Collecting the Past: Aspects of historiography and lithic artefact analysis for the creation of narratives for the Palaeolithic and Mesolithic archaeology of Wales

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ABSTRACT

This submission for a PhD by Published Works examines archaeological historiography and lithic artefact studies concerning aspects of the Palaeolithic and Mesolithic archaeology of Wales. The critical analysis connects the published works through the theoretical approach of biography. It draws out themes of archaeological, stratigraphic and museum context where appropriate.

The critical analysis commences with an examination of publications concerning the history of research at Palaeolithic cave sites in Wales. It identifies the sources and methodologies used then analyses their effectiveness for presenting histories of caves. The historiography of lithic artefact studies is then examined before an analysis is offered of the methodological approaches of technology, chronology, typology and the *chaîne opératoire* as used in the published works. By applying the concept that artefacts have biographies, the archaeological context for individual and surface assemblages of lithic artefacts is explored. This leads to a discussion of archaeological projects which examines the fieldwork techniques adopted in the publications to elucidate archaeological context. There is an examination of the factors that influence the resulting archive and a discussion of its use as a resource for determining past work at archaeological sites. By exploring these topics the concept of biographies of people, places, artefacts and projects emerges. These biographies are drawn together into an assessment of their use for presenting archaeological narratives for regions of Wales.

The final conclusions draw the aims of the critical analysis of the published works together before offering concluding thoughts about the continuation of antiquarian traditions in collecting lithic artefacts across Wales.

CONTENTS

Volume One – The Critical Analysis

Volume Two – The Published Works

LIST OF FIGURES

CHAPTER ONE

INTRODUCTION

RATIONALE

This submission provides a context for, and a critical analysis of, eight published works submitted as evidence towards a PhD by Published Works. The published works all contain original research conducted by the author during a career in the National Museum of Wales. They were written for an academic community of Palaeolithic and Mesolithic specialists. All the publications contain new research that has greatly enhanced knowledge about the Palaeolithic and Mesolithic archaeology of Wales. This research has resulted in the recognition and identification of new Palaeolithic and Mesolithic artefacts and information gathered during the investigation of the findspots. This body of evidence has been linked with existing data to offer new interpretations for sites or regions of Wales. The research has increased the available data-set of Palaeolithic and Mesolithic artefacts and sites for Wales. The interpretation of these data has resulted in new interpretations and an increased understanding about a more widespread settlement of Wales during the Palaeolithic and Mesolithic periods than was previously known. This critical analysis of the published works offers a further contribution to the academic community by providing a detailed analysis of these publications. It will characterize the body of work by exploring aspects of biography, narrative, and context that connect the principal two themes of historiography and lithic artefact analysis together.

THE CRITICAL ANALYSIS

This study has four aims:

1. To provide a critical review of the published works' central themes of historiography and lithic artefact analysis, placing the publications within the broader theoretical framework of biography.

2. To undertake a critical analysis of the published works to demonstrate how evidence gathered from historiographical analyses and collections of lithic artefacts and their accompanying records, may create narratives that contribute towards our present-day understanding of the Palaeolithic and Mesolithic archaeology of Wales.

3. To identify the research methodologies used in the published works and to analyse these critically.

4. To signpost future work that could build on the research presented in the published works.

This document is intended to address these aims by analysing the published works in the context of knowledge when they were written. It offers a personal reflection about a connected group of eight published works. It has resulted in the identification of key themes and approaches drawn from the publications that can be pursued more explicitly through the critical analysis that follows. It will characterize the coherence of this body of work demonstrating the contribution the published works have made towards furthering knowledge for Palaeolithic and Mesolithic specialists.

It is suggested that chapters one and two of this critical analysis are read before the volume of published works. By returning to read chapters three to seven of the critical analysis the reader will be familiar with the research that is discussed and analysed in the rest of this volume. The references given in this volume will enable the reader to identify specific points in the published works that they may wish to re-read.

THE RESEARCH THEMES

The research presented in the published works focuses upon two main areas, archaeological historiography and lithic artefact studies. The history of archaeology has developed and matured as a sub-discipline over the past sixty-five years since publication of Glyn Daniel's book *A Hundred Years of Archaeology* (Daniel 1950). Archives, records, photographs, notes, diaries and material cultural evidence residing in private or public collections can be studied to generate information for historiographical research. By linking these resources to publications, historians of archaeology may present histories that are based on their interpretations of the philosophical, political, research, social or cultural contexts in which their subjects operated.

The study of Palaeolithic and Mesolithic lithic artefacts sits centrally to the research presented in the published works. The ubiquitous nature of stone tools is due to their survival over many thousands, or even hundreds of thousands, of years and they thus provide a resource that is available for detailed study today. Most studies of prehistoric sites, or a specific period of prehistory, will require and include a report of the evidence provided by lithic artefacts. The available dataset is constantly increasing as new

prehistoric artefacts and sites are discovered and recorded. These may be found during formal archaeological investigation or by serendipity, when artefacts are discovered lying on the surface of ploughed fields or eroded from footpaths, cliffs and river valleys. Lithic artefacts have been collected in Wales for almost two hundred years (Buckland 1823, 83). Today some of these artefact collections are in private hands, whereas others, both private and from excavations, may now lie in public museums.

DEFINITIONS AND SCOPE OF THE ANALYSIS

This analysis will focus on Palaeolithic and Mesolithic archaeology and will not venture beyond a time period of around 4,150 cal. BC, the date currently cited as the end of a Mesolithic presence in Wales (David and Walker 2004, 331). The scope is therefore chronologically broad and enables an analysis to be made of a time-span that covers the late Pleistocene period as well as bringing the study firmly into the Holocene. The analysis will not concern itself with a study of, or a comparison with, later prehistory or with historical archaeology (where calendrical dates can be cited (Lucas 2006, 35)).

The work applies the definition that a lithic artefact (or a stone tool) may be any piece of knapped rock. The use of terms lithic artefact or stone tool in this work will therefore encompass finished tools, cores and any knapping debitage. The term knapping debitage will be used to differentiate waste pieces of knapped stone discarded during the knapping activity from those that can be recognized as having been used for some purpose (Odell 2000, 289). Debitage will comprise the majority proportion of the stone tool assemblage at most prehistoric sites.

The geographical scope of the analysis concerns the Welsh archaeological record. It is accepted that this creates a false boundary, based as it is on a modern political concept of what Wales is today. During the Palaeolithic and Mesolithic people's mobility was constrained, not by political boundaries, but by the physical landscape and their own conceptualizations of space. Indeed the geography would also have been different from that of today. However, as an employee of the National Museum of Wales I am required to work within the research area set within its Royal Charter, which defines the remit for history and archaeology as covering Wales and the English border (Royal Charter 1907; 1990; 2006, statute 4). This stipulation therefore creates a boundary for me to work within, because all the funding for research is tied to the terms of this Charter. The geographical scope is potentially limiting because there are few opportunities to undertake research

beyond the current political boundary of Wales and the borders. So there is a risk the resulting published works could appear to be insular in scope. On the contrary, I would argue that defining the study area in this way is helpful for it closely matches the modern political area and enables a national perspective to be provided. Furthermore the region itself provides a clearly defined geographical area of sufficient size and variation to enable useful and relevant regional studies to be undertaken. Whilst I accept that the published works consequently have a Wales centred perspective, this is counterbalanced by discussions of relevant sites across the border, in particular the Somerset, Devon, Gloucestershire and Herefordshire caves.

THE THEORETICAL PERSPECTIVE

The research presented within the published works focuses upon addressing the original research questions posed by the pieces of work. Consequently much of this research is presented at the micro-level through the detailed analysis of archives, artefacts or sites. In preparing this critical review I have had an opportunity to consider the publications within their broader contexts. In doing this I have been able to draw out some of the over-arching theoretical perspectives that connect these works.

Context

Archaeological context is discussed frequently during the analysis of the published works. I draw this aspect out for particular examination here as it was this that originally attracted me to undertake much of the research presented in the published works. Ian Hodder and Scott Hudson provide the definition for archaeological context which says that 'each object exists in many relevant dimensions at once, and so, where the data exist, a rich network of associations and contrast can be followed through in building up towards an interpretation of meaning' (Hodder and Hudson 2003, 187). In the analysis that follows I will examine the archaeological context of objects in ways that seek to use as many data recovered from the archaeological investigations and their records as possible. I will also address my hypothesis that when an artefact does not have a recorded stratigraphic context, it continues to have a role to offer to the interpretation of aspects of life during the Palaeolithic or Mesolithic periods. I will adopt the approach that such artefacts may be considered in a biographical way.

<u>Biography</u>

Biography is adopted as a dynamic approach to determine how archaeologists may view people, artefacts, assemblages and places. The term biography is usually applied to a person's life, indeed the Oxford English Dictionary definition is 'the life of an individual, written by someone else'. The term life-cycle is often applied to connect the various stages of an organism's life.

The concept that objects have biographies was introduced into archaeology by Kopytoff. He adopts a cultural perspective to explain the biographies of things (Kopytoff 1986, 66). His work incorporates earlier ideas of goods or objects having and maintaining social relationships (Douglas and Isherwood 1978, 60). The approach of the biography of things was adopted in ethnography by Hoskins who has examined how things can be used as surrogates for the presentation of a person's biography in anthropology (Hoskins 1998). She describes the inter-relationship that can develop between an object and its owner that can follow a sequence that leads towards its gradual deterioration or ageing (ibid, 8). Jones has also explored the notion that an object may have a biography and that it may be born, live and die (Jones 2002, 83). It is the relationship of things to people that Olsen considers important to archaeology (Olsen 2010, 136). Archaeology has been defined as the study of the past through material remains (Gamble 2001, 120).

In the analysis that follows I choose to adopt two distinctions within my biographical approach. A biography is linear; it starts with birth and ends at death. In the context of this critical analysis this will be applied to people and also as the structure for which I will explore biographies of artefacts, artefact assemblages or places. My definition of a life-cycle hinges on the cyclical nature of the process. Effectively there may not be such a clear end and a further life-cycle may commence at any stage. There may even be occasions where there may be a period of dormancy during a life-cycle. In the examples given it is during those periods when the artefact or place ceases to have direct contact with a person when this state of dormancy is reached. My application of the terms in this critical analysis considers that there may be life-cycles within a biography. I adopt Joyce's definition that a biography concerns a life-cycle that has a birth, a life, a marriage, a death and a reincarnation (Joyce 2002). It is this reincarnation stage which may trigger the start of a new life-cycle within this longer biography. The dynamism of a life-cycle is therefore suitable for application to artefacts, assemblages, places or projects and this approach will be contextualized in the analysis that follows.

Narratives

Narratives are created at all stages of any piece of archaeological work (Joyce 2002, 2). They may be constructed from the historiographical or lithic artefacts analyses and offer opportunities to connect works in many ways and at different levels in order to engage and inform an audience. Pluciennik has developed the concept that most archaeological narratives have a chronological biography with a beginning, middle and an end (Pluciennik 1999, 654). Narratives may be created from people, things, events and plots which can be drawn from the study of the past (ibid, 655). Here I will use narrative to tie the archaeological evidence together to present some histories of archaeological sites, places and regions at times in the past.

THE RESEARCH CONTEXT IN WHICH THE PUBLISHED WORKS WERE WRITTEN

My interest in pursuing the research that is presented in the published works stems from the environment in which I operate. I am a museum curator so I am surrounded by artefacts and information about them. This information may be the archives from the original projects that led to the artefacts being collected, their post-excavation reports, a library of publications and the files and computer records that detail their histories and entry into the Museum's collection. Some of these objects have no archaeological contextual information with them at all, yet there will be something significant about them that caused them to gain their place in the Museum.

I use the Museum's collections in ways few researchers can. By preparing exhibitions I can use artefacts and my research into them as the centrepieces of narratives which will present one of the multiple stories any artefact can tell. I see how all the artefacts have potential to reveal new stories that can engage the interest of a twenty-first century public in ways that may be far removed from the original purpose the object was created for. The concept of using research to create archaeological narratives will be explored in this critical analysis. I will determine the ways in which information and knowledge gained through undertaking the research presented in the published works can be drawn together in powerful new ways as narratives that can be applied back into the museum environment in which I work.

Chapter two of this critical analysis will justify the selection of these particular published works for analysis by identifying the topics and the theoretical approaches that connect them. It will present a summary of each of the published works examining the context in which they were written and highlighting the original research contained within them.

The third chapter will analyse some of the published works within an historiographical framework. It will examine the themes within the publications that contribute to a discussion of the emergence of prehistory as a distinct sub-discipline of archaeology. It will examine the distinction between geology and prehistory. This chapter will look at the materials used to address the research questions posed by the published works. It will draw upon biographical concepts of individuals and places and it will conclude by examining the research methodology applied to the historiographical element of the body of published works.

Lithic artefact studies will be the focus of the fourth chapter as this is a topic that forms a major part of the research that underpins the published works. This chapter will commence with a brief examination of the historiographical background to the study of lithic artefacts. It will then examine the research methodology adopted for the analysis of lithic assemblages and how these analyses have been applied and used in the published works. Tool technology, the *chaîne opératoire*, chronology and typological classification systems will be assessed and their features examined. The chapter will include a discussion of the theoretical approach of artefact biographies as a method for the study of individual and assemblages of lithic artefacts.

Chapter five will examine the archaeological practices used within Palaeolithic and Mesolithic archaeology. It will look critically at the methods used and adopted by the antiquary, amateur and professional prehistorians and will assess the contributions they have made to the study of these periods. This chapter will explore some specific archaeological projects. It will deconstruct the project into the elements of people, fieldwork, archive and the survival of the records. Each element will be examined separately as applied, or observed, within the published works.

Chapter six will examine narratives of places. This chapter will draw the threads presented in earlier chapters together to discuss the purpose of creating regional narratives. It will examine how biographies may lead to the creation of narratives. It will explore different scales, the region or county history and the broader study which has examined the whole of

Wales. It will highlight the role of narrative to present the archaeology of Wales in publications and in museum displays.

Chapter seven will draw the evidence presented in the publications and the discussions in the critical analysis together. It will connect the approaches presented in earlier chapters by examining the key threads that link the works to enable the creation of narratives. It will also present new observations, not presented in the published works that have arisen during the preparation of this critical analysis. The work will conclude by offering some suggestions for future research.

CHAPTER TWO

THE PUBLISHED WORKS

INTRODUCTION

This chapter will introduce the published works. The choice of publications will be justified as their selection will demonstrate their coherence as a body of research in which the two principal themes of historiography and lithic artefact analysis may be connected. This chapter will describe the original reasons for writing these works and the decisions I took, or the instructions I received from the volumes' editors, which have resulted in the works being structured as they are. This chapter will also present an assessment of the contribution the works have made to learning.

Each paper has been given a reference number that will be cited in the discussion that follows. This reference number may be followed, where appropriate, by the Harvard reference.

JUSTIFICATION FOR THE SELECTION OF THE PUBLISHED WORKS

The published works address two areas of research. These, archaeological historiography and lithic artefact studies, may both be used to create archaeological narratives. I have ordered the publications carefully in order to support a route through the works. The two threads of archaeological context and biography provide an underpinning theoretical perspective which offers a further route through the publications. The critical analysis will draw on each of these strands at appropriate times where they can be demonstrated to connect specific elements of the works.

The first theme to be examined is historiography. By selecting two publications (PW1 and PW2) that concern work at Palaeolithic caves in North Wales I demonstrate the significance of understanding archaeological context by examining its origins in geological stratigraphy. PW1 examines the history of investigations that took place at Pontnewydd Cave and other caves at Cefn (Walker 2012). The chapter connects the work of Thomas McKenny Hughes in Pontnewydd Cave (Hughes and Thomas 1874) to that of Henry Hicks, whose excavations at Ffynnon Beuno and Cae Gwyn caves (PW2) were undertaken with the intention of proving his theory about the age of the emplacement of deposits

within the caves (Hicks 1886; Aldhouse-Green *et al*. 2015). Both publications utilize a range of original sources in the preparation of their histories and highlight the role personal biographies may play in elucidating the stories of the caves.

The notion that archaeological context may be understood by undertaking historiographical studies of sites leads to reports of two recent excavations. The first (PW3) seeks to obtain a context for an historic assemblage from Colonel E.R. Wood's excavations at Cathole Cave, Gower, through the application of modern excavation, dating and analytical techniques (Walker *et al*. 2014). A second work (PW4) offers a context and interpretation for a new and previously untouched rock shelter: Snail Cave, Great Orme, North Wales (Smith and Walker 2014). By presenting these two publications it is possible to demonstrate how new excavation and post-excavation analysis of project archives may be adopted as an approach towards obtaining new information about the archaeological context for otherwise unstratified assemblages of lithic artefacts.

These excavations lead to analyses of other surface lithic assemblages from ploughed fields and the study of single chance finds of lithic artefacts (PW5 and PW6). These publications, like PW4, are underpinned by detailed analysis of the artefact assemblages (Walker 2004; 2015). The artefacts are analysed alongside surface and historic collections. The notion that objects, like people, have biographies also emerges and this theme is identified as a thread that connects these works. The methodology used in the analysis demonstrates how the biographies of individual artefacts, or assemblages of artefacts, may be revealed and the role such studies may play in providing a context for these finds.

The published works PW5 and PW6 also demonstrate how surface collecting may help to provide new data about the late Glacial and Mesolithic archaeology of south-east Wales which can be used to create a narrative (Walker 2004; 2015). PW6 and PW7 are both chapters written for county history volumes. They describe chronological archaeological narrative histories for the Mesolithic of Gwent (Walker 2004) and the Palaeolithic and Mesolithic of Pembrokeshire (Walker 2016). The publications are compared with PW8, a chapter about the Mesolithic of Wales (David and Walker 2004). These three works demonstrate how the research generated from historiographical studies of sites, new investigation of the findspots of historical and recent assemblages of lithic artefacts and new analyses of them may lead to the creation of fresh interpretations or narratives for the Palaeolithic and Mesolithic archaeology of Wales.
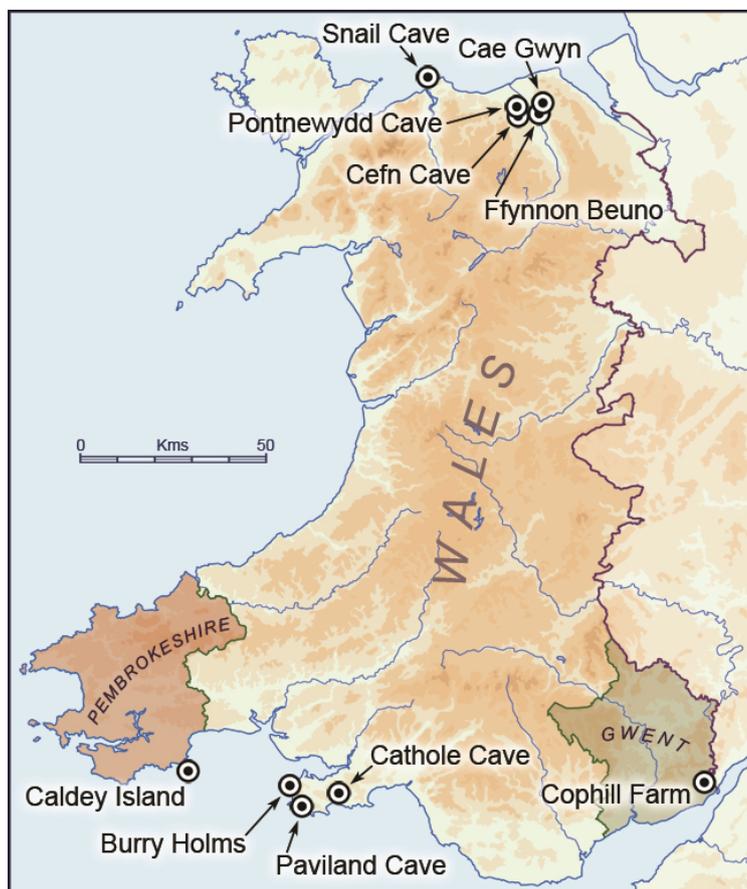
Figure one: map showing key locations mentioned in the critical analysis.
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Figure one shows the locations of the regions and key sites that are referenced in the publications or in this critical analysis.

Published Work One (PW1 – Walker 2012)

Walker, E.A. 2012. The history of work at the caves. In S. Aldhouse-Green, R. Peterson and E.A. Walker (eds), *Neanderthals in Wales: Pontnewydd and the Elwy valley caves*, 10–22. Oxford: Oxbow Books and National Museum Wales Books.

Pontnewydd Cave, Denbighshire, currently provides the oldest dated evidence for a human presence in Wales. This and Cefn Cave lie within the Elwy valley, which was the focus of a major research project directed by Stephen Aldhouse-Green for the National Museum of Wales. In 1986 I joined the project team as finds supervisor and participated in all the subsequent field seasons. During this time I also became responsible for undertaking a major study of the lithic artefacts, providing all the metrical data required for their analysis and working with Stephen Aldhouse-Green to prepare them for future publication. I also became interested in the history of work at the caves.

I was keen to study the records of previous interest in the caves in order to contextualize the historically excavated finds held in museum collections. This led to me researching the place these caves held in the development of the understanding of prehistory. The final monograph devoted to this major research project was published in 2012 (Aldhouse-Green *et al.* 2012). Here I have opted to submit the chapter concerning the history of work at the cave (Walker 2012). This was originally written as two separate chapters, one on the myths and legends associated with the caves, written by Tristan Gray Hulse, a resident of Bont Newydd village and specialist in holy wells. The second was about the history of the caves. I decided to bring the two papers together into a single chapter which explores the origins of some of the local myths and legends associated with the valley. This is followed with my factual account of the history of work at the caves. Both papers remain separately authored and I wrote the introduction that draws them together.

This chapter presents my research into the history of those caves in the Elwy valley which are collectively known as the Cefn Caves. Three caves are examined, the Old Cefn Cave, Cefn Cave and Pontnewydd Cave. This chapter is included here as it provides an historiographical narrative about the nineteenth century excavations at each cave which enables it to be examined with PW2 and PW3 to identify their contributions towards the creation of new narratives today.

The research focused upon the Victorian period when there was a growth of interest in exploring and excavating caves across Britain as a means to refute or to support theories about the age of their formation. This is presented within the context of contemporary newly-emerged frameworks about the understanding of geological stratigraphy, the emplacement of deposits within the caves and debates about the timing and impact of the ice age. The chapter also offers a contribution for use by future historiographers by discussing the recent excavations at the caves. This personal reflection on the project highlights some of the key project logistical arrangements. It ends by assessing the impact this research project had on members of the project team and the perceived impact on the residents of Cefn Meiriadog and Bont Newydd.

Published Work Two (PW2 – Aldhouse-Green *et al.* 2015)
Aldhouse-Green, S., Dinnis, R., Scott, K. and Walker, E.A. 2015. The nature of human activity at Cae Gwyn and Ffynnon Beuno caves and the dating of prey and predator presences. In N. Ashton and C. Harris (eds), *No Stone Unturned: papers in honour of Roger Jacobi*, 77–92. London: Lithic Studies Society.

This paper provides an historiographical account of Henry Hicks' work at Ffynnon Beuno and Cae Gwyn caves, Tremeirchion, Denbighshire, 1883–1887. The inter-relationships between these and Pontnewydd Cave led Stephen Aldhouse-Green to commence research into the historical archives arising from nineteenth century work in them. This entailed locating and studying the artefacts and records from Hicks' excavations. An opportunity was provided to complete this analysis and publish it when Rob Dinnis began to express an interest in undertaking a new research project at Ffynnon Beuno. My role was to research the history of work at the caves and to prepare an historiographical account of it. I also sought information for the stratigraphical contexts of the artefacts and faunal remains recovered from Ffynnon Beuno and Cae Gwyn caves. By bringing this work together with an interpretation of the finds and new dating it was possible for a line to be drawn under the Museum's work before new investigations commenced. This paper was offered as a contribution to a book of edited papers written in memory of the late Roger Jacobi.

In my contribution to this paper I draw upon contemporary publications written by Hicks, Hughes and others working during the late nineteenth century, using these to explore Hicks' rationale for working at the caves. Hicks believed they had potential to offer support to his theory that the past human occupation of several of the North Welsh caves, including Pontnewydd Cave, took place in what at the time was considered to be the pre-glacial, rather than the post-glacial period, as was postulated by Hughes (Hughes 1887). It offers a further contribution to the historiographical picture of late Victorian thinking about the glaciations, emplacement of deposits and date of the human use of the caves of North Wales. This paper sits alongside PW1 and builds upon it. It is included here as it offers opportunity for the application of the concept of biography to be explored as it may apply to people and places.

Published Work Three (PW3 – Walker *et al*. 2014)

Walker, E.A., Case, D., Ingrem, C., Jones, J.R. and Mourne, R. 2014. Excavations at Cathole Cave, Gower, Swansea. *Proceedings of the University of Bristol Spelaeological Society* 26 (2), 131–169.

This paper is a site-specific study of Cathole Cave, Gower, Swansea. In 2010 George Nash explored the cave for potential rock art (Nash *et al*. 2012). His discovery of an engraving in the cave, and its subsequent vandalism, resulted in Cadw and Natural Resources Wales deciding to grille the cave to protect the surviving deposits. I was invited to present a proposal to excavate and record all the deposits along the proposed line of the grille. This paper is the report of the excavations I directed within the cave in 2012.

This project provided an opportunity for me to use excavation to elucidate a stratigraphical context for the historic group of finds recovered during excavations in the 1860s by Colonel E.R. Wood at Cathole Cave. This was not undertaken by later excavators who investigated the platform in front of the cave entrance, rather than inside the cave (McBurney 1959; Campbell 1977). My work therefore took Wood's historic collection as its starting point. The paper summarizes the results of the three previous excavations in the cave. I explain the methodology I adopted to excavate and record the deposits within the cave. The specialist sections of the report are individually authored by sedimentologists and faunal analysts. The results are described within the broader context of the current understanding of early Upper Palaeolithic and late Glacial human presences in Wales. The paper is included here as it provides the opportunity to explore how the application of modern research methodologies to historic records of work at Cathole Cave may contribute to the creation of modern narratives and new interpretations of the research.

Published Work Four (PW4 – Smith and Walker 2014)

> Smith, G. and Walker, E.A. 2014. Snail Cave rock shelter, North Wales: a new prehistoric site. *Archaeologia Cambrensis* 163, 99–131.

This paper reports the discovery and study of a new, previously unrecorded site, Snail Cave, Great Orme, Conwy. Snail Cave was discovered by local experimental archaeologist, David Chapman, when he was examining the rock shelters and caves on Great Orme, Conwy, for surface finds. Remarkably he found an intact cowrie shell bead and some micro-debitage from flintworking in a goat-scrape. He reported these to the National Museum of Wales and my report generated interest from the Gwynedd Archaeological Trust and Cadw. It resulted in Cadw funding an excavation at the site directed by George Smith of the Gwynedd Archaeological Trust.

The paper is a traditional excavation report which details the methodology and assessment of the archaeological and environmental results from this work. My role was to participate on the excavation and later to write the report about the excavations jointly with George Smith. I undertook the analysis of the lithic assemblage and the bead and combined my interpretation of these groups of artefacts with Smith's work on the stratigraphy and dating of the site. Other specialists contributed sections based on their particular areas of expertise. Together George Smith and I wrote a commentary upon this new site in the context of our broader knowledge of the Mesolithic and later Prehistoric archaeology of North Wales.

The lithic analysis included in this paper applies many of the principles that I have used in studies of historic collections looking for technological and typological characteristics amongst all the pieces of knapped flint and stone within the assemblage. Snail Cave has a well-recorded stratigraphic sequence into which to fit the lithic assemblage. This sequence and my assessment of the artefact forms represented in the assemblage has raised a question about the dating of the site. The AMS dating provides early Mesolithic results, yet the lithic artefacts suggest a later Mesolithic date. This paper concludes with a detailed assessment of the evidence as it currently stands for a Mesolithic presence in North Wales in order to provide an overview of Snail Cave within a broader regional perspective. The paper highlights how some of the contradictions that can be encountered in dating a recently excavated assemblage may be the same as those encountered when studying historical assemblages of stone tools. It offers an opportunity for a critical analysis to be undertaken of the techniques that are available for the study of a well-contextualized assemblage of lithic artefacts. This paper can be analysed with PW5 and PW6 to explore notions of the creation of biographies of artefacts, assemblages and sites and to review the contribution such analyses may have to aid an understanding of the Welsh Mesolithic.

Published Work Five (PW5 – Walker 2015)

> Walker, E.A. 2015. Scratching the surface: new late Glacial lithic artefacts from south-east Wales. In N. Ashton and C. Harris (eds), *No Stone Unturned: papers in honour of Roger Jacobi*, 113–125. London: Lithic Studies Society.

This paper applies a knowledge and understanding of lithic artefact technology and typology to the stone tools of south-east Wales. My study arose from observations made when undertaking research for another publication included here (PW6, Walker 2004). Whilst researching the evidence for a Mesolithic archaeology of south-east Wales for a chapter for the *Gwent County History Volume I*, I discovered and recorded several lithic artefacts that were of late Glacial age. In 2004 a new group of artefacts collected from the surface of ploughed fields at Cophill Farm, Howick, Chepstow, was reported to the Portable Antiquities Scheme Cymru (PAS Cymru). Amongst these I identified a number of tools of late Glacial age. This led me to suggest that the fields should be investigated further through a programme of fieldwalking. I worked with the Finds Co-ordinator for Wales, Mark Lodwick, and together we systematically fieldwalked five fields with the help of a team of local volunteers. Mark Lodwick took responsibility for surveying and recording the findspots and the community aspect of the project, whilst my role was to offer an archaeological perspective and to record and identify all the lithic finds on site and during the post-fieldwork stage. An invitation from the editors of a volume of papers in

memory of Roger Jacobi provided the opportunity for me to publish those artefacts I have identified as being late Glacial in age.

The Cophill Farm project is currently the most extensive project so far undertaken to investigate the late Glacial archaeology of south-east Wales. This paper draws the finds from this project together into a broader context with other chance and surface finds of late Glacial age from across this region of Wales. It does so by describing the lithic artefacts in detail by applying a methodological approach based on technological and typological characteristics to surface collections of stone tools. It identifies two new sites on land belonging to Cophill Farm, Howick, Chepstow, and further new locations where individual tools of late Glacial age have been found. The chapter assesses the evidence provided by these tools by drawing analogies between well-excavated, well-stratified and well-dated sites from elsewhere across Wales and south-west England. This paper can be examined alongside PW4 and PW6 which also focus on detailed analyses of lithic artefact assemblages. By including this paper here comparisons may be explored between the application of methodologies for analysing surface collections with those from secure archaeological contexts. These methodologies can be assessed critically to determine if surface collection may be a valid approach to improving our understanding of late Glacial Wales.

Published Work Six (PW6 – Walker 2004)
> Walker, E.A. 2004. The Mesolithic period: the final hunter – gatherer – fishers of south eastern Wales. In M. Aldhouse-Green and R. Howell (eds), *The Gwent County History Volume I*, 29–55. Cardiff: University of Wales Press.

This book chapter focuses upon south-east Wales (as does PW5, Walker 2015) to examine the evidence for a Mesolithic presence in this region. The chapter was written by invitation of the editors of the *Gwent County History Volume I* (Aldhouse-Green and Howell 2004). Initially this appeared to be a potentially straightforward task as there were few sites of Mesolithic age recorded from the county. However, I was aware of a number of surface finds that I had recorded amongst private collections throughout my career and which merited further research. I therefore undertook a systematic search for additional artefacts of potential Mesolithic age. To achieve this I re-examined all the Mesolithic artefacts from the region amongst the collection of the National Museum of Wales. I visited all the local museums that lay within the county and recorded all their lithic artefacts, regardless of age, with the intention of identifying previously unrecorded finds of Mesolithic date. I also contacted all the collectors I knew to be active in the area and re-examined their

collections, recording all new finds in detail. At Monmouth I was made aware of a number of unrecorded collections held by surface collectors who had not previously reported their artefacts to either PAS Cymru or to the National Museum of Wales, and I spent a day in the town recording these private collections. Monmouthshire is also a county where there have been many excavations undertaken by local societies and individuals. So I also contacted the project directors and visited them to record all the lithic artefacts they held. This study resulted in a greatly increased body of data from which to work.

This chapter provides a methodological analysis of the artefacts using technological and typological characteristics to determine their probable ages. It has utilized whatever evidence could be found about the particular collections, the methodologies used during collecting, publications and contemporary records of the assemblages. It discusses the analysis of findspots and the resulting new distributions to demonstrate there is evidence for more widespread Mesolithic settlement across south-east Wales than had previously been thought. It explores this new evidence by discussing the findspots in relation to research on the Severn Estuary levels (Bell *et al.* 2000) and in the upper Wye valley (Barton 1993; 1994a; 1995; 1996; 1997). The resultant publication examines the thinking at the time it was written for the activity, past environment, settlement and dating for south-east Wales during the Mesolithic period.

The inclusion of this chapter, like PW5, offers an opportunity to examine methodological approaches for the analysis of both surface and contextualized assemblages of lithic artefacts. As this chapter offers an account of the Mesolithic archaeology of Gwent it allows comparative analyses to be undertaken with the narratives presented in PW7 and PW8.

Published Work Seven (PW7 – Walker 2016)

Walker, E.A. (2016). The Palaeolithic and Mesolithic periods in Pembrokeshire. In H. James, M. John, K. Murphy and G. Wainwright (eds), *The Pembrokeshire County History Volume I: Prehistoric, Roman and Early Medieval Pembrokeshire*, 1–54. Haverfordwest: The Pembrokeshire County History Trust.

This chapter provides an overview of the Palaeolithic and Mesolithic archaeology of the county of Pembrokeshire, south-west Wales. It was written as a contribution towards the *Pembrokeshire County History Volume I*. My research has drawn together many historical assemblages of lithic artefacts, along with new finds and evidence from publications of recent research undertaken in Pembrokeshire. New research within this chapter includes the detailed study and examination of all the lithic artefacts discovered during work in the

Caldey Island caves and analysis of those from historical and recent excavation of the Hoyle caves, Tenby. Some of these collections were generated from excavations undertaken prior to the 1970s, and many remain unpublished today. The chapter draws upon the archives, particularly those concerning the excavations on Caldey Island, which were initially published by Lacaille and Grimes (1955; 1961). It provides data about new surface collections of lithic artefacts of Palaeolithic and Mesolithic date reported to PAS Cymru and the National Museum of Wales. It draws these together with work done on other surface collections of stone tools by other researchers including Andrew David (David 2007; David and Painter 2014). Much of this paper relies upon collections of lithic artefacts and associated faunal and other evidence recovered from sites during the past one hundred and fifty years which can be analysed to determine the usefulness, or otherwise, of such historic collections. It also draws analogies with sites elsewhere in Wales, and is based on a knowledge and understanding of the history of investigation of the early prehistoric archaeology of the county.

This chapter is included here as it enables a critical analysis to be undertaken of the use of a county history to provide a narrative of the Palaeolithic and Mesolithic archaeology of Pembrokeshire. All this can be examined against the broader framework of what is happening elsewhere in Britain, but particularly in Wales.

Published Work Eight (PW8 – David and Walker 2004)

David, A. and Walker, E.A. 2004. Wales during the Mesolithic. In A. Saville (ed.), *The Mesolithic of Scotland and its Neighbours*, 299–337. Edinburgh: Society of Antiquaries of Scotland.

This paper is an overview of the evidence for a human presence in Wales during the Mesolithic period. The paper was written as an outcome of a presentation I delivered to an international conference held in Edinburgh in 1999. I invited Andrew David to work with me as this was an opportunity for him to bring some of his then unpublished PhD research to publication for the first time. Andrew David's study of Mesolithic Pembrokeshire had updated earlier works by Geoffrey Wainwright and Roger Jacobi (Wainwright 1963; Jacobi 1980; David 1990 published in 2007).

This paper therefore draws mainly upon the earlier work undertaken by David at sites such as The Nab Head and on Daylight Rock and his examination of privately-held surface collections from across Pembrokeshire (David 2007). David's work complemented my own more recent research on all the lithic artefacts held within the collection of the

National Museum of Wales. I worked with David to bring his work up-to-date in the context of new research and discoveries made across Wales that had been undertaken since his thesis was submitted for examination in 1990. In the intervening years several assemblages had come to light across Wales, including surface collections, and finds from recent, but unpublished work, at sites such as Llyn Aled Isaf, Denbighshire. Original research within this paper includes a new analysis of these collections, along with an assessment of some of the historic collections in the National Museum of Wales. These are drawn together with work by others, for example, at Rhuddlan, Denbighshire, and the Severn Estuary levels (Berridge 1994; Bell *et al*. 2000). I also incorporate the first unpublished results from my own research excavations of an early Mesolithic site on Burry Holms, Gower, Swansea. The paper includes results from an initial over-view of the lithic artefact assemblage and a preliminary report about the lithic raw materials represented in the Burry Holms assemblage (Walker 2000).

This paper provides a detailed synthesis of the state of the evidence for a Mesolithic presence in Wales as it stood at the time it was written. It is based upon my detailed knowledge of stone tool technologies and typologies as well as an examination of the available publication record. The resulting paper offers a critique of the evidence for the environmental, chronological settlement and lithic artefact evidence contained within these publications. It uses this research in order to present a narrative picture of our understanding of Mesolithic Wales, as it was in 2004. It is included here as it is an example of a Wales-wide analysis and therefore provides a different perspective to the analyses of the creation of narrative accounts of the archaeology of a geographical region. By including it here I am able to explore the approaches it adopts to determine how relevant the research it contains can be for formulating future research questions.

AN ASSESSMENT OF THE CONTRIBUTION THE PUBLISHED WORKS HAVE MADE TO LEARNING

The published works contain new research that provides new up-to-date data about Palaeolithic and Mesolithic sites, necessary for the formulation of new research questions that may feed future research strategies for Wales. The research has directly contributed towards the methodologies that are adopted by Welsh Government towards the investigation and protection of Welsh caves. For example, the methodology I created for the investigation and recording of deposits along the line of the grille in Cathole Cave has been adopted during fieldwork in Kendrick's Cave, Great Orme, Llandudno (Rees 2015).

The publications present research that has utilized and applied existing methodologies for the analysis of lithic artefact collections. In doing this, as opposed to developing new methodologies, the available data-sets are recorded consistently in ways that enable them to be compared with other assemblages. The contribution these publications have made has therefore been to refine, enhance and to improve the interpretation of Welsh Palaeolithic and Mesolithic lithic artefacts. This has been achieved by detailed recording and description of the associations between the types of artefact recorded. These have then been placed into the frameworks provided by other evidence, including new dating, in order to describe archaeological contexts. This is demonstrated in PW4 and PW8 which highlight how the data-set available has improved on that presented in earlier publications for a Mesolithic settlement in Wales (Wainwright 1963; Jacobi 1980; David 2007).

The published works demonstrate the unique position I hold being able to examine and record all the lithic artefacts that enter the National Museum of Wales. This has given me the opportunity to work closely on the Welsh lithic artefacts enabling me to gain a level of expertise and experience that few other researchers hold. I apply my knowledge of the Welsh data-set to recognize patterning in distributions across Wales. My research has generated new data for comparison with other assemblages which I have utilized in the published works. For example in PW5 I have drawn my analysis of new late Glacial lithic artefacts from south-east Wales into the broader context of the current understanding of the late Glacial archaeology of south-west England and South Wales (Walker 2015).

Three of the works are published within books or journals aimed at a Welsh readership, so they demonstrate the contribution this work has played towards improving and enhancing an understanding of the Palaeolithic and Mesolithic periods within Wales itself (PW4, PW6 and PW7). The other works all sit within books or journals with a wider distribution and readership (PW1, PW2, PW3, PW5 and PW8). Consequently these serve to present this work to a wider audience. This all helps to highlight the importance of aspects of the Welsh resource at a time when there is little research actively being undertaken in Wales on these periods of archaeology. The body of published works submitted here therefore offers a significant contribution towards promoting the new data as they become available and raising the profile of the Welsh archaeological record.

Archaeological publication strives to engage with other professional specialists. The aim is to stimulate thinking and for others to adopt and pick up new approaches and to apply these in their future research and to the research questions they formulate. This role is demonstrated in PW1 which has examined the history of work at the caves at Cefn (Walker

2012). The research undertaken for this publication has drawn attention to new archival resources and has offered an opinion about the role the historical research had on Victorian thinking, particularly regarding the debates about the emplacement of deposits in the caves (ibid, 19). By bringing new archives to publication and by linking these to new interpretations of original publications it has been possible to demonstrate the important place the caves of North Wales held in the development of prehistory during the Victorian period. This significance has not been fully appreciated before.

Having written in some detail about the historical research into the caves at Cefn in PW1 I also chose to include an account of the recent excavations. In doing this I adopted an historiographical approach which is innovative and has not previously been used in a site monograph in such a way. It was achieved by offering a picture which included an assessment of the impact a local chimney-sweep's relationship with the cave had on popular visits to Cefn Cave in 1870 (ibid, 16). I then ended the chapter with a personal view of the impact the twentieth century excavations had on the local community and the project team members. In doing this the work has a serious contribution to make towards future historiographical studies of cave archaeology and offers a template for other researchers to follow.

I have intentionally aimed to unlock the potential contained within historical archives, collections and new assemblages of lithic artefacts by undertaking research into collections held privately and in public museums. There are many collections of lithic artefacts held in such collections which have not been studied. The research presented in the published works has highlighted how historic collections, or previously unstudied collections, of lithic artefacts may provide relevant data for addressing new research questions. The research presented in the published works has therefore made an important contribution towards increasing the quantity of data available and by identifying new sites for study. This has then been used to create new interpretations of the archaeology of regions of Wales. For example, PW5 and PW6 have greatly increased the understanding of the late Glacial and Mesolithic human settlement and presence in south-east Wales. Cophill Farm was one such new site where lithic artefacts were recorded. Subsequent systematic fieldwork presented in PW5 resulted in a distribution plot that has identified two new foci of late Glacial open-air activity (Walker 2015).

Fieldwork has been used as a means to address specific questions posed by the historical assemblages. Jeter has described how analysis of an historic assemblage and its associated archive can result in such new problem-oriented fieldwork (Jeter 1989, 179). The work

undertaken in Cathole Cave (PW3) achieved one of its aims by seeking to understand the extent of Colonel Wood's excavations within the cave as well as to understand the remaining stratigraphy in a surviving standing section (Walker *et al*. 2014, 134). Consequently these published works have brought archives, artefacts and sites into the forefront. The life-cycle of these places and collections may now continue, as the data and their application within the published works may feed new research questions and help to further the future research agenda for Wales.

My analyses of assemblages of lithic artefacts offer an important contribution towards understanding settlement patterns during the Palaeolithic and Mesolithic periods and the timing of these occupations in Wales. In North Wales my preliminary report about the discovery of the later Mesolithic bead and lithic debitage at Snail Cave described in PW4 resulted in excavation in order to investigate an archaeological context and interpret this new site (Smith and Walker 2014). The report has drawn this work together with other recent research to present a detailed investigation of settlement and activity of people in North Wales during the Mesolithic.

I also recognize that the published works have offered a contribution that goes beyond improving knowledge and learning in a purely academic context. Working within a museum makes me very aware of the research potential of the collections that such institutions hold. A key role of good museum research is that knowledge gained about the collections reaches as wide-ranging an audience as possible often this is through exhibitions (Pearce 1992, 139). Research within these publications has also been presented in museum displays e.g. the Cophill Farm fieldwalking finds published in PW5 were displayed in the *Origins: in search of early Wales* exhibition in the National Museum Cardiff 2007–2014.

The county history chapters PW6 and PW7 have made an important contribution towards increasing local knowledge and awareness of the counties' archaeological resources. The published works have achieved this by presenting narrative regional histories in accessible language aimed at enhancing local interest in regional archaeologies and to empower local people towards recognizing their own sense of place and regional identity. The data-sets accrued during the course of the research have also all been made fully accessible to everyone. Records of the contents of museum collections have been placed onto relevant museum collections databases (e.g. Oliver Blackmore, Newport Museum, pers. comm. 2015) and *Historic Wales* (www.historicwales.gov.uk). The private collections data have

all been passed to the Portable Antiquities Scheme Cymru for inclusion on its database (www.finds.org.uk).

The research contained within the published works can therefore be demonstrated to have benefitted the intellectual landscape of aspects of the Palaeolithic and Mesolithic archaeology of Wales at academic, professional, regional and local levels.

CHAPTER THREE

HISTORIOGRAPHY

INTRODUCTION

Three of the published works focus upon aspects of historiography. They are concerned with historical work in caves, two in North Wales (PW1 and PW2) and the third in South Wales (PW3). This chapter will explore the research questions posed in these published works. It will provide an analysis of the publications, including a discussion about the research methodologies applied that relate to historiography and enable the creation of biographies for people and places.

These publications have not presented the broader frameworks of the historiography of Palaeolithic archaeology and their place within it. This is because it was either not part of their original purpose, or because selectivity was exercised in which aspects of this history are referenced. The discussion that follows will place these works within the context of the broader literature. It will explore the main themes and different perspectives that have been placed on, and which have emerged from, historiographical studies of the Palaeolithic.

The published works that relate to the history of archaeology predominantly focus on the Palaeolithic period, so the discussion that follows in this chapter will concern itself solely with the historiography relevant to this time.

BACKGROUND TO HISTORIES OF ARCHAEOLOGY

The history of archaeology has been approached by different scholars in different ways. They have variously concerned themselves with individuals, institutions, philosophy, nationalism, internationalism, gender or theory (Murray and Evans 2008; Murray 2014). It is not the intention here to present a full history of archaeology itself, which has been done in detail by others including Daniel (1950; 1981); Trigger (1989); Bahn (1996) and Schnapp (1997). This chapter instead aims to pick up relevant key points observed from amongst the histories that are referenced within the published works. History is helpful in marshalling the arguments and presenting the background to an understanding of why thinking is as it is today and how it may be possible for different researchers using the same facts to order them and present them in different ways. Reflecting on his five volume

Encyclopedia of the History of Archaeology (1999–2001), Murray concludes that writing this work has helped him to reach his own understanding of past times as well as understanding the means by which he has reached this point (Murray 2014, 11). Many historians of disciplines aspire to achieve this position.

RESEARCH QUESTIONS IN THE PUBLISHED WORKS

Three of the published works (PW1, PW2 and PW3) have drawn on aspects of historiography to present introductions to broader research undertaken in caves. These publications are not historiographical works in themselves and the identification that aspects of historiography may be identified within these published works has emerged during later reflection in the preparation of this critical analysis.

In undertaking this reflection it has been possible to see that the research questions they set out to address have not been articulated explicitly within the publications. In PW1 the research question has been presented as a statement that the work will provide a narrative, 'a history of some caves, where applicable explaining the specific roles they played in the development of scientific knowledge and the contributions they made to contemporary debates' (Walker 2012, 11). PW2 does not pose a research question. The relevant part of the paper is titled 'the history of the nineteenth century work at the caves' (Aldhouse-Green *et al*. 2015, 77). It implies that the research aims to collect data that will be presented as a chronological narrative history without explaining why this is required.

PW3 has placed its historiography under a heading 'archaeological background' (Walker *et al*. 2014, 131). This publication makes use of historiography in a different way. It has been used to formulate new research questions posed about the archaeological context of an assemblage of artefacts and fauna. This question has been addressed using site investigation methods. The lack of explicit research questions in the latter two publications is not unusual. In project reports the history of archaeology is often presented as the background to modern research at a site. However, as all three publications demonstrate, the questions asked by recent work at the caves could not have been addressed satisfactorily without having gained this detailed knowledge about the historic work in the first place. It is therefore not surprising to note that these papers do not present an explicit research rationale. Indeed the new historiographical analysis presented in PW1, PW2 and PW3 has resulted in the development of new research questions at all the caves examined in these published works. These analyses of historical work at the caves have provided a

basis for the modern analysis of historic collections and the new research that the rest of the published works present. It is possible to reconstruct this by examining the research presented within each of these three publications.

THE METHODS USED TO EXPLORE HISTORIOGRAPHY IN THE PUBLISHED WORKS

Published works PW1, PW2 and PW3 have presented their histories of the changes in thinking over time chronologically. They fit into the standard format adopted for histories of archaeology and geology as used by Van Riper (1993); Cook (2003); Rudwick (2004); O'Connor (2007); Rowley-Conwy (2007) and McNabb (2012). These histories are presented as narratives which build upon the evidence layer by layer, examining literary sources and publications, offering an epistemological approach towards their presentation of evidence. To understand this approach it is useful here to offer a critical review of the methods adopted for undertaking the research which underpins these published works.

Historical archives

Two published works (PW1 and PW3) entailed a search for, and study of, original documentary archives, which provide first-hand evidence for the histories presented. Amongst these were the Williams Wynn papers containing correspondence sent to the family concerning visits to the caves at Cefn (Walker 2012; NMW accession file 68.88). In historiographical analysis, a consideration of the sources of information is important for offering new interpretations of sites that were excavated by researchers in the past. Study of such archives may have the potential to change the interpretation of past events or activities (Hinsley and Wilcox 2008, 43). By examining original archives it may be possible to discover what the conditions were at the time the work took place and how the researchers organized and undertook it. They may provide evidence for the site recording methods used, including what was discovered where or other on-site observations. A good archive will also contain papers and notebooks which shed light on the initial expression of ideas or intuitions from which the researcher's motivations may be gleaned, which may have resulted in their formulation of new ideas or interpretations (Schlanger and Nordblah 2008, 3).

The narrative history of the caves at Cefn presented in PW1 is entirely dependent upon the archives and publications located and consulted. The research therefore entailed a search

for all available sources of material. Personal archives may survive in private or public collections. The Williams Wynn archive was consulted during the research undertaken for PW1. This contains original letters sent to the family concerning the caves at Cefn (Walker 2012, 16). This archive just contains those letters the family chose to file in this way, the correspondence that survived. It is impossible to know what was not preserved, so it is only possible to work from the available data, however biased the surviving sample may be.

Some archives reside in public collections. In undertaking research for PW1 I consulted those held by six museums. Access to relevant material is only possible if the curator receiving the enquiry has good knowledge of their collection, or has good quality data on their database. Consequently it has to be assumed that the narrative presented in PW1 is as accurate as it can be based upon the sources of evidence consulted. A hidden archive or misfiled box of letters in any one of these museums, or indeed in another repository, could change the interpretation or narrative completely. It is therefore a chapter that is only as good as the detective work of its author and the information it contains.

The archives themselves are a very important resource in that they provide significant details that are not present within the original publications of earlier work. An example of this is given in PW1 where Stanley's work in Cefn Caves is clearly a response to interest the Reverend William Buckland expressed in the scientific potential of the cave (Walker 2012, 14). The details of the subsequent excavation in 1832 are present in the letters sent from Stanley to the landowner Edward Lloyd, rather than in the publication. Later evidence of Stanley's attempts to interest Buckland to visit the cave in 1836 is also only known about from correspondence in the National Museum of Wales' archive. Buckland's role in guiding Stanley from afar during this year therefore sheds light on why Stanley pursued his researches in this particular cave (ibid). This evidence can only be gleaned from reading this original correspondence given that Stanley's sole description of his work at the site was published three years earlier, in 1833 (Stanley 1833).

A search for any archives associated with Colonel Wood's work at Cathole Cave (PW3) has so far failed to reveal anything other than his photograph albums in the National Media Museum, Bradford. These include photographs of excavations at other Gower caves but none of the Cathole Cave excavation. A note in the Swansea Museum archive suggests that Wood's papers were passed to Hugh Falconer. However, this has drawn dead-ends at the Natural History Museum, London and Forres Museum, where Falconer's papers are

preserved. The failure to locate original archives resulted in a search elsewhere for information about Wood's work.

Wood failed to publish his work himself, so the only firm evidence I have been able to present in PW3 detailing his activity at Cathole Cave comes from contemporary publications. I was particularly reliant on Vivian's account which was later expanded by Roberts (Vivian 1887; Roberts 1888). Neither of these reports provides a first-hand account of Wood's excavations, although both describe the results. They contain very little information about the scope of his excavations or the stratigraphical relationship between the artefacts they describe. As these are apparently the only contemporary records that are known to survive they become important in the history of work at this site. Similarly PW2 used Henry Hicks' published section drawings and detailed descriptions of the stratigraphy of Ffynnon Beuno and Cae Gwyn which have now enabled Rob Dinnis, working in the twenty-first century, to match the surviving artefacts back to their original stratigraphical contexts (Aldhouse-Green *et al*. 2015, 81).

Bradley has commented on the importance of publications as historic documents in their own right and which become subject to the same kinds of scrutiny as other writings about the past (Bradley 2002, 2). McNabb concurs, commenting that such publications offer original data for historians of archaeology as they present the ideas and thinking of the writer at the time they were written (McNabb 2012, vii). It is also important to recognize that later researchers based their work and interpretations on these publications. Indeed, in PW1 I note that various authors quoted Boyd Dawkins who misquoted Reverend Stanley claiming that human remains, antlers and four stone tools originated from Cefn Cave (Boyd Dawkins 1874, 159). It is clear from Stanley's reference that they actually came from the Old Cefn Cave, lower in the valley (Stanley 1833, 41). Later commentators cited Boyd Dawkins, rather than Stanley, and perpetuated this error (Walker 2012, 16). In doing so a human presence became attributed to Cefn Cave when in fact there is no evidence for this claim.

Original publications offer an important resource for historiography providing the polished considered outcomes of a piece of fieldwork at a specific site. An example of this is seen in PW2. The detailed history of investigations at Ffynnon Beuno and Cae Gwyn caves is drawn directly from Hicks' publications. Indeed two of Hicks' section interpretations have

also been reproduced in the paper (Aldhouse-Green *et al.* 2015, 78–79). The original publication has presented Hicks' and Hughes' work in a way that shows the development of their disagreement and the definitions of their arguments about the age of the deposits in the North Welsh caves. During the nineteenth century discussions were frequently recorded in contemporary journals. These transcriptions highlight people's opinions; who sided with whom and their reasons for doing so. For example, Hicks and Hughes undertook their debate in meetings of the Geological Society of London and the British Association for the Advancement of Science (Hicks 1886; Hughes 1887).

These contemporary publications are therefore essential for understanding the thinking of the time. It is far rarer for such discussions to be published today. However, one of the published works (PW8) does sit alongside a full transcription of the discussion that took place at the end of the conference session in which the original paper was presented (Saville 2004, 359–368).

Personal biographies

Personal biographies can be important tools for historiography. The date the biography is written is significant as I observe that those written about people either during, or shortly after, their lifetime will often be highly factual accounts of the person's life. Those written in later years can be more wide-ranging, often drawing the biography together with those of others, in order to offer a more critical appraisal of that person's work. Biographies are often written about key individuals; e.g. Sir Hans Sloane (MacGregor 1994), Augustus Wollaston Franks (Caygill and Cherry 1997), Sir John Lubbock (Owen 2013), Sir John Evans (MacGregor 2008), Pitt Rivers (Bowden 1991) and Grahame Clark (Fagan 2001). Each of these men was a major institutional figure, and all these biographers have drawn upon detailed archival and collection-based studies to present pictures not only of these men themselves, but of the contributions they made towards the development of archaeology.

Interestingly biographies have been written about some of the lesser known figures in archaeology. These are often written by family members keen to present an overview of their relative's life's work shortly after their death, for example, Hester Pengelly's biography of her father William (Pengelly 1897). Other contemporary sources are obituaries which have been used to provide overviews of individuals' work. For example, PW2 describes the professional activities of Henry Hicks as relevant background to his

work in Ffynnon Beuno and Cae Gwyn caves (Aldhouse-Green *et al.* 2015, 77–78). Much of this biography is based upon an obituary published in the *Geological Magazine* (Anon. 1899). Autobiographies can also provide first-hand accounts of individuals' lives; however, none have been consulted during the preparation of the published works submitted here.

More recently there has been a trend in publishing short synopses of individuals' lives. See, for example, the *Bulletin of the History of Archaeology*, Hosfield *et al.* (2009), Fagan (2014) or Marsden (2014). Such works generally celebrate the achievements of the individuals selected for inclusion. Increasingly such volumes are published on anniversaries of years of birth or death, or of significant events (Murray and Evans 2008, 10). Such celebrations may consequently result in biased contributions towards the study of a history of archaeology for, as Bergman citing Gillberg (who writes in Swedish) observes, researchers in the history of archaeology should pay attention not only to prominent figures but also to the less prominent, as the majority of archaeology is carried out by such individuals (Bergman 2008, 131–132). Schlanger and Nordblah have also offered a cautionary note that it is easy to turn such biographies into hagiographies by placing some individuals in more significant positions than they may really deserve (Schlanger and Nordblah 2008, 1).

My own use of personal biographies in the published works is unconventional in the sense that they only work as personal biographies by affording glimpses into the geologists' and archaeologists' lives at the points in time when their lives intersected with that particular place. PW1 and PW2 demonstrate how Hughes and Hicks both used their work at Pontnewydd, Ffynnon Beuno and Cae Gwyn caves to influence the outcome of what became a personal, as well as a professional feud. Their disagreement, about the emplacement of the deposits in the caves, became a key part of what made these men who they were with the intersection of working in these caves providing biographical information both for them and for the caves themselves. In PW1 and PW3 there are no personal biographies; the narratives presented in these publications are based entirely upon the evidence accrued in the process of creating the histories. Rather than writing a personal biography of a person's whole life, effectively what has emerged is what might be called a biography of place, rather than of a person.

The histories of the caves in PW1, PW2 and PW3 are presented in a biographical way. The analogy that can be made suggests that the birth of the cave will be its recognition by people as a geological entity. The cave can then be brought to life as a space within which its inhabitants interact as they lead their lives; being born, living and dying there. The evidence for the caves' lives comes from the material culture contained within the deposits, i.e. the evidence for human activity within it. Without such activity the place becomes dead. We may describe a building or a room as dead when it is devoid of human activity. Likewise a cave can appear cold, damp and dead when it is first entered. However, when a group of people enter and interact with the space, it can be brought back to life and have a new life-cycle which forms a part of the cave's longer biography. In my analogy a place dies when it is abandoned and loses its human connection entirely. However, I should note that when people are absent from the cave it may enter a different phase in its biography, a new life-cycle when it may be occupied by fauna, or when natural processes, such as stalagmite growth, take place.

By applying my metaphor to our Welsh caves I perceive that periods of Palaeolithic or Mesolithic human interaction are cycles, or parts, of a cave's biography. Equally important are the further cycles within their biographies when the caves again touch on human lives during the excavations, the visits that people make and the resultant thinking and writing about them. Joyce has described this as the reincarnation stage of a biography (Joyce 2002, 72). I prefer to see these as the next life-cycle that forms a part of the biography of place I have reconstructed in PW1 and PW2. These are presented as historical narratives, following a chronological approach using the dates of each of the visits to the caves and highlighting the biographies of these caves.

THE HISTORY OF PALAEOLITHIC ARCHAEOLOGY

Published works, PW1, PW2 and PW3 have variously adopted and applied aspects of the broader history of Palaeolithic archaeology and geology within them. In PW1 historiography forms the core of the contribution towards the chapter (Walker 2012). None of the published works have directly tackled the history of the disciplines, yet to understand these papers fully as historiographical works this omission requires addressing. An area of particular interest here is the history of the understanding of stratigraphy and context as it is applied to archaeological sites.

The challenge that faces historians of archaeology is to remember that in Britain prior to the 1950s it was very hard for people to comprehend the calendrical age of humans on the earth. The understanding of prehistory during the Victorian period was gradual. It was not as sudden as commentators such as Van Riper might imply (Van Riper 1993). Chapman has argued that it came into usage not as the result of one individual, but was arrived at by several simultaneously (Chapman 1989, 161). The narratives presented in PW1 and PW2 demonstrate the extent to which rigorous debate took place across all aspects of knowledge during this time.

Histories of Palaeolithic archaeology and observations about archaeological context in Britain start with John Conyer's discovery of a handaxe and elephant tooth on what is today Gray's Inn Lane, London, in the 1690s. These discoveries were recorded, but their significance was not understood (Burnby 1984). A century later John Frere presented his observation about the discovery of a handaxe, found in association with animal bones at Hoxne, Suffolk, to a meeting of the Society of Antiquaries in 1797 (Frere 1800; Singer *et al*. 1993, 1). Frere's publication is remarkable for the fact that it was not remarked upon, given his observation that the stratigraphical relationship of the handaxe, which had some depth of deposits overlying it, must make it belong 'to a very remote period indeed' (Frere 1800). Grayson has argued that as Frere did not make a more convincing case for this antiquity it is not surprising that the paper failed to generate more interest than it did at the time (Grayson 1983, 59). Torrens has suggested that Frere's statement was not controversial at the time simply because there was no knowledge of how remote 'remote' was (Torrens 1998, 39).

At Kent's Cavern, Torquay, Devon, in the 1820s Father John MacEnery recorded finding bones of extinct animals with stone tools (Walker 2009). However, he chose not to publish his work and possibly bowed to questioning by Buckland, who urged caution in asserting that these discoveries were undisturbed (Cook 2003, 180–181). In Wales Buckland's failure to acknowledge the discovery in 1823 of the 'Red Lady' of Paviland Cave being found with associated artefacts and animal remains (Buckland 1823, 83) has been interpreted as due to his belief in non-biblical catastrophism theories, as well as his desire to keep thinking about transmutation at a distance (Sommer 2007, 103).

The first investigations were taking place at Cefn Cave around this same time (Walker 2012, 12). Whilst there is no suggestion within PW1 that any of the early discoveries at Cefn could have provided evidence for human antiquity, it is perhaps worth noting Buckland's interest and role in encouraging Reverend Stanley to investigate Cefn Cave

(ibid, 14). It was Stanley's publication that brought the cave to the attention of later researchers and indeed it was he who was to recognize the potential that Pontnewydd Cave could offer (Stanley 1833, 53; Walker 2012, 17).

Hugh Falconer's visit to Abbeville, France in 1858 resulted in the now well-known visits by Joseph Prestwich and John Evans to Jacques Boucher de Perthes in Abbeville in 1859 and their subsequent announcements and publications about human antiquity (Evans 1860; Prestwich 1860; Gowlett 2009, 20). It took time before a body of evidence existed from several sites and the intellectual climate was right for these new theories to be accepted. Key to this was new thinking about humanity's place in the world. Van Riper's book *Men Among the Mammoths*, subtitled *Victorian science and the discovery of human prehistory*, implies that there was no prehistory known before this (Van Riper 1993). However, this is incorrect as Daniel Wilson claims credit for having been the first to make use of the term prehistory in 1851 (Wilson 1863, xvi). But there appears to have been little sustained interest in prehistory then and this suggests that Van Riper's 1859 start date for prehistory was mistaken, as this date makes more sense as the beginning of an 'interest' in prehistory. The term prehistory entered popular usage after the publication of Lubbock's *Pre-Historic Times* in 1865.

The slower acceptance of human antiquity outside scientific circles is hinted at in one of the published works submitted here. The discussion contained within PW1 about the 'marvellous lizard of Cefn' tells the story of its 'discovery' in 1870 and the subsequent national and local press coverage (Walker 2012, 15–16). The idea that extinct species might still inhabit the caves of north-east Wales was clearly one that could be grasped by those less inclined to believe the evidence that extinct forms of animal and even humans once roamed North Wales. The interest that Thomas Hughes, a chimney-sweep, could attract for his 'discovery' eleven years after Prestwich and Evans' visit to Boucher de Perthes at Abbeville and the announcements about their acceptance that humans and extinct mammals were contemporary is interesting, for it could imply that this idea was not as well accepted in circles outside the scientific community. The literature appears to suggest that the adoption of the understanding of the antiquity of humans was rapid. However, the reaction to Hughes' activities suggests otherwise, as demonstrated by contemporary press accounts in *The Times* (20 October 1870) and *The Flintshire Observer* (4 November 1870) (Walker 2012, 15). These accounts are therefore interesting in the context of historiography.

Kaeser's opinion that an archaeologist writing a history of archaeology will do so from their own perspective will inevitably be true to a degree (Kaeser 2008). Murray has said how historical research has helped him to broaden his approach to the problem from being narrowly epistemological to asking the more encompassing question: 'what makes archaeological accounts of the past plausible?' By doing this he has increased the significance of the history of archaeology as a primary source of information about related enquiries into disciplinary traditions and the 'culture' of archaeology (Murray 2005, 29). By drawing attention to the tale of the lizard of Cefn in this way I have deliberately chosen to interpret Thomas Hughes' motives as anti-evolution, without any substantial evidence to offer. It could be argued he simply saw an opportunity to make some money from the demise of the crocodile and my perspective has been skewed by the contemporary reports. Yet because it concerns a chimney-sweep, a person not normally encountered in a history of archaeology, the tale immediately gains a greater significance in the history of the cave than it might otherwise have merited.

The history of Palaeolithic archaeology presented here highlights the development and understanding of stratigraphy and the direct relationships that existed between the fossil mammal remains and the material cultural evidence. This disconnect between the enthusiasm researchers had in searching for, and demonstrating evidence for, the relationship between the deposits and their contents but then only referencing them without recording or publishing the locations of many of the finds interests me. Context was key to these arguments, yet it seems that despite understanding the need to record stratigraphy only a few of the researchers kept detailed records of the artefacts and associated finds. Henry Hicks was an exception to this. He published descriptions and drawings that show the archaeological contexts of specific artefacts (PW2). This was not however, the case at Pontnewydd or Cathole caves where it has not been possible to relate any of the artefacts back to their original excavated contexts.

GEOLOGISTS OR ARCHAEOLOGISTS?

A consequence of the growing acceptance of human antiquity during the 1860s resulted in a transformation in how humans, their antiquity and their relationships with the natural environment were thought about and understood. This drew a lot of interest from geologists, archaeologists and anthropologists. Van Riper has observed a divide beginning to form between the role of archaeologists and geologists in Britain at this time. He was particularly interested in the domination of the geologists in the examination of questions

of human antiquity and why it was that British archaeologists took so little interest in the age of humans, despite the obvious significance of this for their research (Van Riper 1993, 11–12). The history of nineteenth century work within the caves at Cefn serves to reinforce this perception (PW1).

The early excavations in Pontnewydd Cave were undertaken by geologists (Walker 2012). William Boyd Dawkins was Curator of Natural History at Manchester Museum (Jackson 1966, reprinted in Bishop 1982), whereas Thomas McKenny Hughes was Curator of the Sedgwick Museum of Geology, Cambridge (Clark 1989, 34). It could be argued that despite George Busk's recognition of a rare and unusual human tooth, and Hughes' comments on the stone tools discovered within Pontnewydd Cave (Hughes and Thomas 1874, 390), these observations were not developed or noted by later writers until Stephen Aldhouse-Green expressed his interest in the cave in 1978 (Green 1984, 9). The early research and interpretations offered for Pontnewydd Cave therefore lay firmly within the realms of geology rather than archaeology, with the human story largely ignored in favour of the desire to understand the deposits and stratigraphy without recourse to the archaeology. This was mirrored by Hicks' work in Ffynnon Beuno and Cae Gwyn caves (PW2).

Hughes and Hicks deployed stratigraphical arguments for the interpretation of the human presence in North Wales (PW1 and PW2). As a geologist Torrens has looked at how tensions between those archaeologists he calls antiquarians and naturalists after the 1840s led them to take different sides. He claims that geologists were able to distance themselves further from the scriptural and human records that were the mainstay of the antiquarian and archaeologist and this helped archaeology and geology to become separate disciplines (Torrens 1998, 56). Lucas has observed that Palaeolithic archaeology and geology were well linked by 1859 with both having adopted stratigraphy to explain the relative positions of artefacts and bones in the sequences of the sites they studied (Lucas 2001, 4).

It is perhaps significant that, with the exception of caves, Palaeolithic and Mesolithic sites do not leave monuments visible in the landscape. Consequently most of the early archaeological excavators' activities focused on later periods of archaeology, on the visible monuments in the landscape such as barrows which may account for the reason why archaeologists were not in the forefront of studies of early prehistoric sites during the early to mid nineteenth century.

The relationships between the geologist and archaeologist are not really as clear cut as Torrens and Lucas might suggest. There is a blurred line between them, particularly with

Palaeolithic archaeology, as the time-scale overlaps with the late Pleistocene geological period. Rudwick, writing as an historian of geology, largely avoids mentioning human origins in his discussions of the developments in geology during the mid to late nineteenth century. However, he claims that once human antiquity was recognized it became impossible for prehistory and geology to be separated and the two became entwined (Rudwick 2004, 315). Murray has observed that finding antiquity was one thing, yet quantifying it and finding a way of understanding the human behaviour involved was quite another (Murray 2014, 71). He highlights the major problem that often stone tools do not occur with fossil human bones. Ethnographic analogy therefore filled the gap and chronologies and time-scales lost their impact as tools for the interpretation of the prehistoric past as well as the present (ibid). McNabb concurs, observing that there is little doubt that the lack of undisturbed cave sites in Britain affected the ability of the English archaeologists to develop a body of archaeological theory to engage with the emerging evidence for the Palaeolithic. Much of the evidence for this he says was simply not there (McNabb 2012, 76). However, at Pontnewydd Cave where the evidence did exist and contextual connections between stratigraphy, fossil human and animal bones and stone tools could have been drawn, had researchers chosen to study this, it was ignored.

HISTORIOGRAPHY WITHIN THE PUBLISHED WORKS

The chapter about the history of Pontnewydd and Cefn Caves in North Wales (PW1) commences with a search for references to the caves in early literary sources (Walker 2012, 12). The purpose for doing this is epistemological, looking at how knowledge accrued and developed through time (Schnapp 1997). Schnapp's approach built on an antiquarian tradition of seeking the earliest literary sources to find the first references to sites or to the ideas that are often more widely claimed to have developed and been made popular during the past two hundred years (ibid). My work has sought early literary references to some of the caves at Cefn (PW1), highlighting the traditions they present, for example the romantic poetic tradition of describing dark mysterious places demonstrated by a quotation from Richard Fenton's diary (Walker 2012, 12). The literary tradition is used to explain why the landscaping works were undertaken in the valley by Edward Lloyd, resulting in the Reverend Stanley's recognition of the cave's significance (Stanley 1833, 41). It also accounts for the popularity of the valley to its Edwardian visitors (Walker 2012, 12–13).

The purpose to which the history of archaeology is put will differ from author to author. Some will use it to explain the position in which they, as archaeologists, find themselves and the reason the key institutions they work with, or within, are the way they are today. Others use historical studies as a means to understand the changing interpretations of thinking through time and the developments that have resulted in an understanding about a site or a region being what they are. Murray has criticized such histories of archaeology for being too teleological as there remain few analyses of the institutional structures of the discipline, of the wider intellectual context of archaeology, or of other sociological aspects of archaeological knowledge production (Murray 2005, 27). I would suggest that this is not the case in the works presented here which have explored histories of caves in two regions of Wales. This research has deployed a range of methods to present a narrative of each cave's history. I have focused very specifically on a small area of north-east Wales and on one cave on Gower without examining these sites in the context of a broader U.K. or European picture. These works are effectively case-studies or histories or biographies of places which draw upon, but do not explain, the broader historiographical context in which they sit.

INTERNALIST AND EXTERNALIST PERSPECTIVES

Commentators suggest that without an understanding of the history of archaeology there is a risk that knowledge and evidence gained in the past will be forgotten and that understanding and thinking become impoverished (Meltzer 1989). Sabloff has also observed that 'to toss aside the history of archaeology is to promote inefficiency' (Sabloff 1989, 35). Such comments suggest we should learn from past discoveries and remember them if we are to move forward to create new ways of thinking and developing our understanding of the past. Kaeser (2008) has observed that most biographies or writings on the history of archaeology tend to be internalist i.e. written by and for archaeologists. Indeed an internalist perspective may be seen wherever stories of personalities, discoveries and scientific advancements that have contributed to the progress of archaeology are presented (Abadía 2009, 14). My approach towards historiography may equally be described as internalist. The publications in which these works sit are primarily concerned with presenting the results of the recent investigations. I have written the histories of works at sites to introduce the historical background used to underpin the findings of this research. Trigger has taken a popular externalist approach looking at archaeological interpretation as influenced by the social, political and economical background in which

the research is practised (Trigger 1989; Abadía 2009, 14). In re-examining my own contributions to the history of archaeology I have utilized historiography as a means of exploring past research in these caves (Walker 2012; Aldhouse-Green *et al*. 2015). This is used as a platform from which I can undertake new research of sites and present their biographies in new narrative ways.

CONCLUSIONS

At the start of this chapter I observed that the rationale adopted could be deduced from the papers despite this not having been stated explicitly within the published works. The theme of historiography and the research methods presented have resulted in the adoption of what has been presented as a biographical approach towards the observations about people and places in three of the published works (PW1, PW2 and PW3). These biographies of places may be seen to have resulted in the presentation of chronological narratives of each place. Much of the story they present is driven by a search for an understanding of the archaeological context of the artefacts or bones recovered from Palaeolithic sites and the accompanying understanding of archaeological stratigraphy that emerged during the Victorian period.

In this chapter I have identified some of the sources I have drawn upon and the methods I have adopted. These have included a search for facts, which I have ordered into chronological sequences to present the story about each place. Further chapters will present more complex biographies of places by stepping back from exploring the engagements of people with these sites in historical times in order to utilize other evidence obtained during these studies that may shed light on the activities and lives of the people who were present there during prehistory. But before widening out the discussion I intend to focus more closely by looking at the artefactual evidence that also provides records of people's activities at places in the past. By examining these artefacts research questions can be formulated which lead to new thinking about the places from which they originate.

CHAPTER FOUR

LITHIC ARTEFACT STUDIES

INTRODUCTION

The analysis of assemblages of lithic artefacts is central to PW3 – PW8. This chapter will explore relevant aspects of the history and development of lithic artefact studies. It will describe the research methodology used to study these assemblages explaining how the approach adopted may be applied to the study of individual tools to reveal their biographies. It will then present a critique of the use of technology, chronology and typology as approaches for the study of lithic artefact assemblages. The validity of these methods will be examined to determine their effectiveness to offer archaeological contexts and interpretations of groups of unstratified or surface lithic artefact assemblages.

THE RESEARCH QUESTIONS

The published works present a significant quantity of data that have been accrued from new studies of lithic artefacts. A reading of the published works reveals that lithic artefacts form a major contribution towards the research content of the publications and are central to the broader discussions presented in them. When the research questions posed within the works are examined stone tools are only mentioned once, in PW5. Effectively lithic artefacts have been used as pieces of evidence that can be combined with other forms of material culture, faunal remains, environmental data, stratigraphical data, radiocarbon dating, distribution plots etc. to address the specific research questions the publications pose.

METHODOLOGY

A concept known as the *chaîne opératoire* was first proposed for the analysis of lithic artefacts by Leroi-Gourhan in 1964 (Sellet 1993, 107; Soressi and Geneste 2011, 336). Since then analyses using the principles within the *chaîne opératoire* have been undertaken of studies of stone tools and artefacts made of other materials. The *chaîne opératoire* can be explained simply as the series of operations that transform a substance from raw material to a manufactured product with the maker's skill being crucial to the decision

about how the object is made (van der Leeuw 1993, 240). Such studies draw the processes of lithic production and lithic artefact use together with other aspects which may include the availability, abundance and nature of the raw materials and their influence on factors such as tool morphology (Hurcombe 2007, 41). Ultimately the *chaîne opératoire* embeds aspects of human behaviour with these organizational arrangements and technological approaches (ibid). Andrefsky advocates using this approach for the study of stone tools as it offers a consideration of the notion that tools are dynamic items that may change several times throughout the duration of their use (Andrefsky 1998, 38–39).

The *chaîne opératoire* has been applied to the assemblages studied within the published works. PW5 has included very detailed descriptions of each of the twenty-five tools examined. In this work each tool is described and a range of key observations are noted that include a comment on its raw material, a detailed technological analysis, a taphonomic assessment and its categorization by chronology and typology (Walker 2015, 114). The studies of individual tools may be drawn together into analyses of whole assemblages, such as that presented in PW4, which has examined the larger stratified assemblage recovered during excavations at Snail Cave in order to offer an interpretation of this site (Smith and Walker 2014). The *chaîne opératoire* may be considered to be a part of a biographical approach towards the study of lithic artefacts which I shall advocate here.

BIOGRAPHIES OF LITHIC ARTEFACTS

By applying analyses of the *chaîne opératoire* to the study of lithic artefacts we have a tool that can be used to reveal an object's biography. It is therefore possible to extend this approach to the study of collections of lithic artefacts. An example of this is provided by the analysis of the assemblage of lithic artefacts at Snail Cave in PW4 (Smith and Walker 2014, 108–112). This analysis identifies key artefacts based on technological, taphonomic, chronological and typological characteristics grouped by stratigraphical horizon. It identifies the specific elements that would be expected to be present in the assemblage based on an understanding of the *chaîne opératoire* and the distinctive tool forms that are present. The analysis of the assemblage recovered from horizon 4 specifically indicates that unmodified blades and some utilized blades can be related to the diagnostic later Mesolithic tools (ibid, 110). Blade core reduction sequences will result in the creation of blades, some of which may then be further worked into tools such as microliths, awls, or could simply be used unmodified as cutting tools. Brought together this *chaîne opératoire* of blade creating and further modification into a suite of useful tools is seen to lead to the

creation of an assemblage biography. Further biographical characteristics have been identified amongst this particular assemblage such as burning (ibid, 108). This can be related to other evidence at the site, such as the presence of abundant charcoal-rich soil that connects the burnt tools directly to this layer resulting in the creation of a tool assemblage biography. It is fair to say that this biographical model was not consciously adopted when the published works were written. During the reflection and analysis of the body of works the biographical concept has emerged as a common principle that can be applied to the studies of lithic artefacts presented in the published works and can lead to the creation of narratives of the human activities undertaken at Snail Cave during the later Mesolithic period.

THE HISTORIOGRAPHY OF LITHIC ARTEFACT STUDIES

All mentions of lithic artefacts within the published works are dependent upon the recognition of them being humanly worked in the first place. Once a piece of knapped stone is recognized as such it takes on significance and it can be used to offer an understanding of people's lives in the past. Two of the published works (PW5 and PW6) assume the reader has knowledge and an understanding about what stone tools are (Walker 2004; 2015). They rely entirely upon the assumption that a knapped piece of stone is just that. Indeed none of the published works have directly examined how and why it is possible to say what is, and what is not, naturally formed and how and why specific tool forms (or particular shapes of worked stone) should be named, dated or attributed to function as they are. It is therefore necessary to explore some of these missing elements here in order to contextualize the analyses that are presented in the published works.

Lithic artefacts are first mentioned in the literature as far back as Pliny and Varro (Schnapp 1997, 151). It was Mercati, who worked in the sixteenth century, who is generally credited with having recognized that stone tools were not natural items or thunderbolts that dropped from the sky, but were manufactured by humans (Figure two; Schnapp 1997, 151; Cook 2003, 182). Figure two shows an axehead accompanied by a letter identifying it as a whale tooth. The photograph encapsulates a significant part of this one object's biography. Originally this object was made and used in prehistory, before being found and identified in 1828 as a natural item. It entered the National Museum of Wales early in the twentieth century, where it was re-identified as a Neolithic axehead and placed in a drawer. In 2000 I re-discovered it, deeming it to be a curiosity worthy of display.

Figure two: letter in the collection of the National Museum of Wales describing the Neolithic polished axehead shown as a sperm whale tooth, 1828.

In the light of the re-discovery of this axehead it is worth recalling the Gray's Inn Lane handaxe and faunal remains mentioned on page 35. Burnby's transcription of the manuscript describing the discovery led him to conclude that Conyers was amongst the first in Britain to recognize the tool for what it was (Burnby 1984). Interestingly he also notes that Conyers said that it could have been used as a weapon, leading to the further observation that this may also be the first formal attribution of function to a stone tool (ibid, 65). Throughout the eighteenth century stone tools were gradually accepted to be humanly made (Schnapp 1997; Goodrum 2002; Cook 2003). During the nineteenth century interest and curiosity in stone tools continued. At Kent's Cavern Father John MacEnery considered the tools he discovered to be ancient due to his observation of the stratigraphic context in which they were found (Walker 2009, 27). Stone tools found by Jacques Boucher de Perthes at Abbeville were also key to understanding human antiquity (Gowlett 2009, 19). By the 1870s stone tools had become central to many publications as evidence that could aid understanding of past societies, for example John Evans' *The Ancient Stone Implements, Weapons and Ornaments of Great Britain* (Evans 1872).

Disputes about the authenticity, or otherwise, of lithic artefacts continued into the twentieth century. A good example of this that has not been explored within the published works is the debate about whether or not eoliths were made by people or natural processes (Prestwich 1889; 1891; Harrison 1928). In this field the original argument itself has long been settled, but the discussion and interest in the thinking that led to the debate taking

place in the first place has moved into the field of historiography (e.g. O'Connor 2007; McNabb 2012).

TECHNOLOGY

How stone tools were made is fundamental to understanding any assemblage of lithic artefacts. Publications explaining the process of flintworking are often written by modern experimental knappers and so tend to be handbooks (e.g. Lord 1993; Whittaker 1994). Other authors have provided guides to analysing stone tools in which they apply the concept of the *chaîne opératoire* (e.g. Andrefsky 1998). With the exception of PW5 the published works do not directly discuss technology, yet the discussions they provide imply that it has been considered (e.g. PW6). The analysis of the Snail Cave assemblage presented in PW4 goes further as this paper includes a traditional analysis and report of the lithic artefacts (Smith and Walker 2014, 108–110). It provides detail about some of the characteristic features of the assemblage such as raw material sources and later modification through taphonomic processes such as burning (ibid, 108). Effectively this publication explains that an analysis has been undertaken without detailing the methods used. This lack of detail is not unusual; the methodology is placed within the archive 'grey literature' report, rather than in the final publication. The assumption that can be drawn from reading the published works is that the analyses have followed a macroscopic analytical approach and that had this not been done then the detail that appears in the discussion about the assemblage as a whole would not have been achieved.

CHRONOLOGIES

The history of the understanding of chronology and its definition in relation to the study and developing understanding and application of stratigraphy, geology and groupings of material cultural evidence provide a basic chronological framework for prehistory (Grayson 1983; Van Riper 1993; Schnapp 1997). In the context of the published works it is really only the adoption and use of the terminology that developed from such studies that has a direct relevance and, fascinating though this history is, it is not the place to discuss it here in any detail for this has been done well by others (e.g. O'Connor 2007; Rowley-Conwy 2007; McNabb 2012).

Before scientific techniques such as radiocarbon dating, or ice-core data became available, the understanding of prehistoric chronology was reliant upon the recognition of periods. These developed from the three-age system which has evolved and been made secure by radiocarbon dating (Lucas 2005, 1). This periodization still provides a chronological framework based upon a narrative of technological progress, the idea of which has gradually receded throughout the twentieth century (ibid, 50). Yet the continuation of the broader application of the periods is clearly still significant, as the use of these terms in the titles of this critical analysis and three of the published works (PW6, PW7 and PW8) demonstrate (David and Walker 2004; Walker 2004; 2016). The period names Palaeolithic or Mesolithic are used in order to provide a looser framework for the information they present as they still form a useful structure on which to attach interpretations. Indeed much has been written about the use of time as a theoretical approach to the study of the past (Bradley 2002; Lucas 2005). As Bradley has observed prehistorians are denied the advantages written records provide to historians and so they are forced to study the evidence of material things. It is only by considering how these might once have been associated together that it is possible to suggest how they were related to past human lives (Bradley 2002, 8). Effectively all the chronologies used depend on isolating what are described as 'closed groups', i.e. those collections deposited together on a single occasion based upon the relationships of one object to another (ibid). Studies of such archaeological associations, or contexts, linked to their dating can lead to the creation of typologies.

LITHIC ARTEFACT TYPOLOGIES

The first typologies were formed by Thomsen whose three-age system deemed that stone objects were older than those made of bronze (Rowley-Conwy 2007). More detailed seriation emerges from the complex analysis of a range of characteristics within the archaeological record. A combination of a study of technological attributes, stratigraphical positions and contextual relationships between individual tools within an assemblage can result in the development of typologies. Pitt Rivers is credited with first using the term typology in 1891 (Pitt Rivers 1891; Piggott 1959, 60; Bowden 1991, 55). This was not a new idea, as it could be claimed that Evans' work on tools had already applied the same principles of seriation to his work (Evans 1872).

The published works have not created new typologies and have instead sought to apply those that have been created by others to the artefacts they have examined. The research presented here has refined these typologies, linking them to the dating evidence available

from Welsh sites. This approach is presented in two of the publications which have analysed surface collections of lithic artefacts and have sought to identify specific tools that can provide an indication of the overall age of the assemblages (PW5 and PW6). These publications state that this was a necessary first step towards addressing further questions about the occupation of south-east Wales during the late Glacial and Mesolithic periods (Walker 2004, 34–35; Walker 2015, 113).

Today such studies draw upon a quantity of literature that aid the analyst to pin-point the characteristics of an assemblage to a certain date, although in the past this was much harder to achieve. Published works PW3, PW6, PW7 and PW8 have all drawn on historic publications about lithic artefacts in which the original interpretations of the tools or assemblages are presented. The analysis of lithic artefacts in the published works focuses on Upper Palaeolithic or Mesolithic assemblages, so the discussion that follows will only examine these periods.

Upper Palaeolithic typologies

In Britain an interest in the Upper Palaeolithic period began to take place at the beginning of the twentieth century. In 1926 Dorothy Garrod presented a chronological and typological framework for the Upper Palaeolithic of Britain (Garrod 1926). Her work still provides a very useful foundation for a modern study and interpretation of lithic artefacts from some British sites and is referenced in three of the published works (PW3, PW5 and PW7). She observed an early Upper Palaeolithic presence at Cathole Cave, as evidenced by the presence of a *Font Robert* point amongst Wood's collection (Garrod 1926, 65; Walker *et al*. 2014, 132). Her typology was initially refined by Bohmers (1956) and has been developed further since, as is described in PW5 (Walker 2015, 114). Many of the observations Garrod made at Cathole Cave and at Hoyle's Mouth, Tenby, still stand, as PW3 and PW5 demonstrate (Walker *et al*. 2014, 132; Walker 2015, 114).

These existing typological studies have been linked to radiocarbon dates in order to offer a chronology and dating to the evidence they present. One of the published works (PW5) has demonstrated how this typological approach may result in the recognition of new sites. In this publication a search through a new assemblage of surface finds from Cophill Farm, Chepstow is shown to have identified two new late Glacial sites (Walker 2015, 114–116). The research demonstrates how the application of knowledge of tool typologies may lead to analogies being drawn with other better stratified and dated sites. PW7 has provided an

analysis of the stone tools recovered from excavations at Hoyle's Mouth (Walker 2016). By comparing the tools recovered from historic work at the cave, which do not have stratification records, with the recently excavated assemblage it is possible to draw analogies between these sites and to date them by linking them to the better recorded sites in Devon, Somerset and Gloucestershire (Walker 2015, 116). An outcome of these typological analyses has been to recognize new sites of late Glacial age in Wales, to provide an indication of their likely dates and possible inter-relationships. Effectively this work offers an opportunity for contextualizing some otherwise unstratified assemblages of lithic artefacts.

Mesolithic typologies

Despite the term Mesolithic first being used in 1872 in Hodder M. Westropp's book *Pre-historic phases: or, introductory essays on pre-historic* archaeology, it was not adopted until the 1930s (Clark 1932; Rowley-Conwy 1996, 940; Fagan 2001, 27). Clark developed a framework for a Mesolithic typology based on earlier work by Garrod (Garrod 1926, 181–190; Clark 1932; 1936). This was developed further by Radley and Mellars (1964), Jacobi (1978) and Reynier (2005). This approach has been used to analyse lithic artefact assemblages in PW4, PW6, PW7 and PW8. Their classificatory scheme for microliths has been applied to Mesolithic assemblages from Burry Holms, Trwyn Du and Nab Head in PW8 and to Snail Cave in PW4 (David and Walker 2004; Smith and Walker 2014, 124).

The number of well-stratified, well-dated sites in Wales remains few, although PW4 demonstrates that there has been an improvement in the dataset since publication of PW8 in 2004 (David and Walker 2004, 300; Smith and Walker 2014, 123–124). The publications, including those submitted here (PW6 and PW8) all rely upon fine distinctions in microlith typologies and the associations between different artefact types at sites (David and Walker 2004; Walker 2004). Typology has therefore been a central element of the studies presented within the published works and can help to provide an indication of the age of a tool when it may not otherwise have an archaeological context.

ANALYTICAL TOOLS AND FUNCTION

Other approaches to understanding lithic artefact assemblages include experimental replication of artefacts and refitting. These may provide information on the integrity of

occupation surfaces, post-depositional artefact movement and retooling (Odell 2000, 311). The research presented in the published works has not made use of either technique, except when discussing Andrew David's experimental work undertaken to understand the relationship between early Mesolithic *mèches de forêt* and stone beads (David and Walker 2004, 312; Walker 2016).

Tools were created to be used, yet determining what the use of a particular artefact was is one of the main challenges an analyst faces when interpreting such an assemblage. One method to determine function is use-wear. Hurcombe has argued that if the purpose of a stone tool is not understood then neither is the reason for its existence (Hurcombe 1994, 152). Use-wear has not been mentioned as a technique within the published works, despite the opportunities it can provide to aid interpretation of an assemblage. PW6 has included a discussion about the function and use of stone tools as a way of understanding Mesolithic activity and behaviour in south-east Wales. However, this discussion is tempered by a warning that the evidence available to this particular study is meagre (Walker 2004, 38).

ARTEFACT BIOGRAPHIES

This chapter has so far examined the methodological approaches that the published works have adopted towards the study of lithic artefacts. The discussion that follows will look at these characteristics holistically, drawing in the additional element of assemblage taphonomy. Examining stone tools using the *chaîne opératoire* approach is very useful for understanding aspects of them. By analysing tools individually a range of characteristics can be recorded that may be combined with other studies to form its biography. These features may include what it is made of, where the raw material was sourced from, how it was collected, the methods by which the tool was made, for what and how it was used, whether re-used, re-sharpened or changed in shape and how it was discarded (Barton 1994b, 115).

A good example of an object biography is presented in PW5 which describes a late Glacial penknife point from Goldcliff, Monmouthshire (Figure three; Walker 2015, 118). This one tool, a surface find, was discovered by chance. It is made of flint using a blade manufacturing technology. It can be compared with similar examples from Somerset and Pembrokeshire (e.g. Green and Walker 1991, 64). Typologically it can be called a penknife point. The tool also displays a number of taphonomic features. It has an impact fracture at its tip; it is very heavily patinated and weathered and was discovered eroded from the edge

of Goldcliff Island. The evidence suggests it was a Final Palaeolithic hunting loss (Walker 2015, 118).

Figure three: a late Glacial penknife point from Goldcliff, Monmouthshire.

The penknife point highlights some of the characteristic features that form a tool's biography from its birth, with the selection of raw material and the technological approach adopted by its maker; its life, as it was used as a projectile tip, demonstrated by the impact fracture at its tip; its death, caused by its loss during hunting. It was later weathered and rolled before it became incorporated into the sediment that was laid down on Goldcliff Island. In 2008 it re-emerged, eroded out from the island's edge to be found by a local archaeologist who brought it to the National Museum of Wales for recording. The tool has since been donated to the Museum where it has been given a new life and opened a new life-cycle within its longer biography. This entails study, publication (PW5) and it is now being prepared to be displayed in a new museum gallery where it will be placed in association with artefacts of the same form from other places in Wales.

This one tool encapsulates the concept of a single stone tool's biography. Earlier in this chapter I used the example of Snail Cave to highlight how the same approach may be applied to an assemblage of stone tools from a single stratigraphic horizon. Such approaches may also be adopted for assemblages of surface finds. PW5 and PW6 have highlighted how studies of unstratified mixed-age assemblages can result in the recognition of new sites and observations can be made about site biographies (Walker 2004; 2015). In PW5 discussion reveals how surface finds may be analysed to lead to the suggestion that they may have a shared biography as remnants of late Glacial open-air settlements at Cophill Farm (Walker 2015, 116). Key to understanding these biographies is the application of the *chaîne opératoire* approach to assemblage analysis. An archaeologist will set out to understand the actions of people at the time the tools were made, used and discarded. Each of these steps may be seen as an element of that tool's, or the tool

assemblage's, biography. In the example of the penknife point its biographical characteristics demonstrate the skill of its maker to know what the finished tool should look like. The person who used it may, or may not, have made it. If not, the tool might have entered an exchange process as a commodity, it was then hafted and made into a hunting spear or a projectile and used, eventually being lost after hitting its target. These characteristics are all evident in this single tool. They result not only in the biography of this tool, but also in the creation of a narrative, a story inferred from the observations made today on this stone tool, that can result in a presentation of an interpretation of what the peoples' relationship to this tool might have been. Each of these interactions form parts of the tool's biography and each stage until its loss (or its death using Jones' term) involved interactions between a person and the tool (Jones 2002, 83).

ARCHAEOLOGICAL CONTEXT RELEVANT TO ASSEMBLAGES OF LITHIC ARTEFACTS

Archaeological context will be central to a study of a stone tool assemblage. Published works PW3 and PW4 include studies where assemblages have been analysed by stratigraphic context, or horizon (Smith and Walker 2014; Walker *et al*. 2014). This enables the characteristics of each assemblage to be determined with reference to their context, to which their associations with artefacts made of other materials, environmental and dating evidence can be added (Bradley 2002).

Typologies may be created and dated by drawing analogies from dated contextual data and similar technological criteria. Typologies can therefore be connected to other evidence generated from within the archaeological record. There are, however, lithic analysts who believe it possible to sub-divide surface lithic debitage down into tightly-dated groupings and make statements about activity and site use from them (e.g. Bond 2004; 2011). My own approach, applied in PW4, PW5 and PW6, has sought to relate technology and typological characterization with context. I only classify the debitage to a specific period where I can be confident that I am dealing with an assemblage from a secure archaeological context. In this way typology is never used in isolation from other available evidence.

Typologies are the creation of archaeologists, rather than a reconstruction of the categories that might once have been significant to the makers or users of the material being studied (Trigger 1989, 382). Healy has observed how in many typologies, particularly in the early ones, shape over-rode criteria based on time, distance, material and technology, all of

which she argues are integral to lithic artefact studies today (Healy 1994, 180). Similarly McNabb has articulated how it should be context not tool shape alone that determines the age of an assemblage (McNabb 1995). As Healy reminds us typology should therefore be used as a descriptive, rather than an analytical tool, and its worth rests on the analyst's capacity to use it to frame questions that are appropriate to the particular circumstances (Healy 1994, 180).

The published works which examine stratified lithic artefact assemblages apply these techniques more comprehensively than is possible for those based on surface collections. The lithic analyses presented within PW4, PW6 and PW7 commenced with an assessment of each artefact's technological and typological attributes. By identifying these individual characteristics and then drawing them together, first by archaeological context within site, and then across sites, biographies of assemblages may be created and compared. As Wylie reminds us, it is important when undertaking such assemblage analyses that the process of doing this should not be the end in itself. The analyst needs to consider the wider questions and interpretative possibilities that lie outside the assumptions such analyses may make (Wylie 2002, 45).

LITHIC ARTEFACTS WITHOUT AN ARCHAEOLOGICAL CONTEXT

In Wales, as in other regions of the U.K., many stone tools have been, and are being, collected from the surface of ploughed fields and therefore do not have a secure archaeological context. Such collections present an analyst with a particular set of challenges. As with an excavated assemblage, it will inevitably be a partial assemblage that is retrieved due to the fact that a large component of the original assemblage will remain buried in the ground. Ploughing and other taphonomic processes will have left their mark on the assemblage that is brought to the surface. Also the presence of stone tools in a surface assemblage will be biased, depending upon factors such as the ability of the fieldwalker to recognize worked flint or stone, the weather conditions and the methodology used during the fieldwalk (McFarlane 2008, 118–119).

Many of the localities mentioned in the published works have had long periods of use throughout prehistory, as at Cophill Farm (PW5). This particular site has experienced extensive ploughing with slabs of limestone bedrock visible on the field surface now making it impossible to obtain a stratigraphical context for the lithic artefacts (Walker 2015, 114). If we are to understand such sites, a methodology is required that can

maximize the retrieval of information from it (Schofield 1994, 92). Here studies of technology, typology and analogy were combined to provide biographies of the individual artefacts and the sites (Walker 2015).

Surface assemblages have been examined by a number of analysts. Unlike at Cophill Farm Smith was able to test-pit sites of surface Mesolithic scatters in Gwynedd and gain an environmental and a geographical context for some of them (Smith 2005). Schofield has warned that researchers using surface collections need to consider the constraints such collections pose when seeking to interpret evidence for settlement and past activity at a site. However, if used carefully such studies can greatly enhance and benefit a regional understanding of life in the past (Schofield 1994, 92). I would agree with this as my observations arising from the study of surface assemblages that underpin PW5 and PW6 demonstrate. There is limited evidence available for a Mesolithic presence in Wales from excavated sites and so surface assemblages become particularly important in providing more evidence, as PW6 shows (Walker 2004).

Macquet has suggested that different artefacts may be analysed more conceptually without recourse to the culture from which they belonged (Macquet 1993). But I believe that what is needed is a more holistic approach to the study of surface assemblages. By identifying as many pieces and gaining as complete a picture as possible from the available evidence it may become possible to offer an interpretation of the site or place being studied. The publications submitted here have only concerned themselves with those places where this potential has been realized, for example Cophill Farm or Snail Cave (PW5 or PW4) both of which have been discovered during the past ten years (Smith and Walker 2014; Walker 2015). There are probably many more sites that have yet to be recognized to which this approach may be applied.

The weaknesses with studying surface collections are those that will be inherent in such an assemblage in the first place, including little control in how the collection was made, the lack of stratigraphical context, lack of associations with other artefacts or structures and a lack of actual evidence that could provide dating for the site, or for the assemblage itself. Inizan *et al*. (1992) describe it as reading the assemblage in order to glean as much information as possible from it. With surface collections there will be a large quantity of finds, particularly elements of the knapping debitage, that it may not be possible to incorporate into an assessment with any certainty, a point made in PW6 (Walker 2004, 36).

Published works PW5 and PW6 have used surface collections to provide evidence for a past human presence in south-east Wales during late Glacial and early Holocene times

(Walker 2004; 2015). By combining data from these analyses with evidence from well-excavated, well-recorded sites such as Goldcliff, a broader picture may be obtained (Bell *et al*. 2000). The additional information provided by these surface collections mean the few well-recorded sites tend not to sit in isolation but are part of the wider evidence for human settlement and use of this geographic region. There is inevitably potential for some of the surface sites mentioned in the published works to be investigated further. Indeed, it was only because of reports of surface finds from Snail Cave and Goldcliff that the sites were excavated in the first place (Bell *et al*. 2000, 33; Smith and Walker 2014, 99).

The preceding discussion has identified the range of techniques that may be adopted to analyse a lithic artefact assemblage. Initially these techniques are applied to a surface assemblage by analysing it artefact by artefact. Individual artefact biographies will emerge from this analysis, for example as given in PW5. Then a further stage may be applied which can result in the creation of relationships between groups of artefacts. These may be drawn together providing further relationships which may lead to the creation of site or regional biographies. The Cophill Farm assemblages have revealed biographies for sites that can be extracted and created from amongst a mixed surface assemblage by applying a methodological approach to the analysis of the lithic artefact assemblages (PW5; Walker 2015, 116).

Four of the published works (PW5 – PW8) highlight how ubiquitous surface finds are across Wales today (David and Walker 2004; Walker 2004; 2015; 2016). If surface lithic artefacts were to be removed from the discussions in all these papers there would, in most cases, be barely any material worth commenting upon and the general distribution patterning for the Palaeolithic and Mesolithic archaeology of Wales would be substantially diminished as the available database would be so impoverished. The recovery of archaeological information from a surface assemblage without a stratigraphic context therefore becomes important and a valid tool to understand the biographies of site assemblages which ultimately are able to lead to an improved understanding of aspects of the archaeology of Wales.

CONCLUSIONS

This chapter has examined lithic artefacts both individually and as components of wider cultural assemblages. It has examined how stone tools are recognized and some of the historiography that has resulted in our current understanding of these tools. The

methodology adopted in the published works PW4 – PW8 has been described and critiqued, particularly as it has been applied to surface assemblages. By applying the individual components of methodology, technology, chronology, typology and function to analyses of lithic artefacts the critical analysis has been able to identify the relative strengths and weaknesses of each approach. It has emerged that these approaches are best applied to assemblages that have an archaeological context. However, the detailed study of individual artefacts in surface assemblages, the application of the *chaîne opératoire* approach and the notion that biographies of things, when applied to single tools and assemblages of lithic artefacts, can result in the identification of new relationships and detail about an assemblage. The published works have been analysed using this approach to see how effective studies of assemblages may be towards offering broader interpretations and to provide a context for artefacts found during surface collecting. The next chapter will explore some of the archaeological practices associated with the exploration of places in Palaeolithic and Mesolithic sites in Wales.

CHAPTER FIVE

ARCHAEOLOGICAL PROJECTS

INTRODUCTION

Archaeological fieldwork techniques have been deployed to address questions posed by the research detailed in three published works (PW3, PW4 and PW5). Other works have presented the results of such approaches adopted by previous researchers at sites. This chapter will examine these archaeological projects. It will start by considering the people who have undertaken fieldwork on Palaeolithic and Mesolithic archaeological sites. It will examine the antiquary, amateur and professional determining what, if any, distinctions there are between such appellations. It will look at aspects of the archaeological process exploring the notion that a project may be a life-cycle within a site's biography. The chapter will also define the archaeological archive. It will then assess what influence archaeologists and museum curators may have on the resulting archives. The chapter will conclude by offering a consideration of the biases and potential uses of archaeological archives towards presenting new interpretations of places.

THE LIFE-CYCLE OF A PROJECT

The metaphor of biography may be applied to projects and places. Earlier chapters have introduced the notion that biographies of places may be created from the records of peoples' contact with places at specific times. Each intervention will be a cycle of activity, a stage within the longer biography of the place. This is developed further here in order to examine the archaeological project. The idea that a project may have a biography was applied by Harold Mytum in a study he conducted of a sixteenth century farmhouse in Pembrokeshire (Mytum 2010). Mytum defined a project biography as 'the sequence of fieldwork set within its context of contributors and changes in research focus to demonstrate the creative process that is dependent on people interacting with the data (both archaeological and documentary) that comes to light over the course of time due to individuals' actions' (ibid, 295). I would prefer to call this project a life-cycle, a stage in the longer biography of the farmhouse. The role the people involved with the archaeological project play and their influences on the resulting archaeological record are also central to the discussion that follows.

The notion that an archaeological fieldwork project has a life-cycle of its own is offered here. The sequence an archaeological project follows is formalized through guidance issued by the Chartered Institute for Archaeologists (CIfA 2014) and Historic England, e.g. MoRPHE (Historic England 2015). Following this guidance, a project begins with its inception or birth, i.e., the decision is taken that a particular piece of work is necessary or desirable. The project will then be planned and will be executed, entailing stages such as creating a team, keeping records and analysing the resulting data. The project is deemed to be closed with the completion of the reports and deposition of the archive in a museum or other repository (ibid, 15). The formal guidance ends here. This sequence is biographical in that it follows a linear analogy from birth to closure. However, I suggest that this project is a life-cycle within the longer site biography. It may be one of several interventions that take place at this site, for example as PW1 shows with the series of projects that took place at Cefn Cave. There are further life-cycles evident too as the archive from this cave can also undergo further cycles as new people and processes start to affect it once it has entered a museum. This will start with its arrival at the museum, decisions about whether to retain or discard any elements, the organization of the collection within the store and then decisions about how the material is to be made accessible and used. In my analogy as the items enter their box on the museum shelf they enter a period of dormancy. They will be woken and brought back to life when a researcher next opens the box to study them, or to prepare them for display creating a further cycle within this biography.

In the analysis that follows I shall develop those strands of my concept of archaeological project life-cycles as they relate directly to my published works. Consequently I shall not describe the methodologies of the excavation or post-excavation processes in detail, instead I will examine those elements that I consider to be key to determining how useable the resulting information and archive are for offering interpretations for the Palaeolithic or Mesolithic periods. The analysis will examine the people involved with a project and the resultant archaeological project archive.

EXCAVATORS

Many different appellations have been given to those who have contributed to Palaeolithic and Mesolithic archaeology over time. These include antiquarian, antiquary, archaeologist, geologist, prehistorian, amateur and professional. These terms are mostly attributed retrospectively rather than having been used by these people themselves. In chapter three I explored how the geological approach to archaeology adopted in the nineteenth century is

supported by the histories presented in PW1 and PW2. Van Riper has called this geological archaeology (Van Riper 1993, 186). My work suggests Welsh cave research was mainly undertaken by geologists, e.g. Boyd Dawkins and Hicks (PW1 and PW2). Van Riper has developed his thinking by exploring Levine's distinction of amateur and professional concluding that the Victorian geologists tended to be professionals whilst archaeologists were more likely to be amateurs (Van Riper 1993). Van Riper accepts Levine's distinction that prehistorians were professional at the end of the nineteenth century, arguing that this may be something to do with the long time-scales they studied. He also suggests that there was a difference in the scale of study for prehistory which tends to be global, making it harder to operate as an amateur on such a scale. Historians, he argues, tended to work within a small, often local area and so a lot of this work was undertaken by non-professionals (ibid, 215).

This division between amateur and professional is evident in the published works. Amongst those engaged in cave research were people who were professionals in other fields. In PW1 the earliest references are to clergymen, Reverend Stanley at Cefn Cave (Walker 2012, 13–14) and Reverend Thomas at Pontnewydd Cave (ibid, 17). PW7 describes the results of the twentieth century excavations in the Caldey Island caves undertaken by Brother James van Nédervelde, a Cistercian monk (Walker 2016, 28).

The published works also reveal glimpses of the people who undertook work on the sites. Nineteenth century excavations of the North Welsh caves were conducted by workmen, as was typical of the time. Stanley describes how he employed four men to 'dig, remove and sieve the soil' in a letter quoted in PW1 (Walker 2012, 14). It can be assumed that Boyd Dawkins did the same. His overnight stays with the Williams Wynns at Plas-yn-Cefn are recorded in his diaries and the time he spent at Cefn does not equate to the amount of deposit removed from the caves (ibid, 16). Mr Bouverie Luxmoore of St Asaph paid for the men who worked for Hicks in Ffynnon Beuno and Cae Gwyn caves (Aldhouse-Green *et al*. 2015, 78). As Lucas has observed, digging was a contradiction for many of these gentlemen who had to employ men willing to undertake the labouring and dirty work required. Their curiosity led them to dig, despite the fact that such work was considered to be an un-gentlemanly activity (Lucas 2001, 3).

In this context biography has a dual role to play. The people involved with the sites will find that the places and their experiences at them will become a feature within their personal biographies. For example, PW1 demonstrates that Boyd Dawkins' engagement with Pontnewydd Cave is mentioned in his book *Cave Hunting* (Boyd Dawkins 1874;

Walker 2012, 17). Pontnewydd Cave also merits discussion in his biography (White 2017, 54). The cave clearly had an influence on his biography and equally his work influenced the biography of Pontnewydd Cave in return (Walker 2012, 17).

SURFACE COLLECTORS

Collections of surface finds without archaeological context are central to the discussions presented in published works PW5 and PW6. These assemblages have often been gathered over a long period of time by people who are not trained archaeologists and for whom collecting may be considered to be a pastime or hobby. Examples of their work are highlighted in PW5 and PW6. Had Peter Bond not chosen to walk across Cophill Farm's fields when he did and promptly report his finds, the new late Glacial site described in PW5 might not now be known (Walker 2015, 114).

These collectors match characteristics of Schnapp's definition of antiquarian collectors in that they collect and amass quantities of data for study (Schnapp 1997, 241). In this way I would argue that the antiquarian tradition of collecting is still thriving across the U.K., although with a difference. The earlier antiquarians Schnapp describes amassed artefacts to study for themselves, whereas most present-day collectors do not study their finds, leaving it to professional archaeologists to do this.

There has been a steady growth in flint collecting from the surface of ploughed fields since the 1950s as Stanton's study of Mesolithic artefacts collected from forestry plantations in the Glamorgan uplands demonstrates (Stanton 1984). The data available from such collecting has increased during the past thirty years with the activity of forestry worker Philip Shepherd who has systematically searched all the disturbed ground in the plantations for new Mesolithic artefacts. Shepherd's collection is important as every piece's findspot has been recorded (Hobbs 2003, 100–101). Such surface collections are important, as they can provide evidence that will enable the recognition of new sites. Indeed, when examining the distribution map published in PW8 there is a clear bias in the number of Mesolithic sites and findspots in the Glamorgan uplands due to Shepherd and earlier collectors' activity (David and Walker 2004, 316).

My own role working with surface collectors also needs examining. Since I joined the National Museum of Wales I have encouraged surface collectors to report their finds following a tradition that dates back to 1910 when what was called the Museum Correspondent Scheme was established (Thomas and Evans Hoyle 1910). Since 1999 all

the data I have recorded about collectors' finds have been made accessible on the Portable Antiquities Scheme Cymru database. The evidence for the long tradition of working with flint collectors in Wales accounts for the spike noted in the graphs for the numbers of lithic artefacts recorded by PAS Cymru when compared with other regions of the U.K. (Bond 2010, 22).

The published works demonstrate the importance of recording surface finds and working with their collectors. This relationship is highlighted by the fact that the Snail Cave excavation (PW4) and the Cophill Farm project (PW5) were both set up as direct responses to the reporting of archaeologically significant finds by people without a formal archaeological training (Smith and Walker 2014; Walker 2015). These artefacts have re-entered circulation by commencing a further life-cycle having been brought to the surface either by the plough (as in PW5 at Cophill Farm) or by goat activity (as in PW4 at Snail Cave). The tools were found by surface collectors whose chosen action, in both cases reporting their discoveries to professional archaeologists, resulted in formal projects, either systematic fieldwalks or excavation, and therefore discovery of a new cave site that allowed the finds to be placed back into context and given meaning and significance again (Smith and Walker 2014, Walker 2015). These projects intersect with their participants' lives, at Cophill Farm the team of fieldwalkers was comprised entirely of volunteers drawn from across the local community (Walker and Lodwick 2005; Walker 2015, 114). It is therefore important that professional archaeologists continue to engage with those surface collectors, as they are providing a new stage in the life-cycle of the artefacts that otherwise would not have come about. The odds are that it will be they who will discover new sites for research, rather than the professional archaeologists.

FIELDWORK

The research questions posed in PW3, PW4 and PW5 are concerned with seeking archaeological contexts and distribution information for either historic or recent collections of lithic artefacts. In each of these published works I have addressed the research questions by undertaking new fieldwork. The method adopted and the approach taken differed between the projects according to the specific questions posed. At Cophill Farm the fieldwork entailed the systematic gridded surface collection of artefacts (Figure four). The methodology, described in PW5, resulted in all finds being plotted to a five metre square, or better, resolution (Walker 2015, 114). This enabled detailed distribution plots to be prepared for all finds in order to identify spatial patterns.

Figure four: gridded fieldwalking at Cophill Farm, Howick, Chepstow.

Excavation was the preferred method used to investigate the archaeological context for material associated with the surface assemblage found at Snail Cave (PW4). During the evaluation a test-pit was placed across the centre of the rock shelter which resulted in the recovery of a full, dated stratigraphic sequence of deposits (Smith and Walker 2014, 101). Excavation was also undertaken at Cathole Cave (PW3) where the methodology adopted was to record and remove all deposits along the line of a steel grille. Limited sampling of a standing section left untouched by earlier excavations was also undertaken in order to obtain an archaeological context for finds from historic excavations at the cave (Walker *et al*. 2014, 131).

The examples presented in the published works have demonstrated that excavation is a valid process for retrieving new data about an archaeological context for otherwise unstratified artefacts from a site. However, even with excavations there can be biases, as what survives in the archaeological record today is a factor of many processes. Schiffer observes that the excavator's decision where to place their trenches can bias what the archaeological record contains. This is because what is recovered from a site will always be a sample (Schiffer 1987, 355).

Meltzer has noted that as archaeological interpretations of sites will generally be drawn from excavation data it becomes necessary to know what collection techniques were used, to understand the questions the researcher was setting out to address and to establish what was retained (Meltzer 1989, 14–16). Chantal Conneller and Rob Dinnis investigated whether Hicks was selective in what he chose to retain from his excavations at Ffynnon Beuno by excavating his spoil-heaps (Conneller and Dinnis 2011, 23; Dinnis and Conneller 2012). Meltzer has argued that surface data may be helpful to archaeologists in

enabling them to identify potential places to excavate, but he notes that not all of those people who collect from the surface will retain everything (Meltzer 1989, 14–16). This observation, also made by Conneller and Dinnis in their re-excavation of Ffynnon Beuno, is that often the un-modified items such as flakes and blades were not retained, or if they were collected, they may not necessarily have been permanently retained (Meltzer 1989, 14–16; Conneller and Dinnis 2011, 23).

It is an outcome of decisions taken exactly what is excavated, found, saved, discarded, counted or ignored (Schiffer 1987, 363). These processes are stages within a project's life-cycle and for fieldwork projects it is the archaeologist who will hold the balance of power determining the long or short-term outcomes of the project. The decisions that are inherent in the fieldwork process are therefore stages which significantly influence the form the project's life-cycle will take, ultimately affecting site biography and the resultant archive. Such historiographical and biographical approaches to the study of sites and the resulting records and finds therefore become important if we are to understand what survives today in private or public collections. There is a possibility that without the knowledge that may be gained from such studies our interpretations may be biased by their reliance on those elements of the collections that survive.

ARCHAEOLOGICAL ARCHIVES

All archaeological projects will generate data of some form and together the project records, site notes, artefacts, samples, specialist reports and publication have become known as the archaeological archive (CIfA 2014). As archaeological investigation is a destructive process, the archaeological archive becomes an important resource in that it will be the only permanent record of that archaeology.

The research presented within the published works has not only utilized historic archives held by museums and in private hands described in chapter three, but it has also resulted in the creation of new archives. The Cathole Cave project (PW3) resulted in a new archive comprising one box file of paper and a box of finds and samples and digital files (Walker *et al.* 2014). These become the records future researchers will use for their historiographical analyses. The discussion that follows will analyse the use of project archives focusing on the records that shed light on the project's organization, the recording methods and resulting records.

<u>Records of the organization of projects</u>

Bentz has developed a framework for undertaking an historiographical study of site, based on her experience of using project archives derived from medieval archaeology. Her work starts with fieldwork and the process of excavation which she calls the technical elements. She suggests researchers should examine the different approaches taken and applied to sites at different times and examine the reasons that cause the networks of ideas to change over time. She then describes what she calls the disciplinary conditions, the main people working in the field at the time and what their networks and contacts were. She suggests examining their backgrounds and their motives for excavating where they did. Her third category comprises the ideological conditions based upon socio-economic factors including legislation, protection of the remains and what the researcher's main arguments were (Bentz 2008). Some of this approach has been developed further by others and provides a useful context in which to discuss the use of archives.

These archives may contain materials that provide an insight into researchers' thinking or way of working. Bergman has described personal archives of diaries, notebooks or letters as insightful in that they can provide information about projects, including the funding arrangements, their organization, how objects were recorded, who wrote the reports and how decisions were taken (Bergman 2008, 131). The background and motivations of individual archaeologists will influence their work (Schlanger and Nordblah 2008, 5). They may also shed light on other aspects about the project including the food consumed, the transportation and accommodation arrangements (Bergman 2008, 132).

In PW1 I outline some of the context for Stephen Aldhouse-Green's excavations at Pontnewydd Cave. In the chapter I describe aspects of the social history of the excavations from the perspective of a fieldworker (Walker 2012, 21–22). These aspects are rarely supplied in excavation reports, more usually staying hidden in the archives as Bentz has demonstrated (Bentz 2008). When published, it is popular books about projects which provide glimpses of these aspects of an excavation, for example, Pitts and Roberts' account of the excavations at Boxgrove (Pitts and Roberts 1997). Interestingly whilst I discuss the project in this way in PW1 I fail to mention the fact that the archive itself exists. In time future researchers examining the many boxes in the National Museum of Wales' archive store for evidence about the project will find ample correspondence with the company that provided the buses that took the team on trips to the supermarket and the detailed arrangements for hiring and paying for the use of Cefn Meiriadog village hall.

These records effectively become a central piece of evidence that can lead to the creation of biographies of different forms. These may be the personal or site biographies that emerge as outcomes of a piece of fieldwork at a site. What the archives will conceal, and may not reveal, are those personal biographical elements such as the many friendships and networks that develop as a result of the project. My own networks arising from the Pontnewydd Cave excavations have resulted in further collaborations in other published works. For example, David Case and Richard Mourne undertook sampling and analysis of the sediment samples at Cathole Cave for PW3 (Walker *et al*. 2014).

Photographic records

Photographic archives can provide additional information, not only of the social context of the excavations, but also of the detailed record of the archaeology. Several researchers have examined such archives, including González Reyero who concludes that photographs may be as subjective as other archival records in preserving the record of a project (González Reyero 2008, 216). In contrast Verhart has argued that photographs are very important sources of information when seeking to understand and to reconstruct the past from archival records (Verhart 2008, 211). When one compares drawings with photographs there are different levels of subjectivity involved with their creation. The adoption of photography in field archaeology is therefore significant for recording not only the archaeology but also the methods of excavation and recording researchers once used (Eberhardt 2008, 94). Selected photographs, generally those that do not show people working, are usually published in excavation reports, for example figure three in PW4 (Smith and Walker 2014, 102) which differs from figure two in PW3 where members of the project team provide a scale for the photograph and bring a human element to that excavation (despite my omission in failing to name them in the figure caption) (Walker *et al*. 2014, 134).

Project reports

Reyman has highlighted how it became harder for a researcher working today to have access to all the available information about what their colleagues are doing. This, he says is due to a sharp increase in the number of researchers working since the 1940s and the rise in the number of sites being excavated (Reyman 1989, 42). It should, however, be noted

that Reyman was writing prior to the widespread adoption of the internet that now makes research data widely available.

There may also be finds, particularly of earlier periods, that are discovered during the excavation of a site by a researcher more interested in studying a later archaeological period. An example of this is the late Glacial abruptly backed blade from Thornwell Farm, Chepstow, described in PW5, which I found in Chepstow Museum (Walker 2015, 118). This discovery led me to the site report about the late Prehistoric and Romano-British site in which the tool is published (Bevan 1996, 34). Similarly I have recorded Mesolithic artefacts that have been discovered in the construction material of the early medieval Llangorse Crannog in Powys (Walker forthcoming). It is unlikely that researchers would examine these reports for information about late Glacial or Mesolithic archaeology. Indeed had the excavators chosen to publish journal papers rather than monographs it is unlikely that there would be more than a passing reference made to these finds.

Several of the assemblages consulted remain unpublished. PW6 highlights this by providing analyses of unpublished assemblages from excavations at the Celtic Manor Resort and at Trostrey (Walker 2004, 48). The 'grey literature' that may have entered a museum as part of an archaeological project archive is referenced in the published works as a further potential resource that research can use. An example of this is found in PW6 where Joshua Pollard's unpublished archive report about the later Mesolithic finds from Roman excavations at Usk is discussed (ibid, 46). Such unpublished reports have become an important part of excavation archives. Reyman, writing in North America, makes a number of points that are valid in a British context (Reyman 1989). He has noted how fewer reports of excavations are being published today, making such archive reports primary sources of information (ibid, 43). These reports often contain far more detail than publications can as increasingly there is a limitation on the length of papers submitted for publication (ibid). The result is that a lot of detail is omitted from the published reports and this detail may be significant, for it can provide the evidence that could enable a different interpretation to be drawn by another researcher using the same facts. When preparing PW3 about Cathole Cave I ensured that when I edited down each of the specialists' reports that reference was made to the repository in which the full archive resides (Walker *et al*. 2014, 148).

Traditionally archaeologists have not been good at presenting critiques of their work. A rare example of this is offered for work at Ebbsfleet, Kent, where the publication has included its own self-critique. During construction of the High Speed 1 rail-link around

Ebbsfleet assumptions were made about the area of potential significance which could have resulted in the important elephant site being missed (Wenban-Smith 2013, 470–471). More often critique will follow in reviews of publications. In PW1 I observe how easy it is to criticize earlier work in caves for the lack of recording at the time. I warn that such thoughts need to be tempered by remembering the context within which the research was originally undertaken (Walker 2012, 11).

The finds as archive

The objects themselves may provide a physical link back to the people who either collected, or who studied them. A good example of this is presented in PW1 where the hand-written labels glued to some of the specimens survive (Walker 2012, 15). These labels relate to Hugh Falconer and William Boyd Dawkins, whose handwriting can be recognized on faunal specimens in the National Museum of Wales (Figure five). These direct links to individuals become significant in presenting the histories of the caves as they provide the actual evidence that Falconer and Boyd Dawkins identified these teeth as specific species. The discovery of a reference to Charles Darwin's visit to Cefn Cave and the mention of rhinoceros remains led to a disappointing search through the National Museum of Wales' collections for any potential markings on the collections amongst the Williams Wynn accession. The failure to find this resulted in some speculation within the chapter. A rhinoceros tooth was found, but cannot unequivocally be proven to be the tooth mentioned in Darwin's notebook (Walker 2012, 13).

Figure five: mammoth tooth fragments from Cefn Cave, the upper shows Hugh Falconer's handwriting and the lower William Boyd Dawkins'.

All the elements of the archaeological project and the creation of an archaeological archive may be considered to be elements of a site biography. The research presented in the published works PW1 – PW4 has drawn attention to those elements of the project life-cycle that may be used in order to interpret the human past and present new interpretations of the sites. As Schiffer has said, it is essential to understand the processes the researcher used and the routes they followed in undertaking their research. By understanding these it may be possible to discover the sources of information contained within collections, archives and libraries (Schiffer 1996, 75). Chippendale has similarly claimed that these processes, sometimes called 'social archaeology', should be seen as integral to archaeological practice. This is because archaeology always starts with the physical evidence and inferences about past human societies are drawn from these (Chippendale 1989, 26). Lucas has suggested that the archaeological record is always dynamic as contemporary social processes and the archaeologists themselves will all affect it (Lucas 2005, 34). Historic England's methodology for undertaking an archaeological project using the life-cycle analogy is well explained (Historic England 2015, 15). The published works contain research that highlights all the stages of a project's life-cycle and different examples are present in PW3, PW4 and PW5. Here I shall use the Cathole Cave project to demonstrate how each of these stages may be applied to a project. The project inception comes with George Nash's discovery of an engraving in Cathole Cave (PW3). Its subsequent vandalism led to a decision to grille the cave, a decision which necessitated an excavation (Walker *et al*. 2014, 131). The fieldwork was executed following the creation of a field-team and the appointment of specialist advisors. The field stages and the recording methodology are described in the publication (ibid, 134–136). The processing of samples and the analysis of data gathered then led to the preparation of the specialist reports which were then tied together into final publication (ibid, 163–164). The biography that emerged from such work resulted in the closure of the project through the handing over of the archive, if Historic England's model is followed (ibid). I would, however, argue that whilst this may be the closure of the fieldwork this archaeological archive will enter into a further life-cycle as it enters the museum or repository.

THE REPOSITORY

The final stage of Historic England's project biography is the decision about what should be deposited permanently in a museum and at what stage in the sequence this happens. A

formal excavation archive today should be subject to a process of sorting, indexing and preparation prior to its deposition in a permanent repository (Brown 2011). Each of Brown's elements implies that a process of selection and ordering may take place before it is transferred to a museum.

Decisions in the selection and choice of whether or not to retain artefacts or archives continue throughout the stages of the project with the final say being taken by the curator who decides what to admit into the permanent collection. Ultimately the museum curator becomes a gatekeeper to knowledge, because if the item or collection is not accepted then what is going to happen to it? In effect it could be lost. John Aubrey, writing in the late seventeenth century was well aware of this fact, '... I see one is sure of nothing that is not in one's own custody, and when one is dead all is lost that is not deposited in some public repository' (John Aubrey, October 1692, published in Scurr 2015, 390).

Not everything will enter a museum. Indeed some of the private collections studied during the research undertaken for the publications had not entered museums at the time they were written. Some never will and will die with their collector. Owen's biography of John Lubbock demonstrates how his collection in effect 'died' with him in 1913. Lubbock chose not to pass his collection to a museum, despite having built it up so carefully. Instead it was scattered and Owen speculates that this may be reflected by Lubbock's original belief that it was a personal research tool and would only be of value to him (Owen 2013, 133). Another instance demonstrates how Sir Andrew Balfour bequeathed his personal collection to the University of Edinburgh in 1696. This was enhanced by further gifts from Sir Robert Sibbald. This important collection was catalogued by Sibbald, but much of it is now unaccounted for, as it was used as a teaching resource at the University without consideration made for its future preservation (Dransart 2013, 51).

The project archive will contain excavation records, notes, drawings, samples and finds. Such archives include the justifications that researchers have taken at all stages, from deciding to conduct fieldwork in the first place, where to place any excavation trenches and of what size, how to set up the project, whether to use volunteers, recording methods, sampling strategy and the format of the final report. Once deposited the museums may shape the archive further. They decide what to admit, what to permit to be used and how to catalogue it to make it accessible. These site biographies therefore become complex and important tools from which narratives may be extracted.

CONCLUSIONS

This chapter has examined the different people who have engaged in fieldwork. It has looked at the distinction between professional and amateur where they have been recognized in the published works. It has identified how different fieldwork techniques have been applied over time by different people to address specific research questions. The use of such techniques to explore the archaeological context of historical assemblages of lithic artefacts and new surface collections has been examined in the context of the published works. The chapter has also demonstrated that the collections that are available for study today are the result and consequence of the collector, of the decisions that person has taken, the knowledge and the experience that they hold.

Historic England's project biography ends with the deposition of the archive in the museum and the publication of the report. However, as I have demonstrated, once an archive is deposited a further life-cycle commences which will leave its mark on what is available for future research. Together all these processes may shape the resulting archive. Understanding these becomes essential if meaningful interpretations are to be drawn from the study, and use, of such data for new research. This chapter has therefore highlighted the role holistic studies of project archives should play in deriving interpretations of archaeological evidence from sites. It shows how some of the regional narratives I will examine in the next chapter can emerge from studies of these records.

CHAPTER SIX

REGIONAL NARRATIVES

INTRODUCTION

Amongst the published works are three that present narrative histories of regions of Wales (PW5, PW6 and PW7) and for the whole of Wales (PW8). These publications are intended to synthesize the available evidence for a region in order to present a chronological history. The works draw on the historiographical research as well as the analyses of individual artefacts, assemblages of artefacts, the projects and people that generated them. These threads are drawn together here through the analysis of published works that present regional narratives of places in Wales during the Palaeolithic and Mesolithic periods.

In this chapter I shall draw on some of the discussions of biographies created by these studies to demonstrate how they may lead to the creation of narratives. This chapter will offer a critical analysis of the published works that present regional narratives. It will discuss the role of county and regional histories as delivery mechanisms for such narratives before looking at the broader role of regional histories of Wales. Narratives have been presented in earlier chapters for the history of caves and of studies of specific sites. Here I shall focus on the use of narratives in regional studies. I shall however, conclude the chapter with a brief examination of the role of narrative in a museum context. It will demonstrate how the presentation of research can be applied in different ways to offer benefit to a range of people.

COUNTY HISTORIES

Chapters for county histories are intended to be narratives. It is their purpose to provide as detailed a history of the county as possible. For the earlier periods of archaeology such histories will be based upon the collation of all available data about the archaeology of the region. This will include artefacts, site excavation reports, archives and both published and unpublished reports. From these, key sites or artefacts will be identified and used to present a narrative.

County histories have been written since the seventeenth century (MacGregor 2003, 164). Yet it was from the mid-nineteenth century when there was a significant rise in interest in undertaking county studies (Grayson 1983; Robinson 2003). This may be accounted for by

a number of factors. First was the rise in the number of local societies, many of which produced a journal and held regular meetings (Lloyd 1946). In some, societies' members collected finds from their local area, leading them to establish museums in which to house their collections, for example, the Carmarthenshire Antiquarian Society and Field Club (Carmarthenshire Antiquaries Transactions 1907–1908). A further factor was that they were a consequence of social change as the rising professional middle-class began to collect, an activity which had previously been undertaken by the leisured classes (Chapman 1989, 161).

Local groups began to use their collections and publications for the preparation of county histories. In England the Victoria County History series was commenced in 1899 and aimed to produce a volume for each county (Victoria County History website 2015). In Wales such histories have been less organized and instead different local societies have taken it upon themselves to prepare their own county history volumes. Two of the published works have been written specifically for such volumes (PW6 and PW7). Welsh county histories have been published since the 1930s and several are now very out-of-date. It seems that once a county history is published in Wales there is little interest in keeping it up-to-date, as is demonstrated by the two volumes for Merioneth (Bowen and Gresham 1967; J.B. Smith and Ll.B. Smith 2001). This is perhaps unfortunate, given that the story moves on as new sites are excavated and new finds are discovered, reported and recorded. PW6 and PW7 are records of the evidence at the time they were prepared. The idea of these county histories is therefore somewhat out-moded in an internet-driven era when up-to-date information is demanded. So despite their continued proliferation in Wales they have not developed into the more dynamic on-line formats that the English Victoria County History is seeking to create (Victoria County History Website 2015).

If PW6 in the *Gwent County History Volume I* is examined in the context of other publications, it becomes apparent that a lot of new archaeological evidence has been excavated and discovered since its publication. The chapter for the Pembrokeshire County History (PW7) was updated twice prior to going to press and further new publications e.g. David *et al*. (2014) and Lillie (2015) caused it to be out of date whilst it was being printed. This demonstrates how quickly new pieces of evidence, dating, discoveries or interpretations may be formed and require a work such as this to be updated.

The approaches I took when writing the two contributions to the county history volumes differed. For PW6, the Gwent county history, the methodology entailed a search for, and a study of, all surface finds, excavated assemblages and references in publications using

methodologies described in the published works (Walker 2004, 35). The quantity of available data differed between Gwent and Pembrokeshire. I have provided less detail about individual artefacts in the Pembrokeshire county history. There are few individual artefact descriptions or project descriptions, as there is a far larger resource available to study and the chapter covers a longer time period. This publication has consequently utilized and generalized research about sites and their biographies, being very selective in which aspects to present in its narrative. There are more publications written about the Mesolithic archaeology of Pembrokeshire than there are for Gwent. Occasionally these may provide the only evidence for the analysis of work at some sites, for example Lacaille and Grimes' publications of Brother James' early work on Caldey Island (Lacaille and Grimes 1955; 1961). In the absence of a full modern study of the recent work on Caldey Island it has been necessary to link my own new observations of the artefacts with the summaries described in the annual newsletters produced during the 1970s and 1980s after each season's excavation (National Museum of Wales' Caldey Island archive). It has been possible to draw some conclusions from these based on the basic stratigraphical information that they contain, and by relating individual parts of the record back to the earlier publications (Walker 2016, 13). From these, decisions were taken to determine which elements of assemblages merited inclusion and discussion in the chapter.

THE CREATION OF NARRATIVE HISTORIES

Putting some of these historic collections into some sort of contextual and chronological order is essential. By adapting the methodologies I have described above for studying individual artefacts, or assemblages of tools from both secure excavated contexts and from unstratified surface collections, I have been able to link these with the historiographical studies of places. Some of this work has resulted in additional contextual information about historic collections and has enabled links to be made between collections from different sites. I have fed these into the narrative history.

The scale of the geographical area can be increased from the region to cover the whole of Wales. PW8 has drawn all the available evidence for a Mesolithic archaeology of Wales into such a narrative (David and Walker 2004). As with the two county history chapters (PW5 and PW6) it has followed the format of previous overviews of the Welsh Mesolithic (Jacobi 1980; David 1990; 2007). It divides the Mesolithic into early and later periods but by the fact that this chapter covers the whole of Wales much of the detailed data about inter-relationships, archaeological context, artefact or site biographies become very

generalized. In such a format it becomes necessary to reference trends and patterns rather than the detail.

In the context of the published works it is not the fact that I have recorded many thousands of individual lithic artefacts which is significant, but how I have made use of, and how I have applied the knowledge and information I have gained and generated through their study that is important. Lithic artefacts dominate the discussions in PW5 – PW8 and it is these, linked wherever possible to other evidence (material culture, dating, stratigraphy and interpretations of human behaviour) that enable the sites to be brought together into their narrative histories.

A CRITIQUE OF NARRATIVE HISTORIES

Written regional or national narratives can be criticized for being inward-looking and for only examining the evidence from within the region under study. The four published works that present regional narratives do so with the awareness that the boundaries used are arbitrary (PW5 – PW8). It is interesting to note that PW6 was created for a Gwent County History published in 2004, some eight years after the county ceased to exist as an administrative entity. The editor, Ralph Griffiths, has even apologized in his introduction to the book for choosing not to adopt the name Monmouthshire County History (Griffiths 2004, xv). There is a risk that such volumes may be insular or, as Schlanger and Nordblah have suggested, too satisfying or teleological and reinforcing of the idea of regional or national traditions (Schlanger and Nordblah 2008, 2). This may indeed be true as county histories are intentionally created to celebrate the archaeology or history of a particular region. But I would argue that this is the reason for creating them in the first place.

The creation of a county history might also be considered to be bolstering the sense of regional identity of its readers. It is too early to say whether or not this is the case with PW7 which has only recently been published. However, PW6, written for Gwent, a county no longer in existence, may result in a re-grouping of its inhabitants back to their position as people of Monmouthshire, a county which interestingly sees its identity to be neither Welsh or English, as the former name of Cardiff University – The University College of South Wales and Monmouthshire suggests (www.cardiff.ac.uk/about/our-profile/history). Whilst it is accepted that the purpose that underlies the production of county histories is to bolster a sense of regional identity PW5, PW6 and PW7 have also drawn more broadly upon the wider context they lie within (Walker 2004; 2015; 2016). This is particularly

evident in PW7 where evidence from one highly dubious surface-find of a handaxe from the Preseli Hills, along with a better provenanced handaxe from the Afon Marlais are not much to go on if one needs to discuss a lower Palaeolithic of Pembrokeshire (Walker 2016, 3–4). It is therefore essential to look beyond this region's boundaries in order to place it into the broader context for the Palaeolithic. In doing so the two handaxes reported from Pembrokeshire are placed in perspective and considered as potentially significant outliers of what was once, presumably, a far more extensively settled county than the evidence available today suggests (ibid).

Narrative histories have been heavily criticized by writers including McGlade who has discussed the desire archaeologists have to create chronological narratives, rather than to examine history in a non-linear way (McGlade 1999). The difficulty with such interpretations is, as has been shown above, the desire of local societies to create these linear chronological sequences linked to their regions (PW6 and PW7). County histories have been written in different ways. Lewis has followed a thematic approach in her chapter about the Mesolithic and Neolithic of the Mendip Hills, Somerset. However, despite following four themes she adopts a chronological approach in each of them (Lewis 2011). Lucas has observed how many archaeologists find narratives reassuring or have no problem with them (Lucas 2005, 14). However, he notes that the structure of narrative is also tied to chronological time so archaeological narratives need to ensure that their linearity remains open to the possibility of temporal disruptions and dislocations so that the story does not appear too inevitable (ibid, 117).

REGIONAL IDENTITIES

The need for county histories and national statements about the Mesolithic archaeology of regions in the twenty-first century perhaps derives from a desire to create identities. Regions may therefore write their own histories in order to be seen to be distinct, or even equal to, other areas of the broader country, the U.K., Europe or the World. Murray has made the pertinent observation that cultural elements such as theories, presumptions, prejudices or pre-existing frameworks of understanding did not in themselves create archaeological knowledge. Instead he says, they did something far more important; they created a thirst for knowledge and they supplied meanings of that knowledge (Murray 2014, 103). So in a politically devolved nation there is a renewed interest in looking at the archaeology of Wales in order to seek to create a distinct identity for its place in the wider World which has become a necessary part of being a nation. In this context the fact that

this body of published works is predominantly concerned with Wales results in these publications offering a contribution towards the creation of this bigger history of the country.

There is always a risk when generating national or regional histories that they bolster ideas of tradition. This is an observation that has been made by Schlanger and Nordblah when assessing the contribution of historiography to national studies (Schlanger and Nordblah 2008, 2). At a regional level societies like the Gwent County History Association and the Pembrokeshire County History Trust have both flourished since devolution and the creation of a National Assembly for Wales in 1998. The published works PW6 and PW7 therefore are a consequence of the rise of regions as entities which have a history to celebrate. This has, I believe, followed from this narrowing of scale to the region in Wales and it may well be this that has led to the revival of the creation of these county history volumes in Wales.

NARRATIVES IN MUSEUMS

Narrative histories are not only important as written records but also in the museum context within which I work. Museum displays form a different type of narrative. In these the artefact becomes central to a display and the biography of that artefact will lead to the creation of a narrative story. Such narratives may be presented in different ways according to the underlying message or purpose the artefact has been selected to convey. When preparing a museum exhibition there will be an overarching theme, but rather than being supporting players the artefacts will be central to presenting the story. They will be seen as encapsulating the narrative in their physical forms. Consequently the detailed object biographies will come to the fore as the biography that has been extracted from an artefact will be assessed and relevant parts selected from it in the accompanying label or text. In a museum every artefact has potential to offer a narrative. One artefact may therefore be used as a visual metaphor to tell one part of a story or to support a bigger narrative in a specific way.

As a museum curator I may select one item for display in preference to another. I am able to choose what a visitor will see and which aspects of its story to present. I can also provide that artefact with a rebirth or awaken it from its dormancy within its storage box. Consequently I identify a new opportunity for it to be used in ways in the display that its original maker could never have foreseen. The artefacts in the display may be underpinned

by additional supporting narratives provided via on-line resources and educational events and activities. The museum is therefore a place where new narratives may be created for their viewers and in which new object biographies may be formed. The published works themselves have not provided examples of this directly; however, the research undertaken for such publications will have a contribution to make to inform these new biographies.

It is important to note that museums are not the only places where such narratives can be created. Other areas including theatres may also offer opportunity to present archaeological narratives, as work creating public operas demonstrates (Morgan Barnes and Redknap 2014). A similar approach has been taken by Gibb who has developed a storytelling approach as a means of engaging the public with archaeology via a series of performance narratives created from archaeological evidence (Gibb 2000). Museums and other cultural venues may therefore offer new opportunities derived directly from archaeological research in which to present narrative histories in ways apart from the published book.

CONCLUSIONS

This chapter has examined the creation of regional narratives through county histories and regional syntheses of archaeological data for both the Palaeolithic and Mesolithic periods. By offering such narratives it becomes important to recognize the distinct regional identities that such works present. This chapter has highlighted how narratives can be significant outcomes of research, presented and applied in different ways. It has demonstrated how the creation of narratives is dependent upon detailed analyses of biographies of individual artefacts, assemblages, places or sites. It is these linked to relevant aspects of the historiography of studies of places and a site or a find's archaeological context that enable these narratives to be created and give them the validity and authority that underpins what may read as a very generalized history of a region.

This chapter has also explored how narratives in county history chapters which are aimed at a local society, rather than a professional audience, can engage with their sense of place and histories. By exploring the use of narrative in a museum context this role is able to be extended. The visitors to such galleries may not be those who would read the county history, yet they may gain some sense of their place in the region through their engagement with the narrative of a display.

CHAPTER SEVEN

CONCLUSIONS

INTRODUCTION

This critical analysis has examined eight published works, each of which presents original research concerning an aspect, or aspects, of the historical study of sites, recent studies of assemblages of lithic artefacts or regional histories of the Palaeolithic or Mesolithic periods in Wales. It has examined these works to identify the connections between them that demonstrate they form a coherent body of work which offers a contribution towards our understanding of Palaeolithic and Mesolithic archaeology in Wales.

In undertaking this analysis two central research themes have emerged, historiography and lithic artefact studies. The strands of biography and archaeological context have been drawn out from within the themes. Each thread has featured in the published works enabling a web of interconnections to be created between them. The critical analysis has explored these strands and has demonstrated how they may lead to the creation of narratives.

This chapter will draw the critical analysis presented in the preceding chapters together. It will demonstrate how the aims set out in the introduction have been met. It will identify the main methodological and theoretical approaches identified that connect these published works. It will use this framework to highlight the key points that support this approach. This chapter will make recommendations for future work. It will conclude by considering the implications of this research by exploring new thoughts that have arisen whilst analysing this group of publications.

CONCLUDING ANALYSIS

In the introduction I listed the aims I was setting out to deliver in this critical analysis. These will each be examined and I will demonstrate how they have been achieved.

Aim 1

To provide a critical review of the published works' central themes of historiography and lithic artefact analysis, placing the publications within the broader theoretical framework of biography.

The preceding chapters have explored the two central themes of historiography and lithic artefact analysis as they have been applied in the published works. They have looked at the published works in the broader context of other publications available at the time they were written. The analysis has demonstrated how themes within these publications can be connected by applying the broader theoretical framework of biography.

The concept that it is not only people who may have a biography, but also artefacts, artefact assemblages and places has emerged as a thread that runs through this critical analysis. In chapter three I observed that the published works do not include full personal biographies. Instead PW1, PW2 and PW3 follow a biographical approach to sites, utilizing the source materials available in order to reconstruct the history of work at specific caves by referencing people only at those times when their lives came into contact with the sites. I have called these biographies of places. The materials and methodologies are the same as those used to create personal biographies, namely notebooks, archives, correspondence and libraries (Kaeser 2013, 103–104). The analysis of PW1 has demonstrated how these resources may be used to create biographies for Pontnewydd Cave and Cefn Cave (Walker 2012). The original site publications are also important as it is these that survive and are used by researchers today as a means to understand the thinking at the time they were written. The analyses of the original evidence for Col. E.R. Wood's work at Cathole Cave, described in PW3, is drawn entirely from these publications as they are the only resource that is currently known to survive (Walker *et al*. 2014). These publications have been used to create the history of work at this cave (ibid). The historiographical approach has applied these biographies of people and places to present narrative accounts of their histories.

The published works have also adopted biographical approaches towards artefact analyses. By applying Kopytoff's theory of the biography of things to individual, and groups of, lithic artefacts I have demonstrated how this approach may be extended to make it relevant to lithic artefact studies (Kopytoff 1986). Kopytoff's work examined objects as commodities, but if we step back to examine how an artefact was made and apply the principle of the *chaîne opératoire*, it is possible to start to identify distinctive biographical characteristics from raw material to finished tool (Sellet 1993, 107). The analysis has demonstrated how these characteristics can be recognized in individual artefacts in the study of late Glacial lithic artefacts from south-east Wales in PW5 (Walker 2015). Detailed analyses of lithic artefacts are demonstrated to reveal the biography of a single tool, for example, the penknife point from Goldcliff described in PW5 (ibid, 118).

The critical analysis has explored the ways groups of artefacts may be studied to reveal biographies of assemblages. The discussion has highlighted how the detailed analysis of lithic artefacts at Snail Cave demonstrates assemblage biography (Smith and Walker 2014). This is shown to be a powerful approach, particularly so when it is linked to other evidence from the site, such as archaeological context, dating and the other cultural remains. Such analyses make it possible to offer an interpretation of what people did at a site. By recognizing the characteristic signatures of assemblages, broader conclusions may be drawn about the people who once made and used the tools. This leads to knowledge about the associations, time, the peoples' lives and the biographies of the sites from which they came.

Analysis of surface assemblages of lithic artefacts has also been demonstrated to result in a biography of a lithic artefact assemblage. By undertaking detailed analyses of mixed period assemblages in south-east Wales, particularly at Cophill Farm (PW5) and for sites in the Black Mountains of Gwent (PW6) biographies can be created (Walker 2004, 268; 2015). These studies focus upon the detailed analyses of technology, typology and chronology applying the *chaîne opératoire* approach towards the analysis of the assemblage. These analyses result in detail about lithic artefact assemblages from which site biographies may be formed. The lithic artefact analyses presented in PW4 – PW8 are connected to address the specific questions about a late Glacial or Mesolithic presence in Wales.

The biography or life-cycle of an archaeological project can be revealed by both undertaking historiographical studies of sites in PW1 and PW2 as well as from the study of the archives resulting from new fieldwork presented in PW3, PW4 and PW5. I have applied the life-cycle approach to demonstrate that once a project is deemed to be complete there are further opportunities for these archives to change. For example, once an archive is deposited in a museum it will enter a new cycle in its longer biography. This approach to the study of projects is highlighted by the fieldwork at Cathole Cave (PW3) where the new project can sit alongside the work done earlier at the cave to connect them and offer a further contribution towards the site's biography (Walker *et al.* 2014).

Aim 2

To undertake a critical analysis of the published works to demonstrate how evidence gathered from historiographical analyses and collections of lithic artefacts and their

accompanying records, may create narratives that contribute towards our present-day understanding of the Palaeolithic and Mesolithic archaeology of Wales.

The critical analysis of the published works has demonstrated how a narrative forms a conclusion to each of the published works. As archaeology is about understanding peoples' lives in the past, the material cultural record is used as a resource from which these narratives may be created. The critical analysis has focused on historiography and the study of lithic artefacts as the evidence that provide the detailed site-based narratives that are presented in the published works.

As Hinsley and Wilcox remind us we should take the words and actions of those who preceded us seriously to ensure we present their work in ways that respect their own voices (Hinsley and Wilcox 2008, 42). Prehistoric archaeology is always going to be hampered by the interpretations it can offer due to the fact that there will never be an opportunity to question prehistoric people, or to examine their achievements directly. Consequently prehistorians must infer everything about peoples' past actions and behaviour from the evidence available to them today (Trigger 1989, 357). Archaeology therefore provides the means to discover as much as possible about past societies.

The published works have used historiographical methods to provide some modern interpretations of data-sets accrued in the past (PW1, PW2 and PW3). In doing this they set out to identify the original records and archives, as well as the writings and publications generated by earlier researchers. These data have been used to offer the narrative histories presented in the published works. Schlanger and Nordblah remind us that archaeological knowledge is based on both determination and serendipity (Schlanger and Nordblah 2008, 4). It is therefore important to pay detailed attention to the original archives, records and finds from such work in order to show how intertwined these may be with both archaeological interpretation and the preferred ideology (ibid). In the context of histories of archaeology I believe it is also important to consider the resulting archives as I have demonstrated in my analysis of the recent excavations at Pontnewydd Cave (PW1; Walker 2012, 20–22). The published works are largely concerned with the study of the history of caves or of lithic artefacts and their related records. All the available records have been located, studied and assessed before being drawn together in narratives in the published works submitted here. Lithic artefact analysis has also been demonstrated to be important for the creation of narratives for prehistory. Such narratives based on artefact evidence are presented in PW6, PW7 and PW8 (David and Walker 2004; Walker 2004; 2016).

In chapter six of this critical analysis I have focused the discussion around regional narratives. These draw the research presented in the county history chapters (PW6 and PW7) and the study of the Mesolithic archaeology of Wales presented in PW8 (David and Walker 2004) together. This research has used evidence from studies of archaeological contexts linked to chronology to create a sequence of events that took place at the sites presented in the narratives (for example, PW6; Walker 2004). Contextual analysis has also revealed the connections that link particular artefacts, sites or projects together. Such studies may also uncover biographies that can lead to new narratives, or to the enhancement of aspects of the histories they present.

The critical analysis has explored those published works that have drawn the evidence accrued from individual studies together to offer an analysis of regional studies (for example, PW8; David and Walker 2004). The research demonstrates how such regional narratives are dynamic, offering glimpses of a changing story at specific times. The discussion has also touched upon the role that museums may play in offering narratives in other ways that may reach more people than a book or county history can. These can lead to new interpretations of a place in the past.

There are a lot more elements that could have been explored in my analyses of narrative. By focusing here on the regional studies presented in four published works (PW5 – PW8) I have demonstrated how narratives may be offered that contribute towards our understanding of the Palaeolithic and Mesolithic archaeology of Wales today.

Aim 3

To identify the research methodologies used in the published works and to analyse these critically.

The publications have been analysed to draw out the methodological approaches that were used in the original research. It was noted earlier in this critical analysis that the original research aims and methodologies used in the published works are not detailed in the works themselves. This information is often filed in 'grey literature' reports. However, this analysis has identified the methodologies used in the publications and has explored them critically.

An approach to study stone tools that examines technology, typology, taphonomy and use has been described in chapter four. This can be used as a way to interpret assemblages.

When I analyse an assemblage I set out to unlock its potential and provide as much detail about it as I can. The archaeological record available to us today will inevitably only be a fragment of the material remains that people once left behind them. So it is important to understand this body of evidence and to seek to understand the processes and decisions that have resulted in it being what it is today and then to use this evidence as the foundation for offering new interpretations of the archaeology. A methodological approach that is central to the analyses of lithic artefact assemblages presented in the published works is the *chaîne opératoire*. This may result in a detailed study and analysis of a lithic artefact assemblage as is presented for Snail Cave in PW4 (Smith and Walker 2014). In other publications several hours work examining a stone tool assemblage may have been simplified down to a dot on a map indicating the findspot of Mesolithic artefacts, as in PW8 (David and Walker 2004, 301, 316). In all cases the study now afforded to both recent and historic collections of artefacts is important in offering an understanding of a site during the past and the methodologies used are important to enable other researchers to understand how the conclusions were reached.

The importance of understanding archaeological context has emerged as a key thread that runs through this critical analysis. In all the published works an understanding of archaeological context is essential and is an element that enables methodological approaches to be applied. The discussions in chapter four about studies of lithic artefact assemblages has highlighted the role archaeological context plays towards understanding technology, chronology and the creation of typologies. It is a factor in understanding the assemblage as a whole, as is demonstrated at Snail Cave in PW4 (Smith and Walker 2014). By being able to analyse assemblages of artefacts it becomes possible to develop an understanding of the key characteristics of the assemblage as a whole that may then be searched for in other groups of artefacts. PW5 and PW6 are concerned with surface assemblages and describe how analogies may be drawn between individual finds and those from known, dated stratigraphic contexts (Walker 2004; 2015). This same approach may also be applied to historic assemblages of lithic artefacts where archaeological contextual information was either not recorded, or has become separated from the artefact as in PW3 at Cathole Cave (Walker *et al*. 2014).

Chapter three has shown how the published works concerned with the historiography of caves have all entailed an understanding of stratigraphy in order to interpret the age of the deposits. For example, the discussion and presentation of the debate between Hughes and Hicks about the emplacement of deposits in the North Welsh caves (PW1 and PW2). As none of the works provide the history of the discipline I have offered this as a means of

presenting the background to the detailed site and time specific research presented in the published works. The methodologies adopted to analyse the data used to create these histories of sites come from the study of archives, publications and the artefacts that were generated by the research. I have examined these in chapters three and five.

In PW3, PW4 and PW5 fieldwork is used as a research tool to gain further data about specific findspots or sites. The archaeological fieldwork project is focused on gaining as much information as possible from the site within the scope of its research objectives and the constraints within which it is conducted. The published works have highlighted how fieldwork may be used to contextualize artefacts in order that they may have more to offer an interpretation of a site (Smith and Walker 2014; Walker *et al*. 2014; Walker 2015).

This critical analysis has demonstrated the varied research methodologies that have been used in the published works. Different approaches have been taken to explore the specific research questions each piece of research has set out to address. All these approaches have been analysed critically in the preceding discussion and they have demonstrated how they may be applied to reveal the connections that demonstrate the coherence of this body of published works.

Aim 4

To signpost future work that could build on the research presented in the published works.

Whilst preparing this critical analysis it has become apparent that there are many opportunities to use the data I have presented here in new ways. An area that would merit further investigation is to draw some of the history of archaeology together with the history of collecting by Welsh museums which formed the topic of my submission for the degree of Master of Philosophy and which has remained unpublished (Walker 2007). By linking the historiography of the discipline to that of the institutions in Wales and to the history of investigations of key sites it could be possible to present a more holistic picture of the development of Palaeolithic or Mesolithic archaeological research in Wales.

There are plenty more opportunities to look at some surface collections in greater detail. An anonymous referee commented on PW5 (Walker 2015) that it would have merited looking at the evidence for this period from across Wales as a whole, something that has not previously been done. This is certainly an avenue worth pursuing. Linking the excavated assemblages from key late Glacial sites together with the surface finds and

undertaking some new dating, a more complete picture could be obtained for this period in Wales.

There are also opportunities to look at the history of further caves, possibly seeking to create a history of the work across Wales, rather than it being a preface to analyses of modern work at sites, as has happened in PW1 and PW2 (Walker 2012; Aldhouse-Green *et al*. 2015).

A detailed analysis of the historical and more recent unpublished work at Cathole Cave would also be an important next step for the progression of the research presented in PW3. By linking the recent research with the earlier records, a new analysis of Charles McBurney's unpublished archive from his work at Cathole Cave would be a very useful and an important piece of work. Similarly a detailed study of the Caldey Island caves is long overdue for a full, modern, cross-disciplinary study and the surviving archive undoubtedly merits a more detailed and full study than that so far undertaken.

There are therefore many potential new avenues which I, or others, could follow arising from this analysis. Also important to me is ensuring the future needs of archaeologists are catered for. In writing this critical analysis I have seen the benefit of studying archives; however, I am aware that some of this work was only possible because some of those museums knew what was in their collections. Many museums do not. I believe an important outcome of this research is the need for me to continue to advocate the importance of museums spending time curating their collections, making sure that as much information as possible is made accessible on-line as research is only as good as the material to hand. To create a legacy from this research I need to ensure that the information that has been gained through undertaking the research presented here is made available to as wide an audience as possible, making information about the resources identified via on-line means and thus enabling their application to future biographies. So by highlighting here how historic work may offer a contribution to modern research it is intended that the biographies and narratives, of whatever form, continue to flow into the future.

CONCLUDING THOUGHTS

Whilst preparing this critical analysis I have had opportunity to reflect on this research. Consequently this has raised a number of new thoughts that I could explore further in the future. The earlier discussion has touched upon the professionalization of archaeology as a discipline as defined by Levine in her writing about the late nineteenth century (Levine

1996). She and others have noted how information was widely accessible to all. Public lectures, the rise in local museums and the popular press all contributed towards making information available (McNabb 2012, 286–287). If we compare the late nineteenth century situation with the early twenty-first century we might expect to see a fully professional subject by now. Yet, despite a major shift towards professionalism we also see that amateur activity has continued. The amateur did not disappear during this period. Local societies flourished during the twentieth century, establishing their own museums and encouraging local research to be undertaken (Walker 2007). Their role in promoting local studies possibly gave these groups a different focus from many of the professional researchers. The thriving of the county histories highlights the important contribution such people have made locally. With television and the advent of the internet information has become widely accessible to all once again.

Murray has made the observation that many histories of archaeology have started with an inherent interest in a place or an item, rather than with the bigger picture (Murray 2005, 27). My work on the histories of Pontnewydd and Cefn Caves (PW1) are certainly instances where this happened from a professional perspective. However, at the non-professional level Peter Bond's collection of surface finds from ploughed fields at Cophill Farm led me to investigate the fields systematically with the assistance of an enthusiastic team of volunteers (PW5, Walker 2015). Such opportunities for professional archaeology to react to new discoveries by members of the public are very important but give rise to the question does antiquarianism survive today in Wales? I believe that it does, as there are so many people actively collecting today.

As long ago as 1950 Glyn Daniel observed how archaeology could easily revert to being about collection and warned of the danger of creating a new antiquarianism as a consequence (Daniel 1950, 326). Much flint collecting is undoubtedly continuing along these lines with many collectors collecting for the sake of it. Arguably their work is being endorsed by modern schemes such as the Portable Antiquities Scheme. The risk is that this Scheme may be endorsing the activities of these people who have sometimes been defined as treasure hunters. In so doing, are professional archaeologists, including myself, affirming this as a valid collecting process and is this a good thing to be doing? Yes, I believe that this is the case. However, what is important and what makes the present-day flint collector different from some of the earlier antiquarians is that on the whole, the vast majority of them do not engage in excavation, instead they collect stone tools (and other materials) from the surfaces of ploughed fields. They also do not tend to utilize the collections they gather themselves, leaving the professional archaeologists to study and

publish them for them (e.g. PW5). Such collectors are not 'treasure hunters' in the way that a metal-detectorist might be by digging items out from the ground. All the stone tools collected on the surface of ploughed fields are out of archaeological context and if recorded well are, I believe fair game for collecting. As long as the findspot is recorded by GPS, as long as the finds are reported and recorded by a professional archaeologist who can take an informed decision about whether or not follow-up investigation and excavation should take place at the site, then they are not causing harm. Indeed if I were not to study these finds and provide them with a new significance many of these collections would end up being completely worthless.

An overlap emerges here between historic collections, archives and historiography; surface collections and historical archives can end up tucked away behind the scenes in museum boxes or drawers as these are often not the items selected for display. These items will wait for a researcher to study them and bring them back to life before they are returned safely to their boxes where they will remain until the next researcher asks to see them (Owen 2013, 134). It is the purpose of our museums to keep these archives safe, but I believe it is imperative that archaeologists make use of all this available evidence. So as an archaeologist examining assemblages I am consciously setting out to unlock their potential. Does the very fact that I choose to study surface collections of stone tools start to give them meaning and significance that they would otherwise not have had? I am aware that this is most likely to be the case. My own role is to actively utilize amateur collectors' and interested individuals' discoveries. I study these data in a professional manner drawing together the information available and seeking to use it in ways that may shed light upon the interpretation of places or of sites. So I am not an antiquarian and believe I fulfil Schnapp's definition of an archaeologist. 'The archaeologist is a collector, but of a particular kind, more meticulous than the others and accountable to various institutions, to the state and to the public' (Schnapp 1997, 13). The published works have demonstrated how effective this may be, for example at Cathole Cave (PW3), Snail Cave (PW4) and at Cophill Farm (PW5) where new discoveries have led to further investigations of stratigraphical context and therefore towards providing additional meanings, significance and new interpretations of sites. Together the exploration of historic archives, assemblages and new finds can lead to new narratives that can help keep our interpretations of the archaeological record moving forward.

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