

MINING AND MATERIALITY

NEOLITHIC CHALK ARTEFACTS AND THEIR DEPOSITIONAL CONTEXTS IN SOUTHERN BRITAIN

Anne M. Teather

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Foreword

This book was initially submitted as a doctoral thesis in archaeology at the University of Sheffield in 2008. The research reported here concerns the British Neolithic flint mines and their deposits. It is argued that the interpretation of flint mines has suffered through an overly-narrow emphasis on the mechanics of flint extraction and, in comparison to other contemporaneous sites, they have been seen as peripheral to the wider societal and monumental changes that occurred in the British Neolithic. This book is presented with little alteration and some trepidation. I have read the theses of many and found they often hold a charm in being both bold and naïve; I hope the reader finds this of mine. The only changes are the omission of some poor quality photographs; recalibration of some radiocarbon dates; some of the figures have been redrawn to improve their quality and a few sections of rather rambling text have been tightened, though I fear many remain. Needless to say while the text remains largely unchanged my understanding of some of the topics here have changed, for example I no longer agree with the version of the Mesolithic-Neolithic transition in Britain I present here.

A history of the study of mines and an overview of their general morphology is undertaken in Chapter 2. Much of this review is still current as there have been no new excavations in Britain. However analyses and descriptions of new European mine sites, with radiocarbon dates, have been published. The best sources for this material are three publications - Allard *et al.* (2008); Capote *et al.* (2011) and Edmonds and Davis (2011). Baczkowski (2014) has recently argued for a northern European origin of mining technology though the paucity of radiocarbon dates for the early Neolithic flint mines of southern Britain do not necessarily provide a viable platform for comparison. Furthermore, the 20 radiocarbon dates for seven of the flint mine sites now sit very uncomfortably next to projects that have comprehensively dated the causewayed enclosures and other early Neolithic sites in Britain (Whittle *et al.* 2011) and the re-dating at Grimes Graves (Healy *et al.* 2014). As this book goes to press I have applied for funding for more dates, and a project is about to commence led by Stephen Shennan which will result in more comprehensive radiocarbon dating of flint mines.

For Chapter 3, Conneller's (2011) theoretical work discussing materiality in the Mesolithic resonates with some of the discussions I made particularly on the deposition and use of fossils. Jones *et al.* (2015) have recently published results of their new analysis of the Folkton Drums and in passing referred to the Lavant Drum, incorrectly claiming that I misidentified a pottery sherd from the same deposit as Grooved Ware. During my primary research in 2005 I only examined the Drum itself and any information I had with regard to its context I learned orally from museum staff and the excavator. This is clarified and re-emphasised in Chapter 5 to prevent any future confusion. The original wording can be accessed in my thesis (Teather 2008: 207).

In the last seven years I have published part of Chapter 4 (Teather 2011) and completed analyses on the chalk artefacts found as a result of the Stonehenge Riverside Project excavations (2003-9) that are due for publication within the site monographs (Teather in press a, in press b, in press c). I also have publications in review that expand on elements of Chapters 3, 5 and 6. I completed new research in 2015 and found examples of incredible incised art from the 1870s excavations at Cissbury at the Ashmolean Museum, Oxford (Teather 2015). I think this perfectly illustrates how we can still learn a great deal about these monuments: the flint mines have much more to tell us.

Anne Teather
November 2015

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Chapter 1

Mining and Materiality

1.1 Introduction

Stone tools were a necessary part of life in prehistoric communities before the advent of metals. During the Mesolithic in Britain the raw material to produce them – usually flint and chert – was either collected from the surface or, rarely, extracted by shallow quarrying. By the very earliest Neolithic there was a fundamental change in the technology of extracting flint, alongside the production of new types of tools – most notably polished axes and large arrowheads and blades. This was arguably part of broader programme of economic and social change from the hunting, fishing and gathering lifestyle of the Mesolithic and preceding millennia, to a focus on monumentality, new forms of material culture, domesticated animals and crop cultivation.

The new method of extracting flint involved digging deep shafts into bedrock to extract sub-surface flint nodules laid down in layers within the chalk. Galleries extended from the base of these shafts, in some cases up to 13 metres (m) from the surface, creating a subterranean network of tunnels. They are now visible on the surface as depressions alongside corresponding mounds of extraction spoil which often resemble later Bronze Age barrows in size and shape. The monumental character of these mine workings is interpreted as an indication of an organisational shift within early Neolithic communities involving the mobilisation of large numbers of people to focus their labours on particular places in the landscape, as in the construction of other monuments such as causewayed enclosures and long barrows.

The new forms of material culture contribute to our understanding of the Mesolithic-Neolithic transition in different ways. Pottery, both as a clay-based substance and finished vessel, brought new cultural practices and skills to Neolithic communities. In a similar way, chalk artefacts such as cups and phalli were a cultural reinvention of an existing substance: both clay and chalk are encountered as geological deposits. This creation of new artefact forms, and their use and deposition, are key evidence in proposing the move of Neolithic communities to adapt and alter their world to them, rather than finding different ways to adapt themselves to their environment (Whittle 1996, Thomas 1999a). This change is therefore argued as also having been prompted by an alteration in ideological and

perhaps cosmological understandings which manifested in different practices.

Yet, despite these broader arguments, interpretively flint mines have often been seen as peripheral to this transition in both their monumental form and deposits. While they began to attract the attention of early Victorian archaeologists from the 1860s, their interpretation has almost always concentrated on their function as extraction sites. Changes in theoretical archaeology in the last twenty-five years encouraged interpretations which referenced ethnographic data, focussing on practices and symbolism at other Neolithic sites, particularly monuments, that was in turn applied to flint mines. For example, Miles Russell (2000: 146) discusses how the extraction of flint may have fitted within these wider Neolithic cultural beliefs:

they were places of initiation and ceremony, places where one could descend into a subterranean world of darkness totally removed from the natural and familiar; places of ancestral significance, where one could tame the land; places from which deeply bedded flint could be won at a cost and prestige items could be manufactured.

Evocatively rendered, flint mines therefore became Neolithic monuments, viewed as separate spaces that produced different experiences to those usually encountered during a Neolithic person's life. Flint, as the product of mining, was perceived as a goal to win; the aim being to produce 'prestige items' implicated in relations of social dominance and control either through their ownership and display or through exchange. However, other deposits within flint mines remain unexamined. Is this peripheral view correct and how has it been constructed? We cannot assess if flint mines should be viewed as outside any Neolithic 'norm' without further consideration of their morphology and deposits; in effect they need to be assessed on a comparable basis to other Neolithic monuments before that judgement can be made. This book attempts to start this process.

1.2 Aims of this Study

The aims of this research are to:

- Critique prevailing interpretations of flint mines as economic and ritual resources in the Neolithic by examining how theories of ‘otherness’ have influenced the understandings of the mines.
- Formulate theoretical frameworks that overcome the function-ritual divide, particularly with reference to concepts of materiality, the inter-relatedness of substances and depositional practice.
- Use the theoretical framework to examine the architectural morphology and depositional histories of flint mines, with special reference to chalk artefacts and art.
- Draw conclusions as to how flint mines and their deposits contribute to understanding substances, artefacts and deposits within the existing cultural repertoire of the southern British Neolithic.

1.3 Outline of the Argument

The flint mines in Britain occur on chalk deposits where flint was laid down in seams within the chalk. They have been recognised as archaeological by a distinctive topography of circular depressions and mounds, and have been the subject of excavations for nearly a hundred and fifty years. The mines were built within existing social landscapes, and many sites were subject to later prehistoric activity rendering greater complexity to their surface morphology and depositional histories. Chapter 2 discusses these factors in more detail, giving an overview of flint mine locations and their history of excavation and interpretation.

The concept of materiality has been an important element in both the British Neolithic and wider archaeological discourses, its motivation being to tease interpretation from artefacts and architecture in a more integrated way. In this research I have approached materiality through phenomenology; a method that I think is both the most straightforward and, with the lack of historical records, almost singularly the most effective way of examining the evidence. Materiality is a human engagement, phenomenology a human embodied approach. A fuller discussion of materiality follows (Chapter 3), yet the premise is that artefacts and their context actively structure meaning. Hence, from the perspective of materiality, all aspects of the artefacts and their deposition, substance and indications of use wear, contribute to meaning, and any variations in this have an influence upon interpretation.

While many artefact categories are well studied in the Neolithic, chalk artefacts and art are not among them. Therefore, it has been necessary to interpretively review them as they form a considerable part of flint mine deposits (in terms of importance if not number). With regard to the artefacts themselves, it was felt that size and portability have a significant role in interpreting artefacts and what their likely socio-cultural roles had been in the past (Root 1983). Therefore, chalk artefacts are divided this way: non-portable chalk artefacts and art are examined in Chapter 4, and portable chalk artefacts in Chapter 5, where a new typology of portable chalk artefacts is offered. This has been achieved through an approach of materiality: that artefacts, their construction, substance and form are meaningful. Therefore chalk artefacts have been recognised and placed within a typology through phenomenological means. The analyses in Chapters 4 and 5 are situated within a regional context (where available) of similar artefacts from contemporary monuments.

It is also argued that new artefact categories come into being in the Neolithic, constructed from natural substances or materials such as faunal remains, fossils and iron pyrites and materiality is used to deconstruct functional interpretations. Phenomenological interpretations of materiality cannot focus on one artefact type as materiality is a relational activity, so all deposits are considered. Chapter 6 concentrates on those artefacts previously ignored as deposits in the mines, while also re-considering human and animal remains as artefacts. These arguments are summarised and the study concludes in Chapter 7.

1.4 Flint Mines and Materiality

The flint mines studied here occur across the chalklands of southern and eastern Britain and understanding their place within Neolithic Britain is of equal importance to considering any other monument of the period. Their archaeological deposits contribute to Neolithic interpretations in a similar way to that of contemporary monuments. The study of them and examination of chalk artefacts and art is a long overdue enterprise that begins here.