial responsibilities from within the Society's Council. Turning then to the very first lectures and courses we begin to get a feel for what we might come to expect under philosophical and literary mantle. In the section dedicated to considering the no politics, no religion rule we are confronted with a problematic, being the difference between that promoted by the Society, but that is not necessarily the case. When considering the winning entry for the Society's first ever essay prize by Charles Turner Thackrah, who was one of the Honorary Secretaries at the time, we describe a paper that displayed overt Jacobin tendencies. In response, certain members of the Council called for a re-ballot, with the paper undergoing a censorial name change prior to its publication in the first report of the Society. The case of the essay prize winner here serves to caution us against taking too literally the word of the Society, but also indicates the discursive nature of what becomes historical fact. The discrepancy between stated purpose and what in fact turned out to be the case can be no wider than when considering the Museum. The final section of this chapter looks at the business and acquisitions of the

recently opened Museum and the surprised delight of staff as they received the generous donations.

1.2 The Founders

Among the twenty-two individuals who met at the Court House in Leeds on the night of 11 November 1818 was William Hey senior, who chaired the meeting, and Edward Baines Senior.¹⁰ Both had sons present and both, on the surface at least, embodied the political diametric in the town at the time. On the one side was Hey-representing the un-reformed high Tory corporation-while on the other was Baines-pro-reform activist Whig and seasoned critic of the Tory party. Both Hey and Baines were respectively figureheads for the Tory and Whig political communities in the town. The well-known town surgeon William Hey had twice been town Major by the time of the meeting and had proved himself deeply unpopular with the working poor and the reformers of the town. Edward Baines was the notorious editor and owner of the Leeds Mercury and had by then begun to represent something of the political giant killer of the North. His journalistic prowess had embarrassed key Tory ministers in Lord Liverpool's administration-not least Lord Castlereagh, the manager of the Seditious Meetings Act. Already the 'Bainesocracy' had made some pretty big claims on the Society, perhaps most importantly the Leodiensian correspondence, which had appeared in the Whig Mercury rather than the town's Tory Intelligencer. At the time, the broadcast of involvement by the Baines dynasty in this way made a claim on the inception of the Society and by inference, the Society.¹¹

Historically, philosophical societies in the town had been a Tory enterprise, essentially under the management of William Hey and largely influenced and shaped by the Royal Society. So for these reasons, but not least because of the recent humiliating defeats that local Tory magistrates had suffered—in which

¹⁰ For a full list refer to Table 1.1: 290

¹¹ This type of tension may not have strictly been between Tory and Whig. There were significant differences between the politics of a Tory such as William Hey to that of Michael Sadler, who was also present at that first meeting, to have warranted such feelings. Certainly Sadler would have disapproved of Hey's Toryism just as Baines would have and on these terms—although it would be wrong to go too far with this—Sadler may have been closer to Baines' politics than to Hey's.

Baines had had no small part—a show of Tory muscle at the meeting was not only understandable but also necessary if the Society was to be committed to natural philosophy and subservient to the Royal Society. Certainly, the Tory majority at the November meeting in the Court House should be seen as retaliation against the 'Bainesocracy.' Even at eighty-three years and just months from death,¹² William Hey was still a powerful medium. His presence as chair at the meeting alongside the Tory majority sent a powerful message that the traditional seats of power were going to retain as strong a Tory presence within the LPLS as possible.¹³ The pre-history to philosophical activities in Leeds strongly suggests that the traditional Tory seats of power would have preferred to have managed it entirely however this was the first of the independent civic philosophical societies that emerged after Parliament had made changes to the Gagging Acts and Seditious Meetings Act to accommodate the formation of Lit and Phils.

1.3 Membership

As we indicated at the very start of this chapter, the Society's membership system enabled the accumulation of a considerable wealth for the Society, from which it could set about purchasing land and building Philosophical Hall.¹⁴ The proven membership system at the Leeds Library influenced that which the founders of the 1819 LPLS elected to use¹⁵—several of the founders of the 1819 LPLS were also members of the library. When the Society published its first set of regulations—*Prospectus of Preliminary Laws*¹⁶—the membership system was complete and remained unaltered throughout the nineteenth century. It consisted of a proprietary membership, an ordinary membership level—or 'rank' as the Society referred to them—an honorary membership and a corresponding membership. In later years—as the Society grew—it increased the numbers per

¹² He would die 23 March 1819.

¹³ We know that eight of the twenty-one present were Tory, while five were Whigs. A further eight are unknown, although of these, it is likely that five were Tory—either because of their families' political orientation or because of their profession—and one was likely to have been a Whig.

¹⁴ LPLS Notebook of draft minutes.

¹⁵ LPLS Prospectus of preliminary [...] 1819.

¹⁶ Ibid.

membership level. To acquire proprietary membership an individual needed to buy a £100 share in the Society—or 'ticket' as it was referred to. The Society's *Prospectus of Preliminary Laws* states that this was specifically for the building of Philosophical Hall '[t]hat such individuals as contribute one hundred pounds towards the erection of a building, shall become proprietary members of this Institution.'¹⁷ Ordinary members needed to purchase a deposit of £3 3s alongside an annual subscription of £2 2s. Only when enough money had been earned which at the time was estimated to be £3,000—and sixty ordinary members had subscribed, would the Society become established.¹⁸

As the Society's first account book shows, this critical mass was achieved in just six months when, by November 1819, the balance for subscriptions totalled ± 3.432 16s 2d.¹⁹ This method of generating the much-needed capital for building Philosophical Hall was useful also for unforeseen measures, such as when a section of the carpentry had been condemned by the Building Committee and more funds were needed to correct the work. Here a call for new subscriptions in July 1820 adequately met that need, as reported in the Leeds Mercury: 'The sum necessary to[sic] the completion to the edifice was [...] £1,200, and the means resolved upon for raising it, was by an additional number of proprietary members, whose shares are £100 each.'20 The Society's Subscriptions and Buildings Account 1819-22 ledger indicates that the project developed in a piecemeal way with little or no forward planning. Entries show that in addition to the proprietary membership a further eighteen subscriptions were created to boost the Society's wealth further.²¹ Alongside the income from the annual subscriptions of existing ordinary members, the Society had generated an extra £2,600 for the building of Philosophical Hall. In this way it was able to raise the £6,150 10s 3d that Philosophical Hall ultimately cost to build.

¹⁷ See law II, LPLS *Prospectus of preliminary laws* [...] 1819.

¹⁸ Law IV of the LPLS *Prospectus of preliminary laws* [...] 1819, reads 'When a subscriptions, equal to the building or purchase of a house (estimated at £3000) is filled, and sixty ordinary members have subscribed their names, the society shall become established, and proceed to form meetings and rules for their regulation.'

¹⁹ LPLS Subscriptions and Buildings Account 1819-1822.

²⁰ Leeds Mercury August 1820.

²¹ LPLS Building committee minute book, 1819-1827.

As we have seen, the membership system was an efficient and productive way in which the Society could generate the large amount of funds needed to progress with the building and fitting out of Philosophical Hall. For members of the Society, there was the air of an investment scheme about it.

A proprietary member's ticket will represent his share in the land and building, and also a share in the moveables [sic]. An ordinary member's ticket will represent a share in the moveables [sic], and such part of the land and building, as may hereafter become the property of the Society in general, by purchase or otherwise. A proprietary share will be fixed, and remain at the original value of one hundred pounds. The value of an ordinary ticket to be declared at the first regular meeting of every year.²²

The tickets were the equivalent of share certificates, and were often inherited. However, we must also accept that the building of such an edifice was based not solely on the practical needs of the Society or on the investment opportunity that it offered. Certainly, to have an investment in the building itself—as the proprietary membership level offered—made a very concrete statement about the status of that member. There existed in Leeds at this time an elite group who, because of their political philosophy, had been excluded from a great deal of the town's management. Involvement in Leeds civic matters, until the Representation of the Peoples Act of 1832, was impossible for Whigs like Edward Baines and John Marshall. It is therefore natural for the well-established Whigs in the town to see the building of Philosophical Hall as being perhaps their first chance to be instrumentally involved in a physical part of civic culture and civic management—the built environment was after all the body of the town. In this way, the internal political dimension to the Society was as much a part of pre-reform politics than it was of localised issues.

As we saw in section 1.1 of this chapter, the right to establish such a society had been politically deeply controversial for the last two years up to 1819. The issue had pitted the current administration—from the House of Lords to provincial

²² Law XV. LPLS Prospectus of preliminary laws [...] 1819.

magistrates-against moderate and radical reformers, not least Edward Baines himself and his Leeds Mercury. Accepting the complexities of this subject, the issue of the philosophical societies had become a central point to the argument. For this reason we cannot see either Benjamin Gott's or John Marshall's activities here as being entirely philanthropic. Instead, we should understand the political leverage that these two were claiming, having invested six times the amount a proprietary member needed to-the equivalent to approximately £40,000 each today. Both were part of the industrial landed gentry's high table, among the richest men in the country.²³ However, Benjamin Gott was an Anglican Tory who, having already served as Mayor in 1799, represented the established un-reformed authority in the town. John Marshall, on the other hand, was a Dissenting Whig, his political career-that would eventually see him returned as MP for Yorkshire-was as yet frustrated and restricted to the columns of the Leeds Mercury.²⁴ Again, as we found earlier with William Hey and Edward Baines, whenever two individuals come to the fore in these early days of the Society, we find political opposition between them. John Marshall's claim on the society was such that he would become the Society's first president, holding that position for eight years, while Benjamin Gott took a similar central role in the Society—laying the foundation stone of Philosophical Hall in July of that year.²⁵

Surprisingly, only eight of the twenty-two founders became proprietary members, the remainder becoming ordinary members. But if we look at that group of eight, several things are clear. Firstly, that while we have argued that Leeds' Whigs continued to make claims on the Society throughout its establishment, by the time it came to the initial membership, the Tories had by far the majority. Secondly, that all of these individuals were highly motivated politicians, with all but one being either a Mayor of Leeds or a Member of Parliament—either pre- or post-parliamentary reform.

Thirdly, a large majority of these individuals-75 percent of them-were directly connected to cloth manufacturing, the key industry of the town. Among

 $^{^{23}}$ At his death in 1845 John Marshall was estimated to have been worth £2.5 million—the equivalent of over £300 million today. See ODNB entries for both Marshall and Gott.

²⁴ Taylor (1865): 411-15.
²⁵ Kitson Clark (1924): 20.

the remaining founders—who became ordinary members—there were a further six Tories and four Whigs, with another four of unknown political persuasion.²⁶

Throughout the various 'ranks' of membership, we see that the Tories represented the majority. Unfortunately, by the time we begin taking into consideration the eighty-two ordinary members of 1819, it becomes too difficult to get enough accurate information for each to make their inclusion here helpful. This is unfortunate, because it is likely that it is among the cheaper ordinary membership where we would expect to see the largest Whig turnout.

What can be said more generally about the membership is that in 1819 proprietary membership was out of the reach of all but the town's wealthy elite. The one hundred pound share was roughly equivalent to £6,600 today. While being a little more inclusive, the ordinary membership level was for the vast majority still unaffordable. The £3 3s deposit was worth approximately £200 today, while the annual subscription of $\pounds 2$ s was equivalent to $\pounds 140$. A highlypaid fine spinner employed in the industrial North at this time, was capable of earning a weekly wage of £2 2s, but this was the very top end of potential earnings for factory workers. The weekly wage for the majority of the country's male labouring workforce was more in the region of 9s per week. Women and children were paid lower still.

The Spirit of Improvement: Philosophical Hall and Town 1.4 Planning

There is at present a very laudable and active spirit of improvement in this Borough, which is cherished and animated by our present enlightened and public-spirited chief Magistrate²⁷

As noted by the Leeds Mercury early in 1819, there was in Leeds a palpable spirit of public improvement and of expansion. Having already considered in the

²⁶ See Table 1.1 & 1.2: 290.
²⁷ Leeds Mercury, 9 January 1819.

first part of this chapter the foothold that provincial voices (not least those in Leeds) had begun to achieve within national politics, this optimism is perhaps unsurprising.²⁸ However, these changes were evident not only in town policy but were made physical within the town's public improvement campaign with the 1819 Society and its Philosophical Hall lauded as part of this changed attitude: 'Among the objects of this nature, may be enumerated the institution for the suppression of vagrancy—the establishment of public baths—the formation of a philosophical and literary society, and the construction of gas works.'²⁹

As noted earlier, George Banks had succeeded John Hill as Mayor in 1818 and quickly became identified as an enlightened and public-spirited individual. He soon became as much a symbol for the town's optimism as the Society and Philosophical Hall were. Historians of Leeds have largely ignored the importance of the change from John Hill to George Banks to the town's administration. For us it is important because it was during John Hill's term as Mayor that Alderman (Christopher) Smith had refused the application by the Society for the lectures on mineralogy in 1817 on the grounds that they promoted blasphemy.³⁰ In an unprecedented show of support, a meeting of over ten thousand radical reformers on Hunslet Moor in June 1819 saw the lead speaker James Mann motioning support for George Banks. The Leeds Mercury's coverage of the meeting described, 'that the meeting should be dissolved, and not adjourned.'³¹ Indubitably, this italicised emphasis drew attention to those terms within the Seditious Meetings Act, which if we recall identified adjournment as being capable of sustaining indoctrination. As such, the act of adjournment and the ability to adjourn became prime indicators for the managers of the Act.³² The Hunslet Moor meeting and its coverage in the press sent out a message that the radical elements of the region would not disrupt nor disrespect the law under the current climate, such was its approval of the town's current administration. In a

²⁸ We must also remember that there was at this time a nationwide recession bringing to Leeds a degree of social instability, notably high unemployment among the working poor and bankruptcies among the merchant and middle classes.

²⁹ Leeds Mercury, 9 January 1819.

 $^{^{30}}$ See Chapter 1, section 1.9.

³¹ Leeds Mercury, 26 June 1819.

³² Report of the Secret Committee of the House of Lords Respecting Certain Dangerous Meetings and Combinations, House of Lords.

way, the installation of George Banks and the subsequent Hunslet Moor meeting are signifiers for a ceasefire of sorts and a willingness to move away from the damaging hostilities that had marked previous years. The public improvement in Leeds that followed, not least in the establishment of the 1819 LPLS and the building of Philosophical Hall, evidences both national and local administrative adjustments and reconciliation between groups. That Banks was a proprietary member of the 1819 LPLS and one of its first Vice-Presidents, underscores the differences between the former and the latter civic administrations.

The improvements in Leeds at this time were much more than an ameliorative to certain needs in the town, but also a corrective to earlier civic mismanagement. Unsurprisingly, we find Whig heavyweights such as Edward Baines and Thomas W. Tottie involved in the various public improvement projects that included public gas works³³ and public baths, as well as the designation of areas in the town for certain types of development, including Park Row. A large portion of the Society's core membership consisted of individuals who had financial interests in the 1819 LPLS. At the time, this included several land and property developers who were benefitting from the public improvements programme in the town, not least the owners of the plot bought by the Society on Park Row.



Figure 1.0. The advert for the plot that would become Philosophical Hall, including details of the owners. *Leeds Mercury*, 10 April 1819.

The building plot for Philosophical Hall had been identified as early as April 1819 and by July the price had been agreed at $\pounds 825^{34}$ with the landowners, W. T. Thompson and Charles Makin. Both Thompson and Makin were proprietary

³³ Chartres and Honeymen, eds., (1993): 80-111.

³⁴ Equivalent to approximately £54,000 today.

members of the Society and several other members had either direct or indirect interests in this way. For example, proprietary member John Cawood won the contract for the masonry work on Philosophical Hall, while he and Newman Cash, T.B. Pease, and Peter Rhodes all had financial interests in the development of areas of the town that included the area around Park Row.³⁵ Such businessmen were part of a group of Leeds land developers who had close involvement in various projects around the town. As historians of Leeds have identified, town planning in Leeds has been largely inconsistent.³⁶ The area that includes Park Row was part of an attempt during the late eighteenth century to create a gentrified 'West End' to the town. However, as industrialisation became increasingly mechanised it became clear that the area suffered from smoke pollution and the more exclusive districts established themselves further out of town.³⁷ By the time the Society bought the plot in Park Row, an area which also included the long-standing Leeds General Infirmary as well as the court

house, much-used by all of the Leeds' organisations including the LPLS, the area had suffered from several decades of uncoordinated development and had been ear-marked under the recent programme of public improvements for redevelopment in the township.³⁸ A notice in the *Leeds Mercury*, dated 10 August 1822 certainly indicates how once built, Philosophical Hall helped establish and define the Park Row area in line with those plans, detailing as it does plans to open up access from Park Row to the town centre 'by forming a spacious street, nearly on a line from the Philosophical Hall to Commercial Street.'³⁹

1.5 The Museum within a Constitutional Framework

The Society's 1819 *Prospectus of preliminary laws* provides the first insight into the arrangement within Philosophical Hall of its rooms and facilities. Valuable is the description of the Society's four 'aids,' which when established would enable

³⁵ Much of the material connected to the activities of the lesser-known members of the Society has been taken from 1817-1821 runs of the *Leeds Mercury* and to a lesser extent the *Leeds Intelligencer*.

³⁶ Generally, see Fraser (1980) and Chartres and Honeyman (eds) 1993.

³⁷ Beresford in Fraser (1980): 72-112. Also Briggs (1963): 139-83.

³⁸ LPLS Conveyance of property on Park Row Leeds, 1819.

³⁹ Leeds Mercury, 10 August 1822.

the LPLS to achieve its goals. Prioritised accordingly, it is unsurprising that the first was the building of Philosophical Hall.

*First, then.*⁴⁰ It is intended, (if the necessary funds can be obtained) to erect a building expressly suited to the wants of the Society, because hired rooms cannot expect to offer the necessary accommodations.⁴¹

Having ably established this, the Society then committed itself to the fitting out of a laboratory, to establishing a library 'more strictly scientific than any public collection now in Leeds' and finally—while 'keeping in mind the state of funds'—the establishment of a museum. The low priority given to the museum within the Society's aids—last in the Society's list and on an 'as and when finances dictated' basis—is surprising. In fact, it was the Society's desire that the museum would be established 'by degrees.'⁴² Certainly, the Society at this time had an altogether less ambitious trajectory in mind for the museum than it seemingly took. Generally, the strikingly humble beginnings of the museum within the Society, have been missed by the current literature.⁴³

It is unfortunate, considering the extensive laws and regulations that the Society drew up, that it did not make a thoroughgoing and official mission statement. Had it done so, this might have helped to clarify the role that the founders envisaged for the museum within the Society. Of those that do shed light on the role of the museum within the Society and within Philosophical Hall, the primacy of lectures—of presentation followed by discussion—is apparent. This supports the argument that the establishment of a lecture hall within Philosophical Hall was prioritised above other proposed facilities and activities. The lecture room was the largest room in Philosophical Hall and was designed specifically for that purpose. In fact, it was the only room in Philosophical Hall whose function was preconceived. In contrast, the allocation of a room for the library, laboratory and museum were left until the building was almost complete

⁴⁰ Original emphasis.

⁴¹ Generally here, see LPLS *Prospectus of preliminary laws* [...] 1819.

⁴² As it was put in the LPLS *Prospectus of preliminary laws* [...] 1819.

⁴³ All accounts mentioning the Leeds Museum assume a primary role to the museum within the Society. Specifically, Kitson Clark (1924), Brears (1989), but this also impacts on other historians who have referred to the museum.

and were then selected during a visit by the Building Committee as they made an inspection of the building.⁴⁴ Kitson Clark reported that at an undated meeting '[t]he Hall was examined on a day in March not specified. The Large Room above the stairs was selected for the museum, the Gallery for the Library.⁴⁵ This helps capture the perfunctory air and arbitrary nature to the selection of rooms for the Museum. In fact, the Council Minutes for March 1821 noted that at the undated meeting there were insufficient numbers to reach quorum, so the decision was deferred, but then was never formally reconsidered and resolved, so the original decision stood.⁴⁶ As we have noted earlier with the lack of budgetary control connected to the building of Philosophical Hall, there seemed no proper planning, even forethought, ascribed the allocation of rooms outside that of the lecture hall, thus reminding us of the marginal role given to the Museum. Within the Leodiensian correspondence, we find a section that sketched out the ambitions of the Society—an unofficial mission statement—made at the very brink of action. No mention is made nor any credence given to a museum in the passage and in expressing how the activities of the Society should be beneficial to commercial and industrial Leeds-and how the manufacturers have 'so much occasion for a practical knowledge of mechanics and pneumatics; the medical men must understand chemistry and botany; and the private gentleman should be generally acquainted with the circle of the sciences',⁴⁷ we see clearly the forefront position reserved to lectures and to demonstrations.

This reiterates the importance of the lecture room, but one could argue also brings into focus interest in a laboratory. Although the language around the role of the laboratory seems fixed to the doing of experiments, it is not a hard argument to make that its role was in fact broader, including the preparation of materials for demonstrations within lectures. As we have noted already, the laboratory was the Society's second aid: '*Second*. To establish funds for the purchase of a useful apparatus for experiments in astronomy, chymistry, mechanics, &c.'⁴⁸ We know that in January 1820—one year prior to the selection

⁴⁴ See the Society's report for March 1821.

⁴⁵ Kitson Clark (1924): 25.

⁴⁶ LPLS Council Minutes, 1821.

⁴⁷ Leeds Mercury, 24 October 1818.

⁴⁸ LPLS *Prospectus of preliminary laws* [...] 1819.

of rooms we described earlier-the Society set two things in motion. First, a letter was sent to all members requesting papers to be submitted for the first lecture, and second that it was resolved '[t]hat a sum not exceeding £350 be appropriated for the purchase of apparatus.⁴⁹ This was a large sum, equivalent to over £25,000 today. While it was planned as early as 1820 that John Marshall bought the apparatus, by June 1821, when the first of the lectures were approaching, the apparatus had yet to be acquired. In response, a committee for the purchase of apparatus was formed that included Atkinson the Curator as well as Edward George and William West, the two who were undertaking the upcoming lectures. £60 was immediately called for the purchase of electrical apparatus and it was resolved that 'the sum of £12 be allowed the Committee for travelling expenses, should the Committee require it.⁵⁰ Contributing to the momentum to equip both the lecture hall and the laboratory with apparatus in readiness for the opening of business at Philosophical Hall, a Sub-Committee of Apparatus was constituted to superintend the construction of furnaces in the Lecture-room, and the completion of the laboratory.⁵¹ Rather than being two independent facilities, the above demonstrates the extent to which the laboratory served the activities in the lecture hall. An accompanying Leeds Mercury notice to the first lectures described how 'an extensive and valuable apparatus and powerful Galvanic battery have been provided for the purpose.⁵²

In all, the impression is that the museum and library were largely peripheral concerns alongside the lecture hall and laboratory. The library was intended to support the Society's core activities: '*Third*. To procure (as funds may allow) a library, more strictly scientific than any public collection now in Leeds.'⁵³ The expenditure on the library was considerably less than that on the apparatus. In 1821, Council Minutes report that 'the sum not exceeding £50 be appropriated from the funds of the Society for the purchase of books, to form the commencement of a permanent library for the use of members.'

⁴⁹ LPLS Council Minutes, 14 January 1820.

⁵⁰ LPLS *Council Minutes*, 1 June 1821.

⁵¹ LPLS *Council Minutes*, 8 June 1821. It appears that the Sub-Committee of Apparatus consisted of the self-same members of the Committee of Apparatus.

⁵² Leeds Mercury, 21 July 1821.

⁵³ LPLS Prospectus of preliminary laws [...] 1819.

Certainly, the wording of the Society's fourth and final aid that described the museum suggests that like the library, the museum had a more subservient position:

Fourth. (And keeping in mind the state of funds always in view) to form by degrees a museum, consisting more of what is curious and useful, than of what is elegant and expensive.⁵⁴

Like the library, the museum's importance is reflected in its more modest expenditure: 'the sum of £90 be applied to the fitting up of the Museum, at the disposal of the Curator.'⁵⁵ The Society's first printed report, produced at the close of the second session (1822-1823) provided a twelve-page description of the lecture programme, with a paragraph on the last page making light mention of 'a museum, daily growing [and] a library whose unfurnished shelves cast a melancholy reproach on the limited finances of the Society.'⁵⁶

If the evidence above asks that we rethink what we know about the emergence of a model nineteenth-century civic museum in industrial Britain, then it does so also for what we know about the emergence and role of the nineteenth-century curator. By the start of 1819 the founders met again to agree upon the first Officers and Council, among which was the position of Curator and Librarian. The former pupil of William Hey senior, John Atkinson (1787 – 1828)—who was at the time an LGI surgeon—was elected. Turning to the Society's *Laws and Regulations of 1820*, we learn that '[t]he curator shall have the superintendence and arrangement of the books, apparatus and museum of the Society [...].⁵⁷⁷ When referencing the role and responsibilities of the Curator, this perfunctory tone—which focuses more on the superintendence of the Society's property—is found throughout the *Laws and Regulations* as well as the Council Minutes. Indeed, the responsibilities of the Curator extended to the real estate of the Society and the building itself. The Curator was placed within a Committee of

⁵⁴ Ibid.

⁵⁵ LPLS Council Minutes, 8 June 182.

⁵⁶ LPLS Annual Report (1822-1823).

⁵⁷ Regulation 17, LPLS *The Laws and Regulations of the Leeds Philosophical and Literary Society of Leeds, 1820.*

Property, which consisted of only three individuals—his being the only static position in the committee, with the two others' posts re-elected at the first session of each year. The role of this committee was to 'keep a correct catalogue and account of all the books and other personal property of the society.'⁵⁸ It was the responsibility of the Curator to report on the state and value of the Society's personal property at Council and Annual meetings. Just as we found with the museum, the original roles and responsibilities of the Curator at the Society were substantially different from those to which they became later in the century. Additionally, we must remember that on the establishment of any of the 1820s philosophical societies, the Curator was an honorary position.

Here we are very much at the dawn of what would become the archetypical character of the museum curator. This is a symptom—although not exclusively— of the literature connected to nineteenth-century museums and museum practice prejudicing the late Victorian period. As we shall see later in this thesis, the role of curator changes a great deal as it progresses through the century, from these amateur beginnings to a more professionalized status. For these reasons, the curator described above differs substantially from standard accounts of nineteenth-century museums and curators.

1.6 The Opening of Philosophical Hall: Introducing Lectures and Essays

In April 1821, the members of the Council closed the first session of the Society by holding their first meeting in Philosophical Hall.⁵⁹ The Society had earlier established an award of three guineas for 'the two best essays upon literary and philosophical subjects,' which as noted earlier was circulated as a letter to all members.⁶⁰ The first winner of the essay prize was Charles Turner Thackrah, who was one of the Honorary Secretaries at the time, with a paper titled *Servare*

⁵⁸ See regulation 47 of LPLS *Prospectus of preliminary laws* [...] 1819.

⁵⁹Even though papers had been presented at the Society from the start—one year earlier—these had been under the management of a temporary association established for this purpose. See LPLS *Notebook of draft minutes 1819-1823*.

⁶⁰ LPLS Council Minutes, 1820.

modum, finemque tenere naturamque sequi. His would be the first paper presented in Philosophical Hall.

In addition, the Society established a prize of ten guineas for the best course of no less than five lectures. The awards were intended to 'encourage rising talent, and the regular production of literary papers,⁶¹ the first of which was a collaborative from ordinary members E.S. George and William West on Chemistry. Both George and West had strong connections to the development in Leeds of chemical science. George was partner in his father's company, Messrs. Thomas George & Sons, who provided chemicals to the manufacturers of the town, such as dyes and bleaches. As an analytical chemist, William West became a leading lecturer in the town, notably as lecturer on chemistry at the Leeds School of Medicine for fourteen years (1831-45). An F.R.S. in 1846, West was secretary for the Anti-Slavery Society in Leeds and an active member of the Peace Congress, as well as Councillor for Hunslet from 1844 to 1847 and town councillor in 1850. As well as F.L.S., George would first become the Society's Secretary from 1825-8 and then its second Honorary Curator in 1828.⁶²

The needs of the lecturers at the Society, such as George and West, influenced greatly the acquisition of books to the library, as it also did to the purchase of apparatus. Of books donated to the library, mention is made in the report to a copy of J.F. Daubuisson's *An account of the basalts of Saxony* of 1814, William Thomas Brande's 1819 *A Manual of Chemistry* and Claude-Louis Berthollet's 1804 *Essay on Chemical static's*, all donated by ordinary member Joshua Muff—a Leeds-based fire and life insurance agent. Ordinary member John Carr—son of the LGI surgeon Charles Carr—donated 'two celebrated French works on conchology and plants' while John Heinaman donated Thomas Thomson's 1820 *A System of Chemistry, in Four Volumes*.⁶³ Upon selecting the course on chemistry by George and West, the Committee in 1821 provided the large sum of £150—equivalent to over £12,000 today—for the purchase of

⁶¹ Law xii of LPLS Prospectus of preliminary laws [...] 1819.

⁶² George's premature death (at twenty-nine) prejudices somewhat his attainments, although those given indicate a great deal.

⁶³ The LPLS copies of the Daubisson, the Brande and the Thomson still exist and can be found in the Leeds University Library, Brotherton Special Collection.

apparatus 'requisite for the lectures of Mr. West and George.⁵⁴ Both George and West would remain actively engaged in chemical experiments in the laboratory at Philosophical Hall, booking the use of the apparatus for months on end.⁶⁵ Considering the predominance of chemistry lectures, and the high proportion of natural history specimens being donated at this time to the museum—see section 2.5.2 below—it seems that at this time these subjects were favoured. This was perhaps more by circumstance than design and was a state not welcomed by all members. Certainly, by the end of the following session the Council felt it necessary to report that:

[...] the intention of its original promoters, to make it subservient to the cultivation of every kind of valuable knowledge, has been fully realized; and the objection of those who anticipated, that it would soon become merely an Association of Chemists and Naturalists, has received a gratifying refutation.⁶⁶

1.7 A Note on the "No Politics, No Religion" Rule

It is well known that those philosophical societies that were formed—or indeed were reformed—from 1819 onwards, included the clause 'no politics or religion' in their regulations. We have argued in the first part of this chapter that this was a regulatory compromise, reached after the tough wrangling of 1817 onwards between the embattled societies and local magistrates. As Inkster identifies, the historiography generally explains the no politics, no religion rule as a symptom of conservatism.⁶⁷ Perhaps this reflects predominance in the historiography towards an interest in polite, cultural activities? However, Inkster goes on to suggest that this was born out of a matter of survival for the societies. Given the content of the first part of this chapter, he was right to do so. While speaking specifically of the late eighteenth- and early nineteenth-century Askesian Society, Inkster's assessment of the balance of interests within the earlier

⁶⁴ LPLS Council Minutes, 1821.

⁶⁵ LPLS Council Book, 1821.

⁶⁶ LPLS Annual Report (1822-1823).

⁶⁷ Inkster (1979): 195.

philosophical enterprise is worthy of consideration at this point. In the first instance, Inkster's description of a union of commercial, scientific and political activities that were bound into religious cores⁶⁸ aligns with the interests and activities of the 1819 LPLS more so than those which have emphasised the role of polite knowledge within the societies.⁶⁹ Morrell has cast light on the subtleties between ornamental and utilitarian enterprise within the early nineteenth-century institutions, as well as revealing difficulties with the paradigm of polite, cultural-based knowledge.⁷⁰ Indeed, Derek Orange couldn't help but reveal an active and complex political milieu when describing the Newcastle Literary and Philosophical Society.⁷¹ Having also demonstrated earlier in this chapter the political leverage that the philosophical societies had gained around the Seditious Meetings Act, it becomes more and more difficult to accept that politics and religion were off limits for the philosophical societies from 1819 onwards—as both seem to have been inextricably interwoven into philosophical enterprise.

As his essay would be the first not only to win the LPLS' essay prize but also the first to be delivered at Philosophical Hall, the title chosen by Thackrah would have been important. As we noted above, Thackrah's title—*Servare modum, finemque tenere naturamque sequi*—had its origins in the work of the first-century Roman Poet Lucan's *Pharsalia* (commonly known as *The Civil War*).⁷² However, Thackrah's title is a small fragment of Lucan's original⁷³ and in fact is the same used by a later author—the French enlightenment politician and philosopher Marie-Jean-Antoine-Nicolas de Caritat (known as the Marquis de Condorcet).⁷⁴ Condorcet had used the abbreviated version for the preface of his internationally popular 1783 *Vie de Turgot* and it was this version that Thackrah used for the title of his 1821 paper. It is likely that Condorcet's use of the quote

⁶⁸ Inkster (1977).

⁶⁹ A legacy created by Shapin (1972) and Thackray (1974).

⁷⁰ Morrell in Inkster and Morrell (eds) (1983).

⁷¹ Orange in Inkster and Morrell (eds) (1983).

⁷² Lucan was the Roman poet Marcus Annaeus Lucanus (39 AD–65 AD); he wrote *Pharsalia* in the early 60s AD.

⁷³ *Hi mores baec duri immota* Catonis, *Secta fuit, servare modum, finemque tenere, Naturamque sequi, patriaeque impendere vitam*—This way, this creed unmoved stern Cato drew; To keep the mean, and hold the end in view; Nature his guide, his life his country's own; Born for mankind, and not for self alone.

⁷⁴ Who used *Servare modum, finemque tenere naturamque sequi*— To keep the mean, and hold the end in view; Nature his guide.

was in itself homage to Benjamin Franklin—who had prefaced his 1734 'On Constancy' article with the Lucan quote.⁷⁵ Condorcet and Franklin were close friends and correspondents. Like Thomas Jefferson, Franklin had spent a great deal of time with Condorcet during his eight years in Paris. As the two advertisements indicate below, the connection between Franklin and Condorcet would have been common knowledge to someone such as Thackrah.⁷⁶

As an instrument of the revolution in France and especially for his part in the suspension of Louis XVI, Condorcet's was an icon not just for the Enlightenment but also for republicanism, revolutionary politics and Jacobinism. At the time it was first published, Condorcet's *Vie de Turgot* was considered radical '[...] very fearce, [sic] and [was] forbad to be read under the severest penalties.'⁷⁷ However, its polemic political content proved popular and its circulation was wide. Thomas Carlyle wrote to John Stuart Mill in 1835 asking; '[a]mong the Books needful one of the needfullest, as I now bethink me, is on your own shelves: Condorcet's *Life of Turgot*. Pray bring it in your pocket.'⁷⁸ *John Bull's* 1826 vitriolic attack on Liberalism and Jacobinism not only offers an extreme opinion of the influence of Condorcet but also of the various societies and institutes at the time:

[...] we should be disposed to let them bray out their lungs in the mephitic air of democratic lecture rooms [...] It is, in short, but another garb for JACOBISM, which the 'wear and tear' of the old one, from the workshops of Voltaire and Condorcet, has rendered too threadbare to conceal 'the ghastly form within'⁷⁹

Often advertised alongside writers of similar political interests, such as Franklin, translated copies of Condorcet's works would have been easily available for Thackrah while he trained in London between 1815 and 1816 and when later on he practiced as surgeon in Leeds.⁸⁰ Thackrah's ongoing devotion to study had

⁷⁵ 'On Constancy,' Benjamin Franklin, *The Pennsylvania Gazette*, April 4, 1734.

⁷⁶ For example see *Morning Chronicle and London Advertiser*, 4 August 1783, *Courier and Evening Gazette*, 12 November 1794, *Leeds Mercury*, 16 January 1819.

⁷⁷ *The Public Advertiser*, 22 September 1786.

⁷⁸ Letter from Thomas Carlyle to John Stuart Mill, 9 March 1835, *Carlyle Letters*, Vol. 8, 71-72.

⁷⁹ John Bull, 10 April 1826.

⁸⁰ Taylor (1865): 344-48.

distinguished him as a scholar not only of medicine but also of Latin and English verse.⁸¹ While on the one hand, it is likely that Lucan's original verse would have been known to Thackrah, it is highly unlikely that his use of the abbreviated version would have been made in naivety of the connection with Condorcet and the political connotations it thus represented. Just days after the ballot for the winning essay was held, an extraordinary meeting was called in which the Council received complaints connected to the proprietary of the selection and 'of considering the proprietary of another ballot on the proposed Introductory Essay,'⁸² While this didn't happen, by the time the essay was published, the title had been changed to *An Introductory Discourse*.⁸³

Historians interested in philosophical societies and museums still by and large continue to understand the no politics, no religion clause as a symptom of conservatism and politeness—a mechanism for cultural cohesion.⁸⁴ Perhaps the efficacy of this interpretation has been over-stated. As we have already observed, those few historians that do endeavour to detail a society's activities find themselves explaining complex political and religious issues⁸⁵—although disappointingly none do so for the 1819 LPLS.⁸⁶ Furthering Inkster's position, I submit that the no politics, no religion rule was merely a licensure clause that does not accurately reflect the intention or the activities of the societies. As the subsequent chapters in this thesis begin to detail the various lectures and papers presented from 1821 onwards, we will be more able to thoroughly test this argument. The Thackrah example given above shows that political interests were evidently a part of the philosophical enterprise. While we are in no position to study in depth the content of Thackrah's paper, the extract below indicates that the Jacobin spirit which I argue was embodied in the title predicated its content:

To the existence of Philosophy, however, a republican, or a mixed

⁸¹ Taylor (1865): 345.

⁸² LPLS Council Book, 1821.

⁸³ Thackrah (1821).

⁸⁴ Royle (1971): 306, states that the clause also extended to the later mechanics' institutes.

⁸⁵ See Orange in Inkster and Morrell (1983): 205-231.

⁸⁶ Historians who have looked specifically at the 1819 LPLS, such as Kitson Clark (1924); Steele (1978); Brears (1989) and Alberti (2002), accept the clause as being a symptom of politeness and conservatism.

government, is not requisite. Science has lived under despotic sway [but] the ardour and perseverance, necessary for the cultivation and regular advance of knowledge, cannot flourish under the insecurity of absolute governments; and the energy of the mind, which supports these qualities, decays without liberty of opinion.⁸⁷

Naturally, another area in which this argument may be tested is in the activities of the Museum, the initiation of which we turn to next. However, as following chapters will demonstrate in greater detail, the contingent element to the development of the Museum and its collections presents difficulties when aligning its activities with the aims of the Society.

1.8 The Museum within Philosophical Hall

To the delight of the Society's Council and while work continued on Philosophical Hall, the Museum began receiving its first donations as soon as the Society had sent out a call for essay papers. The report submitted at the end of the Society's first session 6 April 1821 spoke of an enthusiastic response.

The society will also learn with the same unfeigned feelings of delight as I now state them, that we have within the last two months received in presents an acquisition to our personal property of several hundreds of pounds; and though the greater part of these donations have been given by members of the Society, still we have created an interest in many who are without its hale ⁸⁸

It is noteworthy that John Atkinson, the Society's first Curator, takes a prominent position in the report not only for his work on the Museum but also as the key donor for that session. The report only hints at the extent of Atkinson's donation. The full extent of this donation consisted of 135 taxidermy specimens of British birds, two taxidermy Fallow deer, a taxidermy Panther, a number of unspecified smaller quadrupeds, an extensive hortus siccus of rare British plants and a

⁸⁷ Thackrah (1821): 7-8.

⁸⁸ LPLS General Minute book, 1821.

collection of two hundred etymological specimens.⁸⁹ An extensive collection such as this, donated at the establishment of a museum by its first curator is mirrored elsewhere. When the 1794 Hull Literary Association reformed itself in 1822 as the Hull Lit. and Phil. Society, their first curator, William Hey Dikes donated a substantial collection of fossils, shells and birds.⁹⁰ This was true for other societies such as the Yorkshire Philosophical Society established in 1822 and the Scarborough Lit. and Phil. Society established in 1827.⁹¹ Atkinson remained Curator at Philosophical Hall until his death in 1828, when the LPLS bought his personal collection of 1800 British insects.

Robert Layland, who at the time was a corresponding member based in Halifax, made a donation of natural history material that included a hortus siccus of rare plants native to Halifax, as well as 80 mosses from the Halifax area. In 1827 Leyland would make yet another donation, at around the time he was made Honorary Secretary of the Society. Edward George made a donation of an extensive collection of minerals. While at this time George was an ordinary member, he would become the Society's Secretary from 1825 to 1828 and as mentioned earlier, would go on to succeed Atkinson as Honorary Curator in 1828. Mirroring the observations made in the previous chapter, George donated a substantial collection of over seventy-five rare taxidermy specimens to the Museum prior to his appointment as Honorary Curator. These included a Ceylon Leopard, various toucans, macaws and other exotic birds.⁹²

While natural history specimens predominated the donations at this time, some scientific instruments were also acquired, such as two dental instruments (extraction keys) and a letter explaining their use donated by town surgeon and ordinary member Dr Adam Hunter in September 1821. At this early stage we find that this relationship between the act of donating and the gaining of positions on the Society's Council, concurs with the patterning of donations more broadly. By and large, donations at this time came from among the Society's membership. Those that did not were directly connected to members,

⁸⁹ LPLS Donations to the Museum of the Leeds Philosophical and Literary Society, 1821-50.

⁹⁰ Knell (2000): 64-66.

⁹¹ Alberti (2000); Brears and Davies (1989); Knell (2000).

⁹² LPLS Donations to the Museum of the Leeds Philosophical and Literary Society, 1821-50.

such as the donation of a polar bear skull in November 1821, which had been given by a Mr Buchanan, surgeon from Hull, to Adam Hunter.⁹³

Buoyant from the encouraging start, the Council at the end of 1821 portentously reported that it anticipated that in the course of the following years the Museum '[...] will afford a permanent fund of gratification and instruction.'⁹⁴ As an indication of the contingent growth of the physical Museum within Philosophical Hall, as well as a fitting end to this introduction to the Museum, the Council resolved in February 1822 that 'a power be vested in the Curator to dispose of such duplicates in minerals, shells and other subjects of natural history belonging to the Society as he may consider likely to promote its interests.'⁹⁵ That the Museum had surplus collections by 1822, and that it was interested in trading these with other collectors, says a great deal about the steep growth to this side of Society's activities and is considered further in the following chapter. This steep trajectory was unexpected and soon brought with it increased demands on curatorial time and resources.

Mr Thos, Robinson [...] has lately returned from Russia, and brought with him two fine young bears alive, about six months old [...] which he has presented to the Leeds Philosophical Society; and we are informed they are destined to compose a part of the natural curiosities in the museum⁹⁶

We cannot be sure if the two bear cubs' fate did indeed lay with the taxidermist. Nonetheless, their example illustrates well the uncoordinated and often unfeasible nature to the flow of material being donated to the Museum. This would continue throughout the nineteenth century and precipitously stand in contrast to the low constitutional priority the Museum continued to have within the Society.

⁹³ LPLS *Council Book*, 1821, University of Leeds.

⁹⁴ LPLS General Minute book, 1821.

⁹⁵ LPLS Council Book, February 1822.

⁹⁶ Leeds Mercury, 23 August 1823.
Here lies the central problematic for the Society: the lower position of the Museum constitutionally and the resources thus allocated, in differentiation to the Museum's activities in fact and the higher demands thus created. Unresolved, this became the Society's most lasting and injurious inner tension and the source of some of its most divisive conflicts and preoccupations. From where they stood at this point in the narrative, during the first years of the 1820s and at the very start of the Society's and Museum's long lives, such tensions would rapidly lead to insecurities and doubts concerning purpose and aims, and would ultimately cause deep internal rifts that became decisive in shaping the eventual relationship between the Society and its Museum.

1.9 Conclusion

This chapter has argued that the attitudes of parliamentarians towards the growing independence of intellectual and political activities within the manufacturing districts affected when the philosophical societies emerged. This interpretation requires delineation between what I term as pre- and post-1819 societies. Among the pre-1819 societies were societies with royal charter. As such, these were largely not part of the growth of scientific enterprise within the manufacturing districts and were not affected by parliamentary legislation. Importantly, many pre-1819 societies without royal charter reformed themselves sometime around the 1820s and became in name and in constitution, part of the philosophical societies movement of the 1820s.⁹⁷ Significant examples here would include Bath, Bristol, Hull and Newcastle. If its records had survived, it is likely that they would have shown that the Manchester Lit and Phil had done the same. A key distinction between pre- and post-1819 philosophical societies is that the latter built themselves their own halls, within which they established their own society museums. This is typically not a feature of pre-1819 societies to the degree that we may consider this a product of the new model. Therefore, the history of the nineteenth-century museum movement is embedded in the

⁹⁷ Robert Bourgat provides a valuable comparative account from an international perspective in his analysis of the late seventeenth century University of Perpignan's natural history collection. Here he describes the shifts from university collection, to learned society and eventually to municipal museum. See Bourgat. (1995):73-80.

history of the post-1819 philosophical societies, but is more closely aligned to the power struggles between parliament and provincial philosophical enterprise.

While legislation may have impacted on the constitutional frameworks of the post-1819 societies, especially regarding the no politics or religion rule, this chapter has argued that for Leeds this was a licensure clause included for convenience, which does not accurately represent intent and was not adhered to in practice. Historians who have previously dealt with this issue have assumed that this clause was a symptom of conservatism, sending the histories of these societies down a path that has overstated ornamental and polite knowledge. This chapter argues that this was not the case in Leeds. By revealing the centralised role that Leeds had taken in the unprecedented victories over the then current administration, the Leeds case illustrates well how such societies were both polemic and political. However, in detailing a little of the individuals involved, this chapter also attempts the difficult task of creating a more nuanced representation of the ground between established authority and radicalism in early nineteenth-century scientific enterprise. While parliamentary attention concerned radical thought and action, we must admit that this chapter has not been able to determine whether natural science was also a target per se or an accidental victim of driftnet legislation. The Jacobinism we have argued is evident in the first paper delivered in Philosophical Hall makes clear the intent that for key individuals the 1819 LPLS was not going to be confined to apolitical natural philosophy. Nonetheless, among the activists involved in the 1819 LPLS, such as Thackrah, we do not find radicalism, either political or scientific. Instead we are forced to create a more moderate, nuanced characterisation of such activists.

The final realisation of a physical edifice and the emergence of the LPLS Museum from among this matrix was a significant achievement for similar groups across the country that harboured the same ambitions, something little touched upon above. To take this one step further—it could be argued that the institution of the LPLS in 1819, having become embroiled in changes to legislation sympathetic to the Society's cause, made it a test case for others to follow. Mindful not to overstate the original title given to its first lecture in

Philosophical Hall, we may go so far as to suggest that it was a particularly bold statement considering the context out of which the Society had emerged. However, that the Thackrah paper undertook a moderating title change before it was published reminds us that the Society's philosophical enterprise was altogether more complex than simply being a reaction against the seats of scientific authority. Certainly, while elements of the philosophical enterprise in Leeds stood opposed to the ruling elite locally and nationally, some of that elite constituted part of the Society.

Even at this early stage of analysis, the element of contingency to the history of the Museum begins to loom large. It reminds us that the Society was not only a complex web of internal forces but was itself caught in webs of external forces. Already the Society was not as much in control of its activities as it would perhaps have liked.

Part II

Museum Practice in an Industrialising Town

Chapter 2

Acquiring and Preserving the Natural World

2.1 Introduction

This chapter, and the two that follow, chart the growth of the scientific collections of the LPLS's new museum, and the changing significance of those collections for the Society, the citizens of Leeds and the wider scientific community, in the decades around 1850. What will concern us in particular in this chapter is how those collections came to acquire the objects they did and to attain their distinctive character. The approach that will be taken is one that sets out to describe a collection not by studying its constituent parts but rather by attempting to reveal the motivations behind its creation and relies on the idea that collections, their establishment and development, are epiphenomenal to other values, relations and forces. By concentrating on uncovering these other forces, we stand a chance of understanding the Leeds collections (or indeed collections at other museums) in terms of how they were the manifestations of complex and much broader sets of values and motives that were written into the psychology of the individuals involved in this endeavour. This offers a different approach to traditional descriptions of museum collections, not least because it treats the object or collection as an index to hitherto out-of-reach meanings, thus aiming to connect museums and their collections to sociological phenomena. By emphasising specific objects, the recent use of object biography by scholars has strengthened our synchronic view of collections. Notwithstanding the compendium insights that have emerged thus, one might argue that a metanarrative or diachronic view that is facilitated by these discrete and discursive synchronic narratives remains as yet largely out of reach. Certainly we keep this in mind and what this chapter offers is the idea that a museum and its scientific collections developed and grew in highly contingent ways; ways that disrupted the normal and planned processes which its governors had envisaged and expected.

The previous chapter has noted that as early as 1822 the Museum's first Curator, John Atkinson was charged with the responsibility of creating order from the first objects donated, to make it a collection. Atkinson was clearly very active in this way, but alongside putting his house into order he took an interventionist approach to the collecting enterprise. To these ends, the LPLS's Council gave Atkinson leave to use duplicates from within the collection to trade with other collectors and so acquire different specimens.¹ The ebb and flow of specimens thus created, one might call it an economy, as well as the management of this economy, will be an important theme in this chapter.

Starting, then, with an introduction into the scientific collections, which will include overviews of the categories and the sorts of numbers involved in collecting at the very start of the Museum's life, the first section of this chapter will then introduce the kinds of objects being acquired and the categories these fell into, or indeed created. The main draft of the chapter follows when we consider who the collectors were and what the Museum's local, national and international collecting networks looked like. Here we unpick the milieux and economies around key objects and consider the potentially fresh meanings we uncover. Finally we will illuminate more of the world of the collector by considering the logistic and pragmatic issues surrounding growing field collecting practices, including preservation problems, shipment, and the costs of specimens. In this way we are able to get closer to the processes of commodification, the boxing, packing, labelling, mailing and pricing that underpinned this economy as well as how natural history was made and knowledge produced.

Introducing the Collections

The reports of the LPLS indicate a surprisingly healthy rate of acquisitions for the Museum from the start. As has been noted in the previous chapter, the report at the end of the LPLS's first session described numerous acquisitions,

¹ LPLS *Council Book* February 1822.

explaining that 'it would be highly gratifying to specify them [the donors], but their number is too great.'²

The earlier reports of the LPLS detailed all acquisitions under the generic heading *Donations: To the Library and Museum received since the Publication of the last Report.* The subsequent listings then grouped acquisitions under the headings 'Books' or 'Museum'. Under 'Museum' all types of object were listed uncategorised—a geological specimen next to an archaeological specimen, next to a zoological, etc.—with the details of the donor noted alongside. Where objects or collections were purchased by the LPLS, this was also stated, as were anonymous donations—but as can been seen from the excerpt from the Report of the LPLS for the sessions 1824-1825, there was no attempt to organise the objects received.

-Loonerson and	MUSEUM.	

Fossils from the Bath Oolite,Mr. Miller, Curator Bristol Society.
A small Tortoise,*Mr. E. K. Bullman.
Specimens of Rock,
Thirty Specimens of Fossils from Calcareous Grit and Pickering Clay; Carbonate of Strontian and Sulph. of Barytes, from Merrifield, near Pateley Bridge; Red Oxyd of Lime,
Fifty Fossils from the Oolite,J. Pickering, Esq. Malton.
Forty-five species of Lichens, and Fourteen Crustacee,
Two Fossils,
Many fine Fossil Elephant's Teeth, &c. J. Whitchurch, Esq. Surgeon, Melton
The Skin of a Wild Cat, from Loch- Tay,
Twelve Specimens of Corals, *Mr. Teale, Jun. Surgeon, Leeds.
A Mole Crickett; Carb. of Stron- tian, with Sulphate of Barytes, Mr. Samuel Johnson, Surgeon, found in Merrifield Lead Mines, Knaresbro'.
120 Roman Coins, an ancient Quern, John Maude, Esq. Moorhouse, near &c. &c
Two magnificent Corals; a Shark's Jaw, and a variety of subjects in Natural History, from St. Domingo,
Several ancient Copper Coins, a W. M. Maude, Esq.
A fine collection of Fossils, from the Low Moor Iron Works,

Figure 2.0. Report of the LPLS for the sessions 1824-25

² LPLS *General Minute book* Friday, April 6th 1821.

As the collections grew the reporting of acquisitions changed. For example, acquisitions in the report for the session 1847-1848 came under the heading 'Donations and Additions to the Museum', under which were the sub-headings: 'Geology and Mineralogy', 'Zoology, &c.', 'Miscellaneous', and 'Library'. By 1879 these headings had developed further to include 'Geology and Mineralogy', 'Zoology and Botany', 'Archæology and Ethnology', 'Technology', 'Publications', and 'Periodicals'. Under this last category were the sub-categories 'Weekly', 'Bi-monthly', 'Monthly', 'Quarterly', and 'Annually'.

The development of categories and sub-categories in this way undoubtedly indicates improvements made to the overall curation of the collection and the beginnings of a more systematic approach to collecting. These improvements are reflected in the changed role of the curator within the LPLS. By the time of the 1847-1848 report there no longer was one curatorial post within the LPLS but four —one in geology, one in zoology, one in 'Antiquities and Works of Art, &c' and a sub-curator. Again reflecting improvements in the way in which the museum was being managed, the sub-curator's position noted here-filled at that time by Henry Denny—was the first paid curatorial position of the LPLS—and at $\pounds 120$ a year (equivalent to approximately $\pounds 11,000$ today) the most highly paid. However, other than the sub-curator, all other curatorial positions were still honorary/voluntary positions. By the time of the 1879-1880 report we note that the honorary curator for 'Antiquities and Works of Art, &c' had been replaced with 'Ethnology and Works of Art'. In addition, the LPLS at this time included the post of honorary librarian.³ The changing role of curator within the LPLS is something that will be developed further in the next chapter.

The 1847-1848 report indicates that geological and mineralogical objects represented the largest portion of acquisitions to the Museum for that year. In fact, the report records 323 objects acquired under Geology and Mineralogy—including the donation of a collection of 270 specimens. Under Zoology, only fifty-five specimens were acquired during the same period, while under the

³ LPLS Annual Report (1824-1825), (1847-1848), and (1879-1880).

Miscellaneous heading only four items were acquired, including the cast of the head of a dodo, which being man-made was not classified under Zoology. Similarly, specimens of recently extinct species such as the Irish or Giant Elk *Megaceros hibernicus* were listed under Geology and Mineralogy. Many such specimens would later be reclassified under Zoology.

A snapshot of collecting such as this is interesting, but provides only a limited set of quantitative data. If we therefore look at acquisitions from the first recorded in 1821, up to 1850 we afford ourselves a more robust data set from which we can draw conclusions. When a collection was acquired by the Museum, the number of specimens it contained was rarely recorded, so it has proved impossible to get exact figures. Moreover, such examples were frequent. Consequently, the figures discussed below are representative of general trends within the collecting activities of the Museum during this period. Nonetheless, the prefix *approximately* where missed should be assumed.

If we continue to use the categories Geology, Zoology and Miscellaneous,⁴ the twenty-nine-year period from 1821-1850 represents the acquisition of approximately 16,000 objects, the largest part of which was within Zoology, with over 9,200 specimens acquired. Geology followed with 6,275 specimens acquired, leaving over 280 items acquired that fall under the category Miscellaneous. Within an industrialising town such as Leeds, where many of the founders and members of the LPLS were an important part of the town's industrial enterprise, what is striking is the almost exclusive focus on zoology and geology. It is perhaps an anomaly that the museum did not designate a technology category for its collections until much later in the 1870s, not least because of the strength of the Society's interests in these fields within the lecture programme. Certainly the LPLS's *Prospectus of Preliminary Laws* had stressed that the Museum should augment the lectures and the activities in the laboratory; so too should the library.⁵ Even when the technology category indicated collecting in that direction, we may argue that the Museum took a very soft

⁴ The category 'Miscellaneous' used here included anthropological objects, works of art, numismatics, instruments, items referring to technology, archival material acquired, sometimes also natural history casts, and archaeology.

⁵ LPLS Prospectus of preliminary laws [...] 1819.

approach to the category, with early acquisitions consisting of a diagram illustrating the manufacture of glass, a collection of beetles used for ornamental purposes, a lithographic stone as used by printers, flowers of jasmine used for scenting tea and an Indian sun-hat made of pith⁶ – items perhaps better suited to a subsection of zoology than categorised as technology. The reasons why technology had not been as important a part of the collections as the natural sciences may have something to do with space. Darwin made the observation that nature abhors a vacuum⁷ and in Philosophical hall it was doing a good job of fulfilling this, perhaps to the exclusion of some subjects. That technology eventually appears in the 1870s has more to do with the Society's and Museum's increasingly close relationship with the Yorkshire College of Science, which in need of teaching facilities itself was using the Museum and its collections.

Some of the zoology and geology collections did in fact reflect a technological perspective, such as geology and mineralogy in industrial applications,⁸ but no evidence exists of specific collecting to these ends. If we were to argue for a technology section effectively dispersed among other sections, we would expect to find in geology, for example, a proportion given over to specimens such as coal types and of gypsum where we do not. Of the geological specimens amassed during this twenty-nine-year period, the acquisitions fell naturally into three geological sub-categories: palaeontological specimens (fossils)-numbering approximately 2,437 specimens, mineralogical specimens that included oresnumbering approximately 325 specimens, and more general geological specimens that included basic rock types-which contained over 3,500 specimens. Among these different types of geological specimens there were some that we might designate as having an industrial application, such as differing coal types, bitumens, specimens of gypsum and various ores. Nonetheless, these specimens numbered no more than 166-less than three percent of the total geological specimens acquired. Indeed, if not for the donation of one collection-that consisted of 140 specimens connected to the Middleton colliery in 1838—the figure would have been less than one percent.

⁶ LPLS Annual Report (1871-1872).

⁷ Darwin (1859).

⁸ For example, see Rudwick (2005) and Laudan (1987).

Contradicting the collections in the Museum, and reflecting the disparity between the operations of the two, the lecture programme during this period reflects a LPLS very much interested in the commercial application of geology. To this we must add, though, that a reduction in subjects connected to applied science more generally, from the end of the 1820s onwards, is evident in the Society's activities. This was undoubtedly a response to the increasing activities of the Mechanics' Institute in the town at this time rather than a lack of interest in those subjects. Nonetheless, during 1821-prior to the establishment of the Mechanics' Institute-there were five lectures on geological subjects that included The Nature and Use of the Science of Geology by Dr Gilby of Wakefield. Up to 1831 we find the LPLS holding regular lectures on a geological subjectsapproximately twice а year—with many carrying a specifically industrial/commercial interest or application, such as John Phillips' Coal Plants and the Origin of Coal in 1824. Importantly, the LPLS ran several geology courses in their public lecture programme. Many other lectures, while not strictly geological, aimed at commercial geology, such as William West's 1850 lecture on the cause and prevention of explosions in coal mines. Add to these the numerous lectures on organic and industrial chemistry that relied on using minerals and ores-not least those delivered by the LPLS's very own industrial chemists William West and Edward George-then the frequency of this type of lecture increases again. This therefore enables us to establish that at least as far as what we are here describing as commercial geology, the LPLS's Museum did not represent particularly well the interests and activities of the LPLS.

Having provided a general introduction to the Museum's various collections, the three more detailed studies that follow aim to shed light on local, national and international collecting activities. In so doing, it will also consider the network of collectors that the Museum propagated as well as an insight into how the Museum maintained that network. To do this, this section will use evidence connected to the communication between the Museum and the collectors—such as letters, letter-books and diaries, as well as a number of previously unknown acquisitions registers. In so doing, it is hoped that new light will be shed on the world of collecting natural science in Leeds during the nineteenth century.

2.3 Local Collections and Local collectors

The previous section acknowledged that from the start (1821) the Museum received numerous donations from the residents of Leeds and Yorkshire.⁹ But while the donations may have resembled a miscellany to begin with, from 1822 the LPLS's reports reveal that donations of natural science began to dominate. Here we find botanical material often in the form of hortus siccus (herbariums); collections of invertebrates consisting largely of conchology (mollusc shells) and entomology (insects); and also ornithology (birds), which predominantly consisted of taxidermy specimens but also collections of oology (eggs). In geology, fossils and minerals were regularly donated but sometimes also local geology as well as some small collections coal types.

Without clarification, the use of the term 'local' can become overly complicated and a condition of difference: Donor A from Scarborough may be considered local alongside donor B from Tasmania but not so alongside donor C from Leeds. Turning to specimens and locality, oftentimes entries under Donations to the Museum did not detail the origins of a particular specimen. So we are left ignorant as to whether 'young specimen of the Beaver' that was reported in donations for 1862/1863 was in fact a specimen of the European beaver *Castor fiber* or the Canadian beaver *Castor canadensis*. Many British specimens also omit location details, making it hard to ascertain the percentage of local material collected against the Museum's total acquisitions.

When considering national and international collecting generally, the local theme remains relevant—the travelling parishioner happily sent material back to his hometown museum. Certainly as the nineteenth century progressed, such donations could become somewhat ritualised acts, freighted as they were with culturally bound sets of values that call for our circumspection and that perplex normal ideas of the donor/recipient relationship. Among the examples that follow we shall see some of this; however, while acknowledging its importance, for the

⁹ LPLS General Minute book, 6 April 1821.

sake of clarity the use of the term local, national and international will reference the specimens rather than the collector.

As has already been identified towards the end of the previous chapter¹⁰ one of the first to donate was the LPLS's first curator John Atkinson. Although there were exotic specimens included in the donation, the larger parts included a 'Collection of the rarer British Plants, 200 British Insects [and] many Shells'.¹¹ Also reported for that session were donations made by Mr Robert Leyland of Halifax of 'Ten British Birds, The rarer native Plants about Halifax, and 80 Mosses from About Halifax'. Ordinary member and Leeds resident, John Hogg Junior donated a large collection of British ornithology (taxidermy), minerals, and conchology, as well as an entomological collection of species from South America, and other unspecified specimens of natural history. In the same session Dr W. Farrar of Barnsley donated a herbarium of six hundred species of British and Exotic Plants. Typical for the smaller donations of that session were 'Twenty Specimens of British Birds, several of them very Rare' from M. Atkinson, Esq. of Skipwith Hall (North Yorkshire) and 'Twenty British Shells' from Mr. William Bean of Leeds are typical.

We have already conceded that while there was a degree of ebb and flow between which type of natural science material was collected more than another, overall natural science represented around ninety-six percent of the acquisitions. With this in mind, and relating to the natural science acquisitions only, the reports of the LPLS reveal that local donors supplied over eighty percent of the natural science acquisitions, around forty percent of which were from members of the LPLS.¹² That said, one phenomenon worthy of closer inspection is whether a local collection was acquired on the death of the collector or was acquired by the Museum a long time after the death of the collector—sometimes after the collection had moved from one collector to another-and is a common characteristic among the more significant and larger local collections the Museum has made.

¹⁰ Chapter 1, section 1.6: The Museum within Philosophical Hall.
¹¹ See under 'Donations to the Museum' in the LPLS *Annual Report* (1822-1823).

¹² These figures are based on a sampling from 1824-1831 and 1842-1851.

James Abbott (1831-1889) was a Leeds-born chemist. After serving his apprenticeship with a Leeds druggist he spent a number of years working for a chemist's in London before returning to Leeds and establishing his own chemist's in 1850. It was typical for an individual with Abbott's training to have had a thorough knowledge of botany, so the private development of his interest in botany is unsurprising. However, Abbott's experience teaching natural history to a number of associations and clubs around Leeds influenced his decision to develop this side of his interests further. He attended Huxley's practice-based summer courses in London and by the 1870s had established a paid lecturing programme for himself in botany that included private and public lectures as well as the post of demonstrator in Biology, under Miall at the Yorkshire College of Science. Abbott published in Journal of Botany in 1874, Entomologist and Naturalist the following year, and again in 1879, as well as contributing to A Lees' 1888 Flora of West Yorkshire. As an annual subscriber from 1878 he had the lowest form of membership of the LPLS and did not present on their lecture programme. Abbott was, however, deeply involved in the Leeds Naturalists Club and Scientific Association which had been founded in 1870, in which he served first as Vice-President and then in 1877 as President. Clearly the collection of botanical specimens and their maintenance as part of a herbarium would have been important to Abbott throughout his working life. Such a collection would have served as a reference collection to the young chemist and then later for demonstration purposes as lecturer. We know his collection was one of the largest amassed in the town, since in 1976 the Museums acquired his herbarium, amounting as it did to 11 boxes of Herbarium sheets. The donor was the Leeds Naturalists Club.

Abbot's ascendance within Leeds as a botanist and teacher of biology had occurred outside of the influence of the LPLS and its Museum. He had developed strong relationships to other groups in the town and was one of the town's most active collectors of botany without involvement with the Museum and while maintaining the most modest connection with the LPLS. If we consider all the acquisitions of botany to the Museum from the first Report in 1822 to the present day, James Abbott's is just one of seventy-six. However, of the largest local collections that the Museum acquired, Abbott's is one of the three collections acquired that consisted of over five hundred specimens. The collection of 600 pressed specimens belonging to the late Rev. Woods, acquired in 1914; and William Kirkby's cabinet and herbarium of 1,400 British plants 'chiefly local' acquired in 1917 are the other two. Each of which, like Abbot's collection, are markedly independent from the Museum, coming to it after the death of the collector and often also after the collection had belonged to other collectors.

On these terms, we may begin to see the activities of groups such as the Leeds Naturalists' Club and Scientific Association as a competitor to certain natural science-orientated activities in the town. Certainly, it seems that there was a high degree of independence within the local collecting community and that the Museum was not the de facto centre for such activities, nor was it the accepted repository for natural science. In a later chapter, the emergence and development of other institutions, such as the Yorkshire College of Science as well as groups and clubs such as the Leeds Naturalist Club and Scientific Association and the Conchological Society, will be discussed in terms of competition to the LPLS and the Museum over certain scientific activities. Here it will be observed again that significant activities and important local collections were not automatically located at the Museum.



Figure. 2.1 Photograph of the Irish Elk in the Large Zoology Room.¹³

2.4 National Collecting: The Irish Elk

With the Museum's complicated local collecting environment in mind, we now turn to its national collecting activities. In this section we will describe the acquisition of specimens of *Megaloceros giganteus*, the Giant deer. The Museum made five separate acquisitions of this species, which at the time was variously called the Irish or Giant Elk, the Giant deer or the Irish deer.¹⁴ The first of which were three acquisitions made in 1847. Under 'Donations to the Museum' the

¹³ Photograph taken from the gallery sometime after the 1861-1862 extension. Source: Leeds City Museum.

¹⁴ More recent changes to the common and scientific names of the Giant deer reflect that it was in fact neither exclusive to Ireland nor indeed an Elk. The earliest evidence of the species dates from approximately 400,000 years ago, with the latest evidence dating from around 11,000 years. The westerly extremity of the Giant deer's (*Megaloceros giganteus*) range was in what would become Ireland and stretched easterly across the tundra grassland of the now flooded Doggerbank of the North Sea onwards to Siberia.

1847-1848 Report described: 'A very fine Head and Horns of the Giant deer or Irish Elk (Megaceros Hibernicus)', 'A magnificent entire skeleton [...] completely articulated from Lough Gur near Limerick', closely followed by the third entry, 'Very perfect skull of the female Giant Elk of Ireland [...] base of shed horn of Do., Section of skull of Do.'. The report attributes George Goodman and William Gott to the first and second acquisitions respectively and the sub-curator Henry Denny to the third. The fourth and fifth acquisitions came later in the century-1865 and 1870. Certainly the 1846-1847 acquisitions were made at the very time the Giant deer had become caught in an evolutionary debate that centred on the relationship between the species' large antlers and its extinction. Within this debate emerged the proposition that the Giant deer was coeval with man. While the origins of this idea came over a century earlier when Molyneux wrote his 'A discourse concerning the large horns frequently found underground in Ireland' in 1697¹⁵, Thomas Weaver and John Hart-separately, but both in 1825¹⁶—added the coexistence argument to early nineteenth-century creation debates. Weaver would open his paper in *Philosophical Transactions of* the Royal Society with:

[t]hese results have proved the more interesting, as they apparently lead to the conclusion, that this magnificent animal lived [...] at a period of time which, in the history of the earth, can be considered only as modern.¹⁷

Both Weaver and Hart were at the time using palaeobotanical, stratigraphic and archaeological information found with the specimen as a way of determining the age of the specimen. Influential for both Weaver and Hart was the rich archaeological evidence associated with the specimens of Giant deer from the Limerick area, such as flint technology and butchered animal remains. That the Giant deer had been commonly accepted as antediluvan since 1812, made the coeval argument a considerable polemic for the established view.¹⁸ Richard Owen, in 1846 dedicated a twenty-four page refutation to Weaver and Hart's

¹⁵ Molyneux (1697): 489-512.

¹⁶ Hart (1825) and Weaver (1825).

¹⁷ Weaver (1825): 429.

¹⁸ Gould (1977): 70-90.

claims in his *A History of the British Fossil Mammals*. Using his characteristically myopic osteological analysis of the species, Owen set about countering what he described as the 'vague statements of their discovery'— taking particular pains to deconstruct what Weaver had convincingly presented as the healed arrow wound evident in the rib of a Lough Gur specimen.¹⁹

Having already acquired a strong collection of Lough Gur material by 1855, the LPLS's sub-curator, Henry Denny entered the debate with his *On the Claims of the Gigantic Irish Deer to be Considered as Contemporary with Man.* Here Denny aimed to settle the argument of whether the Giant deer's 'period of active life was prior or subsequent to the creation of man'.²⁰ As Owen had done for Weaver and Hart, Denny set about taking Owen's findings apart and taking particular pains effort to defend Weaver's conclusions on the damaged rib, Denny concluded that:

With such facts before me as I have just cited, although I am willing to concede to geologists that the life-periods of the extinct Pachyderms and large Ruminants date at an early period in the history of our planet, still I conceive it neither unphilosophical nor unwise to endeavour to ascertain whether they did not actually exist much nearer the present time than is usually supposed, even within human era.²¹

Denny went on to submit that the 'extraordinary revelations' that geology more than any science had undertaken over the last fifty years had taught both the value of utmost caution in accepting too readily new theories as well as the error of 'retaining too tenaciously long cherished opinions,' adding:

I cannot forget that, less than forty years ago, it was considered heresy to suppose that any animal remains higher in the scale than the Mollusca

¹⁹ See Monoghan (1995): 171-173 for an overview. Weaver (1825): 433-435 for his description and Owen (1846): 445-468 for his rebuttal.

²⁰ Denny (1855).

²¹ Denny (1855): 422.

were to be found beneath the $lias^{22}$ [...] what, however, is now the fact? [...] surely then, such revelations as these, in direct opposition to the supposed fundamental doctrines, ought to teach us the useful, though humiliating lesson, that it is wiser to withhold judgement than to draw too rigidly the exact line or period when certain animals ceased to exist, and also, whether Man was or was not also their associate.²³

Denny then went on to quote Lyell's 1850 'Anniversary Address of the President' in *Proceedings of the Geological Society*, in which Lyell reminded the members of the Geological Society that the recent discoveries in science 'puts us upon our guard against founding hasty generalisations on mere negative evidence'²⁴. While it is easy to imagine how such a debate would have generated factions within scientific communities, it is not clear which Giant deer argument was more accepted at the time. Gould is happy to accept that Owen's version remained the authoritative account.²⁵ Nonetheless, contemporary popularist accounts tended to give authority to the coeval argument, as Philip Grosse's 1862 *The Romance of Natural History* demonstrates:

In the year 1846, a very interesting corroboration of the opinion long held by some that the great broad-horned deer was domesticated by the ancient Irish, was given by the discovery of a vast collection of bones at Lough Gur, Limerick.²⁶

Denny's work was often quoted in the more popularist publications such as the above—where Grosse in the footnote points out 'see a most interesting paper in the proceedings of the Yorkshire Geological and Polytechnic Society, for 1855, by Henry Denny'. Nonetheless, Denny's work on the Giant deer, along with the majority of his other publications, monographs and papers, also reached authoritative nineteenth-century scientific communities and individuals. The

²² The Lias are a recently-formed series of thin blue Limestone strata, rich in fossils and forming the lower division of the Jurassic series. Denny's use of the word refers to the name then also representing a particular period, that being Early Jurassic.

²³ Denny (1855): 422-423.

²⁴ Lyell (1850): i-xxii.

²⁵ Gould (1973): 191-193.

²⁶ Grosse (1862): 51-52.

Royal Society included seventeen of Denny's works in its 1868 *Catalogue of Scientific Papers*, including his *On the Claims of the Gigantic Irish Deer to be Considered as Contemporary with Man*.²⁷ In addition, from the time Denny was acquiring the Giant deer specimens he was in correspondence with Darwin, who sent Denny specimens of lice and credited him in *Descent of Man*—as will be discussed further in the upcoming chapter that details the work of Denny as the LPLS's first paid curator.

Returning to *Reports of the Leeds Philosophical and Literary Society*, acquisition entries generally provide very little information connected to either the process of acquisition or the provenance of the item acquired—with descriptions such as 'Some Reptiles', 'Specimens in Natural History', or 'Rare specimens of British Bird' being typical. However, the acquisitions of Giant deer were clearly of unusual importance to the LPLS, as it committed a comparatively large portion of its Report to describing them. In its preamble, the 1847-1848 Report described the acquisition of the skeleton thus:

To the munificence of William Gott, Esq., the Geological room is indebted for a noble and entire skeleton of the Gigantic deer or Irish Elk, nearly 10 feet in height, which, as illustrating the majestic ruminants that, at former periods, were indigenous in these islands, and as being perhaps one of the last of those which became extinct, will prove one of the most attractive objects in the museum.

However extensive such a description might seem alongside the more usual entries, it still provides very little substantive information on the method of acquisition or the provenance of the specimen. For example, that William Gott was named as being the donor of the 1847 Giant deer skeleton does not reflect who acquired the specimen, but rather who paid for it. The same is true for the 'Head and Horns' that was attributed to the then Mayor, George Goodman. Similarly, that Lough Gur was stated alongside the entry for the skeleton only indicates a partial provenance.

²⁷ Catalogue of Scientific Papers (1800-1868), Royal Society 1868: 239.

William Gott was the son of the super-rich factory master Benjamin Gott. From the 1820s, William had taken over managing his father's cloth manufacturing empire with his brother John and under their management the family business continued to grow.²⁸ Benjamin, William and John were all proprietary members of the LPLS from its establishment in 1819. Benjamin Gott had served on the LPLS's Council from the start and was the LPLS's holder of the largest number of proprietary memberships alongside John Marshall. It is therefore unsurprising that a rich industrialist such as William Gott, who had a long-standing philanthropic interest in the LPLS, would fund the purchase of such an important acquisition as the 1847 Giant deer. Such philanthropy is also expected from the town Mayor George Goodman, who like William Gott was also an original proprietary member of the LPLS.

Among a collection of Museum-related letters received by Henry Denny are a set from a Dublin taxidermy shop owner, Richard Glennon.²⁹ These letters reveal that Henry Denny had in fact purchased all of the 1847 specimens of Giant deer from Glennon's shop, with both Goodman and Gott providing the money. In the first instance it seems that Denny was only interested in acquiring a set of horns of the specimen—paying £18 for an antlered skull with Goodman's patronage. The letters reveal how Glennon had sold the skull and antlers while under financial duress and that the skull did in fact belong to an entire skeleton. Just after the shipment of the skull and antlers had been made, Glennon wrote to Denny assuring him that the specimen had been 'most carefully packed in a strong box well secured'³⁰ and continued:

[...] and only the times are so very hard that I would not have posted with them for twice the value I put on them. And it is a great pity to separate the head from the skeleton which is the largest and the most perfect that was ever found by me or I believe in the world by anybody else and my

²⁸ ODNB for Benjamin Gott.

²⁹ Page 81 of the *Treble Almanack for the year 1832* described Glennon as 'A preserver of Birds, Beasts, &c. 3, Suffolk-Str.'

³⁰ Letter from R. Glennon, Dublin, to Henry Denny, Leeds, 10 July 1847.

advice is that you would speak to your worthy Mayor to buy them from me and not put up a patched specimen in your Hall.³¹

Glennon continued to urge Denny to take the entire skeleton, stating: 'If you do not have the money I would take a bill for it' and from the letters we know that at the time Glennon was asking £20 for the skeleton, which would total £38 for the complete specimen—equivalent to approximately £3,000 today. In Chapter 1 we submitted that there was considerable disparity between the expenditure on lectures and apparatus in comparison to that of the Museum and Library. Certainly the total cost for this specimen was a relatively small sum compared to what the LPLS had spent previously on lecturers and apparatus. In addition, that Denny was forced to seek funding from local patrons for these acquisitions furthermore evidences the lack of LPLS funds available for the Museum. As the correspondence continued, it is not clear whether some confusion arose between Goodman and Gott over who was buying what, but in the end Denny purchased the skull and antlers, then the skeleton to go with the skull and antlers, after which he purchased another skull and antlers as well as the skull of a female Giant deer. In addition, Denny managed to get Glennon to agree to give him several other specimens found at the same location.³²

The letters between Denny and Glennon fill the gap left by the Reports and help to shed light on how the Museum acquired such large specimens. The letters also provide insights into how these were collected from the field and how they became commodified and eventually scientific. For example, we know that Glennon bought specimens from the peat-cutters in the Lough Gur area where such material had been sold as fuel. Several local landed gentry included sets of Giant deer antlers that had been exhumed on their own land—pride of place (due to their size) in their trophy rooms³³—and it would be from this new location that the knowledge of such specimens began to circulate to ever-wider networks. For example, the account that Weaver presented to the Royal Society in 1825 evidences a succession of five transitions from original source to Royal Society.

³¹ Letter from R. Glennon, Dublin, to Henry Denny, Leeds, 10 July 1847.

³² Letter from R. Glennon, Dublin, to H. Denny, Leeds, 4 February 1848.

³³ Gross (1862), Denny (1855) and Gould (2007), all mention this.

Weaver himself was alerted to the subject by the findings of John Hart of the Royal College of Surgeons in Ireland.³⁴ John Hart's findings had in turn been assisted in no small part by the material produced by the Archdeacon of Limerick, Rev. Maunsell³⁵ who had overseen the excavation of Giant deer material on the Rathcannon estate in Limerick.³⁶ It was Maunsell who collected the damaged rib that became a central example in the ensuing debate with Weaver, Owen and Denny.

Prompted very much by Maunsell, Weaver and Hart's interests instigated a change in the method of acquisition from relying solely on a network of agricultural labourers such as peat-cutters to what could be described as protoarchaeological excavations, which were responsible for the acquisition of more complete specimens of antlers and the skeletons. The Denny-Glennon letters capture very well the commodification of this material and are enlightening for evidencing the changes the material went through. As one letter in which Glennon describes a skull and antlers to Denny ably demonstrates, these changes were not only epistemological but also quite physical: 'so fine and uninjured that you would lay that the animal to whom they belonged lived within a few years' adding that the skull was so 'bonelike and white that I was obliged to rub it with Ochre to prevent those ignorant of the knowledge of articles from saying it was composition'.³⁷

Certainly Denny drove a hard bargain and throughout the winter of 1847-1848, while Glennon continued his efforts to convince Denny to buy the skeleton, he steadily reduced his prices so that in the end Denny would pay £15 for it. The negotiation for an entire skeleton, as well as the complete skulls of a male and female alongside a number of associated specimens—all from out of the initial purchase of a single male skull—reveals much about collecting practices. Early on in their correspondence, the dialogue between Denny and Glennon suggests that Denny was interested solely in the acquisition of as large a set of antlers as could be purchased. Perhaps this was perfectly understandable, considering that

³⁴ Hart (1825).

³⁵ See Hart (1825): 9-13 and Weaver (1825): 429-30.

³⁶ Hart (1825): 8-13.

³⁷ Letter from R. Glennon, Dublin, to Henry Denny, Leeds, 12 February 1848.

it was the large size of this species and that it was extinct, which made the Giant deer a subject of discussion and debate. In addition, these particular specimens did prompt a wave of competitive trophyism among nineteenth-century collectors, which undoubtedly contributed to the LPLS's interest in the acquisition of such specimens. We have already argued that the LPLS's Report for 1846-1847 suggests that it was more of a trophy than a scientific specimen that was being acquired and the hagiographic emphasis of the donors only compounds the importance of the cultural status. However, as we have seen, when in the hands of Denny these specimens soon also presented an opportunity for scientific enquiry. This suggests that Denny was able to use the cultural value of the Giant deer as leverage to acquire the comparative collection he needed to undertake research. Denny the businessman is striking, negotiating as he does, with both patron and dealer-ably squaring the more culturally-orientated interests of the LPLS and the economic interests of the dealer with his own nascent-scientific ones. The development of his own interests is sketched here, first as an amateur and connoisseur, with the value he places on acquiring as large a comparative collection of the species as possible; but then a little later as someone with scientific aspirations, keen to enter the scientific discourse on the subject. Denny's activities placed the Leeds material within scientific reach through a similar set of transitions as the earlier Thomas Weaver example.

The above section begins to sketch out the rapid accretion of values that surrounded an acquisition such as the Giant deer: different people, each with different sets of motives, seeking to attain different sets of values and meanings. We acknowledged something we termed cultural trophyism, which had much to do with civic patronage and the desire to publicize private wealth and power. We also noted the role of the scientific here, in which we saw Henry Denny make real certain aspirations. The reports of philosophical societies and museums publicised, authenticated and accredited all of this to other groups around the world, while local newspapers were quick to fill columns and if cases merited it the nationals would follow suit.

Without Denny's own scientific aspirations, the Leeds Giant deer acquisition may not have been made scientific in the way that it was. Accordingly, the scientific character of an object or collection relies not just on the difference between settings, for example the difference between an Irish trophy room or a Leeds museum display, but more crucially the human component that comes to bear. This suggests that values and meanings are external, contingent elements to objects rather than inevitable or essential to them, which clarifies a little of what we think about the scientific character—about what we mean when we speak of an object or collection being scientific, or that a collection was used scientifically, or that it was made scientific. As the debates around the antiquity of man eventually shifted away from the Giant deer, can we say the scientific meaning or value of the Leeds Giant deer also shifted? Eventually, as the antiquity of man became a subject to be explored in entirely different ways, eventually made axiomatic and ultimately mundane, the scientific values that were part of the object's economy during the 1850s all but disappeared. By the turn of the twentieth century the Leeds Giant deer began reflecting entirely different sets of values and meanings brought about by a different social and cultural milieu. The idea that an object reflects values and meanings seems to account for what we described above, which seem to have consistently described agencies external to the object and values and meanings projected onto it. We could take this to mean that specimens, objects and collections do not have any latent scientific agency and that any that may well be accreted is temporary and contingent to certain social and cultural conditions. Our example is that during the 1930s, when no research was being conducted on the Giant deer, the material was of less scientific value and meaning than during the 1850s.

This section began by stating when the Lough Gur specimens were acquired by the Museum and has gone on to unravel the values and motivations involved in this particular acquisition's enterprise. However, what the section has not asked is why collect Giant deer specimens at all? While the answer to this may never be fully recovered, it is nonetheless a question worth asking, if for no other reason than what we add to the account by simply endeavouring to answer it. We may start by stating that it is almost certainly true that the LPLS, Henry Denny, the Museum, and the various patrons involved would not have been so keenly interested and motivated if there was no chance of acquiring any Giant deer specimens at all. From this, we are compelled to accept that an important force behind the acquisition of Giant deer was the opportunity to acquire one.

The collections of specialist monographs, periodicals and societal transactions and reports that formed the bulk of the LPLS's library, played a vital role in identifying such opportunities. Specifically, the detailed accounts of the Giant deer coming from Dublin during the 1820s fired the debates around the Giant deer's coexistence with man and with the topic current, the specimens were in demand. Providing information such as location and method of acquisition, as well as the cost of specimens (found in the accounts sections and treasury's reports), a society's transactions and reports would provide vital information for anyone wishing to acquire specimens. And this is precisely the way in which Denny got the information together that he needed to acquire the Leeds specimens of Giant deer. Perhaps the most famous specimen of Giant deer during the 1840s was that at Trinity College Dublin's University Museum. Supplied by Glennon, this specimen had become a central example among the key Giant deer publications.³⁸ We know that Denny would have been more than aware of the Trinity's museum specimen and its importance not just through the publications by Cuvier, Owen and others but also because the LPLS received the reports from that museum,³⁹ where a Mr Ball was curator. Glennon's letters to Denny reveal that it was Mr Ball who had introduced Denny to Glennon and throughout the Denny/Glennon correspondence, Glennon frequently references Mr Ball's position as a persuasive device.⁴⁰

Working from his shop on Suffolk-street in Dublin, the taxidermist and mineral supplier Richard Glennon, was at the time the main supplier of Giant deer material.⁴¹ The image below shows a detail of the frontispiece to Richardson's 1846 edition of *Facts concerning the Natural History of the Gigantic Irish Deer* that Glennon sent to a George Mahon. Richardson's publication made more references to Glennon's role in excavating and acquiring Giant deer specimens than any other publication on the subject and what is clear here is that

³⁸ Hart (1825): 16-23; Cuvier (1827): 495-501; Owen (1845): 459 and Richardson (1846): 44.

³⁹ See the LPLS's Report of Council, 1845-1846: 16.

⁴⁰ Letter from R. Glennon, Dublin, to Henry Denny, Leeds, 12 February 1848.

⁴¹ Richardson (1846): 19.

Richardson's publication serves a number of functions and a number of motives. The most relevant to us is the opportunist self-promotion it afforded Glennon. While Denny's use of the periodicals was perhaps more circumspect than Glennon's, it too valued these publications as market indicators, ascertaining not only which specimens were desirable to collect but which were practicable to do so. For Glennon they served to promote and market his own (commercial) interests in the subject while they undoubtedly served Denny with a first point of contact, Mr Ball.

Richard Hermons to Mr Mah ACTS Form Geo. C. Mahon Esq.

Figure 2.2. A detail of the frontispiece to Richardson's 1846 edition of *Facts concerning the Natural History of the Gigantic Irish Deer*

Albeit brief, such a description helps to uncover the ways in which publications and periodicals were at the time enmeshed in diverse enterprises, including, as we have noted with the Richard Glennon example above, entrepreneurial. This recommends that for such publications we should not look solely at their text but attempt to uncover a denser, more complex series of associations that existed alongside the more traditionally accepted ones, such as the dissemination of scientific knowledge. To return to the question we posed earlier, 'why collect Giant deer specimens at all?,' what is clear is that the answer has a great deal to do with the creation of desire and demand and whether supply could meet the demand. It is possible that Denny may still have been interested in this species had there been no chance of acquiring a specimen, but much less likely that the various other individuals who represented the Leeds delegation would have become so involved. It seems clear, therefore, that in this case the LPLS's interest in acquiring specimens had as much to do with a response to market forces as it did to a scientific question. It was important to all involved that the species was the centre of a scientific debate—in a sense this helped create the demand by providing an assurance of sorts. Of course, the scientific debate was itself only achievable by the dispersal of specimens among key institutions, which was itself the product of commercial enterprise, from dealers like Glennon.

While we may never be able to answer fully and without doubt the question of why the LPLS exerted the effort and money it did to collect specimens of Giant deer, we can be certain that it had a great deal to do with the fact that they could. That the subject was current was also important. But even here one might argue that the availability of specimens was vital for the debate to have emerged at all. From a counterfactual perspective, had there been no monetary value in the specimens for Glennon (and undoubtedly other less-well known dealers) they would not have become stock for the natural science dealer, the institutions would not have owned them, the subject would not have entered scientific discourse, the debates over them would not have occurred, and Denny would not have collected them.⁴²

Certainly, the case of the Giant deer described above begins to uncover how the market place associated with the natural sciences at the time informed and influenced the natural science enterprise. Alongside this, it also shows how that market place was advertised and information disseminated. If we are arguing that the opportunity to acquire a specimen was a prime mover behind collecting strategies, then as we shall see next, rarity effected this equation dramatically. On these terms, the rarity of the Giant deer, being an extinct species, would have increased the attraction and value of its acquisition considerably. Moving next, as we do, into considering the Museum's international collecting activities, we will encounter this correlation further. Not only will we see again the value levied on rarity and the exotic, but also the seduction of the subject of extinction.

⁴² For an international example of a nineteenth century commercial natural history suppliers see Henri Reiling and Tat'jána Spunarová's analysis of the Prague based business of Václav Frič. Reiling and Spunarová. (2005): 23-43.

2.5 International Collecting: Acquiring the Exotic, the Rare, the Extinct

As the LPLS reports show, the Museum acquired its first specimens of the extremely rare *Thylacinus cynocephalus* in 1862. Known at the time as the Tasmanian wolf, tiger or hyena, a female and two of its cubs were purchased from the taxidermists Gerrard's and Sons. Just as we have noted in the previous section, a willing patron from within the LPLS's membership was needed to fund the purchase, who in this case was George Noble, a proprietary member since 1847.

Mr. George Noble, was so kind as to place the sum of £60 [equivalent to over £4,600 today] in the hands of our Assistant Curator (who was about to proceed to London), for the purpose of purchasing such specimens for our Museum as it was thought most desirable to obtain. By this opportune aid, Mr. Denny has been enabled to add to our collection a most valuable series of species, including the female and two cubs of that singular Carnivorous Marsupial, the Tasmanian Wolf: an animal now become nearly extinct.⁴³

Standard accounts consider the effects of rising agricultural activities in Tasmania to have been the cause of extinction, which in the wild occurred sometime around 1930—the last captive thylacine died in Hobart Zoo in 1936.⁴⁴ However, as can be seen from the Report entry above, as early as 1862 the thylacine was already considered 'an animal now become nearly extinct'. At the time, thylacines were being promoted across Tasmania as a considerable threat to livestock farming and were extensively hunted as pests.⁴⁵ The sensationalised

⁴³ LPLS Annual Report (1862-1863): 10.

⁴⁴ For an account see Paddle (2000) and Owen (2003). Both blame several contributing causes linked to agricultural activities as being the cause of extinction. Large among these was the predation of the species by man, but also included is the predation of the species by domestic dog and the spread of disease among the thylacine population as a result of the introduction of domesticated livestock.

⁴⁵ As an example see Fletcher (1887): 13. Additionally, Owen (2003): 86 reports the extreme cold as being the explanation for the loss of so much livestock during the first decades of the cultivation of Tasmania.

folklore surrounding the species⁴⁶ served not only to perpetuate its threat to livestock but also to make habitual its persecution. Towards the end of the nineteenth century it became a standard part of the ritualised family portraiture in Tasmanian farming communities to include the skin of the family's thylacine trophy. For landowners, the death of the thylacine equated to the removal of an otherworldly threat.⁴⁷

By 1869 the Museum was again actively engaged in acquiring more thylacines as additions to the 1862 specimens. This time the specimens would come direct from Tasmania, from a landowner in Cleveland there called Mr M.A.B. Gellibrand and coincide with the purging of thylacines from the farmlands of Tasmania. The letter below, sent by Gellibrand to Denny in 1869, gives an idea of the extent and variety of specimens being shipped at the time.

Dear sir, I have at last packed up and sent away one cask containing the following animals, Six Tigers three large males and one female and two half grown pups one male and one female.' Two female devils, one Beaver Rat, one Kangeroo Rat, one Black spotted native cat, one tiger cat, two tiger skins a lot of skulls and also a jar of spirits containing young wallaby, one young wombat and tied in a piece of rag two Devils and four young Tigers all taken from the pouch and last but not least one Duck Billed Platypus.

The specimens were wrapped in cloth soaked in sprits of wine and were sealed in a cask or barrel in preparation for the long sea-journey from Tasmania to London and then by coach to Leeds. While spirits of wine were perhaps as good as any other preservative medium available at the time it was not uncommon for much of the contents of such barrels to be ruined upon arrival. William Crosby and Co., who shipped these specimens, made it clear in the Bill of Lading that they were 'Not liable for damage by decay, rust or breakage'⁴⁸—their caution here perhaps indicates their experience gained in dealing with similar shipments in the

⁴⁶ Paddle (2000): 37-79 and Owen (2003): 85-124.

⁴⁷ For the mythology surrounding the thylacine and its reinforcement in the popular

preoccupations of Tasmanian farming communities see Paddle (2000).

⁴⁸ Bill of Lading, September 1869. Collectors Files.

past. Alongside a variety of letters from Mr. Gellibrand to Denny, the Museum also has the Bill of Lading for this shipment which makes mention to 'One Cask containing specimens of natural history. Value and content unknown.'

The 1869 letter describes the shipment of twelve specimens of thylacine including six young, with four of these 'taken from the pouch'. Gellibrand also included 'a lot of skulls', which the Report described as being five in number, making this one shipment consist of seventeen specimens of thylacine. In addition, Gellibrand supplied another two skulls to the Museum in 1893.⁴⁹

Even though Denny knew the thylacine to be a species under threat of extinction, it would be wrong to apply our own contemporary sensibilities onto this particular case and condemn his activities as irresponsible or unethical, as present-day museological values would conclude. Nonetheless, the Leeds Museum's collecting activities were particularly rapacious when it came to this species. While we observed earlier how the acquisition of Giant deer specimens enabled Denny to contribute to the scientific debate surrounding this species at the time, we cannot argue for a similar set of motivations behind the thylacine acquisitions—no publications were produced from these acquisitions. The rarity of this species was common knowledge at this time, as can be seen from the 1885 *Lloyds Weekly Newspaper* piece on the attractions at London Zoo:

WHAT TO SEE AT THE ZOO [...] the largest of the destructive marsupial or pouched animals of Australia—the thylacine, a large, wolf like creature that is too destructive to the sheep to be allowed to remain in existence much longer; the race is being rapidly exterminated.⁵⁰

In Tasmania, the persecution of the thylacine had become normative and endemic among the farming communities⁵¹. Bounty schemes were issued as early as the 1820s by local authorities for 'the destruction of noxious animals in

⁴⁹ Leeds Mercury, 3 May 1893.

⁵⁰ *Lloyd's Weekly Newspaper*, Sunday, 31 May 1885, Issue 2219.

⁵¹ Paddle (2000): 99-167.

those districts'—5 shilling for every male and 7 shilling⁵² for every female with or without young.⁵³ The establishment of the anti-thylacine lobby and the passing of an anti-thylacine motion in the Tasmanian parliament in 1887 only worsened the outlook for the species. With the subsequent increase to the bounty rewards,⁵⁴ the extermination programme gathered yet more momentum and by the time the crowds were gathering around the bored thylacines in Regents Park's Zoo, populations were being exterminated far beyond just the agricultural areas and deep into untouched Tasmanian wilderness. However, the campaigns of the anti-thylacine lobby did not go without challenge. In 1871 the Curator of the Australian Museum in Sydney, Gerard Krefft⁵⁵, warned in *Papers and Proceedings of the Royal Society of Tasmania*:

Let us therefore advise our friends to gather their specimens in time, or it may come to pass that when the last thylacine dies the scientific men across Bass's Straits will contest as fiercely for its body as they did for the last aboriginal man not long ago^{56}

Certainly as far as Leeds' collecting activities, his words were already out of date. But Krefft was not alone; by 1895 the pressure group the Tasmanian Game Protection and Acclimatisation Society lobbied for the establishment of a systematic wildlife management—although here we would have to admit that because their interests were in sustainable game stocks they wanted to halt the destruction of the thylacine so that others could join in. While conservation groups proper formed by the early twentieth century, like the Tasmanian Field Club in 1904, for the thylacine it was sadly too little too late. Krefft was vocally critical of unscrupulous collecting activities, not least among the board members of his own museum, who used their position in the museum to increase their own collections. Krefft provides a contemporary counterpoint to Henry Denny's less

 ⁵² I cannot be certain of the value in 1820 of the Tasmanian shilling against that of the British shilling, however 7 British shilling in 1820 were equivalent to approximately £20 today.
 ⁵³ Paddle (2000): 110.

⁵⁴ Paddle quotes 'When 20 [thylacine] have been destroyed the reward for the next 20 will be increased to 6/- and 8/- respectively and afterwards an additional 1/- per head will be made after every seven killed until the reward makes 10/- for every male and 12/- for every female'. Paddle (2000): 110.

⁵⁵ A brief biographical outline of Krefft can be found in Williams and Wüster et al. (2006).

⁵⁶ G. Krefft (1871) in Paddle (2000): 196.

ethical philosophy on this issue. Denny's position on the Giant deer suggested that he believed extinction to be a relatively recent phenomenon. Even so, whatever Denny's understanding of extinction was, it clearly did not equate to ideas about responsibility or indeed intervention. In contrast, and stimulated by the earlier loss in the 1850s of the Tasmanian emu, sentiments connected to responsibility and intervention did exist in Tasmania. In addition to Krefft, a founder of the Royal Society of Tasmania (henceforth referred to as RST) and FRS, Ronald Campbell Gunn (1808-1881) suggested in an 1836 letter to William Hooker that at a small cost the remaining Tasmanian emus could have been collected and protected from what he described as an inevitable fate—'[Emus] in a few years will be quite gone'⁵⁷. However, these individuals should be considered exceptions and it needs to be added that the RST were collectively not without dirt on their hands over the extinction of the Tasmanian Aboriginal.⁵⁸

Just as was the case with the giant deer in the previous section, the published transactions and reports from other societies were central in equipping Denny with the information and contacts he needed to acquire specimens of thylacine for the Museum. Edward Milligan was an Edinburgh-based doctor who had been an Honorary Member of the LPLS from 1825. Little is known about Milligan, not least why he had a link with the LPLS.⁵⁹ But what can be said with accuracy is that he left for Australia around 1862, when he sent a collection of fourteen Australian birds to the Museum.⁶⁰ It is also clear that Milligan arrived in Tasmania sometime that year, where he sent copies of the *Reports of the Royal Society of Tasmania* and *Transactions of the Royal Society of Tasmania* to the LPLS. He did this again in 1865⁶¹ and clearly they were considered useful,

⁵⁷ Paddle (2000): 221.

⁵⁸ See for example the case of the Tasmanian Aboriginal Truganini who came from the Oyster Cove Group. Who prior to Truganini's death in 1876 expressed the wish to have her ashes scattered over the D'Entrecasteaux Channel. Instead she was buried in the grounds of the Female Factory in Hobart and after two years the RST exhumed her body and displayed it up until the 1970s in their Museum in Hobart. For an overview see *The Concise Oxford Dictionary of Australian History*, OUP Australia and New Zealand (1986).

⁵⁹ There may be the possibility that he was a friend of Denny, because both seemed to have maintained correspondence outside of the LPLS. During the 1865 lice correspondence between Darwin and Denny, Denny mentioned information he had received from Milligan in Tasmania on the subject. This also indicates how Denny maintained his network outside of the Museum and the LPLS.

⁶⁰ LPLS Annual Report (1862-1863).

⁶¹ LPLS Annual Report (1865-1866): 18.

because after 1865 the LPLS regularly received copies of both the reports and the transactions directly from the RST, suggesting that the LPLS subscribed to the Reports from 1865 onwards.⁶² In the letters between Denny and Gellibrand, Denny suggested that Krefft could help with the transaction-indicating that Denny had at least heard of Krefft prior to his correspondence with Gellibrand. However, in the end it would be Morton Allport and Dr James Willson Agnew, in their capacity as committee members of the RST, who would assist. Morton Allport (1830 - 1878) was a British-born solicitor, who upon his emigration to the country in 1831 soon became an authority on Tasmanian fish. He became a friend of both the Linnean Society and the Zoological Society and at the time of the correspondence with Denny was Vice-President of the RST.⁶³ Dr James Willson Agnew (1815 - 1901) was assistant surgeon to the agricultural establishment. He was at the time the Honorary Secretary for the RST and had published several papers on the poisonous apparatus of Tasmanian snakes.⁶⁴

The content of the letters from Gellibrand, Allport and Agnew to Denny reveal the extent to which the RST assisted in the transaction. Agnew's letter to Denny in March 1869 (made on RST headed paper) explains how the RST supplied Gellibrand with the appropriate containers for shipping material. The letter then goes on to explain at some length the considerations that Agnew had made into the appropriate preservative medium. In the letter's postscript Agnew breathlessly added:

Our curator Mr. Roblin has just informed me that many of the animals you require have been sent home by a chemist here, in brine and they arrived in good order and condition [...] I think too that sending the animals with all their intestines-uterine system perfect will be a great advantage to you in many ways⁶⁵

⁶² The accounts for the LPLS' library do not show itemised expenditure. However the regularity to the acquisition of the Reports and that each acquisition is credited to the RST rather than an individual indicates that this represents a subscription by the LPLS to the Reports of the RST. ⁶³ Stilwell, G. T. and Green, F. C., et al., (1969): 28-29 for biography of Morton Allport.
 ⁶⁴ Ibid: 18-19 for biography of Sir James Willson Agnew.

⁶⁵ Letter from James Agnew to Henry Denny dated 25 March 1869.

Allport writing to Denny in August 1869 reveals the extent to which the RST acted as agent in financial matters connected to the acquisition.

In accordance with your instructions I have handed £8.15.0, of the £10 transmitted by you, to my friend W. Gellibrand on account of expenses connected with the specimens forwarded to your address. I feel certain you will be greatly delighted with the fine collection forwarded and that you will not consider the expenditure excessive. I have thought it better to retain the £1.5.0 balance towards a second shipment to which I can add some interesting [*finds*] from my own collection⁶⁶

That Allport described Gellibrand as 'my friend' suggests that it was perhaps through Allport at the RST that Denny made contact with Gellibrand. Allport's final comments: 'to which I can add some interesting [*finds*] from my own collection' reveals in a very lucid way just how Denny's network functioned and extended.

It seems clear, therefore, that Denny had used the LPLS's copies of the *Reports* and the *Transactions* of the RST to gather the intelligence he needed to acquire specimens of thylacine. This and the correspondence between individuals reveal the degree to which the RST was a key agent in the transaction. To this we may add that just as we have seen earlier with the Giant deer, the rarity of the species quickened the desire to collect and so increased demand for such specimens within the 'market'. Being clear about the role of desire here is difficult, but on this point we may differentiate the thylacine acquisitions from those of the Giant deer. With the Giant deer acquisitions we see Denny responding to 'market trends', if you like. That is to say, Denny had picked up on emerging scientific interest and collecting activities by other institutions and based greatly on these the Museum became interested and actively pursued Giant deer specimens. Denny and the Museum were one form of consumer within a multi-layered market. In contrast the thylacine had none of the institutional interest that may otherwise highlight where one might next invest. William Flower had published

⁶⁶ Letter from Morton Allport to Henry Denny dated 12 August 1869, Collectors Files.

an account of the animal in the Philosophical Transactions of the Royal Society in 1865,⁶⁷ while Owen's Royal Society description was published in 1855, yet his BAAS Report on the Extinct Mammals of Australia, was published twentyfour years earlier, in 1841. In the UK it was not until the 1890s, when the extinction of the thylacine seemed unavoidable, that its plight became broadly covered in newspapers and periodicals in the UK.⁶⁸ This notwithstanding, the subject had been active and heated in Tasmania from the 1860s, to which we might add that the Museum regularly received the salient publications from Tasmania. This offers an explanation for how Denny was aware of the concerns of the vocal Krefft prior to the correspondence with Allport, Agnew and Gellibrand. Spurred by the debates in Tasmania over the subject, this reveals Denny as a more autonomous and proactive collector than, say, the Giant deer example. Although it used the selfsame 'economy' to that of the Giant deer, the thylacine example certainly expands our understanding of the extent of the supply network involved that made it perfectly possible for a curator in Leeds to reach out across the world to Tasmania and instigate all the detailed logistics behind acquiring specimens of thylacine.

Rarity was a quality that affected values and dangerously commodified living species. As used here, value is more than monetary, it is also scientific and cultural/social, in fact we saw with the Giant deer the accretion of values that were contingent to time, place and human situations. We have also mentioned desire, as nebulous as the term is. But it is tempting to ascribe desire here with agency, especially when we ask why over twenty thylacine specimens were acquired by Henry Denny for the Museum. Certainly, the creation of value is key and just as we saw a quickening of desire in the 'market' as the species neared extinction, ideas of value changed around the species. The community of collectors, the institutions and museums, all assisted in creating both value and demand, similar in many ways to the Giant deer case earlier. With the global network sustained by museums' reports, societal transactions, and other periodicals in mind, we gain glimpses of a market thus created. Here curators

⁶⁷ Flower, W. H. (1865): 633.

⁶⁸ See *Lloyd's Weekly Newspaper*, 5 July 1896: Issue 2798 and *The Boys Own Paper*, 19 September 1891 for examples.
would learn which fields were developing and what specimens were in demand with both accuracy and expediency. Through this network they would communicate their desires to field collectors, via middle men and agents more often than not institutions or societies. The collecting desire may be an index for complex sets of personal motives, which may need greater unpicking in each instance to more thoroughly understand. Still, we have seen how under its influence interests were enthused and the urge to collect, less systematic and rational, which came to bear on certain specimens, certain objects, sometimes with devastating effect. The Museum's acquisition of dodo material, which were acquired around the time of the thylacine acquisitions, demonstrates now familiar traits to us: the role of the market place, the creation of values and desire as well as the commodification of the animal kingdom. It differs, though, in one crucial way and for this reason it makes it an ideal example to conclude this section.

Specimens of dodo, including a live bird, began arriving in the United Kingdom as early as the seventeenth century. However, since its extinction only a small collection of mummified parts remained into the nineteenth century. These had belonged to a stuffed specimen in John Tradescant's collection, the Museum Tradescantianum, which in 1659 were donated to Elias Ashmole's museum in Oxford where they still remain. This small collection came under scrutiny in 1848 by Strickland and Melville, from which was published their 1848 The Dodo and its Kindred.⁶⁹ Undoubtedly this publication rejuvenated interest in the dodo and so when more remains were discovered in 1865-1866 the mutually dependent aspects that we have observed in previous examples, of value and desire, created an economy almost overnight.

Richard Owen had been in correspondence with a George Clark, a schoolmaster working on the island of Mauritius, who sent two shipments of skeletal dodo material to the British Museum in October and November of 1865.⁷⁰ Keen to establish himself as discoverer, Clark had quickly published an article in the Mauritius Commercial Gazette in 1865 describing his find, while Owen presented his initial osteological conclusions to the Zoological Society of

 ⁶⁹ Strickland, H.E. and Melville, A.G. (1848).
⁷⁰ Clark, G. (1866): 141–146.

London in January 1866 and published his Memoir of the Dodo later that year, in September.⁷¹ Clark received £100 for the material he sent to Owen at the British Museum and along with the profits from a further shipment to Alfred Newton at the University Museum of Zoology in Cambridge, Clark had netted a sum equivalent to approximately £10,000 today. Further specimens of Clark's cache of skeletal dodo material were auctioned in London in March 1866, with another consignment following later in October 1866.⁷² In the short time since Clark's initial correspondence with Owen in 1865 up to the London auctions, dodo specimens had gathered several values of which perhaps the most noticeable is the monetary. Nonetheless, we have also acknowledged its rise in its scientific and publishable values—such inflation undoubtedly enabled Clark to re-publish his discovery story in the respected ornithological periodical *Ibis*.⁷³ There would have been every reason to expect that the eight lots readied for auction 'so as to make each lot as complete as possible⁷⁴ would command considerable interest and fetch high prices and while Messrs Stevens of King Street had published an undeniably modest advertisement in the Daily News, the auction elicited a great deal of interest. As the Leeds contingency would later report, '[t]he lots were contested for with much spirit by numerous assemblage of scientific gentlemen, several of whom were connected with the Natural History Departments of British and Continental museums.⁷⁵ Regrettably, the report falls short of naming just who those gentlemen were, but despite the competition, the Leeds contingency was able to purchase a collection of bones for the Museum, as published in the LPLS Report for 1865-1866: 'The Council have been fortunate to secure one of the sets of bones belonging to that remarkable extinct bird the Dodo, which had been sent to London from the Mauritius for sale.⁷⁶ The newspapers reporting the auction stated that 'the collection eventually realised the sum of £83,' notably less than the £100 Owen had paid for the British Museum's set.⁷⁷ This notwithstanding, the sums of money involved were still high, standing in marked contrast to the thylacine, for which Henry Denny paid £8.15.0 for ten specimens

⁷¹ Clark, G. (1865) and Owen R. (1866).

⁷² Daily News, 10 March 1866.

⁷³ Clark, G. (1866): 141–146.

⁷⁴ Leeds Mercury, Friday, 16 March 1866.

⁷⁵ Ibid.

⁷⁶ LPLS Annual Report (1865-1866).

⁷⁷ For examples see *Leeds Mercury*, Friday, 16 March 1866 and *Daily News*, 10 March 1866.

in 1869, including shipping from Tasmania.

Monetary values intuitively seem like accurate indices useful in identifying sets of other values. We can argue that the dodo, eliciting a greater monetary value than the thylacine, also had a much higher cultural value. Indeed there may have been a certain degree of kudos attached to high monetary values. The cultural and social milieu associated with the thylacine economy, if we may phrase it thus, was slight alongside that of the dodo, which had been a part of the national psyche since the early part of the nineteenth century. The seventeenth-century Savery painting 'George Edwards's Dodo' was a popular exhibit for visitors to the British Museum and had been reproduced by Strickland and Melville in their 1848 publication.⁷⁸ Visitors to the 1851 Great Exhibition at Crystal Palace would have found in the taxidermy section a prize-winning life-sized model of the dodo by Richard Owen's taxidermist at the British Museum, Abraham Dee Bartlett.⁷⁹ Of course, no account of the iconic status of the dodo is complete without mention being made of the 1865 Lewis Carroll novel Alice's Adventures in Wonderland, which perhaps equally importantly included the John Tenniel illustration of the dodo, a character now commonly attributed to representing Charles Dodgson himself. Alice's Adventures was issued the same year Richard Owen presented his findings to the Zoological Society and the LPLS purchased Strickland and Melville's volume⁸⁰ and went on just months later in March 1866 to win at auction their own dodo collection. The popular press was important in keeping the dodo present in the nation's imagination as well as maintaining a dodo mythology with enlivened accounts that reminded readers of how the very existence of the bird had once been doubted or how the animal would eat stones given it.81

Even though each has its own characteristics, hopefully we have now seen enough examples to recognize these economies as we have called them and the types of values they propagated. Given the significant differences in the prices achieved for the dodo through 1865-1866, monetary values may in fact be a poor

⁷⁸ The painting remains iconic and popular, see the cover to Bowler, P. (1992).

⁷⁹ Royal Commission for the Exhibition of the Works of Industry of All Nations (1852).

⁸⁰ LPLS Annual Report (1864-1865).

⁸¹ Chambers Edinburgh Journal (1852): 360.

indicator of other sets of values and importantly most likely not their cause. Equally noteworthy has been the role of rarity. Having had the chance to analyze the role of it in the designation of values within an economy, we could commit to the idea that rarity did contribute to the accretion of monetary values, but is not the primary cause, governing the economy. To this cardinal role we must ascribe the social and cultural factors: these affected, formed and shaped all other values within an economy. The natural corollary to this would be that rarity and monetary value, like more nuanced activities such as accreditation, were all derivatives of a social and cultural economy.

What we have termed above as accreditation we have already seen in Henry Denny's scientific ambitions to publish his Giant deer findings, or indeed George Clark's to publish his discovery account of the dodo. Undoubtedly Clark's primary motivation was to seek accreditation as the rightful discoverer of the dodo-arguably better achieved in Ibis than in Mauritius Commercial Gazette. In fact, when corresponding with Richard Owen in July 1866, Clark had revealed concerns he held over another individual who at that time was claiming to be the rightful discoverer of the dodo, thus making clear his preoccupation with the topic.⁸² Owen did in fact reference him in his address to the Zoological Society of London⁸³ and Clark's ability to republish in *Ibis* no doubt came about because of the improving dodo economy. That the publishers of Ibis were happy to republish Clark's Mauritius Commercial Gazette article with few changes affords us a grasp on the viability of the economy outside of the key actors. In fact, the high price that was paid by Owen in 1865 for the British Museum specimens may be attributable to the value he placed on accreditation, thus reflecting Owen's own desire to be accredited as the scientific discoverer of the dodo. This notwithstanding, accreditation value as we have been discussing here is a derivative of social and cultural. It is these that take the cardinal and causal position towards the economy.

While there is much more that could be unpacked further, enough has been said to for us to need to reposition ourselves over the earlier claim that monetary

 ⁸² Clark, G. (1866): 141–146. See also Owen, R (1865).
⁸³ Lloyd's Weekly Newspaper, January, 1866.

values seem intuitively like accurate indices for other values. The primacy this claim infers upon monetary values, in light of the above discussion, is false. Values connected to rarity, while being discrete and nuanced, we suspect to also be culturally defined. Certainly the dodo's higher cultural status in difference to that of the thylacine seemed to be the determining influence behind the differences in monetary values. Therefore, values connected to rarity are here socially and culturally defined too and it is the social and cultural values that dictate and govern values within an economy. We did, however, promise at the very beginning of this section a difference connected to the dodo example that distinguishes it from the other examples, so to that we now turn.

While still in 1866, not long after the acquisition of the dodo bones by auction, a parcel arrived at the Museum in Leeds. Inside was a collection of dodo bones to be donated to the Museum. They had come from a former Leeds parishioner Harry Higginson, who at the time worked as District Engineer for the Mauritius Government Railway. Alongside Leeds, Harry Higginson had sent similar collections to both Liverpool and York museums. We know the collections were a significant size and at least comparable to the set purchased by the Museum at auction, because Liverpool Museum was able to assemble an almost complete skeleton from its Higginson collection—something Richard Owen was able to do from the sets of bones Clark had sent him. The donation passed unnoticed by the press and received perfunctory mention in the Society's reports. The LPLS Report to Council for 1866-1867 recorded 'several bones of the Dodo, from Mr. Harry P. Higginson, of Thormanby' and the donation appears again as listed under 'Donations and Additions' as 'A series of bones of the Dodo, from the Mare Aux Songes, Mauritius – Harry P. Higginson, Esq.³⁴ Fortunately, Higginson wrote his memoirs, in which he described how he came upon coolies working by a bog or marsh, in Mauritius, called Mare aux Songes (The Sea of Dreams).

They were separating and placing into heaps, a number of bones, of various sorts, among the debris. I stopped and examined them, as the

⁸⁴ LPLS Annual Report (1866-1867).

appeared to belong to birds and reptiles, and we had always been on the lookout for bones of the mythical Dodo. So I filled my pockets with the most promising ones for further examination.⁸⁵

The memoirs describe how he took his full pockets to Clark, whom he knew had a book on the dodo, in all likelihood the Strickland and Melville volume. Having identified the bones to be that of the dodo, Higginson mentioned how Clark immediately supervised the search for more, 'He eventually dispatched a large quantity to the British Museum, which sold for several hundred pounds.'⁸⁶ Of those that Higginson himself dispatched, he mentions that he sent '[...] a box full to Liverpool, York, and Leeds Museums, from which, in the former, a complete skeleton was erected.'⁸⁷ Until very recently, the majority of our knowledge of the dodo came from the specimens found at the Mare Aux Songes in 1865 and represent bones from over 300 individual dodos. The specimens are the most complete in existence.⁸⁸

Here, then, the Higginson account adds yet another facet to the discussion. His philanthropic act reveals how fragile the economies were and that in order for them to appear real they needed (approximate) consensus. With hindsight, the Leeds Museum probably thought they had wasted money with the auction purchases, not least because by all accounts Higginson's donation was comparable in size and quality. This may well account for the lacklustre reception his donation met. The industry of Clark alongside that of Higginson now looks less respectable, not least because his claims as discoverer are now questionable.⁸⁹ Perhaps it says something about the characteristic of collecting nature that institutions and collectors alike face the diametric that they either pay the earth for a specimen or nothing at all. This speaks to the idea that to collect is a culturally-derived practice and from the point of inception, every step remains culturally and socially determined. The articulated skeleton on display in the British

⁸⁵ Higginson, H. (1891)

⁸⁶ Ibid.

⁸⁷ Ibid.

⁸⁸ For perhaps the most extensive account of the dodo to date, see Hume (2006).

⁸⁹ Ibid.

Museum, in the Liverpool free Museum or at the LPLS's Museum in Leeds may no longer be accurately described as a dodo's even though the labels say so. Rather they are an expansive cacophony of values and meanings, almost all of which are human-built. Extinct, bird, Mauritius, rare, dodo, discoverer, these are all signs culturally derived, temporary, and that exist through consensus.

[...] the dodo suddenly called out 'The race is over!' and they all crowded round it, panting, and asking, 'But who has won?' This question the Dodo could not answer without a great deal of thought, and it sat for a long time with one finger pressed upon its forehead [...] At last the Dodo said, 'EVERYBODY has won, and all must have prizes.'⁹⁰

2.6 Conclusion

Perhaps the best way to characterise that early collection at the Museum as it looked throughout the 1820s is as a public-spirited miscellany. Even so, at this early stage it was already clear that natural history would dominate. The first Curator, John Atkinson, sought order and the Society's early Reports reflect him wrestling with the Museum's earliest categories. Up to 1826, donations were listed under 'Library and Museum,' perhaps a vestige of the early constitutional status of the Museum. The first Museum categories were formed the following year and while reflecting biases already apparent in the collection, the categories also represented Atkinson's lengthy deliberations: Geology and Mineralogy; Zoology, Ornithology and Entomology; Coins &c.; Comparative Anatomy.⁹¹ The following year sees further elaboration and includes the categories: Herpetology (reptiles), Ophiology (snakes) & Ichthyology (fishes); Entomology and Crustacæology; Numismatology, and Miscellaneous.92 Such depth did not last and subsequent years saw a simplification of these into what we might call the Museums trinity: Geology & Mineralogy, Zoology, and Miscellaneous. With an ebb and flow of other categories, these three represent the core of the Museum's collections. During the 1860s we see the addition of the categories Archæology

⁹⁰ Carroll, L. (1866): Chapter 3.

⁹¹ LPLS Annual Report (1826-1827): 15-21.

⁹² LPLS Annual Report (1827-1828): 17-24.

and Technology. Following these, Zoology became Zoology & Botany in 1879 and Archæology became Archæology & Ethnology a little later. It is likely that this is a result of the increase in specialisations within the sciences and the Society's and Museum's growing relationship with the Yorkshire College of Science . The complexion of this important relationship and its impact on the Museum will be looked at in detail in Chapter 6. At this point it is perhaps worth summarising around two points. Firstly, that the volume of donations increased so rapidly that by the late 1820s the curatorial role at the Museum was one largely concerned with containment. That it curtailed Atkinson's ability to establish expansive taxonomic order among the collections suggests that it most likely restrained other areas of the curatorial role as well. Secondly, the extensions made to the Museum's categories towards the end of the nineteenth century were of a different order to those made by Atkinson at the start, representing as they did a response to emerging academic disciplines and subdisciplines.

Collecting activities changed, becoming more sophisticated, disciplined and selective, as we have charted in this chapter. Nonetheless, this did not affect the public will to donate. Perhaps, then, the category 'Miscellaneous' should be considered a legacy of unsolicited public donations. Earlier we noted the absence of technology or subjects of industrial import, perplexing given that the Museum was located in industrial heartland. This is an absence that is at once revealing, because of how it helps to define what we do see. What we do see is an overflowing cacophony of natural history, filling the rooms of Philosophical Hall so completely and so quickly that it seemed likely to spill out into the streets of Leeds. It was so often portrayed by the Society as a behemoth, consuming all resources, energies and activities, when in fact it was a compulsive, ebullient outpouring from a people conditioned to the industrial townscape and moved by their longing for, and native love of, nature. Making meaningful sense from this outpouring was the task of Leeds' curators. Their unique position within that greater complex makes their lives of paramount importance to us, so it is to them we now turn.

Chapter 3

Curatorial Ideology and Practice

3.1 Introduction

Chapter 3 will take a closer look at the ideology and practice that lay behind the activities of the curators by analysing four of the Museum's curators whose terms together span our all-important 1819-1921 chronology. In this chapter we will make claims against the idea of professionalization, which has too often been portrayed as inevitable, processional and necessarily improved all that preceded it historically. Rather than founding our understanding of the role of the curator through that route, we instead proceed with a hypothesis that curatorial practice was in fact not pushed or pulled by such a force, but was instead something immanent, discursive, unresolved and largely personal. Perhaps our desire to seek harmony in the world found the professionalization narrative hitherto so useful. We do not deny that changes happened, but attempt to understand them not as the effect of an all-improving causation, but rather as entangled phenomena with repercussions in all directions. Towards this subject, one curator, Louis Miall, will be especially salient for being an outspoken protagonist around subjects of progress within museums, curatorship and the natural sciences. His case will be vital in unpacking the anachronistic term professionalization and studying thus the modernist dialectic of difference which characterised much of the energies of change around the opening of the twentieth century. Another theme explored in this chapter is the idea that curatorial practice was an entangled activity requiring the synthesising of different fields of practice and different social worlds and different spaces. To a degree, we want to ignore what we already know of these things and try to observe the texture of historically contingent phenomena. Throughout the United Kingdom, across the Continent and the New World, posts like that at Leeds represented at the time positions at the forefront of the nascent sciences. The Leeds case, then, will bring new insights to bear onto the position that museums took in the development of the natural sciences.

In section 3.2, the Museum's first honorary curator, John Atkinson, who served from 1820 to 1828, will introduce the impact that acquisitions had on the curatorial subject and the import to have a naturalist's expertise at the start. With no legacy to build on, Atkinson employed the first categories within the museum and introduces early on the tension between curatorial needs and the interests of the Society's broader mission. Section 3.3 looks at Henry Denny's term, serving as he did from 1825 to 1871. Denny was the Museum's first full-time paid curator and provides an opportunity to consider the museum curator as natural scientist. We consider how important curatorial posts like Denny's were for the forwarding of the natural sciences. The following section, section 3.4, takes the term of Louis Compton Miall, who served as Curator from 1871 to 1891, as an opportunity to discuss curatorial practice during the formation of professional posts within the natural sciences. This will include his activities among the scientific community in urban Yorkshire and in particular between the Museum and the newly formed Yorkshire College of Science. An often contentious figure, Miall's outspokenness and his tandem positions in both Museum and College make him ideal for consideration. With Miall re-located to the Yorkshire College as first chair of Biology, Henry Crowther, serving as Curator from 1893 to 1928, provides the chance to consider the curatorial role in a greatly changed museum environment, on the brink, as it was, of becoming a municipal museum, the broader impact of which will be developed further in Chapters 7 and 8 of this dissertation. Here we will look at the Museum's popular, public-facing activities like the schools programme, and Crowther's popular magic lantern lecture series as well as his use of local press. So with the curator defined here as populariser and generalist, Crowther's example will help us crystallize our thoughts around the role of the curator, around terms like amateur and professional and the status of the Museum within a civic-aligned landscape.

3.2 John Atkinson, Curator 1820-1828: The Making of a Museum

Atkinson's position as Curator at the Museum was honorary and so unpaid. Being a surgeon of a busy Leeds-based practice, his experience as a naturalist was limited to his spare time and his responsibilities at the Museum to part-time. When evaluating Atkinson's contribution, because of his personal circumstances and because of the time, we could easily describe him as a dilettante, curioso, or a gentleman curator. But these terms are oftentimes synonymous with naïve or more primitive practices and so used to differentiate something of higher value from these. If we remain committed to the idea that curatorial practice was something immanent, discursive and unresolved and if we remain unhappy with the idea of a century of progress which leaves us with the professional curator, then we need to think very differently about individuals like John Atkinson.

Given that at the time of Atkinson's appointment in 1820 there were no natural scientists or natural history museums at this time, per se, it is hard to imagine anyone better suited to undertaking this role. After being educated at the Leeds Grammar School, Atkinson was trained at the Leeds General Infirmary as surgeon under William Hey senior. As noted in Chapter 1, Atkinson was one of the founders of the LPLS, and presumably with the endorsement of William Hey, he divided his time between life in a busy Leeds practice and his curatorial responsibilities, which by all accounts was noteworthy for his dedication and commitment.¹ His social and professional credentials aside, that Atkinson was a naturalist was decisive to his appointment. It certainly speaks to the natural history orientation of acquisitions at this very early point (1820) and shows a degree of commitment by the Society towards that orientation. Atkinson's engagement with the naturalist tradition is noteworthy, it having developed during a long period of convalescence at his father's vicarage in Kippax.² Unable to do much else, and most of the time on his own, it was in these surroundings that the weakened Atkinson nurtured his interest '[...] here an admirer of the

¹ Philosophical Magazine, 2nd Ser. 4 (1828): 395.

² Ibid.

beauties of nature, his attention was attracted to her details.³ The accounts describe a private and modest man, dedicated to his practice and to his post as Honorary Curator,⁴ which eclipsed any ambitions for public office or further involvement with the LPLS:

His office of Curator, to which the whole of not only the days but also the nights he could spare from an extensive practice were devoted, prevented his taking any prominent part in the literary proceedings of the Society $[...]^5$

It was while at Kippax that Atkinson developed his interests in entomology and botany. Certainly his time in Kippax is important to understanding Atkinson the Curator and there is a sense that his was a meditative and analytical enquiry.⁶ Of his time as a Curator it is his industry and dedication that earlier historians draw our attention to. This notwithstanding, what is immediately striking to us is that he established in 1822 the authority for the Curator to be able to trade the Museum's duplicate objects 'in minerals, shells and other subjects of natural history belonging to the Society as he may consider likely to promote its interests.⁷ This small compliance gave Atkinson and his successors the currency to build a Museum of Natural History yet further and beyond the reliance of donations alone. Far beyond the value in exchange of the various specimens, this instigated perhaps the most powerful curatorial device, the exchange network and their economies that we discussed in the acquisition of the Giant deer, Thylacine, and dodo in the previous chapter. Importantly, in 1822 Atkinson made a donation to the Museum consisting entirely of natural history specimens: '135 Species of British Birds, Two Fallow Deer, a Panther, with several smaller Quadrupeds a Collection of the rarer British Plants, 200 British Insects, many

⁴ The few brief biographical notes that exist of Atkinson suggest that only one fuller account was ever written, being his obituary in *Philosophical Magazine*, 2nd Ser. 4 (1828): 395-396. Perhaps surprisingly, the *Leeds Mercury* obituary is very short and mostly highlights the eminence of his father. See *Leeds Mercury*, 11 October 1828; Issue 3298. His obituary in the LPLS *Annual Report* (1828) does not offer any biographical details, while Taylor (1865): 311-313 copied this account verbatim.

³ Ibid.

⁵ Philosophical Magazine, 2nd Ser. 4 (1828): 395-396.

⁶ According to the biographical accounts, while at Kippax Atkinson used Berkenhout's Linnaean *Synopsis* as his only reference. See Berkenhout (1795).

⁷ LPLS *Council Book*, February (1822).

Shells.⁸ The donation is large and the panther, deer and other quadrupeds designate large specimens of rarity and show Atkinson to be well connected to collecting sources in a personal capacity. We know that these did not represent his entire collection, since after his death the society purchased his personal collection in 1829, which consisted of a large collection of British insects.⁹ So whether he envisaged complementing the permanent collection and displays with these items or whether they were intended to prime trade under his recently acquired powers, we can see that his commitment to building the Museum's collection had by 1822 embraced his personal self and emotional state.

Certainly, Atkinson had to deal with large amounts of unanticipated donations, which as we have seen in Chapter 2 were heavily biased towards natural history subjects.¹⁰ However, if the public showed a predisposition for natural history, the Society itself had different interests. Here we find pursuits and acquisitions heavily freighted with cultural value, like antiquarian mineralogy and Egyptology. The presentation of the Egyptian mummy in 1824 by John Blayds Esq. did much to stimulate a momentary interest in Egyptology. The LPLS gave papers and lectures by key members of the Council and in 1836 the first President of the LPLS, John Marshall, opened his version of the Egyptian Temple of Edfu in Holbeck, Leeds and called it Temple Works. One could argue, though, that this behaviour was atypical, a different museology or language to that which can be seen among the majority of donations and serves to distinguish Atkinson still further to observe the traditional antiquarian ethos present in the LPLS Council at this time.

By 1824, it was considered by many on the Council that Philosophical Hall was already too small for the LPLS' needs. Calls were made to sell it and with the profits have built a larger building. As Council members came together to put forward an argument for a new building, explaining that the building was already 'unsuitable as a depository of subjects of Natural History, requiring scientific arrangement' they helpfully provided us with their view that the Museum, a

⁸ LPLS *Council Book*, February (1822).

⁹ LPLS Annual Report (1829-1830).

¹⁰ The extent of the donations included thirty-four donations of natural history specimens and eight of antiquities, archaeology and art, together, see LPLS *Annual Report* (1824-1825): 15-16.

depository of subjects of Natural History, required scientific arrangement. We remarked about the use of categories in the organisation of the Museum's collections in Chapter 2, which in 1827 Atkinson had fundamentally extended and did so again in 1828. His categories were derived from Linnaean taxonomy, so were suited to natural history subjects, which brings us to an important point.¹¹ Anything outside of natural history had the probability of becoming categorised as miscellaneous. Being characteristically assiduous, it is likely that Atkinson was uncomfortable with this and noting the increasing inclusion of categories in non-natural history subjects, we may conjecture that here he is making amends. Even so, all of this offers us a glimpse at qualities lying at the heart of the curatorial management of objects and collections.

Although a system like the taxonomic one employed by Atkinson looks like a natural or real order and seems to stress the relations between things, it is in fact a system of differentiation and separation. When Atkinson created taxonomic order from a conchological collection, for example, he would first separate the land snails from other molusca, marine or freshwater snails for example. This would then be sub-divided into family and genera, then placed into drawers according to species. Within each tray, the delineations would continue as colouration; monstrous varieties and rarities like sinistral specimens were identified and set aside. This process loses an object's original and natural meanings, for it forces the object into a map or sets of human-built meanings, in this case taxonomic meanings like species or sub-species. But as the above example illustrates, not only does it employ a theoretical map, it relies strongly on physical separation, from card dividers within a single drawer to different cabinets, or as we shall see in the following chapter, even different rooms like the Bird Room. So the original and natural meanings of an object that rely on relational and sensual terms, struggle to survive this process and so withdraw, perhaps into the object but arguably beyond our reach. Once separated, original values are seldom returned to objects and the reality of an object in the museum

¹¹Atkinson's categories introduced for 1827: Geology and Mineralogy; Zoology, Ornithology and Entomology; Coins &c.; Comparative Anatomy. The following year of 1828 sees further elaboration and includes the categories: Herpetology (reptiles), Ophiology (snakes) and Ichthyology (fishes); Entomology and Crustacæology; Numismatology, and Miscellaneous. See LPLS *Annual Report* (1826-1827): 15-21, and LPLS *Annual Report* (1827-1828): 17-24.

is one determined by its difference to and separation from other objects. Under such regimes, we are left with an artificial production that consists of a culturally determined meaning, which is often referred to as interpretation that is projected onto a human-built construction. So the tray of a certain species of land snail may convince us of certain realities, for example that this is a certain species of land snail, when in fact what is experienced is greatly removed from any land snail reality. As a case in point, conchology collects only the shell of snails, not the soft body parts. This practice was largely superseded in the early twentieth century with malacology, which was interested only in the soft body parts. What we might see, then, when one looks at the tray of land snails, would effectively be a set of signs, signifying among other things certain naturalists' interests and values.

The exercises above hopefully draw our attention to the determining human role to what Atkinson was undertaking. It charges the curatorial undertaking at this very early stage with the production of new cultural meanings from out of natural objects. As we have seen, objects and collections are made to fit the systems of organisation and categorisation chosen and begin to resemble the system or map. For example, objects need identifying before being placed accurately into the system; until then they have no identity within the system or map. But also the fallacy of the map, 'this is a land snail' becomes fallacy in fact, or perhaps more appropriately, 'this is a natural history museum.' In the previous chapter we considered the role that public donations played in shaping the Leeds Museum as a natural history museum. But with Atkinson we have seen how this played a small role in defining museum identity alongside the role of the curator. Looking at this early curatorial practice has upset ideas that earlier forms of practice are primitive forms of practice. Certainly, delving into curatorial activities, Atkinson presents an astonishingly competent contributor whose outstanding achievement must be the creation of the Museum's identity.

3.3 Henry Denny, Curator 1828-1871: Curatorial Production between Worlds

When discussing the collecting activities of the Museum, the previous chapter has done much to throw light on Henry Denny's (1803-1871) key role in the acquisition of important national and international specimens at the Museum and in its collecting activities more generally. Denny's term is also notable for bearing witness to the greater establishment of the natural sciences, so his is an important narrative if for this reason alone. His was also the first full-time salaried position held in the Society. Therefore in Denny we have several characteristics that differentiate him from John Atkinson. Notwithstanding the differences, as Atkinson's Sub-Curator he was still part of that ideology we described in the previous section. In fact, remaining as Sub-Curator to a string of Honorary Curators until 1862 when he was made General Curator, and yet part of a vanguard of full-time paid positions within the natural sciences, Henry Denny embodied a curator of two ideologies.¹²

The need to employ someone full-time had been discussed by the Society prior to his appointment and so when the accommodation in the cellars of Philosophical Hall became vacant, the officers and council of the Society saw this to be the ideal opportunity:

It had been frequently recommended to engage in the service of your Society, some individual qualified by science and experience to conduct, under the direction of the Curator, the arrangements of the Museum, with an annual stipend, sufficient to enable him to devote his undivided attention to the concerns of the institution, and thereby to relieve the Curator and Secretaries from the pressure of their accumulating duties. The vacation of the situation of Resident,¹³ seemed to present a suitable opportunity for submitting to you a proposition of that nature, in consequence of which, your Society came to the important resolution of

¹² Nothing was mentioned of the change in title from Sub- to General Curator, other than it being noted in the reports List of Officers, Council, and Members. See LPLS *Annual Report* (1862-1863): 29.

¹³ The responsibility of the Resident is uncertain; little mention is made of Mr Livesey, except for one entry: 'Resident at Hall... Mr. Henry Livesey'. It seems likely that he undertook caretaking and security. See List of Officers, Council, and Members in LPLS *Annual Report* (1824-1825): 18.

creating the office of Sub-curator, with an annual salary of £80, leaving the appointment to be filled by the Council.¹⁴

And it was the position thus created that Denny filled. Little has been recorded of Denny's life prior to his arrival in Leeds, except that he was from Norwich and had a seemingly close association with the entomologist William Kirby.¹⁵ Previously William Kirby had sought employment for Denny as an illustrator on an entomological periodical.¹⁶ Denny's alliance with William Kirby was particularly close. They worked together on producing illustrations for Kirby's Linnaean Society papers¹⁷ sometime before Kirby and William Spence produced the seminal entomological text An introduction to entomology, in 1857.¹⁸ Writing to Denny in 1822, Kirby explained how he had 'long felt a wish, if it could by any means be accomplished, to introduce you to constant and remunerating employment'. Ordained Deacon in 1782 and appointed rector of Barham, Kirby was himself well appointed to undertake his interest in entomology as an aside to his clerical responsibilities. He had good associations with Joseph Banks, William Hooker and William Spence among others and in him we find a man concerned with the lack of employment opportunities for young talented natural scientists, like Denny. It is plausible that his endeavours in establishing museums in Norwich and later in Ipswich were motivated as much by this preoccupation. Chairs of Biology that were available at the time were few and far between, poorly paid and had no opportunity to employ assistance and staff,¹⁹ which was something Kirby would know from personal experience, having unsuccessfully applied for the Professorship of Botany at the University of Cambridge.

Of his own work, Denny had published *An essay on the British species of the genera Pselaphus of Herbst, and Scydmaenus of Latreille* in 1825 by the Norwich publisher Simon Wilkin just before he arrived in Leeds.²⁰ Wilkin was himself a well-known figure within entomology at that time and a friend of

¹⁴ LPLS Annual Report (1825-1826): 6.

¹⁵See the *ODNB* entry for Denny.

¹⁶ Freeman (1852): 403.

¹⁷ Ibid: 369.

¹⁸ Kirby, W. and Spence, W. (1857).

¹⁹ Allen (1978): 83.

²⁰ Denny, H. (1825)

William Kirby.²¹ Therefore Denny's natural science, particularly his entomology of parasitic insects, was proven and mature prior to his appointment at Leeds.

After the Society had agreed to form the post of Sub-Curator, letters were sent out seeking the recommendation of an individual:

[...] your council has selected an individual, recommended to their choice by the decided testimonials of gentlemen eminent for scientific attainments, and fully competent to form an opinion of the requisite qualifications.²²

It seems likely that it was William Kirby who recommended Denny and provided the necessary testimonial.²³ In addition we also know that John Atkinson had long since admired the work of Kirby, had corresponded with him on entomological matters and the two exchanged specimens.²⁴ Certainly, after Denny's appointment at Leeds, Denny and Kirby maintained correspondence which often concerned museum matters. In 1827, writing to Denny on the progress made on the Norwich museum, Kirby concludes 'I hope, when you have got your museum into good order, you will have less labour upon your shoulders, and be sometimes at leisure to take an entomological excursion.²⁵ Accordingly, we begin to see how one of the first paid curatorial positions came about, how it was advertised and what was required to gain such a position. Denny continued his links with Norwich and would act as advisor to the Committee of the Norwich Museum in 1864 concerning the issue of entrance fees.²⁶ According to census records from the time Denny lived at Philosophical Hall, with his wife, five children and a domestic servant. That the post included accommodation would certainly would have added to the attraction for Denny

²¹ Wilkin's entomological collection was bought by the Zoological Society of London in 1832. He was fellow of the Linnaean Society, member of the Wernerian Society of Edinburgh and founder of the Norfolk and Norwich Literary Institution and Norwich Museum. William Kirby was a founder member of the Linnaean Society and FRS; among other publications, he was a contributing author to the *Bridgewater Treatises* (The History, Habits, and Instincts of Animals, 1835), founder of the Ipswich Museum in 1832, and along with William Spence found the Entomological Society of London in 1833. See *ODNB* for Simon Wilkin and William Kirby.

²² LPLS Annual Report (1825-1826): 6.

²³ Secord, A. (1994): 383-408.

²⁴ Atkinson sent Kirby specimens of seed weevil (*Apion astragali*) to assist with his research. See letter from Atkinson to Kirby, 18 August 1810, in Freeman (1852): 251.

²⁵ See letter from Kirby to Denny, 17 October 1827, in Freeman (1852): 429.

²⁶ Letter from Denny to Joshua Swann, 31 December 1864.

who remained resident at Philosophical Hall with his family, until around 1832.²⁷ The lack of any evidence within societal records of this arrangement as well as the layout of Philosophical Hall, suggests that this arrangement was unplanned.

On the death of John Atkinson in 1828, John Hey was appointed as Honorary Curator, with Denny remaining Sub-Curator. John Hey was the son of William Hey and therefore part of the still influential Hey dynasty in Leeds. William Hey (Junior), who was John's brother, would be Mayor of Leeds in 1831 and President of the LPLS the following year. However, John Hey's election came when he himself was an elderly man and the impression is that this was a title awarded honoris causa rather than an active position. However, on Hey's death in 1837 the Society altered its laws to provide three honorary curator positions, with Denny remaining as Sub-Curator.²⁸ Even though the Honorary Curator was a title intended more for the honour, the Curators did like to make changes and thus any turnover of such positions were, as the Society pointed out after John Hey's death, a problem for the continuity of the classification of specimens which were 'liable to entire reversal by the change of the Curator.'²⁹ In a move that both reduced the impact any one Honorary Curator could have on the management of the collections while also offering two more honorary titles for the now aging Council, the LPLS divided the original Honorary Curator into three: one for geology, one for zoology and one for antiquities. As suggested above, these honorary positions were awarded very much for the honour and reserved for a small coterie closely involved in public life and with foundational connections with the Society. John Marshall (junior) became Honorary Curator of Geology, Thomas Teale the Honorary Curator of Zoology, and William Osburn the same for Antiquities. John (Garth) Marshall was the son of John Marshall, who had been the Society's first President, wealthy industrialist and Liberal MP—John G. Marshall Junior would follow his father's political career

²⁷ It has not been possible to ascertain with certainty the date when Denny moved from Philosophical Hall. However, a letter sent to William Gott in 1832 regarding the purchase of the Giant deer seemingly included details connected with Denny moving accommodation, writing 'I have taken the house, but was compelled to allow the rent to commence from the 1st of this month'. See letter from Henry Denny to William Gott, 8 November 1832.

 ²⁸ LPLS Annual Report (1837-1838): 7.
²⁹ Ibid.

and became the Member of Parliament for Leeds from 1847 to 1852.³⁰ Thomas Teale was surgeon at the LGI and a key figure in the public life of the town. He was Royal Medical Commissioner and Justice of the Peace for Leeds by the 1860s.³¹ William Osburn had been a part of the Council since the very first meeting in 1818; he belonged to the powerful merchant classes in the town and like Marshall and Teale, a major figure in Leeds' public life. The posts at the very top of the Society would circulate within this small group and it was not uncommon for a member of this high-table to be at different periods the Society's President, its Secretary, Honorary Curator, Honorary Librarian, or Treasurer.

Informal instruction of the natural science kind had been available for some time with accessibility to publications, clubs, associations and itinerant lecturers increasing throughout the end of the eighteenth century onwards, and of course the Phil and Lits. But paid positions in the natural sciences were still very rare in 1825 and until the formation of regional museums, which grew out of the shifts in legislation we noted in Chapter 1 from 1817 onwards, employment was very much the preserve of clerics in the few Chairs of Biology in universities. Professional men, clerics like William Kirby and medical men as with John Atkinson, commanded many of the honorary positions within the councils of the early societies and museums—seemingly, their professions affording the lee-way for such. However, the new paid museum appointments, like those in Leeds, Norwich or Ipswich would not have been of interest to clerics or surgeons because as we have seen, aside from excellent experience, these positions expected subservience to the honorary positions by the post holder. It is easy, therefore, to imagine how for individuals unable financially to submit themselves to medical or theological degrees, a museum appointment represented a hitherto absent opportunity. Denny, you'll remember, considered earning a living from his entomological illustrations.³² Kirby, in correspondence with Denny, had mentioned how he had also encouraged an individual to consider dealing in

³⁰ Taylor (1867): 364-366.

³¹ See *The Medical Times*, 21 December 1839: 105. Also *The Gentleman's Magazine*, Volume 224, 1868: 260.

³² Freeman (1852): 403.

entomological pins, tools and sundries as it would 'produce him a little profit.'³³ In this way a new individual entered the museums structure who up until then would otherwise have been excluded.

Denny's post could be seen as a bold investment towards the professionalization of curatorship. It certainly represented one of the first of its kind in the country. Nonetheless, we have seen how it was in fact a prosaic response to the rising workload generated by the exponential growth of the collection. Moreover, the entrenchment of honorary positions within the Society's constitutional structure that we have noted above encumbered Denny's post by subservience to a panel of Honorary Curators. In the same way in which they indicated the organisation of the collections, the reports assist here in the way they categorised various posts within the Society's Council. Just as we saw with objects and specimens, the act of categorisation here is one based on difference and separation, creating artificial hierarchy within what was essentially a fluid human complex. During 1828-1829, when John Atkinson was Curator and Henry Denny Sub-Curator, the organisation listed the post fifth down from President.³⁴ However, by 1858-1859 we see a forceful imposition of hierarchy in which considerable distance has been placed between the upper council and the Sub-Curator post, now placed not only eighth down from the President but also after the entire Council of ten members.³⁵ Given the above, we would have to submit that Denny's narrative problematizes any idea of a linear progression to the professionalization of curatorship and the natural sciences.

However, the lowly and changeable status of Sub-Curator greatly belies Denny's achievements. Certainly from the 1840s up to his death in 1871, he was well known to many of the leading natural scientists of the time, who included Richard Owen, Charles Darwin, Thomas Huxley and others besides. Some of them, like Darwin, he was in close correspondence with at certain points during

³³ Freeman (1852): 429.

³⁴ LPLS Annual Report (1828-1829).

³⁵ Ibid.

this period.³⁶ In addition, the material collected under Denny's management and energies kept the museum vital to the scientific community. Certainly at times his collecting activities were commensurate with the British Museum; often collecting material such as the dodo specimens, in tandem with the British Museum's natural history department. The thylacine collection that Denny amassed was as extensive as the British Museum's own collection of this species, with many the specimens in both institutions sharing the same provenance and donor.³⁷ Just as we have observed with other important acquisitions, Henry Denny instigated the acquisition of one of the earliest specimens of gorilla to arrive in Europe. The specimen purchased by the Society in 1855 came from Samuel Stutchbury, the curator of the Bristol Institution for the Advancement of Science. Stutchbury had orchestrated the arrival of the first specimens into the UK in 1847 and Leeds had been trading specimens with the Bristol Institution from as early as 1824.³⁸ Access to the Congo and the west coast of Africa during the 1840s and 1850s was very limited. However, Bristol being a busy port, Stutchbury was able to establish the necessary contacts with captains running the trade route down to the West coast of Africa.39 All of Stutchbury's first acquisitions of gorilla were sent to Owen. More soon followed these, and Stutchbury supplied the Bristol Institution with their own gorilla material in 1849.40 We cannot be sure how well informed Denny was over the work of Savage and his co-author, the Harvard anatomist Jefferies Wyman, in identifying the species,⁴¹ but the LPLS subscribed to the *Proceedings* of the Boston Society of Natural History shortly after acquiring the gorilla material and followed Owen's recommendation that this was a new species of chimpanzee.⁴² Owen originally called the species Troglodytes savage, but honouring Savage and Wyman's name altered it to *Troglodytes gorilla*.⁴³ However, it was not until after

³⁶ Denny won a BAAS award in 1844 to produce a report on Lice (*Anaoplura*), which brought him into close correspondence with Charles Darwin, who sent Denny his lice collection and went on to reference Denny in *Descent of Man*.

³⁷ Oldfield (1888): 257-258.

³⁸ LPLS Annual Report (1824-1825): 15.

³⁹ Richard Conniff has done the most extensive work on this, describing the competitiveness of acquiring such specimens and the role of the American missionary physician Thomas Savage in the species' discovery. See Conniff (2009).

⁴⁰ Bristol Mercury, 17 February 1849.

⁴¹ Proceedings of the Boston Society of Natural History, Vol. 2, 1847: 245.

⁴² LPLS Annual Report (1855-1856): 8-17.

⁴³ Transactions of the Zoological Society of London, Vol. III, 1849: 391.

the Owen-Huxley clash at the 1860 Oxford meeting of the BAAS, that the classification of the gorilla became a live subject in scientific circles.⁴⁴ Along with John Gray, the Keeper of Zoology from the British Museum, Huxley inspected the Leeds specimen in 1862 and corrected Owen's original classification. Shortly afterwards the Society reported:

The Society will be glad to hear, that a skeleton of an Anthropoid Ape in this compartment, purchased about seven years ago, and hitherto looked upon as a new species of Chimpanzee, has been recently examined with care by Professor Huxley, and Dr. Gray, and pronounced by both these eminent Naturalists, to be an undoubted skeleton of the Gorilla [...] It is gratifying to think that our Museum has been in possession of such a treasure as a complete skeleton of Gorilla, long before the recent explorations in Western Africa had given that animal so much celebrity.⁴⁵

Being the responsibility of the Sub-Curator (or later on the General Curator), the Society's lecture programme offers another example of the primacy of the role. Although this subject will receive fuller attention in the following chapter it is enough to say here that under Denny's management it was responsible for bringing to the lecture hall of Philosophical Hall the scientific, literary and cultural vibrancy of the nineteenth century. From zoology these included Owen, Huxley, Wallace, George Rolleston, and Francis Galton. From geology, Phillips and Sedgwick; elsewhere from science names included John and Alexander Herschel, Playfair and Crichton Browne. The names from politics and literature included Whewell, Trollope and Joseph Paxton. As well as contributing to the richness of Society life, and public life in Leeds, the lecture programme offered the opportunity to side-step traditional protocols attached to correspondence and without doubt assisted in building his network. This aside, the lecture programme also demonstrates a remarkable degree of social mobility that came with paid curatorial posts such as that taken by Denny, especially when we remind

⁴⁴ See Conniff (2009) and Desmond (1994): 275-278.

⁴⁵ LPLS Annual Report (1862-1863): 10-11.

ourselves of the Norwich boy in dire need of gainful employment we met at the beginning of this section.

When summarising John Atkinson's term, we characterised his role as nothing less than that of creator of the Museum's identity. Having now also considered the role of Henry Denny there seems little doubt that this remains true for his term also. However, even though the Society seems also to appreciate the contribution - 'it is impossible to overestimate Mr. Denny's unceasing exertions^{46} – it continued to place the role under that of a panel of Honorary Curators right up until the museum was gifted to the Corporation in 1921. That said, Denny's short obituary in the Society's Reports described him as 'the first stipendiary Curator of the Leeds Museum.⁴⁷ So far we have seen how curatorial practice was an entangled activity, which through a variety of responsibilities required the synthesis of distinct fields of practice. Thus far this has suited individuals like Henry Denny, through whom we see the degree to which this was a socially-bound practice. It is noteworthy just how well the narrative speaks of the individuals and that Atkinson's term differs from that of Denny's in the ways that each put their individual mark on their term. In addition, we cannot justifiably claim there to be any continuous precession of improvements to what we have discussed.

Certainly, acknowledging the differing periods of their terms, there is a sense that instead of inevitable precessional improvement, the narratives actually reveal a degree of irresolution thus far. Certainly we have seen a high degree of readjustment by the Society around the Curator. So we are left thus far with the impression of immanence that we introduced at the very start of the chapter, in which Museum, Curator, and curatorial practice are all in the process of becoming.

Eventually, in 1862, the post was renamed General Curator, thus indicating an acceptance of sorts to the primacy of role and later still, when Denny had been replaced by Louis Miall, Miall would be referred to as the curator in the body of

⁴⁶ LPLS Annual Report (1858-1859): 9.

⁴⁷ LPLS Annual Report (1870-1871): 6.

the Society's Reports while still being listed as General Curator in the List of Officers, Council, and Members.⁴⁸ Additionally, in 1891 Miall's post was supported with a full-time paid post of Sub-Curator, for whom the General Curator was responsible. However, changes to the title of the post did not seem to impact on increases to the salary of the post holder. The Society paid Denny £80 per annum from his appointment in 1825 up to 1830, when his salary rose to £100. By the 1840s it rose again to £120 but then remained there until 1862, when it rose to £140. By 1865 it had reached £160 per year and in 1870 this had become £200 per year.⁴⁹

By and large, the Honorary Curators did not affect the activities of the Sub-Curator and their curatorial ideologies and practices. Additionally, while we have not found evidence of such, the impression is that the various parties knew their roles, with the task of managing the Museum resolutely the responsibility of the paid post. In this way there was a harmonious accord between Honorary Curators and Sub-Curators or General Curators. We have seen little evidence towards the autonomy and voice or authority of the Curator, but no one did more to establish these than Henry Denny's successor Louis Miall, to whom we now turn.

3.4 Louis Miall, Curator 1871-1891: Professionalization and the Natural History Curator

Upon the death of Henry Denny, and with a perfunctory briskness, the Society announced the appointment of Louis Compton Miall (1842-1921): 'The vacancy occasioned by Mr. Denny's death was filled up on April 5th by the election of Mr. L. C. Miall, late Curator to the Bradford Philosophical Society'.⁵⁰ Henry Denny has afforded the chance to explore an emerging entangled curatorial practice, one interwoven with various scientific practices. With Miall we will be able to explore curatorial practice within a growing institutional environment in

⁴⁸ Miall had previously worked for the museum in Bradford where his title was curator, so this name change to the post in Leeds may have represented acknowledgment of that. LPLS *Annual Report* (1878-1879): 10.

⁴⁹ LPLS Annual Report (1824-1825): 30 and 40. LPLS Annual Report (1862-1863): 65 and 70.

⁵⁰ LPLS Annual Report (1870-1871): 6.

which scientific fields and disciplines were rapidly solidifying and are able to expand the narrative of interwoven scientific practices yet further.

As a boy, Miall was schooled in Yorkshire. His father was a congregational minister in Bradford and his eldest brother attended the Edinburgh Medical School. Most likely out of financial constraints, Miall's parents established a private school at his father's chapel in Bradford, where Miall was to teach and was forced to continue his education self-taught. It was here that the defining roles of pedagogue and a natural scientist were formed in Miall's life.⁵¹ He joined the West Yorkshire-based Todmorden Botanical Society at this time, became immersed in geology and biology and published his first papers on these subjects.

Noteworthy is the same early proximity to the church that we have seen with John Atkinson, whose father was incumbent at Kippax, as well as the formative role that William Kirby had on the young Henry Denny. The church had thus far played an important role in the ideologies of the curators at Leeds. However, Miall denounced his faith during the 1860s, just as his interests in natural science were in ascendance.⁵² The materialism that would follow became a defining characteristic of his scientific philosophy, which had been greatly shaped by the influence of Huxley on Miall.⁵³ So at this early point Miall stands out from the curators that preceded him. His denouncement caused distress within the Miall family and his relationship with his father had deteriorated such that Miall took a teaching position in London and left the family home.⁵⁴ Throughout this period in London, Miall maintained strong Bradford connections, largely through his brother. In 1862, presumably while teaching in London, Miall co-authored *The*

⁵¹ The biographical account by Baker and Bayliss, while being the most extensive on Miall, is frustratingly economic with dates. His obituary in *Entomologists Monthly Magazine*, 1921: 93-94 has proved useful for filling in some of the gaps.

⁵² Wager (1921): xii.

⁵³ By his own request, Miall's funeral was conducted with no religious service attached. For general biographies of Miall see Baker and Bayliss (1983) and Wager (1922): x-xix. Many others exist, such as *Entomologist's Monthly Magazine*, Volume LVII, 1921: 93-4. Also LPLS *Annual Report* (1921-22). However, all sources are largely based on the transcript produced by Miall's daughter, Winifred Wager. For overviews of his academic contribution and the

amateur/professional debate see Baker and Bayliss (1985): 141-5 and Alberti (2001) respectively. ⁵⁴ Entomologists Monthly Magazine, 1921: 93-94.

Flora of the West Riding with fellow member of the Todmorden Botanical Society Benjamin Carrington.⁵⁵

By this time, Miall's interests and ambitions in natural science were solidly formed, but his paid appointment at the Bradford Philosophical Society (BPS) was entirely down to the influence of his brother Philip, who upon completing his medical education became surgeon at the Bradford Infirmary and closely connected to the BPS.⁵⁶ Philip contacted his younger brother in 1865 offering him the position of Secretary to the recently formed BPS with a salary of £100 per annum. This was a retainer position offered to Miall, a strategic steppingstone, since the following year, 1866, he was appointed curator.⁵⁷ As curator he was responsible for establishing the museum and library, which opened in 1866 in Manor Row.⁵⁸ In a way similar to that observed with Denny earlier, Miall organised the BPS' programme of scientific lectures, greatly expanding Miall's network and influence. When comparing the lectures programmes at both the BPS and the LPLS during 1865-1871, we find considerable duplication. It is perfectly likely (and understandable) that lectures were organised across a number of neighbouring societies by individuals such as Thomas Huxley, who lectured at both societies in 1870 or indeed Richard Owen, Alexander Herschel, or George Rolleston, who were all active at both societies between 1865-1871. Miall certainly could not fail to have been impressed with the extensive LPLS programme under Atkinson and Denny's charge and at the time the Museum in Leeds would have provided an excellent example for younger institutions such as the Bradford museum. The extent of duplication between the programmes of the LPLS and the BPS is suggestive of a degree of collaboration between the two curators and institutions, and certainly no sign of competition.⁵⁹ Miall did himself deliver a course of twelve lectures on Geology at the LPLS in 1869 and at this time his geological work was earning him attention from Huxley. Miall had sent a specimen of Labyrinthodont Amphibian, unearthed from a coalmine

⁵⁵ Miall and Carrington, *The Flora of the West Riding*, 1862.

⁵⁶ Lancet, 12 May 1860: 481-483 and 13 March 1869: 360.

⁵⁷ Other than the porter, the General Curator was the only salaried post at the LPLS during this time. In 1865 the post amounted to £160 per annum. See LPLS *Annual Report* (1864-1865): 17. ⁵⁸ Baker and Bayliss (1983): 205.

⁵⁹ Competition between towns has been over-emphasised by historians, perhaps. See Briggs

^{(1968).} See Knell (2000), concerning competition between philosophical societies.

outside Bradford, to Huxley in 1869. Miall submitted a description of its excavation to Huxley for use in the subsequent paper and he and Huxley copresented the specimen to the Geological Society later that year.⁶⁰ By the time Miall entered the service of the LPLS as its General Curator in 1871 he would certainly have been well known to its Council.

Miall was outspoken on the subject of museums and in him we find forceful modernist ideals of progress brought to bear on the state of curatorial practice. He sought a reformation of the museum complex and used that of the professorial system in universities and colleges as his ideal.⁶¹ Miall believed that instead of the diffuse educational and entertainment orientation of a public town museum, the rightful direction for the Museum was as a specialised scientific natural history museum. His manifesto might have sought an incumbent professor, teaching biology but museologically, with a curator educated through that professorial system managing a natural history museum dedicated to the teaching and research needs of that biology department. Miall had the Yorkshire College in mind, an institution he was already closely connected to and saw himself in its key position. This he realised when from 1876 he divided his time between curatorial duties at the Museum and his new responsibilities as first Chair of Biology at the College, where he would eventually work full time.⁶²

While he was able to realise much of his personal career plans, the Museum proved a different matter. Miall's approach sought to differentiate between what was needed and what was not. This disassociation of Miall's has been variously explored as part of a process of professionalization, as much to do with distancing itself from amateur activities.⁶³ But this did not just concern relationships and associations: it involved physical separation as a necessity. In

⁶⁰ Huxley (1869): 309-311 and Wager (1921): xiii.

 ⁶¹ For others have looked at Miall's activities and motives See Alberti (2001) for a discussion of Miall and the need to create a separate identity and space for the modernisation of natural science practice. More generally see Baker and Bayliss (1983).
⁶² That this was a Chair of Biology is noteworthy. The term 'biology' is one more usually thought

⁶² That this was a Chair of Biology is noteworthy. The term 'biology' is one more usually thought of as a twentieth century distinction within scientific knowledge. Caron (1988): 223-268 reviews the history of the use of the word to designate an emerging area of scientific knowledge and practice, which is considered as being stable much later than we find at Leeds. Appearing as it does in 1876 suggests a noteworthy distinction to the natural sciences practiced and taught at the Yorkshire College and one worthy of further attention.

⁶³ Alberti (2001).

short, the Museum would need to be assimilated into the College, but would first need to shed anything that did not contribute to what would be its new mission. Many of Miall's acerbic comments have been attributed to this process of disassociation.⁶⁴ Nonetheless, it remains hard to imagine that a strategy of any kind lay behind Miall's comments or that he would have actually wanted the attention his comments received. Nonetheless, that they often were public affairs served to alert every one of changes he wished to make to the map. Whether we agree or disagree over the intention of his critiques, they were still public attacks on the work of his predecessors, still alienated and disenfranchised longstanding Museum users and all no less regretful and damaging if they were a part of a boundary-defining strategy.

We know very well what he thought of the legacy he inherited, describing regional museums and their collecting policies as consisting of '[o]bjects mostly given by people who wanted to get rid of them.' Of curatorial practice generally he opined, '[...] what am I to do with badly stuffed birds, shells and miscellaneous things which were of no value and in which I myself was not prepared to take any interest.⁶⁵ His article 'Museums,' which appeared in *Nature* in 1877, described the need for better labelling, for improving displays of wetpreparations, and of geological specimens. 'Stuffed animals,' he would write, 'are the plague of a curator,' continuing, 'I do not refer especially to their liability to moths [...] but to their grotesque deformity [...] and their proneness to contract in unexpected places.⁶⁶ Of course, it is one thing to point out the problem and another to provide the remedy. In this Miall offers ideas towards what a solution may look like. Always controversial, he proposed that ninety percent of a museum's existing displays be removed: 'At present we aim at too much, introduce too many departments into a small museum, show too many obscure and un-instructive objects, and spoil everything by overcrowding.⁶⁷ Instead he recommended that provincial museums should display a general collection that provided an overview of a discipline, abandoning the taxonomicled classification that had become the standard of natural history curatorship. The

⁶⁴ Alberti (2001).

⁶⁵ Baker and Bayliss (1983): 205.

⁶⁶ Miall (1877): 360. ⁶⁷ Ibid.

most influential proponent for taxonomic classification had been Richard Owen at the British Museum, who had a reputation for his overbearance regarding the descriptions of new species and the perpetuation of natural theology. But increasingly, provincial museums found the idea of central museum governance increasingly unattractive. More and more, the provincials inclined towards the emerging Huxleyan model that implied greater latitude and independency in which evolution theory, atheism and more besides were bound. For Miall, this was akin to a new religion. He distanced himself from his earlier classificatory works that had been published prior to his appointment at Bradford in customary outspoken style, describing it as being contrary to his later work. Instead, he embraced the influence of Darwin, Huxley, physiology and evolution theory in both his curatorial and lecturing work.⁶⁸

Just as we noted with Troglodytes gorilla, many collections had received Huxleyan revisions during the 1860s and 1870s, remedying the fallacies of earlier Owenite categories. Miall had co-presented with Huxley at the Geological Society in 1865 and so impressed was Miall with Huxley's expository presentation style that he adopted it henceforth.⁶⁹ Huxley described Miall's appointment as Sub-Curator at Leeds as '[...] the putting of an indubitably square man into the square hole at Leeds.⁷⁰ A comment made between Huxley and Michael Foster the physiologist, over twenty years later in 1894, described Miall's qualities thus: '[...] he is a very good man much trusted in these parts and belongs neither to Cambridge nor Oxford nor London.⁷¹ Owen had developed the archetype research museum at the British Museum. But the opening of those collections as the new Natural History Museum at South Kensington in 1880 would not have import for Miall. He knew that a research museum arranged by evolution theory and independent from the authority of Oxbridge and London was what interested Huxley and was therefore what Miall sought in Leeds. Henry Denny had seen much of this during his term. He had been an Owen devotee at the time he bought the Leeds dodo, but in defending

⁶⁸ Miall also delivered a lecture *The Life and Work of Charles Darwin* to the LPLS in 1883. See Kitson Clark (1924): 191.

⁶⁹ Wager (1921): xii.

⁷⁰ Wager (1921): xiv and Baker and Bayliss (1983): 208.

⁷¹ See letter 356, in 'Michael Foster and Thomas Henry Huxley, Correspondence, Letters 330 through 363, 1865–1895.' in *Medical History Supplement*. 2009, (28): 265–290.

the embattled Thomas Weaver and John Hart, he had crossed swords with Owen over the coeval Giant deer question in 1855.⁷² Owen was wrong, but his reputation and authority were too persuasive for the likes of Denny to successfully refute him.⁷³ Such confrontations would not be easily forgotten. The investment made into the Giant deer at Leeds would have returned a much greater reward if Weaver, Hart, Denny and others had not had their arguments rubbished by Owen. Miall's term as Curator at the Museum was defined by his ambition to reform its form and function. This reformation was structured by the ideologies principled by Huxley, which sought the devolution of traditional seats of scientific authority. Huxley regarded the provincial colleges of science as central, but it was his at-the-coal-face canvassing and door-knocking that had enlisted natural history museums into the project, for Huxley knew quite well that it was the museums that held the all-important evidence he needed.

The inner dialectic to Miall's ambition here possibly related to his turbulent relationship with his father and the religion of his childhood. It had seen him turn his back on his family, renounce his faith and distance himself from his earlier, more classificatory works. Therefore, his was a deep connection with Huxley's causes and may explain why Miall pursued it with the vehemence and religiosity he did. Perhaps this inner dialectic also speaks to Miall's concept of progress, being a process of disassociation, and the ways and means in which he thought it best sought. Better placed as we are now to understand the forces at play, the term professionalization becomes more troubling. At every point in the history of the museum the curatorial ideology had centred on the value of large social networks. This had not been so much a soft-focussed public-facing ethos, but rather a pragmatic one based on access to specimens. The practices of collecting natural history had always relied upon these networks being cross-cultural, independent of class and so necessarily boundary-less and undifferentiated. It is hard to imagine that Miall would consciously harm such networks, as this would require a deeply uncharacteristic short-sightedness. Perhaps here the most banal explanation is the most accurate. Perhaps his outbursts were largely reactive and

 ⁷² See the National Collecting section of Chapter 2, Section 2.4.
⁷³ Gould (1973) 191-193.

were the unfortunate products of entrenched frustration and the troubling inner dialectic with his past.

Unfortunately, we are forced to concede that his contribution towards the end of his term as Curator was fundamentally damaging to the museum complex. His campaign, if we can call it such, ultimately failed and curatorial practice after Miall would seek to restore the severed links created at his hands. But Miall's curatorial practice underscores this idea of the importance of personality. As we have noted with all the other curators before, this was a term carved out by Miall's character. The edgy quality to his personality brings forward this idea that curatorial practice was unresolved, immanent, very much in the process of being and that retrogression was as possible as innovation. Even though he made errors in his methods, the museum system did need to change by the end of the nineteenth century, as we discuss in the final two chapters of this dissertation. So Miall helped the Society accept that there was a decision to be made. He himself did not possess the skills to orchestrate these things, but through his insistence the fundamental issue, whether the Society's Museum should aim to serve the diffuse educational and entertainment needs of the town or the more specialistscientific needs of the Yorkshire College, was forced onto the agenda. Miall's movements in many ways mirror the shifts in scientific practices and of course, the innovative and emergent status of the natural sciences was a key reference for him. However, Miall remained deeply influenced by museum life and inspired by Huxley's similar system, developed object-centred pedagogy for biology, which came to characterise his teaching at the College.⁷⁴ The curatorial term of Henry Crowther, which followed that of Miall's, serves very much as an antidote to the turbulence and posturing of Miall's term and represents Museum life and curatorial practice during the last phase of its governance by the Society. If Miall had presented the museum complex as facing a dilemma, Crowther's term reflects well the course the Museum would eventually elect to follow.

⁷⁴ Miall (1891) and (1897).

3.5 Henry Crowther, Curator 1893-1928: The Path towards a Public Museum

Henry Crowther (1848-1937) was first involved in the LPLS in 1871.⁷⁵ He came from a modest background, his father was a grocer in Leeds, and the young Henry had attended the Kings Free Grammar School at the neighbouring Pontefract, but of this time we know very little, with no indication among the few sources we have on Crowther that sketches out an early life or hints at his theological environment or any early scientific interests.⁷⁶ It seems that his introduction to the Museum began on an informal basis, with him undertaking the responsibility of Assistant Secretary for Louis Miall, who continued to be described as 'Curator and Assistant Secretary' during this period.⁷⁷ The informality of Crowther's early role at the Society can be framed within a twofold model. It first served to alleviate the difficulties Miall faced in balancing his existing curatorial responsibilities at the Museum with those escalating at the Yorkshire College. This notwithstanding, as an entry point for a long-term mentoring process, the Society gained by improving stability in curatorial practice between appointments of curators. We have noted in the previous section how Miall had himself gained employment in museums along similar lines, beginning as he did at the BPS as Assistant Secretary. Like Crowther, this had been a temporary stepping-stone position that had others like it in view. Crowther eventually become Assistant Curator by 1875, with his position importantly recorded under 'Officers, Council and Members,' a post he held until 1881. We may recall that Henry Denny had been mentored into his position by the retiring John Atkinson from 1825-1828 before finally taking over the full curatorial responsibilities.⁷⁸

The only entry in the Reports that makes mention of Crowther's activities during his term as Assistant is a single sentence noting his help in arranging the

⁷⁵ Violet Crowther, unpublished notes, Henry Crowther File, Collectors Files, Leeds Discovery Centre.

⁷⁶ Ibid.

⁷⁷ See LPLS Annual Report (1870-1871) and (1871-1872).

⁷⁸ Although this was under the title Sub-Curator. See Chapter 3, Section 3.3 of this thesis: Henry Denny, Curator 1828-1871: Curatorial production between worlds.

mollusca, for which Miall reported that Crowther had 'a good knowledge [...] and has spared no pains in arranging the collection to the best advantage'.⁷⁹ Other than this, little else marks Crowther's term as Assistant to Miall, except when in 1881, after ten years as assistant to Miall, Crowther accepted the post of curator at the Royal Institution of Cornwall in Truro, which the LPLS Reports described as 'a more remunerative situation.'⁸⁰ It may well have been true that Crowther took the post because of financial reasons, but the post of curator would have brought with it a currency and certainly his time in Cornwall was fruitful with regard to Crowther's curatorial practice. He returned to Leeds as Curator after the resignation of Edward Waite in 1893, where he remained until his retirement in 1928.

His twelve-year term as curator for the Royal Institution of Cornwall represents a formative period for Crowther's curatorial ideology and method and sees the curator come of age. It was during this time that Crowther developed his abilities as a lecturer, lecturing on geology and mineralogy, as well as metal and coal mining, at the School of Mines at Camborne, Chacewater and Truro. He also became vice-President of the Bristol Lecture Society at this time. His research at the time included working alongside the mining engineer Sir William Garforth,⁸¹ researching the causes of coal dust explosions.⁸² Crowther maintained his Leeds contacts throughout this period, lecturing at the Leeds Mechanics' Institute on 'Life Struggle in Nature' in 1891.⁸³ It is irresistible to note his choice of venue for this lecture, as one might expect it to have been at Philosophical Hall if links with the Society remained open and friendly. While it reminds us of Crowther's close links with enthusiast groups, his lecture being at the Leeds Mechanics' Institute does leave us wondering whether some tension between the rebarbative Miall and himself might not have had a say in Crowther's relocation to Cornwall. Crowther returned to Leeds as Curator after the resignation of Edward Waite's short two-year term in 1893 and two years after Miall had left the post. Here Crowther remained until his retirement in 1928.

⁷⁹ LPLS Annual Report (1877-1878).

⁸⁰ LPLS Annual Report (1880-1881).

⁸¹ See William Garforth's obituary in *Nature*, 27 October 1921, Vol. 108: 285-6.

⁸² Brears (1989): 14.

⁸³ Leeds Mercury, 7 November, 1891.

Crowther's period in Cornwall saw the formation of the Museums Association (henceforth MA) in 1889. Born out of the British Association's network,⁸⁴ the Museums Association under William Flower's presidency proposed a universal restructuring of what it considered to be an overly specialised museum rubric to that of a more publicly focussed one, thus mirroring many of the deliberations we have noted at Leeds. Flower, the Huxleyan physiologist and then Director of the British Museum (Natural History), distilled this into a new model for museums (which at this stage were solely natural history museums) in what Flower described as the 'New Museum idea.'⁸⁵ Its mission spread wide through the BAAS network and through published articles in *Nature* and in Crowther's curatorial ideology we see the influence of this New Museum idea. Without undermining the outstanding work of his predecessors, Crowther's term as Curator at the Museum saw an engagement with the public in innovative and unprecedented ways.⁸⁶

The educational component, which came to represent a major part of both Crowther's curatorial ideology and the Museum's function and use, was itself the product of a number of largely contingent forces and is very much the countermove that was made after the contestation we described in Miall's term as Curator. The allegations of nepotism and exclusivity within the activities of the Society and the ensuing debates and debacles in the press had been both damaging and severely uncomfortable for the Society and Museum and indubitably served to stimulate the self-reflection we see within the Society at that time, all of which will be more fully discussed in chapters 6 and 7.⁸⁷ Rather than continuing Miall's confrontational attitude, the Society now resisted all direct response in the press and indicating a more savoir-faire period, began emphasising in their Reports the public-orientated work of the Museum and, to

⁸⁴ The Museums Association was established during the Newcastle meeting of the BAAS, during which William Flower was elected the BAAS president for the Zoology section.

⁸⁵ Flower (1893): 234-236 and 254-257.

⁸⁶ Brears described him as 'one of the best museum-based educators of all time'(Brears 1989).

⁸⁷ See the *Leeds Mercury*, 8 May 1900. These issues will be discussed fully in chapters 5 and 6.
similar ends, publishing innocuous reports in the *Leeds Mercury* to similar ends, among which we find emphasis given to educational activities.⁸⁸

When, then, we ascribe cardinal roles to curators and curatorial practice like the begetter of museum identity, we have to accept the limitations of this position. We cannot justify exploring ground much beyond that of a given phenomenon, which in this case is that of the curators themselves. This supplies a tantalising but ultimately restricted description of the wider museum complex that at best only hints at the broader changes across the country at the time, and how these related to changes on the continent and to administrative structures of townships across the empire. This is an important state to remind ourselves of, as it is clearly not the case that the education reformation we are describing within the Museum was the invention of its curator. Even though we describe Crowther's role as cardinal, it is still very much a derivative of other forces, some of which we can make out, such as the influence of the Museums Association, but many of which we cannot, though we know just as well that they exist beyond our current reach and all constitute what we are calling the museum complex. This hopefully enables us to remember that what often appears to us as trenchant has in fact been arrived at in a fragmentary, discursive way. This does not mean we need to de-crown our curators. Crowther remains the great educator and populariser of the Museum, his energies, dedication and interpretation of the task at hand remain remarkable. Given this caveat, we are arriving at a point in which Crowther, associated with public education and what we today call amateur activities, can begin to be interpreted as the antidote to Miall's term. Crowther championed local clubs and associations and was much the enthusiast himself. He was well known to several such societies, the Leeds Photographic Society being one, the Leeds Conchological Club and the Yorkshire Naturalist Union notable others. Naturally, any such credence was a welcome endorsement for the various clubs and the like around the town and undoubtedly did much to repair damaged relations between the Museum and enthusiast interests. But rather than just a public relations campaign, Crowther found useful and innovative ways to expand curatorial practice in the Museum. His use of photography, including

⁸⁸ See the report directly following the Teasdale case. LPLS Annual Report (1899-1900).

extensive photographic object history records, documenting the development of interpretation and recording the displays as well as his popular public magic lantern shows at the Museum are all noteworthy examples. So popular did the lantern shows become, they were a characteristic part of Leeds' social and cultural calendar as well as a regular contributor to the Museum programme.



Figure 3.0 Catalogue for Crowther's lantern slide lectures. Circa 1900. Source: Leeds City Museum

The 'Syllabus' depicted above featured a total of 95 lectures consisting of 53 individual lectures and a further 7 lecture series of 6 lectures per series. It states that the lectures will be delivered without 'recourse to notes at any time' and that each 'is illustrated by an excellent series of original Lantern Slides.'⁸⁹ Given that

⁸⁹ Syllabus of Lectures. (1900)

a lecture featured in the syllabus was typically illustrated by about 75 slides, then the syllabus represents approximately 7,125 glass plate slides. On the cover mention is also made of Henry Crowther's daughter Violet, who hand-coloured many of her father's slides. Very much an unofficial curatorial companion to her father, Violet Crowther donated her father's collection of over 15,000 slides to the Museum in 1932.⁹⁰ The numbers indicated here demonstrate the remarkable extent to which a photographic enterprise was employed by Crowther. Crowther went on to introduce cinematography into the Museum's education programme from 1917 and we know exactly how photography was used within the Museum's education programme because of the numerous and frequent references to it in the LPLS Reports. For example, in 1901 the Museum established a scheme with the Leeds & District Association of the National Union of Teachers to increase access for students of public elementary schools in the Leeds area to the Museum. The visit consisted of a lecture by Crowther 'illustrated by lantern slides of objects in the collection' for which each child was provided a printed copy of the lecture and a list of the Museum objects it referenced.

At the close of the lecture, the children are taken in sections round the Museum by their teacher, who explains the objects. The children change from room to room, under the charge of their teacher, when the bell of the supervisor is rung.⁹¹

6,197 school children visited the Museum in 1901 under this particular scheme. This notwithstanding, his innovative use of technological advancements to engage and fascinate audiences distinguishes Crowther and the above offers further support for the idea that such individuals shaped museum form and function. Crowther's photography will be utilised again in Chapter 4. Nonetheless, the above example enables us to unpack what we mean when we talk of the discursive nature of curatorial practice, for here we are able to observe the way in which museum practice has evolved from out of activities

⁹⁰ Digital database entry. Information courtesy of Leeds City Museum.

⁹¹ LPLS Annual Report (1901-1902): 5.

disconnected from the Museum and idiosyncratic to an individual. Thus by 1901 curatorial practice had been subject to Crowther's practice. It is, however, wrong to say that his photographic activities had been normalised or assimilated into museum practice, because the reverse is more true. What we mean here is that it is more accurate to state that curatorial practice at Leeds transformed around Crowther's photographic practice and that it appropriated museum practice. Again, as with all of what we have seen so far, the Society used the printed word of the Reports to make real and lay ownership claims to these changes.

Crowther's time at the Royal Cornwall coincided with photography emerging as a recreational activity and it is likely that it was as a recreational activity that Crowther first became involved in photography. Immediately, however, Crowther made use of his interest within the curatorial space when researching coal dust explosions with William Garforth during the 1880s. However, it was when used in conjunction with a magic lantern that its greatest impact on Crowther's curatorial practice can be found. The projection of photographs thus transformed one of the most public-facing of all curatorial responsibilities, the public lecture programme, and in so doing reinvented curatorial practice in Leeds.

3.6 Conclusion

Drawing this chapter to a conclusion, we find that instead of differences between John Atkinson's term as Curator at the start of our narrative, through Denny's and Miall's term to that of Henry Crowther's at the end, we have rather illuminated more of what was cognate between them. Certainly, we are struck by the endeavour that binds the curators together, something we have seen to be an entangled practice requiring the synthesising of different fields of practice, social worlds and spaces. Similarly noteworthy is the primacy of each of their own personalities to curatorial practice, encouraging us to see in the individual curator a designer of the museum and museum identity. As we have seen with the use of photography above, museum practice and ideology within this narrative is plastic and pliable, but perhaps most importantly we have seen how curatorial practice could be appropriated around the activities of an individual curator. Ultimately the results are new ways of operating, new modes of practice, but this presents curatorial practice as unresolved, immanent, dialogic and socially contingent. Certainly to look for a place of curatorial practice does not conclude with the halls of the Museum or indeed the constitution of the Society. We have also problematized the idea that practice resides in the curator, although all these locations provide us with views of practice. It is this assemblage that we put forward as the cardinal characteristics to curatorial practice in Leeds, which bind rather than differentiate the four Curators considered here.

Much in this vein, we have problematized the idea of sequential progress to curatorial practice. John Atkinson's innovations early on in the Leeds curatorial tradition alongside Louis Miall's best retrogressive moments at the end of that century illustrate the futility in any such endeavour. In addition, we noted early on in the chapter how the Museum became predominantly one of natural history through the agency of public donations and curatorial prerogative, underscoring how the Museum was a socially and culturally mediated complex. We saw in Miall's term the surfacing of certain inequities and how the Museum had become unable to continue operating under the residing ideology, which forced the Museum complex away from equilibrium. Just two years after opening, John Atkinson lodged the first plea for more space. So eighty years later during Miall's term, we can be in no doubt that he was right in forcing the argument for change. Even though constitutional change would become protracted, Henry Crowther's term denoted new curatorial priorities. If Miall underlined the need, Crowther undertook the change and it is through his public-facing activities, in particular his use of photography to transform the lecture programme that we understand further how the entangled curatorial practice at Leeds was always in the process of becoming. Ending as we have with the work of Henry Crowther has brought us close enough to the subject of the Museum's public face to warrant attention in that direction, to which we now turn in Chapter 4.

Chapter 4

The Presentation of the Natural World

4.1 Introduction

The physical realms of the Museum, especially the displays, represent its foremost public-facing endeavour. After all, it was the practicalities of presenting the natural world that required more resources than any other undertaking by the Society. Myriad components contributed to this endeavour. The term 'displays' signify a more complex reality that included the display cases but also extended to include items like the small Albion letterpress in the cellar and the supplies required for the printing of labels. It should also include ongoing activities such as the dusting of specimens and regular cleaning of the skylights, the maintenance and improvement of the gas lighting as well as such things as the replacement of wooden shelves with glass. It should account for the preparation of specimens themselves, their acquisition and the storage of the collection, or the shelves, boxes, and various chemicals required for this.

So within the following chapter the form and function of the displays will represent a significant proportion of the whole. Nonetheless, this was by no means the only way the Museum engaged with its public, so alongside the displays we shall also consider the Society's conversaziones as well as the Museum's use of the press, notably the newspaper columns that were penned under its name. Unlike so much of the previous narratives in which the Museum's voice had largely been reactive and defensive, the material discussed below will represent the expressive state of the Museum in which *it* controlled what was said, how it was communicated and to whom, thus revealing to us yet more of the phenomenon.

Superficially, the Museum's displays appear to be one of the most durable of its expressions, though we have already seen how these were in fact subject to constant renewal—largely because of their fragility and ongoing decomposition.

This element of intangibility, which counters somewhat any impression of constancy, is of course compounded by the loss of the majority of these collections during the bombing in 1941. Both Philosophical Hall and the collections suffered severe damage from the bombing raid on the town and without funds to redress this, the Town Council was finally obliged during the 1960s to condemn the building after nearly two decades of managing in a derelict building. The fragments of the original collection went into storage and Philosophical Hall was demolished. But filling this lacuna, this chapter will make use of a most remarkable and previously overlooked archive of glass plate slides taken by Henry Crowther from the end of the nineteenth century onwards. Within this primary source we are able to re-imagine the interiors and understand better what the fully functioning Museum was like. We have touched on Crowther's photographic activities in Chapter 3, but here make use of his material as a primary source. Among over 20,000 glass plate slides that constitute Crowther's collection, a small group of around fifty record museum objects, and depict displays and entire rooms in Philosophical Hall. Alongside these we use three printed sources: catalogues which recorded smaller contained collections, a series of guides for visitors, as well as articles it supplied to the newspapers. By triangulating these with the glass plate slides we thus gain a rich resource from which to consider a variety of registers relevant to this chapter, such as ideology and imagination, as well as the methods of knowledge production and the language used to disseminate it.

4.2 Exhibitions

The Society published guides to the Museum across the nineteenth and early twentieth centuries. These provide the most comprehensive descriptions we have of the contents of the Museum, as well as the developments and changes to the displays over time.¹ The first publications to describe in some way the displays

¹ For this section I have used *Guide to the Museum of the Leeds Philosophical and Literary Society*, (1854) and the *General Guide to the Museum of the Leeds Philosophical and Literary Society* for (1897), (1906), and (1915). The Museum produced catalogues and descriptive guides of particular sections—such as their collection of British birds. Each focusses on didactic descriptions of a specific collection and/or areas within the Museum and as such, were less useful to this section.

were the collection catalogues. While some were titled catalogues,² most were called descriptive guides.³ The first, in 1827, described the Mineral collection⁴ and this was followed in 1830 by a similar publication for the quadrupeds and birds.⁵ While there is nothing to distinguish between a catalogue and a descriptive guide, neither went further than detailing a particular collection within the Museum. The first publication to attempt an overall description was the *Guide to the Museum*, which appeared in 1854. Unlike the Society's catalogues, the guide endeavoured to describe the displays and layout in entirety—aiming not only to assist the visitor's navigation of the Museum but also to serve as instruction on the basic principles of classification:

It having appeared to the Council that a cheap guide to the objects in the Museum would be of great assistance to the general visiter, [sic] and would also be the means of imparting instruction on the first principles of classification to those commencing the study of Natural History, it was determined to prepare such a desideratum, and the manuscript is now in the printer's hands.⁶

It is noteworthy that the Museum did not produce a full catalogue. Most other institutions did, and copies of many of these were acquired by the Society's Library.⁷ Because of this, the Society's *Guide to the Museum* would have been an unusually informal response to what many institutions traditionally took to be an august publication. Leeds was not, however, the usual institution and it appears that an informal guide was preferred over the more typical formal full catalogue, because the collections at Leeds were already by 1854 too large and too rapidly growing to be catalogued effectively and accurately. The report for 1854 explains how embarking on such an endeavour would be 'utterly impractical'. It was therefore decided to combine in a pamphlet the key

² Such as Catalogue of casts of ivory carvings, issued by the Arundel Society in 1855, and presented to the Leeds Philosophical & Literary Society, 1871.

³ For example, LPLS Descriptive Guide to the Collection of British Birds in the Museum of the Leeds Philosophical and Literary Society (1874).

⁴ LPLS Annual Report (1827-1828): 4.

⁵ LPLS Annual Report (1830-1831): 7.

⁶ LPLS Annual Report (1854-1855): 11-2.

⁷ LPLS Catalogue of the Library of the Philosophical and Literary Society of Leeds (1883).

characteristics of a full catalogue with the instructive element of a natural history text book dedicated to classification.⁸ The guide was sold for one penny and by the end of the first year of publication the Report recorded receipts of 14s 6d for sales of the publication.⁹ Stock lasted until 1856, after which no more sales are recorded in the Society's accounts. However, in that time it had earned the Society 24s 6d, making the print run for the 1854 guide around 300 copies.¹⁰ We can only deduce that the decision to produce the pamphlet-styled guide had not proved itself a worthwhile endeavour, for while the production of collection catalogues continued unabated, a revised edition of the Guide to the Museum was not forthcoming until 1897.¹¹ By this time it had become commonplace within the museum sector at large to produce handy guides such as this for an increasingly diverse visitor.¹² For this reason there are no extensive descriptions of the interior layout of the displays in the Museum. Naturally there is also a large gap to account for between the 1854 and the 1897 publications—in which time the museum had changed greatly, not least with the addition of its extension, opened in 1862. Nonetheless, the guides for 1854 and 1897, as well as those for 1906, 1909, and 1915 are invaluable for providing a description of the interior of the Museum and the layout of the displays. Alongside these publications, much can be gleaned from the Reports as they noted changes, developments, additions, and requests, as they occurred. Augmenting these historical sources, this section will also make use of photographic evidence glass plate slides taken of the interior of the Museum. These rare depictions of the displays were taken largely by Henry Crowther, who was present at the Museum as the Assistant Curator between 1875 and 1881, and then again as Curator between 1893-1928. It is likely that the photographs were taken during Crowther's second term.¹³ The location in the Philosophical Hall of each

⁸ LPLS Annual Report (1854-1855): 11-12. The Report for this session goes on to note that the subsequent guide cost the Society £19, although sadly the number of guides produced was not recorded.

⁹ LPLS Annual Report (1854-1855): 15.

¹⁰ See LPLS Annual Report (1854-1855): 15, (1855-1856): 15 and (1856-1857): 21.

¹¹ LPLS General Guide to the Museum [...] (1897).

¹² For example, see the *Handy Guides* produced by the Manchester Museum in 1895.

¹³ Crowther developed his interest in photography while in Cornwall between 1881 and 1893, working as a curator for the Royal Institution of Cornwall. The first evidence of Crowther using photography as a work-based technology is in his work with mining engineer Sir William Garforth on their research into coal dust explosions in mines, in which Crowther used photographic evidence to understand and describe the explosions.

photograph used in this chapter, including the direction it was taken, has been identified in the Appendix. Because many more photographs were taken than could be used in the chapter—the Leeds City Museum currently holds over 20,000 of Henry Crowther's glass plate slides—and each throws yet more light on what the Museum was like at the end of the nineteenth century, a small selection of additional photographs is also included in the Appendix. Triangulating between these sources can make up for any gaps in textual sources alone, and together they offer a remarkable insight that not only helps to describe how the Museum displayed natural science—and the presentation and balance of themes—during the nineteenth and early twentieth centuries, but also goes a long way towards capturing the atmosphere of the Museum. Of course, the more qualitative dimension alluded to here is important because alongside understanding how natural science was displayed we want also to try and reconstruct as much of the visitor experience as we can.

4.3 Philosophical Hall Downstairs: An Overflowing Miscellany

On first impressions, a visitor could not be blamed for thinking that the Museum was one of anthropology, antiquities, and archaeology rather than of natural science. We have already indicated that anthropology specimens, antiquities, and archaeology were all acquired by the Society, but mostly by donation rather than strategic and assertive collecting.



Figure 4.0 Egyptian Mummy (right) and case, circa 1915. The mummy and mummy case depicted here were acquired by the Museum in 1849, but were destroyed in the 1941 bombing, making the glass plate slides from this period particularly important evidence. Source: Leeds City Museum.

However, by 1854 anthropology, antiquities, and archaeology constituted the majority of the displays on the ground floor of the Philosophical Hall, and thus those that a visitor first saw. In fact, the above photograph—taken from the glass plate slide made by Henry Crowther sometime after 1915—shows precisely what the visitor's first impression would have been. The guides for 1854, 1897, 1909, and 1915 all describe how the Museum's mummies were situated thus from the 1820s. Throughout the nineteenth century the mummy and mummy case on display in the entrance of the Museum had been those presented by John Blayds in 1824, but were replaced sometime after 1915 by the ones depicted above, which were donated by Messrs Fenteman in 1849.¹⁴ However, it was not uncommon for the Museum to exhibit several themes in one room—in an apparently uncoordinated way—and some natural science objects were also displayed in this entrance room—depicted in Figure 4.1 below as room (A).

¹⁴ Which were donated by Messrs Fenteman in 1849. See LPLS Annual Report (1849-1850): 9.



Figure 4.1 Philosophical Hall as it would have looked in 1821, downstairs (left) and upstairs (right). Hatched room (a) being the original location of the Museum. Source: Author's own work.

This room was originally called the *Entrance Hall* but was changed to *Entrance Salon* at the time of the 1861-1862 extension and again to the *Outer Vestibule* by the time of the 1897 guide.¹⁵ We observed in Chapter 1, that as the building of the Philosophical Hall was nearing completion in 1820, the Museum had been allocated to '[t]he Large Room above the stairs'¹⁶—depicted as the hatched room (a) upstairs in Figure 4.1. The perfunctoriness of this decision is matched only by the rapidity with which the Museum outgrew this space. The Museum's growth is depicted in Figure 4.2 below and shows how by the time that the 1854 *Guide to the Museum* had been published the Museum had taken over most other rooms in Philosophical Hall. Prior to the opening of the Museum's extension, specimens too large to be displayed in the properly allocated room upstairs were displayed in the entrance (A) and it seems that as the collections grew this overspill policy was extended to the remainder of the rooms downstairs.

¹⁵ See LPLS *Guide to the Museum* [...] (1854) and LPLS *General Guide to the Museum* [...] (1897). For the drawings made for the extension in 1861-1822 see Kitson Clark (1824): 73. Because of the various changes to the room names, an independent room identification system has been used where appropriate.

¹⁶ LPLS Building committee minute book, 1819-1827.



Figure 4.2 Areas taken up by Museum displays (hatched), circa 1854. Room (A) displayed anthropology, antiquities, and archaeology; room (B) was the Secretary's office; room (C) anthropology, antiquities, and archaeology; (D) geology then antiquities; room (E) Library; room (F) and (G) anthropology, antiquities, and archaeology. Upstairs, room (a) zoology; (b) geology; (d) Egyptology; (e) geology. Source: Author's own work.

The guide for 1854 describes how the skeleton of the Indian Elephant and the large fossil of Plesiosaur were to be found in the Museum's entrance, although by the time that the photograph in Figure 4.0 was taken, these were repositioned in the new extension. When it came, the 1861-1862 extension afforded more space but as just noted, this had been ear-marked for natural science. The sense, therefore, of a lack of overall strategy continued for most other collections and was added to by the ongoing pressures for space. For these reasons, collections of bird taxidermy and display of corals visible in the background of Figure 4.0 accompanied the archaeology displayed in the Museum's entrance room as well as the anthropological collections depicted in Figure 4.3 below. While the presence of this type of overspill was not described in any of the Museum's guides, it evidences the vestiges of the ongoing redisplay and reorganisation of the Museum that was stimulated largely by the growth of the collections. Considering the unexpected growth of the collections, it was natural that there was this overspill of objects and displays evident around the Museum. Nonetheless, we can with considerable accuracy depict segregation between the anthropology, antiquities, and archaeology downstairs—such as is depicted in Figure 4.3 below—and the natural science found predominantly upstairs.



Figure 4.3 Anthropology on display in the entrance room circa 1900. As can be seen from inside of this display case, it contained various anthropological items. Despite the determining text along the top of the case, the contents of this case—as with all other displays downstairs – did change. The 1915 guide indicates that by that time much of the contents of this case had been replaced with other anthropological objects. *General Guide to the Museum*, 1915: 1. Source: Leeds City Museum.



Figure 4.4 Lord Savile's collection of antiquities as displayed inside room D (circa 1900). Source: Leeds City Museum.

4.4 The Changing Use of the Smaller Rooms Downstairs

A left turn out of the entrance room would have brought you into two smaller rooms—rooms (C) and (D) in Figure 4.2 above—whose adjoining doorway was sometimes opened such that the two rooms became one.¹⁷ As was observed with the displays in the entrance room, the displays here were thematically broad and subject to frequent change. Around 1827 room (D) had been given over to the burgeoning geological collection,¹⁸ but even this had changed by 1839 to accommodate a growing Egyptology collection.¹⁹ The 1854 Guide to the Museum described how the displays in this room had changed again to include a model of Jerusalem along with specimens illustrating the production of 'flax, silk, cotton, worsted, cloth, and iron' alongside a miniature model of the Parthenon marbles and medals from the Napoleonic wars.²⁰ As the century progressed, it emerges that the Museum began developing what it termed an 'Industrial Museum' out of the displays in room (D), describing in 1865 'the greatest interest which is evinced by the visitors generally in examining the contents of the Industrial Museum, even in its present rudimentary condition²¹ However, despite a steady development of the Museum's industrial collections and their display in this room, these plans were abandoned in 1896 when the room was given over entirely to a collection of antiquities that had belonged to the influential British diplomat, the late (Lord) John Savile (1818-1896)—Figure 4.4 above. The collection had been donated by the Savile estate under the guidance of Nathan Bodington (1848-1911). Bodington was at the time the Yorkshire College's Principal and would become Leeds' first Vice-Chancellor when the College became a University in 1904.²² Throughout, the replacement of

¹⁷ The exact use of these rooms fluctuated greatly over time. The 1854 *Guide to the Museum* describes the use of only one of these rooms for the display of antiquities. However, by the 1860s the plans for the Museum extension shows two rooms in use, one (room (D) in Figure 4.2) called the Geological Room—presumably a reference to its former use, as by this time the room had not displayed geology for around thirty years—and one Antiquities (room (C) in Figure 4.2).

However, the 1897 catalogue describes how the two rooms were used as one—the so called the Greek and Roman Room.

¹⁸ LPLS Annual Report (1827-1828): 3-5.

¹⁹ LPLS Annual Report (1839-1840): 13.

²⁰ LPLS *Guide to the Museum* [...] (1854): 3. For an earlier account of this room see LPLS Annual Report (1839-1840): 13.

²¹ LPLS Annual Report (1864-1865): 14.

²² Draper (1912): 250-251.

the Industrial Museum with the Savile collection demonstrates a clear case where non-natural science displays continued to develop in a considerably less strategic way than did the natural science collections. Whether as two rooms, or as one conjoined room, rooms (C) and (D) help reveal something of the contingent growth to the collections and displays of anthropology, antiquities, and archaeology. Much of this contingent element consisted of a reliance on patronage for the acquisition. Anthropology, antiquities, and archaeology continued to be acquired by the Museum predominantly via donation rather than by strategic collecting, in contrast to the way in which the Society collected natural science, which had developed from out of these same origins into a strategic collecting practice. For this reason, the displays downstairs were subject to greater vagaries concerning thematic consistency and to reactionary reorganisation. The 1854 guide described how the geological collections had been moved from the top of the stairs (d) and the room generally redisplayed as the Egyptian Room. Visitors would still find geological specimens displayed in wall cases around this room. Similarly, the natural science collections were themselves not impervious to the effects of overspill. Just as geological displays remained in the new Egyptian room, visitors would also find Egyptian antiquities in the Zoological Room.²³

4.5 The Stairs Area

Leaving rooms (C) and (D), the visitor would then enter the staircase area. This area received the greatest changes during the 1861-1862 extension when the size of the staircase was enlarged considerably, affecting the display areas around it. Figure 4.5 below shows these changes. The impact on the large display area at the top of the stairs can clearly be seen. As noted earlier, the collections of Egyptian artefacts were once displayed here and upon their dispersal were scattered around the museum. With much of the evidence concerning this appearing after the extension was completed, it is difficult to describe the stairs area with clarity. Nonetheless, as can be seen from the photograph in Figure 4.6 below, this area corresponded with the remainder of the displays on the ground

²³ LPLS Guide to the Museum [...] (1854): 25.

floor—being predominantly anthropology, antiquities, and archaeology. The 1897 guide describes how display cases downstairs of this area contained the mummified remains of cats, birds and crocodiles 'from the tombs of Thebes and the caverns of Manfalout' as well as clubs and other weapons of war.²⁴ In addition, portraits of various notables, mainly founders of the society, as well as from the sciences, hung along the walls of the stairs.²⁵



Figure 4.5 Development of the staircase area. This area before the 1861-1862 extension (left) had considerably more display space than after the extension's new staircase was built, when it became much more a corridor (right). Source: Author's own work



Figure 4.6 The stairs area after the 1861-1862 extension. The mummified specimens and the human skulls are clearly visible in the foreground display case. Just visible behind the obelisk is the Museum's first mummy, donated in 1824 by the Leeds banker Thomas Blayds, who was the Society's Treasurer at the time. Source: Leeds City Museum.

²⁴ LPLS General Guide to the Museum [...] (1897): 4-5.

²⁵ Listed in the 1897 guide were portraits of Joseph Banks, William Hey (former President of the Society), Joseph Priestley, Michael T. Sadler (former President and M.P.) and Henry Denny, Curator. See *General Guide to the Museum* [...] (1897): 5.

4.6 The Society's Library

Before leaving this area and turning our attention to the Zoological Gallery, mention needs to be made of the Society's Library, which was accessed from the ground floor stair area. The Library, alongside its usual function, also served as the committee room for the Society, as well as being the location for temporary exhibitions that were sometimes held in conjunction with a lecture. With the audience spilling into the Library after the lecture the Society noted that the: 'appreciation of the objects displayed in the Library at the close of the lectures [was] most encouraging'.²⁶

There is little more textual evidence to provide insights into the use of the Library, but here the photographic evidence has assisted in providing a broader idea of the room's full range of uses. As can be seen from Figures 4.7 and 4.8 below, the Library was sometimes also used as a workshop by the Curator when preparing objects for display and for photographing. While this adds yet more evidence to the idea of an all-consuming museum enterprise, what it shows of day-to-day museum life and curatorial practice—in the provinces and at the end of the nineteenth century—is remarkably rare.

²⁶ LPLS Annual Report (1900-1901): 5



Figure 4.7 Photographs taken circa 1890 from inside the Library depicting the preparation for the displays of cave deposit material. This material included specimens from the Dowerbottom cave in 1859. The finished displays were situated in the North Geological room (room (e) in the plan in Figure 4.10 below). Source: Leeds City Museum.



Figure 4.8 Photographic record made circa 1920, of a set of moose antlers donated by John Heaton in 1862. Heaton was variously the Society's Librarian and President. Note the imaginative use of W.J. Pountney's *Old Bristol Potteries*, first published in 1920. The views of the Library that these images afford, while being only slight, are the only ones to have survived. Source: Leeds City Museum.

Photographs such as these²⁷ go beyond depictions of the finished displays and show their development and how the curators were forced to construct the displays wherever they could. In addition, the photographs reveal the degree to which photography was an important part of a curator's toolbox at this time, with the Leeds material vividly demonstrating how photography was used both to record displays prior to mounting (Figure 4.7 and Figure 4.8) and to facilitate extensive object-by-object cataloguing (Figure 4.9 below).²⁸ In so doing the Museum preserved a record of its displays and individual objects that, due to the fragility of the objects, and extraordinary events like the bombing of the Philosophical Hall in 1941, no longer exist.

 ²⁷ A number approaching one hundred photographs of this type have been used for this thesis.
 ²⁸ Glass plate slides representing an object record, numbering several hundred, have been identified in the stores of Leeds City Museum's Discovery Centre.





Figure 4.9 The photograph at top depicts one of the thylacines discussed in detail in Chapter 2, brought down to the Library (visible beyond the white backdrop) to be photographed at around the end of the nineteenth century as part the Museum's object photography programme. The specimen of Kangaroo depicted in the lower image, (one of three acquired by the museum in 1833, 1854, and 1862) clearly needed the help of the Curator's assistant to stand upright and was therefore taken only a short distance from its display case to be photographed. Again, during the course of day-to-day curatorial work, remarkable insights into museological practice and museum life at the end of the nineteenth

century have been preserved. Neither of these specimens has survived. Source: Leeds City Museum.
4.7 Philosophical Hall Upstairs: Displays of Natural Science and the 1862 Extension

Having already described how the area at the top of the staircase (room (d) in the plan in Figure 4.10 below) had been originally dedicated to geology, and that this was re-themed as the Egyptian Room—with vestiges of the former geological displays remaining in the wall cases—we might wonder where the geology collections went. In answering such a question we bring the subject of the Philosophical Hall's upstairs to the fore. Certainly, by the time of the 1854 *Guide to the Museum* the geological collections had grown such that rooms (b) and (e) in Figure 4.10 had already been requisitioned for their display sometime prior, although this didn't necessarily mean that the geology from room (d)—made homeless by Egyptology—was re-homed in (b) and (e).



Figure 4.10 Upstairs, pre 1861-1822 extension (left) and post 1861-2 extension (right). Room (z) being the Large Zoology Room, room (a2) the Bird Room, room (b2) the South Geology Room, and room (e2) the North Geology Room. Source: Author's own work.

The Society's Report for 1835-1836 recorded that 'many valuable collections are necessarily hidden, in a manner, which renders them as useless as if they were not in existence'.²⁹ It would be another twenty-seven years before the Museum would get its extension and until then the strain to accommodate the evergrowing collections is palpable from among the Society's Reports as they record

²⁹ LPLS Annual Report (1835-1836): 8.

the pleas for increased space from all involved in the Museum. Foremost among complaints was that the inability to display any more specimens negatively affected the Museum's ability to collect specimens as well as the donors' willingness to donate them.³⁰ So it seems likely that the geology that had been made homeless by Egyptology was stored and not displayed until more display space was created. When the new extension opened in 1862 the Society boasted that:

[a]s might have been anticipated from the increased space afforded by the enlargement of our building, and the greater facilities given by this means for the useful display of the specimens, the Museum has never in any previous year been so enriched with rare and valuable contributions.³¹

Geology had retained the two rooms it had previously requisitioned (rooms (b2) and (e2) in Figure 4.10 above), with a small increase to the size of room (e2). Primarily though, the extension created a large hall dedicated to general zoology called the Large Zoology Room (room (z)), which enabled the original museum room (a) to now be dedicated to the display of the Museum's collection of birds. There is no photographic evidence to assist in describing the original museum room. Nonetheless, the 1854 Guide to the museum describes how the displays were arranged under a Cuvieran taxonomy: first by 'Division'; Vertebrata, Heterogangliata, Homogangliata, Nematoneura, Acrita; and then by 'Class', Starting with Mammalia, Aves, Reptilia, Pisces, and ending with Polupi and Spongia. The overall sense from the 1854 guide was that for visitors arriving in the original museum room (a) the displays in this room emphasised the mammals and the birds above others. Of course, the Museum's mammal and bird collections were at the time its most abundant zoological collections and included its largest and most colourful specimens, and a visitor's preference for the more visually commanding of a museum's displays is a widely accepted axiom of present-day museology-the larger and more colourful an object is, the

 ³⁰ For example see LPLS *Annual Report* (1853-1854): 9.
 ³¹ LPLS *Annual Report* (1862-1863): 9.

more visitor attention it will receive.³² Perhaps for this reason, the Museum's Polar bear and Tiger became its iconic artefacts.



Figure 4.11 Photograph of the Large Zoology Room from its gallery, taken after the 1861-1862 exntension. Source: Leeds City Museum.



³² See Dean (1994): 51-52, in which he discusses the behavioural tendencies of visitors, specifically chromaphilic and megaphilic behaviour.

Figure 4.12 The Bird Room from its gallery, circa 1900 (room (a2) in the plan in Figure 4.10). The large display case at the foreground contained the Museum's specimen of Moa (*Dinornis elephantopus*), acquired in 1868. It was in the doorway of this room (on the left of the picture, through which the stairway is just visible) that the Kangaroo in Figure 4.9 was photographed. Also visible is the blocked doorway (recess centre right) that prior to the 1861-1862 extension, had led to the North Geology Room (room (e) in Figure 4.10). Source: Leeds City Museum.

The photograph above (Figure 4.11) represents one of the earliest taken of the Large Zoology Room, which represented the main part of the new 1861-1862 extension. The picture does also offer an impression of what the arrangement and atmosphere was like in the original museum room, before the extension was built. The photograph below, Figure 4.12, depicts the room dedicated in 1862 to the Museum's collections of birds (room (a2) in Figure 4.10)—the location of the original Museum room. The closest we can get, therefore, to recovering that earlier original Museum room is from the size and shape of the room in this photograph, on which is superimposed the contents from the photograph in Figure 4.11.

4.8 The Large Zoological Room

The natural science displays upstairs, after the extension had opened, were prone to similar reconfigurations as those we have observed elsewhere. Upon ascending the staircase a visitor would be facing what was called in 1862 the North Geological Room, just as is depicted in Figure 4.13 below. This photograph shows how at the time that it was taken the specimen of Moa was displayed in this room rather than the Bird Room. The 1897 and 1906 guides both describe the Moa as being in the Bird Room, whereas the 1915 guide describes it being in the North Geological Room. We are here reminded of how by revealing the collecting activities of the Museum, Chapter 2 considered how the geographic location of an object at any point in time affected that object's meaning, the types of values that surrounded it, and the form of knowledge it produced. The repositioning of the Moa specimen from among the specimens of extant species in the zoology room to the collections of fossilised extinct species in the geology room would have undoubtedly impacted on the object's meaning in a similar way. Nonetheless, the change of viewpoint is noteworthy here, from the more high-altitude geographical viewpoint of Chapter 2, to a narrower roomby-room architectonic-orientated one here. However, an emerging leitmotif of this chapter is the balance between the ideology and the pragmatism of display. While the redisplay of the Moa among the displays of Triassic to Post-tertiary fossils may point towards a controversial re-classification of the status of the Moa, its move has a lot to do with the practical display problems connected to an already over-crowded Museum. This does not mean that significant changes to the object's meaning did not occur as a result of this move.



Figure 4.13 Photographed at the top of the stairs looking towards the North Geological room circa 1915. The specimen of Moa is visible through the doorway. Source: Leeds City Museum.

To comply with the order of rooms as they were laid out in the various guides, a visitor would have to resist the temptation of entering the North Geological Room facing them, then turn completely around, pass the entrance to the Bird Room now on their right, and enter the South Geological Room (room (b2) in

Figure 4.10) in order to view all the geological specimens in chronological order from the South to the North Geology Room, as was intended.³³

4.9 The Main Floor of the Large Zoology Room

Assuming that this order had been followed, visitors would have entered the Large Zoology Room at the right of the photograph in Figure 4.14 below. The floor of this room displayed the skeletons of Giraffe and Pilot Whale (depicted in the photograph below), 'the Great Cave Bear', Indian Elephant, Walrus, and the 'fine specimen of the Irish Elk'.³⁴ These were all mounted on table-high stands, such that the larger specimens would have towered above the visitors.



Figure 4.14 Entering the Large Zoological Room from the North Geology Room, visitors would have arrived bottom right of this image, facing the Neptune's Cup just visible at the back of the Giraffes legs. In front of the Giraffe is the skeleton of a Pilot Whale. Here the displays of Ruminata are clearly visible on the back (north) wall, with the Museum's displays of fishes in the gallery above. Source: Leeds City Museum.

³³ The order of rooms in the guides starts with the South Geology Room, followed by the North Geology Room, the Bird Room, and then the Large Zoology Room. ³⁴ *Guide to the Museum* [...] (1915): 11.

Just as visitors had come face to face with the Museum's prize mummy in the entrance, it might be expected that a similarly iconic zoological counterpart would have greeted visitors as they first entered the Large Zoological Room. Indeed, shortly after its purchase, William Gott's Tiger was described as having been 'fitly placed in the centre of the large Zoological Room, and is always the most attractive object in that collection'.³⁵ However, towards the end of the century the Tiger³⁶ was stood obliquely to visitors as they entered from the North Geology Room, and the Irish Elk was located in the furthermost corner—see Figure 4.15 below. Instead of being greeted by the Tiger, for example, visitors entering this room were greeted with a collection of large sponges.³⁷ Despite its position, the tiger did nonetheless command attention from visitors. The photograph in Figure 4.15 below is one of only two sets of photographs that are known to have been taken by visitors to the museum.³⁸



³⁵ LPLS Annual Report (1862-1863): 10.

³⁶ 'Mr. William Gott presented to the Society the great tiger from the International Exhibition of 1862'. Kitson Clark (1924): 132.

³⁷ A skeleton of a Fallow Deer was positioned here first, but was replaced after 1903 when the Museum's Neptune's Cup (a giant sponge of the genus Petrosia) was acquired. See LPLS *Annual Report* (1903-1904): 8 and 15.

³⁸ Taken by a Thomas Garnett, whose collection of glass plate photographs was donated to the Museum circa 1903.

Figure 4.15 Photograph of the Tiger donated by William Gott in 1862 and taken by Thomas Garnett sometime after the 1903 acquisition of the Neptune's Cup, just visible behind the display case of the Tiger. Source: Leeds City Museum.

Figure 4.16 below demonstrates the layout of the Large Zoology Room at the turn of the century, with the arrow indicating where a visitor would enter from the North Geological Room. Here the position of the Museum's iconic specimens can clearly be seen. When Thomas Garnett tried to photograph the Tiger, he found too little room between it and the wall cases to enable him and his camera to stand directly in front of the specimen, forcing him to take his photographs from various angles.



Figure 4.16 The Large Zoological Room (room (z) in Figure 4.10). The arrow (top right) indicates the route into this room from the North Geological Room. Common names only are given here. The italicised descriptions around the edge represent the contents of the galleries that overlooked the main room. Source: Author's own work.

Similarly, when Henry Crowther came to photograph the Irish Elk he could only do this from inside the ring of display cases, with the result that the subsequent photographs were of the back of the specimen only.³⁹ This all points towards a situation where the pragmatics of display eliminated the possibility of any theoretical ideologies being at play. It has been the pragmatics of display, as we have termed it here, that has been the leitmotif of this chapter. In short, fitting all the specimens into the given space dictated many interests the curators may have had towards the architectonics of display and the consequential impact on an object's meaning.

The desk-top cases near to the case of British Mammals contained specimens grouped around the theme of 'Means of Attack and Defence among Animals'.⁴⁰ Elsewhere, the desk-top cases contained Pleistocene fossil remains from Yorkshire, which among other species included Mammoth, Hippopotamus, and Rhinoceros. The desk-top case directly left of the Irish Elk contained the remains of 'a Woman of the late Bronze Age' found in Scoska Cave, Yorkshire, in 1908.⁴¹ It seems that the public did not have access to the area in the middle of the ring of large mounted skeletons and desk-top display cases. As can be seen in Figure 4.17 below, the wall-mounted display cases that ran around the entire perimeter of the room were of substantial dimensions, able to house large Ungulates like camel, yak, and bison.

³⁹ See *Photograph q* in the Appendix.
⁴⁰ LPLS *General Guide to the Museum* [...] (1897): 14-15.

⁴¹ LPLS Annual Report (1908-1909).



Figure 4.17 Corner wall-mounted display case including specimens of Bison and Wild boar. Source: Leeds City Museum.

4.10 The Wall-Mounted Cases of the Large Zoology Room

The sections in the Museum's guides devoted to the content of the wall-mounted display cases were much briefer than the descriptions of this room's other sections. In the sixteen-page long 1897 General Guide to the Museum the description of the wall-mounted display cases extended to less than one and a half pages, while the galleries above extended to four. This uneven distribution of information is especially hard to understand when we consider that the bulk of the specimens in the Large Zoology Room were displayed in its wall-mounted cases. This makes substantive descriptions of these cases difficult to create. Nonetheless, the arrangement suggested in Figure 4.16 above, and the following account, serve to give an impression of the arrangement of displays in these cases and once again the photographic evidence has been pivotal to the process of recovery. As can be seen in Figure 4.16, the cases were dedicated to the display of mammalia only. Despite the general pressure for space, their arrangement does reflect a rational ordering of specimens, not apparent elsewhere. The series of ungulates (certain hoofed animals) starting with the displays of rhinoceros on the West wall (top left in Figure 4.16), and including sequential displays of wild and domestic pigs, tapirs, warthogs, bison, yaks and domestic cattle, deer, antelope, and horse is perhaps the most comprehensive

example of this in the Large Zoology Room. The arrangement of specimens indicates here that morphological similarities determined the display strategy. Not so in the display of the Museum's large specimens in the centre of this room, whose arrangement was much more the result of pragmatic considerations and were by consequence subject to the same vagaries of the displays downstairs. The displays of anteaters, sloth, and armadillos were arranged along similar morphological lines and we also know that after the celebrations connected to the opening of the Museum's extension had ended, Henry Denny shut himself in the Large Zoology Room for several months to arrange the displays.

When the new Hall was opened with an Exhibition, the most striking and attractive objects were hurriedly set up in the new Zoological Room, chiefly with a view to temporary display. Under these circumstances it will be evident, that the entire Museum required a complete re-arrangement, and classification. This serious work has been undertaken by our Assistant Curator, Mr. Denny, and it has now advanced so far under his unremitting exertions, that your Council look forward to the re-opening of the Museum, in a few weeks.⁴²

⁴² LPLS Annual Report (1862-1863): 16.



Figure 4.18 The displays of marsupial. The specimen of thylacine photographed in the Library (Figure 4.9) can be seen in its display context among the marsupial specimens. Source: Leeds City Museum.



Figure 4.19 The displays of primate which along with the display case of apes stood nearby followed on sequentially from the marsupial displays. The collection of human material detailed in Figure 4.20 below, can be seen to the left of the display. Source: Leeds City Museum.



Figure 4.20 The tattooed heads of three Maori Chiefs, among other human remains with the neighbouring display of monkey visible to the left. While most of this material was collected as anthropological or ethnographic specimens its re-use and display among the zoological specimens throws light on the complexities of issues at play. Source: Leeds City Museum.

These displays largely remained impervious to the pressures of space-a systematic imperative dictating a pragmatic one—in a way that has been hard to find anywhere else in the Museum. In Figure 4.20 above is the Museum's collection of human skulls, including a series of Maori heads. Described in the section for the Large Zoological Room as consisting of 'a fine series of Skulls, amongst which are the tattooed heads of three Maori Chiefs,⁴³ these were shown alongside a display of monkey-the apes were displayed nearby in a freestanding case. Even though the human material was located within the primate displays, we have already noted that it was more closely positioned to the specimens of monkey than it was of the great apes. In addition, the primate displays were themselves situated between the displays of marsupials and bats losing entirely any morphological references apparent in other parts of the wallmounted display cases. Alongside this, the human material, especially the heads of Maori chiefs, were not intended as zoological specimens but as anthropological or ethnographic specimens. This example demonstrates better than others that while we have argued that pragmatic forces rather than ideology

⁴³ *General Guide to the Museum* [...] (1915): 13.

dictated the precise arrangement of displays in the Museum, this did not in any way mean that the making of meaning and knowledge stopped—even if those meanings that were made were unintended and sometimes unfortunate.

4.11 The Conversaziones

If one activity reiterates more than any other that the Museum was the dominion of the middle classes, it would its annual conversazione. Helpfully, the conversazione has, among all other activities connected to philosophical societies, also generated the most interest from historians.⁴⁴

Conversaziones were being held by the Society in Leeds from 1840.⁴⁵ Commonly, the use of the word *conversazione* was interchangeable with *soirée*, the two seemingly representing the same. In Leeds, the introduction of regular conversaziones were being considered by the Officers and Council of the Society as early as 1832, when they noted the popularity of such an occasion at similar institutions in London.⁴⁶ At this time it was not uncommon that the President of the Society would hold an annual dinner for members and their families at Philosophical Hall, usually marking the end of the session, and there is a sense here that the conversazione took over this function, in a more widely recognised format. Certainly the Council were confident that a conversazione organised by the Society would be a success, reporting in the 1832-4 session that '[a] plan of this nature has met with a favourable reception from the retiring Council and will probably be immediately submitted'.⁴⁷ Initially the conversaziones at the Society were occasional rather than annual, and seemingly not always included in the Society's Reports.⁴⁸ In addition, they were not solely held at the Philosophical

⁴⁴ I have used Alberti (2003); Finnegan (2005): 53–72, Livingstone (2005): 96, Naylor (2002): 503-8, Secord (2000): 410-21, Withers, C., Higgitt, R., and Finnegan, D. (2008): 397-402.

⁴⁵ *Leeds Mercury*, 28 March 1840: 5.

⁴⁶ Secord (2000): 210-221, discusses the soirces of the Royal Society, which undoubtedly influenced activities elsewhere in the country.

⁴⁷ LPLS Annual Report (1832-1833): 8.

⁴⁸ The Society held a conversazione in 1840 that went unrecorded in the Report for that session but which received a lengthy account in the *Leeds Mercury*. It is highly unusual that an event took place in the Philosophical Hall without it being mentioned in the Report, much less one of such size, which as the *Mercury* reported, generated 'highly respectable audiences, comprising a considerable number of Members of the Society and other individuals of scientific pursuits and attainments; a large number of ladies'. Admittedly, that it was reported as 'Master Bassle's

Hall but sometimes also at the Assembly and Concert Rooms in Leeds.⁴⁹ In Leeds, conversaziones became a regular yearly event at the Philosophical Hall from 1846.⁵⁰ In comparison to the majority of regional philosophical and scientific societies, the 1840s marks an early appearance to what would become an ubiquitous event in Victorian Britain.⁵¹ The conversazione or soirée had its origins in the salons and elite balls of Regency high culture and for this reason was more closely associated with the arts than the sciences. By the 1800s-1810s, newspapers regularly reported conversaziones in connection to theatre society, which at that time had a strong Italian influence. Perhaps that the conversazione had become popularly connected to a cultural event influenced the decision to reinvent it within a scientific institution and that the cultural and social motifs that came with it made it such an attractive proposition to the LPLS in 1832.⁵² Certainly, of the fully formed conversaziones of the latter-half of the nineteenth century, the standard accounts suggest that it was the social and cultural aspects that were imported into the format adopted by the philosophical and scientific societies. Indeed, the performative, graphic and oral nature, that enabled a mixing of the spectacle of art with that of science, were the conversaziones defining characteristics. Of course, the meetings of the British Association for the Advancement of Science included a conversazione in their programme—the first of which was held in York in 1831-and represent one of the first conversaziones to be a standard event within a scientific society's yearly programme of activities.⁵³

Conversazione' rather than the Society's, suggests some detachment by the Society and Bassle's touring event may well have been used by the Society to test the conversazione format. Nonetheless, that this was not reported by the Society, even under the list of lectures for that

session, remains unusual.

⁴⁹ Leeds Mercury, 21 September 1844: 5.

⁵⁰ LPLS Annual Report (1846-1847): 5-6.

⁵¹ For example, Sheffield Literary and Philosophical Society started their conversaziones in the 1860s. See Alberti (2000): 82.

⁵² This agrees with the Thackrayean idea that the regional philosophical societies served to provide cultural cohesion among newly forming social groups (elites) that were otherwise disparate. See Thackray (1974): 672-709. Also Secord (2000): 210-221.

⁵³ Withers, Higgitt, and Finnegan (2008): 397. Searches were made for the terms 'conversazione' and 'science' through the British Library's online *The British Newspapers 1600-1900*, of which the BAAS York meeting was the earliest found. For an example see 'Great Scientific Meeting at York' *Preston Chronicle*, Saturday, 8 October 1831: 4. Secord talks about the soirées of the Royal Society from the 1840s: Secord (2000): 210-221. It seems likely that Leeds was influenced by both the BAAS' 1831 conversazione and those at the Royal Society. The Royal Society's soirées were widely popularised in illustrated newspapers, while BAAS activities generally were closely aligned to the Society.
4.12 Who went to the Conversaziones?

The Leeds Society indicated early on that a conversazione was considered 'a less formal mode of communicating many particulars of interest, than is afforded by the more stately solemnities of a regular essay'.⁵⁴ This in itself points to the intention of addressing a wider public with a conversazione than the Society would usually reach. After the 1846 conversazione was held, the following report emphasised the improved accessibility, noting that many of the attendees had never visited the Museum before, and the *Leeds Mercury* described the same conversazione as being of an 'edifying character'.⁵⁵ The Reverend William Sinclair, President of the Society at the time, described how:

'[i]t seemed a matter of just regret that the rich stores of our beautiful Museum should remain unvisited by many inhabitants of the town and that the objects of this institution were not duly appreciated by some of those for whose especial benefit it is intended'.⁵⁶

What we also find is that many, if not all of the exhibits connected to a conversazione in Leeds were taken up with material from outside the Museum's own collection—from the public. Many such exhibits were authoritative and comprehensive—such as the extensive collections of photographs exhibited from the 1850s—and from within the setting of a conversazione, the role of amateurs upsets the didactic and authoritative role traditionally ascribed to Museums, to a degree. Further adding to the idea of an active public, the Society, in response to the success of the photographic exhibitions, held a separate 'photographic' conversazione exhibiting material from amateur photographers, in 1857.⁵⁷ The pluralism presented here, of the public instigating activities in Society and Museum, begins to problematize the simplistic transmission model of the Museum's role and authority by showing more of the complexity behind the

⁵⁴ LPLS Annual Report (1832-1833): 8.

⁵⁵ Leeds Mercury, 19 December 1846: 5.

⁵⁶ Leeds Mercury, 20 November 1847: 8.

⁵⁷ LPLS Annual Report (1846-1847): 4.

ways in which knowledge was presented, within a *public* setting during the nineteenth century. Much of this reiterates the ideas promulgated by others-that the displays and social interaction embedded in the conversaziones show the public's experience of science as being proactive, involving consumption and transmission.⁵⁸ That the Leeds Society's calendar was influenced by public activities in the way observed with the photographic conversazione, does add a little to the scholarship and indicates the degree to which such events were an interface for public and institution. Conversely, some of the ideas connected to the conversaziones discussed by historians seem difficult to apply to the Leeds case. There is thin evidence to suggest that at Leeds the conversaziones were a way for the Society to demonstrate its scientific prowess, not least when most of the exhibits were not their own.⁵⁹ On the other hand, the Leeds case squares well with descriptions elsewhere of the conversazione bringing science into the realm of fashionable society and reminds us of the oral dimension to scientific endeavour.⁶⁰ Of course, there is a 'within' and a 'without' dimension to this, because by discussing how the Museum became a location for the public's proactive contribution to knowledge making, we also throw light on how Society and Museum was interwoven into Leeds' broader culture and society.⁶¹ However, it is certainly difficult to square metropolitan-centred accounts with the evidence in Leeds, especially the idea that the conversaziones were about the social ascent of 'men of science'.⁶² Descriptions of the conversaziones held at the Royal Society do not correspond well with what we see at Leeds and this is naturally to do with the two greatly differing environments.⁶³ Of course, if social adaptation during the reform era was at the heart of the matter,⁶⁴ then the political environments of London and Leeds, while being considerably different,

⁵⁸ Walters (1997): 121-54.

⁵⁹ Alberti (2000): 82.

⁶⁰ Secord (2000): 412.

⁶¹ Alberti (2003): 223.

⁶² This is about distinguishing between significantly different examples and identifying the limitations of the conclusions thus drawn. Naturally, the analysis of the conversaziones at the Royal Society or other aristocratic societies, as has been the focus of some of the most widely acknowledged scholarship in this field, will afford fascinating and colourful accounts. However, on balance, they are unrepresentative of the majority and their conclusion should be considered on these terms.

⁶³ Secord's description of the conversaziones of London's elite, particularly those of Murchison's at the Royal Society. See Secord (2000): 210-221.

⁶⁴ Secord (2000): 210.

in some ways favoured Leeds', perhaps.⁶⁵ If the elite societies like the Royal Society stimulated the trend for the nineteenth-century scientific society conversazione, then that role remains theirs. Nevertheless, the adaptation by regional societies of the model was such that the Royal Society model (if it was the progenitor) actually bears no resemblance to the vast majority of scientific society conversaziones in the country. The first part of this chapter was dedicated to clarifying more of what *public* precisely means with the Leeds case, so it is from this perspective that we must now consider the conversaziones.

There seems to be an agreement among historians that these were events for the middle classes.⁶⁶ This does support the evidence forming out of this chapter generally, that the social/class orientation of Society and Museum at Leeds was predominantly middle-class, although we must remember that there was a kind of aristocrat at the Leeds conversaziones—the industrial ruling class of the Marshalls, the Gotts, and the like.⁶⁷ Again, this is a somewhat banal statement and largely unsurprising, but in the same way as we reconsidered the assumptions connected to the term *public*, we should not take assumptions over

⁶⁵ Finnegan (2005): 60-61, notes slight differences between the function of conversaziones in Edinburgh and those described by Alberti.

⁶⁶ Alberti, whose 'Conversaziones and the Experience of Science in Victorian England' is perhaps the most extensive article on the subject, is particularly resolute that these were firmly part of 'bourgeois cultural life'. See Alberti (2003): 209. Secord is more interested in the conversazione in terms of how scientists did or did not gain entry into aristocratic society; however, these scientists were middle-class themselves. See Secord (2000): 410. Finnegan, in a way not dissimilar to the Leeds case, discusses the conversazione within the environment of specific regional locales—Dundee for example—and describes an adaptation of the model to suit the local environment. See Finnegan (2005).

⁶⁷ Certainly, the consideration of class distinctions in nineteenth-century Leeds, while being unavoidable in this thesis, is complex, especially when one attempts to find compliance between it and national class categories. As a result, I remain unclear on how the status of individuals such as John Marshall or Benjamin Gott were regarded at the time. They had created wealth for themselves that often ranked them among the richest in the country and had subsequently (although not prior to their wealth) established political positions for themselves. In addition, their dynasties maintained for many generations these privileges. However, rather than being aristocratic, which strictly speaking represented a member of the patrician—one of a ruling oligarchy, and most commonly a position of birth-there is a sense that at the time they were considered independent in class and politics. The Registrar General's Social Classification described the mid-century upper middle-classes (class 1) as being self-employed professionalslawyers, M.D.'s, and the like, which these clearly were not. So for that reason they were above middle-class, and one might be tempted to replace uncertainty with evasiveness by describing them as being the *nobility of the industrial North*. However, this or indeed terms like gentry suggests a position determined by birth and behaviour not compatible with these individuals. The Marxian terms *Ruling Class* or the strict use of *bourgeoisie* might here be the closest we get, although both are terms that predominantly described something other than what we find in Leeds.

the conversaziones for granted either. Not least because our findings so far have shown that *the public* continues to be a deceivingly simple term that belies a considerably more complex and entangled situation. Another reason is that there is an easily recognisable situation in which it is likely that the working classes were involved in the conversaziones—born out of a contradiction within the existing accounts.

We have observed earlier in this chapter that generally the exhibits at the conversaziones consisted largely of exhibits submitted by the public. This was not peculiar to the conversaziones at Leeds, but something equally well covered in the broader standard accounts.⁶⁸ Alongside this, the standard accounts have described how natural science was a mainstream exhibit at the conversaziones, and was undertaken by natural history field and collector clubs.⁶⁹ We know that these types of organisations were predominantly amateur and were also well populated with working-class members-especially the botanical, conchological, and entomological field and collector clubs.⁷⁰ A comprehensive collection amassed in the field provided its working-class owner a tacit authority within a discipline that transcended class distinctions.⁷¹ The potential that a field collection had to transcend class in this way and at this time, accounts for the need to have well-established epistolary protocols and codes of conduct for communication between naturalists, as so often they were from markedly different circumstances⁷²—and this could be no truer than for the artefact-reliant natural sciences. In light of this, are we right in maintaining that the

⁶⁸ For example, see Alberti, who talks of 'the manifold 'amateur' collectors and writers participating as exhibitors and lecturers', Alberti (2003): 209. Or Finnegan, who describes how such events often represented 'the more effective ways in which a natural history society could make use of public buildings and publicize their activities to a local public'. See Finnegan (2005): 60.

⁶⁹ Finnegan describes how such events in Scotland often represented 'the more effective ways in which a natural history society could make use of public buildings and publicize their activities to a local public'. See Finnegan (2005): 60. While Alberti considered natural science as being 'omnipresent' at the conversaziones of both dedicated natural history societies and the more general literary and philosophical societies. Alberti (2003). ⁷⁰ Perhaps most extensively discussed in Desmond (2001). Also of value here are Star and

Griesemer (1989) and Farber (1982).

⁷¹ Secord talks of silence being the most effective way of exercising authority. Secord (2000): 421.

⁷² Secord (1994).

conversazione was a domain exclusive to the middle classes and upwards?⁷³ Having described the participating exhibitors of the conversaziones thus, we have provided ourselves with a strong argument for a working-class/artisanal component, unrecognised by the existing accounts. At the very start of this chapter we speculated somewhat that the clarity and extent to which various publics are recorded in the primary sources will vary considerably—some clear and vivid, some all but disappeared. This is almost certainly the case here, where the primary sources prejudice a dominant group and forget to mention that this may not be entirely representative. For this reason, more care is needed to be able to distinguish other less well defined groups whose relevance and role is as yet unknown. It is clear from the Leeds newspapers who the dominant group was, among which we find very little evidence for working-class participation at the conversaziones.⁷⁴ The *Mercury* reporting the 1847 conversazione described its guests as 'the most distinguished families of the district', and the following years as attracting 'a large and brilliant assemblage of the elite of the town and neighbourhood',⁷⁵ while the guests at the 1869 conversazione were described as being 'many hundred of the ladies and gentlemen who form the upper circles of our town and neighbourhood'.⁷⁶ It was usual for the *Mercury* to name over two hundred of the guests, taking up a considerable proportion of the entire article in doing so, with the most 'distinguished' (usually the Mayor) named first. Despite the prejudice of the primary sources, we may still be able to make out the shadowy forms of other groups at the conversaziones, and while they remain marginal and indistinct, we can be sure they did contribute.

⁷³ Secord's now canonical *Victorian Sensations* underlines the importance of technology at the conversaziones and includes a reproduction from the *Illustrated London News* depicting the 1847 Royal Society conversazione. Among the crowd Prince Albert and Lord Northampton stand besides what Secord describes as the conversazione's star attraction, a double-action printing machine, which was kept running throughout the evening. However, no mention is made of the machine's operators. The *Illustrated London News* illustration does not show its operators and neither does Secord consider them; however, they would have undoubtedly been there and the example is very interesting for depicting probably a very rare moment when industrial practice and machine operators were placed within an aristocratic setting. See Secord (2000): 413 (Figure 12.3).

⁷⁴ The following section will note how the *Leeds Mercury* provided details of who the confectioners and the gas lighting supplier were. It must be reiterated though, that this is an exception.

⁷⁵ 'Conversazione of the Philosophical and Literary Society, Last Evening' *Leeds Mercury*, 18 November 1848: 5.

⁷⁶ Leeds Mercury, 17 November 1869: 3.

4.13 A Typical Conversazione

Turning to the accounts offered by the *Leeds Mercury* and the Reports of the Society helps provide a vivid insight into what a typical conversazione at the Museum entailed and might possibly throw more light on who was involved. Not yet having gas lighting throughout the Philosophical Hall, the first observation the *Mercury* made concerning the conversazione for 1847 was that Philosophical Hall was '[b]rilliantly illuminated by Mr. Hall, of Basinghall-street', adding that the Museum was 'enlivened by an excellent band of music, led by Mr. R. A. Browne [...] and throughout the evening coffee and other refreshments were provided by Mr. Godfrey Wood, confectioner '.⁷⁷ This does remind us that of course there was an engagement at the service level of individuals who may not otherwise have become involved in the Society and Museum. That their names and addresses were provided indicates that for these individuals the conversazione may have served to advertise their businesses. This prosaic dimension reminds us that both Society and Museum were physical operations in the town that made an economic contribution.

Despite the fact that technology such as telegraphy and microscopy did dominate the exhibits, the exhibits were at the time generally portrayed by the press as an eclectic array of antiquarian subjects. These included portable works of art and antiquities: 'On the tables of the museum we observed specimens of sculpture from Rome [...] and eleven casts from ancient cameos'; paintings, prints, and drawings including sketches from Afghanistan and 'an original portrait of Dr. Johnson by Joshua Reynolds'; antiquarian books, 'elegant and chaste copy of Martin Luther's Bible, printed in Germany, at Lineburg, in 1711'. The walls of the Museum displayed a variety of material: '[o]n the walls of the coffee-room and in other parts of the hall, we likewise observed amongst the novelties, mandarin and ladies' dresses from Amoy (taken at the siege of that city)'. For the 1853 conversazione, exhibits included 'an extensive series of educational apparatus, a collection of photographs, and various other objects of interest, all

⁷⁷ 'Conversazione of the Philosophical and Literary Society, Last Evening', *Leeds Mercury*, 18 November 1848: 5.

contributed by the Society of Arts'.⁷⁸ Just as we noted with the service end of the event, each description of an exhibit was accompanied by the name of its donor, reminding us that this was as much about being seen. Nonetheless, but for this, descriptions of the conversaziones often read like the collection of an antiquarian dilettante.⁷⁹

Invitations were issued for the conversazione, of which around 400 to 500 were sent out for the 1847 event, with the Mercury reporting 'and the very large attendance of both ladies and gentlemen showed that the invitations must have been generally accepted'. After coffee, the audience, who would be in full dress, would typically assemble in the lecture hall 'and presented a fashionable and animated scene', to receive the opening address by the residing President of the Society. A number of talks, demonstrations and experiments made up the remainder of the evening and typically across the century, as noted earlier, emphasised recent technological advances in areas such as telegraphy, microscopy and photography, above other subjects, with art a close second. These were punctuated by intervals 'devoted to promenade, and to the inspection of the attractions of the museum, to the pleasure of witnessing which an excellent band of music much contributed'.⁸⁰ Throughout the nineteenth century the opening address remained dedicated to promoting the activities of the Society and Museum, not dissimilar to the Annual Reports, often providing in details recent acquisitions to the Museum and their donors.⁸¹

By the 1880s, the format employed by the Museum included a greater proportion of amateur activities. Home crafts, including modelling in clay, wood-carving, lace-making and embroidery, featured in the 1887 conversazione. Prizes were held for this work, most of which was available for sale during the conversazione. Clearly, this provided an opportunity for a variety of artisans: '[i]t must certainly be encouraging to the young peasant to find himself the recipient

⁷⁸ LPLS Annual Report (1853-1854): 6.

⁷⁹ 'Conversazione of the Philosophical and Literary Society, Last Evening', *Leeds Mercury*, 18 November 1848: 5.

⁸⁰ 'Conversazione of the Philosophical and Literary Society, Last Evening', *Leeds Mercury*, 18 November 1848: 5.

⁸¹ Leeds Mercury, 17 November 1869: 3.

of a three-guinea prize for articles of a market value of a few shillings'.⁸² This remarkable and surprising quote from the Leeds Mercury evidences involvement from a group of the lowest class status, which the author of the report described as peasants. That in 1887 certain groups were being described as such is remarkable and throws some light on the understanding and terminology of class at the time. The conversaziones in Leeds, like those elsewhere, included collections of natural history by amateur field clubs. One such, the Concological Society, exhibited its collection of shells at the 1891 conversazione, as was reported by the *Leeds Mercury*.⁸³ This example is particularly pertinent because we know that a large part of the Concological Society's collection consisted of material collected by one of its members, William Nelson. Nelson and his collection provides a strong example of the working-class collector; their presence at the conversaziones; and the currency that could be created from their collections. This last point will be discussed in greater detail in Chapter 6; however, of relevance here is the evidence he provides of a working-class contribution at the conversaziones and how his personal contribution was not recorded in the primary sources connected to that conversazione.

4.14 The Last Conversaziones

It seems as though the last of the annual conversaziones was in 1891. However, no mention is made either of the decision or the absence of the conversazione from the Society's programme in the following Report.⁸⁴ It is hard to consider poor attendance to be the reason for the decision, though, as the Report that described the last conversazione also described nearly four hundred members, subscribers and guests as being present, which for the Philosophical Hall represented a capacity crowd.⁸⁵ The accounts for that session do record a cost of £47 14s 2d against the conversazione and considering that at the time the Society was particularly concerned with its financial state, financial reasons may have lain at the heart of the decision.⁸⁶ There was an attempt to revive the annual

 ⁸² Leeds Mercury, 7 December 1887: 8.
 ⁸³ LPLS Annual Report (1891-1892): 3.

⁸⁴ LPLS Annual Report (1891-1892): 3 and LPLS Annual Report (1892-1893).

⁸⁵ LPLS Annual Report (1891-1892): 3.

⁸⁶ LPLS Annual Report (1891-1892): 9.

conversazione in the twentieth century, with one held in 1917. And the coverage in the newspapers at the time does throw a little light on the original decision. The Bradford Observer noted that '[t]he conversazione of the society is an old function which was abandoned sometime before the outbreak of the war because of the many social gatherings held in the city'.⁸⁷ From the 1880s the conversazione had certainly become a popular model to follow among a variety of groups in Leeds and from this time the Society found itself vying with the Yorkshire College, the Leeds Mechanics' Institute and the Leeds Liberal Association among a great many others.⁸⁸ Naturally there was a conflict of interest in both subject matter and target audience between the conversaziones held by the Yorkshire College and the Society—on which the Society assumed a secondary position—and the content of the Mechanics' Institute's conversazione was all but identical to that at the Society. Others received a far higher attendance, such as those held by the Liberal Associations of towns across Yorkshire. The 1883 Leeds Liberal Association's conversazione held at the Town Hall attracted numbers approaching three thousand, while that at York attracted nearly five thousand, both of which were reported by Leeds newspapers.⁸⁹ The effect on Society and Museum of growing competition in the town will be the subject of further consideration in the following chapter. Nonetheless, what emerges from the narrative is that competition of some sort, whether that was over target audiences or themes and subjects, certainly seems to have been a contributing factor to the eventual cessation of the Society's annual conversaziones, even if it did not strictly rest on attendance numbers. The financial situation suggests that this may well have contributed to some degree, but in the end it seems as though the reasons were not remarked upon, nor are they overtly apparent from the extant primary sources.

4.15 Public Lectures

One of the evening's attractions at the Society's annual conversaziones were the public lectures, several of which were held through the course of the evening.

⁸⁷ Bradford Observer, 7 November 1917.

⁸⁸ A survey conducted within the *Leeds Mercury* alone, between 1880 and 1900 revealed twelve annual conversaziones advertised in the paper.

⁸⁹ See Leeds Mercury, 18 October 1883: 8 and Leeds Mercury, 27 October 1887: 7.

However, unlike the conversaziones, the Society's public lecture programme had been one of its original objects, as laid out in the Preliminary Laws of 1819, and would prove to be a more enduring feature of the Society. Itinerant lecturers had contributed to the intellectual stimuli in towns around the country until the first philosophical societies began emerging during the late eighteenth century. If the emergence of the philosophical societies across the regions began the process if institutionalising the scientific enterprise, we should certainly consider the itinerants as representing the progenitors of their lecture programmes. Before the Museum extension had been built in the 1860s—effectively doubling the size of the Philosophical Hall—the lecture theatre had been the Hall's central and largest feature, around which facilities for the Society's various other activities were accommodated. It was, in fact, the only room in Philosophical Hall whose function was preconceived—in contrast to the allocation of rooms for a library, laboratory and museum.⁹⁰ The 1819 Preliminary Laws proposed a minimum of one elementary course of public lectures a year, but when the lectures eventually began in 1821 a total of sixteen individual papers were presented. The growth in this activity was such that by 1824 the lecture theatre was described as being 'scarcely sufficient'.⁹¹ The bookings for the room at the time seem to suggest that such comments were reasonable. During that session—1824-5—the Society held sixteen individual papers on various subjects as well as six courses of lectures. Most of these courses numbered six to eight individual lectures, although several during that session numbered upwards of twelve lectures. In addition, the Report records that the recently established Mechanics' Institute used the Society's lecture theatre weekly, while its own building was being erected.92

4.16 The Development of the Lecturing Programme across the Nineteenth Century

Looking closer at the lectures themselves, we notice that to begin with these are divided into either courses of lectures or individual papers. Both were

⁹⁰ See Chapter 1.

⁹¹ LPLS Annual Report (1824-1825): 6.

⁹² LPLS Annual Report (1824-1825): 9-11.

constituents of the Society's lecture programme but do represent slightly different types of activity. These categories would be augmented later by private lectures during the 1834-1835 session and conversazione lectures from the 1840s. The courses of lectures held by the Society-usually consisting of a minimum of five to six lectures-represent an attempt at more formal scientific education and were at the time called 'public lectures'. These ran independent of the meetings of the Society, and were intended to be elementary in content, representing the received views on certain topics.⁹³ On the other hand, those referred to in the Reports as individual papers for the most part demonstrated the original work of an individual and were the main feature of the Society's meetings-one being read at each meeting. The lectures held at the conversaziones and those called 'private lectures' that were introduced later, were both of the 'individual paper' type-their distinction in the Reports serving only to identify the differing occasions during which they were presented. To begin with, the individual papers came from members of the Society and indicate the degree to which original research was being done in the town. However, this changed with time and the later inclusion of papers from a wide range of individuals, often celebrated names in science, demonstrates the way in which later in the century the lecture programme did become a national platform for a much wider range of individuals. Both the public lectures and the individual papers were held from 1821, when the Philosophical Hall was first available.⁹⁴ We noted in Chapter 1 a prize of 3 guineas for a paper that would 'encourage rising talent, and the regular production of literary papers,' awarded to Charles Turner Thackrah's somewhat contentious 'An Introductory discourse',⁹⁵ as we did the 10-guinea prize for the best course of no less than five lectures.⁹⁶ The first course of lectures, ten on experimental chemistry, commenced in November 1821, as declared in a Leeds Mercury announcement:

⁹³ LPLS Prospectus of Preliminary Laws [...] 1819.

⁹⁴ There were papers delivered prior to this, through a temporary association formed to discuss philosophical subjects while the Philosophical Hall was being built. See *Notebook of draft minutes 1819-1823*.

⁹⁵ See Chapter 1 for a full account of Thackray's paper. Also see *Council Minutes*, 30 March 1820.

⁹⁶ See Law xii of LPLS Prospectus of preliminary laws [...] 1819.

The Council respectfully announce that during the next session. COURSES of LECTURES on these Subjects will be delivered, at the Society's Hall, to which the Public will be admitted.⁹⁷

Once again, the use of the term public requires further clarification. As used in the above advertisement, it does not carry our modern-day meaning, but instead signified members of the Society. In other words, we could say that the public of the Society were invited. Outside of the Society, we find guests being permitted, but this was heavily controlled such that it was a facility restricted to proprietary members only and at the ratio of one guest for each one-hundred-pound share owned by the proprietary member. In reality, this meant one guest per proprietary member, as only two proprietary members owned more than one onehundred-pound share at this time.⁹⁸ As noted earlier, the individual papers were presented at the regular meetings of the Society. A regular meeting would begin closed to all but the members, during which time the business of the Society was discussed. After an adjournment, any visitors were allowed to enter and it was during this second part of the evening's meeting that the individual papers were read-followed by an open discussion. Like those surrounding guests, restrictions surrounded who a visitor could be:

Any member of the Society may introduce one or two visitors to the regular meetings, but persons residing in Leeds, or within the distance of five miles, cannot be introduced oftener than three times, unless they become a member⁹⁹

On balance, the Society's lectures up to the 1850s, whether they were its public lectures advertised in the local newspapers, those given at the conversaziones, or the individual papers presented at the meetings, were all but closed to nonmembers, and throws yet more light on our understanding of Society, Museum, and the public.

⁹⁷ Leeds Mercury, 21 July 1821.
⁹⁸ These being Benjamin Gott and John Marshall. See Chapter 1.

⁹⁹ LPLS Prospectus of Preliminary Laws [...] 1819.

Naturally this eventually changed and across the second half of the nineteenth century we see functions at Philosophical Hall becoming more open, something which can perhaps be detected as early as 1853, with the introduction of the Juvenile Lectures programme.¹⁰⁰ These show a Society and Museum grappling with accessibility and popularity and reveal something also of the way in which such activities were parts of larger complexes:

From the success which has attended the delivery of Juvenile Lectures, at the Royal and other Institutions in London, the Council were induced to try the experiment of a course of this nature during the Christmas vacation. The object of these Lectures is to impart scientific knowledge in its most simple form, divested as much as possible of technicalities and thus rendered suitable for the comprehension of a Juvenile audience¹⁰¹

The Public Saturday Afternoon Museum Lectures that were introduced in 1885 are yet more evidence of this broadening of view by Society and Museum as well as yet another turn in how the term public was being used. These lectures focussed specifically on Museum subjects like the collections or themes explored within them and being held on a Saturday afternoon aimed specifically at Leeds' working population—the public as we would call them today. Having already observed that access to the museum changed in 1852 with the introduction of the penny admission, it looks like there was a discursive element to the opening of the Museum and its activities to the public of Leeds, in part stimulated by financial interests, in part by the example of others and undoubtedly also by the Society's and Museum's own enterprise. Certainly we know that the scheme that introduced school children to the Museum from the 1870s broadens access to the Museum and complements the series of lectures that Crowther conducts to teachers and school classes. We can already be sure, then, that the intentions behind the lecture programme became less restricted as the century progressed, but that this was a culmination of discrete events rather than the product of a grand design.

¹⁰⁰ LPLS Annual Report (1863-1864): 5-6.

¹⁰¹ Ibid.

4.17 Themes and Speakers

The development of the lecture programme became the responsibility of the Museum's paid curatorial staff, an appointment taken first by Henry Denny in 1825.¹⁰² The resulting programme eventually became the Society's most prestigious activity, through which it regularly received national newspaper coverage, especially whenever a famous name presented a paper. This took some time to achieve, and although the Society had enjoyed some lectures of note early on, they were much less frequent than they would become from the 1860s onwards. The Society's Report for the 1854-1855 session records a futile attempt to engage a lecturer of eminence on a scientific subject for that session 'owing to the previous engagements of the parties applied to'.¹⁰³ This indicates clearly that lecturers by members of the Society had dominated the programme before the 1860s. Those given in the 1820s by the geologists William Smith and John Philips, the chemist John Dalton, as well as the science populariser Dionysius Lardner in the 1830s, and Adam Sedgwick's 1852 lecture on 'The Comparative Anatomy of the Megatherium, and other Large Fossil Edentata', were some of the notable exceptions. Accepting, then, that there were notable speakers prior to the reopening of the Museum, this event in 1862 seems to mark a turning point for the lecture programme, after which it increasingly attracted well-known names from the country's intellectual community.

From the natural sciences these included Richard Owen, who conducted a short course of four lectures as well as the inaugural address at the reopening of the Museum in 1862. That same year John Lubbock delivered 'On the recent Geologico-Archælogical Discoveries in Denmark, Switzerland, and France' and the following year saw Alfred Wallace deliver 'The Varieties of Man in the Malay Archipelago'—the first of several he would deliver for the Society over the following years. 1863 also saw Francis Galton at the Philosophical Hall presenting his 'On the Early Domestication of Animals', with the following lecture in the session being by George Rolleston's 'On the Distribution of

 ¹⁰² This has been discussed from the perspective of developing curatorial activities in Chapter 3.
 ¹⁰³ LPLS Annual Report (1854-1855): 5.

Species' and then would return to the Philosophical Hall in 1870 to provide a short course of two lectures on fourth- to sixth-century burials in England. In 1869 Thomas Huxley lectured on 'The Ethnology of India', following this up with 'On Yeast' in 1871. Botanist George Henslow presented 'On Geographical Botany, with Special Reference to the Origin and Distribution of the British Flora' in 1872, along with George Mivart's 1875 'Apes' and Ray Lankester's 'Degeneration' in 1881. From geology, we have already noted the early contributions by Adam Sedgwick and John Phillips, but to these we may add Henry Clifton Sorby's 1856 'On the Currents produced by the Action of the Winds and Tide' as well as 'On Man and the Mammoth' by Henry Woodward, keeper of geology at the British Museum in 1868, as well as William Carruthers—curator of botany at the British Museum—1871 'The Vegetation of the Coal Period'. William Pengelly presented 'Recent Speculations Respecting the Climatal History of the Earth' in 1872, along with papers from the mineralogist Robert Hunt in 1861 and 1866, and 'Our Earliest British Ancestors' from the geologist and curator of the Manchester Museum, William Boyd Dawkins in 1880.

More broadly across the sciences, names appearing on the Society's lecture programme included John Herschel, who in 1858 presented 'On Sensorial Vision', which he followed up a year later with 'On Volcanoes and Earthquakes'. Lyon Playfair presented 'On the Food of Man in relation to his Muscular Force' in 1867 and the following year saw the return of a Herschel, this time Alexander Herschel with 'On Meteors and Meteorites'. Straight out of his Royal Institution Lecture, William Crookes delivered 'The Radiometer' in 1877, which Sylvanus Thompson followed a little later at Philosophical Hall with 'Waves of Sound and the Photophone' in 1880. Other lectures by well-known physicists and electrical engineers included: J. H. Gladstone's 'Recent Discoveries on the Refraction of Light' in 1866; J. Norman Lockyer's 'Recent Researches in Spectrum Analysis', which was presented in 1873; and Arthur Schuster, Oliver Lodge and John Ambrose Fleming, all of which presented at the Society during the 1860s-1890s period. Other names at the Philosophical Hall included Joseph Paxton, who presented 'On the Growth of London and other Large Towns' while at Chatsworth house in 1855, the Royal Observatory's

meteorologist James Glaisher and naval engineer John Scott Russell. From neurology and psychology, David Ferrier and James Crichton Browne both presented several lectures, as did the ethnologists Robert Gordon Latham and Edward Burnett Tylor, the educational reformer Oscar Browning, the chemist Henry Roscoe, and George Gilbert Scott, architect of St. Pancras Station, all between the 1860s and the 1890s. Biologist/sociologist Patrick Geddes also presented 'The Progress of Geography', which included his 'The Outlook Tower' and 'The Great Globe' in 1899.

Names from politics included William Whewell, who presented in 1856 and again in 1857, as well as the politician, poet, and member of the Apostles Club Richard Monckton Milnes, and the politician Michael Thomas Sadler. Names from literature included Anthony Trollope and Hartley Coleridge-the eldest son of Samuel Taylor Coleridge, among many others. Samuel T. Coleridge had been an honorary member of the Society from 1825 up to his death in 1834. In addition, philologist Friedrich Max Muller presented in 1865 and again in 1889, and John Seeley-professor of modern history at Cambridge-presented several times across the 1870s on political history. In addition, contributions came from chairs at the majority of the British universities; indeed, many of the individuals mentioned above presented within their capacity as professors. Of those not already discussed, we might here mention Professor of comparative anatomy at University College London, Robert. E. Grant; Reader in chemistry and mineralogy at Durham University, J.F.W. Johnston; Rev. Robert Walker, Reader in Experimental Philosophy, University of Oxford; William Turner, Professor of Anatomy at Edinburgh University; the physicist Balfour Stewart, Professor of Natural Philosophy at Owens College Manchester; Robert Ball, Professor of Astronomy at the University of Dublin; and William Flower, Hunterian professor of comparative anatomy at the Royal College of Surgeons. Also of note are the lectures contributed by the natural history artist Waterhouse Hawkins, who collaborating with Richard Owen produced the first life-size depictions of the dinosaurs at Crystal Palace in 1862; the artist, designer, and writer William Morris, who presented 'Art and Labour' in 1884; as well as the pottery magnate Henry Doulton in 1890, and the archaeologist Flinders Petrie in 1895. Alongside these, several names from publishing presented at the Philosophical Hall,

including Ernest Hart, the editor of British Medical Journal; Norman Lockyer, founder of Nature; and J. L. Hannay, columnist for Punch. Individuals also presented lectures within the capacity of presidents of societies and associations, including the physiologist and marine zoologist William Carpenter, as President of the British Association (BAAS); and the President of the Geological Society, P. M. Duncan.

Numerous names connected to the governance of the colonies as well as from the Church of England also presented at the Philosophical Hall, as well as countless contributors whose names while being less well-known now, were at the time current. These include the architect Edward Middleton Barry, who designed the new Covent Garden theatre and Floral Hall after its 1857 fire, and Professor Pepper, who at the time presented his 1863 'On the Progress of Modern Science, as illustrated by the late International Exhibition' was described as 'the wellknown lecturer at the Royal Polytechnic Institution of London'.

As can be seen, 1860-1890 represents the high point for the Society's lecture programme. What is also evident is the influence of the Yorkshire College from the 1870s in increasing the number of contributing professors to the programme, as will be discussed in the following chapter in greater detail. In addition, there was a strong University of Manchester contingency, but this was not to the exclusion of contributions from Oxbridge and other traditional institutions. We notice also that from the 1860s the Society's lecture programme became part of the circuit for lecturers at the Royal Institution.¹⁰⁴ As with the John Herschel 1858 paper 'On Sensorial Vision', the Society did fund the publication and distribution of papers. In this case the paper was distributed with the Society's Annual Report¹⁰⁵ and many notable speakers were made honorary members.

There is a sense that the reopening of the Museum in 1862 represents the watershed year for the Society's lecture programme. As we mentioned earlier in this chapter, this was a period of great cultural mobilisation by the public, and

¹⁰⁴ In particular, William Crookes 1877 paper 'The Radiometer' delivered to the LPLS after his Royal Institution Lecture, and Sylvanus Thompson's paper 'Waves of Sound and the Photophone' in 1880. ¹⁰⁵ *Liverpool Mercury*, 4 March 1859: 6.

this would undoubtedly have contributed. Additionally, that Richard Owen provided the inaugural address at the opening of the new museum extension in 1862 was also important. The Society described Owen at the time as 'one of the greatest living naturalists'¹⁰⁶ and the attention he gave would certainly have invested both Society and Museum with more credibility. In addition, revealing the lecture programme in this way has afforded the opportunity to grasp the intellectual atmosphere in the Philosophical Hall, especially between 1860 and 1890, and to understand more the degree to which the scientific world flowed through both Society and Museum.¹⁰⁷

4.18 Our Man in the Field: Museum Correspondence in the Press

From the start, newspapers had taken a pivotal position in the activities of the Society. We may recall that in 1818 it was through the *Leeds Mercury* that the letters of Leodiensian and others first announced the forming of the Society to the *Mercury's* readership.¹⁰⁸ As was discussed in Chapter 1, this was largely down to the role of Edward Baines, being both co-founder of the Society and owner/editor of the *Leeds Mercury*. Thus established, this close alliance with the press seems to have remained. Rather than a process of trial and error, this alliance was indicative of a native grasp of the potential of the press, a state most likely connected to the early political propagandist role of the press in the town. That both Society and Museum were media savvy in this way is borne out somewhat by the fact that they kept extensive and well-organised collections of newspaper cuttings throughout the nineteenth and twentieth centuries. The *Leeds Mercury* was considered the Society and Museum's de facto newspaper. Early on, we see evidence of lucid principles around the reporting of societal matters even before mechanisms were in place to uphold them. In 1821 the minutes of a

¹⁰⁷ Interest in the Magic Lantern lectures did wane after the increase in cinematography. The Society's Reports demonstrate candour regarding the need to keep abreast of technological advances and from 1917 introduced a lecture programme based on the installation of a kinetograph, no doubt with an eye on maintaining the popularity of the programme, demonstrating how Museum practice was alert to audience expectations as much as other forces. ¹⁰⁸ The letters are found in the *Leeds Mercury*, 26 September 1818 for Leodiensian, 17 October 1818 for Beverlonian, 24 October 1818 for Leodiensian's reply, 31 October 1818 for Juvensis,

¹⁰⁶ LPLS Annual Report (1862-1833): 7.

and 28 November 1818 for Leodiensian's reply.

meeting along with comments connected to the paper read at the meeting, were reported by a member of the Society without permission, to the *Leeds Intelligencer*. This was deemed dishonourable by the Society's Council, who resolved that no publication should be allowed unless agreed by the Council. The author was instructed to write a paragraph explaining his error, which should be published first in the *Mercury* and then the *Intelligencer*. When the Society eventually published its annual Reports, from 1822, they were reported in tandem in the *Leeds Mercury*. In addition, the *Mercury* reported the Society's conversaziones, its meteorological tables, and numerous miscellaneous news items. This is not to say that the *Leeds Intelligencer* was entirely excluded, and it did also publish a great deal of material on Society and Museum. As these newspapers and others besides expanded and diversified their range of publications, the opportunities for Society and Museum to publish in ever more diversified ways increased accordingly.¹⁰⁹

If we accept that readers of the *Leeds Mercury* and the *Leeds Intelligencer* were able to stay abreast of activities at the Society and Museum, we are naturally led to ask how much further did this information travel. It was common practice throughout the nineteenth century for a newspaper to use reports from other newspapers as a way of providing broader news coverage in their own paper. For this reason, we can be certain that the activities of the Society and Museum would have reached a national audience, to some degree. More specifically, we find the Society's events and activities receiving mention in newspapers from Darlington, Derby, Dublin, Hull, Liverpool, London, Manchester, Newcastle, and Wales. However, these were infrequent and there is no distinct pattern behind who reported LPLS activities or indeed the kind of thing that was reported. The Liverpool Mercury was one of the more regular reporters as well as one of the earliest to do so. The first time this newspaper covered LPLS activities was in 1825, when it reported a paper Adam Hunter read of Dr Traill's 'The Object of Captain Franklin's Present Expedition to the North Pole.'110 Hunter was physician at the Leeds General Infirmary and Traill the same for the

¹⁰⁹ The *Leeds Intelligencer* becoming the *Yorkshire Post* in 1883, including the supplement *Yorkshire Weekly Post*.

¹¹⁰ The *Liverpool Mercury*, 27 May 1825.

Liverpool General Infirmary. Before Traill returned to Edinburgh University as Regius Professor of medical jurisprudence in 1832, he was instrumental to many of Liverpool's scientific activities. These included being a member of the Roscoe group, and a founder member of the Liverpool Literary and Philosophical Society in 1812, and the Liverpool Royal Institution in 1817.¹¹¹ In short, there were not only good reasons why Hunter read Traill's paper but why the Liverpool Mercury reported him doing so. Clearly, then, a link of some sort with a society in another town stimulated coverage in that town by its local newspaper. The LPLS sent the Liverpool Lit. and Phil. its Annual Reports throughout the nineteenth century, as well as the published papers presented at the Society. These in turn stimulated coverage in the Liverpool Mercury. the editorial eye was predominantly concerned Throughout, with newsworthiness. Something touching on a local subject, such as Dr Traill or additions to the Liverpool Literary and Philosophical Society, would be of interest to the Liverpool press. But this type is by far the least common reason that LPLS news was published elsewhere. The meteorological records that the society published regularly in the *Leeds Mercury* also elicited interest from other newspapers that used the figures to augment a local story with an authoritative statistic.¹¹² However, a famous name would arouse wider interest, so it is no surprise that the Society's lecture programme generated the widest press interest, as the following rather convoluted short example ably demonstrates: The London based The Examiner reported after a Leeds Mercury report that John F.W. Herschel was to read his 'Sensorial Vision' to the LPLS in 1858. This news reappeared verbatim in the North Wales Chronicle several weeks later, and after Herschel's 'Sensorial Vision' had itself been published. The LPLS then sent a copy of Herschel's paper along with a copy of the Society's Annual Report for 1858-1859 to the Liverpool Lit. and Phil., which was consequently covered by the *Liverpool Mercury*.¹¹³

¹¹¹ See Traill's *ODNB* entry.

¹¹² See 'The Storms and Floods' in the *Derby Mercury*, 18 October 1876, for an example of how news reports elsewhere used the meteorological records that were made by the Society.

¹¹³ The Examiner, 21 August 1858: 539, North Wales Chronicle, 28 August 1858, Liverpool Mercury, 4 March 1859: 6.

It is a seemingly banal declaration that states that the development of the press in Leeds brought about a development of the use of the press within Society and Museum. It is nevertheless relevant to us that the kind of opportunities and pressusage we see the Museum participating in at the start of the twentieth century would have been hitherto unimaginable and represents ideological sea-changes to Museum interpretation and content, as well as to audience engagement. We cannot know the proportion brought into being by developments within the press, but we can be certain that the particular approach adopted by Henry Crowther at the start of the twentieth century was very much a reportage style first. Crowther began writing regular articles for a number of Yorkshire-based newspapers from the turn of the twentieth century, but none more so than the Yorkshire Evening Post, which described him as their natural history correspondent.¹¹⁴ Oftentimes liberally and wittily illustrated (see Figure 4.21 below), the articles anthropomorphised candour: 'The reasoning power of Mr Rook'¹¹⁵ and nostalgia for the countryside no doubt aimed at urban tastes and interests: '[i]n spite of the fog the mammals and the birds are in the keenest quest for food beneath this pall of soot.'116

¹¹⁴ Yorkshire Evening Post, 12 March 1909.

¹¹⁵ Yorkshire Evening Post, 12 April 1908.

¹¹⁶ Countryside, 4 December 1908.



Figure 4.21 The Thrush's Protest. Old Mr. Thrush: Well I'm blest! March, and can't find a worm! Source: *Yorkshire Evening Post*, 12 March 1909.

Earlier in this dissertation we described the public donations to the recentlyopened Museum as an ebullient outpouring from a people conditioned to the industrial townscape but still moved by their nostalgia for nature.¹¹⁷ However, the populace of Leeds at the very end of the nineteenth century represented the first generation to have lived entirely within the urban Leeds setting and while the nostalgia for nature had been learned from their parents, it was a different ideology. With his 'Life in the Countryside' appearing in the *Yorkshire Evening Post*, his 'Wild Nature Week by Week' in *Countryside*, or 'Notes by a Naturalist' in the *Leeds Mercury Supplement*,¹¹⁸ Henry Crowther engaged with this diffuse urban readership in a form and style hitherto not possible. We have seen how his innovative use of photography transformed the Museum's lecture programme and how later in 1917 the kinetograph, heralded for its educative properties, captivated the audiences of the Museum's lecture programmes with moving images, replacing the threadbare magic of a well-worn magic lantern.¹¹⁹ Here we might easily imagine the animated and flickering images dancing across the

¹¹⁷ See Chapter 2.

¹¹⁸ Leeds Mercury Supplement, 19 November 1892.

¹¹⁹ See 'Cinema as Educator' and 'Cinema for Scholars', *Leeds Mercury*, 8 November 1917 and 'Moving Pictures at the Leeds Philosophical Hall', *Yorkshire Post*, 8 November 1917 for reports on the first use of the cinematography.

Lecture Hall's walls while school children crowd around displays and newspapers circulate the latest 'Notes by a Naturalist' to the homes of everyday Leeds folk. This vibrant image of curatorial practice stands in marked contrast to the one that occupied the same space as the Museum first opened. While John Atkinson was an innovator just as much as Henry Crowther, the ideology that framed the Museum's presentation of the natural world then, reserved it for the membership of the Society only. The reformation into a public enterprise, that satisfies our own definition, was not necessarily inevitable, nor a simple trajectory to chart.

4.19 Conclusion

Chapter 4 has shown how the Museum's formalised public facing activities—its displays, conversazione's and articles in the press—present the impression of a healthy and vibrant functioning museum that was closely connected to a range of stakeholders and broader communities. Combine this with the collecting activities and academic work on those collections that we described in the previous chapter and we perhaps get as close to an idealised nineteenth century museum. This emerged from out of the general discursive and ad hoc nature that has come to characterise the narrative thus far.

We could argue in this chapter, just as we can with the previous chapter, that this was largely because of the work of one individual—in this case Henry Crowther. This may seem to edge us towards a hagiography of figureheads and notaries. In response we must add that the historical records do not preserve well the evidence of those other individuals who would have provided vital and undoubtedly inspirational supportive impetus to these individuals and their projects.¹²⁰

Coming at a time in the Museums history when the word public begins to mean something similar to our own modern day interpretation of the term—Henry Crowther presents perhaps our best example of museum curatorship as public

¹²⁰ Here perhaps we should name Henry Crowther's daughter Violet Crowther as one such example. With Henry Denny we can only imagine the role his family would have assumed—all of whom lived with Denny at the Museum in Philosophical Hall.

service. This seems to have stood in contrast at times to the position adopted by Crowther's superior, Louis Comptom Miall, who was ambitious to redefine the premise of curatorial activities along academic lines. One might conclude therefore that the natural science that emerged was different between the two. In simplified terms, Miall was interested in the potential contribution to formal scientific education while Crowther sought to re-engage an increasingly urban public with the wonder of the natural world.¹²¹ Miall's vision, dedicated as it was to the service of science ultimately took him away from the Museum-as if that vision was untenable for a museum. Crowther's articulation of the natural sciences, being more closely related to leisurely activities, became the diametric to that of Miall's. Here between the over-simplified characters of Miall and Crowther we are able to perceive the two potential routes that represents the possible futures for the Museum. The LPLS's inability to decide upon a single path for the Museum or find a working version that included both, dictated largely what happened next. Therefore, aside from the impression that during Crowther's term the Museum had reinvented itself into that thoroughly public institution, its constitution remained and any such growing schism remained in place. How a solution finally came about is the metanarrative to Part 3 of the Thesis which to we now turn.

¹²¹ While it is vital to perceive the nuances in this way the divisive nature of the narrative may lead to too great a distinction and it is important to keep in mind that these two facets are mutually inclusive within a common phenomenon, describing as they do, different points on the same arc.

Part 3

From Private to Civic: Public Museums' Long Dawn

The middle chapters 2, 3, and 4 have thrown light on the subject of change especially towards professionalization and specialisation. Such issues and preoccupations came from broader discourses and developments outside the Museum, such as among the scientific community, as well as the newly emerging museum community of the late 1870s.

In addition, we should not forget that this was as much about the Museum's Curators, whose receptiveness, readiness and role in such reforms represented here a vital force for change. Each made a significant impact on the form, function, practice and activities at both Society and Museum. It was out of these influencing forces and changes—all the time linked to the growth and increased diversity in the town itself—that a more user-led awareness emerged that involved target audiences, an evolving sense of competition, public relations and marketing.

At this time, both Society and Museum faced a number of dilemmas concerning its particular purpose, as well as a number of unresolved issues such as who its key target audience was. Such preoccupations at times threatened to divide both its membership and Council. Therefore, the late 1870s represents the beginning of a period of self-reflection for both Society and Museum that would come to characterise the final episode in the relationship between Society and Museum, and the last period of interest in this thesis. The associated preoccupations occupied the agenda of the Society's Council at this time and necessitated the creation of the Committee on the Means of Extending the Usefulness of the Society.

The conclusions that were drawn, and put into effect from the 1900s, would see in the most radical constitutional changes since both Society and Museum were established around one hundred years earlier. These saw the eventual splitting of Society from Museum, which up to that point had been indivisible. The Society reconfigured more closely to the newly-formed University of Leeds and the professional science it stood for, and the Museum donated in entirety to the town. With its management taken over by the Leeds Corporation, the Museum was perhaps for the first time re-presented as a civic museum proper, serving the general educational and entertainment needs of the town. Of course, such changes, challenges, and dilemmas were not entirely specific to the Leeds case, but represented insurmountable obstacles for the majority of other philosophical societies and their museums around the country.

As the LPLS struggled to respond to the changes in the context and environment of late-nineteenth-century Victorian Britain, so most other philosophical societies closed, and did so at a rate comparable only to the flurry with which they were first established at the start of that century. Again, the provincial setting like Leeds affords insights into national phenomena, enabling us to better determine phenomenon from epiphenomenon. In this way, Leeds enables us to observe how, far from being an independent movement filling a gap the emergence of the Victorian municipal museum movement was embedded in the trajectories of the Lit & Phils.¹

The consequential municipal museum became a standard institution for most towns in Victorian Britain. albeit a recontextualisation of the work of the Lit & Phils.² Just as the Science Museum in London emerged out of the large and well-used collections that remained from the grandiose international expos—positioning itself in the space previously occupied by the expositions around South Kensington³—so too did the Victorian public town museums blossom from the body of the regional philosophical societies, locating themselves in the halls of the Lit & Phils, inheriting their collections, practices and staff. While the Victorian public museums did become a significantly different enterprise, their proximity to the Lit & Phils has been largely overlooked historians. Similarly, very few historians attempt an explanation of the demise of these societies, and yet accept it as an important historical shift towards a public- and civic-orientated enterprise in late Victorian Britain.⁴ By turning now to the final transitional period of the LPLS, from 1860 to the 1900s, and then by considering in the last chapter of the thesis the process of transference that saw its Museum

¹ Of note among authors who cover this include Alberti (2002), Hill (2005) and Knell (2000).

² See Alberti (2000) & (2002) and Hill (2005).

³ Follett (1978): 1-11. Also, MacDonald (2002): 3-59.

⁴ Those authors that do consider this include Alberti (2009), Elliott (2009), Orange (1983) and Morrell (1985).

gifted to the Corporation, we will get the chance to recover those forces that influenced the demise of the Lit & Phils generally.

Chapter 5

Self-reflection and Reappraisal in the Society and Museum, 1860-1904

5.1 Introduction

The late 1870s represents the beginning of a period of self-reflection for both the LPLS and the Museum that would come to characterise the next era in the relationship between Society and Museum, and the last period covered in depth in this thesis. As the number and severity of concerns grew, and the agendas of the Society's Council at its meetings came to be ever more fully given over to them, the decision came, inevitably, for the creation of a dedicated committee, known as the Committee on the Means of Extending the Usefulness of the Society, established in 1893, the report of which represented the first definitive position against the current state of Society and Museum. Here was the turn of the screw that herald the most radical constitutional changes since both Society and Museum were established, resulting in the eventual splitting of Society from Museum, which up to that point had been indivisible. The Society reconfigured more closely to the newly-formed University of Leeds and the professional science it stood for, and the Museum was donated in entirety to the town. With its management taken over by the Leeds Corporation, the Museum was perhaps for the first time represented as a public museum proper, serving the general educational and entertainment needs of the town.

Of course, such changes, challenges, and dilemmas were not entirely specific to the Leeds case, but represented insurmountable obstacles for the majority of other philosophical societies and their museums around the country. As the LPLS struggled to respond to the changes in the context and environment of latenineteenth-century Victorian Britain, most other philosophical societies closed, and did so at a rate comparable only to that with which they were first established at the start of that century. Nature, it used to be said, abhors a vacuum; so, viewed from a distance, did natural history museums in this period, which are closely allied to the rise of the Victorian public museum movement. But throughout this thesis the Leeds case has afforded more problematized perspectives on national phenomena, thus enabled us to distinguish phenomenon from epiphenomenon. In this way, the Leeds case has enabled us to observe how, far from being an independent movement filling a lacuna, the emergence of the Victorian public museum movement was embedded in the trajectories of the philosophical societies and the drive for intellectual independence in provincial centres.

Throughout the following chapter, the discussion will gravitate towards the subject of the changing dynamics between the Society, the Museum and their publics. However the term 'public' is problematic, because of changes made to its definition and use by the Society and Museum across the nineteenth century. Therefore we first will need to explain more accurately what we mean by 'public' at differing historical points: a brief etymology of sorts. The remainder of the chapter will focus on the period of self-reflection and reappraisal that Society and Museum went through from the 1860s, which saw the creation of the Committee on the Means of Extending the Usefulness of the Society. Beginning this will be a contextual preamble that aims to consider the precursors to the selfreflection and reappraisal, with the remainder of the chapter dedicated to the complexion and characteristics of the self-reflection-its manifestations, aims, and conclusions. Changes in the town, such as the emergence of other institutions like the Mechanics' Institute, the Yorkshire College, and eventually the University will be an important consideration. Reforms to museum practice and to the practice of science also made an impact, especially concerning the dilemma over specialist or popularist directions. Debates and moments of conflict within the Society, such as the altercation between Miall and the lecturer Zangwill, will be useful here too.

5.2 A Note on the Public

Historians of science have described the nineteenth-century philosophical societies as an important player in a move towards a more public- or civic-

orientated science—away from the dining clubs and more private activities of the late eighteenth and early nineteenth centuries. A similar progressive move has been articulated by historians interested in municipal museums. Within this historiography the Lit & Phils remained elite institutions—essentially obstacles in the way of reform.¹ As has been noted in the preceding chapters, the Society and the Museum developed in differing and sometimes conflicting ways. Nonetheless, the subject of the *public* remained a vital component and influencing force in all consequential negotiations.

Part of the problematic met in previous chapters has been trying to understand what was meant when the Society and the Museum referred to the public. What has so far emerged is that what was meant then by public and what this term now means to us is so different that great care is needed not to superimpose our present-day interpretation onto the historical one. So while previous chapters have begun suggesting what these differences might be, the following analysis seeks to identify more precisely what was meant. However, there are considerable obstacles attached to this aim. The clarity and extent to which those who were involved one way or another with Society and Museum has been recorded varies considerably. Some sources provide clear and vivid accounts, for example of the members of the Society, yet we also know that some constituents have not been preserved and thus appear to us all but disappeared, for example visitors the Museum. In addition, it is evident that there was a difference between an intended public-the target audience-and the one realised. Alongside this, the constituents that made up the public of both Society and Museum did not remain static but changed over the nineteenth century.

It is greatly significant that the majority of the residents of Leeds, regardless of their class, had absolutely no contact at all with the Society or the Museum as is indicated in table 5.1 below.

¹ Hill (2005). Also Alberti (2005a): 337

Year	Visits to Museum	Population of Leeds	Percentage
1840	1,500	222,189	0.7%
1853	8,052	249,992	3.2%
1860	16,500	311,197	5.3%
1863	40,902	311,197	13.1%
1869	44,988	311,197	14.5%
1880	25,000	433,607	5.8%
1900	22,000	552,479	4.0%
1910	18,000	606,250	3.0%
1915	15,000	606,250	2.5%

Table 5.1 Visitors to the Museum as a percentage of the town's population²

Access to the Museum was limited to members only until the 1840s,³ when the Society made available an Annual Ticket costing 5s, and a Single Admission Ticket costing 6d for non-members.⁴ In comparison with earlier admission schemes that required an application to the Society, these greatly improved access to the Museum, but were still arguably out of the reach of the majority.⁵ For this reason, visitors to the Museum during the first twenty years were either members of the Society themselves or came with a member. These numbered in the region of one to two thousand a year.⁶ The Society's Visitors Book records these.⁷ The greatest improvement to access came in 1853 with the penny admission charge, as well as the move away from a prepaid ticket to admission payable on the door, which happened around ten years later.⁸ Prior to admission

² Figures have been taken from the LPLS *Annual Reports* (where available) for (1840), (1853-1865), (1868-1869), (1871-1872), (1876-1904), (1911-1915). Leeds population has been determined from www.visionofbritain.org.uk

³ The cheapest form of membership available up to 1840 was as an Annual Subscriber at 21 shillings per annum.

⁴ LPLS Annual Report (1839-1840: 8

⁵ Edward Baines suggests that a worker in the textile factories of Leeds would have earned 33 shillings 8 pence a week in 1833. See Baines (1835): 443. According to Rogers (1908): 539 and supported by Pike (1966): 196, this had seen no great increase by 1843, when the average wage for factory workers was 39 shillings a week. However, Engels (1843): 152 and Leach (1844), both highlight how certain factory workers were at this time able to earn considerably more than an average wage.

⁶ LPLS Annual Report (1836-1837): 8.

⁷ Caution needs to be shown when discussing figures generated from the visitor books. Alongside the names of members entering the Museum, some entries included the addition 'and party'. The only visitor book that remains is for the years 1847-1861.

⁸ The Reports mention the postal reformer Sir Rowland Hill's influence here. Hill was instrumental in the introduction of the Penny Post in 1840. See LPLS *Annual Report* (1869-1870): 19 for the Rowland Hill reference.

at the door, the penny tickets were bought at nearby kiosks and shops.⁹ Unfortunately, the recording of visitor numbers did not begin with accuracy and regularity until after the installation of a recording turnstile in 1863.¹⁰ Nonetheless, the few insights we have prior to this range from one to two thousand visitors per year for the 1840s, to 8,052 just after the penny admission was implemented. The Report for that particular session described the success of the penny admission thus:

The success attending the introduction of this regulation has fully realized the expectations of the Council, 8,052 persons, during the past year, having availed themselves of the facilities thus afforded of visiting the Museum, without the formality of applying for an order, and the Society has in consequence received a net return of £30 17s.¹¹

Admissions continued to rise in this way, and the Report for 1859-1860 counted 16,500 visitors. Numbers then dropped when the building of the extension to Philosophical Hall forced its closure to visitors. However, after the Museum reopened in 1862, and the recording turnstile was installed, the Report for that session indicated 40,902 visitors for that year rising to 44,988 during the 1868-1869 session.¹² The 1868-1869 session represents the peak for the Museum's attendance figures during the entire 1819-1921 period covered in this thesis. This was connected to the reopening of the Museum and the unveiling of its new extension in 1862, for which Richard Owen gave the inaugural address. In addition, we must not forget that this was also the heyday of the grandiose Victorian international exhibitions, exemplified at that time by those at South Kensington and replicated on more modest lines up and down the country throughout the remainder of the nineteenth century—indeed Leeds had its own in 1868. As the middle classes relocated themselves to the new urban suburbs

⁹ Denny, in 1864 offered advice to the Curator of the Norwich Museum, Joshua Swann on the penny admission charge. The letter provides an insight into how the system worked: 'Your admission' Denny would write, 'must be either by penny admission actually if you have a person you can trust or by penny tickets sold at shops near, for while a small percentage will have to be paid, we used to pay 3/- per 33'. Henry Denny to Joshua Swann December 31, 1864. Unpublished letter.

¹⁰ LPLS Annual Report (1862-1863: 15-16.

¹¹ LPLS Annual Report (1853-1854: 6-7.

¹² LPLS Annual Report (1864-1865): 7, and (1868-1869): 8.

around the township, the spirit of the expos—with their fetishism of commodities and civic ethos —emboldened the idea of a civic centre to the town. The latter half of the nineteenth century saw the town embark on an impressive civic building programme, of which perhaps the most notable from among the many erected during this time was the Town Hall, started in 1853, and opened in 1858 by Queen Victoria herself. By the time the town became a city proper, in 1893, it had created a new civic townscape, modelled on the social, leisure, and consumer activities of its middle classes,¹³ which included the new infirmary, the Leeds Music Festival, Leeds station, the Free Public Library, Roundhay Park, the Yorkshire College and Leeds Girls School, the towns Art Gallery, and Kirkstall Abbey. As the century moved on from the high-civic years of the 1860s we observe that the visitor numbers to the Museum waned, steadily dropping off to 22,000 per year at the end of the nineteenth century and then down again to 15,000 towards the end of the 1910s.¹⁴

Since its establishment in 1821, the Society had frequently prefaced the various activities within Philosophical Hall with 'public', and later in the century the Museum was itself regularly described as being a public institution by the press.¹⁵ Of course, the penny admission did technically make the Museum available to anyone able to afford it, but as Table 5.1 (above) reveals, this does not necessarily make the Museum a public institution. What it was precisely, and what was meant by the term public, is worth scrutinising further.

We have already noted that just after the penny admission had been implemented the Museum received 8,052 visitors for 1853. We can add to this that the population of the town was at that time standing at 249,992 people, which makes our 8,052 visits represent around three percent of the Town's population. At this time, around seventy-five percent of working males in Leeds consisted of manual

¹³ Barker (2004).

¹⁴ These later figures do not include the school groups that were admitted free of charge under the Museums Teachers Association Scheme, which at times almost doubled actual totals. The Museum recorded 22,737 paying visitors for the session 1903-1904, while the number of children admitted under the Teachers Association Scheme for that session totalled 14,739. For the 1912-1913 session, the Museum recorded 18,751 paying visitors, with 13,678 children being admitted under the Teachers Association Scheme.

¹⁵ LPLS Annual Report (1824-1825): 6-10. For an example of the assumption in the press see *Leeds Mercury*, 31 July 1852: 5.

labourers (working class),¹⁶ the larger proportion of which were unskilled labourers who earned around three shillings nine pence a week.¹⁷ It is certainly a precarious activity to draw too many substantive conclusions from figures such as these, but if these figures are indicative of Leeds' population generally, it makes it a hard case to argue that of those 8,052 visitors to the Museum, many were from the working classes, even with the concession of the penny admission.

Henry Denny writing in 1864 to the Committee of the Norwich Museum, throws more light on this subject. At the time, Norwich Museum was considering implementing a similar penny admission and had asked the LPLS for advice on the matter. Through Denny's recollections to the Norwich Committee we gain an insight tempered by time into the motivation that lay behind the scheme's implementation in Leeds. After discussing the installation of the turnstile Denny adds:

Now anyone can come independently of asking a favour & the visitors are not only most increased in numbers but also of a different class. Our Museum used to be filled with Factory hands just as they left the Mill. Boys & Girls who many came because their employer gave them a ticket of admission, they were both unruly & noisy & made a deal of dirt. Now the price debars no one & men, their wives & children come decently dressed & I believe enjoy it more than when it cost nothing as it was only a lounge for the idle & disorderly¹⁸

Clearly the removal of the admission by application system was seen as an improvement, but perhaps of the administrative variety. However, the real surprise is that clearly the penny admission scheme had served also to remove whom Denny had described as 'Factory hands'. What seems to emerge is that the original scheme, whereby members could bring visitors to the Museum, was being exploited to some degree, in this case by factory owners or managers who were themselves members of the Society, to provide a rudimentary form of education or uplifting leisure-time for their workforce. While in one breath Denny believed the penny admission scheme debarred no one, its

¹⁶ These being classes 3-5 using the Registrar General's Social Classification.

¹⁷ Bowley (1900) and Burnett (1969).

¹⁸ Henry Denny to Joshua Swann, 31 December 1864. Unpublished letter.

implementation served to remove working poor children-perhaps some of the most vulnerable groups in the town-and replaced them with what he described as well-dressed families. Of course, we cannot be certain whom Denny was referring to; nonetheless, dress and behaviour codes, as alluded to in Denny's comment, were an important part of the definition of class during the nineteenth century, which I submit here suggests that Denny was indeed referring to middleclass families. Denny's recollections, rather than showing the penny admission scheme to be a move towards inclusivity, shows how the scheme served to solve a problem the Museum had at the time with unskilled labouring children. It seems evident that *public* used here was a delimiting term that identified certain specific groups with very specific socio-demographic backgrounds. Nearly twenty years later, the Society experimented with a Monday evening extension to their opening hours (from seven o'clock to half-past nine), which aimed at artisans unable to visit earlier because of the conditions of their employment. With an average attendance of thirty-two visitors a night, the scheme returned disappointing results, forcing the Society to admit that this was 'less than might have been hoped for'.¹⁹ The Leeds landscape was very different in 1869 than it had been in the 1840s, and competition for visitors from all classes much greater. Nonetheless, both the description of this Monday evening scheme, and Denny's description of visitors before and after the penny admission scheme, adds to our interpretation of what *public* may have meant at differing times. This seems to agree with the evidence that emerged earlier, that the Museum's public, its primary target audience, was Leeds' middle classes. This is no great surprise, but perhaps what is, is the Museum's lack of interest, even positive discrimination against, the poorer and more needful classes.

The Society assumed that the Museum and its various other activities such as its lectures were all public, and readily called them so. This was true from the start. However, that only members of the Society had access to the Museum and the various activities within, persisted for too long throughout the nineteenth century for us to consider the Museum a public institution at any time during that century.²⁰

¹⁹ LPLS Annual Report (1869-1870): 8.

²⁰ See 'to direct the attention of the public' in LPLS *Preliminary Laws* [...] 1819.
The usage and meaning of the word *public* changed within the rhetoric of the LPLS. It was used to describe the Ordinary Members of the Society-as distinct from the Society's Council. Here the word did not refer to the broader population of Leeds, as our present-day understanding of the word might lead us to think. This is worth qualification, because the rhetoric is too easily misinterpreted. The terms *public museum* and *public lecture* were widely used in the Society's publications, in their advertisements and articles in newspapers. In 1821 the Society advertised a course of lectures on 'Chemistry, Natural Philosophy, Physiology, &c [...] to which the Public will be admitted²¹ but the *public* referred to here were in fact members and subscribers to the Society only.²² This is borne out by a change to the Society's rules which occurred nearly fifty years later in 1870, when the Society decided to increase the price of subscription for 'Ladies and junior subscribers', raising it from 5s a year to 7s. 6d.²³ Usefully, the report for that session detailed what a subscription to the Society included at that time; admittance 'not only to the Lectures and Papers but also to the Museum and Conversazione.²⁴ In the same report, the Council noted a change also to how individuals were admitted to the Museum—providing yet more evidence towards the argument for a much more limited meaning for the term public throughout the nineteenth century. It described how because of the large numbers of visitors the porter was unable to recognize those described as 'unqualified persons' and that proof of admittance would be required henceforth. In response, the Council made it necessary for all visitors to produce their Ticket of Membership or Subscription at the Museum's entrance before they would be allowed admittance.25

The move from private to public activities in the nineteenth century, within institutions such as museums and in activities such as lectures, has been widely discussed by historians over the last decade,²⁶ but analysis and discussion often continue without providing etymological considerations. Such a reflection has

²¹ Leeds Mercury, 21 July 1821.

²² LPLS *Preliminary Laws* [...] 1819.

²³ Women could only be subscribers to the Society at this time. Membership was barred also to males under the age of twenty-one, who like women could become a subscriber only. See the 1870 repeal of Rule 13, Chapter I., noted in LPLS *Annual Report* (1870-1871): 7.

²⁴ LPLS Annual Report (1870-1871): 3.

²⁵ Ibid: 9-8.

²⁶ Beratta (2005).

here proved vital in reaching an accurate understanding of activities—separating action from its oftentimes misguiding rhetoric. As a result, we are able to state that the Society, Museum, and their various activities within, were not public in any present-day understanding of the word, despite the contemporaneous rhetoric that surrounded the activities. As the above section has endeavoured to prove, they remained affectively private and closed to all but a small fee-paying community throughout the nineteenth century.

5.3 Precursors to the Period of Reappraisal

For the Council of the LPLS the growth of the Museum, and to a certain extent also its direction, had been unexpected and therefore unplanned. Initially this was a matter for celebration, but growing year on year as they did, the demands of the Museum soon threatened to outgrow the resources of the Society. Throughout the Thesis thus far, we have detailed the rapidity with which the over-spilling collections of the Museum had commandeered the other rooms of the Philosophical Hall. This was mirrored in the attitudes of several members of Council, who as early as the 1820s were referring to the entire building as 'the Museum' rather than as the Philosophical Hall.²⁷ By 1824 a report had been received by the Council that outlined the limitations of the building, which was then just three years old, describing it as being 'neither sufficiently commodious, nor in any respect eligible, for the purposes of an increasing and valuable collection'. The conclusion of this report recommended selling the current building, and with the profits from the sale, as well as the release of further proprietary shares, 'raise a building in all respects more complete',²⁸ explaining that the building, 'at first thought unnecessarily spacious, is now found small and incommodious'.29

As we already know, the Philosophical Hall was not sold, and had to wait until the 1860s to receive an extension, some forty years after this recommendation. That the decision was made against the recommendations of the report indicates

 ²⁷ See LPLS Annual Report (1824-1825): 5-7.
²⁸ See LPLS Annual Report (1824-1825): 5.

²⁹ See LPLS Annual Report (1824-1825): 6.

that already by 1824 there was a difference between the resources the Society could prioritise to the Museum and those that some felt it should prioritise. That precursors for the 1860-1900s reappraisals date as far back as 1824, makes clear just how pressing certain issues were when they were finally acted upon. This long evolution is evident in the pleas for increased accommodation for the Museum. As we have seen above, these emerged as early as 1824. In the 1850s several members of the Council had called for the establishment of a separate gallery of art as well as a museum of manufacturing and industry, to ease the pressures put on the Museum.³⁰ Such concerns continued to be aired up to the 1860s, when they were abated for a period by the Museum's new extension. However, by the 1870s the pleas for more space resumed when concerns were articulated over the problems of having too many diverse collections managed by one museum. Here some members of the Council called the Society 'overambitious' and predicted that it may be forced at some time in the future to 'restrict its comprehensiveness'.³¹

One of the greatest forces that contributed to the period of reappraisal was the establishment of other institutions in the town. While it may not be thoroughly accurate to describe these as competitors as such, they did change who in the town had priority over and rights to certain activities, some of which had previously been the preserve of the Society and Museum. Penetrating the polite rhetoric that by and large concealed the presence of increased rivalry in the town. However, its effects were not recognised as an influencing factor, requiring deliberation by the Society, until after the 1860s. There were precursors to this, though, and along with the pressure for increased space a number of prospective mergers with other institutions surfaced from the 1850s that effectively see in the period of reappraisal, as we are describing it. The first was a proposal to merge the Society with the Leeds Library. The subject had been in discussion since 1854; however, it was not until 1856 that a joint sub-committee was formed and a report commissioned by both societies to consider the full implications of a merger.³² The results of this report were published in the LPLS' 1856-1857

 ³⁰ See LPLS Annual Report (1856-1857): 18.
³¹ See LPLS Annual Report (1876-1877): 9-10.
³² See LPLS Annual Report (1854-1855): 3.

Annual Report,³³ from which it becomes apparent that the central objective behind the merger was the need for more space by both institutions. The idea went as far as the suggestion of sites within Leeds for a single building to house the amalgamated society. However, the LPLS had the opportunity to purchase land adjoining the plot taken up by the Philosophical Hall and was at that time handling a similar merger interest from the Mechanics' Institute.³⁴ Alongside this, the Leeds Library was interested only in extending its own property and in keeping the two institutions constitutionally separate. Ultimately the LPLS saw no advantage in the merger with the Leeds Library, and as the opportunity to purchase the land adjoining the Philosophical Hall became more and more realistic, neither did it see advantages in pursuing the merger with the Mechanics' Institute.

5.4 From Township to City: The Impact of an Evolving Industrial Town on Its Institutions

The need for larger accommodation, which was so clearly a shared problem across several of the town's institutions, was of course linked closely to the need for more capital to buy the extra space. Whether it was a proposal to build an extension to an existing building or the erection of an entirely new one, the generation of more funds, usually through the creation of more members, remained a central concern. Here lies a valuable insight into the history of our institutions, because what we are talking about here is the surfacing of mergers, at a specific time (mid-nineteenth century) between institutions founded specifically on the proprietary membership model. This suggests that this particular model, which had been so prevalent and proved so successful at the end of the eighteenth and the start of the nineteenth centuries, was by the midnineteenth century beginning to reveal its limitations within the town. Indeed, Leeds had already become a corporation around twenty years prior to the prospective Leeds Library merger, and was at the time developing rapidly into

³³ See LPLS Annual Report (1856-1857): 13-20.

³⁴ See LPLS *Annual Report* (1858-1859): 14-5. The plot adjoining the Philosophical Hall was purchased by the Society and became the site for the 1861-1862 extension. See *Council Minutes* for 14 December 1859 for decision over the Leeds Library Merger.

the municipal city it eventually become in 1893.³⁵ Initially, when the unreformed town relied on a community chest to fund its civic projects, proprietary membership was a successful model for nascent institutions. However, since Robert Peel's 1842 Income Tax Act-the first tax in Britain to aim at welfare rather than warfare—the financial environment of the town had begun to change and to do so quite quickly. In 1845 the Museums of Art Bill was brought in ,which enabled town councils to levy rates for the pecuniary assistance of Art museums and galleries and made museums exempt from town rates³⁶, which was something the Society's Museum took advantage of.³⁷ This was followed by William Ewart's 1850 Public Libraries and Museums Act, which aimed at enabling town councils to establish public libraries and museums where the meaning of *public* embraced the full population of the town.³⁸ Indeed, why should individuals have renewed their expensive membership to such institutions at this time, when other not so different institutions could develop in the town, funded from the Corporate purse? At this time, the Hampshire Telegraph ran an article describing how in consequence of the gradual withdrawal of subscriptions to the Hampshire County Museum, a new Corporation-funded public museum was being planned on the back of the Public Libraries and Museums Act. The report described the transference of the old subscription museum's collections to the Corporation of Winchester in a move identical to that in Leeds in all ways but for having occurred some seventy years earlier.³⁹ Therefore, if we find it problematic to describe the establishment of new institutions in the town as competitors per se-one area where we may need to accept the presence of competition was in the changed financial environment of the town, where generating new fee-paying members was becoming more and more difficult, yet more and more important. Perhaps it is fitting that the first museums to be established under the aegis of the Public Libraries and Museums Act were at Manchester in 1850⁴⁰ and Liverpool in 1851.⁴¹ William Ewart, the architect of

³⁵ Leeds became a civil parish in 1866, a county borough in 1889, and gained city status in 1893.

³⁶ House of Commons Debate, Vol. 78, 6 March 1845: 381.

³⁷ See the LPLS Annual Report (1873-1874): 10.

³⁸ For a description of the act see *House of Commons Debate*, Vol. 108, 14 February 1850: 759. Ewart's *ODNB* entry provides a short outline of his role in the creation of the Act.

³⁹ *Hampshire Telegraph*, 21 December 1850: 4.

⁴⁰ Lloyds Weekly Newspaper, 30 May 1850: 8.

⁴¹ *Liverpool Mercury*, 5 September 1851: 2.

the Act, was himself from a Liverpool mercantile family, his wife Mary from a Manchester mercantile family.⁴² Indeed, when in 1870 calls appeared in Leeds' newspapers for a similar Leeds-based scheme, it was the remarkable visitor numbers from the Liverpool Museum that were used to convince readers of the value of the idea.⁴³ For general readers of the advert, the over 350,000 visitors quoted who had visited the Liverpool Free Library and Museum per year would have seemed impressive enough. However, for the Council of the LPLS, whose highest ever yearly attendance to their own Museum was under only 45,000,⁴⁴ the Liverpool figures would have been foreboding. Of course, we know that the Council of the LPLS read the articles, because they complained about them to John Barran, the then Mayor of Leeds. Barran had been a Proprietary Member of the Society since 1867 and under pressure from the LPLS' Council the adverts were removed, and so too, it seemed, the threat to the Museum of the establishment of a genuine public museum in Leeds under the Public Libraries and Museums Act.⁴⁵

This rather ruthless approach to potential rivalry in the town was not a common trait of the Society. When the Mechanics' Institute had established itself in the town but had yet to finish its building, the LPLS leased its lecture hall to them on a weekly basis. The 1824-1825 Report described the Mechanics' Institute as an 'excellent establishment, whose unanticipated measure of success must afford genuine satisfaction to every member of your institution [the LPLS]'.⁴⁶ Of course, while at that time the Mechanics' Institute undertook similar activities to the LPLS, its overall aim of providing practical education for the working classes circumvented it being a direct competitor. When the Society had established itself and its Museum in 1819, another museum of natural science existed in the town: that of John Calvert in Commercial Street. Calvert had published in 1829 a catalogue of his museum, which described a collection of equal size to that of the LPLS' at that time. But between the Society's Museum and that of John Calvert

⁴² See Ewart's *ODNB* entry.

⁴³ See advert in the *Leeds Mercury*, 17 March 1870: 4.

⁴⁴ LPLS Annual Report (1868-1869): 8.

⁴⁵ LPLS Council Minutes, 14 March 1871.

⁴⁶ LPLS Annual Report (1824-1825): 11.

there is no evidence of competition, in fact quite the opposite. The LPLS Report for 1825-1826 took the trouble to praise Calvert on his endeavours.

Your Council conceive that they express the real sentiments of the Society, which will require no apology for the digression, when they offer this small tribute of respect to their intelligent fellow-labourer, Mr. Calvert,—who, with no extraordinary resources but such as his own talent and enterprize [sic] have supplied, by the unremitting labours of his past life, has furnished a Museum, which is an object of distinguished local attraction, and to all classes a source of rational pleasure and information.⁴⁷

In addition, Calvert made regular donations to the Museum and became in 1861 a Subscribing Member of the Society.⁴⁸ He would retain this relationship with the Society and Museum even after his own museum had closed and his collection sold by Thomas Weatherly, the Leeds-based auctioneer in 1874. Several purchases of specimens from his collection were made by the Society at the auction.⁴⁹ For reasons such as these, the term competition needs to be applied with caution or at least with qualification. However, even though the Mechanics' Institute started out in the town as a complementary institution to the LPLS, just as John Calvert's museum had, by the 1850s their relationship had changed. The new economic environment in Leeds that we described earlier, as well as the increased pressure on such institutions to generate more members, effectively forced rivalry between them—remember that the Mechanics' Institute sought a merger with the LPLS in 1860 and that the contents of Calvert's museum were auctioned in 1874.

5.5 Emerging Discontent

⁴⁷ LPLS Annual Report (1825-1826): 7.

⁴⁸ LPLS Annual Report (1861-1862): 38.

⁴⁹ LPLS Annual Report (1879-1880): 29 for the latest date of Calvert's subscription to the Society. For examples of specimens bought by the Society from the auction of Calvert's collection, see specimens of nautilus, ammonite, and mountain limestone, among others, under 'List of Donations and Additions to the Society's Museum and Library', LPLS Annual Report (1873-1874): 16. The same specimens appear in Weatherley's 1874 catalogue for the auction of Calvert's collection, Catalogue of the Exceedingly Rare and Valuable Contents of the Leeds old Museum. See Weatherly (1874).

The Society and its Museum seem to have survived all of the obstacles described so far reasonably well, better than most early nineteenth-century institutions in the town, as well as most other philosophical societies across the country. However, the theme of this chapter has been the period of reappraisal and selfreflection for Society and Museum. This suggests that there was also a degree of instability and uncertainty around the future of both. The above section has found ample evidence to support this. However, in Chapter 4 when we looked at the Society's lecture programme and the famous names who presented at the Philosophical Hall, we observed how roughly speaking the same period came to represent a high point for the Society's lecture programme.⁵⁰ The income that the Society generated from the hire of its lecture hall supports the idea that at the same time there were reappraisals and uncertainty around the future of the Society. On the surface, the lecture series gave reason to be hopeful. Just as we have referred to the declining visitor numbers to the Museum during the 1870s to around half of the decade before, receipts gained from the rental of the Society's lecture hall emerged as an important income source for the Society, effectively counterbalancing the loss of takings from the Museum. The Society noted in 1877 that the lecture hall had become a 'considerable item of revenue' and that the 'convenient position and other advantages of the Hall as a place for public meetings seem to be generally recognised.' Acknowledging the potential for profit, the Society increased accordingly the rental tariff for the lecture hall.⁵¹ The Report for the 1900-1901 session shows that receipts gained from Museum admittance totalled £104 8s, while those from the rental of the hall amounted to over double that—£212 13s 6d.⁵² It seems, therefore, that amidst a period of uncertainty and reappraisal, there was some reason to be optimistic. However, income earned from other institutions and organisations for the use of the Society's facilities is somewhat different to the health of their own lecture programme. While looking impressive on the surface and regularly attracting famous names as speakers, the Society's lecture programme came at a significant cost. Therefore the profit gained from rental of the lecture hall should be offset

⁵⁰ Chapter 4. Section 4.16. The Development of the Lecturing Programme across the Nineteenth Century.

⁵¹ LPLS Annual Report (1877-1878): 4.

⁵² LPLS Annual Report (1900-1901): 12.

against the cost of maintaining the lecture programme, which steadily rose year on year. In 1862, the year the Museum reopened and Richard Owen graced the lecture programme, the Society paid £132 9s 6d to lecturers, £80 of which represented payment to Owen.⁵³ Disbursements to lecturers for 1879-1880 was £95 9s 5d, for 1900-1901 it was £121 5s 2d, and £136 0s 11d for 1903-1904.⁵⁴ Clearly, then, a vibrant lecture programme was desirable, but despite its popularity provided only a modest remuneration to the Society.

Putting the financial reality of the Society's lecture programme aside, the programme itself was becoming the object of mounting division and discontent within the Society. To demonstrate some of the issues at play, we will turn to a debate sparked by one lecture delivered to the Society by the then well-known playwright, novelist and humourist, Israel Zangwill, in 1900.⁵⁵ Zangwill had already delivered the paper 'Fiction the highest form of Truth' in 1896 to the Society. Perhaps emerging from a Schopenhauerian realism, the paper tackled the rationalization of nature by the natural sciences and would have represented an attractive and current debate for the Society. It seems that generally the paper was well received and the nature of his argument elicited interest.⁵⁶

He had the satisfaction of addressing one of the largest and most appreciative audiences of the session, as well as the delight of seeing that his 'Insults to Science,' as he himself described his address, were evidently keenly relished by the audience⁵⁷

Zangwill's central argument concerned what he saw as the 'over-scientification' of contemporary life. When describing the work of scientists he proffered, 'the world they painfully build up for me, from the little cells and atoms, is not the

⁵³ LPLS Annual Report (1862-1863): 18.

⁵⁴ LPLS Annual Report (1879-1880): 11, (1900-1901): 12, and (1903-1904): 14.

⁵⁵ LPLS Annual Report (1899-1900). For Israel Zangwill's biography see his entry in Jewish Encyclopaedia, (1901): 633-5.

⁵⁶ I found Erich Heller's essays, 'The Romantic Expectation,' 'The Realistic Fallacy' and 'The Artist's Journey into the Interior,' very helpful for understanding Romanticism and Realism in the arts. See Heller (1976). In addition, the *Fontana Modern Masters* series has proved valuable for throwing light on particular individuals, which here included the volumes on Schopenhauer and Nietzsche.

⁵⁷ Leeds Mercury, 21 March 1900.

world I have tasted; the flavour is gone.⁵⁸ He went on to argue, from a Schopenhauerian standpoint (with a twist in favour of the playwright and novelist), that the 'artistic fiction of the play, the drama, the poem, and more particularly, the novel' represented higher forms of truth than anything produced by science. Accepting Zangwill's paper as part of an aesthetic Realism in the literary arts, his comments were commensurate with that philosophy, to which the audience in Leeds would undoubtedly have already been familiar. Hearing Israel Zangwill expound on the matter would have been a treat for anyone interested in literature, philosophy and science. But despite this, Zangwill's paper elicited anger for Miall, for whom it was too much to tolerate without some form of response.

This came at the next annual meeting of the Society held two months later, during which Miall gave full rein to his concerns, reminding the Officers and Council of the history of the Society and pressing his belief that the Society's primary role was the encouragement of the sciences. He complained that aside from 'small additions to the collections' he could find 'not a single effort of any kind in the direction of the advancement of science' for the last session.⁵⁹ He then focussed his complaint on Zangwill's 'Insults to Science', especially the comments made about Isaac Newton. He described the paper as being enough to have made the founders of the Society turn in their graves, because, as he put it:

[T]he novelist of the day, writing from his own emolument and for the diversion of the man in the street, was a higher teacher of truth, as these words would seem to imply, than the author of the 'Principia'⁶⁰

He ended his complaint by adding that on balance of the amount of scientific work that the Society undertook it had no claim to consider itself a scientific institution.⁶¹

⁵⁸ Yorkshire Post, 21 March 1900.

⁵⁹ Leeds Mercury, 2 May 1900.

⁶⁰ Leeds Mercury, 2 May 1900.

⁶¹ Yorkshire Post, 2 May 1900.

Damning words indeed, yet the response from the Society's Officers and Council was divided. There was, of course, a great deal of truth attached to Miall's comments. Of the thirteen lectures that were delivered during that particular session, only two were of a scientific nature.⁶² However, the division within Officers and Council lay not so much between individuals who did or did not agree with Miall, but whether or not a corrective should be sought. Some tried to explain the popular lectures (like Zangwill's) as an important income source for the type of activity Miall wanted to see, while others appreciated Miall raising the point, hoping that Miall's criticisms would 'bear fruit' and that the Council would 'do something to fulfil the great and noble purpose of the founders of the Society.⁶³ The Society's President, Nathan Bodington, who being Principal of the Yorkshire College at the time was Miall's employer, remarked that 'financial considerations could not be ignored, and before they materially changed the policy they must discover how funds were to be increased.⁶⁴ Clearly, those that wished to argue against Miall had little evidence to do so. The episode reveals a subtle admittance by the Officers and Council concerning the future of both Society and Museum, that on the strength of its activities the designation of scientific institution was no longer accurate. Some members of the Society had acknowledged this already and had formed a separate splinter venture called the Priestley Club. The club aimed solely at scientific discourse and the Annual Report for 1875-1876 noted its establishment, describing it as being limited to the physical and natural sciences, adding that 'the mutual principle upon which the club is based constitutes a return to the system which the Philosophical and Literary Society itself adopted in the early years of its existence.⁶⁵

5.6 The Yorkshire College of Science and Its Impact on the Society

Woven through most of this is the role that the Yorkshire College played. The College opened in October 1874 and immediately began with courses in

⁶² LPLS Annual Report (1899-1900): 4.

⁶³ Yorkshire Post, 2 May 1900.

⁶⁴ Yorkshire Post, 2 May 1900.

⁶⁵ LPLS Annual Report (1875-1876): 10.

mathematics, physics, chemistry, and geology. The Society was vocally supportive of the College, as they had been with every other educational institution in the town, reporting in 1872 that:

[T]he Council have heard with much satisfaction of the proposal for the formation of a Yorkshire College of Science, regarding it as an object of great public importance and utility, in which they hope to co-operate by such means as may be within their power⁶⁶

From the start, the relationship between Society and College was close. During its establishment and adoption of a constitution, the founders of the College met at the Philosophical Hall. The Society referred to its establishment as a 'powerful and lasting influence,' believing it to be one that would 're-act in a direct and favourable manner upon our own Society.'⁶⁷ Moreover, it is clear that after the College opened that close relationship remained in place:

[T]he resources of the society, particularly the museum and library, will be more largely utilised; and scientific research, which so far as Leeds is concerned had long seemed to be on the verge of extinction, may be reawakened.⁶⁸

Staff from the College worked with Miall, the Curator at the time, contributing to the lecture programme, conversaziones, and the collections.⁶⁹ By 1876-1877 we begin to get the first evidence of the Yorkshire College beginning to dictate activities at the Society and Museum. Miall had accepted the post of Professor of Biology at the College while keeping his post as Curator at the Museum and for two years the College had been using the Society's lecture hall and Museum for it teaching purposes. The report for 1876-1877 noted that:

[T]he increasing use of the museum for teaching purposes in connection with the Yorkshire College renders it necessary to replace the somewhat

⁶⁶ LPLS Annual Report (1872-1873): 6-7.

⁶⁷ LPLS Annual Report (1873-1874): 12.

⁶⁸ LPLS Annual Report (1874-1875): 10.

⁶⁹ LPLS Annual Report (1874-1875): 5-6.

hap-hazard arrangement of the past by the classification almost universally adopted by teachers [...] the curators have no misgiving as to the general improvement which will result from the change now in progress.⁷⁰

At this time, 1876, an extension of the College's curriculum to include literature brought about a contraction of its name, from the Yorkshire College of Science to the Yorkshire College. When the College had first opened in 1874, the Society had noted that the subjects taught by the College were the same as those of the Society's. Nonetheless, it regarded the College's presence in the town as one that would 'promote in the surest and most rapid manner those studies which this Society endeavours to cultivate⁷¹. So the addition of literature to the College's curriculum was seen as bringing it 'completely within the scope and sympathies of the Society'.⁷² As we have mentioned before, the subject of competition has proved a complex matter, based on different factors and not simply on clear and present rivalries. The first half of the nineteenth century saw constitutional boundaries as important mechanisms for avoiding the harsher side of laissezfaire. This did enable several apparently similar institutions, each established on the proprietary membership model, to operate simultaneously within one town. However, as we have argued earlier in this chapter, the progression of the century saw in a new municipal environment, a result of which was greater contest over audience attendance for the proprietary institutions, just as the new civic institutions opened. In addition, the constitutional boundaries proved too fragile to maintain the gentlemanly distance that institutions had enjoyed in the past. Most, if not all of the Mechanics' Institutes were closed by the 1850s, with their libraries forming the core collections of the new public libraries.⁷³ We noted earlier in this chapter, with the Hampshire County Museum in section 6.3, that this was beginning to be true for the philosophical societies also. Recording a lower turnout than expected for the lectures, the Society's Report for the 1875-1876 session was forced to conclude that this was 'a result which must probably be ascribed to the great increase of lectures and other evening engagements in

⁷⁰ LPLS Annual Report (1876-1877): 12.

⁷¹ LPLS Annual Report (1874-1875): 9.

⁷² LPLS Annual Report (1876-1877): 14.

⁷³ Tylecote (1957): 258-294.

this town'.⁷⁴ This represents one of the first recorded acknowledgments by the Society of the negative effects of competition from other institutions in the town.

Despite the support and general benevolence that the Society emitted in the direction of the College, the growth of activities by the College looked set to engulf Society and Museum, and, as we have seen, quickly began dictating activities in both. Clearly the Society did not regard the College as competition, and undoubtedly the relationship between Society and College was encouraged and propagated by Miall. However, while the Yorkshire College developed its curriculum on the back of the Society's facilities, it would soon complete building its own premises in Clavering Road and would relocate its activities to these new facilities. When in 1877 the Society reported that his Grace the Archbishop of York opened that year's lecture session at the Philosophical Hall, it also noted that the Archbishop had 'kindly undertaken to lay the foundation stone of the new buildings of the Yorkshire College in the morning of that day'.⁷⁵ The buildings would open the following year; they would include provision for teaching its entire core curriculum and included a Chemistry laboratory and museum, facilities for teaching Geology, and a lecture theatre.⁷⁶ While this did not mean an overnight end to the College's dependence on the Society, it sent a clear signal that independence was inevitable.

When contestation surfaces it often provides a platform for the grievances of other stakeholders over other issues. This was true of the altercation between Miall and the Society over Israel Zangwill's 'Insults to Science'. Washington Teasdale was an active member of several amateur groups in the town, among which we may include being President of the Leeds Naturalist and Scientific Association, as well as the Leeds Astronomical Society, and being a member of the Leeds Photographic Society, all of which met regularly at Philosophical Hall throughout the 1880s and 1890s.⁷⁷ For these reasons, we can take Teasdale's remarks as being representative of a number of amateur communities and

⁷⁴ LPLS Annual Report (1875-1876): 5.

⁷⁵ LPLS Annual Report (1877-1878): 5.

⁷⁶ University of Leeds Waterhouse Plans (1877-1897) and Planning Office Papers (1878-1994)...

⁷⁷ See *Leeds Mercury*, 19 March 1881: 8 and *Leeds Mercury*, 29 June 1895: 5 for Teasdale's role in these societies and their use of Philosophical Hall.

stakeholders in the town at the end of the nineteenth century. Teasdale's comments enable us to see how the relationship that had developed between the Society and the College, which was embedded in the process of professionalization of scientific practice and scientific education, came to disenfranchise the communities that Teasdale represented. Within days of the original altercation between Miall and the LPLS, Teasdale sent his response to the editor of the Leeds Mercury, who published the lengthy letter in full. First off, Teasdale opens with sarcastic surprise to read that members of the Society were actually present when Mr Zangwill presented his lecture, adding 'which has been rarely the case for the last twenty-five years'.⁷⁸ In fact, many of the Officers and Council were not present at the meeting, Miall included, as they admitted when discussing Zangwill's paper with Miall. Teasdale then complains about the number of Yorkshire College employees in the Society, writing: 'practically the management has passed so completely under the control of the authorities of the Yorkshire College'.⁷⁹ On closer inspection, there is certainly little exaggeration to Teasdale's observations and at the time there was a considerable presence of Yorkshire College employees at Officer and Council level. A large contingency of the Society's Officers and Councillors were employed by the Yorkshire College. This included the President, the two Vice-Presidents, the Secretary and Honorary Secretary, and several of the Honorary Curators. Five years earlier, in 1895 all the Officers except the Treasurer were employees of the Yorkshire College.⁸⁰ Teasdale also makes mention of the work of what he calls 'minor local scientific societies', whose amateurism had by this time been so vocally maligned by Miall, but which Teasdale believed to have 'sustained the reputation of Leeds, for, say, forty years past'.⁸¹ He went on to remark how such societies relied on Philosophical Hall as somewhere to meet, but had been negatively affected by 'annexation of the Hall by the Yorkshire College'.⁸² His letter then ends with a description of the Yorkshire College as an institute:

⁷⁸ Leeds Mercury, 5 May 1900: 5.

⁷⁹ Ibid.

⁸⁰ Kitson Clark (1924): 223-234 provides an idea of the Presidents and Secretaries of the LPLS in his 'Contemporary Chronology'. However, closer inspection of the Society's Reports for the relevant years is needed to ascertain the makeup of the Society's Officers and Council.

 ⁸¹ Leeds Mercury, 5 May 1900: 5.
⁸² Ibid.

[...] that has been injuriously parasitic on the Literary and Philosophical Society to the extent of the payment of half the salaries of several College officials [...] Many of the old proprietary members have ceased to take interest, to attend the annual meetings, or to claim the rights and privileges of which they have been deprived. They appear to regard the society as somewhat of an effete and moribund institution, for whose possessions the civic authorities and the Yorkshire College will eventually contend.⁸³

The responses to Mr Teasdale's indictment were quite conservative and no one refuted any one of his claims specifically.⁸⁴ Miall suggested that Teasdale's reasons for wanting the Society to increase its scientific content was more an act of aggression towards the Yorkshire College, justifying his own comments as being 'a despairing effort to induce the Society to do some piece of scientific work'.⁸⁵ It had been perhaps the most severe and most public criticism the Society had yet received.

The establishment of the first six civic universities is a seminal moment in the history of British education, effectively ending the monopoly on university education held previously by the Oxbridge ancients. The Yorkshire College would become one of that original six. In 1884 it became part of the federal Victoria University that included Owen's College Manchester and University College Liverpool. The Yorkshire College received its Royal Charter in 1904, granting it independent University status and thus became the University of Leeds.⁸⁶ A prerequisite characteristic of those original six civic universities is that they all developed from out of earlier private institutions. For Leeds this has commonly been attributed to the Leeds Medical School, with which the College merged in 1884, but the history of the University ignores entirely the intimate role of the LPLS during its founding years as the Yorkshire College.⁸⁷

⁸³ Ibid.

⁸⁴ See the *Yorkshire Post*, 5 May 1900, which described Teasdale's comments as being a 'Shrewish all-round attack on the Leeds Philosophical and Literary Society, and the Yorkshire College, and Professor Miall'.

⁸⁵ Leeds Mercury, 6 May 1900.

⁸⁶ Shimmin (1954) was useful here. Also useful has been Landa (1999). For an overview of the civic universities see Truscot (1943).

⁸⁷ See *The Independent on Sunday*, 29 June 2009 for examples of a generally received history of the University. It seems likely that the omission of the LPLS from the history of the University of

Considering the dependence that the College had on the support of the LPLS and its Museum for the use of its facilities across the last quarter of the nineteenth century, this is a considerable omission and due weight has not yet been given to the role of the Society. The relationship that the two institutions had was nuanced and sometimes problematic. If we have argued that Society and Museum were indivisible from each other, then we might equally do the same of the Society and the Yorkshire College from the 1880s, for the Society's Council at this time, up until the end of the century, was effectively peopled by staff from the College. Arguments from the Society's membership claimed this was a parasitizing of the Society by the College. Nonetheless, the College had provided life-saving support for the Society, invigorating Museum activities, the lecture programme, reaffirming the authority of Society and Museum and emboldening the civic identity of both. This during a time when almost all other philosophical societies across the country were disappearing. As the expanding College considered new accommodation in Clavering Road, it was keen to preserve those vital aspects between itself and the Society and Museum.

5.7 Committee on Means of Extending the Usefulness of the Society

Naturally, the Society and Museum were both interested in ensuring a meaningful and purposeful role for themselves prior to the establishment of the 1893 Committee on Means of Extending the Usefulness of the Society. Earlier Annual Reports regularly underlined how various activities demonstrated their usefulness. Increasing admissions to the Museum as recorded at the turnstile, as well as positive comments in the press were often mentioned in the Reports, by way of evidence. Nonetheless, from the end of the 1860s we note a change in the rhetoric, whereby the hitherto commonplace assertions of improvement were replaced with a more self-reflective, conscientious tone. The Report for 1866-1867 concluded that while the Museum's visitor figures increased steadily, they

Leeds has much to do with the emphasis of the 1884 merger between the Yorkshire College and the Leeds Medical School in contemporaneous periodicals. For an example see 'Yorkshire College, Leeds. The New Medical School', *The British Medical Journal*, Vol. 2, 6 October 1894: 763.

were 'still less than might be expected in a town of the size and wealth of Leeds.⁸⁸ It goes on to describe how members would be asked to undertake 'an active canvass amongst their friends and neighbours, and so to place in the hands of the Society the means of greatly extending its usefulness.' This shows that by the late 1860s the Society was beginning to establish plans to actively improve its own usefulness. Indeed, by 1869, when the Society marked its fiftieth anniversary, the important event was marked in the Report not so much with celebration but sober reflection. At the same time as describing its past accomplishments as being 'eminently satisfactory', a review of what has been accomplished was anticipated to 'reveal some failures'.89 That year a subcommittee was established to consider whether the Society 'could promote science teaching in Leeds to a greater degree than it had hitherto done^{'.90} The result of which was the creation of the Schools Scheme, through a collaboration between the Committee of Management of the Scheme for Scholars visiting the Museum and the Leeds Association of the National Union of Teachers, notably turning to external bodies for advice.⁹¹

However, the normal, healthy self-reflection noted above became determinedly anxious and pessimistic when President Rev. J. H. D. Matthews, Messrs. T. W. Harding, Sydney Lupton, Professor Miall, and Professor Smithells constituted the committee in November 1893 'to consider the means of extending the usefulness of this Society, and to report to Council.' The Committee of that name produced its report in 1894, which presented a statement on the property, income and expenditure, the present objects of the Society, and finally its recommendations for increasing its utility. Indicating gross income to have been £660 and outgoings to have been £600, the section on the property, income and expenditure indicated a situation that was effectively balancing the books. However, the report added that a further 3% on the value of the freehold property represented an addition of £1,000 per year to the outgoings, making then 'the

⁸⁸ LPLS Annual Report (1866-1867): 3-4.

⁸⁹ LPLS Annual Report (1869-1870): 3.

⁹⁰ LPLS Annual Report (1869-1870): 5.

⁹¹ LPLS Annual Report (1903-1904): 6.

total cost at which the Society carries on may be assumed to be more than $\pounds1,600$ a year.⁹²

In the second section of the report, on the objects of the Society, the Committee saw the Society's energy being expended in three main directions; the Library, the Museum and the Lecture Hall. Of the Library, it states that '[f]or want of funds to purchase books and periodicals and of shelf-room, the Library is not kept up to modern requirements. It is very little used.'⁹³ Describing the Museum as being extensive and valuable, the Committee presses the urgency for greater space, better lighting, and new cases, with the current ones admitting 'large quantities of dust, to contend with, which is the chief occupation of the Curator.' It describes a Museum overcrowded to such an extent as to 'defy arrangement on any tolerable plan.' The section goes on to state of the Museum that 'very few applications to study are made, and it is to be feared that the 24,000 annual visitors gain little real knowledge.'⁹⁴ Of the Lecture Hall, it describes a room that '[n]otwithstanding some defects [...] fulfils its purpose well,' but points out that it is only the members, subscribers, and their friends who may attend the public lectures.⁹⁵

The last section, that sets out the Committee's recommendations, opens with '[t]he present want of space and funds, and the decreasing interest in the operations of the Society shown by the poor attendance of members at the lectures, and the diminishing number of subscribers seem to prove the necessity of fundamental changes if the Society is to be saved from decay.⁹⁶ The Committee considered improving the facilities for the Museum and Lecture Hall at the current site, but described the drawbacks as being 'insuperable,' stating that the size of the Philosophical Hall was not nearly sufficient for the Museum alone. 'The wants of the city of Leeds cannot be met, as they could sixty or seventy years ago, by a building of small size.⁹⁷ The Committee went on to recommend that the Lecture Hall could not sustain any more members, and thus

⁹² LPLS Report of the committee on means of extending the usefulness of the Society, 1894.

⁹³ Ibid.

⁹⁴ Ibid.

⁹⁵ Ibid.

⁹⁶ Ibid.

⁹⁷ Ibid.

any proposed expansion of the Society's membership would have been restricted by the size of this room. Staffing problems were highlighted, stating that '[t]he Museum is inadequately staffed, and is managed by a Curator, whose income is so meagre as to have attracted public comment (Sir W. H. Flower, Nature, June, 1893)'⁹⁸ and laid indictment on shame:

It is not difficult to forecast the future of the Society if its growth is rigidly forbidden and if its funds remain locked up in a costly site. There are already signs of decay, and these may be expected to grow more marked every year. Your Committee believe that the Society cannot even keep up its present position for long if it proves unable and unwilling to meet the new wants of Leeds. Extensive collections, well arranged and maintained, are wanted for students of science, for students of technical art, and for the public. The Society can, we believe, afford valuable and almost indispensable aid towards supplying this want, but the experience of many years shows that it cannot by itself do all that is required.

This they concluded by stating that any scheme for the reorganisation of the Society's work should provide for a greatly increased space for collections, adequate Museum staff, a Lecture Hall materially larger than the present one, including a smaller lecture-room and offices for the use of the scientific and antiquarian societies of Leeds and Yorkshire.⁹⁹ The report described how the money that the Society had was 'locked up' in both the Hall and its collections. It suggested that once an adequate offer was received for the Philosophical Hall, the Society should accept this and that the collections should be divided thus:

[...] the more popular portion, such as the pictures, coins, local antiquarian and ethnological collections, should be given or lent to the Corporation, on condition that they are adequately housed, maintained, and displayed, as the foundation of a popular City Museum¹⁰⁰

 ⁹⁸ LPLS Report of the committee on means of extending the usefulness of the Society, 1894
⁹⁹ Ibid.

¹⁰⁰ Ibid.

It went on to note that if the transfer could be accompanied by a 'grant of money, a powerful stimulus would be given to the creation of a much-needed popular Museum.¹⁰¹ The committee then made the recommendation that the contents of the library, the 'more scientific portions of the collections, such as the fossils, bones, minerals, entomological collections, and Greek marbles' should be gifted to the Yorkshire College along with a 'very substantial' donation of money for their upkeep.¹⁰²

The report was followed up by a 'confidential circular' to all members by the President, Charles Hargrove, urging members to not dismiss the report as impracticable: 'I would respectfully urge you that such is not the case.' His position was in agreement with the report and providing a summary of the report's findings, his concern was that the two-thirds majority decision needed from the proprietary members for the recommendations to be realised would not be reached, warning that, 'if we reject the proposal of the Committee, we take upon ourselves the responsibility of finding some remedy for the grave state of affairs which confronts us.'¹⁰³

On 12 March 1895 a second committee, called the Committee for the Arrangement and Disposal of Collections, was established to assess firstly what books and collections could be disposed of 'without injury to the interests of the Society' and what assents were required and then having done that whether the space gained within Philosophical Hall in this way and by a re-arrangement of the existing collections would be sufficient to display 'so much of the collections as it is desirable to retain.'¹⁰⁴ Its report stated that of the Museum's collections, 'it would not be in the interests of the Society to dispose of any part of them, either by gift, sale, or otherwise.'¹⁰⁵ This view the committee shared with regard to the Library's holdings, stating '[t]he value of the scientific part of the Library consists chiefly in the Transactions and Proceedings of the Royal and other learned societies, many of which are supplied gratuitously, and of the chief of

¹⁰¹ LPLS Report of the committee on means of extending the usefulness of the Society, 1894. ¹⁰² Ibid.

¹⁰³ Confidential circular to the Members of the LPLS, by Charles Hargrove, 1895.

¹⁰⁴ LPLS Report of the Committee for the Arrangement and Disposal of Collections, 1895.

¹⁰⁵ Ibid.

which we have a valuable and (with some exceptions) complete series.¹⁰⁶ The report noted that an exception to this was the Proceedings of the Zoological Society, which the library has runs of up to 1890, after which the subscription was transferred to the Yorkshire College. This the Society clearly appreciated as a loss, because it went on to state later in the report that '[w]e recommend that the back numbers be purchased, and the future numbers obtained by subscription.¹⁰⁷ It concluded to detail, room by room, suggested ways extra space could be gained at the Philosophical Hall through a rearrangement of the existing collections. Instead of identifying areas for disposal within the Society's collections, it had recommended acquiring more (the missing editions of the Proceedings of the Zoological Society). Any hope, therefore, that the Committee for the Arrangement and Disposal of Collections could recommend a number of practicable space-generating ideas was dashed. In short, there seemed no ameliorative to the bitter pill served by the earlier report of the Committee on Means of Extending the Usefulness of the Society.

Our analysis has thus far brought us close to the outer edges of what we have described as the period of self-reflection and reappraisal for the Society and Museum. The report of the next Committee, which we shall briefly look at before we conclude, was very much part of an altogether more tumultuous period for the Society and Museum which began in 1904. Given, then, that this last report played such a catalytic role, it is perhaps noteworthy that the committee responsible for it was dubbed the Committee on the *Reconstruction* of the Society. Appointed in 26 April 1904, it convened with the apparent mission '[t]hat in view of the desirability of the extension and development of the Society's work, a Committee be appointed to consider and report upon the advisability of reconstructing the Society with these object.'¹⁰⁸ Much like the findings of the previous Committee for the Arrangement and Disposal of Collections, this report failed to produce a clear solution to the Society's problems. It suggested that while the Society continued to not make the most of its property, there was no need to alter the Society's constitution. It

¹⁰⁶ LPLS Report of the Committee for the Arrangement and Disposal of Collections, 1895.

¹⁰⁷ Ibid.

¹⁰⁸ LPLS Report of the Committee on the reconstruction of the Society, 1905.

recommended building a larger museum—which by now was not an unusual conclusion, developing museum demonstrations and lectures 'and by making the collections more generally useful to Students,' running systematic courses of lectures by special authorities on Scientific and Literary subjects and making the Society a centre for the kindred Societies in Leeds and this District. Among these reasonably conservative recommendations it accepted that the sale of the Philosophical Hall was a prerequisite, but as we noted before now, by this time this was an uncontroversial claim.¹⁰⁹

However, it seems that the Committee harboured another agenda, not at all evident at its establishment. It seems that the Committee was asked to establish the legal considerations and requirements behind the sale of Philosophical Hall, especially on their bearing upon the Society's proprietary membership. Citing the Literary and Scientific Act of 1854, the Committee reported that the Society could sell Philosophical Hall and the excess not needed for the new building could be 'reinvested in trustees securities, and the income applied for such purposes as may be deemed calculated to carry out the objects of the Society.' Importantly, it emphasised that no new Trust Deed was required, which the Committee noted 'would have taken time and money and jeopardised the process.¹¹⁰ Here, then, we find early in 1905, a Committee tasked to report on the legal implications of the sale of Philosophical Hall and specifically whether constitutional changes were required—a new Trust Deed. If changes were required, then the entire membership would need to be called upon. If they were not required, then all that was needed was compliance from the proprietary members. But this was a difficult thing to ensure, as we saw with the confidential circular that President Charles Hargrove issued in 1895. It seemed, then, from the various attempts to effect change that we have looked at during this chapter, it was within the proprietary membership that all was won or lost.

5.8 Conclusion

¹⁰⁹ LPLS Report of the Committee on the reconstruction of the Society, 1905.

¹¹⁰ LPLS Report of the Committee on the reconstruction of the Society, 1905.

From as early as the first Annual Report, made in 1822 by John Atkinson, the Museum's first Curator, we have seen a variety of suggestions and recommendations put forward regarding the future of the Museum. Common among them was the need to find more commodious accommodation, which even in 1822 was true. As the century progressed the various recommendations, pleas and reports from Committees became more emphatic. However, in this chapter we have also noted a shift in the nature of concern from what can only be described as matters of concern to a matter at hand.

If we were to look back fifty years from this circa 1904 standpoint, we would find an institution about to enter the heyday of a Philosophical Society's Museum. At the time, the Curator Henry Denny defined Museum practice and Museum identity. Through Denny the Society and Museum had built trust and gained authority within an international scientific community. As a result, his collector's network was comprehensive and expanding and the Museum enjoyed privileged access to the specimens in most demand. This had included the specimens of Irish Elk from which Denny had published his On the Claims of the Gigantic Irish Deer to be Considered as Contemporary with Man in 1855 and entered the debate then current on the antiquity of man. It had included the acquisition of one of the earliest specimens of gorilla to arrive in Europe and some of the first specimens of dodo material since the animal's extinction. Denny was part of the milieu of leading scientists and the kudos was all the Museum's. But this was still a private museum, whose achievements were the glory of the Society's members. That said, it was at just this time that interests in developing broader audiences were emerging. Access to the Museum changed in 1852 with the introduction of the penny admission, and again in 1853 with the introduction of the Juvenile Lectures programme, although what would eventually become the Museum's prestigious Public Lecture programme was still in its infancy at this time, with most speakers elicited from the ranks of the Society's membership.¹¹¹ If, then, the outlook circa 1854 was optimistic and developmental, that for 1904 could not be more different. By this time, the Museum and Society had been beleaguered by the debate concerning the future

¹¹¹ LPLS Annual Report (1863-1864): 5-6.

of the Museum. It had divided the Society's membership, but also elicited anger from the public. If the work of the Museum from 1854 onwards built an excellent example of an active museum, the schisms that formed at the end of the nineteenth century saw those achievements in tatters by 1904. According to the worst of its critics, its Council, the Society was all but functionless and the Museum's overcrowded and aged collection all but ruined. The discussions when they were not embattled concerned which group should take custodianship of which part of the collection - as if the picking over of bones should not concern the not yet dead animal. Public opinion had only the Museum's public image to respond to, so they often described Leeds at this time as a town without a museum.

When we come to try and understand the events that surrounded the Museum at the end of the nineteenth and the start of the twentieth century, our prejudices associated with museums, such as their durability and stability are unceremoniously thrown aside. At this 1904 juncture, the Museum looked condemned to disassembly for the satisfaction of the contesting parties that had come to argue over its future. Perhaps it was a symptom of having not acted soon enough that the equilibrium of this complex had shifted so far from its mean. We could also describe ourselves as being far from equilibrium, historiographically speaking, at this particular point. This discursive narrative has taken us to a place far from the help of existing accounts. The degree to which we have been able to explore the dialectic of a scientific collection in the way we have, its inner nucleus has afforded us some remarkable, perhaps unique insights. But in so doing we have had to become highly adaptive and divergent observers and thinkers. Nonetheless, as we have pointed to above, there remains a great deal to the story of the scientific collections at the Museum still to be examined. We might very well sense that end-game manoeuvrings are at hand and that a conclusion is imminent, but whatever we may think, they will not be the conclusion to this narrative. Ultimately, the findings of the committee on means of extending the usefulness of the Society, as well as the various other committees we have discussed, did not inform how this narrative will end. The troubled relationship with the Yorkshire College or the interest of the Town Council did not affect it either. Even the growing influence of William Henry

Flower's new museum model or the Museums Association that was spreading homogeneity across the nation, or the comments in the press, or in the Society's Reports, nor public opinion came to influence at all the form of what was to come.

Chapter 6

Transfer and the Creation of a Civic Museum

6.1 Introduction

The President [of the Society...] said that he had never given so much time and so much thought to any undertaking as he had to this Society, which had yielded so little outcome. *Leeds Mercury*, 3 May 1904¹

Speaking at the 1904 annual meeting, the President of the Leeds Philosophical and Literary Society, Arthur Smithells, took the opportunity not only to describe a Society in poor condition but to convey a deep discontent within the heart of its Council. He took the opportunity to advance the argument that the Society lay in a critical state, likening it to 'keeping a man alive on stimulants rather than on normal diet.'² If the 1860s represented 'something like its zenith,'³ then the first decades of the twentieth century were the Society and Museum's nadir.

We know that by 1921 the Museum would belong to the Corporation of Leeds, and its taxpayers. As a town councillor aptly put it: 'If the Corporation was going to pay the piper it should have the right to call the tune'⁴ and indeed it did. But when Smithells was giving his Presidential Report, the transfer was a world away. Between these two points we find Society and Museum encumbered with an outmoded and overbearing nineteenth-century constitution. We find it unable to modernise itself and find meaning and purpose within a twentieth-century Leeds, a town which was seemingly no longer in need of it.

In comparison with the histories of other philosophical societies, the eventual transfer of the Society's Museum to the Corporation of Leeds in 1921 took an

¹President's Annual Report, *Leeds Mercury*, 3 May 1904.

² Ibid.

³ Smithells in his 1904 President's Report identified the year 1869-1870 as 'something like its zenith'. *Leeds Mercury*, 3 May 1904.

⁴ Yorkshire Observer, 6 June 1921.

unusually long time to come about. For the most part, the Lit and Phil museums that had been established at the beginning of the nineteenth century had largely been disbanded during the 1850s and 1860s.⁵ During such dissolutions it was commonplace that elements of the societies' collections went on to form the principal collections of the new municipal museums that emerged on the back of the Libraries and Museums Act of 1854.⁶

Smithells' description of the state of the Museum was a piece of propaganda. There was truth to it, of this there is no doubt. But the oratorical whole was designed for effect more than anything else and those close to the Museum would have known this better than any. His agenda, at that time already underway, would soon become apparent and with tumultuous effect later that year. So from this point early in the twentieth century the Museum's immediate future is one marked with embattled politics, contestation, move and countermove. Here old concerns were forgotten as the fall-out from proposals and counter-proposals eclipsed all else. These elicited public opinions, all of which spilled not into the Society's Reports, but out into the newspapers, where party politics were given the broadest platform and where support was best elicited.

These commentaries reveal little of the nuts and bolts of the 1921 transfer. Instead they represent the preoccupations, opinions and protests of voices connected to this issue that involved not only the Society and Museum but also the College and the Town Council. We have already recognised that contestation proves useful for identifying hitherto unsuspected values and preoccupations. Thus the subject of transfer, being the most significant change to the Society since its establishment, represents a point of contestation par excellence and perhaps the most vivid litmus of public opinion we have so far.

The first section of Chapter 6 continues very much where Chapter 5 left off by describing how the various committees we have looked at concealed what were the opening moves by the newly instituted University to take over the Museum. In the following section we will discuss the nature of the University's takeover

⁵ Alberti (2009) and Knell (2000).

⁶ See Finnegan (2005), Swinney (1999), Alberti (2009), and Knell (2000).

bid and consider the suspicions and distrust that were levied towards it at the time, as well as how University staff had positioned themselves so as to gain leverage within the Society's Council. We will look at the responses to the University's posture, the repercussions that surrounded the eventual disclosure of its takeover bid and how the ensuing contestation and public outcry highlights the values of several interested groups.

The following section discusses how this was no truer than with the Town Council, which in response to the University's bid submitted its own proposal to own the Museum. Here we will discuss the campaign run by the Town Council to discredit the University and wrest advantage from them over the future of the Museum. In this section we look at the withdrawal of the University's interest in the Museum and its eventual transfer to the Leeds Town Council.

The period from when the Town Council appeared victorious in 1905 up until the actual transfer in 1921 serves to remind us that rather than a solid whole the 'affective Museum' was composed of dynamic interactions, which were part of a broader ecology of social networks. Ultimately it was a fragile human construction that was always reaching for consensus to maintain equilibrium and manage its contingencies amidst what was at this particular point in its history was a deeply unsettled world.

In taking a necessary step back from the florid language and histrionics, the following section looks at the impact that these events had on the ongoing activities of the Museum, specifically around the natural science collections. In light of Smithells' diatribe, it was advantageous for any party interested in bidding for the Museum to represent a beleaguered and impoverished institution, in dire need of their support.

Here we are able to examine the effect that misrepresentations and public arguments had on core activities such as collecting practices at the Museum as it was being publicly pulled between the vying parties. The final section of this chapter looks, then, at how scientific Leeds had at this time also altered including changes to where science was done. These changes impacted on assumptions about scientific authority; of what constituted professional scientific endeavour, who could and could not undertake it, how and where it was made, and where the associated collections were to be kept. Within those shifts we get the final composition of Museum practice and the natural sciences in the town as they emerged into the twentieth century.

6.2 The Society's Committee as an Agent of Change

In portraying the period of reappraisal for the Society that emerged around the 1870s, Chapter 6 brought to our attention three committees: the 1893 Committee on the Means of Extending the Usefulness of the Society,⁷ the 1895 Committee for the Arrangement and Disposal of Collections⁸ and the 1904 Committee on the Reconstruction of the Society.⁹ If we describe the opening of the twentieth century as being the most turbulent period for Society and Museum, then these three Committees were its foretelling.

As we saw in the previous chapter, the Committee's 1894 report and the recommendations made therein made manifest the need for fundamental change to both Society and Museum, materially and constitutionally. It had recommended that the contents of the library 'and the more scientific portions of the collections, such as the fossils, bones, minerals, entomological collections, and Greek marbles' should be gifted to the Yorkshire College along with a 'very substantial grant of money' for their upkeep.¹⁰ However, the advice of the committees stood for nearly thirty years before any changes were brought into being. In fact, the impression left throughout Chapter 6 is that change, both constitutional and material, were deeply uncomfortable subjects for the Society to tackle, despite the consistent message of the committees.¹¹

⁷ LPLS Report of the Committee on Means of Extending the Usefulness of the Society, 1894.

⁸ LPLS Report of the Committee for the Arrangement and Disposal of Collections, 1895.

⁹ LPLS Report of the Committee on the reconstruction of the Society, 1905.

¹⁰ Ibid.

¹¹ For an example see Confidential circular to the Members of the Leeds Philosophical and Literary Society by Charles Hargrove, 1895.

Change had become something the Society was deft at avoiding. Whether the content of the reports represented good advice or not, the call for action by a committee was summarily rejected by the members. The President, Charles Hargrove, suggested that 'if we reject the proposal of the Committee, we take upon ourselves the responsibility of finding some remedy for the grave state of affairs which confronts us.'¹² Given that each committee allegedly had differing agendas, by and large each committee reported approximately the same central point—Philosophical Hall needed to be sold. It was the week before Smithells gave his presidential report that the Committee on the Reconstruction of the Society produced its report.¹³

As we noted in Chapter 6, the hidden agenda of this committee (if it can be termed such) was to consider whether a change to the Society's constitution was needed in order to sell Philosophical Hall and regarding constitutional matters to research the legal implications of purchasing new land and building a new museum. It was to assess whether the excess not needed for the new build could be 'reinvested in trustees' securities, and the income applied for such purposes as may be deemed calculated to carry out the objects of the Society.' In addition, it would establish whether a new Trust Deed was required to do this, 'which would have taken time and money and jeopardised the process.'¹⁴

In all, it looks as though the conclusion was predetermined and that the committee was in fact establishing the best means possible to undertake this. Given that the Committee members of the 1893 Committee were mostly Yorkshire College staff—Lupton, Miall, Smithells—we should see the pessimistic conclusions of this Committee's report as an official move to encourage the Society's hand towards the sale of Philosophical Hall and the advantage of the Yorkshire College.

¹² Ibid.

¹³ LPLS Report of the Committee on the reconstruction of the Society, 1905.

¹⁴ Ibid.

6.3 The Yorkshire College's Takeover Bid

At the time that Smithells delivered his report at the Society's annual meeting, he had become first Professor of Chemistry at the new University of Leeds formed just one month earlier. As an undergraduate, Smithells had read chemistry under Henry Roscoe, at Owens College Manchester, and so had long since been a part of the Victoria University triumvirate (consisting of Owens College, University College Liverpool, and the Leeds Yorkshire College).¹⁵ While in Manchester, he had benefited from Roscoe's relationship with Robert Bunsen and J. F. Baeyer, spending time in both these notable chemists' laboratories between 1882 and 1883. He left Owens to become Professor of Chemistry at the Yorkshire College in 1885, where he went on to serve three terms as Pro-Vice Chancellor.

Smithells played an instrumental role in the Yorkshire College joining the Victoria University in 1887, and in gaining its Royal Charter in 1904. We should remind ourselves that this was also the year he made his searing critique of the Society and the year that he and other College/University heavyweights Miall and Lupton had established and operated the 'Janus-headed' Committee on the Reconstruction of the Society. Smithells had been elected FRS in 1901 for his work on flame structure and later served two years as Vice-President of the Royal Society (1915-1917).

Alongside this, 1907 saw him elected as President of the British Association's chemical section. In short, when Smithells made his several moves in 1904, he did so as a distinguished and influential member of academia, the British chemical industry, and a key figure within the town. Earlier, we suggested that Smithells' critique of the state of the Society and Museum was propaganda and therefore not wholly objective and in fact many at the time were concerned that it had an ulterior motive.

Chapter 5 has already described how the Yorkshire College's involvement in the Society had hitherto been a contentious one, describing its resources as having

¹⁵ The Victoria University was founded in 1880 with Owens College joining that year, followed by University College Liverpool in 1884 and the Yorkshire College in 1887.

been parasitized by the Yorkshire College.¹⁶ The local natural scientist Washington Teasdale had been particularly disparaging and vocal towards the College's relationship with the Society. Teasdale had offered a pessimistic speculation that the Society, Museum, collections, and property would eventually be haggled and fought over by the College and the Corporation.¹⁷ We have already pointed out how the boards of the committees oftentimes consisted of College staff. This was inevitable, given that by the end of the nineteenth century the Society's Council consisted almost entirely of University staff, most of whom would have been involved in the appointment of the committees, in charging them with their responsibilities and then in their undertaking. Smithells characterised the distrust levied against the college as 'a special dread of any scheme for reorganisation which emanated from those connected with the Yorkshire College,' to which he offered the placatory note that 'he should be the last person to suggest that anything like violent hands should be laid on it.'¹⁸

Unsurprisingly, Smithells' 1904 presidential address elicited several letters to the editors of the region's press, some of which, perhaps alluding to the use of committees, claimed a move was already underway by the new University to take over the Museum! Certainly there are no official records of any such activity, but still, the accusations in the press reported underhand manoeuvrings. A member of the Society's Council, James Bedford played a notably vocal part in these allegations.¹⁹ Bedford, a Leeds chemist and dyer, had been a member of the Society's Council since 1896, was an alderman, became Lord Mayor of Leeds in 1914, and eventually became President of the Society from 1917-1919.²⁰

Following the 1904 Annual Meeting, Bedford penned a long letter to the editor of the *Yorkshire Post*, making clear his opposition to the University's plan, describing it as '[t]he scheme hinted at but not explained.' He went on to claim that the University proposed the Museum be moved to a building 'adjacent to and

¹⁶ Chapter 5, Section 5.6. Also *Leeds Mercury*, 5 May 1900: 5.

¹⁷ Leeds Mercury, 5 May 1900: 5.

¹⁸ Leeds Mercury, 3 May 1904.

¹⁹ Yorkshire Post, 7 May 1904.

²⁰ See Kitson Clark (1924): 234, also *Lord Mayors & Aldermen of Leeds since 1626*, Leeds City Council; Whitworth (2008): 6.

connected with the college [sic], a site inconvenient to the members of the Philosophical Society and to the public generally' and that the proposal included selling Philosophical Hall and using the proceeds to establish paid curatorial posts for the professors at the University.²¹ Bedford's claims here are strikingly similar to the recommendations made by the Committee on the Reconstruction of the Society and it seems likely that he had linked the activities of the Committee's with the University's bid as he saw it. In summarising, Bedford said that:

'[t]he result, in my opinion, would be the extinction in a few years of the society, the dispersion of the greater portion of the present collection, type specimens only being retained, and our valuable library being merged in that of the College [...] One is forced to the conviction that nothing would meet the wishes of the College better than the dissolution of the society.'²²

Bedford was not a wholly disinterested party himself and in fact harboured his own ambitions and plans for the Museum, which he included in that 1904 letter to the *Yorkshire Post*. Phrased as much as an antidote to what he saw as the sophistry of the University, he claimed his own scheme had the hearty support of some members of the Council 'and I feel sure the majority of the members of the Society.'²³ This saw the Museum becoming a municipal public museum, free to the public. It included new premises housing the collection, with its governance supplied by the municipal authorities. This, he claimed, would continue the work of the Society 'on a broader basis, and making provision for the smaller scientific societies of the city.'²⁴

At this point we must remember that the University had not disclosed any such plan, it had merely been alleged by Bedford. As Bedford's scheme saw it, the money raised from the sale of Philosophical Hall would be used by the municipal authorities to erect new premises close to the town centre, with the remainder

²¹ Yorkshire Post, 7 May 1904.

²² Ibid.

²³ Ibid.

²⁴ Ibid.

used to pay staff and fund acquisitions. This, Bedford suggested, could be supplemented by an annual maintenance grant from the town at two and a half percent of the original investment. Bedford's rhetoric drew on traditional and dynastic themes and their synonymy with authority and rights. He took the opportunity to highlight his own longstanding connection with the Society: 'I can claim some interest in the welfare of the society, as my grandfather, father, and myself represent a continued membership of eighty years.'

Despite inability to undergo change that was characteristic to earlier decades, the suggestion that a University scheme lay hidden much like a snake in the grass, seemed to unlock feverish activity and interest in this direction and 1904-1905 became all about taking over the Museum. While the preoccupations of members such as Washington Teasdale had often presented themselves as being melodramatic, perhaps even neurotic at times, it seems that ultimately their concerns were well-founded.

Early on in 1905, at the time the Committee on the Reconstruction of the Society submitted its report to Council, the University made a formal offer to the Society much along the lines speculated by Bedford in 1904. It offered a site for the Museum within the University's curtilage at a favourable rate, but wanted full management of the Museum.²⁵ Revealing the degree to which the Society's Council had become representative of the interests of the University, the offer was signed by the Society's President²⁶ and complete with his authorisation, circulated to members. In addition, the report produced by the Committee on the Reconstruction of the Society had done valuable legal legwork by ascertaining whether a constitutional change was necessary for any such offer to succeed.

So Teasdale's speculation of 1900 had been prophetic, for here were University and Corporation effectively haggling over the Museum and its collections as he had predicted.²⁷ While the University's ambitions were not exclusively scientific, nor the town's exclusively public, we can safely consider the creation of a

²⁵ LPLS Annual Report, 1904-1905.

²⁶ Ibid.

²⁷ *Leeds Mercury*, 5 May 1900: 5.

university museum as being a more scientific, private and specialised institution and the creation of a municipal or corporation museum a more local history public one. Smithells, the first Professor of Chemistry at the new University, became the advocate for the creation of a new university museum, Bedford the advocate for the public museum scheme. Smithells had the support of the majority of the Society's Council, Bedford its members.

In the meantime, the University sought to establish a board of trustees required by law to manage funds gained from the sale of Society property. Therefore, just days later the *Yorkshire Post* ran notice of an extraordinary meeting for proprietary and ordinary members of the Society to vote on a resolution required to establish that board. However, the resolution printed verbatim was not all it seemed, because it carried at the very bottom an additional element to vest in the current Council the power to accept the offer made by the University without reference to the remainder of the Society:

[...] and also to authorise the Council to carry into effect with or without such modification as they may think fit a suggested agreement between the Council of the University of Leeds and the Council of the Society which was approved by the Council of the University of Leeds on 29th March 1905²⁸

If, then, the resolution was carried it would not only have appointed a board of trustees to be used if and when Philosophical Hall was sold, but would have also removed the voting rights of the Society's membership, effectively removing the one obstacle the University faced in owning the Museum. With the resolution heavily couched in legal rhetoric and reproduced in small print, the addition of the extra powers added at the very end makes for the argument that this resolution was the University's Trojan horse.²⁹

The original *Yorkshire Post* version carries the name of the Society's then Secretary, Edwin Kitson Clark. As Secretary from 1895 to 1921, Kitson Clark

²⁸ Ibid.

²⁹ Yorkshire Post, 7 April 1905.
had been a part of the Society's Council across both Smithells' and Bedford's Presidencies, and at times had shared the role of Secretary with Smithells.³⁰ Turning to Kitson Clark's 1924 history of the Society, we find the inclusion of the resolution but with that all-important last passage missing.³¹ Of course, the difference between the *Yorkshire Post* version and the later Kitson Clark version is enormous and had it been effective, the future of the Museum would have looked entirely different to the trajectory it finally took.

6.4 The Town Fights Back: The Bid for a Municipal Museum

When the extraordinary meeting was held, the resolution and the intentions of the University were exposed. The *Yorkshire Evening Post* included a short report titled 'Leeds Philosophical Hall: Opposition to the Sale of the Building,' in which it described the meetings as being 'somewhat animated.'³² The report described how the attempt to remove the elective powers of the membership had been an attempt to out-flank Society protocol and one strongly opposed by certain elements of the attendance.³³ The vocal and animated opposition, it was reported, was led by William Howgate, a civil servant for the Shepley Local Board, who being involved in local politics and several civic concerns including the Education and Art Gallery Committee and the Mechanics' Institute,³⁴ had himself been a proprietary member at the Society since 1896.³⁵ Amidst straplines such as 'Philosophical and Unphilosophical,' Some outspoken criticism,' and 'Another strong criticism by Mr. Howgate,' the events unfolded in the press, but as noted before, were not recorded elsewhere.

³⁰ Kitson Clark (1924): 233-234. Also see his obituary: *The Times*, 19 April 1943.

³¹ Kitson Clark (1924): 117.

³² Yorkshire Evening Post, 17 April 1905.

³³ Ibid.

³⁴ Yorkshire Herald, 25 October 1899: 3.

³⁵ For Howgate's involvement in local administration see 'District Intelligence' in the *Huddersfield Chronicle* and *West Yorkshire Advertiser* 1890-1900. See LPLS *Annual Report* (1896-1897) for Howgate's membership and donations. Howgate, like all other proprietary members, donated to the Museum. In Howgate's case this included natural science, numismatics, antiquities and archaeology. Perhaps his most well-known donation was the large Neptune's Cup sponge in 1903, which graced the Large Zoology Room and featured in several of Henry Crowther's photographs—see Figure 4.15, pp. 171.

One important point was the handling by the Society's Council of a letter, which the Society had received prior to the extraordinary meeting, from the Town Clerk expressing interest in the future of the Museum by the Corporation.³⁶ The allegation was made that the offer was being withheld by the Society's Council, thus preventing its fair and serious consideration. At the extraordinary meeting the President of the Society, James Eddison MD³⁷ argued against any further delays required to consider the Town Clerk's offer and recommended the acceptance of the offer from the University. Howgate then protested that the proposal had been 'sprung upon the members by a coterie who seemed distinctly interested to deprive the proprietary and ordinary members their rights,' claiming that the whole scheme had emanated from the University, where the professors had elected each other to the Council of the Society 'at hole-and-corner meetings' and thus Howgate raised an amendment to delay a decision until all the members had had full time to consider both offers alongside each other.³⁸

Clearly Howgate's concerns were well founded. However, with a large proportion of the Society's Council and proprietary membership consisting of University staff, his protestations fell on deaf ears. That evening, during the meeting in the Library at Philosophical Hall, Howgate's amendment was rejected and the Trojan-horse resolution was carried. There was a second chance to make an impression though—when the meeting opened up to the ordinary members who had congregated in the lecture hall next door. Nonetheless, with the resolution now sanctioned by vote from the Society's Council and proprietary members, it seemed unlikely that Howgate would get the result he thought to be the right and just one. It was a moderate turnout, but Howgate seemed undaunted, referring to the resolution as nothing less than infamous:

If you had come out like men and said 'we want it for the Yorkshire College' I should have admired you like men; but to come like somebody in the night-time to rest from the people of Leeds what is their birth right

³⁶ LPLS Annual Report 1904-1905.

³⁷ Kitson Clark (1924): 140.

³⁸ Bradford Observer, 18 April 1905.

is unmanly, and unworthy of Yorkshiremen. I enter my protest in the sight of God against this act.³⁹

Despite his best efforts, it was not enough. Howgate lost his amendment with the ordinary members and the resolution was carried. Now the Society's Council had the authority to bring about 'with or without such modification as they may think fit'⁴⁰ the agreement put forward by the Council of the University of Leeds, in effect the two councils being the same people. Even though the resolution and other manoeuvrings had been flagged up, the University had succeeded in securing their aims. Everything was now aligned so that the sale of Philosophical Hall would fund the move of the Museum to the University.

However, this notwithstanding, the University had perhaps underestimated one vital aspect. Reporting on the meeting, the press had described the turnout of ordinary members at the extraordinary meeting as 'moderate.'⁴¹ It may have been that ten days between the *Yorkshire Post* notice and the meeting itself may not have been enough warning for some members. Alongside this, we must not discount that being a small entry on a text-heavy broadsheet, the notice may simply have been missed. So a moderate turnout can be explained and perhaps easily dismissed as insignificant. However, this seemingly small point would turn out to be the game changer, swinging the advantage entirely from the University into the hands of the Corporation. Widely circulated in the region's press, the results of the meeting, freighted with Howgate's comments, struck the attention of those absent members, who promptly, and en masse, responded through the self-same channels, the region's press.

Despite having secured its aims on paper, the Society's Council continued to come under severe attack. The message that emerged through the newspaper reports stood largely in agreement with Howgate's concerns: that the Council had become too greatly populated by employees of the University, that the recent actions were discreditable, that the move away from the centre of the town would

³⁹ Yorkshire Post, 19 April 1905.

⁴⁰ Ibid.

⁴¹ Bradford Observer, 18 April 1905 and Yorkshire Post, 19 April 1905.

be against the interests of the town, and that the financial argument advanced by University was flawed.⁴²

The result was that through the belated unanimity of the membership a delay in accepting the University's offer was effected while the Town Clerk's offer was brought into fair consideration. By the end of May, over one month after the animated scenes at the extraordinary meeting, the Bradford Observer reported that a group consisting of representatives from the Education and Art Gallery Committee of the Corporation (to which Howgate belonged), along with the Society's Council and the University shall meet:

[...] with a view of drawing up some comprehensive scheme for not only the housing of the Leeds Museum and affording of facilities to Leeds school children, but also for housing the Art Gallery in the same building as the $Museum^{43}$

As the months of 1905 passed and the articles in the press continued to debate and reiterate the lack of a municipal museum and potential solutions, the University was conspicuous by its absence. Given the particular uses a university would make of a natural science collection, where specimens would be dissected, and breeding programmes would require undisturbed space, it is understandable how the new multilateral negotiations were not suitable to the University, no matter how well-intended they were. In addition, even the most charitable of views would describe their attempts to circumvent the Society's protocols as unethical. Therefore there was a sense that having been exposed thus, the best action was no action. By the close of 1905 the subject of a municipal museum remained the current topic and at the time the most likely outcome.⁴⁴

 ⁴² For examples see *Yorkshire Post* from 19 April to 10 May 1905.
 ⁴³ *Bradford Observer*, 24 May 1905.

⁴⁴ See Yorkshire Post, May-August 1905.

6.5 Poor Public Identity and the Decline of Collecting Practices

Chapters 2 to 4 of this dissertation have stressed the significance of the Museum's physical spaces, especially concerning knowledge claims.⁴⁵ However, from Chapter 5 onwards we have suggested that by and large it is more useful to think of the Museum as something altogether more insubstantial or socially determined. Here we have forwarded the idea that the museum did not exist in the bricks and mortar or the rooms and spaces, but between the relations and interactions, the humans and the objects. The idea forming henceforth is that the museum is more accurately considered as a complex system involving sets of discrete ecologies of agency, to better denote the dynamic network of those interactions and to better understand the true fabric, or body of a museum.⁴⁶

At the very start of the thesis, in the Introduction, we argued that dominant museological theories have come to largely rely on the presumption that much of a museums form and function was determined and created by the application of residing ideological metanarratives. On these terms, understanding those broad principles can somehow provide insight into the form and function of specific museums across the country. The museum edifice somehow embodied those principles which it then exerted on its occupants. However, our own narrative describes something considerably different. Instead, the Leeds case demonstrates how curatorial practice emerged from sets of ecologies into a complex system. Specific to an individual, a time and a place, it was from such contingencies that the Museum's form and function emerged.

The events as we have described them thus far in this chapter represent a breakdown of consensus and equilibrium within, what we could term, the body of the Museum. Facing a future as a general town museum, such events would seem only destructive to its natural history background but these were important

⁴⁵ Histories like Stearn (1981) and Follet (1978) are both defined strongly by the history of the building. But this is somewhat different to the problematized study of the architectonics of such spaces, such as Forgan (1989) and Forgan and Gooday (1996).

⁴⁶ Here, the applicability of ideas emerging from complexity theory, especially the idea of a Complex Adaptive System oftentimes useful for business and economic models, has been influential. In particular, see Mitleton-Kelly and Papaefthimiou, M.C. (2006): 164-181. For its excellent introduction into the subject, see Mallin et al. (2010): 1-21.

agents that shaped form and function at a point in which the Museum looked set to become a general municipal museum and one seemingly no longer dedicated to the natural sciences.

The natural sciences were still largely specimen-reliant at this time. New specimens were required from the field alongside access to collections of 'long series' for reference.⁴⁷ An institution's ability to be scientific was at this time determined by a correlation with specimens. Of course, the communities that held some of the most comprehensive and accurately recorded of these were the field-based clubs and societies. It would suggest, then, that the shifts in Leeds as characterised so far would have upset the long-established institution/collector relationships within the town, for which we might coin the term 'patterns of donation.'

Up until this period the Museum represented the de facto repository for natural science.⁴⁸ Collections did exist outside the Museum but could be generalised as privately-kept collections held by the collector in their home, some of which represented the endeavours of a field club. Despite losing its bid for the Museum, the University had already established itself as the centre for scientific and learned activities in the town. This was true from the early Yorkshire College days of 1874 onwards, when in want of adequate facilities it used the lecture hall in Philosophical Hall and aligned itself with the Society and its Museum.

At this time donations made to the Museum were tantamount to donating to the College. The College's original layout had included smaller departmental cabinets and museums and after it became clear that the new University would not benefit from the continued discussions regarding the Museum, it went no further towards establishing a large thematically over-arching museum, allowing each department instead to develop its own subject-specific collection.⁴⁹

⁴⁷ Johnson (2012).

⁴⁸ Naturally, large collections did exist outside the Museum. These were mainly privately-kept collections held by the collector in their home, some of them representing the endeavours of a field club.

⁴⁹ University of Leeds. Administrative Records: Buildings: Planning Office Papers, 1878-1994.

If this period represents a time of genuine change and contestation, we would expect to see the effects of those changes in the activities of the field collecting communities. We might expect that these would be faced with a dilemma as to where to deposit their collections, making what had until then been a largely pacific endeavour into a politicised one. Any such changes we would expect to see within the town after 1905, when it seemed likely that the future of the Museum's collections lay with the Corporation and not the University and the shift in purpose seems at it starkest.

Appearing two years after the 1905 watershed, the Yorkshire Post printed a short article that touches on the subject. The article opens by pointing out that in not yet having established a central municipal museum, Leeds trailed behind other towns. However, the pressing matter for the author was the need to secure adequate facilities for the scientific aspect of the collection: 'the setting apart of a small room or part of a room in the Leeds Municipal Buildings for the reception of donations of natural history, geological, etc., etc., specimens, the specimens to be properly labelled, arranged, and open for public inspection free.⁵⁰ In the first instance, this shows that little had been done to action the decisions of 1905, but as the author continues, he pointed out that such tardiness came at a cost to the town:

If this had been done only a few months ago Leeds would have received two at least valuable natural history collections free that have gone elsewhere [...] if the Council would only find proper housing for the same⁵¹

Perhaps the widely-circulated accounts of contest between University and Corporation gave rise to an assumption that a municipal museum was imminent. As an expression of his personal expectations, the author quoted above seemed to labour under this misapprehension. So too did the Society, which throughout this period, up until the transfer in 1921, concluded its Annual Reports with:

 ⁵⁰ Yorkshire Post, 20 August 1907.
 ⁵¹ Ibid.

No further communication has yet been received from the Town Clerk in relation to a joint arrangement in the interests of the Public and the Society, as suggested in a letter from him dated April 13th, 1905⁵²

It seems that the Town Clerk's ambitions did not have the full support of the Town Council anyway, which, distracted by its own poor state, seemed at best ambivalent towards the proposals. On the subject, a representative for the Corporation stated that the Society's Museum was fulfilling adequately the museum education provision within the town and that 'the provision of a room at the Municipal Buildings or the Town Hall, [...] was utterly out of the question at present.⁵³ Perhaps the article was designed specifically to quash any expectations that might have arisen from out of the 1905 agreement, explaining how '[m]atters of that sort, such as provision for a museum, were not to be talked of when the city was being committed to such vast expenditure as was involved in the sewage scheme, and that of the waterworks.⁵⁴

Even though nothing concrete had come of the 1905 agreement—no wave of natural history donations heading towards a new municipal museum that would otherwise have gone to the Society's Museum—there is still evidence of a change to the patterns of donation. Appearing towards the end of 1907, another article draws attention to yet another collection.

Sir,—I have just received information from a reliable source that inquiries are being made of the Bradford Municipal Museum officials as to the depositing of a fine natural history collection there that at present has a home in Leeds, and would most probably continue in Leeds if we had a proper public museum.⁵⁵

What this article has in common with the earlier one is that both complain of collections leaving Leeds entirely. This one also makes reference to another collection, 'the fine collection (complete, I believe) of Yorkshire flora made by

⁵² See, for example, LPLS Annual Reports (1911-1912) and (1915-1916).

⁵³ Yorkshire Evening Post, 22 August 1907.

⁵⁴ Ibid.

⁵⁵ Yorkshire Post, 4 November 1907.

Dr. Lees, of Leeds,' which had been lost sometime earlier,⁵⁶ and which may in fact be one of the two mentioned in the earlier article. Certainly no collection fitting that description was donated to the Society's Museum, either at the time or in the future.⁵⁷ So we are able to conclude that local collections were leaving Leeds at this time and that the perceived lack of a 'proper public museum' was the cause.

Apart from a steadily decreasing footfall and a similarly decreasing income, the Society recorded nothing to relate the Museum to the loss of collections as described in the press at the time.⁵⁸ Such articles seem to have universally disregarded the Society's Museum as a suitable home for the collections. One preoccupation seemed to be the constitutional unsuitability of the Museum: 'the Park Row Museum is the property of a private society, and that all donations made to it belong to a private body, not the town.⁵⁹ Another was the state of the collections:

[...] that Leeds with (roughly) half a million inhabitants within its marches has no 'museum' to amuse one's children in, or muse upon one's self, save a decayed, dusty, out-of-date- private 'Philosophical' one⁶⁰

To summarize, by the end of the first decade of the twentieth century, the Society's Museum had reached an impasse at Philosophical Hall. With opinion favouring a municipal museum, the University had retracted from its previous museum life, into the background. Philosophical Hall had for some become a symbol of what was not wanted. If then the patterns of donation were changing in Leeds, what of collections of scientific value? The trajectory of a collection of snail shells made by a William Nelson around Leeds during this period provides a good example of a change to the patterns of donation specifically regarding scientific collections. This affords the chance to reconsider the institutional horizon of scientific Leeds.

⁵⁶ Yorkshire Post, 4 November 1907.
⁵⁷ See LPLS Annual Report (1906-1907).

⁵⁸ Kitson Clark (1924): 118.

⁵⁹ Yorkshire Post, 26 August 1907.

⁶⁰ Yorkshire Post, 30 September 1907.

6.6 Plotting Territorial Changes to the Scientific Landscape in Leeds

William Nelson (1835 - 1906) belonged to a devoted group of Leeds-based amateur field scientists, well-placed and well-connected within that discipline. In 1870 Nelson had become co-founder of the Yorkshire Naturalist Union (referred to henceforth as the YNU) along with John Taylor (1845 - 1931), William Roebuck (1851 - 1919), and the then Assistant Curator at the Museum, Henry Crowther. The YNU charged itself with the responsibility of aiding and managing the gamut of emerging Yorkshire-based naturalist clubs; ensuring that each club kept up-to-date records of specimens, meetings, and findings.

Although the first few years of the YNU were largely taken up with accomplishing this, the four continued their passion for collecting, studying, recording, and publishing findings on mollusca, particularly conchology. As soon as their responsibilities for the YNU had alleviated, the four collaborated again in 1874 with the creation of the Quarterly Journal of Conchology. This grew in popularity such that by 1876 the four founded The Conchological Club, Leeds,⁶¹ which became the Conchological Society of Great Britain and Ireland in 1878, the journal becoming its official publication.

That Crowther was part of this small but important group is no surprise. Involvement and support by the Museum of this kind would have been expected. Besides which, Crowther was himself passionately involved in field-based activities and by the turn of the twentieth century had played an enormous role in promoting the natural sciences.⁶² In addition, the Museum had been collecting conchological specimens for almost one hundred years and housed a nationally important comparative collection.⁶³

⁶¹ The aims and objects of which were the advancement of conchological science by the exhibition of specimens and the communication of information relating to every department of the science. Jackson (1927): 65-70.

⁶² See Chapter 3, section 3.4: 'Henry Crowther, Curator 1893-1928: The path towards Public'.
⁶³ Brears (1989): 47-52

Nelson was himself a prolific field collector and after forty years his conchological collection was generally regarded as the most comprehensive of its type. Although not exclusively, Nelson had specialised in the genus *Limnaeidae* or pond snails, particularly the Wandering Pond Snail species *Limnaea peregra*. After his death in 1906, the management and future of Nelson's collection fell to his three conchological friends, Taylor, Roebuck, and Crowther.

Previously the Museum had been the de facto repository for natural science of any description. Mindful of Crowther's personal connection with Nelson and that the Museum possessed an important conchological collection itself, this would have been especially the case for such an extensive conchological collection. However, this chapter has endeavoured to show how the patterns of donation changed for the Museum during the first decades of the twentieth century. With this in mind, we now turn to a letter from Roebuck and Taylor to the Secretary of University of Leeds, dated 12 January 1914.⁶⁴

It was resolved unanimously that the Cabinets and Conchological Collection of the late William Nelson, a naturalist long associated with Leeds, together with much of the books in his library as may be deemed suitable for acceptance in the University Library, be offered to the University of Leeds for permanent preservation.⁶⁵

There were some conditions attached: '[...] that all specimens with data be retained and that full data shall always be shown upon the labels properly displayed'.⁶⁶ But with that aside, there was no debate of the kind we might have expected considering the type witnessed earlier. Therefore, it appears that any such shifts in the scientific horizon of Leeds observed earlier were by 1914 largely resolved in the University's favour.

⁶⁴ John Armitage, Curator at the Museum 1954–1989, orchestrated the relocation of the Nelson collection from the University to the Museum in the 1960s.

⁶⁵ Unpublished letter from Professor Garstang to the Pro-Vice Chancellor (University of Leeds),12th January 1914.

⁶⁶ Ibid.

It was the Professor of Zoology at the University, Walter Garstang (1868–1949), who had arranged with Taylor and Roebuck the donation. He had liaised with both the Pro-Vice Chancellor (Mr. A.G. Lupton) and the Secretary at the University regarding the donation and a ceremony was held at the University (28 February 1914) to mark the occasion and honour the collector.⁶⁷ During the ceremony Roebuck was quoted in the *Yorkshire Post* as saying, 'It was felt that so excellent a collection should not be allowed to leave the city'—as if there were no reasonable alternative!⁶⁸ A little less taciturn, Taylor was quoted in the same as saying that alongside honouring William Nelson:

[...] they wished to demonstrate their cordial sympathy with the University, which for some years past has done much to identify itself with, and to co-ordinate the intellectual life of the city, especially on its scientific side [...] such an inimitable series of shells ought not to be dispersed [...] and they hoped that in course of time Leeds would follow the example of Manchester and have a museum in connection with its university.⁶⁹

The Pro-Vice Chancellor's comments are equally revealing and in accepting the collection he remarked: '[...] that it showed the position which the University held when it was accepted as the natural home for such a treasured collection, which he was sure, would be of great value to the students in that particular branch of science.⁷⁰

At least as far as the communities represented here were concerned, the University had become the de facto institution for scientific collections. As mentioned earlier, there is no evidence of the kind of contestation we observed earlier. There were no James Bedfords or Washington Teasdales publishing pointed comments in the region's press as there had been just a decade earlier.

⁶⁷ Unpublished letter from Professor Garstang to the Pro-Vice Chancellor (University of Leeds),12th January 1914.

⁶⁸ 'Memorial of a Leeds Naturalist: Shells and Books Presented to the University'. *Yorkshire Post*, 2 March 1914.

⁶⁹ 'Memorial of a Leeds Naturalist: Shells and Books Presented to the University.' *Yorkshire Post*, 2 March 1914.

⁷⁰ Ibid.

Taylor outwardly acknowledged that the University had yet to establish a museum of their own and as we have seen, applied a number of basic museological conditions to which Lupton, the Pro-Vice-Chancellor, was contrite, promising to look after the collection well:

A suitable museum was part of the original plans of the University; but so many other ideas crowded in upon them that it had not yet developed, but it was a dream of the future that they hoped to see realised. The Council of the University were looking eagerly to the time when a museum could be built, and in the meantime he promised that the greatest care would be taken of the collection⁷¹

We should have no doubt about the scientific worth of the Nelson collection. Lupton had himself indicated as much during the donation ceremony, stating that he was sure the collection '[...] would be of great value to the students in that particular branch of science,' and indeed it was.⁷² While at the University and under the omnipresent management of Gartsang—a nationally important embryologist himself—specimens from this collection would go on to contribute to developments within genetics.⁷³

Led by the malacologist Arthur Edwin Boycott (1877-1938), a four-strong team of researchers that included Garstang's daughter—then a research assistant in her father's department in Leeds—used four live and incredibly rare sinistral forms of the Wandering Pond Snail *Limnaea peregra* from Nelson's collection.⁷⁴ From 1920 to 1930 the team embarked on an exhaustive breeding programme that resulted in a sample base of approximately one million snails. With guidance early on from the notable geneticist Alfred Sturtevant, the team was able to

⁷¹ 'Memorial of a Leeds Naturalist: Shells and Books Presented to the University.' Yorkshire Post, 2 March 1914.

⁷² Ibid.

⁷³ For an outline of Garstang's career and contributions see: Hall (2000): 718-728 and Hardy (1951): 560-566. For his contribution to Leeds-based field collector groups see Taylor (1920): 11.

⁷⁴ For an outline of Boycott's contribution see *Obituary Notices of Fellows of the Royal Society*, Vol. 2, No. 7. (1939): 560-571. For Boycott's published works on this subject see: Boycott, et al., (1923): 207-213, Boycott, et al., (1929): 152, and Boycott, et al., (1931): 51-131.

establish the idea of delayed inheritance, which in broadening the compass of Mendelian heredity forwarded the geneticist's larger project.⁷⁵

Despite the lack of a university museum proper, Taylor and Roebuck's comments highlight that the University had become the rightful repository for natural science collections. Both were important representatives for an extensive field naturalist's community—remember their central role with the YNU. The pomp and ceremony associated with the donation and the extensive articles featuring it in the region's press would have sent a very clear message to the large community of field collectors that Taylor and Roebuck represented. Throughout the 1880s and 1890s, Louis Compton Miall had himself pressed upon the LPLS the need to think seriously about where the direction of the Museum should be—between scientific specialisation at the College or the diffused and general education and entertainment required for a public-facing role.

As discussed more fully in Chapter 4, whatever balance he may have endeavoured to preserve between the Museum and the growing Yorkshire College, by 1891 Miall had himself taken the first Chair of Biology at the Yorkshire College, a shift within his professional life that would mirror the broader institutional changes characterised in this chapter. Thus, having lost the fight to own the Museum's scientific collections, the University had taken possession of scientific activities in Leeds and in so doing became the rightful repository for natural science collections.

6.7 The Long Road to the Municipal Museum

To have characterised this period as the Museum's nadir, as we did at the very start of this chapter, seems now upon its conclusion compromised. Without doubt, Smithell's acerbic comments of 1904 set a tone for what was a period of harsh, sometimes even brutal criticism, levied on both Council and Museum. Mindful of the troubles it faced in reaching that point, the eventual transfer in

⁷⁵ Sturtevant (1923): 269-270. For a brief summary, see Gilbert (2006) and Young (1985): 1364-1379.

1921 did represent resolution for the Museum. We could argue that this was a case of too little, far too late. Indeed the collections had earlier been thought of by the townsfolk as outmoded and in poor repair.⁷⁶

If not guilty of complete underhandedness, the University had at the very least employed sharp practice in its claim for the Museum. And with its activities exposed, it did perhaps the worst thing it could have done at the time for the Museum, and retract its interest. This had hitherto been a life-line for the Museum for the past three decades: perhaps reason enough for the University to think of the Museum as theirs in all but the letter of the law. The Society and Museum benefited greatly from their relationship with the College from the 1870s onwards. When the lecture programme glittered with celebrities from science, literature and art, the town benefitted too.⁷⁷

While there had been earlier concerns relating to the Society's alliance with the College, it was only when talk of a takeover emerged that voices of dissent rose to the surface. Naturally, had the University's efforts been successful, the Museum's trajectory would have been entirely different and certainly up to 1921, arguably healthier. The press was used as a sharp propagandist weapon, though, and the animosity and protests of the most vocal few got extrapolated as the opinions of the whole. So with the weight of public opinion against them and a formal proposal for management of the Museum by the Town Clerk, the old College, now University, retracted its interests.

By the end of 1905 it seemed that the University was out of the running and an agreement between Society and Corporation forged. Having achieved that, the Corporation did perhaps the worst thing it could have done for the Museumnothing, which it kept doing for almost twenty years. As we noted earlier, throughout this period the Society's reports ended with the somewhat tragic note:

⁷⁶ *Yorkshire Post*, 30 September 1907.
⁷⁷ See Chapter 4, Section 4.17 for a more thorough analysis of the lecture programme.

No further communication has yet been received from the Town Clerk in relation to a joint arrangement in the interests of the Public and the Society, as suggested in a letter from him dated April 13th, 1905⁷⁸

Even acknowledging the histrionics involved, there was some truth in Smithells' description of a Society and Museum at breaking point in 1904. Given its keenness to wrest the opportunity from the University, the Corporation's procrastinations across 1905-1921 must have made this period the most trying, perhaps a profoundly regret-filled period for Society and Museum, a true nadir.

As many of the previous chapters have already explored, the demands of maintaining the Museum had been both draining and ongoing for the Society. This would have been especially so after the University's support declined. The Museum had certainly been the single greatest demand on the Society's financial resources as well as on the time and energies of the Council generally. Under such strain, there is little wonder that divisions and dissent appeared within and around the Society, expressions of which spilled out across the pages of the region's press during those first decades of the twentieth century. When it did come, on 8 November 1921, the transfer afforded the Society a new lease of life. The terms brokered between themselves and the Corporation, while representing a considerably less attractive agreement for the Society than those discussed throughout the proceeding years,⁷⁹ had guaranteed the Society a sum of one thousand pounds for a period of twenty-five years to forward the Society's aims.⁸⁰ Recreating itself as a limited company and free of its longstanding financial burden, it re-aligned itself without controversy with the University and re-focussed its attentions on nurturing academic activity within the town once again.⁸¹

For the Museum, the post-transfer period was studded with differing plans for a new municipal museum, unfortunately none of which were forthcoming in the

⁷⁸ See, for example, the LPLS *Annual Report* (1910-1911) and (1915-1916).

⁷⁹ Throughout the 1905-1921 period, a yearly sum of £1,500 was consistently acknowledged for the Society, see for example *Yorkshire Evening Post*, 11 April 1920.

⁸⁰ See the Appendix in LPLS Annual Report (1920-1921); also The Times, 9 November 1921.

⁸¹ Kitson Clark (1924): 129.

economic climate of post-First World War Leeds. Mindful, then, that the allocation of a more suitable building was a core condition of the agreement with the Corporation, it is astonishing that the collections remained at Philosophical Hall until 1966.

This predicament was only exacerbated from 1941 onwards when a direct hit by a Luftwaffe bomb tragically destroyed the original part of Philosophical Hall, leaving only the 1861-1862 extension standing. So from 1941 the Museum, renamed City Museum, operated in roughly half the space it had previously. In fact, only because the remainder of Philosophical Hall was condemned did the collections finally move in January 1966 and this only saw the majority of its collections put into long-term storage, with a series of temporary public spaces around the city providing the public some access to the collections.⁸²

This may suggest a strong downward turn for the Museum, a true nadir. However, despite the various sizeable obstacles that the Museum faced before and after the transfer, an impression is left that it enjoyed a renaissance of sorts. From the mid-1920s the increasing regularity of purchases made by the Museum indicates a renewed scientific interest. Early examples of such investments would be the 'Atkinson Memorial Collection of Land and Fresh-water shells,' purchased by the Museum in 1925.⁸³

To this we can add purchases demonstrating scientific principles, such as the 'Case showing Mendelism amongst mice,' purchased in 1926, as well as those representing the life histories of animals. Also of note are the acquisitions made across this period of extensive collections demonstrating themes such as protective resemblance and mimicry, usefulness of insects in relation to plants, insect pests, diseases by fungi, and diseases of fruits and vegetables.⁸⁴ Such renewed investment resulted in the Museum eventually acquiring the William

⁸² See Brears (1989) for an account of the Museum after the 1921 transfer.

⁸³ These are listed on Leeds City Museums Natural Science Catalogue as LEEDM-C-1-1925 and LEEDM-C-2-1925 respectively.

⁸⁴ Examples listed were acquired from 1925 to 1932. See Leeds City Museums Natural Science Catalogue.

Nelson conchological collection from the University in 1960, which included his inimitable sinistral specimens of *Limnaea peregra*.⁸⁵

As contradictory as this increase in the Museum's activities may seem, it demonstrates remarkable buoyancy. Undoubtedly, with both the University and the Society no longer invested in the Museum, and the embattled negotiations in the past, the lay communities such as the amateur natural history collectors, clubs and groups in the town would see an opportunity to reiterate themselves within the Museum. It is noteworthy that the aforementioned donations of collections belonged to eminent amateur collectors in the town. The increase in activities is also the mark of the remarkable Curator Henry Crowther whose significance as an educator and populariser of the natural sciences in the town is sadly only hinted at within the scope of this thesis and represents a significant area of further research. Crowther still saw the Museum's role as providing academically pertinent displays and content that could serve the many institutes, technical colleges and Grammar schools that now existed.

6.8 Conclusion

Chapter 6 has described a remarkable episode in the Museum's life history—a period in which the voices of the Museum's publics had never before been so candid and their motives so evident. Through the rhetoric of individuals such as Arthur Smithells we are able to observe the intentions and interest of the University in creating a new university museum of natural science. At the time Smithells was both the President of the Leeds Philosophical and Literary Society and the Professor of Chemistry at the Yorkshire College. Through Smithells reveals sets of important priorities and values are revealed that indicate the degree to which the Museum was instrumental to the ongoing work of the University.

⁸⁵ Who's Who: Notes from the Molluscan Collections held in Leeds Museums. Adrian Norris. Unpublished digital manuscript. Leeds City Museums.

However, the University's bid for the Museum had been perceived as underhand—attempting a takeover behind closed doors between itself and the Society, without consideration to other stakeholders. The counter proposal by the Town Corporation's William Howgate aimed at damaging the University's proposal through public exposure and humiliation. The subsequent public outcry was undoubtedly expected by Howgate and the Corporation and was most likely part of their own strategy. Like Smithells before, the extent to which individual representatives such as Howgate were prepared to go and the emotions involved, indicates sets of presumptions.

Aside from their damning indictments, each party reveal the value ascribed to the concept of a museum, appearing large among which is a sense of rightful ownership by various groups in the Town. That it remained constitutionally a private, elite institution until 1921 misdirects us away from its reality. The variety of voices, stakeholders, and imperatives that emerge over this particular period show that far from being an elite institution there was a widespread perception of ownership. Each party described a poorly managed and underresourced Museum in dire need of intervention. Such rhetoric undoubtedly acted as propaganda and served the aims of each party rather than as an objective assessment of the state of the Museum at this time.

Beyond the florid arguments and accusations surrounding the Museum, natural science continued to be collected and researched proactively in light of new areas of interest within the natural sciences—evident in the Museum's acquisitions of conchological and malacological material across this time. Acquisitions continued during the period from 1905—when the Corporation, having seemingly just secured the Museum for the Town, avoided its newly won responsibilities for a further sixteen years—until the transference in 1921. It seems then that, regardless of the politics and attitudes that surrounded the Museum at this time, work involved in acquisitions and in managing the collections continued.

The donations continued and in spite of the obstacles, so too did the museum work. Notwithstanding the contingencies, perhaps even because of them, the Museum's collections became refreshed and renewed. New displays, directed at new audiences, brought renewed relevance to the Museum. While, on one hand, we have described a nadir of sorts for the Museum, the other hand demonstrates regeneration and renewal.

It appears then that in the face of what must have oftentimes been difficult conditions, work at the museum continued—finding an unpredicted and unplanned path through the contingencies. That it was not a monolithic organisation but, as we have argued, was instead a complex system of sets of socially determined ecologies, afforded a degree of mutability enough for the Museum to vary its practices and to adapt. This was largely beyond the control of the Museum, was not cognisant or perceptible by its actors, and was evidently a painful process for those involved. Nonetheless, it enabled the Museum itself to navigate through the rigours of its demanding contingencies, creating enough long-term cohesion to survive.

Conclusion

This thesis promised an account of the Leeds Museum that would explore the complex contingencies of its history, freed up from master narratives about power and class. In line with that ambition, we have seen that the collections came very largely unbidden and set up a dynamic in which the Museum was constantly responding to new challenges about the acquisition, interpretation and presentation of those collections. In this conclusion, I review the novel findings of thesis in relation to each of the three questions with which I began before reflecting on the wider historical and historiographical implications of those findings.

At the very beginning of the dissertation we set out to understand better the relationships between museum development, the development of the natural sciences, and the growth of the industrial township across the long nineteenth century. In particular, we raised the questions of how the objects were acquired by the Museum over the years, how they were interpreted by the succeeding generations of curators, and how they were presented to the Museum's changing audiences. The thesis has shown that these processes all involved ad hoc practices, conflicting interests, paradoxical behaviour and chronic instability, which perhaps contradicts our expectations given that the Museum was one of the larger and more successful nineteenth-century regional museums. Thus, the picture offered of the Museum, as we grapple for clarity, appears to have ill-defined outlines. Nevertheless, key themes emerge.

First, the acquiring of objects at Leeds was subject throughout to a public will to donate, especially in the area of natural history, tending to overwhelm emerging academic and socially oriented interests. This unbidden quality to acquisitions is evident among what look like systematic collecting practices as well, with a variety of voluntary donations of miscellaneous specimens often arriving alongside strategic acquisitions. Secondly, this characteristic of donations dominated the work of curators, giving them a key role as managers of the burden, but limiting the scope for their action. Thirdly, the curators' ability to respond to the changing demands of museum display in the rapidly changing context of the town's public sphere, were significantly limited by these practical demands. Rather than it being a primarily ideologically driven institution, the Museum was dominated by pragmatic concerns relating to the management of a burgeoning collection.

The findings drawn from the analysis of museum practice and operation at Leeds have wider significance for the history and historiography of museums in general and civic museums in particular. The thesis began by arguing that the Foucauldian historiography common in modern museology since the 1990s has relied too greatly on its own theory-driven conclusions, leading to a largely continued neglect of the temporal, existential and physical particulars of museum history. The history offered here has demonstrated how at Leeds it was precisely those temporal, existential and physical particularities that defined museum operations rather than an ideological or directorial framework. It does this by demonstrating the long-term impact that sets of contingencies—the everyday realities and contestations that created ad hoc responses and discursive narratives—continued to have upon the whole museum operation across the nineteenth century. The thesis has also demonstrated how resistant those forces were to reform, despite the best intentions of the individuals involved, the museum ideology of the lobbyists or the pragmatic need to achieve such reform.

Contrasting with the dominant Foucauldian historiography is a picture of museum form and function at Leeds that was predominantly shaped across the nineteenth century by the practical everyday issues created by its collecting activities, the maintenance of the existing collections, and the desire to represent scientific authority and to respond to social and cultural changes across the town. By exercising a form of sovereignty over the Museum, the role of the curator emerges as central. However, despite the role that the curators played in creating museum form and function, in the end the problems behind their practices became part of the need to reform the sector. What a museum intended to do, what it did, as well as what it said it did, could mean all manner of different things.

This thesis has thus shown that paying more detailed attention to the practical demands and constraints of managing a museum within the changing context of an industrial township directs new attention to neglected questions concerning the management of collections, the practice of display and the associated museum spaces, and the practical engagement with the demands of civic culture and universities. In this way, the thesis draws and elaborates on the work of recent revisionist historians, such as Suzanne MacLeod, Samuel J.M.M. Alberti and Kate Hill, who have described for other museums very similar sets of contingencies, contestations and schisms to those that directed practice at Leeds, contributing to the development of a more adequately historical vision of the history of nineteenth-century civic museums.

In the remainder of this conclusion I review the contents and arguments of the thesis and how they might be significant for both historians and museum professionals. Firstly, under 'What Has This Thesis Achieved?' I reflect on the findings from each chapter. The status of the Museum within the Society's broader aims and objectives is discussed, along with acquisitions, interpretation and display, as well as curatorial practices. Key themes considered here are the impact that unbidden donations had upon activities, the role of ideology and the Museum's public. Following this is the section 'What is the Wider Significance of this Thesis?' in which I consider the main ways the thesis contributes not only to the history and historiography of museums and collections but also to the perspective of museum professionals. I consider the multidisciplinary approaches adopted in the thesis and highlight the importance of capturing an in-depth understanding of the day-to-day contingencies and exigencies of museum practice. I then go on to review a number of ways that this approach is successful, suggesting important topics for further consideration.

What Has This Thesis Achieved?

The thesis offers an account of the Leeds Museum that emphasizes the contingencies of its development. However, it begins by showing that it was founded with distinct ideological purposes in mind which aimed to differentiate

itself from seats of traditional metropolitan authority. This ideology was nevertheless overrun by the practical demands of managing the collection. Thus, in Chapter 1, we demonstrated that establishing the LPLS and building Philosophical Hall were part of civic-wide improvements to Leeds at the time, as characterized by the press:

Among the objects of this nature, may be enumerated the institution for the suppression of vagrancy-the establishment of public baths-the formation of a philosophical and literary society, and the construction of gas works.⁸⁶

At its inception in 1818 and its establishment in 1819 the aims and objectives of the LPLS seemed in line with the ethos that underpinned the public-facing institutions and municipal museums of the 1850s. However, the Society's constitutional make-up was that of a private society, consisting of a rebarbative group of men of diverse and previously antagonistic political orientations. While this provided a valuable funding stream for the Society it is easy to imagine how its preservation throughout the nineteenth century would ultimately hold the development of the Museum back.

Given the Society's profitable membership model, physical progress could initially move quickly. However, the declared intentions and aims found amidst the official narratives of the reports and public announcements in the press were often at odds with the contingent processes and practices, as well as the outputs thus achieved. This is perhaps best illustrated by the final conception of the Museum, which was noteworthy in the lack of forethought and planning afforded to the idea. Having built Philosophical Hall, the Society declared its commitment to establishing a lecture hall, laboratory, and library. Only after these would the Society consider a museum 'consisting more of what is curious and useful, than of what is elegant and expensive' and then only by degrees, when funds permitted.87 As a declared intention it is at odds with the activities that subsequently occurred and arguably says nothing of the objective achieved. If we

 ⁸⁶ Leeds Mercury, 9 January, 1819.
 ⁸⁷ LPLS Prospectus of preliminary laws [...] 1819.

happened to overlook the peculiarities around the Museum's inception, and instead looked at its subsequent activities, anyone would be excused for believing that a museum was the singular intention of the Society. It grew so rapidly that, just a few months after the Museum opened, the Society had vested powers in the Curator to dispose of duplicates 'in minerals, shells and other subjects of natural history belonging to the Society.⁸⁸ The relative ease with which the Society attracted a paying membership and built Philosophical Hall stands in contrast to the obstacles it faced and the direction it took the moment it did so.

Having thus shown that the Museum was, from the start, somewhat beyond the ideological control of the Society that spawned it, the thesis explores how it developed over succeeding decades. The next three chapters focus in turn on the three core questions of the thesis, concerning the acquisition, interpretation, and display of the Museum's collections over the middle years of the nineteenth century. As we saw in Chapter 2, the volume of donations increased so rapidly that by the start of the 1830s the curatorial role at the Museum was one largely concerned with containment. This prevented curators from undertaking their basic responsibilities such as establishing taxonomic order among the collections and most likely restrained other areas of the curatorial role as well, such as care of existing collections and the preparation of recent donations. By the end of the century the Museum had undergone many changes and extensions to how it thematically organised its collection. This was affected not only by museological imperatives but also in response to emerging academic disciplines and sub-disciplines within the natural sciences.

As the century progressed collecting activities at Leeds changed, becoming more sophisticated, disciplined and selective. Nevertheless, this did not affect the public will to donate nor the impact it had upon the curator. There was a marked absence of technology or subjects of industrial import and it is here where we might detect the effect of more stringent collecting practices. However this is an absence that is revealing because of how it helps to define what we do see. What

⁸⁸ LPLS Council Book, February 1822.

we do see is an overflowing abundance of natural history, filling the rooms of Philosophical Hall so completely and so quickly that it seemed likely to spill out into the streets of Leeds, despite more sophisticated, disciplined and selective collecting practices. This continued presence of natural history was often portrayed in the Society's rhetoric as a behemoth, consuming all resources, energies and activities. Again we are reminded of the idea that what lies at the heart of the museum phenomenon are sets of personal imperatives that were made social through an iterative process—continuing them or re-enacting them within the museum context.

Chapter 2 thus shows that the Museum's collections were a compulsive, ebullient outpouring from a people conditioned to the industrial townscape and moved by their longing for, and native love of, nature. Making meaningful sense from this outpouring was the task of Leeds' curators. Their unique position within that greater complex makes their lives of paramount importance to us, so it is to them we now turn. Chapter 3 looks at the practice that lay behind curatorial activities across the nineteenth century by using sets of overlapping biographies that aim to capture more precisely specific curatorial activities. This bottom-up approach to an understanding of the history of a museum throws light on current historiographic debates about how museums produced power, and what its form and function were. It also offers a challenge to the idea that the professionalization of the sector was an external force, inevitable and linear, that necessarily improved all that preceded it. Accepting that the national debates of the time did have influence on practice we state that, at Leeds at least, practice remained something that was highly changeable and largely personal. Each curator experienced an individual process of becoming, each with a different start and end point. Progress within museums, curatorship and the natural sciences came not as a result of an all-improving external causation but rather as an entangled social grass roots phenomenon with repercussions in all directions.

The curators at Leeds represent such differing imperatives. John Atkinson, the first curator at the Museum, held an honorary role afforded to a gentleman scholar who nevertheless founded curatorial practice at Leeds and established the Museum's first categories. Henry Denny, who succeeded Atkinson in 1825, was

the first full-time paid curator and his example affords us an opportunity to better understand curatorial roles as part of the natural sciences. While, on the one hand, Denny adds an international perspective to the story of Leeds he also introduces a sense of domesticity, living as he did in the Museum cellars with his family and domestic staff until the 1860s. Denny's successor in 1871, Louis Compton, represents a model of curatorial practice at a vital time when the landscape was changing around the newly formed Yorkshire College of Science. As both curator at the Museum and professor at the College, Miall's example reveals the impact of geographic changes at the time and enables us to explore curatorial imperatives and ambitions at this cross-roads, revealing the contestations and debates that spilled out. In many ways the antidote to Miall, Henry Crowther served as Curator from 1893 to 1928 and provides the chance to consider the curatorial role on the brink, as it was then, of becoming a municipal museum. In Crowther we find a museum populariser who was able to keep abreast of new technologies such as photography and cinematography and exploit them to further the role of museums as popular educator and entertainer.

Curatorial practice emerges from this account as an entangled activity requiring the synthesising of different fields of practice, different social worlds and different spaces in order better to measure its role. With a strong leaning towards canonical collections within national museums, current historiography has been slow to recognise the role of individual curators and discrete settings in creating museum policy, form and function. The examples offered in this thesis help us better to understand the agency of the curator within the museum complex. They also make clear that curators often did not command the level of control and orchestration of the public-facing activities of a museum that would have been necessary to achieve the kind of ideological power imputed to museums by Foucauldian histories. Given the mountainous backlogs and ongoing cataloguing they had to contend with, curators at Leeds could not possess such influence.

As the final two chapters show, the reformations of the Leeds Museum at the end of the century to some extent disempowered the curator. The 1850 Public Museums Act put the fiscal mechanism in place for such changes to the museum sector. However, more thorough reforms took the lobbying of the BAAS and the Museums Association around the 1880s, as a result of which regional museums were redeveloped into municipal institutions. While, in the new context, much of the physical work would still rest with the curators, many of the decisions and responsibilities-around, say, collecting activities-became civic policies bound by standards of practice that defined the expectations of roles. The creation of the many municipal museums from out of older literary and philosophical institutions saw the creation of a new civic position in the cultural landscape, that of the museum director, for it was they who now governed the new municipal museums. The undermining of curatorial autonomy inevitably involved some degree of dispute and contestation.

The transferral of existing regional collections into the operational structures and procedures of a town council structure required extensive restructuring, leaving little, if anything, of former strategies, imperatives and patterns of activities—it was intended after all to affect wholesale reform and professionalise practice. The Leeds case indicates that discourses around the subject of mergers involved dramatic rationalising and disposal of the collections themselves. As a mechanism of change it undoubtedly excluded individuals connected to the former collections. Such extensive changes indicate a fundamental shift in the power relations within institutions which also changed the narratives emerging from museums at the time and the primary sources available for interpretation by historians. Perhaps it is a little ironic that, after the mergers of the 1880s, the socalled municipal museum movement struggled to counter the key issues that had bedevilled museums beforehand, especially issues over effective collecting practices and collections management and the impact they had upon a museums resources.⁸⁹ When looking at the early municipal museums we find very similar narratives to those at Leeds the century before-of contingencies and ad hoc activities, contesting groups, overflowing storerooms, cataloguing backlogs, changing interpretation imperatives and no money.⁹⁰ However, it was no longer the sole responsibility of the curator. No longer was the curator required to steer the ship and it was at this point that there was a shift from the curator to the director as the author of museums.

⁸⁹ Hill (2005): 145. ⁹⁰ Ibid.

In addition to showing that the Leeds Museum's history rapidly came to be dominated by issues of containment, rather than ideology, and that the key figures in its management (curators and latterly directors) were heavily preoccupied with those issues, the thesis also examines the ongoing attempts of the Museum to display its collections in a manner appropriate to the township's rapidly changing publics. This is made a particular focus in Chapter 4, but also forms a significant element of the following two chapters. In the process, the thesis explores how, within the LPLS and the Museum, the definition of the term 'the public' changed across the nineteenth century. An example is its usage within the printed records of both the Museum and the LPLS at the beginning of the nineteenth century in comparison to those at the end. Initially, Ordinary Members were referred to as 'the public.' This was intended to distinguish the Ordinary Member from select committees, propriety members and museum staff and was employed in the reports and transactions.⁹¹ However, this internalist definition of the term had largely disappeared by the end of the century when 'the public' came to mean non-members of the Society.

Seen as a slow change over the century, the evolution of the term within the Museum's rhetoric settled into a more expansive definition around the period of self-reflection and reappraisal evident within the Society and Museum from the 1860s, as discussed in Chapter 5. While there were clear needs for such a reappraisal of practices and strategies by the Museum and the Society at this time, such imperatives were also informed by calls for a nationwide reform of the museum sector by lobbying groups such as the BAAS and the Museums Association, whose agendas by this time had begun to carry authority across the sector. By the 1880s, when the broad move towards municipal museums is generally accepted to have got under way, the use of the term within Leeds' rhetoric was largely in line with national discourse. Nevertheless, the change was in reality more nuanced. Across the first half of the nineteenth century both the internalist definition and the broader use of the term was in use by the

⁹¹ For an example, look at the reporting of annual meetings in the Society's *Transactions* at this time in which the public were allowed into the meetings after the select committees had had their private meetings. The use of the term here denoted the remainder of the Society's members, outside of those select committees.

Society and Museum side-by-side without distinction. Complicating the matter further is the use of the term by other groups who referenced the Museum, such as contemporary newspapers like the *Leeds Mercury*, the *Leeds Intelligencer* and the *Yorkshire Evening Post*. While groups such as the BAAS and the Museums Association sought cohesion and synthesis and so edged the rhetoric around the term 'the public' towards a more universally accepted definition, the press offered discursive and subjective commentary, especially in letters 'to the editor', keeping more discursive and plural interpretations alive.

Understanding the public dimension of historical museums requires understanding the language in and around those institutions. What is clear from the Leeds case is that it meant different things to different people at different times. The display of natural history at Leeds was intended to demonstrate taxonomic order in each particular collecting field—the systematics of zoology, entomology, geology and so forth. However, the degree to which such a strategy could translate to the physical exhibits was largely dependent on the Museum's contingencies, as highlighted in this thesis. The narratives emerging from Leeds suggest that the opportunity for interpretative clarity among the exhibits was constantly compromised by the over-abundance of miscellaneous material as well as by the demanding and costly maintenance that all natural history collections require. This is seen in the difficulties the Museum faced when attempting to establish non-taxonomically themed exhibits. In the second section of Chapter 2 we discussed the inability to establish such themes. While the intent was clear, acquisitions consisted largely of natural history. Re-organising displays and tidying-up galleries immediately impacted on other spaces and gave but temporary relief against ongoing acquisitions. The photographic evidence of private and back-of-house spaces such as the library and the cellars depict spaces appropriated by museum practice-used for the manufacture of displays, for photographing the collections and for storage. In addition, the collections were liable to expansive re-descriptions and re-classification at any moment, as a result of the progress of science across the nineteenth century.

These facts alone would have impaired effective communication with the Museum's visitors. We should here consider the various other activities of the

Museum, such as the publication of museum guides, the magic lantern shows, conversaziones, the lecture programme and the cinematography, as not just creative public-facing initiatives but also responses to the issues surrounding effective interpretation and display. As the century progressed, visitors to the Museum at Leeds were increasingly lay and working-class. This did not create any sense of success by the Museum and neither did it see in a new period of public engagement, rather adding new layers of contingencies and contestations for its managers that seemed ultimately to inhibit and delay any thoroughgoing reforms. As Kate Hill has ably established, the working-class made use of such spaces according to their own needs and were not the blank canvass ripe for reform that middle-class museum managers seemed to have expected.⁹² At Leeds such changes also strained the Museum's relationship with its specialist groups, its local collectors and natural history clubs as well as with the growing academic community in the town. Indeed the accessible and engaging work of the assistant curator Henry Crowther at the end of the nineteenth century seems almost contradictory alongside the academic and professional ambition demonstrated by his manager, Louis Compton Miall. The presence of the polarity evident between Miall and Crowther is fitting for the end of the time line followed by this thesis, for it was on the one hand the university and on the other the municipality that offered the future for the majority of provincial natural history museums such as Leeds. It seems each had the right idea.

By setting aside politicized master narratives and focusing instead on the particularities of the Leeds case, the thesis has revealed that the acquisition of objects grew out of control, overwhelming initial purposes. It shows how curatorial practice emerged specific to particular institutions and disciplines, which despite the best efforts of the lobbyists continued through most of the nineteenth century. Curatorial knowledge was largely gained through a personal experience and as a result was specific to place and person. It had an authority within a museum's constitutional makeup that was unique and as a result curators played a central role in museum management. However, any such power was largely overwhelmed by the demands of the day-to-day lived experience of

⁹² Hill (2001).

natural history curators, added to which were ongoing financial constraints. This made it difficult for the institution to manage its interior spaces, displays, and interpretation as effectively as their publications did. The attempts to present the natural world at Leeds were responsive to the town's rapidly changing publics, but in a way that was heavily limited by resources and the singularity of its collections.

The Leeds case shows that the primacy of objects and collections is complicated. Where we might expect to have found a collecting strategy based upon salient scientific imperatives, with subsequent cataloguing, interpretation and dissemination via the exhibits and displays to a receptive public, we do not. Such an account is interrupted and problematized by the Leeds case at all its stages. Instead we find multiple ecologies of meanings at differing stages of an objects biography. At Leeds, collections were created under an umbrella of values and imperatives, which I argue were predominantly not scientific, regardless of initial intentions. Undoubtedly, such material was intended to perform as signifiers to scientific metanarratives or natural phenomenon, as a reference collection, whether that was speciation, animal camouflage, taxonomy, or animals in the service of man. Sometimes, as we saw with the case of the Irish Elk detailed in Chapter 2 Section 2.4, such acquisitions were intended to create new findings or serve to corroborate existing debates within the natural sciences. In addition, however, we find a complex accretion of intentions that included personal, social, cultural and civic imperatives. Through all of these desires weave the overwhelming temporal practical demands and exigencies that such collecting practices and the resulting collections incurred. It is undeniably true that traces of scientific intentions are evident among some of the processes mentioned above. But it has been important for this thesis to distinguish between the perceived necessity to create ideologically stable exhibits and the reality behind orchestrating that. Indeed, as Hill observes, such issues did not necessarily change under the management of municipal or university authorities.

What is the Wider Significance of This Thesis?

The Leeds case presents a considerably different picture than the dominant historiography and the history of museums tells us to expect. The findings submitted in this thesis demonstrate the value for scholars of the distinctive approach adopted, in which grand narratives about politics and class are reconsidered as being conditional upon to the histories that emerge from detailed examination of the practical exigencies of managing the Museum. This has arisen firstly through necessity born out of the demands of the various sources and then later through encouragement from within an emerging revisionist historiography. The majority of the initial findings challenged dominant assumptions within the historiography. My own desire to seek cohesion and clarity was similarly challenged. These were obstructive and not necessary in order to proceed towards an understanding. Instead, I submit that the insights gained through analysis of the day-to-day realities and particulars, and the journey you take to understand how each contributed its own agency, speak to the realities of the phenomenon in ways not possible from other conceptual and methodological approaches. This demonstrates the opportunities for historian in addressing the day-to-day physical realities of a phenomenon. This final section begins then by considering this key issue and goes on to review a number of ways that this approach is successful, suggesting important topics for further consideration.

The degree to which a museum allegedly exerted power, the effectiveness of its interpretation and the impact it had on its publics have all been brought under question. Despite the intentions of the founders, curators and staff alike, the Leeds Museum appears to have been driven more by sets of more temporal, contingent and socially orientated factors than the existing historiography suggests. This thesis submits that it was these existential and temporal realities, found among the social entanglements, the quotidian and disorderly that represented significant factors in defining to a far greater extent the reality of the Museum's form and function. Taking seriously the complexities of day-to-day museum life opens the door to further studies for scholars working within the

newly emerging historiography of museums. As with this study, that will entail historians finding and immersing themselves in a much wider pool of primary sources, to understand those complexities. Such an approach requires the use, as here, of a wider range of perspectives, drawn from different disciplines, including collections history, historical geography, colonial history, and architectural history.

A second issue that the thesis highlights for scholarly attention is the tension and elasticity that often exists in natural history museums between scientific and other frames of meaning for museum objects. All collections become freighted with complex sets of meanings during their trajectory within museums. However many authors agree that the complexities of meanings encompassed by natural history collections make for a special case.⁹³ As the thesis shows, the dialectic between the physical demands of natural history collections and scientific precepts was especially significant in generating such complexities. In particular, the analysis of the collections at Leeds has shown that the individual motivations of members of the public to donate natural history were frequently in tension with the Museum's need to implement up-to-date taxonomies and scientific theories. Much work remains to be done on these tensions, however, and the hope is that the thesis serves to encourage further studies on this subject from different conceptual perspectives.

A third issue that the thesis has highlighted is the issue of continuity and change within the Museum. It is not so much the changes that the Leeds Museum faced that defines it but rather the way in which it responded to such challenges. Understanding the impact that change had on form and function has been important in this thesis. Nineteenth-century Leeds saw large changes within the sciences, changes across the academic horizon of town, changes within a broader museum ideology, transitioning social groups in the town and changes to individuals such as curators within the Museum. Such analysis requires an iterative approach in order to grasp the saliency of seemingly disconnected and discrete conditions and build a more thorough ecology of the phenomenon. In so

⁹³ Loughney (2005) and Hill (2005).

doing this thesis has sought to approach key topics—display, architecture, space, audience, relations between museums and teaching institutions, relations between museums and civic culture, professionalization of curating—with different conceptual frameworks, drawing different conclusions from earlier scholars. This conceptual approach offers a model or prototype and invites further attention to the processes of change in other museums and at other times.

The thesis has demonstrated how change was felt across the Museum's various activities as well as the impact that transitions within cultural and social contexts in the town had on the Museum. Such considerations have helped in acknowledging that certain groups have been marginalised or omitted entirely from existing accounts. We now need histories that consider more extensively museum users-not just visitors but contributors to the making of museums-as recently signalled by Kate Hill's Women and Museums 1850-1914: Modernity and the Gendering of Knowledge.⁹⁴ We need histories of the disenfranchised, more histories of the staff.⁹⁵ These areas will prove fruitful when applied to the under-researched provincial museums as well as the already well researched national museums. The terms 'plurality' and 'diversity' are already widely dispersed in museum rhetoric. We have to keep these terms invested with meaning and at the forefront of our minds at all times if museums are to learn from their histories and adapt to the significant changes in the social fabric and priorities of the communities that surround them and the publics they interact with. Scholars will need to challenge the presumption that museums are relevant-the bedrock of civilised society-and ask difficult questions about why and how museums continue to acquire, preserve and interpret objects and collections. The only presumption we should take to the study of museums is that they are always multivalent and in ways we have yet thoroughly to understand.

Perhaps one of the more surprising findings of this study is that things do not need to be ordered, clear or logical for us to proceed towards an understanding. Instead, I submit that the insights gained through analysis of the day-to-day realities and particulars, while often contradicting and interrupting existing

⁹⁴ Hill (2016).

⁹⁵ See Aberti (2009): 17-19 and Alberti (2007): 371-403, in Fyfe & Lightman (eds) (2007).

histories, say more about the realities of the phenomenon than other conceptual and methodological approaches have done. Museums seem typically to have been established on sets of presumptions not just around ideology but also around stability and permanency—to collect and preserve in perpetuity and thus to create a stable account. One might even suggest that the ideology emerged because of a presumption towards stable and cohesive accounts. This, I argue, stood in contrast to the lived realities behind museums, which were characterised by constant change and contestation, creating a curious mismatch between the desire for permanence and the reality of change. A contingent history like the one offered in this thesis and in other revisionist studies brings us face to face with the reality that museums were not the sites of stability and cohesion suggested by earlier histories but instead were and still are, in constant transition.

Despite all the obstacles—the diversions, contestations, even bombings—the Leeds Museum persisted from its constitution in 1819 to the present day. Herein lies the enigma. Through a deeper grasp of the ecology of this remarkable institution we may detect that somehow the vagaries of the phenomenon afforded the Museum a multivalence that enabled an almost organic adaptation and survival of sorts. This adaptation and survival was not one envisaged by its founders, nor was it one worked towards by its curators or indeed expected by its historians. That it was primarily a natural history collection makes the enigma more tantalising, for it could be argued that the expression of this human invention mirrored something of nature itself and ourselves within it. Through the complex array of possibilities, contestations, acquisitions made and opportunities missed, something adapted and endured because of the Museum's inability to apply hard and fast regulations. It was perhaps not a survival in the form expected by those involved, but survive it did, incompletely and greatly changed. It is behind that enigma that the full nature of the phenomenon exists.

Undoubtedly, museums are deceptive—they change the moment we look at them and move the moment we reach for them. When force is applied, resistance is experienced. In museums we created something we did not expect or imagine. Here I recall the dedication made at the very start of the thesis to Mary Shelley's *Frankenstein, or, The Modern Prometheus*, first published the same year that the
Leeds Philosophical and Literary Society was devised in 1818. Perhaps, in the Leeds Museum, we made something that was constructed from parts of ourselves, a monster of sorts which pertains to individual and social responsibilities around our relationship with nature and science. Once alive it began threatening the survival of itself and its creators and in so doing created glimpses into some of our deeper preoccupations. The ideological aims of the broader museum phenomenon are perhaps diversions, then, from other subconscious motives that pertain to identity and self within an increasingly denatured and dehumanised changing world. Given the considerable changes that western societies will experience over the next few generations, brought about by climate change, the ability to learn something from the repetitions of museums histories will undoubtedly define how well museums can renegotiate their positions within that greatly changed world. Given their subject field, this is especially true for natural history museums and collections.

Tables

Table 1.1 Religious, political and occupational status of founderswho became Proprietary Members.

Name	Religious	Politics	Occupation	Politically	Civic
	denom.			active	position
Edward Baines	Methodist	Whig	Proprietor/Editor	\checkmark	\checkmark
(sen.)			of the Leeds		
			Mercury		
George Banks	Anglican	Tory	Cloth Merchant	\checkmark	\checkmark
Thomas Blayds	Anglican	Tory	Banker	\checkmark	\checkmark
Benjamin Gott	Anglican	Tory	Cloth Merchant	\checkmark	\checkmark
			and Manufacturer		
John Gott	Anglican	Tory	Cloth Merchant	\checkmark	\checkmark
			and Manufacturer		
John Marshall	Dissenter	Whig	Cloth Merchant	\checkmark	\checkmark
			and Manufacturer		
Michael T	Anglican	Tory	Cloth Merchant	\checkmark	\checkmark
Sadler			and Politician		
Thomas W	Dissenter	Whig	Solicitor	\checkmark	
Tottie					

Table 1.2 Political alliances among LPLS members as apercentage

Туре	Tory %	Whig %	Unknown %
Of the 22 Founders	50	32	18
Of the 37 Proprietary Members	32.4	21.6	46

Appendix

The two plans below show Philosophical Hall downstairs (top image) and upstairs (lower image) and indicate the position of each photograph used in this chapter. These are referred to by numbers, each representing the Figure number of the photograph as it appears in the chapter—Figure 4.0 appearing on the above plan as number 1. Because many more photographs were taken than could be used in the chapter, and each throws yet more light on what the Museum was like at the end of the nineteenth century, a small selection of a further nineteen additional photographs appear below. Each of these can be located on the above plans by using its corresponding alphabetical letter—from a, to s. Source: Leeds City Museum.



Russel Street





Photograph a Several busts of the founders photographed in the Library. From left to right; William Hey, Sir John Beckett, Michael T. Sadler, unknown, and William hey Junior.



Photograph b One of only two photographs found of the Lecture Hall.



Photograph c The Schools Scheme in practice, in the Large Zoology Room.



Photograph d The Schools Scheme in practice, in the South Geological Room.



Photograph e The Cave Bear, in the Large Zoology Room.



Photograph f The collection of stone implements. At the top of the stairs.



Photograph g The Large Zoology Room.



Photograph h The North geology Room's displays of cave remains and cup and circle casts above.



Photograph i Lias and Oolite fossils. Entrance to the North Geological Room.



Photograph j Display of the anatomy of feathers in the Bird Room.



Photograph k View across the gallery to the West wall in the Large Zoology Room, and the displays of invertebrates.



Photograph 1 From the top of the stairs across to the South Geological Room's doorway.



Photograph m Display of bird bills in the Bird Room.



Photograph n The Museum's Moa, displayed in the Bird Room.



Photograph o The collections of Devonian and Carboniferous fossils in the South Geological Room.



Photograph p The Large Zoology Room. Brain Coral, Cave Bear and Irish Elk in the distance.



Photograph q Photograph of the back and side of the Irish Elk.



Photograph r The Bird Room, looking North with the Moa to the direct right.



Photograph s View across the gallery to the East wall in the Large Zoology Room with the displays of dogs underneath.

Bibliography

Archival material

Leeds University Library

Waterhouse Plans, 1877-1897. Plans Chest I Drawer 1.

University of Leeds Archive.

- Administrative Records: Buildings: Planning Office Papers, 1878-1994. University of Leeds Archive.
- Prospectus of preliminary laws for the establishment of a Philosophical and Literary Society in Leeds. Leeds, B Dewhirst, 1819.
- LPLS Annual Reports, General Meetings, Council Minutes and Proceedings with Occasional Notes from (1822-23) – (1920-1921).

Leeds University Library, Brotherton Library Special Collections, Papers of the Leeds Philosophical and Literary Society.

- MS DEP 1975/1/1. General minute book of transactions, 1821-1841; prefaced with a list of members and officers; forms of admission and order of business; attendance register of ordinary members during first session.
- MS DEP 1975/1/3. Council minutes, 1822-1840.
- MS DEP 1975/1/4. Account book, subscriptions and building account, 1819 1823.
- MS DEP 1975/1/5. Council minute book, 1819-1822; contains also a list of proprietary and ordinary members.
- MS DEP 1975/1/6. Building committee minute book, 1819-1827.
- MS DEP 1975/1/7, (i). The Laws and regulations of the Philosophical and Literary Society of Leeds. Leeds. Edward Baines, 1823. 20 ff. [Interleaved and amended.]
- MS DEP 1975/1/7, (ii). Report of the Council on the general state of the Leeds Philosophical and Literary Society 1822-3. Leeds. Edward Baines, 1823. 24pp.
- MS DEP 1975/1/7, (iii). Fourth report of the Council on the general state of the Leeds Philosophical and Literary Society 1823-4. Leeds, Robinson and Hernaman, 1824. 20pp.
- MS DEP 1975/1/7, (iv). Fifth report of the Council on the general state of the Leeds Philosophical and Literary Society 1824-5. Leeds, Edward Baines. 1825. 20pp.
- MS DEP 1975/1/8. Conveyance of property on Park Row Leeds, from Thomas and Charles Makins to George Banks and others, 17th August 1819. Plan attached.
- MS DEP 1975/1/11, (i). Prospectus of preliminary laws for the establishment of a Philosophical and Literary Society in Leeds. Leeds B Dewhirst, 1819.
- MS DEP 1975/1/11, (ii). Notebook of draft minutes 1819-1823; memoranda of subjects for discussion and attendance register.

- MS DEP 1975/1/11, (iii). The Fiftieth report of the Council of the Leeds Philosophical and Literary Society 1869-70. Leeds. C Goodall, 1870.
- MS DEP 1975/1/12, (ii). notes on disposal of assets to Leeds Corporation. 1920.
- MS DEP 1975/1/63. Alphabetical list of ordinary members in 1827, together with supplementary lists of ordinary members joining in subsequent years. c. 1870.
- MS DEP 1975/1/87. Print of architect's perspective drawing and ground plan of Williams Brown's Bank. [no date].
- MS DEP 1975/1/88. Sketch elevations of Philosophical Hall and the new bank buildings and previous buildings. 1897.
- MS DEP 1975/1/106. Notice of an extraordinary general meeting to be held on 17th April 1905 together with relevant papers. 1905.
- MS DEP 1975/1/107. Press cutting from the Leeds Mercury, 7th April 1905. Giving notice of an extraordinary general meeting.
- MS DEP 1975/1/108. Press cuttings from the Yorkshire Post, 18th April 1905. Reporting the extraordinary general meeting of the Society.
- MS DEP 1975/1/109. Press cutting from the Yorkshire Post, 27th April 1905. containing a pseudonymous letter to the Editor about the affairs of the Society.
- MS DEP 1975/1/124. Louis Compton Miall. Guide to the Museum of the Leeds Philosophical and Literary Society. Leeds, Jowett & Sowry. (1890): 8
- MS DEP 1975/1/130. Press cutting from the Yorkshire Post. 9th May 1904, containing a letter from James E Bedford to the Editor about the affairs of the Society, together with a draft reply.
- MS DEP 1975/1/139, (i). Committee for Providing Increased Accommodation. 1860-1861.
- MS DEP 1975/1/139, (ii). Building Committee. 1861-1863.
- MS DEP 1975/1/144. Book of draft minutes of council and various committees. 1912 - 1929.

MS DEP 1975/1/146. Minute book of the Society's Council, 1840 - 1873.

MS DEP 1975/1/ 147. Minute book of the Society's Council, 1873 - 1905.

MS DEP 1975/1/148. Minute book of the Society's Council, 1905 - 1921.

MS DEP 1975/1/149. Minute book of the Society's Council, 1921-1934.

MS DEP 1975/1/150. Minute book of general meetings, 1842 - 1873.

MS DEP 1975/1/151. Minute book of general meetings, 1873 - 1921.

MS DEP 1975/1/152. Minute book for committees, 1900 - 1908.

MS DEP 1975/1/153. *Minute book for committees*. 1922 - 1929.

- MS DEP 1975/1/169. [Louis Compton Miall]. *Descriptive guide to the collection* of British birds in the museum of the Leeds Philosophical and Literary Society. Leeds, McCorquodale, 1874. frontispiece [Two copies.]
- MS DEP 1975/1/170. [Louis Compton Miall]. *Descriptive guide to the mineral collection in the museum of the Leeds Philosophical and Literary Society.* Leeds, McCorquodale, 1872.
- MS DEP 1975/1/171. Henry Crowther. General guide to the museum of the Leeds Philosophical and Literary Society. Leeds, Chorley & Pickersgill, 1897.
- MS DEP 1975/1/278 (iii.) Henry Crowther. General guide to the museum of the Leeds Philosophical & Literary Society. 6th edition, Leeds. Chorley & Pickersgill, 1915
- MS DEP 1975/1/278 (vi). Louis Compton Miall. Descriptive guide to the mineral collection in the museum of the Leeds Philosophical and Literary Society. 2nd edition, Leeds, McCorquodale, 1884.
- MS DEP 1975/1/193. Catalogue of the Library of the Philosophical & Literary Society of Leeds. [Leeds], 1883. 25 [1] pp. [Interleaved with blanks]
- MS DEP 1975/1/199. Thirty-eight miscellaneous receipted bills, 1868 1870: Edward Baines (Leeds Mercury), advertisements and printing (2); Matthew Bywater, coals; John Calvert, zoological specimen; M Cross, zoological specimens; R Cundall, zoological specimens(2); T Fenteman,

books; Edward Gerrard, zoological specimen; C Goodall, [unknown]; Thomas Harding, tea;.

- MS DEP 1975/1/205. Report of the Committee for the Arrangement and Disposal of Collections, 1895.
- MS DEP 1975/1/206: 2. Report of the committee on means of extending the usefulness of the Society, 1894.
- MS DEP 1975/1/207. Report of the Committee on the reconstruction of the Society, 1905.
- MS DEP 1975/1/209. Printed circular letter from the Reverend Charles Hargrove, President of the Society, to members of its Council, about the report of the committee on extending the usefulness of the Society, 1895. [Two copies]

Uncatalogued material

Visitors Book Uncatalogued Ledger No. 114

Donations to the Museum of the Leeds Philosophical and Literary Society, 1821-1850.

Leeds City Museum, Discovery Centre, Collectors Files.

Bill of Lading, September 1869.

- Catalogue of casts of ivory carvings, issued by the Arundel Society in 1855, and presented to the Leeds Philosophical & Literary Society, 1871.
- Descriptive Guide to the Collection of British Birds in the Museum of the Leeds Philosophical and Literary Society, 1874.
- General Guide to the Museum of the Leeds Philosophical and Literary Society, (1897).
- General Guide to the Museum of the Leeds Philosophical and Literary Society, (1906).
- General Guide to the Museum of the Leeds Philosophical and Literary Society, (1915).
- Guide to the Museum of the Leeds Philosophical and Literary Society, (1854).
- Letter from R. Glennon, Dublin, to H. Denny, Leeds, 10 July 1847. Denny file.
- Letter from R. Glennon, Dublin, to H. Denny, Leeds, 4 February 1848. Denny file.
- Letter from R. Glennon, Dublin, to H. Denny, Leeds, 12 February 1848. Denny file.
- Letter from James Agnew to H. Denny dated 25 March 1869. Denny file.
- Letter from Henry Denny to Joshua Swann December 31, 1864. Denny file.
- Letter from Henry Denny to William Gott, 8 November 1832. Denny file.
- Letter from Professor Garstang to the Pro-Vice Chancellor (University of Leeds)12 January 1914. Nelson file.
- Syllabus of Lectures. 1900.
- Violet Crowther, unpublished notes. Henry Crowther File.

Glass plate slides

- Henry Crowther Collection. Leeds discovery Centre photographic store, Leeds City Museum.
- Garnett, Box 7, Shelf 1.3.1. Leeds discovery Centre photographic store, Leeds City Museum.

Published Sources: before 1921

- Anon. Letter from Thomas Carlyle to John Stuart Mill, 9 March 1835, Carlyle Letters, Vol. 8.
- Anon. Hansard's Parlimentary Debates. Report of the Secret Committee of the House of Lords Respecting Certain Dangerous Meetings and Combinations, House of Lords, 18 February 1817, vol. 35, Chapter 418.
- Anon. Catalogue of Scientific Papers (1800-1868), Royal Society (1868): 239.
- Anon. House of Commons Debate, Vol. 108, 14 February (1850): 759.
- Anon. House of Commons Debate, Vol. 78, 6 March (1845): 381.
- Anon. Annual Report: Leeds Conchological Society, Leeds Conchological Society (1895).
- Anon. Specimen courses of object lessons and instruction in gardening in actual operation in elementary schools. (1902). London, HMSO.
- Anon. 'Eighty Eighth Report of the Council: 1906 1907.' Journal of Conchology, (1908): 32.
- Anon. 'Eighty Ninth Report of the Council: 1908 1909.' Journal of Conchology, (1909): 32.
- Anon. 'Ninetieth Report of the Council: 1909 1910.' Journal of Conchology, (1910): 32.
- Anon. Memorial of a Leeds Naturalist: Shells and Books Presented to the University. *Yorkshire Post.* 1914.
- Anon. BAAS 'Report to the Council of the Corresponding Societies Committee.' Journal of Conchology, (1886): 5 - 23.
- Baines, E. (1817). Directory, general and commercial, of the town & borough of Leeds, for 1817. Leeds, Edward Baines.
- Baines, E. (1851). The Life of Edward Baines: Late M.P. for the Borough of Leeds. London and Leeds, Longmans and Reid Newsome.
- Berkenhout, J. (1795) Synopsis of the Natural History of Great-Britain and Ireland. London, T. Cadell.
- Bowley, A. L. (1900). *Wages in the United Kingdom in the 19th Century*. Cambridge. Cambridge University Press.
- Bunting, R. (1900). New object lessons: Plant life. London, Isaac Pitman.

Carroll L. (1866) Alice's Adventures in Wonderland, London, Macmillan.

- Clark, G. (1865). On the discovery of bones of the Dodo in Mauritius. *Mauritius Commercial Gazette*.
- Clark, G. (1866). 'Account of the late discovery of Dodos' remains in the island of Mauritius.' *Ibis* 2 (2): 141–146.
- Clifford, J. R. S. (1873). 'Concerning Local Museums.' *Yorkshire Naturalists' Recorder* 7: 109 – 111.
- Cockerell, P. (1917). 'Letters to the Editor.' Nature 119: 84.
- Collinge, W. E. (1898-1900). 'Proceedings of the Midlands Malacological Society.' *Journal of Malacology* 7: 17-18.
- Darwin, C. R. (1859). On the origin of species by means of natural selection, or the preservation of favoured races in the struggle for life. London: John Murray.
- Denny, H. (1825), Monographia Pselaphorum et Scydmaenorum Britanniae, or, An essay on the British species of the genera Pselaphus of Herbst, and Scydmaenus of Latreille. S. Wilkin.
- Draper, W. (1912). Sir Nathan Bodington: A memoir. London. Macmillan.
- Farish, W. (1796). A plan of a course of lectures on Arts and Manufactures, more particularly such as relate to chemistry. Cambridge, J. Burges.
- Fletcher, P. (1887). Queensland: It Resources and Institutions. Issues in Connection with the Colonial and Indian Exhibition, 1886. London. William Clowes & Son.
- Flower, W. H. (1865). 'On the Commissures of the Cerebral Hemisperes of the Marsupialia and Monotemata as compared with those of the Placental Mammals.' *Philosophical Transactions of the Royal Society*. 155: 633.
- Flower, W. H. (1893) 'Museums Association.' Nature, 48: 234-236, 254-257.
- Freeman, J. (1852). *Life of the Rev William Kirby, MA, FRS, FLS, &c.* London Longman Green Brown & Longmans.
- Gosse, P. H. (1861) *The Romance of Natural History*. Boston, Gould and Lincoln.
- Hammond, J. B. (1919). *The skilled labourer, 1760-1832*. London and New York, Longmans, Green.

- Hart, J. (1825). Description of the Skeleton of the Fossil Deer of Ireland Cervus Megaceros; drawn up at the instance of the Committee of Natural Philosophy of the Royal Dublin Society. Dublin. R. Graisberry.
- Higginson, H. (1891) *Reminiscences of Life and Travel*. Unpublished manuscript courtesy of Alistair McOran-Campbell (great-grandson of Harry Higginson).
- Horsley, J. W. (1904). 'A Standard Value for Exchanges.' Journal of Conchology 11(1): 26.
- Huxley, T. H. (1869). 'On a new Labyrinthodont from Bradford.' *Quarterly* Journal of the Geological Society. 25 (1-2): 309-311.
- Kenyon, A. F. (1909). 'On the Deterioration of Shells in Cabinets.' Journal of Conchology 12(10): 258.
- Kirby, W. and Spence, W. (1857). An introduction to entomology; or, Elements of the natural history of Insects: comprising an Account of Noxious and Useful Insects, of their Metamorphosis, Food, Strategems, Habitations, Societies, Motions, Noises, Hybernation, Instinct, ETC, ETC. London. Longman.
- Lecky, W. E. H. (1890). *A history of England in the eighteenth century*. London, Longmans, Green.
- Mayhall, J. (1860). The annals and history of Leeds: and other places in the county of York: from the earliest period to the present time. Leeds, J. Johnson.
- Mayhall, J. (1866). *The annals of Yorkshire: from the earliest period to the present time*. In two volumes. Leeds, J. Johnson.
- Mayo, E. (1832). Lessons on shells: as given to children between the ages of eight and ten in a Pestalozzian school, at Cheam, Surrey by the author of 'Lessons on Objects'. London, R.B. Seeley and W. Burnside.
- Melvill, J. C. (1909). 'Obituary Notice: R.D. Darbishire.' *Journal of Conchology* 12(10): 258.
- Miall, L. C. (1877). 'Museums.' Nature, (16).
- Miall, L. C. (1893). *Object Lessons in Nature: A First Book of Science*. London, Cassel & Company Ltd.
- Miall, L. C. (1904). *House, garden and field: a collection of short nature studies*. London, Edward Arnold.

Miall, L. C. (1897). Thirty years of teaching. London, Macmillan.

- Michael Foster and Thomas Henry Huxley, Correspondence, Letters 330-363, 1865–1895. In *Med Hist Suppl.* 2009; (28): 265–290. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2737296/#_sec47title
- Michell, J. (1784). 'On the Means of Discovering the Distance, Magnitude, &c. of the Fixed Stars, in Consequence of the Diminution of the Velocity of Their Light, in Case Such a Diminution Should be Found to Take Place in any of Them, and Such Other Data Should be Procured from Observations, as Would be Farther Necessary for That Purpose. By the Rev. John Michell, B. D. F. R. S. In a Letter to Henry Cavendish, Esq. F. R. S. and A. S.' *Philosophical Transactions of the Royal Society of London* 74: 35-57.
- Molyneux, T. (1697). 'A discourse concerning the large horns frequently found underground in Ireland.' *Philosophical Transactions of the Royal Society of London*. 19 (227): 489-512.
- Murdoch, W. (1808). 'An Account of the Application of the Gas from Coal to Economical Purposes: By Mr. William Murdoch. Communicated by the Right Hon. Sir Joseph Banks, Bart. K.B. P.R.S.' *Philosophical Transactions of the Royal Society of London* 98: 124-132.
- Murray, D. (1904). *Museums: Their History and Their Use*. 3 Vols, Glasgow, MacLehose.
- Nelson, T. H. and Clarke, W. E. (1907). The Birds of Yorkshire: Being an Historical Account of the Avi-Fauna of the County. London, A. Brown & Sons, Limited.
- Nelson, W. (1872). 'The Limnaeidae of the Birmingham District.' Leeds City Museum, Collectors folders. Leeds.
- Nelson, W. (1891). 'A Visit to Cooper's Hill, Gloucestershire.' Conchologist: A Quarterly Magazine for Conchologists 1: 36-38.
- Nelson, W. (1901). 'Note on Breeding Limnaea peregra monst. sinistrorsum.' *Naturalist*: 355.
- Nelson, W. (1901). 'Reversed Limnaea peregra in Leeds.' Naturalist: 216.
- Nelson, W. and Roebuck, W. D., et al., (1892). *The Conchological Society's List of British Land and Freshwater Mollusca*. Leeds, Conchological Society.

- Oldfield, T. (1888). Catalogue of the Marsupialia and Monotremata in the collection of the British Museum (Natural History). London: British Museum.
- Owen, R. (1846). A History of British Fossil Mammals, and Birds. London, John Van Voorst.
- Owen, R. (1866). *Memoir of the Dodo (Didus ineptus Linn.)*. London. Taylor and Francis
- Owen, R. (1865) Letter dated 1865 December 15. *Frances Hirtzel Collection*. https://digital.library.temple.edu/digital/collection/p15037coll18/id/514/re c/1
- Priestley, J. (1767). *The History and Present State of Electricity, with original experiments*. London, J. Dodsley, J. Johnson and T. Cadell.
- Priestley, J. (1806). *Memoirs of Dr. Joseph Priestley to the year 1795*. London, J. Johnson.
- Reid, T. W. (1883). A memoir of John Deakin Heaton, M.D. of Leeds. London, Longmans, Green and Co.
- Richardson, H. D. (1846) Facts concerning the natural history, & c. of the gigantic Irish deer, (Cervus giganteus hibernicus.) Dublin. J. M'Glashan.
- Roebuck, W. D. (1906). 'Obituary Notice of the Late William Nelson.' *Journal* of Conchology, 11(12): 357-359
- Royal Commission for the Exhibition of the Works of Industry of All Nations. (1852). *Reports by the juries on the subjects in the thirty classes into which the exhibition was divided*. London. William Clowes and Sons.
- Stelfox, A. W. (1908). 'The Colonization of Mollusca.' Journal of Conchology 12(6): 140.
- Stewart, J. W. (1832) The Treble almanack...containing: I. John Watson Stewart's almanack. II. English Court Registry. III. Wilson's Dublin directory. Dublin. C. Hope.
- Strickland, H.E. and Melville, A.G. (1848). *The Dodo and its Kindred*. London. Benham and Reeve.
- Taylor, J.W. (1913). Dominancy in Nature: And its Correlation with Evolution, Phlogeny, & Geographical Distribution. Leeds, Taylor Bros.
- Taylor, J. W. (1894-1921). Monograph of the Land and Freshwater Mollusca of the British Isles. Leeds, Taylor Brothers.

- Taylor, J. W. (1920). Leeds Naturalist Club History: Presidential Address. Leeds City Museum. Yeadon box. Leeds: 11.
- Taylor, J. W. and Roebuck, W. D. (1913). 'Report on the Investigation of the Land Mollusca in the North of Scotland.' *Scottish Naturalist*.
- Taylor, R. V. (1865). *The biographia leodiensis*. London, Simpkin, Marshall, and Company.
- Thackrah, C. T. (1821). 'An Introductory discourse delivered to the Leeds Philosophical and Literary Society.' *Papers of the Leeds Philosophical and Literary Society*, Leeds, Gawtress.
- Walker, J. (1875). *The handy book of object lessons: from a teacher's note book: second series.* London, Jarrold.
- Walker, T. (1794). The whole proceedings on the trial of indictment against Thomas Walker of Manchester, merchant, William Paul, Samuel Jackson, James Cheetham, Oliver Pearsall, Benjamin Booth and Joseph Collier for a conspiracy to overthrow the constitution and government and to aid and assist the French (being the kings enemies) in case they should invade this kingdom. Manchester and London, J. Johnson and J. Debrett.
- Weatherley, (1874) Catalogue for the auction of Calvert's collection, Catalogue of the Exceedingly Rare and Valuable Contents of the Leeds old Museum.Leeds. Samual Moxon Printers.
- Weaver, T. (1825). 'On the Fossil Elk of Ireland' Philosophical Transactions of the Royal Society of London. 115: 429-435
- Wiedemann, F. (1883). Chats with the children: an illustrated manual of object lessons, containing hints for lessons in thinking and speaking: adapted for infant schools, kindergartens, and nurseries / edited from the work of *F. Wiedermann by Henrietta P. Rooper and Wilhelmina L. Rooper; with twenty blackboard drawings.* London, W. Swan Sonnenschein.

Published Sources: after 1921

- Aaltonen, M., Barth, T., Casti, J. L., and Mitleton-Kelly, E., (2005). Complexity as a Sensemaking Framework. Monograph Report. FFRC Publication Series, 4/2005. Helsinki, Finland: TUTU Publications.
- Alberti, S. J. M. M. (2000). Field, Lab and Museum: The Practice and Place of Life Science in Yorkshire, 1870–1904. Unpublished PhD Thesis, University of Sheffield & University of Leeds.
- Alberti, S. J. M. M. (2001). 'Amatuers and Professionals in One County: Biology and Natural History in late Victorian Yorkshire', *Journal of the History of Biology*, 34, 115-47.
- Alberti, S. J. M. M. (2002). 'Placing Nature: Natural History Collections and Their Owners in Nineteenth-Century Provincial England,' *British Journal* for the History of Science, 35, 291-311.
- Alberti, S. J. M. M. (2003) 'Conversaziones and the Experience of Science in Victorian England'. *Journal of Victorian Culture*, 8: 208-230.
- Alberti, S. J. M. M. (2005a). 'Civic Cultures and Civic Colleges in Victorian England', in Daunton, M.J., ed., *The Organisation of Knowledge in Victorian Britain*. Oxford: Oxford University Press: 337-56.
- Alberti, S. J. M. M. (2005b). 'Owning and Collecting Natural Objects in Nineteenth-Century Britain', in Barretta, M., ed., *From Private to Public: Natural Collections and Museums*. New York: Science History Publications: 141-54.
- Alberti, S. J. M. M. (2005c). 'Objects and the Museum', Isis, 96, 559-71.
- Alberti, S. J. M. M. (2007). 'The Museum Affect: Visiting Collections of Anatomy and Natural History', in Fyfe, A., and Lightman, B., eds., Science in the Marketplace: Nineteenth-Century Sites and Experiences. Chicago, University of Chicago Press: 371-403.
- Alberti, S. J. M. M. (2009). *Nature and Culture: Objects, Disciplines and the Manchester Museum*. Manchester, Manchester University Press.
- Allen, D. E. (1976). *The Naturalist in Britain: A Social History*. London, Allen Lane.

- Allen, D. E. (1985). 'The Early Professionals in British Natural History', in Wheeler, A. and Price, J. H., 'Linnaeus to Darwin: Commentaries on the History of Biology and Geology'. Society for the History of Natural History Special Publication, No. 3. London: Society for the History of Natural History: 1–12.
- Allen, D. E. (1988). 'The Survival of the Amateur Tradition in the Newly Professional World of Biology.' Program, Papers, and Abstracts for the Joint BSHS-HSS Anglo-American Conference: 77–84.
- Anderson, R. D. (1992). Universities and Elites in Britain Since 1800. Cambridge, Cambridge University Press.
- Anning, S. T. (1963). *The General Infirmary at Leeds*. London, E & S Livingstone Ltd.
- Anning, S. T. (1978). 'The History of Medicine in Leeds.' Proceedings of the Leeds Philosophical and Literary Society Literary and Historical Section 16: 203–246.
- Arnold, K. (2006). Cabinets of the Curious: Looking Back at Early English Museums. Aldershot, Ashgate.
- Barber, L. (1980). The Heyday of Natural History, 1820-1870. London, Cape.
- Barker, H. (2004). "Smoke Cities": Northern Industrial Towns in Late Georgian England." Urban History 31(2), 175-190.
- Bartlett, M. (1969). Learned Societies, Museums, and Art Gallery. A History of the County of York and East Riding. London, Oxford University Press, Institute for Historical Research.
- Beckwith, F. (1949). Printed Works Referring to the History of Leeds Before ca.1900: A Draft Bibliography Prepared by Frank Beckwith. Brotherton Special Collections. Leeds.
- Beckwith, F. (1968). *The Leeds Library* 1768-1968. [Leeds?] : Printed for private circulation
- Bennett, T. (1995). *The Birth of the Museum: History, Theory, Politics*. London, New York, Routledge.
- Beratta, M., ed., (2005). From Private to Public: Natural Collections and Museums. Sagamore. Beach, MA: Science History Publications
- Beresford, M. (2004). John Marshall, (1765–1845). Oxford Dictionary of National Biography. Oxford, Oxford University Press.

- Beresford, M. W. and Jones, G. R. J., eds., (1967). *Leeds and Its Region*. Leeds, British Association for the Advancement of Science.
- Berman, M. (1972). 'The Early Years of the Royal Institution 1799-1810: A Re-Evaluation.' Science Studies 2(3), 205-240.

Bernal, J. D. (1939). The Social Function of Science. London, Routledge.

- Bourgat, R. (1995). 'Perpignan Museum: From Natural History Cabinet to Municipal Institution.' *Journal of the History of Collections*, 7, 73–80.
- Bourne, J. M. (1986). *Patronage and Society in Nineteenth-Century England*. London, Edward Arnold.
- Bowden, M. E., ed., (2005). *Joseph Priestley, Radical Thinker*. Philadelphia, Chemical Heritage Foundation.
- Bowler, P. (1992). *The Fontana History of The Environmental Sciences*. London, Fontana.
- Bowler, P.J. & Morus, I.R. (2005). *Making Modern Science: A Historical Survey*. Chicago, University of Chicago Press.
- Boycott, A. E. (1931). 'Obituary Notice: John William Taylor 1854-1931.' Journal of Conchology 19 (6): 156-161.
- Boycott, A. E. and Diver, C. (1923). 'On the Inheritance of Sinistrality in Limnaea peregra.' *Proceedings of the Royal Society of London*. 95 (666): 207-213.
- Boycott, A. E. and Diver, C. (1930). 'Abnormal Forms of Limnaea Peregra Obtained in Artificial Breeding and their Inheritance.' *Journal of Molluscan Studies* 19(3): 141 - 146.
- Boycott, A. E., Diver, C., Garstang, S. L., Turner, F. M., (1931). 'The Inheritance of Sinistrality in Limnaea peregra (Mollusca, Pulmonata).' *Philosophical Transactions of the Royal Society of London. Series B, Containing Papers of a Biological Character* 219: 51-131.
- Boycott, A. E., Diver, C., Hardy, S., Turner, F. M., (1929). 'The Inheritance of Sinistrality in Limnoea peregra.' Proceedings of the Royal Society of London. Series B, Containing Papers of a Biological Character 104 (729): 152.
- Boycott, A. E., Oldham, C., Garstang, S.L., Turner, F.M., (1930). 'The Inheritance of Sinistrality in Limnaea peregra.' *Philosophical Transactions of the Royal Society of London Series B* (219): 51-131.

- Boycott, A. E. and W. D. Roebuck (1921). 'Roebuck Memorial Number: Introduction to the Census of the Distribution of British Land and Freshwater Mollusca.' *Journal of Conchology* 16(6): 165-169.
- Brears, P. (1984-1985). 'Temples of the Muses: The Yorkshire Philosophical Museums, 1820-50.' Museums Journal 84: 3-19.
- Brears, P. (1989). Ralph Thoresby, A Museum Visitor in Stuart England. Journal of the History of Collections, 1(2): 213-224.
- Brears, P. (1989). Of Curiosities and Rare Things: The Story of Leeds City Museums. Leeds, The Friends of Leeds City Museums.
- Brears, P. and S. Davies (1989). Treasures for the People: The Story of Museums and Art Galleries in Yorkshire and Humberside. Leeds, Yorkshire and Humberside: Yorkshire and Humberside Museums Council.
- Briggs, A. (1954). Victorian People: A Reassessment of Persons and Themes 1851-67. London, Oldhams Press.
- Briggs, A. (1968). Victorian Cities. Harmondsworth, Penguin.
- Briggs, A., ed., (1970). The Nineteenth Century: The Contradictions of Progress. London, Thames & Hudson.
- Briggs, A. (2000). *The Age of Improvement, 1783-1867.* Harlow, England, Longmans.
- Buchli, V., ed., (2002). The Material Culture Reader. New York, Berg.
- Bud, R. and G. Roberts (1984). Science versus Practice: Chemistry in Victorian Britain. Manchester, Manchester University Press.
- Burnett, J. (1969). A History of the Cost of Living. Harmondsworth. Penguin.
- Cameron, R. A. D. (1995). 'Master Molluscs: 'Pan-Germanism' and J.W. Taylor's Biogeographical Thought.' Archives of Natural History 22(3): 371-384.
- Cardwell, D. S. L. (1957). *The Organisation of Science in England*. London, Heinemann.
- Caron, J. A. (1988) "Biology" in the Life Sciences: A Historiographical Contribution." *History of Science* 26, 3: 223-268.
- Caunce, S. (2000). 'Urban Systems, Identity and Development in Lancashire and Yorkshire: A Complex Question', in Kirk, N., ed., Northern Identities: Historical Interpretations of 'The North' and 'Northernness. Aldershot, Ashgate: 47–70.

- Chaloner, W. H. (1958). 'Dr. Joseph Priestley, John Wilkinson and the French Revolution, 1789-1802.' *Transactions of the Royal Historical Society* 5th ser. 8: 21-40.
- Chartres, J. and Honeyman, K., eds., (1993). *Leeds City Business*. Leeds, Leeds University Press.
- Clark, E. K. (1924). *History of 100 Years of Life of the Leeds Philosophical and Literary Society*. Leeds, Jowett & Sowry Ltd.
- Cleevley, R. J. (1995). 'Some 'Malacological Pioneers' and Their Links with the Transition of Shell-Collecting to Conchology During the First Half of the Nineteenth Century.' *Archives of Natural History* 22(3): 385-418.
- Coleman, W. (1971). Biology in the Nineteenth Century: Problems of Form, Function, and Transformation. New York, Wiley.
- Collier, F. (1964). *The Family Economy of the Working Classes in the Cotton Industry*, 1784-1833. Manchester, Manchester University Press.

Conniff, R. (2009) 'Discovering Gorilla', Evolutionary Anthropology, 18, 55-61.

- Coote, J. and Petch, A., eds., (2014) 'Archaeology, Anthropology, and Museums, 1851–2014: Rethinking Pitt-Rivers and His Legacy – An Introduction,' *Museum History Journal*, 7 (2): 126-134.
- Cornish, C. (2015) 'Nineteenth-Century Museums and the Shaping of Disciplines: Potentialities and Limitations at Kew's Museum of Economic History.' *Museum History Journal.* 8 (1): 8–27.
- Cox, D. (1995). 'The Leeds Library.' Library Review 44 (3): 12-16.
- Crabb, E. D. (1927). 'Genetic Experiments with Pond Snails Lymnaea and Physa.' *American Naturalist* 61(672): 54-67.
- Crossley, R. (2003). 'Mystery at the Rectory: Some Light on John Michell.' Yorkshire Philosophical Society Annual Report: 61-69.
- Crowley, T. E. (1975). 'A History of the Society.' *Journal of Conchology* 28: 265-293.
- Crowther, J. G. (1962). *Scientists of the Industrial Revolution*. London, The Cresent Press.
- Crump, W. B. (1931). *The Leeds Woollen Industry 1780-1820*. Leeds, The Thoresby Society.

- Cunningham, H. (1980). *Leisure and the Industrial Revolution c. 1780–c. 1880*. London, Croom Helm.
- Curry, A., Jardine, N., Secord, J.A., Spary, E.C., eds., (2018) *Worlds of Natural History*. Cambridge, Cambridge University Press.
- Daston, L., ed., (2004). *Things That Talk: Object Lessons from Art and Science*. New York, Zone Books.
- Dean. D. (1994). Museum Exhibition: Theory and Practice. London, Routledge.
- Dennis, R. (1984). English Industrial Cities of the Nineteenth Century: A Social Geography. Cambridge, Cambridge University Press.
- Derry, J. W. (2001). *Politics in the age of Fox, Pitt and Liverpool*. Basingstoke, Palgrave.
- Desmond, A. (1982). Archetypes and Ancestors: Palaeontology in Victorian London 1850 – 1875. Chicago, The University of Chicago Press.
- Desmond, A. (1987). 'Artisan Resistance and Evolution in Britain, 1819–1848.' *Osiris* 2nd ser. 3: 77–110.
- Desmond, A. (1989). The Politics of Evolution: Morphology, Medicine, and Reform in Radical London. Chicago, University of Chicago Press.
- Desmond, A. (2001). 'Redefining the X Axis: 'Professionals', 'Amateurs' and the Making of Mid-Victorian Biology', *Journal of the History of Biology*, 34 (2001): 3-50.
- Domanska, E., (2006) 'The Material Presence of the Past,' *History and Theory* 45 (3): 337-348.
- Eales, N. B. and J. Sankey (1967). 'Obituary Notice: H.E. Quick. M.B., B.S., B.Sc.(Lond.), F.R.C.S.(Eng.), 1882-1967.' Proceedings of the Malacological Society, 37: 353-355.
- Edgerton, D. (1996). Science, Technology and the British Industrial 'Decline', 1870-1970. Cambridge, Cambridge University Press.
- Edgerton, D. (2006). The Shock of the Old. London, Profile Books Ltd.
- Elliott, P. A. (2009) *The Derby Philosophers. Science and Culture in British Urban Society, 1700–1850.* Manchester: Manchester University Press.
- Elliston Allen, D. (1976). *The Naturalist in Britain: A Social History*. New York, Penguin Books.
- Engels, F. (1943). *The Condition of the Working-Class in England in 1844: With a Preface Written in 1892.* London, George Allen & Unwin Ltd.

- Engels, F. (1971). The Condition of the Working Class in England. Oxford, Blackwell.
- Evans, N. J. (1998). 'Gentlemen and Players in Malacology. An Appreciation of A.E. Boycott and H.E. Quick.' Archives of Natural History 25(3): 389-399.
- Farber, P. L. (1982). 'The Transformation of Natural History in the Nineteenth Century.' *Journal of the History of Biology* 15: 145–152.
- Findlen, P. (1994). Possessing Nature: Museums, Collecting, and the Scientific Culture in Early Modern Italy. Berkeley, University of California Press.
- Finnegan, D. (2005). 'Natural history societies in late Victorian Scotland and the pursuit of local civic science', *British Journal for the History of Science*, 38(1): 53–72.
- Follett, D. (1978). *The Rise of the Science Museum Under Henry Lyons*. London. Oxford University Press for the Science Museum.
- Forgan, S. (1986). 'Context, Image and Function: a Preliminary Enquiry into the Architecture of Scientific Societies.' *British Journal for the History of Science* 19: 89–113.
- Forgan, S. (1989). 'The Architecture of Science and the Idea of a University.' *Studies in the History and Philosophy of Science* 20(4): 405 434.
- Forgan, S and Gooday, G (1996). 'Constructing South Kensington: The Buildings and Politics of T. H. Huxley's Working Environments'. *British Journal for the History of Science*, Vol. 29, No. 4: 435-468.
- Forster, G., A. Hamilton, et al. (2001). *A very good public library*. Newcastle upon Tyne, Allenholme Press.
- Fox, C., ed., (1992). *London: world city, 1800-1840*. London, Yale University Press, in association with the Museum of London.
- Fraser, D. (1980). 'The Baines Family, Victorian Leeds and Victorian Society.' University of Leeds Review 29: 91–101.
- Fraser, D., ed., (1980). *A history of modern Leeds*. Manchester, Manchester University Press.
- Freudenberger, H., F. J. Mather, et al. (1984). 'A New Look at the Early Factory Labor Force.' *The Journal of Economic History* Vol. 44 (No. 4): 1085-1090.

- Fyfe, A., Lightman, B., eds., (2007). *Science in the Marketplace: Nineteenth Century Sites and Experiences.* Chicago, University of Chicago Press.
- Goergen, M. and Mallin, A, et al., (2010). *Corporate Governance and Complexity Theory*. Edward Elgar Publishing.
- Gilbert, S. F. (2006). Sturtevant's Guess. Developmental biology: A Companion.Massachusetts, Sunderland, Sinauer Associates: 751.
- Golby, J. M. and A.W. Purdue (1984). *The Civilisation of the Crowd: Popular Culture in England 1750–1900*. London, Batsford Academic and Educational.
- Golinski, J. (1992). Science as Public Culture: Chemistry and Enlightenment in Britain, 1760–1820. Cambridge, Cambridge University Press.
- Gould, S. J. (1977). Ever Since Darwin. New York, W.W. Norton.
- Gould, S. J. and Young, N. D. (1985). 'The Consequences of being Different: Sinistral Coiling in Cerion.' *Evolution* 39(6): 1364 - 1379.
- Gould, S. J. (1996). *Dinosaur in a haystack: reflections in natural history*. London, Jonathan Cape.
- Gray, R. (1998). 'The Platform and the Pulpit: Cultural Networks and Civic Identities in Industrial Towns, c. 1850–1870', in Kidd, A. and Nicholls, D., eds., *The Making of the British Middle Class? Studies of Regional and Cultural Diversity Since the Eighteenth Century*. Stroud, Sutton: 130–147.
- Halévy, E. (1949). England in 1815. London, Benn.
- Hall, B. K. (2000). 'Balfour, Garstang and de Beer: The First Century of Evolutionary Embryology.' American Zoologist 40(5): 718-728.
- Haraway, D. (1988). 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective.' *Feminist Studies*, 14: 575-599.
- Hardin, C. L. (1966). 'The scientific work of the reverend John Michell.' *Annals* of Science 22(1): 27-47.
- Hardy, A. C. (1951). 'Obituary Notice: Walter Garstang 1868 1949.' Journal of the Marine Biological Association of the United Kingdom 29 (3): 560– 566.
- Hardy, A. C. (1951). 'Walter Garstang. Obituary.' Journal of the Marine Biological Association of the United Kingdom 29(3).

- Hays, J. N. (1983). The London Lecturing Empire, 1800–50, in Inkster, I. and Morrell, J., *Metropolis and Province: Science in British Culture*, 1780– 1850. London, Hutchinson: 91–119.
- Heller, E. (1976). The Artist's Journey into the Interior and other Essays. Harvest.
- Henry, J. (2002). The scientific revolution and the origins of modern science. Basingstoke, Palgrave.
- Heppel, D. (1995). 'The Long Dawn of malacology: a brief history of malacology from prehistory to the year 1800.' Archives of Natural History 22(3): 301 - 319.
- Hill, K. (2001). 'Roughs of both sexes: the working class in Victorian museums and art galleries,' in Gunn, S., and Morris, R. J., eds., *Identities in space: contested terrains in the western city since 1850.* Burlington, Ashgate: 190-203
- Hill, K. (2005). Culture and Class in English Public Museums, 1850-1914. Ashgate.
- Hill, K. (2011a). 'Whose Objects? Identity, Otherness, and Materiality in the Display of the British Past c.1850-1950,' *Museum History Journal*, 4, (2): 127-138.
- Hill, K. (2011b). 'Thinking About Museums and Agency in Museums: Models from Historical Research,' *Current Issues in European Cultural Studies*, (62): 217-222.
- Hill, K. (2013). 'Manufacturers, Archaeology and Bygones: Making a Sense of Place in Civic Museums, 1850-1914,' *International Journal of Regional* and Local History, 8 (1): 54-74.
- Hill, K. (2016). Women and Museums 1850-1914: Modernity and the Gendering of Knowledge. Manchester University Press.
- Hilton, B. (2006). *A Mad, Bad, and Dangerous People?* Oxford, Oxford University Press.
- Hobsbawm, E. J. (1962). *The Age of Revolution 1789–1848*. London, Weidenfeld and Nicolson.
- Hobsbawm, E. J. (1969). Industry and empire: from 1750 to the present day London, Penguin.

- Holland, A. J. (1979). *The age of industrial expansion*. Middlesex, Thomas Nelson and Sons.
- Hooper-Greenhill, E. (1992). *Museums and the Shaping of Knowledge*. London, Routledge.
- Hudson, P. (1992). The Industrial Revolution. London, Edward Arnold.
- Hume, J. P. (2006). 'The history of the Dodo Raphus cucullatus and the penguin of Mauritius', *Historical Biology*, 18:2, 65-89.
- Hunt, T. (2004). Building Jerusalem. London, Weidenfeld & Nicolson.
- Impey, O. and MacGregor, A., eds., (1985). The Origins of Museums: The Cabinet of Curiosities in Sixteenth- and Seventeenth-Century Europe. Oxford, Clarendon.
- Inkster, I. (1980). 'The Public Lecture as an Instrument of Science Education for Adults–The Case of Great Britain, c. 1750–1850.' *Paedagogica Historica* 20: 80–107.
- Inkster, I. (1983). 'Aspects of the History of Science and Science Culture in Britain, 1780–1850.', in *Metropolis and Province: Science in British Culture, 1780– 1850.* Inkster, I. and Morrell, J., eds., London, Hutchinson: 11–54.
- Inkster, I. and Morrell, J., eds., (1983). *Metropolis and province: Science in British Culture*, 1780–1850. London, Routledge.
- Jackson, J. W. (1927). 'History of the Conchological Society.' *The Journal of Conchology* 18(3): 65 70.
- Jacob, M. C. (2007). 'Mechanical science on the factory floor: The early industrial revolution in Leeds.' *History of Science* 45: 197 221.
- James, F., ed., (1989). The Development of the Laboratory: Essays on the Place of Experiment in Industrial Civilisation. Basingstoke, Macmillan.
- Jankovic, V. (2000). 'The Place of Nature and the Nature of Place: The Chorographic Challenge to the History of British Provincial Science.' *History of Science* 38: 79–113.
- Jardine, N. (2003). 'Whigs and Stories: Herbert Butterfield and the Historiography of Science.' *History of Science* 41: 125-140.
- Jardine, N., Secord, J.A., and Spary, E. (1996). *Cultures of Natural History*. Cambridge, Cambridge University Press.

- Johnston, C. P. (1997). Scientific Improvement, Polite Learning, and Social Division: An Examination of the Foundation and Early Development of the Leeds Philosophical and Literary Society. School of History. Leeds, University of Leeds. M.A.
- Johnson, K. (2012). Ordering Life: Karl Jordan and the naturalist tradition. Baltimore, The Johns Hopkins University Press.
- Jordanova, L., Porter, R. (eds.) (1979). *Images of the Earth: Essays in the History of the Environmental Sciences*. British Society for the History of Science Monograph. Oxford, The Alden Press.
- Joyce, D. (2003). The Leeds Intelligencer and reform c. 1815-1835. School of History. Leeds, University of Leeds. M.A.
- Kargon, R. (1972). 'The Social and economic roots of Newton's Principia by Boris Hessen.' *Isis* 63(4): 567-567.
- Kargon, R. (1977). Science in Victorian Manchester: enterprise and expertise.Manchester, Manchester University Press.
- Kingery, W. D., ed., (1996). *Learning from Things*. Washington, Smithsonian Institution Press.
- Knell, S. J. (2000). The Culture of English Geology, 1815 1851: A Science Revealed Through its Collecting. England, Ashgate.
- Kohler, R.E. (2006). *All Creatures: Naturalists, Collectors, and Biodiversity, 1850-1950.* Princeton and Oxford, Princeton University Press.
- Landa, M. H. (1999). 'A history of the University of Leeds Library from its inception in 1875 to the opening of the Brotherton Library in 1936. Leeds Metropolitan University. M.Sc. Thesis.
- Laudan, R. (1987). From Mineralogy to Geology: The Foundations of a Science, 1650–1830. Chicago: University of Chicago Press.
- Leeds City Council. (2008). Lord Mayors & Aldermen of Leeds since 1626. Manchester, Whitworth.
- Leeds Institute of Science. (1923). An Historical Sketch of One Hundred Years' Work (1824–1923). Leeds, Jowett and Sowry.
- Levine, P. (1986). The amateur and the professional: antiquarians, historians, and archaeologists in Victorian England, 1838-1886. Cambridge, Cambridge University Press.

- Lindberg, D. C. and Westman, R. S., eds., (1990). *Reappraisals of the Scientific Revolution*. Cambridge, Cambridge University Press.
- Livingstone, D. (2003). *Putting Science in its Place*. London, The University of Chicago, Ltd.
- Livingstone, D. (2005). 'Text, talk and testimony: geographical reflections on scientific habits. An afterword', *British Journal for the History of Science*, 38(1): 96.
- Longair, S. and McAleer, J., eds., (2013). 'Shifting Interpretations of Empire.' *Museum History Journal*, 6 (1).
- Loughney, C. (2005). Colonialism and the Development of the English Provincial Museum, 1823-1914. School of Arts and Cultures. Newcastle upon Tyne, University of Newcastle. PhD.
- Lowe, P. D. (1978). Locals and Cosmopolitans: A Model for the Social Organisation of Science in the Nineteenth Century. Brighton, University of Sussex. M.A. Thesis.
- Lowerson, J. R. (1965). *The Political Career of Sir Edward Baines (1800–1890)*. Unpublished MA Thesis, University of Leeds.
- Lyell, C. (1850) 'Anniversary Address of the President'. *Quarterly Journal of the Geological Society*. 6: i-xxii
- MacDonald, S. (2002). Behind the Scenes at the Science Museum. Oxford, Berg.
- MacGregor, A. (2001). 'The Ashmolean as a museum of natural history, 1683-1860.' *Journal of the History of Collections*, 13, (2): 125-144.
- MacGregor, A. (2007). Curiosity and Enlightenment: Collectors and Collections from the Sixteenth to the Nineteenth Century. New Haven, Yale University Press.
- MacLeod, S. (2013). *Museum Architecture: A New Biography*. London, Routledge.
- Marzuola, C. (2003). 'Stalking Larvae: On the evolution of the spinal chord in vertebrates.' *Science News*. Vol. 163: 19-20.
- Matthew, J. (1981). 'Science and Technology in York, 1831–1981.', in Feinstein,
 C., York 1831–1981: 150 Years of Scientific Endeavour and Social Change. York, Ebor: 30–52.
- McCormmach, R. (1968). 'John Michell and Henry Cavendish: Weighing the Stars.' *British Journal for the History of Science* 4(2): 126-155.
- McEvoy, J. G. (1997). 'Positivism, Whiggism, and the Chemical Revolution: A Study in the Historiography of Chemistry.' *History of Science* 35: 1-33.
- McMillan, N., F. and A. E. Ellis (1972). 'Obituary Notice: Arthur Wilson Stelfox.' *Journal of Conchology* 27: 520 525.
- Mendyk, S. A. E. (1989). Speculum Britanniae: regional study, antiquarianism, and science in Britain, to 1700. Toronto, University of Toronto Press.
- Mitchell, S., ed., (1996). Object lessons: the role of museums in education. Edinburgh, HMSO.
- Mitleton-Kelly, E. and Papaefthimiou, M.C. (2006). 'Co-Evolution and an Enabling Infrastructure: A Solution to Legacy?', in Henderson P., ed., *Systems Engineering for Business Process Change*. Springer, London
- Monaghan, N. T. (1995). 'The Irish Giant Deer or "Irish Elk."' *The Geological Curator*. 6(4): 171-173.
- Morrell, J. (1985). 'Wissenschaft in Worstedopolis: Public Science in Bradford, 1800–1850.' *British Journal for the History of Science* 18: 1–23.
- Morrell, J. (1997). Science, Culture and Politics in Britain, 1750–1870. Aldershot, Variorum.
- Morris, C., ed., (1947). The journeys of Celia Fiennes. London, Cresset Press.
- Morris, R. J. (1980). 'Middle-class culture, 1700-1914.', in Fraser, D., ed., *A history of modern Leeds*. Manchester, Manchester University Press: pp.200-222.
- Morris, R. J. (1983). 'The Middle Class and British Towns and Cities of the Industrial Revolution, 1780–1870.', in Fraser, D., and Sutcliffe, A., eds., *The Pursuit of Urban History*. London, Edward Arnold: 286–306.
- Morris, R. J. (1990). Class, Sect and Party: The Making of the British Middle Class, Leeds 1820–1850. Manchester, Manchester University Press.
- Morris, R. J. (2004). Men, women, and property in England, 1780-1870: a social and economic history of family strategies amongst the Leeds middle classes. Cambridge, Cambridge University Press.
- Myrone, M. and Peltz, L., eds., (1999). *Producing the past: aspects of antiquarian culture and practice, 1700-1850.* Brookfield, Ashgate.
- Naylor, S. (2002). 'The Field, the Museum and the Lecture Hall: The Spaces of Natural History in Victorian Cornwall', *Institute of British Geographers*. *Transactions*, 27, 494-513.

- Naylor, S. (2005). 'Historical Geographies of Science: Places, Contexts, Cartographies', *British Journal for the History of Science*, 38, 1-12.
- Norris, A. (1982). 'The Conchological Society of Great Britain and Ireland: The Early Years.' *Naturalist* 107: 131-134.
- Norris, A. (1985). 'Collectors and Collections.' Naturalist 110: 125 132.
- Norris, A. (2002). 'The Collectors-Who's Who: Notes from the Molluscan Collections held in Leeds Museums.' Unpublished digital copy, Leeds City Museums.
- Norris, A. and Dance, P. (2002). 'Sylvanus Charles Thorp Hanley (1819 1899):
 A Nineteenth-Century Dilettante of the Shell World.' *Journal of Conchology* 37(4): 363.
- Norris, A. and Seaward, M. R. D. (1992). 'Archives of the Yorkshire Naturalists' Union.' *Naturalist* 117: 31-40.
- O'Donoghue, J. and Goulding, L. (2004). 'Consumer Price Inflation since 1750.' *Economic Trends*, 604.
- Orange, D. (1983). 'Rational Dissent and Provincial Science: William Turner and the Newcastle Literary and Philosophical Society.', in Inkster, I., and Morrell, J., eds., *Metropolis and province: Science in British Culture*, 1780–1850. Routledge, London: 205-231.
- Outram, D. (1996) 'New Spaces in Natural History,' in Jardine, N., Secord, J.A., Spary, E., eds., *Cultures of Natural History*. Cambridge, Cambridge University Press: 249-266.
- Owen, D. (2003). 'Thylacine: The Tragic Tale of the Tasmanian Tiger.' Australia, Allen & Unwin.
- Owen. J. (2006). 'Collecting artefacts, acquiring empire: Exploring the relationship between Enlightenment and Darwinist collecting and late nineteenth-century British imperialism.' *Journal of the History of Collections*. Vol. 18, Issue 1: 9–25.
- Pacey, A. (2003). 'Emerging from the museum: Joseph Dawson, mineralogist, 1740–1813.' *British Journal for the History of Science* 36(3): 455-469.
- Paddle, R. (2000). *The last Tasmanian tiger: the history and extinction of the thylacine*. Cambridge, Cambridge University Press.
- Pearce, R. D. and Stearn, R. (2000). *Government and Reform, 1815-1918*. London, Hodder Murray.

- Pearce, S. (1992). *Museums, Objects, and Collections*. Leicester. Leicester University Press.
- Pearce, S. (1994). Interpreting Objects and Collections. London, Routledge.
- Pearce, S. (1998). Collecting in Contemporary Practice. London, Sage.
- Pennington, J. T. and Chia, F. S. (1985). 'Gastropod Torsion: A Test of Garstang's Hypothesis.' *Biological Bulletin* 169(2): 391 - 396.
- Petkova-Campbell, G. (2018). 'Nineteenth-century Bulgarian museum collections: the legacy of the chitalishta.' *Journal of the History of Collections*, Vol. 30, (3): 407–418.
- Priestley, J. (1970). Autobiography of Joseph Priestley. Bath, Adams and Dart.
- Prior, N. (2002). Museums and Modernity: Art Galleries and the Making of Modern Culture, Berg Publishing
- Radley, E. J. (1970). Notes on British economic history from 1700 to the present day. Oxford, Basil Blackwell.
- Read, D. (1961). Press and people, 1790-1850: opinion in three English cities. London, Edward Arnold.
- Reader, W. J. (1966). *Professional Men: The Rise of the Professional Classes in Nineteenth-Century England*. London, Weidenfield and Nicholson.
- Rehbock, P. F. (1983). The Philosophical Naturalists: Themes in Early Nineteenth-Century British Biology. Maddison, University of Wisconsin Press.
- Reiling, H., and Spunarová, T. (2005). 'Václav Frič (1839–1916) and his influence on collecting natural history.' *Journal of the History of Collections*. 17 (1): 23–43.
- Rimmer, W. G. (1960). *Marshalls of Leeds, flax-spinners 1788-1886*. Cambridge, Cambridge University Press.
- Rimmer, W. G. (1967). 'The industrial profile of Leeds: 1740-1840.' *Publications of the Thoresby Society* 14(113): 130-157.
- Rimmer, W. G. (1967). 'Occupations in Leeds, 1841-1951.' *Publications of the Thoresby Society*, 14(113): 158-178.
- Robinson, E. (1986). The Leeds Library in 1817. School of English. Leeds, University of Leeds. M.A. Thesis.
- Robinson, T. Z. (2013). 'On the influence of the scientific societies of New Zealand on the character of the nation: Collecting and identity at the

Hawke's Bay Philosophical Institute museum, 1874–1899.' *Journal of the History of Collections*. 25 (1): 87–102.

- Roderick, G. W. and Stephens, M. D. (1973). 'The Role of 19th-Century Provincial Literary and Philosophical Societies in Fostering Adult Education.' *Journal of Educational Administration and History*, 5: 28– 33.
- Royle, E. (1971). 'Mechanics' Institutes and the Working Classes, 1840-1860.' *The Historical Journal*, Vol. 14 (No. 2): 305-321.
- Royle, E. (2001). Revolutionary Britannia: reflections on the threat of revolution in Britain, 1789-1848. Manchester, Manchester University Press.
- Royle, E. and Walvin, J. (1983). *English Radicals and Reformers 1760-1848*.Brighton, Harvester Press.
- Rudwick, M. J. S. (2004). *The New Science of Geology: Studies in the Earth Sciences in the Age of Revolution*. London, Ashgate.
- Rudwick, M. J. S. (2005). Lyell and Darwin, Geologists: Studies in the Earth Sciences in the Age of Reform. London, Ashgate.
- Russell, B. (2001). Freedom and organization, 1814-1914. London, Routledge.
- Russell, C. (1983). *Science and social change: 1700-1900*. London, The Macmillan Press Ltd.
- Schofield, R. E. (1998). *The Enlightenment of Joseph Priestley*. Pennsylvania, Penn State University Press.
- Schultz, T. W. (1972). 'Knowledge, Agriculture and Welfare.' *Science Studies* 2(4): 361-368.
- Secord, A. (1994). 'Corresponding Interests: Artisans and Gentlemen in Nineteenth-Century Natural History.' British Journal for the History of Science 27: 383-408
- Secord, J. (2000). Victorian Sensations. London, The University of Chicago Press.
- Secord, J. A. (2004). 'Knowledge in Transit.' Isis 95: 654-672.
- Shapin, S. and Barnes, B. (1977). 'Science, Nature and Control: Interpreting Mechanics' Institutes.' Social Studies of Science Vol. 7 (No. 1.): 31-74.
- Shapin, S. A. (1972). 'The Pottery Philosophical Society, 1819-1835: An Examination of the Cultural Uses of Provincial Science.' Science Studies 2(4): 311-336.

- Sheehan, D. (1941). 'The Manchester Literary and Philosophical Society.' *Isis* 33(4): 519-523.
- Sheppard, T. (1906). The relationship between provincial museums and local scientific societies: (being the presidential address, delivered at a conversazione held at the Museum, Hull, on October 17th, 1906). Hull, Hull City Museums and Art Galleries.
- Sherman, D.J. (1987). 'The Bourgeosie, Cultural Appropriation and the Art Museum in Nineteenth-Century France,' *Radical History Review* 38: 41
- Shimmin, A. N. (1954). *The University of Leeds: the first half-century*. Cambridge University Press.
- Simms, C. (1971). 'Towards a History of Natural History Collections at the Yorkshire Museum.' Yorkshire Philosophical Society Annual Report, York: 85–87.
- Skempton, A. W. (2004). John Smeaton (1724–1792). Oxford Dictionary of National Biography. Oxford, Oxford University Press.
- Smeaton, J. (1759). 'An Experimental Enquiry concerning the Natural Powers of Water and Wind to Turn Mills, and Other Machines, Depending on a Circular Motion. By Mr. J. Smeaton, F. R. S.' *Philosophical Transactions* (1683-1775) Vol. 51: 100-174.
- Spence, C. S. (1868). *Memoirs of eminent men of Leeds / by a Leeds man*. London & Leeds, G.J. Berger and D. Green & Sons.
- Sprittles, J. (1969). Links with Bygone Leeds. Leeds, Thoresby Society.
- Stearn, W. (1981). *The Natural History Museum at South Kensington*, London, Natural History Museum Publication.
- Steele, E. D. (1978). 'The Leeds Patriciate and the Cultivation of Learning, 1819-1905: A Study of the Leeds Philosophical Society.' *Proceedings of the Leeds Philosophical and Literary Society* 16(9): 183-202.
- Stilwell, G. T. and Green, F. C., et al., (1969): Australian Dictionary of Biography. Vol. 3, Melbourne University Press: 28-29.
- Sturtevant, A. H. (1923). 'Inheritance of Direction of Coiling in Limnaea.' *Science* 58 (1501): 269-270.
- Swinney, G. N. (1999) 'A natural history collection in transition: Wyville Thomson and the relationship between the University of Edinburgh and

the Edinburgh Museum of Science and Art.' *Journal of the History of Collections*. Vol. 11, Issue 1: 51–70.

- Thackray, A. (1974). 'Natural Knowledge in Cultural Context: The Manchester Model.' *The American Historical Review* Vol. 79 (No. 3): pp. 672-709.
- Thompson, E. P. (1963). *The making of the English working class*. London, Gollancz.
- Thornton, D. (1999). *Mr Mercury A Biographical Study of Edward Baines with Special Reference to his Role as Editor, Author and Politician.* School of History. Leeds, University of Leeds. PhD Thesis.
- Thurgood, W. (1938). 'King Lane Pond, Leeds.' Journal of Conchology 21(3).
- Topham, J. (1992). 'Science and Popular Education in the 1830s: The Role of the Bridgewater Treatises,' *British Journal for the History of Science* 25 (4): 397-430.
- Truscot, B. (1943). Red Brick University. London, Faber and Faber.
- Tylecote, P. T. (1957) *The Mechanics' Institutes of Lancashire and Yorkshire Before 1851*. Manchester. Manchester University Press.
- Vergo, P., ed., (1989). The New Museology. London, Reaktion Books Ltd.
- Wager, W. (1922). 'Obituary Notices of Fellows Deceased.' Proceedings of the Royal Society London. Vol 93.
- Walden, H. W. (1975). 'A Nomenclature List of the Land Mollusca of the British Isles.' *Journal of Conchology* 29: 21-25.
- Walters, A. N. (1997) 'Conversation Pieces: Science and Politeness in Eighteenth-Century England', *History of Science* 35: 121-54.
- Webster, C. (1995). 'The Architectural Profession in Leeds 1800-50: A Case Study in Provincial Practice.' Architectural History 38: 176-191.
- Wheeler, A. and Price, J. H., eds., (1985) 'Linnaeus to Darwin: Commentaries on the History of Biology and Geology'. Society for the History of Natural History. Special Publication No. 3.
- Weil, S.E. (1990). *Rethinking the Museum: And other Meditations*. Washington, Smithsonian Institution Press.
- Whitaker, K. (1996). 'The Culture of Curiosity' in N. Jardine, J. A. Secord and E. C. Spary., eds., *Cultures of Natural History*. Cambridge, Cambridge University Press.

- Whitworth, I. (2008). 'An Archive and Beyond.' Journal of Weavers, Spinners and Dyers, 277: 6.
- Williams, D. and Wüster, W., et al., (2006). 'The good, the bad and the ugly: Australian snake taxonomists and a history of the taxonomy of Australia's venomous snakes', *Toxicon* 48, 922.
- Wilson, R. G. (1971). Gentlemen Merchants: The Merchant Community in Leeds 1700-1830. Manchester, Manchester University Press.
- Withers, C., Higgitt, R. and Finnegan, D. (2008). 'Historical geographies of provincial science: themes in the setting and reception of the British Association for the Advancement of Science in Britain and Ireland, 1831c.1939', British Journal for the History of Science, 41(3): 397-402.
- Young, R. (1990). 'Marxism and the history of science.', in Olby, R. C., Cantor, G. N., Christie, J. R. R. and Hodge, M. J. S., eds., *Companion to the History of modern science*, London, Routledge.