Truth and Archaeology

Justification in archaeology

Monique Ingrid Boddington

Magdalene College

University of Cambridge

Submitted for the degree Doctor of Philosophy

October 2013

Declaration

This dissertation is the result of my own work and includes nothing which is the outcome of work done in collaboration except as declared and specified in the text. This dissertation is not substantially the same as any that I have submitted, or, is being concurrently submitted for a degree or diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text. I further state that no substantial part of my dissertation has already been submitted, or, is being concurrently submitted for any such degree, diploma or other qualification at the University of Cambridge or any other University of similar institution except as declared in the Preface and specified in the text

This dissertation does not exceed the prescribed word limit.

Acknowledgements

At the end of any project of this size there are always so many people to thank who you have met and have helped you along the way. In the case of this thesis like many this was a journey not of the straightest route and it was only possible with the help of so many people that I got this far.

This journey began a long time ago before the first word of this work was written. During my undergraduate degree in Archaeology at the University of Nottingham the first ideas that would become what is written here first began to crystallize. My introduction to archaeological theory was strongly influenced not only by a brilliant lecturer but also the time I was spending with academic philosophers. Evenings were spent discussing issues far beyond the scope of this work, drinking tea, listening to the Smiths. It was these individuals who helped me begin my journey, distilling a great passion for this type of debate. Individuals like Dr Mark Pearce, who always told us to think outside the box in lecturers (though to also remember there was a box to start with) and who always believed in me, even when things didn't for as planned. Dr. Hamish Forbes whose support I am still grateful for.

As part of this I completed fieldwork on the site of Çatalhöyük, Turkey. I would like to thank Prof. Ian Hodder for letting me take part in the excavations, pursue my own research interests on site and for taking the time to discuss my ideas with him. Also I would like to thank the many people who helped me during my fieldwork: Shahina Farid, Roddy Regan, Prof Peter Biehl, Freya Sadarangani, James Taylor, Dr. Amy Bogaard, Dr Lori Hager and Ingmar Franz. Over the years I received support and feedback from numerous different people. I would also like to thank Prof Lynn Meskell, Åsa Berggren, Anders Hogberg, Björn Nilsson, Prof Raymond Corbey and Prof John Bintliff.

In Cambridge there have been many individuals who have helped me along my journey. Most importantly I would like to thank my supervisor Dr John Robb for so much of his time, reading many drafts of this thesis, many hours of debate and supporting me throughout my studies. I also must thank Prof Paul Dupree, my college tutor for so much support and guidance. I am also grateful to Prof Simon Blackburn for reading some of the early drafts on truth and guidance on philosophical theories of truth. I would like to thank Dr. Sarah Tarlow and Prof. Alison Wylie for their comments on a previous version of this thesis. My peers have also been of great help and guidance, often willing to just listen to me rant; particularly I would like to thank Dr. Naomi Farrington, Dr Tera Pruitt and Dr Catherine Lackey.

The most important thing though in undertaking any PhD is being surrounded by friends and family. Thank you so much for all your love and support. Bike poloists, rowers, colleagues and just good companions, thank you! Most of all I would like to thank my parents and my brother for all their love and support, standing by me and helping me even at the toughest of times.

Summary

Many causes have been proposed for the transition to agriculture but how can archaeologists debate rival interpretations of the record with a seat-of-your-pants theoretical methodology? Truth is a concept that has been the subject of considerable thought and analysis by philosophers for millennia and is a conceptual resource that archaeologists can draw on.

The aim of this thesis is twofold. Firstly, the aim is to study the epistemological criteria used in the formulation and assessment of archaeological knowledge: bringing new understanding of knowledge formation in archaeology and how to deal with competing interpretations of the past (specifically with political and ethical ramifications). The second aim is to assess these epistemological criteria and position them in light of the literature on philosophical theories of truth. The focus of this thesis is on the justification project which attempts to identify a characteristic which is possessed by most true propositions and not possessed by most false propositions. In other words, what it is that makes certain statements about the past 'true' or 'not true'. The aim is to understand how archaeological claims about the past come to be made and against what grounds these claims are justified.

Three angles are used to answer the aims of this thesis. Firstly, looking at archaeological interpretation in the field, the case study of Çatalhöyük in Turkey is used to track interpretation from excavation through to publication. Secondly, looking at justification in larger syntheses of the past, different explanations for the emergence of agriculture in Britain are explored to understand how justification works at this level of archaeological interpretation, especially when dealing with multiple explanations. Finally, the ethical and political consequences of archaeological justification are discussed. Given the acceptance that there are different interpretations of the past beyond solely the archaeologists, how does justification work in archaeology when we include other interpretations of the past and when concerns shift away from reaching the most justified account of the past, to the practical ramifications of that knowledge?

This thesis original and novel contribution is in answering these aims. In the next chapters it will be argued that archaeological justification works within a specific model of justification based on correspondence and coherence. Justification shifts as interpretation moves away from the archaeological record; there is a heavier reliance on abductive reasoning. Multiple interpretations are a product of abductive reasoning and due to the adoption of different theoretical stances. Archaeology fits within a pragmatist theory of truth showing that ethical and political issues are part of the process of justification.

To my parents!

Thank you Mama and Papa!

CONTENTS

DECLARATION I

ACKNOWLEDGEMENTS II

SUMMARY III

LIST OF FIGURES AND TABLES VIII

CHAPTER ONE: ARCHAEOLOGY AND TRUTH 1

1.1 TRUTH AND ARCHAEOLOGY 1

1.2 SITUATING THE JUSTIFICATION PROJECT IN ARCHAEOLOGICAL THEORY 2

1.2.1 Processual Archaeology 4

1.2.2 Post-processual archaeology 8

1.2.3 A middle ground 12

1.2.4 Justification and archaeological theory 14

1.3 WHY DO WE NEED A THEORY OF TRUTH? 19

CHAPTER TWO: PHILOSOPHICAL THEORIES OF TRUTH 23

2.1 PHILOSOPHICAL THEORIES OF TRUTH 23

2.2 THE ISSUE OF JUSTIFICATION 23

2.3 CORRESPONDENCE THEORIES 24

2.3.1 Introduction to correspondence theories of truth 24

2.3.2 Correspondence as congruence, correspondence as correlation 26

2.3.3 Deflationary Theories and Correspondence theories 28

2.3.4 Arguments against a correspondence theory of truth 30

2.3.5 Applying a correspondence theory of truth to archaeology 31

2.3.6 Mind and World 34

2.3.7 Conclusions for a correspondence theory of truth 36

2.4 COHERENCE THEORIES 37

2.4.1 Varieties of coherence 38

2.4.2 Arguments against Coherence 39

2.4.3 Archaeology and coherence theories 39

2.4.4 Conclusions for a Coherence Theory of Truth 41

2.5 SOCIAL CONSTRUCTION 42

2.5.1 A very brief history of the Sociology of Knowledge 42

2.5.2 The Spectre of Relativism and the Sokal Hoax 44

2.6 PRAGMATIST THEORIES OF TRUTH 46

2.6.1 Classical Pragmatism 47

2.6.2 Between Objectivism and Subjectivism 50

2.6.3 Pragmatism and Archaeology 54

2.6.4 Pragmatism, Correspondence and Coherence *57*
2.6.5 Conclusions for Pragmatist Theories of Truth *59*
2.7 Pluralism 60
2.8 What does the truth tell us? 62

CHAPTER THREE: JUSTIFICATION IN THE FIELD: ÇATALHÖYÜK 65

3.1 Introduction: Thinking about the practical consequences 65
3.2 The Reflexive Method 66
3.3 Çatalhöyük 70
3.3.1 The methodology of Çatalhöyük *71*
3.3.2 Excavating on site *74*
3.3.3 The Diaries *80*
3.3.3.1 Discourse Analysis 81
3.3.3.2 Ethnography of the diaries 87
3.3.3.3 Diaries in publication 88
3.3.3.4 Diaries in pursuit of the reflexive method 90
3.3.4 A series of small walls *92*
3.3.5 The final record (?) *106*
3.4 Interpretation on site from trowel to pen 118
3.5 Applying philosophical theories of truth to archaeology in the field 125

CHAPTER FOUR: JUSTIFICATION AND THE ARCHAEOLOGICAL 'GRAND NARRATIVE' 128

4.1 The British Neolithic 128
4.1.1 Migration *130*
4.1.2 Acculturation and changing world view *135*
4.1.3 Acculturation and changing economies *142*
4.1.4 Justification and the British Neolithic *145*
4.2 Narrative and justification in archaeology 151

CHAPTER FIVE: ETHICS OF ARCHAEOLOGICAL EPISTEMOLOGY 156

5.1 Archaeology, politics and ethics 156
5.1.1 The political ramifications of archaeological epistemology *158*
5.1.2 The burden of the past *160*
5.1.3 Archaeology as political action *163*
5.1.4 Epistemic Inclusion and Multivocality *169*
5.2 A pragmatist approach to archaeological ethics and epistemology 173
5.3 Ethical justification in practice: a pragmatist approach 177
5.3.1 The reflexive method at Çatalhöyük: Multivocality through access and dialogue *177*
5.3.2 Achieving 'Satisfactory' Justification (or not): some conflictual examples *183*
5.4 Archaeological ethics and justification 186

CHAPTER SIX: ARCHAEOLOGY AND TRUTH 190

6.1 TRUTH AND ARCHAEOLOGY 190

6.1.1 Archaeological justification on site. 191

6.1.2 Justification and the archaeological 'grand narrative' 193

6.1.3 Justification and multiple interpretations. 194

6.2 ARCHAEOLOGY AND TRUTH 196

BIBLIOGRAPHY 198

List of Figures and Tables

Fig. 1 MOLAS context sheet …… 75
Fig. 2 Çatalhöyük Unit Sheet ……76-7
Fig. 3 Line graph of results of textual analysis as percentages…… 83
Fig. 4 Comparing results by percentage of textual analysis…….. 87
Fig. 5 Building 10 and associated wall from Archive Report 2003…….. 93
Fig. 6 Feature 2054 eastern wall foundation of building 44……..94
Fig. 7 Floor of building 44…….97
Fig. 8 Room fill, Unit 11416…… 99
Fig. 9 Foundation wall, F.2053……..100
Fig. 10 & 11 East Wall of Building 56, F.2070…… 102
Fig. 12 Southern foundation of building 44, F.1341 …… 103
Fig. 13Reconstruction based on findings from building 1…… 109
Fig. 14 Pit F.17……..…… 116
Fig. 15 Interpretation in the field……..…… 122
Fig. 16 Layers of interpretation...…….....…… 124
Fig. 17 Layers of interpretation II……..……125
Fig. 18 Model of justification…..……..…… 150

Table 1 Results of textual analysis ……84
Table 2 Results as percentage……84
Table 3 Textual analysis of diaries used in site report…….. 89

Chapter One
Archaeology and Truth

1.1 Truth and Archaeology

Philosophical theories of truth are not something that are frequently discussed in the archaeological literature, but they are something that philosophers have grappled with for thousands of years; classically attempting to identify the very nature of truth. Truth is one word which can be defined in simplistic terms and yet also has a Pandora box effect. Truth is a term that is heavily burdened with preconceptions.

Kirkham (1992, 3) identifies three projects within the study of truth; the metaphysical project, the justification project and the speech-act project. The metaphysical project attempts to identify what truth consists in (what it is for a statement, belief, proposition, etc. to be true). The justification project attempts to identify a characteristic which is possessed by most true propositions and not possessed by most false propositions. The justification project does not try to provide a definition for truth and instead tries to explain, for any given proposition, when and how we are justified in thinking a proposition is probably true. The speech-act project attempts to describe the locutionary or illocutionary purpose of utterances that appear to ascribe the property of truth to a statement, belief, proposition, etc. Locutionary acts being the act of 'saying something' in the full normal sense: i.e. the utterance of certain words, with certain meanings, in a certain grammatical way. Illocutionary acts are performative acts: asserting, asking a question, warning, threatening, announcing a verdict or intention, giving an order, expressing a wish, making a request (Austin 1975).

There is a traditional assumption that truth has a nature and that this nature can be identified and captured in a formula or set of formulas. This is not a simple undertaking and there is no mutually agreed upon answer. The paradigm is existence, which applies to everything, whatever that may be that exists (Blackburn and Simmons 1999, 1). Truth can apply to mind, matter, numbers, time or even pots, pans and elephants. The task of identifying the nature of truth is hence a daunting one:

> "'What is truth?' we sometime ask-but the question tends to be rhetorical, conveying the somewhat defeatist idea that a good answer, if indeed there is such a thing, will be so subtle, so profound, and

> so hard to find, that to look for one would surely be a waste of time. The daunting aura of depth and difficulty which surrounds this concept is perfectly understandable. For on the one hand the notion of truth pervades philosophical theorizing about the basic nature and norms of thought and action-e.g. 'truth is the aim of science'; 'true beliefs facilitate successful behavior'; 'truth is preserved in valid reasoning'; 'to understand a sentence is to know which circumstances would make it true'; 'evaluative assertions can be neither true nor false'. So insight into the underlying essence of truth promises, by helping us assess and explain such principles, to shed light on just about the whole of our conceptual scheme." (Horwich 1998, 1)

Philosophers have lamented the humanities' lack of consideration of the role of truth (Blackburn 2005, xvi; Williams 2002, 3). Is it possible that studying truth could improve our understanding of how we construct knowledge of the past?

Focusing primarily on the justification project, it is posited that truth offers a different angle for investigating how archaeologists make justified knowledge claims. To understand why archaeologists need a theory of truth, we need to firstly understand how many other writers have grappled with epistemology in archaeology. Therefore, the next section is a broad history of archaeological theory as related to justification.

1.2 Situating the justification project in archaeological theory

Archaeological theory has dealt with many logical, philosophical, and epistemological issues over decades of research. In recent years it has been argued that archaeological theory is dead (Johnson 1999): a peace has broken out and, except for a few hardliners; issues of epistemology in archaeology have been resolved. What is reached is a middle ground, where data exists and is important but where we are unavoidably influenced by our own paradigms (Ibid, 175). Archaeological theory has moved towards a mixed theoretical approach with no unifying general theory (Bintliff 1993; Kristiansen 2011; Parker Pearson 1998; Pearce 2011; Pluciennik 2011). Rather than an explicit understanding of epistemology there are some generally agreed upon criteria and contrary to previous decades, there is no new grand theoretical paradigm (Pearce 2011). Archaeological theory has shifted away from questions of archaeological epistemology and justification to, in recent decades, more specific, fragmented issues; for example, to name a few: perceptions of space and the environment in relation to landscapes (Ingold 2000; Tilley 1994); agency (Dobres & Robb 2000); post-colonialism (Gosden 2004; Liebmann & Rizvi 2008) and materiality (Miller 2005). Given this fragmentation of archaeological theory, where does this leave

questions regarding the nature of knowledge in archaeology? Do questions regarding the metaphysical nature of truth and epistemology, as within the philosophical study of truth, become redundant? Do archaeologists need a theory of truth? Could truth provide a useful concept/body of study for archaeology?

The below sections are a very brief survey of the literature that deals with epistemological issues, as related to truth, in archaeology. The central concern here is the issue of justification (how do we know what we know) and not the other projects of truth. Within the archaeological literature the concern is with how we know the past and what we know about the past. In recent decades there has also been a growing concern with what we do with what we know (Habu *et al* 2008; Kohl & Fawcett 1995; Meskell & Pels 2005).

The justification project is not a theory of truth. The justification project does not define truth but provides a practical criterion for truth:

> "So theories of justification answer questions like, For any given proposition (or belief or sentence, etc.), when and how are we justified in thinking that the proposition is probably true? It does *not* answer, "What are the necessary and sufficient conditions for something's being true?" (Kirkham 1992, 25)

The justification project "attempts to identify some characteristic that, though it may not be among the necessary and sufficient conditions for truth, correlates well (though perhaps imperfectly) with truth" (Ibid, 26). Theories of justification are not theories of truth as that they do not attempt to define 'truth'. Theories of justification try to explain the sufficient conditions for believing a proposition is justified.

As noted earlier, the three different projects within the study of truth have often been mixed up. Many philosophers, when discussing truth are often discussing justification (Kirkham 1992). There is a mixture of views on the connection between truth and justification. Infallibilism holds that justification implies truth, however, it is not universally supported (Sturgeon *et al* 1998, 14-7). It is noted that it is very doubtful that there exists no facts which we could be mistaken about (Ayer 2000, 7). Justification therefore cannot imply truth as certain facts that are held as justified may be false. There is a lot of controversy on whether justified belief implies truth and the relationship between theories of justification and theories of truth. The relationship between justification and truth will be discussed further in the next chapter.

While most archaeologists may struggle with the word truth they would agree that knowledge of the past is supported by justification; where justification is the conditions under which

we hold a proposition to be probably true. How are archaeological interpretations justified from the available evidence? What is the nature of archaeological justification? As will be illustrated below, over time archaeologists have had different answers to these questions.

1.2.1 Processual Archaeology

Processual archaeology emphasised the explanation of past events and processes through the use and formulation of laws (Watson *et al* 1971; Watson 1976), within a hypothetico-deductive model of explanation (Salmon 1992, 227). For example, Binford (1962; 1967; 1968) supported the use of a hypothetico-deductive method, in line with the work of Hempel (1965). Therefore, the validity of a hypothesis is determined by its ability to withstand testing. Archaeological interpretations, following this line of reasoning, are justified within a system of testing, using a hypothetico-deductive method. Traditionally archaeological reasoning is associated with inductive reasoning. Archaeological interpretations are justified through inductive reasoning. Inductive reasoning is traditionally associated with the natural sciences, whereas deductive reasoning is associated with the 'harder' sciences, such as mathematics (Bird 1998, 11). An example of an inductive argument is as follows:

1. All crows that have been seen are black;
Therefore
2. All crows are black;
Therefore
3. Any crows we might see in the future will be black.

While the first conclusion of this argument (2) can be seen to logically entail the second conclusion (3), (2) itself is not a logical entailment of the premise (1). The argument does not rule out the logical possibility that somewhere there is a crow that is not black. Premises in inductive arguments do not logically entail their conclusions. It is possible for the premise to be true but the conclusion still to be false. Inductive arguments are not logically sound and inferences from data do not inevitably, logically entail their conclusions. Inductive reasoning is characteristically circular. We know that all crows are black because all crows we have seen are black. We accept the argument as it has served us well, thus far. Inductive reasoning requires *a posteriori* knowledge (where experience is required). Traditionally, interpretations in archaeology are justified through inductive

reasoning. It is justified to hold an interpretation when everything we have seen so far fits with the interpretation. For example, hypothetically, the interpretation that all houses in a specific geographical area, during a specific period are round is justified inductively as all houses so far discovered, belonging to this period, in this area are round.

Hume (1978) discusses whether it is possible to use inductive reasoning to gain knowledge. Hume argues that if a conclusion is to give us knowledge, then the argument must justify our belief in the conclusion; the conclusion must be logically implied by the premise. In inductive reasoning, this is not the case; the conclusion can be false, even if the premise is true. All crows seen may be black but there may be a crow, not yet seen, that is not black. The only way Hume believed that it was possible to overcome this problem was to turn inductive reasoning into deductive reasoning by adding an additional premise, the uniformity premise; all unobserved cases resemble the observed cases.

A classic example of a deductive argument is as follows:

1. All men are mortal;
2. Aristotle is a man;

Therefore

3. Aristotle is mortal.

This form of reasoning can be found in archaeology. Inferences are made between observed and unobserved cases or alternatively, between the past and present. In archaeology there is concern regarding assuming uniformity. For analogical reasoning to be compelling "it presupposes some form of uniformitarian principle that establishes ground for treating similarities known to hold between an interpretive subject and its analogy as a reliable indicator that further similarities hold in areas where direct comparisons cannot be made."(Wylie 2002a, 138-9) Archaeologists need to be mindful of the use of inductive reasoning and the uniformity premise. Inductive reasoning, as discussed above, is inherently circular, and there is always the danger of assuming similarities that analogical reasoning is meant to establish (Clarke 1951, 52).

The hypothetico-deductive method works by formulating a hypothesis, deducing a prediction (amenable to observation) and seeing whether the prediction is true or false:

H Deductively implies P;	P Deductively implies P;
P;	not P;
H is confirmed.	H is disconfirmed.

or alternatively,

H = Presence of a posthole P = area of dark soil;

Presence of posthole implied by area of dark soil;
Area of dark soil;
Presence of a posthole.

Presence of a posthole is implied by area of dark soil;
No area of dark soil;
No posthole.

Archaeological justification occurs through the testing of multiple hypotheses against available evidence. These hypotheses may be implied by evidence but they are justified through testing. For example, in the case above, the presence of a posthole can be identified through certain features and the presence of a posthole is justified through testing against the archaeological record.

The hypothetico-deductive method relies on ethnographic data and the use of analogy. Analogical inferences broaden the scope of interpretation by increasing the field of available hypotheses. Hempel held that the necessary tools for explaining the past existed and that general laws were possible (Hempel 1965, 235). Parallel to this, Binford believed that analogy played a crucial role in covering law explanations (Binford 1962). This has been interpreted as being akin to Hempel's method of empathetic understanding; a method in history which employs imaginary self-identification to gain an understanding of the past, but does not act as an explanation on its own (Hempel 1965, 239-40). Ethnography suggests hypotheses, as Binford states:

> "analogies should be documented and used as the basis for offering a postulate as to the relationship between archaeological forms and the behavioural context in the past. Such a postulate should then serve as the foundations of a series of deductively drawn hypothesis which, on testing, can refute or tend to confirm the postulate offered." (Binford 1967, 1)

The epistemological realization, of the inferential nature of all statements about the past (Tschauner 1996, 3), undermines the hypothetic-deductive method in archaeology. Binford (1981) himself recognized this. Archaeological investigation is conducted in the present. Archaeologists make contemporary observational statements from which they make meaningful statements about

the past. Justification occurs in the present. Justified knowledge of the archaeological past is gained through testing statements, inferred from the present (analogies), against the archaeological record. All observational statements are contemporary facts and the past is inferred from them. Therefore, there is an inherent circularity to justification in archaeology.

Middle Range Theory (MRT) attempted to overcome this problem by finding Rosetta Stones (interpretable as universal laws) that would allow accurate interpretation; from observation of the static archaeological record to statements about the dynamic past (Binford 1981, 25). MRT is a difficult concept to grasp as there have been a variety of different positions towards it (Binford 1977; Cowgill 1993; Trigger 1995). MRT attempts to recover the hypothetico-deductive method, by using evidence from present-day studies to isolate causal relationships between things, to justify statements about the past. Justification within MRT works by finding hypotheses that can be tested against the archaeological record and hence overcomes the inferential nature of archaeology.

The inherent problem with the use of MRT, or the hypothetico-deductive method in archaeology, is that it assumes the existence of a body of data that can provide a stable and unproblematic measure of truth, against which a hypothesis can be tested. In archaeology though, hypotheses of interest lie beyond accessible data. To construct a hypothesis in the first place requires interpretation of the partial, incomplete archaeological record (Wylie 1985, 87). There are no absolutely stable and transparently meaningful empirical foundations that testing can be grounded upon. Justification is therefore not secure.

Often confirmation may offer some support for a hypothesis, which, by the rules, would lead to outright rejection of the hypothesis. Interpretations of the past can therefore be partially justified. As Watson argues, "the hypothetico-deductive method is not faulty in the sense of imposing the claim of certainty on uncertain scientific knowledge. Carnap and Hempel, as well as Popper and Feyerabend, "know perfectly well that all scientific knowledge is uncertain" (Watson 1992, 260-1). Some believe that the deductive method can only test falsification: a hypothesis is said to have only been corroborated when it has survived serious attempts at falsification (Popper 1963). In which case justification in archaeology is through how well a theory stands up to falsification.

Analogy and the hypothetico-deductive method both narrow the field of possible hypotheses and bring new possible hypotheses too light but, it has been argued, they do not provide a way of separating between hypotheses. For example, Binford's (1967) account of smudge pits for smoking hides and Munson's (1969) account that smudge pits were used in ceramic production. While further investigation may result in one account being preferred over the other, it also could result in no clear way to separate between accounts (Krieger 2006, 54). It is possible that more than one interpretation may be equally justified. However, alternative examples indicate that it is possible to delimit the

field; for example, in the case of stone gorgets (groundstone artefacts used within pottery production, see Curren 1977) in which, by determining the relative strength of different inferences, it is possible to delimit the field of possible interpretations (Salmon 1982). Curren expands the bases of interpretation of stone gorgets use in pottery production, rather than just being stone ornaments, by drawing in further sources (Wylie 2002a). In some cases it is possible to conclude that a specific analogy is justified and another is not.

Within the literature on processual archaeology, hypothesis testing and deduction is emphasised. However, as seen in the brief deconstruction above, processual archaeology is problematic. Archaeological interpretation is justified through a process of testing but this fails to take into account the partial nature of the archaeological record. Working within a hypothetico-deductive methodology, justification is limited to the hypotheses employed or the universal laws built. During the 1970's a growing number of archaeologists began to question the current theoretical paradigm of the time; New Archaeology or processualism. Many archaeologists became more and more convinced that the past was much more diverse than contemporary theoretical methodology allowed (Trigger 1989, 329). There was a growing recognition that the neo-evolutionary constructs that New Archaeology heavily relied on were unduly restricting the questions that archaeologists could ask about the past. Ethnological critiques by anthropologists also indicate the limitations of an approach based on evolutionary study. Fried (1975) claims that many complex features of tribal societies were the product of acculturation with the West and not spontaneous internal developments: a major concern for archaeologists (Renfrew 1982). This was coupled with an increasing questioning of the importance of economic and ecological factors in determining human behaviour (Watson 1986), arguably, linking justification of past human behaviours to deterministic world views. New Archaeologists by the 1970's were backing down from their extreme positivist claims of objectivity. Though arguably, they had never been as extreme as sometimes painted, even Binford (1977) recognized the limitations of the testing procedure he had recommended. In general, a processualist view of justification is criticized for being too limiting, too deterministic and too positivist.

1.2.2 Post-processual archaeology

Clarke's landmark paper '*Archaeology: The Loss of innocence'* (1973) marked a new period in archaeological theory. Clarke states that archaeologists had lost their disciplinary innocence by crossing the threshold from consciousness through self-consciousness to critical self-consciousness.

In this new era, archaeologists now recognized that archaeology's domain is as much defined by its form of reasoning (the intrinsic nature of its knowledge) as by the elementary raw material, study and methodology of the discipline. As Trigger (1989, 379) notes, archaeology is particularly vulnerable to the pretence that what is accepted as true at any given time is whatever appears reasonable. Though archaeologists may establish sound correlations, such as weeding out logical inconsistencies and being able to falsify previously accepted interpretations in the light of new data, these interpretations are subtly influenced by *a priori* social and personal conceptions of reality. Frequently neither adequate data nor strong correlations exist to counterbalance such bias. As argued at the end of the previous section, the past is much more diverse than processual theoretical methodology allows (Ibid, 329). The interpretation of evidence creates the possibility of competing hypotheses, which may not be just 'right' or 'wrong' but emphasize different aspects or paradigms of reality (Thomas 1995, 352). Following this, justification in archaeology can be mistakenly accepted as whatever is reasonable. Justification of archaeological knowledge, at the very least, is influenced by *a priori* social and personal conceptions of the world.

The problem for New Archaeology, and universal laws of explanation, is that the same paradigmatic assumptions are used in explaining the significance of contemporary evidence and in observing the archaeological record (Barrett 1990, 42). The observer's paradigmatic beliefs structure ideas of the past and the evidence for those ideas. Hodder (1986) argues that it is difficult to ever create universal laws of cultural processes that are independent of one's own cultural theories. The idea of independent testing is thus false. It is not possible to identify or rule out *a priori* biases as they become an embedded part of the process of justification. Within justification the same *a priori* biases impact both the ideas of the past and the evidence used to test those ideas, therefore, making it impossible for justification to be independent of *a priori* biases.

It is difficult to characterize post-processualism: "a group of approaches more united by what they are not, rather than what they have in common" (Dunnell 1992, 75). Johnson (1999) indicates eight key points that roughly connect post-processualists. Post-processualists hold that we cannot be objective in our construction or testing of theory; we always see through a cloud of theory (as discussed above). Secondly, post-processualists believe that interpretation is always hermeneutic. Justification is a circular act, from evidence to interpretation and interpretation to evidence. Post-processualists reject the opposition between material and ideal; asserting that there is no ideal interpretation and that every person will view something differently. The individual is treated as an individual: an actor who effects and changes the archaeological record. New Archaeology traditionally bypasses the individual in pursuit of the grand model (Hodder 1991). The last of Johnson's (1999) points is that interpreting the past is always a political act. Justification of

archaeological interpretations, within post-processualism, is very different to the form of justification argued within the processual school of thought. There are no grand models and the emphasis is on reaching individual in the past. Justification is influenced by *a priori* biases and is neither an objective act nor produces objective interpretations.

Preucel (1995) distinguishes three different epistemological positions in post-processualism:

> "An analytic epistemology refers to those approaches seeking to provide explanations of systematic relationships in terms of cause and effect. It is associated with empiricist and more recently realist ontologies. A hermeneutic epistemology, in contrast, attempts to provide an understanding of the meaning of an event from the actor's point of view. This position is closely allied to the phenomenological position that meaning is grounded in experience. Finally, a critical epistemology seeks to expose past and present ideological structures for the purposes of emancipation. "(Ibid, 150)

Preucel also identifies frameworks that crosscut each of these three epistemologies; for example, the analytical tradition has Marxist and Feminist variants (Ibid). Following Preucel, there is not one form of justification within post-processualism, but several different positions that have different epistemologies. Within the analytical tradition the focus is on justifying relationships between cause and effect. A hermeneutic epistemology (not to be mixed up with, as discussed below, Hodder's use of hermeneutics), on the other hand, focuses on understanding the past through the individual, arguably, relativizing justification to some extent. Critical epistemology focuses not on how we justify interpretations of the past, but on how interpretations are shaped by the present. For example, within critical post-structuralism original meanings are inaccessible and the focus is on how the past is constructed in the present, hence, justification will produce different and often contradictory meanings (Ibid, 154). Given that there are, possibly, numerous different stances on justification in post-processualism, it is important to look in more detail at a couple of these stances.

Hodder's contextual approach (1986) is often seen as the principal rival paradigm to processualism (Trigger 1989, 348). Preucel identifies Hodder as a critical post-structuralist (Preucel 1995, 154). Based on ethnographic studies, Hodder claims that material culture is not just a reflection of ecological adaptation or socio-political adaptation, but is an active element in group relations. Material culture is used to disguise and reflect social relations (Hodder 1982). Material culture is meaningfully constituted. Hodder adapted habitus, as conceived by Pierre Bourdieu (1977). Habitus is the strategy generating principles that enable agents to cope with unforeseen situations (practical knowledge and logic). These behaviours are context dependent. Common

behaviours occur within groups. Habitus is passed down in the daily practice of life; in the use of space and objects, and is expressed in material culture. Habitus is in everything.

Habitus is central to Hodder‘s contextual approach. Archaeologists interpret material culture’s symbolic function within the system and the system from the symbolic meaning or habitus of the material culture. In other words, the material culture or system is only understandable through understanding the structure and the structure cannot be understood without understanding the system (Kosso 1991, 624). This introduces an inherent circularity to archaeological justification. The part can only be understood in terms of the whole and the whole can only be understood in terms of the part. The interpreter must tack back and forth between the whole and the part, to fully understand the meanings of the given situation (Hodder 1991, 150). Justification thus occurs within a hermeneutic approach.

Hodder adopted hermeneutics from continental philosophy as he viewed the interpretation of the archaeological record as reading text (Hodder 1991, 126). There are very simple rules that underlie all languages, at all times and all places; however, all text must be interpreted and their meaning is often ambiguous. The idea of a universal grammar was first suggested by Collingwood (1946). The ideas adopted by Collingwood can be traced back to the German hermeneutic tradition (Johnsen & Olsen 1992).

Shanks and Tilley (1987) also make use of hermeneutics. Heidegger (1962) illustrated a second hermeneutic circle: as we interpret, we inevitably bring our own presuppositions and thus interpretation is endlessly revisable. Knowledge becomes paradigm or context relative:

> “In sum, to accept the post-positivist critique of objectivity is not to embrace a rabid, anything goes, relativism. Rather it is to accept that facts and data are always relative to a particular historical context and are always mustered in relation to a network of other forces and institutions. This means that the interpretations that seem to fit best and the criteria used to judge the closeness of fit cannot exist outside of historical time.” (Hodder & Hutson 2003, 202)

When we interpret the past we always do so within our present day mind-sets. The past is constructed in the present (Hodder 1985) thus all justification is an act in the present. A growing number of archaeologists are now prepared to hold that they cannot achieve objective historical understanding of the past (Trigger 1989, 381). Shanks and Tilley (1987; 1987a), as well as Ucko (1992), have argued along the same lines. Thus, there is no empirical basis for archaeologists to use to demonstrate that any interpretation is right or wrong (Trigger 2006, 467), though cautiously:

> "It is entirely misleading to pose the problem of understanding and explaining the past in terms of either a purely factual representation tied to the past and purged of subjective 'bias', or a presentist quest for liberation from the dogmatic burden of the archaeological record through unrestrained fictionalizing and mythologizing. Interpretation is an act that cannot be reduced to the merely subjective." (Shanks & Tilley 1992, 103)

The product of justification, within post-processualism, is a plurality of interpretations and no single, final and definite account of the past (see also Shanks & Hodder 1998).

Within post-processualism, at a very simplistic level, justification is both hermeneutic and dependent on context. Post-processual archaeologists, as seen above, emphasise the context of interpretation. The past can only be understood in reference to the present as all interpretations are justified in the present. All justification is influenced by *a priori* biases.

In place of the hypothetico-deductive method, interpretation is built by tacking between theory and data. Post-processualists emphasize that all interpretation is hermeneutic: any part of the archaeological record must be understood within a wider context and vice versa (Hodder & Hutson 2003, 195-6). It is argued, in the next chapter, that hermeneutics embodies a coherent model of justification, as both the part and whole need to fit together; this will be discussed in greater detail in the next chapter. Post-processualists move away from a linear hypothetico-deductive model of justification (as argued within processualism), towards justification that rotates from theory and data (part and whole) allowing interpretation to constantly evolve.

1.2.3 A middle ground

In archaeological theory the debate has moved on from processualism versus post-processualism. It is argued that it is possible to identify a middle ground in which it is recognized that data is in some way theory laden, analogy is used and interpretation is not endlessly circular (Wylie 2002c). In this middle ground it should be possible to identify an approach to how archaeological knowledge is justified and characterize the nature of this knowledge.

Similarities can be found between specific theories of processualists and post-processualists. Hodder's contextual archaeology is full of formation processes and general law-like principles akin to processualist theory and in particular MRT (Tschauner 1996, 13). For example, the book '*Domestication of Europe'* (Hodder 1990) showcases the use of the contextual method. The central concepts of domus and agrios are treated as general law-like principles, so too is the concept of habitus. Despite the heavy critique of processualism, there remains an acceptance that there are

certain laws that are used to interpret the past. This would suggest that archaeological interpretation is justified, through a process of understanding evidence through the use of some kind of general law-like principles.

In the previous section it was argued that one of the central pillars of post-processualism is hermeneutics. Hodder's contextual archaeology advocates working within a hermeneutic method where you work from the part to the whole, and whole to part, until a model is produced that fits within the data. A piece of data is embedded more and more in its context during a search for a theory that fits with all data. The whole is understood in terms of the part and the part is understood in terms of the whole (Hodder 1992, 227). Kosso (1991) argues that this is essentially a method of hypothesis testing and therefore not in opposition to processualism. The hypothesis is suggested by variation in the material culture and is the underlying structure of interpretation. This hypothesis is then verified by testing against other independent variations. MRT is methodologically comparable to contextual methods:

> "Middle-range theories are tested and justified by comparison to evidence, that is, to observations. There is then a kind of circularity. Theories in general (including theories used as middle-range theories) are confirmed and understood through an appeal to observations, and observations in general are understood and verified with the support of theories. Observations are theoretically influenced claims about local and specific situations, closely linked to perception....the content and justification of theories are strongly influenced by observations, and in turn the informational content and justification of observations are influenced by theories. This is exactly the structure of the hermeneutic circle." (Ibid, 625)

With both MRT and the contextual method, observations are understood through an appeal to theories and theories are understood through an appeal to observations. Another example, Shanks and Tilley's (1987) analysis of beer cans and Neolithic tombs, has heavy processual undertones in the analysis of key variables and the relationships between them (Johnson 1989).

Originally the hypothesis testing of processualism and the hermeneutics of post-processualism appear to be at opposition to each other, however, it is possible to argue that both are essentially based on the same model of justification in which observations and theories are tested against each other. Bringing together processualism and post-processualism, commonalities between the two theoretical schools can be found. However, is this how justification of interpretations works in practice? Do archaeologists work within this middle ground?

1.2.4 Justification and archaeological theory

By looking at archaeological theory it is possible to identify a middle ground but what does this mean in terms of the justification project; in this middle ground, how do archaeologists make justified knowledge claims? How are interpretations of the past reached? Two themes are chosen from the above discussion of the middle ground to look further into justification, as presented in the archaeological theoretical literature. Firstly, the agreement that data is in some way theory laden and secondly, that interpretation is hermeneutic but as stated earlier not endlessly circular. The below discussion focusses on how these themes theoretically emerged in the literature, with the aim of understanding how they impact justification in archaeology.

Before discussions on hermeneutics in archaeological literature, the discussion was on ladders and cables. Hawkes' (1954) and Piggott's (1959) 'ladder of inference' held that different levels of inference worked in a hierarchy. At the lowest level, with the highest security, are inferences concerning technologies in the production of artefacts. The next level, are inferences concerning aspects of cultural life that are more directly shaped by material conditions. The highest level, with the lowest security, is the ideological symbolic dimensions of cultural life. Justification happens in degrees. Different types of knowledge are more secure/ justified than other forms of knowledge.

An alternative to the above is the chain metaphor, which can be traced back to the classical and medieval concept of the 'Great Chain of Being' (Lovejoy 1936). The chain metaphor is the idea that all existence can be put in order by degree of perfection. Descartes used the chain metaphor to describe scientific reasoning. Scientific reasoning works by the building of a chain of inferences, through deductive arguments and leading to secure knowledge (Preucel 2006, 251). Interpretations are built upon interpretations: a chain of different arguments through deductive reasoning.

Taking this further, Peirce, in questioning Descartes' understanding of reasoning, discussed the idea of cables. Cables are made up of multiple strands (data, theories, interpretations, etc.) that are entwined together. Cables are stronger than chains as a chain is only as strong as the weakest link (Peirce 1992). Bernstein makes use of Peirce's cable metaphor as an alternative to objectivism and relativism:

> "Peirce criticizes the picture of scientific reasoning that represents it as a linear movement from premises to conclusions or from individual 'facts' to generalizations. In its place he emphasized the multiple strands and diverse types of evidence, data, hunches, and arguments used to support a scientific hypothesis or theory. Any one of these strands may be weak in itself and insufficient to

> support the proposed theory, but collectively they provide a stronger warrant for rational belief than any single line of argument—like a strong cable make up of multiple weak strands."(Bernstein 1983, 69)

In terms of justification, a chain of inferences suggests that interpretations are built upon interpretations and so on, in a linear fashion. Cables emphasize multiple interpretations being brought together alongside evidence and data. Justification draws in all these strands to support a hypothesis or a specific explanation of the past. An alternative to the cable metaphor is the idea of hermeneutics as discussed in the previous sections:

> "a continuous dialectical tacking between the most local of local detail the most global of global structure in such a way as to bring both into view simultaneously...Hopping back and forth between the whole conceived through the pasts which actualize it and the parts conceived through the whole which motivates them, we seek to turn them, by a sort of intellectual perpetual motion, into explications of one another."(Geertz 1979, 239)

Geertz argument situates the hermeneutic circle as central to ethnographic interpretation (Ibid, 240). Traditionally, hermeneutics in archaeology is used to argue against objectivity and in favour of a much more subjective thesis in which we are always stuck within the hermeneutic circle (Shanks & Tilley 1987); revolving from part to whole and whole to part endlessly and making interpretation endlessly revisable. Hermeneutics can strengthen interpretation as by tacking back and forth it is possible to overcome issues of incommensurability.

Bernstein's model, based on the work of Geertz, is conceived as a diagonal tacking; from abstract to concrete and from familiar to alien. Wylie (2002d, 163) holds that there are at least two additional dimensions on which interpretation occurs. Firstly, on a vertical axis, tacking between 'experience-near' and 'experience-distant' concepts; as also argued by Geertz. Secondly, an extra dimension is added as archaeology is heavily dependent on vertical tacking. Archaeology uses background knowledge of contemporary contexts and proceeds by ethnographic or other forms of analogical reasoning. Inferential tacking is an interactive process on all axes. Cross-context understanding works on both sides, not just the subject side but also the source side (the ethnographers). Therefore, the tacking process works on diagonal, vertical and horizontal axes (Ibid, 164). Within this a mitigated objectivism is possible as the archaeological record acts as evidential constraint within the tacking process (Ibid, 167).

Kosso (2001) presents an alternative model in which descriptive claims are verified through testing. Theories are suggested and tested by working back and forth and back again, between evidence and hypothesis (Ibid, 92). Some claims become more entwined than others. More entrenched claims are less likely to be rejected, whereas claims on the peripheral will be the first to be doubted and rejected (Ibid, 106). Interpretation is thus hermeneutic but not endlessly circular. This is reminiscent of the processualist theories on hypothesis testing but appears to also include a hermeneutic element to justification.

So far four different models of justification (ladder of inference, chains, cables and the hermeneutic circle) have been presented. All these models focus on the idea of interpretations being built on other interpretations in varying ways. The idea of cables suggests that justification in archaeology is built through interlinking interpretations. The metaphor of chains suggests that different strands of evidence and interpretation are brought together. Returning to hermeneutics, as discussed in the previous sections, justification occurs through tacking (between different types of evidence and reasoning) along multiple lines. Kosso also supports a hermeneutic approach but within which theories are tested. These four theories all appear to agree that archaeological knowledge is justified by interlinking interpretations and evidence but do not agree on a universal model of how.

The second theme that can be drawn out of the middle ground is that all data/evidence is theory laden. Justification is a process impacted by *a priori* biases. Binford (1981) recognized that all statements of the past must be inferred; archaeological investigation is conducted in the present. Archaeologists make contemporary observational statements from which they make meaningful statements about the past. Knowledge claims are paradigm relative (Binford & Sabloff 1982) but there are many linking principles that are formulated and established independently of cultural theories and tested archaeologically (Binford 1983), which allows for a mitigated objectivism. However, it remains that the past is produced in the present (Shanks & Tilley 1987). Justification occurs in the present.

All statements about the past involve adding to archaeological data in the process of interpretation. It is always a question of saying more than is actually there (Hodder 1984, 25). Data of the past is observed and is given meaning in the present social and cultural context (Ibid, 28). In archaeology we work within a certain trained social pattern with its own traditions, which impact our interpretation of the past (Berglund 2000). Certain studies have attempted to study the inherent biases in modernist Western perspectives (Insoll 2007; Thomas 2004):

> "Archaeological practice is always conducted by finite moral beings whose experience of the traces of the past is always contingent. Their interpretation of those traces will arise from different sets of preunderstandings and may thus be irresolvable. Despite this, their accounts of the past will gain in richness from a process of dialogue that is not intended to reach a definitive, non-contradictory point of closure. It is acknowledged that these different accounts of the past will be politically situated." (Thomas 2004, 248)

Therefore, if all interpretation is trapped in our own perspectival partial views in the present, knowledge becomes situated in the present and a political act. In recent decades, archaeology has been increasingly concerned with the ethical and political ramifications of interpreting the past (for example, see Scarre & Scarre 2006; Meskell & Pels 2005). There are many different people with their own interpretations of the past and their own links to the past. The knowledge claims archaeologists make have a real world modern day impact in many ways. This is discussed in greater detail in Chapter Five.

A method of dealing with the epistemological ramifications of the above has been to focus on the practical consequences of knowledge. The focus shifts from how we know what we know, to what we do with what we know. Pragmatism, at its core, relates truth to practical consequences (Hookway 2008) and has been of increasing interest in archaeological theory (Gaffney & Gaffney 1987; Preucel & Bauer 2001; Preucel & Mrozowski 2010; Webmoor 2005).

Within a pragmatist account, truth is defined in terms of on-going negotiation with experience (Webmoor 2007). Justification is a functional tool for dealing with the world practically and intellectually. This shifts the aim of the justification project away from gaining knowledge to building an understanding the past in a way that helps us deal with the present. Preucel (2006) advocates a comparable view of pragmatism. Pragmatism is defined as the thesis that ideas are dependent on their effect in the world. This fits with the current theoretical milieu in archaeology: the emphasis on the social element of interpretation and the social purpose of archaeology (Preucel & Mrozowski 2010, 3):

> "These questions of political relevancy are consistent with the precepts of pragmatism. The notion of knowledge as actions stands as a prime example of a philosophical stance that dovetails nicely with growing call for archaeologists to be more responsive to the political needs of nations, emerging states, and indigenous communities around the world." (Ibid, 28)

Epistemological questions shift towards the ethical and political:

> "Pragmatism is another related by more radical proposal. In brief the argument is that the meaning and justification of different pasts depends on their 'practical' effects or practical content. Knowledges are related to social interests in an inseparable nexus of power, knowledge and a will-to-truth. Some interests are good, so some knowledges are good. Alternatively knowledge is what it is good to know. In either case it is necessary to shift argument to ethical matters, questions of value, of politics. Accordingly values as yet not forcibly championed in archaeology are advocated in some recent works, they are against authority and for a more participatory archaeology, challenging organization, countering archaeological pasts which trap us in the ideas and structures of a faulty present. Archaeology is to be a political practice." (Shanks 1992, 29)

Pragmatism is defined as a new framework, working towards a democratic archaeology (McDavid 2000). Highlighting the themes of authority, politics and a more participatory archaeology, Holtorf argues for a 'democratic relativism' in archaeology. Different styles of thinking cannot be judged against a single reality (Holtorf 2000, 244-5). Pragmatism, as will be shown in the next chapter, deals both with justification and the practical consequences of knowledge. As will be argued in Chapter Five, Pragmatism is not the only approach to thinking about ethics but one that will be shown in this thesis that fits with an archaeological model of justification.

Clarity is needed on how political and ethical concerns fit into a middle ground approach. If archaeological epistemology is hermeneutic then what is interpretation tacking to and fro from? Are judgements of knowledge made against the archaeological record or the practical outcomes of our knowledge? Most would argue that in some way it is both but how do they relate to each other and how does this work at a practical level?

Two themes are drawn out in this section and from the discussion in the previous section on the middle ground. There is a general acceptance that archaeological epistemology is hermeneutic and that any interpretation of the past is theory-laden. It is interesting though that there is no universal way to conclude on these themes. There are multiple different theories regarding the nature of archaeological justification. There appears to be two ways of dealing biases within justification. Firstly, a general acceptance that biases exist and try to overcome biases as much as possible: archaeological evidence constrains the system and allows for a mitigated form of subjectivism. The second is shifting the aim of archaeology, from learning about the past to using the past. Arguably therefore, there is a split between more traditional concerns about how do we know what we know and more recent concerns of what we do with what we know. Does this then

signify a shift in concern, or are these two aims commensurable? What does this mean in terms of looking at justification in archaeology?

1.3 Why do we need a theory of truth?

What use is there in answering questions about justification? What is gained from bringing clarity to how archaeological knowledge is justified, beyond just bringing clarity to the debate in the archaeological theoretical literature?

As highlighted in the discussion on a middle ground approach in archaeological theory, it is not clear what the conditions of justification are. There is a general agreement that archaeology epistemology is hermeneutic and context dependent but beyond this there are a number of different approaches to how interpretations are justified and no universal model of justification. Arguably, the closest analogy to the current position in archaeological epistemology is Hilary Putnam's statement concerning coherence being “not something that we can have an algorithm for, but something that we ultimately judge by 'seat of the pants' feel.” (Putnam 1981, 133)

The issue, with this analogy, is how do archaeologists deal with different interpretations of the past, including those ‘competing’ or ‘incompatible’ interpretations? It is argued that competing/incompatible interpretations should be dealt with in a ‘democratic’ way (Holtorf 2000; McDavid 2000). Alternatively, it can be argued that different interpretations need to be logically and clearly adjudicated by the archaeological discipline at large (Fagan 2006). Archaeologists deal with many different contested interpretations of the past. For example, the interpretations of a 10, 500 year old nameless civilisation (Hale 2006), the ramifications of archaeological interpretations on indigenous peoples (Killion 2007; Meskell & Pels 2005; Smith & Wobst 2005) or the many different causes for the transition of agriculture (Price and Gebauer 1992). What are knowledge claims, of the past, judged against?

What happens to justification when archaeology becomes politically and ethically controversial? For example, the use of archaeology for modern day political means or issues around repatriation and ownership. The case of Ayodhya (see Chapter Four for more details), in which disagreement over the history of a site ended up with riots and many deaths, makes very real the dangers of using archaeology to support modern day agendas (Ratnagar 2004). How does archaeology deal with other ways of knowing the past, for example the views of indigenous people? How do these views relate to the interpretations of archaeologists? On what grounds are different interpretations of the past decided?

The reason we need a theory of truth can be argued at a much deeper and much simpler level. Surely if archaeology is worth doing, it is worth doing well, and therefore knowing how we justify our claims regarding the past cannot just be left to a 'seats of the pants' epistemology. The case studies discussed later in this thesis illuminate why this is an issue.

In Chapter Three the site of Çatalhöyük in Turkey is discussed, the aim being to look at how justification works within fieldwork. This is one of many sites across the world and one of hundreds digs in the world. However, there is no point to excavation unless we are gaining knowledge of the past. An understanding of how archaeological interpretation is justified is therefore crucial. Furthermore by focussing on 'truth' (a language not usually employed by archaeologists dealing with justification), we focus attention upon the seriousness of the issue, moving away from a 'seats of the pants' epistemology. Further, it is noted that theory and practice are separated (Johnson 2006, 119). Looking at the site of Çatalhöyük, Turkey, what do archaeologists make their judgements against when excavating? Is this in line with the theory upon which the excavations are based?

In Chapter Four the debate surrounding the origins of the Neolithic is discussed to look at how justification works within grand scale narratives. This debate and many others on this scale have gone on for a long time. There have been many different ideas about the causes for the transition to agriculture (Price and Gebauer 1992). In archaeology the transition to agriculture has been studied for over 100 years and yet there is no consensus. It is an issue of public interest and millions of public grant money has been spent investigating different research projects, but what is the point unless we can bring some consensus to the debate in archaeology? Will continuing such debates confirm what we already know or can we gain new understanding through continuing? Looking at justification could give us a better idea of why a consensus has not been reached. Is the lack of consensus due to defective reasoning by some or all archaeologists or is it just a reality of the nature of archaeological investigation?

In the penultimate chapter of this thesis the debate surrounding ethics and politics is discussed as related to justification. In recent decades, as argued earlier, there has been a growing recognition of the political and ethical issues surrounding archaeology. This has led to calls that archaeology needs to change (Hodder 1984; Insoll 2007; Meskell 2002): to be concerned more with the practical consequences of archaeological knowledge. But if the aims of archaeological investigation change, does this mean that archaeological justification itself has to change? Have recent decades' growing concern regarding politics and ethics impacted epistemology in archaeology? If we are no longer interested in how what we know what we know but instead what we do with we know, what does that mean in terms of what archaeologists actually do when interpreting the past? Rather than a model of justification that aims, arguably, to build the most

accurate interpretation of the past is instead the aim to build interpretations of the past that best suit the practical and ethical needs of the present? Can a model of justification include these two aims or are they incommensurable?

Looking at these three different angles, it is clear that an understanding of justification in archaeology matters for multiple reasons. The aim of this thesis is to investigate how archaeologists justify knowledge claims. 'Truth' has never been the preferred vocabulary; more comfortable terms include 'current best hypothesis', 'justified statement', 'knowledge claims' or 'interpretation'. On a purely theoretical level 'truth' may be a practical use of terminology given that archaeologists can be very stubborn about their commitment to their own interpretations. Why is it useful to speak of 'truth' rather than 'justified' or something else that is similar? Why does truth matter? Philosophers have argued that we should pursue truth as it is surely the aim of inquiry and that the truth can be emancipatory by overturning distortions and misrepresentations (Benson & Stangroom 2006). Here, rather than getting into a deeply emotive and fragmented debate, I propose that the reason for talking about truth is simply that it provides a way of focussing attention on the importance of the issue, justification. Arguably, discussing 'truth' focusses attention to overcome a lack of understanding of certain issues and stances so far in archaeology. As will be argued, in the next chapter, this does align archaeology with epistemic justification and assumes that archaeologists are aiming towards a true account of the past (though as will be discussed in Chapter Five this may not always be the only aim of archaeology). Further, if archaeologists are not aiming for a 'true account' or even justified account of the past this will become very clear, by comparing archaeological justification with philosophical theories of truth.

The aim of this thesis is twofold. Firstly, the aim is to study the epistemological criteria used in the formulation and assessment of archaeological knowledge: bringing new understanding of knowledge formation in archaeology and how to deal with competing interpretations of the past (specifically with political and ethical ramifications). The second aim is to assess these epistemological criteria and position them in light of the literature on philosophical theories of truth. As stated at the beginning of this chapter, theories of truth can be separated into three distinct projects. The focus of this thesis is on the justification project which attempts to identify a characteristic which is possessed by most true propositions and not possessed by most false propositions. In other words, what it is that makes certain statements about the past 'true' or 'not true' (please note earlier statement on preferred vocabulary). The aim is to understand how archaeological claims about the past come to be made and against what grounds these claims are justified. For the most part this thesis will discuss the justification project only, though it is accepted that at times the debate will cross over into the metaphysical project (though no attempt will be

made to resolve this debate being a much larger debate, on an even more abstract level) and the speech-act project (including semantic issues related to the philosophy of language, again larger than the project here).

This thesis original and novel contribution is in answering these aims. In the next chapters it will be argued that archaeological justification works within a specific model of justification based on correspondence and coherence. Justification shifts as interpretation moves away from the archaeological record; there is a heavier reliance on abductive reasoning. Multiple interpretations are a product of abductive reasoning and due to the adoption of different theoretical stances. Archaeology fits within a pragmatist theory of truth showing that ethical and political issues are part of the process of justification.

The next chapter begins by surveying the many theories of truth, discussing those theories relevant to justification in archaeology. Theories of truth from correspondence to pragmatism are discussed and applied to archaeological justification. Chapters Three to Five aim to look at how archaeological interpretations are justified. Chapter Three looks at archaeological interpretation in the field. The case study of Çatalhöyük in Turkey is used to track interpretation from excavation through to publication. The issue here is how archaeological knowledge is justified in the field. What is the epistemological product of excavation? Chapter Four looks at justification in larger syntheses of the past. Different explanations for the emergence of agriculture in Britain are explored to understand how justification works at this level of archaeological interpretation, especially when dealing with multiple explanations. Chapter Five looks at ethical issues of archaeological justification. Given the acceptance that there are different interpretations of the past beyond solely the archaeologists, this chapter aims to understand how justification works in archaeology when we include other interpretations of the past and when concerns shift away from reaching the most justified account of the past, to the practical ramifications of that knowledge. In the concluding chapter these three different models of justification will be brought to together to answer the main aims of this thesis.

Chapter Two
Philosophical Theories of Truth

2.1 Philosophical theories of truth

This chapter is not intended to be an exhaustive review of philosophical theories of truth. It is neither possible, nor required, for the remit of this thesis to cover every facet of this area. One could write an entire thesis on the arguments raised by one of the issues discussed below. Instead, the aim of this chapter is to cover the various theories of truth in the philosophical literature, and the issues raised by these that are relevant to archaeology.

One of the major issues with covering so many theories is terminology. Some philosophers talk about beliefs, some about propositions, some about hypotheses and these are all logically different. Therefore, to minimise confusion throughout this chapter for each theory, the discussion will stick to the language used by the philosophers who debated the theory of truth being discussed. This does mean at times we may be talking about beliefs and sometimes about propositions, but always with the aim of covering philosophical theories of truth that can be used to better understand how knowledge is justified in archaeology. For more general discussions, the focus will be on the justification of interpretations (by interpretations we mean the general statements made about reality). These interpretations are neither assumed to be justified, nor justified; they are simply the statements that are made through inquiry. In future chapters a tighter use of terminology will be used, which will be clearly defined.

There are four historically important theories of truth: correspondence, coherence, pragmatist and deflationary theories (Schmitt 2004). To this, is added a fifth, constructivist theories, originally proposed by sociologists of science (Downes 2000). These five theories are discussed below in relation to the justification project of truth. Issues related to the two other projects of truth will be largely excluded.

2.2 The Issue of Justification

As noted at the beginning of the previous section, deflationary theories do not answer the justification project. The aim of this thesis, though, is to look at the justification project, applied to archaeology.

It is generally agreed that the two elements of knowledge are justification and truth. A central issue in epistemology is the connection between these two elements (Cohen 1984, 279). There are different types of justification:

> "In addition to being epistemically justified, a belief can be pragmatically or morally justified. The belief of a defense attorney who, in order to provide a better defense, convinces himself that his client is innocent may be said to be justified in one of these latter senses. One might contend that the connection to truth is what distinguishes *epistemic* justification from these other senses of justification." (Ibid)

Sticking solely with epistemic justification (though in Chapter Five we will see how other forms of justification may play a role in archaeology) there are a number of different viewpoints regarding the connection between truth and justification. It is held that the relevant goal of epistemic justification is truth (Lehrer & Truncellito 2004 170-1). In general, the aim of epistemic justification is "maximizing truth and minimizing falsity."(Alston 1985, 84-5) This is the view adopted in this thesis.

In terms of defining justification, there are two standard positions referred to as justification, which are not at conflict with each other. Propositional justification focuses on the subject and whether an individual has sufficient reason to believe a given proposition. On the other hand, doxastic justification focuses on the belief and whether it is appropriate to hold a specific belief. Doxastic belief is more closely related to knowledge (Ichikawa 2012). For this reason doxastic justification is held for the following sections (though Chapter Five brings this into question).

In trying to understand justification in archaeology, a definition beyond just stating it as the study of 'how do we know what we know' is required. Justification is understood as the conditions under which it is appropriate for a specific belief to be held as generally true. The next sections of this chapter discuss how this issue has been dealt with by various different theories of truth. Relating to theories of truth, what are the conditions under which an interpretation is justified?

2.3 Correspondence theories

2.3.1 Introduction to correspondence theories of truth

The oldest theories of truth in western philosophy are those of Plato and Aristotle, who were both correspondence theorists (Kirkham 2000). Correspondence theory was widely held from its

inception, till the 18th century and later revived by Russell and Moore, early in the 20th century (David 2005).

Perhaps the first expression of the correspondence theory was by Aristotle when he said: "To say of what is that it is not, or of what is not that it is, is false, while to say of what is that it is, and of what is not that is not, is true."(*Metaphysics* 1011b25) (David 2005). Correspondence theory is often cited as originating with Plato and his discussion of false belief in the 'Sophist' (Schmitt 2004, 17).

The correspondence theory of truth is a common-sense take on truth and probably the theory, most likely, held by someone who is unfamiliar with philosophical theories of truth. Correspondence theory states simply that a proposition is true if it corresponds with the way the world is:

For every *x*, *x* is true iff it corresponds to the fact *x*.

Where iff stands 'for if and only if'. A proposition is true if it designates an existing state of affairs, or alternatively conforms to reality, or accurately represents reality, or corresponds to a 'fact'. Therefore, it is justified to hold a proposition if it corresponds to the world. This relationship, between proposition and the world, is referred to as the correspondence relationship. Correspondence theory requires some type of thing to be true or false, for example, a proposition or a sentence. These truthbearers then require facts, things in the world, as truth makers. Correspondence theory must explain how propositions and sentences correspond with the world and discuss the nature of truthbearers and facts (Newman 2002, 1). Different opinions on these three points give rise to a variety of different versions of a correspondent theory of truth.

Much of the debate on correspondence theories of truth has been about the relationship between truthbearers and facts. In the period between 1898 and 1910, Russell (1904) and Moore (1899; 1902) held a version of the identity theory of truth (Glanzberg 2006). Identity theory is rooted in the wish that there should be no gap between mind and world, and stemmed out of dissatisfaction with correspondence theory (Mackie 1973, 57). Identity theory is basically the theory that the truth of a judgement consists in the identity of the judgement's content with a fact (Baldwin 1991, 35). Thus, true propositions do not correspond to facts; true propositions are facts (David 2001, 684). Around 1910 both Russell and Moore rejected the identity theory of truth for a correspondence theory of truth (Glanzberg 2006).

Within a correspondence theory (opposed to identity theory) there is a distinction between truth and fact (David 2001). A 'truth' or 'truthbearer' has to be understood as a linguistic term, a representation of a fact through a proposition in some actual language. A 'fact' or 'truthmaker' is an

actual condition of affairs. Every truth states a fact, but it is possible that some facts cannot be stated and, therefore, not captured as truths (Rescher 2006, 104). This is largely a linguistic issue, not an epistemological issue, so largely does not relate to the overall issues of this thesis. However, it is important to note that identity theory and correspondence theory do differ.

Close comparisons remain between identity theory and correspondence theory. As Frege (1918) points out, the issue for any correspondent theorist is always the danger of being drawn towards the impossible premise of perfect identity, between true representation and fact (Baldwin 1991, 49). It remains questionable how big a step it is from a definition of truth as identical to the world, to one of corresponding with the world. On a practical level, the idea that knowledge is gained through perfectly capturing reality appears absurd.

There are two types of correspondence theory: correspondence as correlation (Austin 1950) and correspondence as congruence (for example Russell 1912) (Kirkham 1992, 119). Aristotle supported correspondence as correlation and Plato supported correspondence as congruence. Correspondence as correlation does not claim that a truthbearer mirrors, pictures or is in any sense isomorphic with the state of affairs which it is correlated to. Instead, a truthbearer is correlated as a whole, to a whole state of affairs. Correlation denies that there is anything natural in the correspondence relationship (the relationship between truthbearers and the state of affairs); instead the correspondence relationship is a result of linguistic conventions, which are a result of the historical development of a language. In comparison, correspondence as congruence does claim isomorphism between truthbearers and the facts to which they correspond, when the truthbearer is true. For correspondence as congruence the truthbearer works in a comparable way to maps: truthbearers mirror or picture the structure of facts (Kirkham 1992, 119).

An alternative correspondence theory of truth is logical atomism (a form of correspondence as congruence). Logical Atomism was supported by Wittgenstein (1921) and was later modified by Armstrong (1997). Truthbearers are restricted to a special subclass of truthbearers: atomic facts. Logical atomism is in line with the ontological view that the world is the totality of atomic facts. In logical atomism, one to one correspondence is restricted to the atomic level. For any truth there can be many truthmakers or one truthmaker may correspond to many truths (Armstrong 1997, 129-30).

2.3.2 Correspondence as congruence, correspondence as correlation

As stated earlier, there are two types of correspondence theories. This section examines these further to understand how they inform the justification project.

Russell's theory of correspondence by congruence held belief (terminology used by Russell) to be the relationship between four things (Russell 1912). The first, the subject (the person who has the belief); the second, an object term (roughly the subject of the sentence; or the thing thought to be doing something to something else); the third, also an object term (the object of the sentence; the thought to be having something done to it) and finally, the fourth, the object relation (roughly the verb of the sentence) (Kirkham 1992, 120). A hypothetical example, the archaeologist believes that population pressure caused the emergence of agriculture, where = means identical to:

	Belief		The fact
Subject	Archaeologist		
Object term	population pressure	=	population pressure
Object term	Agriculture	=	Agriculture
Object relation	Emergence	=	Emergence

A belief is true when there is unity between belief and facts (Russell 1912). Truth is isomorphic and Russell is trying to explain the deeper underlying structure that in some way mirrors or captures a picture of reality.

Austin (1950) rejects any form of isomorphism as any correspondence is purely conventional. While certain expressions in language may mirror features of the world, this is down to linguistic efficiency, which may make a language more adaptable and learnable but does not make an expression any more true (Kirkham 1992, 124).

> "A statement is said to be true when the historic state of affairs to which it is correlated by the demonstrative conventions (the one to which it 'refers' is of a type with which the sentence used in making it is correlated to the descriptive conventions." (Austin 2001, 28)

A statement is made true by a sentence which describes a state of affairs, and the statement also refers to a particular state of affairs. Truth is confirmed indirectly against the state of affairs. This is still a correspondent theory but not through any type of isomorphism. Austin's account is less than explicit, presupposing correlation between a statement and a particular state of affairs, and does not appear to take into account falsity (Kirkham 1992, 126-7). Austin's account explains what truth is (metaphysical project) but does not explain how truth is reached.

2.3.3 Deflationary Theories and Correspondence theories

Deflationary theories of truth at the simplest reading can be mistaken as correspondence. Deflationary theories of truth do not attempt to answer the justification project.

To understand deflationary theories of truth one must begin with Tarski's theory of truth. Alfred Tarski was one of the greatest logician-mathematicians of the 20th century and one of his greatest achievements was his semantic conception of truth (Tarski 1944). Tarski believed that the semantic conception of truth was the essence of the correspondence theory of truth (Ibid 1969; 1983), discussed later in this chapter. Whether semantic conception of truth is a correspondence theory is a matter of controversy (Glanzberg 2006). Putnam (1985) felt it failed even as a philosophical account of truth, whereas other philosophers (Davidson 1969; Kirkham 1992; Field 1972) have seen Tarski's theory, at least at its very centre, as a correspondence theory of truth (Kirkham 1992, 173).

Tarski's theory of truth used the liar paradox[1] to show that the ordinary truth predicates of natural languages which are incoherent and thus, no coherent definition of truth is possible in natural languages (Soames 1999, 67). Tarski's 'Convention T' was the minimum condition of any theory of truth:

(T) x is true if, and only if, p

(Tarski 1944, 346)

Where 'p' is an arbitrary sentence, 'x' is the name of the sentence so that instances of (T) include:

"Snow is white" if and only if snow is white.
"Grass is green" if and only if grass is green.
And so on.

[1] Based on the legend of Epimenides of Crete who proclaimed that all Cretans are liars but since he himself is a Cretan, what he says is a lie. If what he says is true, then what he says is false but if what he says is false, then what he says is true. The classic modern version is: 'This sentence is false' (Kirkham 1992,271).

So that, where ‘s’ ranges over all possible sentences:

(s)(s is true iff ____)[2]

Tarski held that any adequate theory of truth must logically entail every instance of the above schema (Lynch 2001b, 323). However, such definition only works for a language with a finite number of sentences; therefore, Tarski believed that it was not possible to define truth for any natural language because it would ultimately be paradoxical (Tarski 1969).

Deflationists deny that truth is a ‘real’ robust property (Blackburn and Simmons 1999, 3), unlike the other theories discussed in this chapter. There is nothing more to the truth predicate than what enables it to be used as a logical function of language. The truth predicate is merely a logical function of language. Truth is nothing more than what is captured by the assertion being made. Following Tarski’s ‘Convention T’, the proposition ‘’p’ is true’ is equivalent to ‘p’. This is known as the equivalence schema and all deflationary theories refer to it (Stoljar 2007).

(ES) <p> is true iff p

It follows:

> “We know individually what makes the predicate applicable to the judgements or sentences of an understood language. ‘Penguins waddle’ is a sentence true, in English, if and only if penguins waddle. It is true that snow is white if and only if snow is white. The reason the first sentence deserves the predicate is that penguins waddle, and the reason why the judgement that snow is white deserves the predicate is that snow is white. But these reasons are entirely different. There is no single account, or even little family of accounts, in virtue of which each deserves the predicate, for deciding whether penguins waddle had nothing much in common with deciding whether snow is white.”(Blackburn 1984, 230)

There are a variety of different deflationary approaches: redundancy theory, disappearance theory, no-truth theory, disquotational theory, minimalism, quietism. Redundancy theory states that the truth predicate adds nothing more to a sentence (see Ramsey 1927; Strawson 1950; Williams

[2] Meaning s is true if and only if s, for example where s = grass is green, s is true if and only if.

1976). Minimalism holds that truth cannot be inflated beyond the equivalence schema (Horwich 1998); truth is generalized as a function over all unstated propositions, which are infinite in number.

However, as noted as the beginning of this section correspondence theories are often confused with a deflationary approach to truth, however a brief overview indicates that they are different. Tarski's theory of truth, though controversial, is arguably, at the very least, not in competition to correspondence theories. A basic definition of deflationary theories seems not dissimilar to a basic definition of correspondence theories, however, this is inaccurate as correspondence theories hold additional truth conditions (Field 2001). Correspondence theories focus on the nature and the role of truth, whereas, deflationary theories focus on the nature and the role of the truth term. The former is a metaphysical concern and the latter is a linguistic concern. Within a correspondent theory, the truth predicate acts as an intermediary between words and the world. Deflationary theories rely on the equivalence schema (something is made true by conditional t-sentences); truth is not relational and engagement of the world only occurs when judging the right hand side of the schema (Devitt 2001, 580).

Deflationary theories lack the explanatory power to explain how truth can be reached (Beebe 2006: Kitcher 2002). Traditionally, a deeper account of truth has been insisted upon. Deflationary theories of truth hold that this is not needed nor expected (Horwich 2010, 3-4):

> "A deflationist will say—and with considerable plausibility—that our basic concern in science, and in other forms of inquiry, is not really with the property of truth. More fundamentally, what we want is the following: that we believe that gods exist if and only if gods exist, that we believe that there is extra-terrestrial life is and only if there is extra-terrestrial life,...and so on. Truth enters the picture, in its role as a device of generalization, only as a way of articulating this infinite conjunction of desires." (Ibid, 6)

Truth in a deflationist approach does not figure in explaining how truth is reached but does help us to understand what is being reached for (Ibid, 10). It is for this reason that for the purposes of this thesis deflationary approaches will be largely not considered beyond their role within other theories of truth, for example Haack's (2005) pragmatism.

2.3.4 Arguments against a correspondence theory of truth

There are a number of different arguments against correspondence theories of truth. At the simplest level, it is argued that correspondence theory is too obvious: all it does is condense some

idioms into some handy formulas and, therefore, cannot be labelled as a theory (Davidson 1969, 1). As seen above, despite several different syntheses the correspondence relationship is very difficult to pin down.

A more serious objection is that a correspondence theory asks for a 'god's eye view' of reality: the ability to view all of reality from an external all-knowing position. A special kind of success is needed in which it is possible to link judgements and facts, which is only possible, it is argued, by stepping outside your own skin or by obtaining a 'god's eye view' of the world (Blackburn 2005, 56). This leads to an inevitable scepticism about the external world because this is not possible; we cannot step outside our skins to compare our thoughts with any mind-independent reality. This is not a direct argument against correspondence theories of truth but against our chances of ever finding the truth and questions epistemological issues regarding the conditions under which beliefs are justified. This objection therefore applies to any theory of truth which holds that we can have any epistemological success.

Leading on from the previous criticism, and also in light of the discussion in the introduction regarding the theory ladeness of any interpretation, the metaphysical structure of correspondence theories is questioned. Correspondence theory appears to presuppose that reality is classified independently of us; that the way things are, the kind of things there are, the things that can be, have nothing to do with our own conceptual scheme. It presumes that on the one side there is reality (people, animals, trees, atoms, tables, chairs and so on) and on the other side, there are thoughts and language that provide nothing more than names and descriptions of reality. However, the way we think about the world owes something to our own nature and thus, affects our conception of reality. This objection can be taken in degrees (Kirk 1999, 26-7); this is an issue that will be considered in greater detail later in this chapter and thesis.

Further objections are raised against correspondence theory including: the so-called slingshot argument that logically, all true sentences must correspond to the same big fact (Davidson 1969) and that correspondence theory contains a false tautology and claims correspondence between the linguistic and non-linguistic (Strawson 1950).

2.3.5 Applying a correspondence theory of truth to archaeology

Focusing on as much as possible the justification project, we see that truth within a correspondence theory of truth is somehow isomorphic or congruent with reality. That, in some way, our statements about the world captures a picture of the world; not dissimilar from the first version

by Aristotle. Correspondence theory is much more complicated but these debates take us into the metaphysical and the speech act projects.

It is possible to see how a correspondence theory can apply to archaeology. In the discussion of the middle ground in the last chapter it was noted that it is widely accepted that interpretation is constrained by the archaeological record. Statements about the past are made by somehow capturing a picture of the archaeological record. Interpretation in archaeology, as will be argued in the next chapter, makes use of correspondence. Arguably, within archaeology, the common sense stance is a realist view in which there is a world out there and our interpretations have to match this world out there. On site, archaeologists identify walls and cuts from the stratigraphy that is uncovered during excavation. As noted in the previous chapter, in the middle ground, between processualism and post-processualism, and within the hermeneutic method, there is an appeal to observations (Kosso 1991, 625). These observations act as evidential constraints (Wylie 2002b, 167). It is argued in the next chapter, that the use of observations of the archaeological record demonstrates correspondence at play in archaeological interpretation. However, as seen in the introductory chapter it is not this simple; justification in archaeology is not through just capturing a picture of the world, for example, the issue of how our own ontologies impact interpretation of the archaeological record. As shown in the introductory chapter, it is accepted that the archaeological record is in some way theory laden, Social construction, as will be discussed later in this chapter, has a role in archaeological interpretation Therefore, we need to see how correspondence could theoretically work within archaeology.

As stated earlier there are two kinds of correspondence: correlation and congruence. It could be argued that within archaeology, correspondence is congruent: "there is a structural isomorphism between truth bearers and the facts to which they correspond when the truth bearer is true." (Kirkham 1992, 119) We know there is a pit cutting into a deposit, when there is a pit cutting into a deposit.

Alternatively, applying correspondence as correlation to archaeology, correspondence as correlation defines correspondence as a result of linguistic convention which is simply a result of the historical development of language. If history progressed differently, like in different languages (Ibid), correspondence differs. Arguably, though historical linguistic convention obviously has its role within archaeological interpretation there is more to archaeological justification than just the correlation of one statement with one state of affairs. For example, someone brought up to use the Munsell scale would refer to a particular colour in a different way to someone else that did not use the scale. Therefore, the way we look at the archaeological record is in some way socially constructed as choices on method arise from training and experience; and as the method chosen

impacts archaeological interpretation this leads to the social construction of archaeological knowledge. The problem is that it is extraordinarily difficult to pin down what this means, what is the correspondence relationship?

> "every attempt to go beyond the metaphor of congruence or fitting together and give a precise characterization of such a relation runs aground on the hard fact that, once the sorts of confusion present in the image theory have been eliminated, there simply does not seem to be any clear sense in which beliefs or the sentence which express them are non-conventionally related to the world which they describe. And thus we are apparently left with a purely conventional correlation as the only explication of what is meant by "correspondence," with the disheartening result that the correspondence theory seems to say nothing more than that a belief is true if it is conventionally correlated with the world in the right way, i.e. if it is true."(Bonjour 1969)

The issue is that correspondence theory doesn't really say anything beyond the obvious. In the case of a pit cutting into a deposit much more is going on. How do we recognise the pit? How do we decide which deposit cut into the other? What is the correspondence relationship? How do we link what is out there in the world, to knowledge we gain from the world? Is it just a matching process? Is it this obvious? The classical argument against correspondence theory is that it:

> "seems to demand that there is both a separate topic and a separate standpoint from which it can be judged. It is here that we see the illusionary nature of the idea that we can step outside our own skins or stand on our own shoulders. Another way of putting the point is that in examples like the mirror and the map we have access both to the original and the image, so there can be a genuine empirical investigation of their correspondence."(Blackburn and Simmons 1999, 7)

In the last chapter it was noted that a criticism of processualism by post-procesualists was that all interpretation is theory laden. Post-processualism holds that we can never be objective, as we always see through a cloud of theory (Johnson 1999). Following this line of reasoning, we do not have a 'god's eye view' of the world and thus, can never identify when our interpretation of the archaeological record accurately corresponds to the world out there.

The issue becomes how to know that our statements accurately picture the world; how can we ever know that something is true, given that we do not have external access to reality? Our own nature affects our conception of reality and thus our success at accurately depicting reality. In archaeology we cannot view the original. As discussed in Chapter One, all archaeological interpretation is influenced by *a priori* social and personal conceptions of reality. This objection can

lead to scepticism about our knowledge of the external world as reality is mind independent and we are unable to step outside ourselves to see it. This is not an argument against correspondence theory directly but against, if we accept a correspondence theory, how and when we are justified in knowing that we have matched the correct truthmaker to the correct truth. Correspondence theory does not suggest that we will always know if we have reached the correct judgement but simply that 'x' is true iff corresponds to 'x'. This argument also makes a number of assumptions about the nature of knowledge. One can only know something, if we know that something is true: S knows x only, if S knows x is true: standard definitions of knowledge disagree with this as it confuses the requirements for knowing something, with the requirements of knowing that one knows something (David 2005).

Correspondence theory, arguably, provides an underlying rationale to describe the world. Blackburn argues that there is not really a correspondence 'theory' of truth but, rather, an invitation to think about the relationship between the world and true belief, and "[t]he notion of correspondence at least registers a half-truth: whether or not true beliefs correspond with the facts, true believers must certainly respond to the facts."(Blackburn 1984, 246)

2.3.6 Mind and World

Taking Blackburn's statement, if correspondence theory causes us to think about the relationship between the world and true beliefs, how do these two concepts relate? The below discussion works at a more abstract theoretical level and aims to further pin down what the correspondence relationship in archaeology could look like. If we accept archaeological knowledge is justified through correspondence with reality, what does it mean 'to correspond'? Bradley (1999 (1907)) argued that correspondence theory creates an unnatural gap between truth and truthmakers: "[t]ruth has to copy facts, but on the other side the facts to be copied show already in their nature the work of truth-making."(Ibid, 31)

Identity theory grew as a reaction against correspondence theory. The identity theory of truth holds that propositions do not correspond to facts; they are facts (David 2005). Identity theory is rooted in the idea that there is no gap between the mind and world (Mackie 1973, 57). Correspondence theory creates unnecessary divisions:

> "This error consists in the division of truth from knowledge and of knowledge from reality. The moment that truth, knowledge, and reality are taken as separate, there is no way in which consistently

> they can come to be forced together. And since on the other hand truth implies that they are somehow united, we have forthwith on our hands a contradiction in principle. And according to the side from which the subject is approached, this contradiction works itself out into a fatal dilemma."(Bradley 1999(1907), 33)

Recent theoretical writing (the hermeneutic nature of archaeological reasoning and the subject/object divide in materiality) hint at an archaeological theoretical stance on the above. Recent work on agency and the interpretation of material culture has made use of anthropological theory and, in particular, the idea of objectification. Objectification is the theory that between humanity and materiality there is no fundamental separation; it is impossible to know who we are without an understanding of the material world. Further, through our confrontation with the world material culture evolves (Miller 2005, 8).

The implicit acceptance of a Cartesian view of the world, the distinction between mind and body, culture and nature, has constrained archaeological reasoning. Thomas (2004) associates these types of divisions with Modernity:

> "The modern view of the importance of epistemology rests on the suspicion of experience, which leads to the conclusion that the gathering of knowledge from the world needs to be carefully regulated. This suspicion can in part be attributed to the subject/object dichotomy, which condemns us to scepticism, as our knowledge is always understood as a reflection or representation of worldly things."(Ibid, 57)

The division gives the status of truth to biological sciences alone; culture becomes meaningless and secondary. The Cartesian view is particular to modern Western thought and limits our understanding of the past as archaeology is concerned with material culture (Thomas 1996, 11).

In recent decades work in anthropology and sociology has led archaeologists to question and move away from such a presumption. Descartes taught us that what makes the world worldly is the way in which we are engaged in the world though language and meaning, which also gives us our understanding of the world. Knowledge is from the world but we are already immersed in this world, through the structure of language and meaning (Descartes 1996). Alternatively, as Hegel (1977) discusses, there is no fundamental separation between humanity and materiality, "that everything that we are and do arises out of the reflection upon ourselves given by the mirror image of the process by which we create form and are created by the same process."(Miller 2005, 8). In archaeology this viewpoint is found within phenomenological approaches (Ingold 2000, Thomas

1999, Tilley 1994) which attempt to break down subject-object divide as through a perception of the world we realize our own being (Brück 2005). This brings into play the social element of interpretations: it is impossible to separate who we are with our interpretations of the past. There is no separation between mind and world and thus truth in some way is socially constructed.

The separation of mind and world is a traditional problem for any theory of truth supporting a realist epistemology. What is required is a conception of mind and world that allows the world to be knowable but does not compromise the independence of knowledge (Williams 2006, 80). Descartes stated the problem, thoughts and sensations are immediately knowable but the material world is not, knowledge of the world requires accurate representation, this is Descartes dualism (Ibid). The mind and body are two different things. We could suggest that we are dreaming and doubt our body exists but the mind is a separate thing that we cannot doubt and thus, a dualism occurs. As discussed, however, in archaeology this dualism is approached differently and mind and body are seen as acting together in a complicated interrelationship.

Looking at identity theory raises issues surrounding the relationship between mind and world, indicating that a pure correspondence theory creates unnecessary divisions. This does not suggest that what is occurring in archaeological justification is akin to an identity theory of truth. Arguably, archaeologists' statements about the archaeological record are not identical to the archaeological record. Even on site, at the first levels of data retrieval and interpretation, interpretation occurs at the trowel's edge. As discussed in Chapter One, it is recognized that interpretations is always theory laden. It is not possible to face the archaeological record naked and unconceptualised; it is not possible to separate the archaeological record from our understanding of it (Barrett *et al* 2000).

2.3.7 Conclusions for a correspondence theory of truth

The above sections aim to outline a correspondence theory of truth and apply it to archaeological justification at a theoretical level, with the aim to draw out key themes and issues. Correspondence theory is, arguably, the oldest theory of truth in western philosophy; simply stating that a proposition is true if it corresponds to reality. There are a number of different forms of correspondence theories; generally they differ on the nature of the correspondence relationship. In general, there are two types of correspondence: correlation (truth is in some way isomorphic with reality) and correlation (correspondence is purely a matter of linguistic efficiency). Correspondence theory, however, has struggled at providing an explicit understanding of the correspondence

relationship, i.e. what does it mean by corresponds, when we say that x is true iff it corresponds to the fact x.

Correspondence theories of truth do make us think further about the relationship between truth and reality. How you define the correspondence relationship impacts underlying assumptions regarding the relationship between mind and world. Accepting one form of correspondence creates unnecessary divisions, whereas, accepting identity theory, for example, distinguishes no gap between mind and world. In Chapter One though we saw how archaeological interpretation is a hermeneutic exercise, always tacking from theory to date and back again.

The biggest issue for the simplest synthesis of a correspondence theory of truth is that it requires a 'god's eye view', something that is not possible in archaeology as we always view the past through the partial archaeological record. Arguably, within archaeology there is always an expectation that our theories and our interpretations in some way match up to a world out there or at the very least, any interpretation is always constrained by the archaeological record. It is possible to conclude that archaeological interpretation, in some way, must correspond to a world out there. The character of which will be discussed in more detail in the next chapter.

2.4 Coherence theories

Coherence theories of truth came into being a lot later than correspondence theories and date back to Kant's (1781) critique of the notion of adequacy or correspondence of thoughts to things. Basically, coherence theories of truth claim that where two or more theories/beliefs/statements 'fit together' or 'agree' with one another they cohere and are thus true. Truth is a matter of the relationship between one truthbearer and another, rather than with reality (Davidson 1983, 137).

Early versions, of a coherence theory of truth, held the coherence relation to be consistency, however, this is difficult to hold; it is possible for two propositions to be consistent with a set of propositions and thus held to be true, but be inconsistent with each other. A workable alternative is entailment: a proposition coheres to a set of propositions if it is logically entailed (in some sense) by the set of propositions held to be true (Young 2001).

Coherence systems can be understood in both a negative and a positive way. Evidence can justify a coherent set of beliefs and also, negate a set of beliefs. This is known as a mixed coherence theory (Sturgeon *et al* 1998, 23-4).

Just like correspondence theories of truth, there are several different versions of coherence theories. Coherence theories differ on two major issues. Firstly, they give different accounts of the

coherence relation and secondly, they give different accounts of the set of propositions with which true propositions cohere (Young 2001).

2.4.1 Varieties of coherence

Coherence theories came to prominence at the end of the 19th century under the influence of the absolute idealists, H. H. Joachim and F. H. Bradley (Lynch 2001, 99). As Joachim stated: "[t]ruth in its essential nature is that systematic coherence which is the character of a significant whole" (Joachim, 1906, 76). Absolute idealism is the metaphysical position that there is no difference between the thought and the object; thought becomes more developed and coherent until it is identical to reality and hence, reality is a coherent system of judgements. A judgement is true when, and only when, it is a member of a coherent system of judgements (Austin 2001, 99). The most complete synthesis of a coherence theory (in line with absolute idealism) is that of Brand Blanshard, an American philosopher. He argued that our beliefs (experiences) are true if they cohere with the rest of our beliefs. A total system of coherent beliefs gives a complete picture of the world, in which beliefs entail each other (Blanshard 1941, 263); this is Blanshard's definition of pure truth which he thinks has never been attained. Blanshard instead talks about degrees of truth:

> "A given judgement is true in the degree to which its content could maintain itself in light of a completed system of knowledge, false in the degree to which its appearance there would require transformation." (Ibid, 304)

An issue with correspondent theories of truth is that we cannot get outside ourselves to compare our thoughts with any mind-independent reality. Arguably, it is only possible to compare our beliefs with themselves. This viewpoint raises certain metaphysical questions. It does not necessarily follow that if it cannot be known if a proposition corresponds to reality, that it does not correspond to reality. Therefore, even if we can only know which beliefs cohere with each other, it does not mean that truth does not consist in correspondence (Young 2001). A metaphysical definition of truth does not come with the prerequisite that it explain justification.

Alternatively, Donald Davidson (2001) argued that the coherence of a proposition, with a set of beliefs, is a good indication that the given proposition corresponds to reality. From coherence it is possible to infer correspondence, but any form of confrontation with reality is not possible. Reality

does play a role in shaping our beliefs (for example sensory stimulations) but they are not a source of evidence or justification. Beliefs are not made true by reality (Ibid, 151).

2.4.2 Arguments against Coherence

The strongest argument against coherence theories is that it appears to be possible, within this position, for there to exist two competing pictures of the world (Young 2001). It is possible to have two sets of theories that internally both cohere but contradict each other. This is known as the specification objection and originates with Russell (1907). This is only a problem if it is also held that there is only one true picture of the world.

An alternative objection against coherence theories is the transcendence objection. For some propositions, which are true, there exists no set of beliefs to which they cohere; truth transcends belief. The only coherence theory immune to this objection is that which equates truth with the coherence of belief employed by an omniscient being. In response coherence theorists argue that it is not possible for truth to transcend what coheres with belief; the issue at fault is not coherence theory but the assertion this objection begins with, that truth can transcend what coheres with belief (Young 2001).

2.4.3 Archaeology and coherence theories

Within archaeology, at the most simplistic level, coherence would be expected to be a standard of interpretation. It is not that controversial to suggest, that when interpreting the past, the different components of an interpretation should fit together. The term coherence is vague but in general is understood to mean when:

> "a set of two or more theories beliefs are said to cohere if and only if (1) each member of the set is consistent with any subset of the others and (2) each is implied (inductively if not deductively) by all the others taken as premises" (Kirkham 1992, 104).

For example, the two premises; "it rained last night" and "the grass is wet" both cohere as they are both consistent and implied by each other. This is the definition of coherence held throughout the rest of this thesis.

In the introductory chapter, hermeneutics and contextual archaeology were discussed. It is argued that these can be seen as a method of fit (Kosso 1991). For example, Hodder's contextual archaeology works within a hermeneutic circle, in which tacking occurs from part to whole and back again (Hodder 1992); the part and whole must cohere together. This is at opposition to correspondence theories, which hold that observations (reality) are the source of evidence or justification. Coherence theories do not hold this.

Kosso (2001) discusses the coherence nature of archaeological justification. Claims about the past (for example, that an excavated configuration of stones and mud is a wall) require justification as soon as they contain enough relevant information. The lack of foundations (knowledge) for an interpretation "suggests that the model of justification of knowledge about the human past is one in which each component claim is supported by other claims." (Ibid, 75) For example, the identification of a wall rests on a specific understanding on what a wall is, i.e. a specific configuration of stones and mud; otherwise all we have is a pile of stones and mud. However, as Kosso argues, coherence is not enough on its own. Independence of evidence is also required. Correspondence with real objects is always evaluated from the present, but independence is required in terms of different types of knowledge from different sources. Thus, Kosso argues that archaeological justification works along a model of dynamic coherence, working with a variety of relations and kinds of strands (Ibid, 92). This raises an issue for coherence theory as a model for archaeological justification; as we don't have direct access to the past we need to rely on the compatibility of different types of evidence in the present.

The discussion in the previous chapter illustrates possible issues with a coherence theory of truth. It was noted, both in MRT and the contextual method, observations are understood through an appeal to theories and theories are understood through an appeal to observations. Coherence, however, is a method of best fit between theories (beliefs) and not between theories and observations: interpretation is justified by how theories fit together not by how well they correspond to the external facts. Whether this is a serious objection, depends on how one understands 'facts'. One of the central principles of post-processualism, as discussed in the last chapter, is that all data are seen through a cloud/lens of theory, that all data are theory laden. Observations are in themselves influenced by *a priori* assumptions. Furthermore, they are only understandable through appeals to theory and thus in themselves are never simply observations of an external world out there. It is therefore possible to argue that archaeological justification occurs through the coherence of different types of theories; some of which are unexpressed but remain implicit in how 'data' are defined, codified and recorded.

2.4.4 Conclusions for a Coherence Theory of Truth

Coherence theories of truth are concerned with our beliefs and how they fit with each other; truth is not defined in terms of reality. The workable version of coherence theories holds that propositions to be true if they are logically entailed by a set of propositions that cohere.

From the discussion in the last chapter, coherence models figure largely within archaeological theory. Middle range theory and the hypothetico-deductive method can be seen as methods of coherence, in which the interpretation is logically entailed by other interpretations. A hypothesis is tested against an appeal to other theories, within which, there is an ever-evolving cycle between theories and hypotheses, constructed through observations that are influenced *a priori* by local and social beliefs. In the previous chapter, it was noted that within a middle ground approach there is a general consensuses that archaeological reasoning is hermeneutic. Hermeneutic methods can also be seen as a method of coherence. Tacking back and forth from part to whole, from evidence to interpretation, coherence occurs. However, the issue remains regarding the use of an external reality (observations) to justify archaeological interpretations. Coherence theories of truth negate access to an external reality; is this the case within archaeological justification?

Coherence theories appear to allow for different systems of propositions to be held as true but to contradict each other. For Davidson (2001) this is possible as we each work within our own systems. This though can lead to relativism; in which it is not possible to decide between interpretations, as all interpretations are system dependent. However, most archaeologists have chosen to distance themselves from extreme relativism that supports an 'anything goes' attitude to archaeological interpretation (Wylie 2002c, 172).

Alternatively, it is not necessarily the case of one extreme or another (one truth versus relativism). The above argument only holds if it is metaphysically argued that there is only one true reality. Pluralists hold that not all sentences are true in the same way; there is more than one way of being true (see Wright 1992), as will be discussed later in this chapter. Even correspondence theories of truth (usually viewed as the traditional monistic theory) involve no commitment to how many ways of being true are possible and does not require there being only one (Wright & Pedersen 2010). Contradictory propositions are only a problem in a world in which it is held that there is only one possible way of knowing reality, this will be explored later in this chapter.

Coherence, given the hermeneutic nature of archaeological reasoning, is arguably an inherent part of justification in archaeology. At the very least within archaeology an internal coherence is at play, so that within a particular paradigm or framework all ‘data’ and ‘theory’ must cohere. The question is what is the nature of this coherence? Is archaeological justification purely based on

coherence or are there multiple features to justification in archaeology? In the section on pragmatism it will be shown that as a form of justification, some philosophers accept both coherence and correspondence as methods of justification. This is something that will be explored later in this chapter and in the next chapter.

2.5 Social Construction

A number of times so far, in this and the previous chapter, it has been discussed that knowledge is, in some way, theory laden or a product of its context. Ian Hacking (1999) lists all the things he found that have been described as socially constructed. These ranged from: illness, to quarks, Japan, the past, serial homicide, reality and so on. Three types of things can be constructed: objects, ideas and elevator words (the words that are used to say something about the world or what we say or think about the world) (Ibid, 21). He lists six grades of construction: historical, ironic, reformist, unmasking, rebellious and revolutionary (Ibid, 19). The crucial point in looking at social construction is not for a definition but to ask what is the point? (Ibid, 5):

> "a primary use of "social construction" has been for raising consciousness. This is done in two distinct ways, one overarching the other more localized. First, it is urged that a great deal (or all) of our lived experience, and of the world we inhabit, is to be conceived of as socially constructed. Then there are local claims, about the social construction of a specific x…That is why I began with the question "The social construction of what?" and opened with a list of whats. The items in my alphabetical list are so various! Danger is a different sort of thing from reality, or women refugees. What unites many of the claims is an underlying aim to consciousness."(Ibid, 6)

In previous sections it was important to understand the definition behind a theory of truth; in this section it is important to understand the reasons behind the discourse.

2.5.1 A very brief history of the Sociology of Knowledge

The central thesis of the sociology of knowledge is social facts as construction. Social reality is somehow made by the way we think or talk about it, consensus is reached within society and moulded by the way we explain it to each other and the concepts we use to grasp it. The most

popular example is money; by believing certain tokens have value, we give them value; the collective belief creates the reality (Collin 1997, 2-3).

The above argument can be traced back to the philosophy of Hume. Hume (1978) argued that much of what we take as reality, we ourselves contribute to. What we take to be a feature of external reality, is not. We are psychologically inclined to move from the thought of an event, to what we think is the cause, to the effect. As our thoughts move in this way, we think that there is a connection with external reality but there is no such connection (Kirk 1999, 27). Kant (1781) was the first to apply Hume's approach. Kant maintained that not even space and time were out there. Our intellectual nature presupposes us to organise space and time in a certain framework, which we apply to the information we gain from our senses (Kirk 1999, 27).

The term social construction was made popular in recent times by the publication of '*The Social Construction of Reality'* (Berger & Luckmann 1966), though it was first coined in the 1920's by Max Scheler (1980), a German philosopher. The sociology of knowledge stems from the philosophy of Marx, Mannheim and Durkheim (Kukla 2000, 7). Marx argued that social class affected intellectual attitudes and that man's consciousness is determined by his social being (Marx & Engels 1963). Mannheim (1936) and Durkheim (1915) also discussed the causal link between social factors and intellectual attitudes. Mannheim held that ideology influenced epistemology; therefore, knowledge is always from a certain perspective. He also believed that though ideological influences could not be eradicated, influences could be controlled by systematic analysis of differing perspectives (Mannheim 1936).

Berger and Luckmann (1966) argued that our conception of reality is embedded in society and hence is socially constructed. Interactions, between peoples and groups, create concepts of each other's actions and over time become part of the interaction. Through these interactions, these concepts become embedded in society and shape belief and knowledge of reality.

Another famous example in this area is the work of Latour and Woolgar (1979). The application of social explanation to the content of science is inspired by the work of Thomas Kuhn (1962). Kuhn argued that in the history of science there are two kinds of episode: normal science and evolutionary science. Periods of normal science are governed by a paradigm (made up by certain standards and exemplars). A revolution occurs when one paradigm is overthrown and replaced. Scientific paradigms are a sociological notion, setting not only the agenda of science but also the standards of science. When a revolution occurs, the new paradigm arises from collective renegotiation, persuasion or by force. As the old and new paradigms do not refer to each other, in any way, it is impossible to compare them or compare the theories created by differing paradigms. Knowledge is thus paradigm relative.

In the late 1970's Bruno Latour and Steve Woolgar gained access to the Salk laboratory founded by Jonas Salk of the polio vaccine. As anthropologists, they looked at how the daily activities of working scientists impact the 'construction of facts' (Latour &Woolgar 1979). Latour and Woolgar discuss the many facets of the work of the scientists: experiments, meetings, results, publication, and how at every stage the social setting affects the construction of scientific knowledge. Within a laboratory, statements of results are asserted; these assertions can be rejected, borrowed, quoted, ignored, confirmed or dissolved by others. For some groups their assertions are acted upon, whereas for others this is not the case. A statement can end up in a so-called 'operational limbo', where they are proved, disproved and proved again. Alternatively, a statement could fall out of consideration or become a 'fact' that is no longer contested. How different statements are treated is socially driven.

2.5.2 The Spectre of Relativism and the Sokal Hoax

In this chapter, we have moved from correspondence theories to the social construction of knowledge, from 'objective' to 'subjective'. Is justification an objective or a subjective act or somewhere in-between? In the last chapter, we saw how the post-processualists argued that processualism had failed to take into account that all interpretation is theory laden. This transition and stance can be identified outside archaeology.

With regards to truth, it is argued, that there are two current modes of thought in the world at large: a commitment to truth and a pervasive suspicion about truth (Blackburn 2005, xiii). The so-called 'Science Wars' encapsulated a clash regarding philosophical claims about the world: one side claimed that scientists discover facts about the world and the other, claimed that the scientific community constructs those facts (Turner 2007, 8-9).

The Sokal hoax illustrates this debate in action. The physicist, Alan Sokal published a paper, in *'Social Text'*; a well-regarded journal of literary and cultural studies. Sokal called for a more liberated science and an emancipated mathematics (Sokal 1996). Almost simultaneously, another paper was issued in *'Lingua Franca'*, in which Sokal made public the hoax; getting a journal to "publish an article liberally salted with nonsense if (a) it sounded good and (b) it flattered the editors' ideological preconceptions" (Sokal 1996a). In the hoax article, Sokal abolishes reality as a constraint of science and calls for the liberation of science. The article was intentionally written as a spoof and contained, deliberately, many mistakes. Sokal's hoax aimed to illustrate his concern with the spread of subjective thinking, in both intellectual and political spheres. The hoax became famous

because it encapsulated the current mood in this area of debate: how seriously the spectre of relativism can haunt individuals and how incapable academics, at times, can be at listening to what the other side of the debate has to say. As Hacking notes:

> "Many historians and many philosophers won't talk to each other, or else they talk past each other, because one side is so contentiously "constructionist" while the other is so dismissive of the idea. In larger arenas, public scientists shout at sociologists, who shout back. You almost forget that there are issues to discuss." (Hacking 1999, vii)

There is a fear that the acceptance of social construction entails full scale relativism, within which all knowledge becomes equally valid; leading to the loss of any scholarly integrity (Koertge 1998); leading to an inability to criticize on any level (Boghossian 1998) and a 'privileging' of knowledge that is politically fashionable (Kitcher 1998). All these things would be very worrying if it was supported by social construction, but it very doubtful that this is the case. The debate is not helped by extreme comments, for example, when Latour stated that it was impossible for Ramses II to die of tuberculosis, as it wasn't discovered until 1882 (Boghossian 2006, 26). As Hacking argues, social construction works critically to raise consciousness and in general, universal constructionism is very hard to come by (Hacking 1999). The debate between 'objectivism' and subjectivism' cannot be so easily resolved, but clearly the extreme of either position is not tenable.

Truth, therefore, is in some way relative to society and by extension, so too is the process of justification. Relativism is the view that knowledge (and/or truth) is relative to a time, place, society, culture, framework or conviction (Siegel 1992, 428-9); what counts as knowledge depends on the value of one or more of these variables. Social Constructivism can entail relativism. If within constructivism we hold that our knowledge of the world is in some way influenced by ourselves therefore all knowledge can in some way become relative to all other knowledge as all knowledge is social constructed. Knowledge and truth are thus held to be relative because different cultures, societies, or people accept different background principles. Evaluation of knowledge claims and truth can only be done relative to these principles (Kirk 1999, 35-55). However, it is one thing to say that different people may look at the world in different ways and another, to advance the statement that all statements are equally valid.

Social construction results in a complex ontology and the structure of social reality is, in a manner, invisible:

> "our investigate is ontological, i.e., about how social facts exist, we need to figure out how social reality fits into our overall ontology, i.e., how the existence of social facts relates to other things that exist." (Searle 1995, 5-6)

Searle argues that it is possible to separate the *intrinsic* and the *relative*. Describing reality there are things that exist independently of our representations of them (molecules, mountains), but as soon as we try to do more, we discover the existence of observer-relative features (Ibid, 9-10). Searle though remains a correspondence theorist:

> "In general, statements are attempts to describe how things are in the world, which exists independently of the statement. The statement will be true or false depending on whether things in the world really are the way the statement says they are. Truth, in short, is a matter of accuracy of a certain sort of linguistic representation. So, for example, the statement that hydrogen atoms have one electron, or that the earth is ninety-three million miles from the sun, or that my dos is now in the kitchen are true or false depending on whether or not things in the hydrogen atom, solar system, and domestic canine line of business, respectively, really are the way these statement say they are. Truth, so construed, admits of degrees. That statement about the sun, for example, is only roughly true." (Searle 1995, 200)

Applying social construction to justification, we can see that there are a wide variety of opinions that encompass the spectrum from objective to subjective. There is the issue of whether our knowledge is social constructed and whether reality is socially constructed. Understanding the conditions under which interpretations in archaeology are justified will allow an insight into how issues of ontology impact both the process of interpretation and the product of interpretation.

2.6 Pragmatist Theories of Truth

Until the 19th century the prevalent theory of truth was correspondence theory. During the 19th century the first fully formed alternatives began to appear. This was in the form of idealism which led to coherence theories of truth, and to pragmatism. Pragmatism is the view that a concept's meaning is given in reference to the practical consequences of its application (Grayling 1997, 124). Originating in America and led by Charles Saunders Peirce, William James and John Dewey (Lynch 2001a, 185), pragmatism is related to both correspondence and coherence theories. The pragmatists' view of truth involves some kind of correspondence and coherence. This is because the scientific

method, in some way, is answerable to the world (correspondence) and it is expected that any system of beliefs be coherent (Haack 1976).

So far throughout this chapter, the focus has been on individual theories of truth and how these could possibly be applied to understand justification in archaeological theory. The central aim of theories of truth, in the philosophical literature, is to provide a definition of what truth is, however, they also, as argued at the beginning of the last chapter, aim to answer other projects. Therefore, in trying to provide a definition of truth they focus on one thing that truth could be; what the property of truth is. In this section on pragmatism it will be posited that it is possible, unlike in the metaphysical project that more than one theory of truth could apply. Within the justification project the conditions under which interpretations are justified may include more than one theory of truth. Pragmatism is the only classical theory of truth which explicitly recognizes other theories of truth as a criteria of justification though not as a definition of truth (answer to the metaphysical project), as will be illustrated in the next sections.

There are several different forms of Pragmatism, for example, the classical pragmatism of Peirce and James and, in contemporary times, the work of Rorty and Putnam.

2.6.1 Classical Pragmatism

It can be argued that C.S. Peirce was the first to develop a pragmatist account of truth, coining the phrases "Truth is the end of inquiry" and "Truth is satisfactory to believe" (Glanzberg 2006). Peirce argues against the notion that inquiry aims at true belief, instead favouring the aim of inquiry as the fixation of belief (Peirce 1877). He notes that different minds tend to agree. Peirce claims that the common conclusion reached by all minds, is always true (Kirkham 1992, 81). Inquiry is, by definition, the settling of doubt and this can only be done by permanent belief. Temporary belief cannot end doubt, as once a temporary belief ends there is renewed doubt. Thus, the end of inquiry is when belief is settled, permanently (Schmitt 2004, 4).

Within the scientific method, Peirce held that beliefs are constrained by reality. Inquiry is prompted by doubt and ends with stable belief. Truth is stable consensus provided by scientific methodology. Truth is what is satisfactory to believe. Satisfaction occurs through stability and is a practical virtue (Haack 1976, 233). Kirkham (1992) argues that this is incoherent as reality is both independent of all minds and not independent of all minds. The scientific method is constrained by reality but the truth is whatever is agreed upon by all minds, at the end of inquiry. Therefore, justification occurs in the first instance by studying reality and is constrained by reality, but

interpretation is judged by stable consensus. The major argument against this is that it suggests the existence of peculiar idealist objects, which allow an idea in the minds of individuals (who have the relevant experience) to force other people to have certain perceptions. Further, the final conclusion means some of the perceptions we are having right now are forced on us by an idea that has yet to occur (Ibid 84-6).

Peirce was the first to coin the term abduction (Douven 2011). Abduction (or Inference to the Best Explanation) is a type of inference (Ibid). It is noted that within science, hypotheses are confirmed and disconfirmed, and occasionally this is done on deductive grounds, however, in the vast majority of cases the reasoning is non-demonstrate or abductive (Lipton 2000, 184). Abduction's "governing idea is that explanatory considerations are a guide to inference, that scientists infer from the available evidence to the hypothesis which would, if correct, best explain that evidence."(Ibid) Abduction differs from deductive reasoning as the conclusion is not logically necessary, based on the premise. Instead, the conclusion is compatible and the best explanation, but not logically, necessarily true. For example, the lawn is wet, therefore, it can be abductively reasoned that it rained last night. However, the problem for inference to the best explanation is in any situation (as in this chapter) there are multiple explanations and the issue becomes how to choose the best explanation. For example, in the case of the lawn being wet, it does not necessarily mean that it rained last night. The lawn could be wet due to another process. One solution is to pick an explanation by degree of explanatory virtue (the degree of understanding provided by the features of the explanation). However, this is not simple and has led some philosophers to conclude that it is not possible to reach a definite theory on what is the best. The power of abductive reasoning remains; explaining general inferential principles that guide science (Ibid). For Peirce deduction, induction and abduction are all integral to the scientific method and for seeking truth (Burch 2010).

Following Peirce but differing, Williams James (1907) emphasized the importance of the practical consequences of our ideas and theories. Truth is analogous with the ways health, wealth and strength are made, and theories are instruments (Kirk 1999, 32). James agreed with Peirce that truth is correspondent with reality but differed in that reality is mind-dependent (Kirkham 1992, 89); reality is shaped by the way we think about it. James' emphasized the doctrine that truth is what is satisfactory to believe, as subsequent experience will not overthrow it (Haack 1976, 233). It was this view, that truth what was good (or expedient, useful) to believe, that opened James up to the greatest criticism. Russell and Moore in particular took against this, arguing that James was making the crude, morally objectionable statement that truth was the same as congenial belief (Grayling 1997, 126). An alternative, more favourable, interpretation is that James did not literally mean congenial belief. Instead, James meant beliefs that are safe from the danger of inconsistency, created by future

experience. Thus, just like Peirce, true belief is that which is satisfactory to hold (Haack 1976, 233-4). Therefore, interpretations are justified against their practical outcomes. In a way, they are tested against how well they stand up to real world experience, for example, for James true beliefs are those that are verifiable by experience in the long run: "Our beliefs are like banknotes, they 'pass' so long as no-one challenges them; but, once again like the financial system, the system of beliefs would collapse were it not for actual direct verifications at some points." (Ibid, 234) Something is satisfactory as long as it is verified, confirmed or corroborated by our experience.

In classical pragmatism it is unclear what interpretations are judged against; what is meant by satisfactory belief or exactly how justification relates to practical outcomes is not clear. Peirce talked about the fixation of belief and stable consensus provided by scientific methodology. James, on the other hand, held truth to be congenial belief. What is meant by such statement is difficult to decipher and "Peirce and James are notorious for the inconsistency of their remarks about truth." (Kirkham 1992, 79) Haack (1976) in distilling the underlying meaning of Peirce's and James's work notes that, "Peirce's theory of meaning does not equate significance with practical usefulness, and neither does James's theory of truth straightforwardly equate truth with practical usefulness" (Ibid, 232). In terms of stable consensus, Haack takes it to mean: "Truth is that stable consensus which the Scientific Method will eventually achieve, it follows that the true is, in a certain sense, satisfactory to believe; satisfactory because stable." (Ibid, 233) Consensus is reached through the scientific method; correspondence and coherence with reality (Ibid 233-248). Kirkham notes (1992, 82-3), discussing Peirce, that the scientific method drives consensus through experience of an external reality. However, this reality is not mind-independent as what is real is determined by the minds of a community. Kirkham argues that this is inconsistent as reality is both dependent and independent in the work of Peirce (Kirkham 1992, 84). A universal stance on Peirce's and James's theories of truth does not exist. Drawing from the above discussion a general definition can be reached. Truth is justified through experience of an external reality, through the scientific method. Interpretations are true based on the beliefs of a community which evolve towards a stable consensus and consensus is shaped through experience of an external reality (which will also be different for different individuals). It is for this reason that pragmatism accounts for some form of social constructivism. Justification is shaped through our experience of an external reality which will in some way be socially mediated; therefore pragmatism embodies elements of social constructivism. This does not entail extreme relativism as our experiences are also shaped with a reality (arguably in some way out there) though our knowledge is in some ways always limited from our own viewpoints. Therefore pragmatism is not in opposition to theories of social constructivism. Pragmatism embodies both a mitigated objectivism socially influenced.

To reach a more substantive understanding of how interpretations are justified, within a pragmatist theory of truth, one has to look at more contemporary literature on the theory.

2.6.2 Between Objectivism and Subjectivism

Dewey developed pragmatism (Hookway 2008) and was greatly influenced by James (Hickmann 2009). Like other pragmatists, Dewey argued against correspondence theories of truth; on the ground that it is impossible to look at both an object and a proposition, and determine if they 'correspond' (Dewey 1941).

Traditional pragmatists aimed at fixing belief: Dewey aimed at fixing the situation (Smith 1978). Instead of the idea that it is just our beliefs about the situation that change, the situation is also transformed during inquiry. Knowing the question we are trying to answer, means that we have already started the process (Hookway 2009). Understanding truth is, therefore, a process rather than something absolute or unchanging. Dewey is neither an absolutist nor a relativist. Dewey argued against a rigid theory/practice dichotomy; inquiry is not a passive act (McDermid 2006, 26).

Belief is made true by objective experimental inquiry. However, inquiry can lead to different truths, under different conditions. Moral, physical and mathematical truths are only regulative principles; they are rules of action that over time have been so thoroughly refined that they are unlikely to be revised, though they can be. (Hickmann 2009). Dewey always argued that knowledge can only grow if we are open to new experiences:

> "The history of science shows that when hypotheses have been taken to be finally *true* and hence unquestionable, they have obstructed inquiry and kept science committed to doctrines that have later turned out to be invalid." (Dewey 1938, 145)

For Dewey, truth is between the objective and subjective. While each of us has our own unique perspective, it is possible that carefully designed experiments can produce objective truths and though they may change over time, it is possible to proceed with confidence; until the emergence of new conflicting data (Hickmann 2009, 13-4).

In more recent times Hilary Putnam and Richard Rorty have been the two most influential philosophers to support a pragmatist conception of truth. Putnam takes inspiration from James, whereas Rorty follows Dewey (Lynch 2001a, 188).

Within Putnam's (1981) internal realism, truth is what would be justified under ideal epistemic conditions (the condition in which a superior being would have all the evidence for and against a proposition (Lynch 1998, 109)), which can be approximated. Putnam intends to work beyond the dichotomy of objectivism and subjectivism. Putnam prefers not to call his view anti-realist, but it does oppose realism (Glanzberg 2006). Unlike realism, the internal realist believes that the totality of objects is not fixed as they only exist relative to a conceptual scheme. Putnam is influenced by Kant and states that truth:

> "is a statement that a rational being would accept on sufficient experience of the kind that it is actually possible for being with our nature to have. 'Truth' in any other sense is inaccessible to us and inconceivable by us. *Truth is ultimate goodness of fit*." (Putnam 1981, 64)

Putnam also argues against correspondent theories. He argues, not that correspondence between words, concepts and other entities doesn't exist but that too many exist. It is impossible to pick out just one correspondence, we have no referential access to mind-independent things, we have no 'god's eye view' (Ibid, 73). It is not that mind-independent things don't exist; we just have no access to them.

Putnam's idealization theory has two key ideas:

> "(1) that truth is independent of justification here and now, but not independent of all justification. To claim a statement is true is to claim it could be justified. (2) truth is expected to be stable or 'convergent'; if both a statement and its negation could be 'justified', even if conditions were as ideal as one could hope to make them, there is no sense in thinking of the statement as having a truth-value." (Putnam 1981, 56)

An interpretation is justified by how well it stands up to experience (our knowledge of the world and interaction with the world). Putnam's notion of ideal conditions is very broad and not as limiting as Pierce, who claimed that truth is the goal of scientific inquiry and no other forms of inquiry. It is argued that Putnam's account of truth is not informative; it does not describe what it is for something to be rationally justified (Lynch 2001a, 189). Perhaps this charge against Putnam is unfair as he never intended his theory to be explicitly informative as be believed that all there is to truth is justified belief and very little more. Putnam also argues that science uses abduction or inference to the best explanation (Putnam 1981, 198).

Rorty defines truth in terms of what is good in the way of belief. It is argued that his form of pragmatism is different to Putnam's, Peirce's or James' as it appears to support some form of relativism (Kirk 1999, 12). Rorty argues that language and mind do not enable us to represent the world, truly or otherwise (Blackburn 2005, 151). Instead, like Dewey's pragmatism and Darwinism, vocabularies are tools (Ramberg 2007). For Rorty language is a coping mechanism and not a way of enabling us to represent the world (Blackburn 2005, 151). In place of any concept of truth:

> "we understand knowledge best when we understand the social justification of belief, and thus have no need to view it as accuracy of representation. Instead of seeking 'vertical' relationships between language, or ourselves as language users, and the world, we must concentrate upon 'horizontal' or inferential processes, whereby we advance and accept reason from each other. Justification becomes a 'social phenomenon' rather than a transaction between a 'knowing subject' and 'reality'."(Rorty 1980, 9)

It could be argued that Rorty wanted, for epistemological purposes, to get rid of the concept of truth altogether and once was quoted as saying "that only old-fashioned metaphysical prigs talk of truth any more" (Blackburn 2005, 58). However, this is not what he intended; he does not deny notions of truth, knowledge or objectivity: ordinary uses of these notions always refer to particular features of the context they are applied in. Thus any attempt to generalize them is impossible, as the notions just become abstract hypostatizations (Ramberg 2007).

Rorty in the end came to doubt any theory of truth. Following the work of Davidson he rejects any attempt to explain truth in terms of other concepts (Rorty 1991). He argues that, though truth has many uses, it is not a goal which we can strive for beyond justification:

> "the entire force if the cautionary use of 'true' is to point out that justification is relative to an audience and that we can never exclude the possibility that some better audience might exist, or come to exist, to whom a belief that is justifiable to us would not be justifiable."(Rorty 2001, 261)

Rorty follows Dewey; justification is contextual and open to change, but it is argued that Rorty goes much further down a relativist path:

> "The best way to understand Rorty is simply to see him as generalizing this view of humanity and its literature across the board. In science of history, law or psychology, politics or ethics the same model applies. There is the community of interpreters, and the aim of getting them to be of one mind. There

is invention and innovation. But just as a text allows for multiple readings, so does the world. Truth, and reason as the anointed methods of sifting it, disappears." (Blackburn 2005, 156)

Another recent American Pragmatist, Susan Haack, has questioned Rorty's label as a Pragmatist (Haack 1998). Haack views Rorty's pragmatism as dangerous; abandoning the pursuit to learn about the nature and conditions of inquiry (which is what classical pragmatism aimed to do) it weakens intellectual resilience (Ramberg 2007).

Haack is a strong defendant of the rationality of science and within this argues against Rorty's stance that justification consists purely in the conformity of epistemic practices of people's beliefs. She notes that, though science is a deeply social enterprise, "consensus in the scientific community is epistemologically significant" (Haack 2008, 178). This is important as without this there would be no purpose to inquiry.

Haack holds that "*there is one truth, but many truths*: i.e., one unambiguous, non-relative truth-concept, but many various propositions, etc., that are true."(Haack 2005, 87) Truth, Haack argues, is defined in terms of Taski's t-schema and in line with a deflationary style approach. There are many truths: it is not possible to argue that all ways of understanding the world are reducible to a single truth (Ibid). The idea of pluralism will be returned to in a later section.

Contemporary pragmatism appears to be situated somewhere between objectivism and subjectivism. Justification is rooted within the social. In archaeology, as will be discussed in the next section, this leads to the use of social usefulness as a criterion of justification, something which is not as explicit in philosophy. Philosophers instead emphasise that inquiry is not a passive endeavour nor is it one that is free from its context. Contemporary pragmatists, like earlier ones, hold that truth is expected to be stable or convergent. Our knowledge of the world is formed through confrontations with the world and through interaction with the world. The concept of truth is not abandoned within pragmatism but socially situated. Rorty arguably goes further, abandoning the epistemic enterprise, whilst others see value in continuing and accept that some form of objective truth is possible, though in a world that is not reducible to a single truth.

2.6.3 Pragmatism and Archaeology

Pragmatism in archaeology emphasizes the social element of interpretation (Preucel & Mrozowski 2010). Pragmatism is seen as being relevant to current issues in archaeology, with the current emphasis on the political, social and ethical (McDavid 2002; Webmoor 2005). In relating truth to the practical consequences of it application, pragmatism appears to answer the need in archaeology to align interpretation with what is politically, ethically and socially good: "archaeology must be made practically relevant to the represent and must not remain merely an arcane discourse on the past." (Tilley 1989, 112) This appears to differ from what the above discussions on pragmatism, in which the practical outcome appears to mean standing up to experience. To confirm this, a more in-depth study of pragmatism as applied in archaeology is required.

So far pragmatism in archaeology is relatively under theorised and, therefore, arguably not explicit. Preucel and Mrozowski (2010) detail an approach supporting many of the principles of Baert's (2005) Pragmatism. There are:

> "three core pragmatist principles. The first is that truth is belief justified by social need, rather than the way the things are in nature. This justifies experimentation with theory and method in order to achieve intersubjective consensus, rather than the rigid adherence to a particular theory and method. The second principle is that experimental truth must be evaluated against experience...The third principle involves testing in the context of beliefs from different cultural traditions. Rather than testing by correspondence or coherence to some empirical reality, a pragmatist approach requires us to continually interweave different webs of belief so as to expand and deepen community." (Preucel & Mrozowski 2010, 31)

Pragmatism is seen as a work in progress. The elements of pragmatism that Preucel and Mrozowski adhere to are: that archaeology cannot escape the social, the notion of the detached spectator should be replaced with an emphasis on social action. Secondly, the social should be mapped, determining its contours over the long term with the continual challenging of usual distinctions between time, space, process and people. Lastly and most of all, pragmatism should lead to meaningful social action (Ibid). Archaeologists heavily rely on Baert's (2005) view of pragmatism; heavily based on Rorty though not completely aligned with Rorty's pragmatism:

> "Success is then no longer measured by the extent to which a theory has shown to 'fit' the data neatly, the extent to which the various components of the theory are shown to weave easily into the

myriad of empirical experiences. Instead, it is the ability to see things differently, to form a *gestalt* switch, which ought to be viewed as a sign of success."(Ibid, 143)

Interpretation is justified not by how well it fits the data, but how it impacts the present. Baert identifies congruence between pragmatism and post-processual archaeology, noting that post-processualists:

"adopt a pragmatist stance, emphasizing how their method of inquiry may alter the present constellation of meanings, Knowledge is no longer conceived as something passive, but it is more like an action, it affects things. Like the pragmatist method, these archaeologists explore how their discipline can be used to confront and alter some of our dominant views today." (Ibid, 163)

Two different versions (in general) towards pragmatism can be identified: one detailed in the section above, which focuses on the goals of scientific enquiry to interpret an external reality; the other, found in archaeology, focuses on social utility. Following Beart, influenced by Rorty:

"For the "postmodern" philosophers and the pragmatists (among whom I number myself) the traditional questions of metaphysics and epistemology can be neglected because they have no social utility." (Rorty 2007, 37)

Though Baert emphasizes social utility without abandoning questions of epistemology (Baert 2005, 143), the issue appears to be in terms of what is meant by 'practical outcomes'. As noted earlier, Haack argues that this shouldn't be taken so literally, however, it is also noted that this is not a universal pragmatist position. Further work on pragmatism in archaeology aligns more closely with the discussion above. Pragmatism hinges on the concept that what is true is linked to practical outcomes, defined in terms of utility and success. Saitta details how truth claims are evaluated within a pragmatic framework:

"Specifically, they must be evaluated in terms of their concrete consequences for life today—for how we want to live as a pluralistic community. Instead of simply asking whether a claim about the past is empirically sufficient in light of available data, pragmatism asks what difference the claim makes to how we want to live. What are the implications of theoretical claims from evolutionary archaeology, interpretive archaeology, or indeed, any other current framework for understanding society and history for how we think about, and how we might intervene in, human social life? To

> what extent does a truth-claim expeditiously meet the human needs at stake in, say, reburial or repatriation controversies; that is, to what extent does it facilitate putting human souls to rest and human minds at ease?"(Saitta 2007, 10)

Thus truth is defined in terms of the alternative concept of 'value' or 'social utility'. This though is not the only possible reading of practical: in the Dewey sense, practical refers to truth as not passive and context free.

> "Meaning is considered to be neither given to the world to be passively revealed by the operations of science nor as solely constituted by a knowing 'subject'. Knowledge instead is acquired through practice, through a subject-object dialectic, in which primacy is granted to neither."(Shanks & Tilley, 244).

Pragmatism in archaeology has been adapted so that not only should knowledge be shaped by experience, experience should shape knowledge. Pragmatism in archaeology differs from most philosophical pragmatists, as can be seen when comparing this section with the previous sections on pragmatism. Following James, as interpreted by Haack, truth is satisfactory in that it is confirmed or verified against experience of reality. Truth is justified through experience of an external reality, through the scientific method. Interpretations are true based on the beliefs of a community, which evolve towards a stable consensus and consensus is shaped through experience of an external reality (which will also be different for different individuals). Contemporary pragmatists focus on the social element of inquiry and in most cases an interpretation is still justified by how well it stands up to experience (our knowledge of the world and interaction with the world)(Putnam 1981, 56). Pragmatism in archaeology appears quite different. Truth is still justified against experience but this is defined in terms of the alternative concepts of 'value' or 'social utility'; this is not a universally held position. Interpretation is not justified against on-going experience of reality but against the impact the interpretation has on reality. This is very different to what Dewey meant by practical (not passive or context free) and what other pragmatists meant by standing up to experience, for example Putnam, Peirce, Haack and James.

Preucel and Mrozowski (2010) heavily rely on the work of sociologists Beart (2005) and his interpretation of Rorty. Rorty, as noted in the previous section, differs to other contemporary pragmatists (like Putnam and Haack), emphasizing justification as a social phenomenon (Rorty 1980). Pragmatism in archaeology focuses on a very specific reading of Rorty, following Baert. Given that vocabularies are tools and truth is a social phenomenon, than justification is also a social

tool. Therefore, it could be concluded that archaeology following a very specific form of pragmatism, and arguably not as widely held, in which justification is defined in terms of social utility.

Given that the above is not a universal stance towards pragmatism, the next section dissects alternative viewpoints to how interpretations are justified; 'social utility' is a worthy goal but is it the standard of justification?

2.6.4 Pragmatism, Correspondence and Coherence

Within the justification project it is possible that interpretation may be justified against more than a single theory of truth. Within a pragmatist account of truth it is possible to argue that either or both correspondence and coherence theories are compatible.

Pragmatists, at least those of a traditional character, agree that truth is correspondent with reality. James (1907), Peirce (1877) and Putnam (1981) agree that truth is correspondent with reality but that this is inadequate. For Rorty he sees correspondence "as an automatic compliment paid to successful normal discourse rather than as a relation to be studied and aspired to throughout discourse" (Rorty 1979, 371-2). For Dewey (1941) and Putnam (1981) the problem is that it is not possible to compare a proposition and reality. It is not possible to simply copy reality; correspondence can be viewed as part of inquiry rather than the central method of justification to truth. That we do not have to refute correspondence theory merely recognize its limitations (McDermid 2006). As Peirce notes:

> "These thoughts, however, have been caused by sensations, and those sensations are constrained by something out of the mind. This thing out of the mind, which directly influences sensation, and through sensation thought, because it *is* out of the mind, is independent of how we think it, and is, in short, the real." (Peirce 1992, 88)

Peirce coined the term abduction. Abduction's central difference is that explanations involve more than what can be directly observed and thus is it possible to build explanations of features that we cannot observe.

Coherence theory appears to be even more compatible with Pragmatism. As Putnam notes:

> "What makes a statement, or a whole system of statements – a theory or conceptual scheme – rationally acceptable is, in large part, its coherence and fit; coherence of 'theoretical' or less experiential beliefs with one another and with more experimental beliefs, and also coherence of experiential beliefs with theoretical beliefs. Our conceptions of coherence and acceptability are, on the view I develop, deeply interwoven with our psychology. They depend upon our biology and our culture; they are by no means 'value free'. But they *are* conceptions, and they are conceptions of something real." (Putnam 1981, 54-5)

Justification is through coherence, which is not 'value free' but still a conception of something real. Pragmatism may be a form of coherence theory as it centres on the stability/agreement of beliefs. The debates between Rorty (1999) and Davidson (2001), labelling each other as supporting and not supporting pragmatist/coherent theories show how blurred the lines can be, between these two theories. As Haack notes

> "mutually incompatible propositions can no more be jointly true than formally inconsistent formulae can; there can't be incompatible truths or "knowledges." Yes, there are many *different* truths; but not incompatible ones. Yes, incompatible propositions can be *accepted* as true; but they can't all *be* true." (Haack 2004, 169)

Mutual compatibility is a necessary condition for truth (Ibid). However, pragmatists' truth is not defined purely in terms of coherence or even in terms of justified belief. As Haack argues:

> "But truth is, though not *the* goal, *an aspect of the goal* of inquiry, If you aren't trying to find out how things are, to get truth you aren't really inquiring…Because inquiry has this double goal, appraisal of a person's success in inquiry has two dimensions, which might be roughly characterized as depth and security, the former being interest- and the latter truth orientated…That truth is epistemically valuable is entirely compatible with the fact that in some circumstances one may be better off not inquiring or better off having an unjustified belief, or better off having a false belied and with the fact that some truths are trivial, boring, or unimportant…Part of the answer is that truth *is* instrumentally valuable. Knowledge of how things are enables us to bring about desired ends and to avoid undesired ones. Not always, of course" (Haack 2009, 257-8).

It is possible to recognize truth as epistemically valuable (success through inquiry) but also accept 'social utility'.

2.6.5 Conclusions for Pragmatist Theories of Truth

The main issue in the application of pragmatism to archaeology is that there is no consistent pragmatist framework; pragmatists are not even consistent with each other (Kirkham 1992, 80) and pragmatism has never been a unified school of thought; even the first pragmatists were divided over what pragmatism is (Talisse & Aikin 2011, 1). Peirce (1877) held that a proposition was true if it was agreed upon by everyone who had investigated the matter. James (1907) emphasized the importance of the practical consequences of our ideas and theories and this has been interpreted to mean different things. Haack (1976) interprets practical consequences to mean that ideas and theories are tested against our experience of the real world. Sociology and archaeology have taken a more literal reading of early pragmatists, following Baert interpreting Rorty: the truth of an interpretation is literally down to the practical consequences of an interpretation. As it is not possible to identify a universal stance on how interpretations are justified within pragmatism a number of points are instead highlighted below.

Pragmatist theories have evolved over the last century with divergent opinions, for example, if we compare the works of Rorty (1991; 1999) with Haack (1976, 1998). A synthesis of different views builds a general image, though not a universal one; the central issue, frequently being, how one interprets 'satisfactory' or 'practical'. In general justification is reached through consensus, reached within society. Justification shifts, as interpretations are tested against our experience of the world. Truth is achieved with the fixation of belief, at the end of inquiry. There is always the issue of social context as different groups may fix on one view. However, for most pragmatists this does not lead to relativism about interpretation as interpretation is still in some way shaped by the world (in some way socially constructed); pragmatists sit in-between objectivism and subjectivism.

Pragmatism holds that practice and theory are not separated and that knowledge is a tool in finding our way in the world. Pragmatism in archaeology follows these main principles though evolves the concept of practicality towards the concept of 'value'; a very specific type of utility and success, which arguably differs from most philosophical accounts of pragmatism. This is where there is a divergence of opinion; Rorty abandons any concept of truth, replacing truth with the concept of social utility. Others, though, see the value of inquiry; through coherence of individuals conceptions of reality (for example Putnam) and through inquiry (for example Haack). Further, despite the arguably sceptical views of Rorty, pragmatists define their account of truth as anti-sceptical (Peirce 1878; Putnam 1981): truths are real and discoverable. Pragmatists have argued against correspondence and coherence theories of truth as being largely inadequate as a metaphysical definition; but as part of inquiry pragmatists view correspondence and coherence as

valid methodology. Pragmatism in recognizing that inquiry is a practical endeavour argues that all truths are in some way relative to their context, therefore, whilst allowing for one truth, there are also many truths.

2.7 Pluralism

In the previous section it was noted that through inquiry, if we accept that truth is embedded/impacted by its context, as theory and practice are not separated, then multiple different truths exist. Pluralism originated within Pragmatism and specifically the work of James (1907). Pluralism, in a general sense, is the idea that there are more than one true account of the world and that these different accounts can be incompatible but equally acceptable (Lynch 1998).

A motivation for pluralism is the observation that different truths work within different concepts of truth (Lynch 2009). So while the identification of pots, pans and elephants appears plausible within a correspondence theory of truth, theories of a moralistic, ethical nature do not. This gives rise to simple alethic pluralism (SAP) which is the idea that there is more than one concept of truth (Ibid, 54-5). Lynch strongly argues against SAP, stating that it is the 'lazy man's approach' and also causes epistemic and logical difficulties. Lynch finds multiple issues with SAP and is logically incoherent on multiple levels, for example, illustrating just one:

> "A useful fact about the concept of truth is that it allows us to make blind generalizations. That is, we can say: Everything Socrates said was true. But Socrates said lots of different sorts of things. So if "true" means different things when predicated of different sorts of proposition, we face two related questions about generlizations. First in what sense if the generalization *itself* true?...Second, how to we each understand such generlizations." (Ibid, 57)

The issue is that SAP is not a pluralist view of 'truth' but a pluralist view of the meaning of the word 'true' (Ibid, 59).

A more substantive option is the work of Crispin Wright (1992; 2001), who argues that though there is a single concept of truth, there are different properties that satisfy truth. Minimalism "incorporates a potential pluralism about truth, in the specific sense that what property serves as truth may vary from discourse to discourse."(Wright 2001, 752) However, as discussed in the earlier section on deflationary theories, deflationists generally argue that the truth predicate is just a linguistic device that allows us to perform certain logical functions and thus deflationists do not

focus on the nature of truth; truth is not an explanatory resource (see for example Field 1994; Horwich 1998; 2010).

The third type of Pluralism and arguably the closest to its original pragmatist roots is functionalism (Lynch 1998, 2009). Truth is seen in terms of a job or a function (Lynch 2005) so that:

> "Properties can have their features accidently or essentially. *Being a color* is an essential feature of the property *being red*, but *being Tom's favourite color* is only an accidental feature of *being red*. Functional properties are defined by their functional role; that is; by the sum of their relational features. Those features can therefore be thought to be essential to it. Thus, the functionalist, link the monist, can claim that there is a single property and a single concept of truth. The property *being true* (or the property of truth) is the property that has the truish features essentially or which plat the truth-role *as such*." (Lynch 2009, 74)

Therefore, while there is one concept of truth there are many different truths, stemming as Lynch puts it, from:

> "The idea that human beings can have different perspectives, engage in distinct forms of life, or use different conceptual schemes is an essential element of any pluralism." (Lynch 1998, 31)

Pluralism stems from the acceptance that though there is a singular nature to truth this does not mean that there is one truth. Hypothetically, applying this to archaeology we may see this as the acceptance of the archaeological view of the past and an indigenous populations view of the past; different perspectives that may or may not be incompatible with each other. As the pragmatists highlighted, truth is contextually driven. For example, Putnam holds that there is an external world but with no direct access, truth is justified against the coherence of our own conceptions of this external reality (Putnam 1981). More simply as Haack notes it is highly unlikely given:

> "In view of their large historical element, it seems very doubtful even that the biological sciences are wholly reducible to physics; and that -- despite the significant parallels between human beings' social behavior and that of other animals, and despite the undeniable biological constraints on our social interactions -- it also seems very doubtful that the intentional social sciences are wholly reducible to biology. For the intentional social sciences appeal to people's beliefs, hopes, etc.; and though these are neurophysiologically realized, the relevant families of neurophysiological configurations have to be identified, not by their neurophysiological characteristics, but by reference to patterns of verbal

> behavior in a person's linguistic community, to denotation and meaning, and to the things in the world that those beliefs, etc., are about. (Haack 2005, 101)

In other words, it is highly unlikely that all of inquiry is reducible to one truth. Archaeological practice is a paradigm in itself. Within the discipline of archaeology particular methodologies are learnt and practiced, particular ways of uncovering the past and as will be argued in the proceeding chapter, there are other ways of knowing the past leading to different interpretations of the past. It is unfeasible to suggest that: "the sciences are the only sources of truth" (Ibid, 102); as demonstrated in the above archaeological, hypothetical example. Moving the debate forward, the next step is to look into this in more detail as will be done in later chapters and specifically Chapter Five.

2.8 What does the truth tell us?

This chapter has been a very brief overview of the most prominent theories related to truth and where possible has stuck to understanding the justification project; as defined in the first chapter and extended in this chapter. This chapter is not an exhaustive account of theories of truth and has left many debates open. For example, in the section on constructivism, there was much left unwritten about the on-going debate on social constructivism and relativism. It is not possible to go into complete detail of every debate, within the space of this thesis. Instead, this chapter aims to give a broad overview and highlight themes that are relevant to understanding the nature of justification in archaeology.

This chapter has covered theories across the entire range beginning with correspondence theories and ending with pluralism. Several themes and conclusions can be picked out of the synthesis above.

Moving on to looking at philosophical theories of truth that deal more specifically with justification, classical theories of truth were first discussed. Correspondence theory is, arguably, the most simple of these. Truth is justified through correspondence with the world. A definition of correspondence has proven difficult to pin down. It is argued that correspondence may be a mirroring of reality or it could be just down to linguistic conventions. Therefore if, hypothetically, interpretation in archaeology is justified through correspondence, what does this actually mean? What is it for an interpretation to 'correspond' with reality or archaeologically, interpretation to 'correspond' with the archaeological record? How is this practically achieved, if at all? A major

objection to correspondence theories of truth is that it is not possible to gain an external 'god's eye view'; to compare interpretations and reality to check if they correspond. A further criticism of correspondence theories of truth is that they don't say anything of use. For example, how useful would it be for archaeologists to simply state that interpretations are justified through correspondence with the archaeological record? These are issues that will be explored in the next chapter when looking at archaeology in practice.

Exploring the correspondence relation in more detail, it was discussed that different forms of correspondence theory differ regarding the underlying nature of justification. Correspondence theory may create an unnecessary division between theory and truth. Working through the archaeological theoretical literature, it was posited that this was not an attractive prospect to a discipline that has tried to move away from theoretical divides. This is something that will have to be considered when applying correspondence theory of truth to archaeology.

The second classical theory of truth discussed was coherence theories of truth. Coherence theories of truth focus on the relationship between theories/beliefs/statements/interpretations and how they cohere together. As with correspondence theories of truth, there are a number of different versions which differ on what it is for interpretations to cohere and also the relationship of interpretations with reality. It is noted that it is not controversial to suggest that it should be expected as part of justification that any justified interpretation would cohere with other justified interpretations. This is backed up by the archaeological theoretical literature which seems to agree that coherence is part of archaeological justification. In the next chapters, in looking at how justification works in archaeology from several angles, any discussion of coherence needs to consider the nature of what it means for interpretations to cohere with each other. Is coherence a central condition under which interpretations are justified or is it just a desirable characteristic of justified interpretations? Further, if coherence occurs what is the nature of the relationship between interpretations and reality?

Next social construction was explored; this is something that was briefly covered in the previous chapter in terms of the recognition in archaeology that all interpretation is theory laden. In this section it was seen that the literature varies greatly, from an extreme social construction to one that is less so. It is also shown that social constructivism is an element in other theories of truth and not necessarily in opposition to other theories of truth. Social constructivism is particularly closely related to pragmatist theories of truth and pluralism. In pragmatism it is accepted that our experience of the world are in some way socially influenced. In pluralism it is accepted that given that there are different ways of knowing the world this can lead to plural accounts of the past. Therefore, in the next chapter, when working in the field, how much is interpretation biased by our own ontologies?

In Chapter Four, looking at the interpretation of grand narratives, how much are archaeologists influenced by social constructs?

Pragmatism is related to both correspondence and coherence theories of truth as within a pragmatist view of truth correspondence and coherence are part of scientific inquiry. Pragmatism emphasizes the practical: truth is a practical endeavour (truth is not an observer sport) and is defined in terms of the practical (though there is a lot of debate about what exactly this means). Discussions on pragmatism can be found in archaeological theoretical literature. Truth is also open to revision until the end of inquiry. Truth is what is satisfactory to believe as frequently those knowledge claims that work on a practical level are shown to be true. Truth is still guided by inquiry and correspondence and coherence methods are valid methods of inquiry. There is a strong case also to suggest that though truth may be defined in one way, there are multiple truths. Understanding reality is a social endeavour, it is interactive and we bring our own ontology into any justification. An issue that will be explored in future chapters; do archaeologists aim for a single interpretation or multiple interpretations? Pragmatism in archaeology follows these main principles, though evolves the concept of practicality towards the concept of 'value'. Therefore, in Chapter Five this will be explored further. If pragmatism views the conditions of justification as what is satisfactory to believe, what does this exactly mean for archaeology and how does this impact archaeological practice.

This chapter has shown that there are many different theories regarding truth in philosophy which can be used to understand the underlying structure of how archaeologists formulate and assess truth claims. Though a rough structure is highlighted above, the next question is how does justification work in practice? The next chapter considers what theories of truth are at play in practical archaeology.

Chapter Three
Justification in the field: Çatalhöyük

3.1 Introduction: Thinking about the practical consequences

It has been remarked that there are many textbooks on the archaeological method but there are very few that state what the end-product is supposed to be (Tilley 1989a, 275). To complicate matters, theory and practice have historically been detached (Andrews *et al* 2000; Chadwick 2003; Hodder 1992). Theory is something done away from the field. Excavation and interpretation are separated (Berggren & Hodder 2003). This view has been widely abandoned since the 1960's and archaeology is now viewed as more than mere data retrieval (Lucas 2001, 11). Archaeology is not the same as excavation or prehistory.

As Tilley (1989a) points out, fieldwork is an interpretive exercise. To say that fieldwork is devoid of theory, is like saying interpretation is devoid of data. Hodder (1989; 1997) identified this contradiction within British fieldwork. Hodder argues that interpretation is prior to, or embedded in, excavation but there is the pretence that data collection is prior to interpretation; that description can be separate from interpretation.

The central aim, of this chapter, is to look at how knowledge claims are justified in the field, though clearly archaeological excavation is only one form of archaeological practice. This chapter aims to apply the theories of truth covered in the last chapter to look at knowledge construction in the field. What do archaeologists actually do and which model of truth applies to this? What model is used in practice as opposed to in theory? Is it possible that we think that we are following a particular model but in fact are using a very different conception of truth?

The case study of Çatalhöyük was chosen due to the reflexive method and the MOLAS system used on site. This chapter aims not only to look at how theory and practice relate, but also how archaeologists support truth claims in the field. Çatalhöyük provides the ideal case study for this; though some of the methodology is experimental with few imitators, on site they think a lot more explicitly about what they do making it possible to answer the general research questions of this thesis, in particular identifying the character and role of truth in archaeology. The practical techniques used on site are heavily based on British unit methodology. Alongside more traditional methodology, different methods of recording on site make it possible to analyse knowledge production at the many different stages. The completion of context sheets are as you would find on

any rescue excavation in the UK. Additional methods of recording are used, for example video and individual diaries.

The reflexive method was born out of the post-processual theoretical movement as a way of practically dealing with the multivocal nature of archaeological research. Given that the reflexive method is not a universal one; the first section defines the reflexive method: understanding how it impacts justification and what extra evidence it provides on how archaeologists justify interpretations. The overall remit being, what does this method tell us about archaeological epistemology?

Going deeper into the specific methodology on site, the next section will look at knowledge creation from an ethnographic angle, looking at what occurs on site. This section questions whether in fact knowledge is constructed through discourse. The diaries are then considered as an insight into a particular methodology employed in the reflexive method. This study contributes to assessing the reflexive method and answering the question: does this methodology differ from normal archaeology? It is important to assess the use of the diaries as they are used extensively in later sections.

The sections so far in this chapter will aim at setting the scene and show how justification is conceived in theory. The rest of the sections of this chapter focus on applying philosophical theories of truth (as detailed in the last chapter) to archaeological fieldwork. Following the interpretation of one wall, and how interpretation evolves through publication, will illustrate how archaeological epistemology works in practice and which theory or theories of truth apply to archaeology.

3.2 The Reflexive Method

The many ideas and theories of the last twenty to thirty years have had a lasting effect on archaeological literature. Words like hermeneutics, agency, pluralism, multivocality, reflexivity and so on, are familiar in the archaeological literature. The greatest task is how to deal with the consequences of the changes in archaeological theory that have occurred since the 1980's.

Reflexivity reached anthropology in the 1960's through sociology (Salzman 2002, 805). The anthropologist Scholte viewed reflexivity as a paradigm shift from a scientific, objective, value-neutral perspective to a hermeneutic, relativistic, emancipatory perspective (Scholte 1972). Following Scholte, reflexivity can be defined as "the constant awareness, assessment, and reassessment by the research of the researcher's own contribution/influence/shaping of the intersubjective research and the consequent research findings" (Salzman 2002, 86). The use of

reflexivity in anthropology stems from the view that a researcher's 'position' shapes perception and cognition. Reflexivity aids a researcher to accept these limitations and accept that there are different views and perspectives. By the 1990's it was common for ethnographic reports to include some type of 'reflexive' discourse (Ibid, 807).

As these developments were occurring in anthropology, archaeologists were re-synthesizing their understanding of archaeological practice itself, in the face of more theoretical concepts. Tilley (1989a), in comparing archaeology to a cake that is expected to bake itself, calls for a more integrated approach to archaeological excavation: to keep excavating, in the present manner, is irresponsible, i.e. frantic attempts to collect more and more information without the means to deal with it. The post-war period saw a division between the practicalities of excavation and interpretation. Within excavation, particularly rescue, all possible evidence is recorded so that at some future date it may be interpreted by an academic (Ibid, 275-6). Tilley argues that excavation should be used as an interpretive exercise, not as information collection, to develop a reflexive and more mature archaeological practice (Ibid 277-8). Current recording procedure "deny the importance of the fundamental basis of all excavation: that it is an autobiographic, subjective, socially determined and often fundamentally ambiguous and/or contradictory set of interpretive activities." (Ibid 278)

Tilley makes use of the analogy of performance (or the theatre) for archaeology: both being something that is not always a direct reflection but always a production, an interpretation. Every production is also an individual one; any narrative of the past will also include the narrator's or the archaeologist's point of view (Shanks & Tilley 1992, 19). Tilley's work echoes many of the themes in the section on social construction in the previous chapter. Justification is an individual act; different individuals will reflect and interpret in different ways.

Interpretation occurs at every level in archaeology. Excavation is always determined by prior interpretation (Hodder 1999, 81). Theory not only constructs objects, it also decides whether we find objects at all. Whether we wet sieve, dry sieve or the size of the mesh, all have an effect on what is found. How we construct and define contexts impacts interpretation. Everything depends on the hermeneutic circle (Ibid, 85-6). As discussed in the first chapter, the process of justification is not a linear act but a circular process between evidence and theory.

Multivocality was part of the originally conceived reflexive method (Hodder 1997; 2000). Different groups have different interests and views which impacts the way they view the past. At Çatalhöyük there are numerous different groups with different interests:

> "on the one hand, a global and multinational commercialism and homogenisation which views cultural difference at play and pastiche and, on the other hand, an increasingly fragmented world of competing identities, ethnicities and nationalism within which the past *matters* very directly. 'Hotel Çatalhöyük' may be a long way from 'Hotel Auschwitz', but it raises some of the same concerns about the clash between on the one hand, the past as play, postmodern façade, commodity, resource and on the other hand, the past as passion, depth, history, ownership." (Hodder 1998, 125)

The majority of research attached to archaeology embodies a Western perspective. This has historically been the case. The interpretation of the Near East has been embedded within, as Said (1987) described it, "Orientalism" or within postcolonial theory the 'other'. Difference has played a major role in western thought: the unconscious creation of the 'other' (Gosden 1999; 2001). All history is culturally ordered (Sahlins 1985). Archaeologists need to not only consider the context of a site but also the peoples of the local area. As Gosden (2001) highlights this creates an internal tension. If all cultures, as Bhabha (1994) holds, are of hybrid origins it is not possible to think in terms of the 'other' as the picture is much more complicated. Reflexive archaeology needs to account for the context of different peoples' views and at the same time not make presumptions or assumptions about these different peoples. This postcolonial turn, a questioning of any essentialist view of culture, has given way not just to reflexivity but impacted archaeological justification at a more general interpretative level (Gosden 2001),

One of the earliest discussions of the reflexive method is Hodder's (1989) paper on writing site reports. Hodder looked at different site reports dating back to the 1770's. Early reports are full of personal details; the findings located contextually in terms of the contingent. Personal accounts show the sequence of discovery. During the 19th century reports changed, from being organized according to the sequence of excavation and events, to specialist reports that concentrated on arranging material by typology. During the 20th century reports became more and more formalized. Hodder calls into doubt the value of more formal styles of writing and calls instead for a method that brings the narrator, narrative and dialogue back into site reports (Ibid 271-3). The issue here is that changing report style may lead to a different form of justification. Within more formalized recording procedures there are, arguably, greater limitations of what can be recorded and how it is recorded. Justification is thus constrained by rules of what is acceptable within a particular system.

The first publication explicitly related to the application of a reflexive method occurred almost a decade later. A number of sites have practically applied post-processual theories: Çatalhöyük, on the Konya plain in south central Anatolia (Hodder 1996; 1997); Leskernick, Cornwall, UK (Bender *et al* 1997; 2007) and Perry Oaks, Heathrow, UK (Andrews *et al* 2000).

The aim of the Stone World project at Leskernick Hill was to document how people experience things, both physically and emotionally, from a particular point of view (Bender *et al* 1997, 149). Concentrating on the practical application of a phenomenological perspective of landscape, the aim was to "explore the prehistoric symbolic continuum from house to field to stone row and stone circle to distant cairn on the horizon." (Ibid, 150) Another objective was to look at the process of doing archaeology, to highlight the alternative site histories generated by the daily process of archaeology that are usually lost in standard recording. It is not clear if these objectives are fulfilled. Site descriptions and excavation findings are dissected by more personal insights (diaries written by all three authors).

The reflexive method requires a greater level of participation of different groups and also a greater openness. Archaeology has been increasingly concerned with the ethical ramifications of interpreting the past (Meskell & Pels 2005; Scarre & Scarre 2006) and "[a]re archaeologists adequately fulfilling their responsibilities to the societies within which they work by arguing for a separation between data and interpretation?" (Hodder 1997, 693) The reflexive method not only requires that different levels of interpretation are recorded, but that all voices are included within the interpretive dialogue. Often with different views and interests they need to be included in the archaeological interpretive process. At Çatalhöyük this included site tours for anyone (from local to Mother Goddess groups to site specialists). Many chapters of Stone Worlds are written in conjunction with individuals from outside archaeology, including geologists, anthropologist and the inclusion of poetry (Bender *et al* 2007, 206).

What makes reflexive archaeology reflexive is a constant inward questioning of how interpretations are reached. For example, always questioning *a priori* assumptions by allowing different groups access on site and thus creating dialogue between different people with different viewpoints. The aim is to not take any interpretation for granted and to listen to all interpretations. Reflexivity, arguably, does not alter justification, per se, but makes us more aware of how interpretations are justified; this is something that will be explored in Chapter Five.

Within the reflexive method multiple different voices have a stake in the interpretation of the past. This appears very similar to the discussion on pragmatism, social construction and pluralism in the last chapter. There is an emphasis on different ways of seeing the world as different individuals/groups/peoples have different ways of seeing the world. This means that there is a plurality of interpretations. Interpretation is also a practical endeavour, data collection and theory are not separated, the interpreter is immersed and part of the world he/she is trying to understand. The question then is 'how does this work in practice?' Is this an accurate representation or does justification work differently? A brief discussion of the reflexive method does open up some

questions specific to the reflexive method, for example, are multiple theories held up to the same 'standards' of justification? Does this recognition impact how archaeologists justify their own interpretations or change the conditions under which interpretations are justified? Some of these questions will be dealt with below and some will be picked up in Chapter Five.

3.3 Çatalhöyük

To look at knowledge creation, at how archaeologists make decisions between competing claims and how theories of truth apply to archaeology on site, the case study of Çatalhöyük is used. These next sections are a broad introduction to the site and methodology employed on site.

The site of Çatalhöyük was first excavated in the 1960's by James Mellart and was identified as a large densely packed Neolithic town of significant archaeological importance. Further work at Çatalhöyük resumed in 1993, with surface survey and excavation commencing in 1995 (Hodder 2005, 1). The site is an important example of the development of Mediterranean societies and Anatolian societies in particular. The aim of the project, given the site's importance both locally and internationally, was to set up a well-planned heritage site. The project deals with field research, conservation, restoration and heritage management (Hodder 1996, 1).

The Neolithic town was occupied between 7400 BC and 6000 BC and was lived in by 3000 to 8000 people. There were 18 levels of occupation. People built new houses on top of the old ones, which they abandoned and filled in (Hodder 2006, 1). Mellaart's work opened up wide areas of the western mound but only 4% of the mounds were excavated and none using the full range of modern scientific techniques (Hodder 1996, 2). Many questions remained unanswered by the 1960's excavations. Questions regarding "paleoenvironmental and paleoeconomic reconstruction, the early development of the site, relationships with other sites, the degree of centralization and specialization of production, the degree of social differentiation and its relationship with elaborate symbolic behavior"(Ibid, 2-3). Many things have changed in archaeology since the 1960's excavations, not least scientific techniques but also our understanding of Neolithic Anatolia. Çatalhöyük is not as distinctive as previously thought and is now interpreted as part of a wider trend in the area, and yet, still embodies its own uniqueness. New excavations therefore contribute to an understanding of the sites individuality and the wider context (Ibid, 3-4).

3.3.1 The methodology of Çatalhöyük

This chapter will not look at the major archaeological findings from Çatalhöyük but at the methodology of the site and the philosophical ramifications of this. The aim at Çatalhöyük is to use a reflexive methodology with four principles. Firstly, to be critical of assumptions and things taken for granted. Second, to be relational or contextual as all meaning is relational:

> "Everything depends on everything else. So to interpret involves creating circuitry between participants in the project and between different types of data. One implication is that conclusions are always momentary, fluid and flexible as new relations are considered."(Hodder 1997, 694).

Thirdly, is the need to be interactive; to provide information which can be questioned and approached from different angles. Finally, there is a need to be reflexive, multivocal, open and transparent, so that anyone from anywhere can participate in the discourse regarding the archaeological process (Ibid).

At Çatalhöyük the intention was to allow, over the long term, the development of methodologies associated with a post-processual position. This would be in the form of new ways of recording and working in the field. The key aim was not to define typologies and terminologies on *a priori* ground but base them on local and general information: "[c]ontextuality leads to multivocality, interactivity and reflexivity" (Hodder 1996, 6). The 1993-1995 seasons set the stage to get beyond the surface. Traditional methods were followed until enough contextual information had been gained. During these seasons ethnographic fieldwork was conducted in Küçükköy (the closest village to the site). The aim was to firstly, consider whether knowledge of local village life could help in understanding the archaeology and secondly, examine the setting of the archaeological research; the anthropology of archaeology (Shankland 1996, 350): providing an understanding of the archaeological social reality and social reality from an alternative perspective.

On site the single context method is employed as part of the reflexive method, though it is more frequently associated with projects employing more traditional methods. 'Single context recording' was first used in 1975 by the then Department of Urban Archaeology (DUA) of London Museum (Spence 1993, 25). This method was developed as a response to the practical circumstances of urban rescue excavation. Each and every context (or stratigraphic unit) has its own individual plan and written record. All relationships between contexts are mapped on a Harris matrix. This allows flexibility in recording, as stratigraphy of a site could be reconstructed virtually, reworked and re-examined (McAnany & Hodder 2009, 6). This method puts a greater responsibility

on individual excavators; who were now expected to define, plan, record and excavate their own contexts. The advantage to such a methodology is that, firstly, a much more accurate and detailed record is kept, updated constantly throughout excavation. Secondly, the archaeologists recording and interpreting would be the one best situated to do so, having a better and close understanding of the contexts they themselves are working with (Spence 1993, 25-6).

Single context recording is seen as moving towards a reflexive method as it democratizes the excavation process: the director or site supervisor no longer has sole right to record. The technique encourages more participation, not only in terms of who is recording but also the increased amount of interpretation required to fill in a context sheet (Hodder 1999, 94). Single context recording was originally not intended to support a multivocal method but to deal with large and complex urban sites, in the most effective and objective way possible. The DUA's main requirements, for a recording system, were that it be able to capture large quantities of data in an accurate, comprehensive and quick manner. Further, the system would have to establish stratified archaeological sequences, allow verification of these relationships, incorporate artefactual and environmental material to support context recording and be able to do this regardless of what features were discovered or what the practical conditions of the excavation became (Spence 1992, 26). Single context recording stuck to the central tenets of 1970's and 1980's excavation methodology: the preservation of the archaeological past through recording and the objective collection of data (Chadwick 1997).

The problem with single context recording, in supporting a reflexive method, is that it bears little relation to the archaeological process: "[t]hey provide an interpretation of what was seen, but separate from what was done" (Hodder 1999, 95), the running narrative is lost. One way to reclaim this on site has been through personal diaries, which will be discussed later in greater detail.

Interaction between specialism's (e.g. ceramic, faunal, lithic, archaeobotanical, exactor) is enabled through site tours and onsite primary processing. Site tours occurred every other workday and were given by the area supervisor, who would describe the latest excavated deposits, latest interpretation and any problems or anomalies (Farid *et al* 2000, 19). At the end of every week, all team members took part in a tour of different areas. These tours are videoed. Conversations and questions pass between field specialists and laboratory specialists.

Site tours enable the contextualising of specialist information. They also empower and inform members of the excavation team: the more the team know about the artefacts coming out of the ground, the more interpretation on site is facilitated. Methods and recording techniques can be adjusted according to findings. New technology assists in getting information to the excavator as quickly as possible (Hodder 1997, 695). This discourages the idea that excavation is an objective

mechanical process and instead encourages the idea of interpretation at the trowel's edge (Hodder 2000, 7).

Recording categories on site are flexible. Artefact categories are evaluated against context information and vice versa (Hodder 1997, 696); the notion of fixed objective categories is abandoned. This is done through the ever growing site database. The Çatalhöyük database acts almost as the central hub of the reflexive method: specialist findings, personal diaries are all kept on the central database. Another move towards a reflexive practical archaeology is the completion of personal diaries, which it is hoped shows the narrative of interpretation as it happens. Originally video diaries would be kept on a daily basis; visual stimuli is an important aspect of the context of knowledge production (Ibid). The premise behind the video diaries was to allow for an openness of recording not found in the context sheets.

The database is also used to facilitate as much participation as possible, by placing the entire database on the web. The openness enhances multivocality in encouraging participation and engagement within the research process (Hodder 2000, 8). Another example of dissemination, of the research process, is the presence of a virtual Çatalhöyük on the web. Via 'Second Life' anyone can visit a virtual representation of the site, wander around the site and even take site tours with particular individuals from the team.

An intensive sampling regime is implemented at Çatalhöyük. Archive samples, flotation samples, and other samples, dependent on the context are taken. The site tours, by non-field specialists, feeds back into the sampling procedures. On the site tours, laboratory staff and field staff discuss sampling and the prioritizing of certain contexts. Sampling procedures change in relation to interpretation onsite, as it is happening (Hodder 2000, 6). Some samples are taken by laboratory staff but most are taken by field staff under strict guidance as this was the most practical method (Farid *et al* 2000, 23).

These are some of the twelve tentative steps that Hodder defines towards a 'multivocal' and 'reflexive' archaeology (Hodder 2000). These steps emphasize a plurality of different ways of knowing the past and suggest that, in some way, interpretation is socially constructed. As discussed in Chapter One, post-processual archaeological theory demonstrates how we always see through a cloud of theory; the steps discussed above take account of this. For example, by defining typologies and terminologies locally allows a greater flexibility to recording categories, arguably, overriding *a priori* assumptions as much as possible. Further, additional methods of recording make it possible to look deeper at the narrative of interpretation and understand the context of knowledge production. Looking at the methodology on site does not provide explicit insights into how interpretations are justified but does provide certain clues. On site, justification is already assumed to be in some way

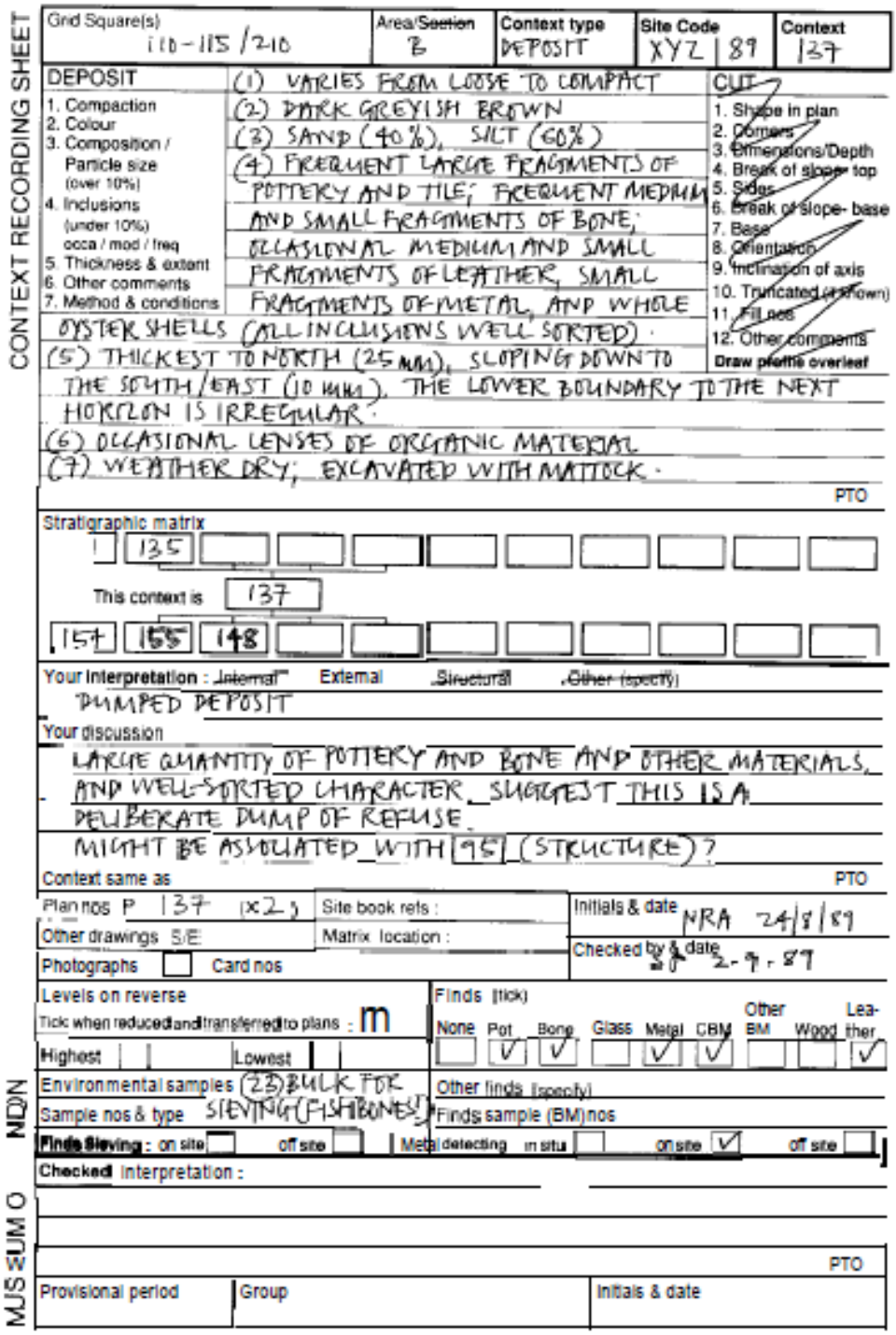
impacted by *a priori* conceptions. Interpretation embodies a hermeneutic characteristic and fits within a coherent theory of truth, theory and evidence all have to fit together. Typologies and terminologies are built through surface studies, and are then used to further examine the site; there is a tacking between theory and data. To understand if the theory matches how justification on site works, we need to look at interpretations being built from the ground up.

3.3.2 Excavating on site

To discover how the theoretical methodology at Çatalhöyük compared to the reality, I spent the 2008 season working as an excavator on site. This section may be taken as my personal insight into the excavations and the reflexive methodology but it seems fitting given Hodder's (2000, 8) twelfth step towards a reflexive archaeology: anthropologists working on site studying the construction of knowledge on site and to question assumptions. Clearly, this brings my own ontology into play, my own views of social reality and someone with different training may have seen different things; read things differently.

This section focuses on the reflexive method from an ethnographic angle. Ethnography of archaeological practice is an increasingly popular area of interest (Edgeworth 2006). This has come out of recognition that archaeology is interwoven with other social and cultural systems. Archaeological evidence is not only a material reflection of the past; archaeological evidence is also a material reflection of the practice of archaeology itself and therefore, a reflection of present day social and cultural systems. Ethnographic studies of archaeology have been used to study the 'act of discovery': how evidence emerges and is shaped and applied. Archaeological knowledge is applied to make sense of the material evidence and vice versa; this two way dialogue is mediated socially (Edgeworth 2006a). It was with the 'act of discovery' in mind that I began my fieldwork at Çatalhöyük.

The first thing that struck me on site was the use of the single context system and the presence of many very experienced excavators on site, from contract archaeology. Context sheets, or as they are called on site, unit sheet (fig. 2) were adapted from MOLAS context sheets (fig.1). There are five different types of unit: layer, arbitrary layer, cluster, skeleton and cut.



9 An example of a completed general Context Recording Sheet.

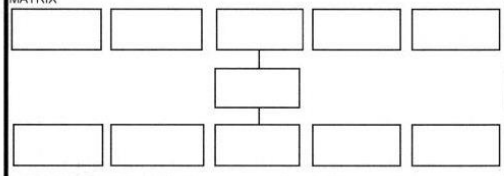
Fig. 1 MOLAS context sheet (Brigham, Spence *et al.* 1994)

UNIT SHEET

ÇATALHÖYÜK	MOUND: East	YEAR: 2007	AREA: SOUTH	UNIT NUMBER
INDICATE BY CIRCLE	NOT EXCAVATED		PRIORITY	FAST TRACK
FEATURE / SPACE	BUILDING		GENERAL CATEGORY	
INTERPRETIVE CATEGORY	PROBABILITY: LOW MEDIUM HIGH		ALTERNATIVE	PROBABILITY: LOW MEDIUM HIGH
DATA CATEGOR	FILL FLOOR CONSTRUCTION MIDDEN ACTIVITY NATURAL ARBITRARY | CUT | CLUSTER | SKELETON			
DATA SEARCH FIELDS	In Situ?	Location	Description	Material / Deposition / Basal deposit?
MID X AND Y	DIMENSIONS			

	DESCRIPTION
METHODOLOGY:	
A. RECOGNITION	
B. DEFINTION	
C. EXECUTION	
D. CONDITION	
LAYER AND ARBITRARY LAYER	
1. CONSISTENCY	
2. COLOUR	
3. TEXTURE	
4. BEDDING	
5. INCLUSIONS	
6. POST-DEPOSITIONAL FEATURES	
7. BASAL BOUNDARY	
CUT:	
1. SHAPE IN PLAN	
2. CORNERS	
3. TOP BREAK OF SLOPE	
4. SIDES	
5. BASE BREAK OF SLOPE	
6. BASE	
7. ORIENTATION	
8. ALL LAYERS WITHIN CUT	

MATRIX



PLAN Nos

SECTION Nos

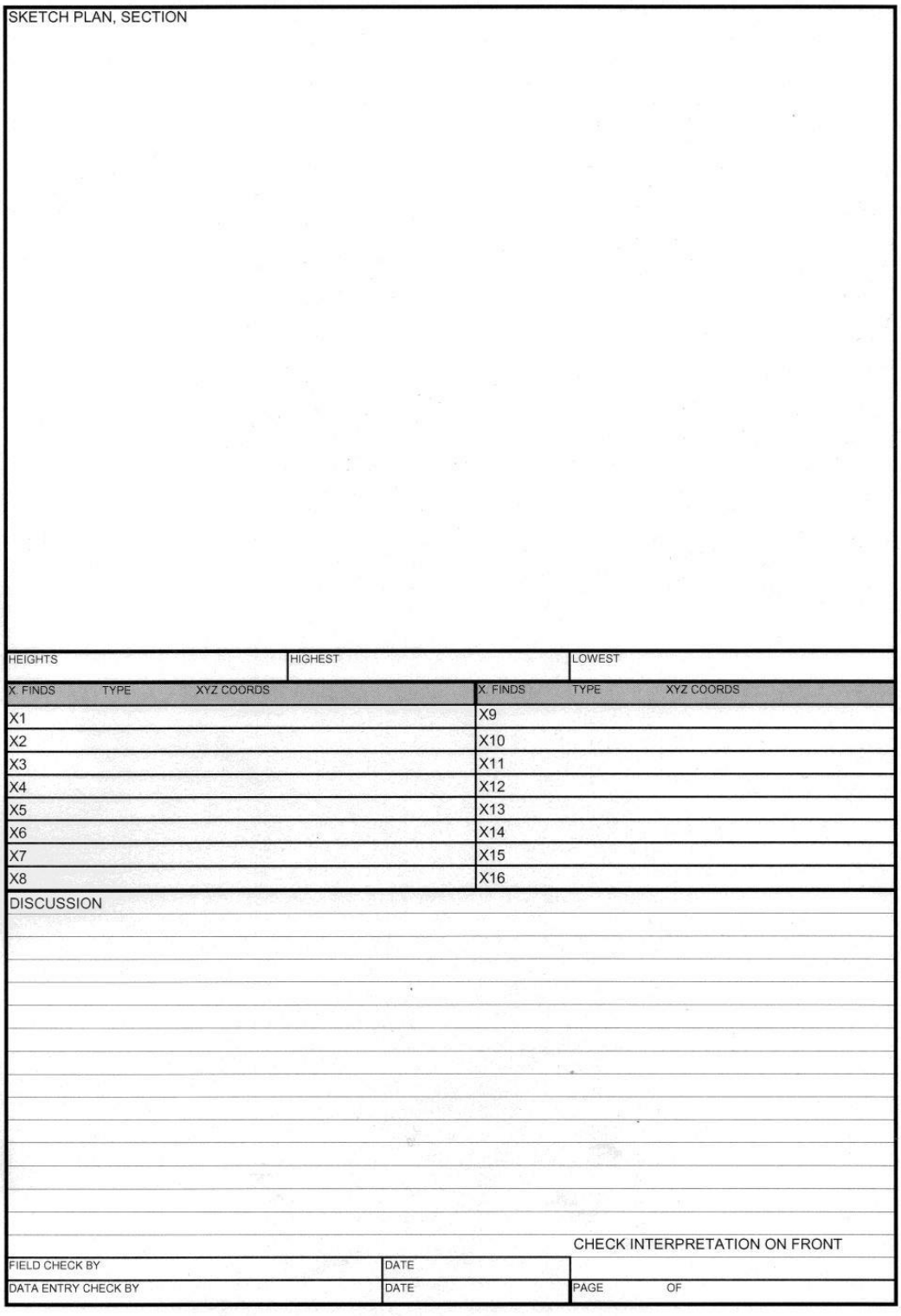
PHOTO YES ☐ NO ☐

SAME AS

SAMPLES	TOTAL VOLUME OF DEPOSIT IN LITRES	VOLUME DRY SIEVED	
NUMBER / SAMPLE TYPE	XYZ COORDS	REASONS FOR COLLECTION	AMOUNT
S1			
S2			
S3			
S4			
S5			
S6			
S7			

IN SITU CONSERVATION	NAME AND DATE

UNIT SHEET



SKETCH PLAN, SECTION

HEIGHTS	HIGHEST	LOWEST

X FINDS	TYPE	XYZ COORDS	X FINDS	TYPE	XYZ COORDS
X1			X9		
X2			X10		
X3			X11		
X4			X12		
X5			X13		
X6			X14		
X7			X15		
X8			X16		

DISCUSSION

CHECK INTERPRETATION ON FRONT

FIELD CHECK BY	DATE	
DATA ENTRY CHECK BY	DATE	PAGE OF

Fig. 2. Çatalhöyük Unit Sheet (Courtesy of Çatalhöyük Research Project.)

Though similar, a number of changes were made to the MOLAS context sheet, as part of the reflexive method. 'Interpretive category' was added to provide a more specific definition of the unit being excavated: this could be fill, floor, midden, hearth, etc. Added to this was a probability criterion of low to medium to high. If unsure about an interpretation, alternative interpretations could be entered on the unit sheet. We see a move away from an underlying assumption that there is just one secure interpretation. However most individuals, specifically the more experienced excavators, rarely filled in these boxes with more than one interpretation or circle anything other than 'high probability'. Arguably, this behaviour by experienced excavators could be due to the way they have been trained; ambiguity is not embraced as the excavators are trained to provide a single interpretation.

At first excavators used a diverse range of terms in the interpretive category, which allowed a fluid individual approach and in turn, this led to discovering what terms were necessary for the site. From the 2000 season a systematic set of terms was introduced (Hodder *et al* 2007, 14). As discussed in the previous section on methodology, the key aim on site was not to define typologies and terminologies on *a priori* basis. In terms of knowledge formation the aim is to overcome the impact of biases on interpretation. By allowing more locally defined terminologies, interpretations are not limited by categories and thus, terminology and typologies can be built that fit the context of interpretation.

There was some controversy on site regarding the 'interpretive category'. Some experienced excavators felt that the probability category questioned their expertise: they would not fill out the category in the first place if they did not know what it was. The systemization of the interpretive category was seen as nothing more than a semantic difference compared to other sites (it didn't matter what you called something as long as everyone knew what was meant) and despite a reflexive method, it still came down to ticking boxes and filling in sheets according to a systemized methods. This illustrates that within interpretation, it is very difficult to overcome the impact of *a priori* terminologies. Excavators on site are trained within a specific system, which impacts how they excavate and how they record what they excavate: this will always impact how interpretations are justified in the field.

Latour and Woolgar (1979) noted how what scientists choose to study is socially dependent. On site, decisions about how and what areas were excavated depended heavily on the archaeological record; a new cut or layer could change excavation tactics. These decisions were based on expertise gained over years of experience. One, therefore, could question how much a social role played into this. How much is this expertise, relative to the system it was gained in? Single context recording is

popular in UK contract archaeology but in other parts of the world different methods are used and obviously, method will impact interpretation.

Hume (1978) noted how humans are predisposed to think in certain ways. If a tree falls, one will think in terms of cause and effect, with fixed meanings of time and space. Are archaeologists predisposed when looking at the archaeological record to think in terms of layers on top of each other, cuts and more layers? What is decided in the recording process by the archaeological record and what is due to social and other norms? Despite all the theoretical questioning in archaeology; "the social meaning of stratigraphy-making tends not to be critically probed or extensively discussed" (McAnany & Hodder 2009, 2).

The reflexive method was met, by a number of people working on site, with an air of uncertainty and distrust. Some individuals didn't see how it affected them or how they were part of the process. Some aspects of the reflexive method were seen with some humour, for example, language was discussed in some length. Context sheets were called unit sheets. Only particular words could be used in completing context sheets, mainly because when entered on the database, only certain choices were available. Rumours spread about the idea of teams being referred to as pods, a more egalitarian, less loaded term. It didn't matter whether the rumour was true or not, it was questioned what effect calling something, one thing rather than another, could have. For some people, the notion that terminology is loaded was met with an air of scepticism.

The more time I spent on site the more it became clear that this doubt did not show itself in real terms. Discussion on site was integral to the on-going interpretation and excavation on site. Those more experienced passed on their skills to others. Excavation strategies would be discussed, agreed upon and re-discussed as further excavation took place. Interpretation was discussed in great detail and as the excavation progressed, this would develop. Discussion was always open, anybody was welcome to take part and their ideas would be criticized or developed by others. However, this is not an act specific to the reflexive method, arguably, these types of discussions take place on any site where two individuals begin discussing their opinions.

On one of the first days on site, discussion began regarding the large number of houses on level 6/7 that had been burnt compared to other levels and maybe this was a fashion during a certain time. Constant interpretation occurred in the field, as will be discussed later in this chapter, for example, the reinterpretation of one wall into two. What had been thought previously to have been one wall was in fact the wall of building 44, using the remains of the wall from building 56 as foundations. This raised a discussion regarding the idea that on-going interpretation was a dangerous thing, that there is a need to fully uncover stratigraphy before it is possible to have any type of matrix or interpretation.

Some conversations about the archaeology were much more general. Questions arose about what people did with the material from knocked down structures. Several ideas were put forward: dumped down the side of the mound, deposited as room fill for other houses, reused in some other way. Every member of the excavation team took part in the on-going interpretation. Ideas might be posited and forgotten in the same moment, but other ideas could affect the interpretation of the archaeology. One can imagine that when Hodder (1989) was discussing about recording the 'narrative of discovery' it was these types of debates he had in mind.

3.3.3 The Diaries

Given that interpretation is socially mediated, the reflexive method attempts to scrutinise this process closely to uncover how it affects and changes interpretation. This section can be seen as a brief departure from the overall remit of the thesis. Assessing the diaries does highlight certain issues. If archaeologists go down a reflexive route, are these new tools practical and do these tools offer new insights into interpretation. What do the diaries tell us about justification in archaeology, in the field?

As noted in the previous section, on methodology at Çatalhöyük, on site personal diaries were completed as part of the twelve steps towards a reflexive archaeology. The use of the diaries was intended to record the individual and shared social discourse of interpretation, to document the 'narrative of discovery'. The diaries at Çatalhöyük were meant to provide a better understanding of interpretation: to show how interpretation may evolve and change; to show the preconceptions and biases that affect interpretation and to contribute to the reflexive approach. Through the diaries, everyone has the opportunity to express their own views (Farid *et al* 2000, 25).

The diary entries, as well as being accessible on site and posted on the internet, were included in the site report (Hodder 2007). The diaries are used in the same way as other forms of data from site, for example unit sheets. Diary quotes are included within the narrative of interpretation of the site, within descriptions of particular spaces or units.

Despite the continued used of diaries at Çatalhöyük and an increasing number of other sites (Bender *et al* 2007; Berggren 2009; Roveland 2006), there has been no critical assessment of the use of the diaries, whether they succeed in performing the tasks given to them and in the end what effect they have. They diary entries are available online to be viewed by anyone[3]. The diaries are analysed

[3] All diary entries are available at http://www.catalhoyuk.com/database/catal/diarybrowse.asp

firstly, through textual analysis to show the themes discussed in the diaries. Secondly, whilst on site during summer 2008 I interviewed members of the excavation and lab teams on site to gain a better understanding of the attitudes towards the diaries. Finally, the uses of the diaries in the publications on Çatalhöyük are considered (in a later section), particularly the only currently available site report (Hodder 2007). By looking at the diaries, from these multiple angles, it will be possible to show what affect they have and make certain recommendations for the future use of diaries on any archaeological excavation. However, the central aim of looking at the diaries is to add to an understanding of how knowledge is made; how interpretations are justified.

3.3.3.1 Discourse Analysis

Philosophy of language and semantics are complicated and multi-faceted. Discourse analysis or textual analysis is a way of evaluating text (Gee 2005). The first step in analysing the diaries was to identify certain themes in the diaries. These headings balance both the contents of the diaries and the original conception of the role of the diaries. Someone else may have highlighted different themes and created different categories. Below is a definition of each heading as used for the analysis of the diaries with examples[4].

Personal – These are comments of a personal nature and have nothing to with the excavation. These entries often have little or no bearing on the interpretation on site, though the diaries are meant to possibly show how biases and personal preconceptions affect interpretation.

> "Feeling much more neolithic after Thursday's party and a day off in Konya. Gen was sick today, what a pity on her birthday" (Diary Entry 30/06/2007 ER)

Interpretation – Any discussion regarding the interpretation of the archaeology on site. This can be very general or about a particular context or feature. This theme is, arguably, the closest to the original aim of the diaries. Over a series of diary entries it is possible to show how interpretation of a particular feature changed. These discussions are often over multiple entries by multiple persons. Certain entries also discuss wider interpretations of entire houses, or sections or even site-wide.

> "The wall that we thought divided space 329 with the hearth, from space 333 with the oven may turn out to be earlier than the use of both as there now appears to be collapse from the wall under surfaces

[4] All spelling and grammar mistakes are kept as original entries.

that appear to respect the oven. So it may mean this wall has already gone partially out of use as a division which makes the area more open and perhaps reinforcing the idea that this is a communal space or yard." (Diary Entry 07/07/08 RR)

Political – This is any comment regarding discussions about site methodology that has a 'political' nature, for example, disagreement/discussion regarding current events, interpretation or methods on site. These are often over a number of diary entries from different people venting their own views.

"Health and Safety on site. I do not wish to be controversial for the sake of it, and this will be my last comment on these issues since my own thoughts on the matter are by now fairly well known. Really I would just like to express my disappointment, after a very positive start to the season, regarding Trench 7." (Diary Entry 26/07/08 JST)

Report – Entries that include information that could be found on a unit sheet, reports on excavating particular features or contexts. No added information is gained from these entries; what is stated simply repeats what is recorded elsewhere.

"Space 340 is made up of four walls, features 2428 (units 16853 and 16854), 5052 (16855 and 16856), 5053 (units 16857 and 16858) and 2413 (units 16851 and 16852)" (Diary entry 26/07/08 TEB)

Life on site – This is any comment that does not directly relate to the archaeology but is related to activities on site. This ranges from comments about the weather to comments about who someone is working with on site. These entries provide an interesting perspective of life on site, though they may have little directly to do with the interpretation of the archaeological record.

"The first day was spent clearing the pottery lab of stored equipment and helping ready the dig house. The next couple of days were spent cleaning up the South area, under the main shelter, ready for excavation and to make the area more presentable for visitors." (Diary entry 14/06/06 DE)

Methodology – Entries regarding the discussion of methodological issues on site, including the criticism of current methodologies or ideas to improve methodologies. Like political discussion this can span a number of diary entries by different people.

"Our aim is to get down to a consistent Phase level over the whole area and this should happen over the next few days barring unexpected complications. Its good not to have to do the full sampling strategy as we are going through floors and their are loads." (Diary Entry 03/07/04 RR)

Each Diary entry was analysed under the above headings. It is possible for an entry to come under one heading or under all headings. Diaries from the years 1996 to 2010 were assessed. 2000 to 2002 (no entries in 2000 and 2002, and only 2 entries in 2001) were excluded as there were too few diaries to analyse. 2000 and 2001 were study seasons and 2002 was a writing season, hence explaining the low number of entries in these years.

To make it possible to compare the results of the textual analysis, the number of diary entries for each category in each year was calculated (table 1) and by a percentage of the total number of diaries for each year (table 2). Finally these results were then used to create the line graph (fig. 3).

The results of the textual analysis do not show any definite trends. Report entries remain consistently high, as would be expected given that the diaries are regarding an archaeological site and any discussion of the evidence would be expected to include details of units, features and their characteristics.

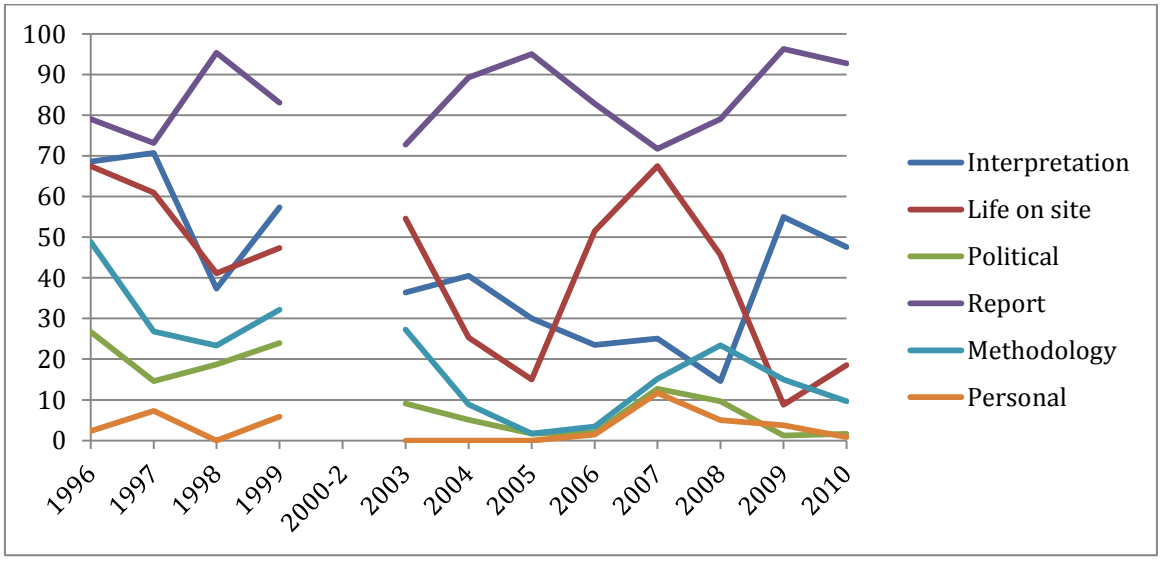


Fig. 3 Line graph of results of textual analysis as percentages.

	1996	1997	1998	1999	2003	2004	2005	2006	2007	2008	2009	2010
Interpretation	59	29	40	98	4	64	18	48	71	35	44	59
Life on site	58	25	44	81	6	40	9	105	191	109	7	23
Political	23	6	20	41	1	8	1	4	36	23	1	2
Report	68	30	102	142	8	141	57	169	203	189	77	115
Methodology	42	11	25	55	3	14	1	7	43	56	12	12
Personal	2	3	0	10	0	0	0	3	33	12	3	1
Total number of entries	86	41	107	171	11	158	60	204	283	239	80	124

Table 1 Results of textual analysis

	1996	1997	1998	1999	2003	2004	2005	2006	2007	2008	2009	2010
Interpretation	68.6	70.73	37.38	57.31	36.36	40.51	30	23.53	25.09	14.64	55	47.58
Life on site	67.44	60.98	41.12	47.37	54.55	25.32	15	51.47	67.49	45.61	8.75	18.55
Political	26.74	14.63	18.69	23.98	9.09	5.06	1.67	1.96	12.72	9.62	1.25	1.61
Report	79.07	73.17	95.33	83.04	72.73	89.24	95	82.84	71.73	79.08	96.25	92.74
Methodology	48.84	26.83	23.36	32.16	27.27	8.86	1.67	3.43	15.19	23.43	15	9.68
Personal	2.33	7.32	0	5.85	0	0	0	1.47	11.66	5.02	3.75	0.81

Table 2 Results as percentage

Entries regarding life on site started high and decreased before rising in 2006, peaking in 2007 before dropping again. These entries could be viewed as a consistent element of the diaries. It is to be expected that discussions regarding the site would include information about who is doing what and occurrences on site, for example, the weather. These are things that affect every season. The peak in 2007 is partly explained by the large number of diary entries by members of the West Mound Buffalo/Cambridge team. Unlike the rest of the site, in this area there was a strong push for people to complete diary entries every day. Many of these people were students rather than expert diggers and very few of the student diary entries discussed the archaeology directly; instead they included more about personal experiences on site. For example from an experienced excavator:

> "Two small sections of wall remained from building 60 above and were the first units to be removed planning the lowest course. The first to the south F. 2216 made up of units (13473) and (13474) bricks and mortar respectively. The second to the east F.2215 consisted of units (13471) and (13472)." (Diary Entry 24/06/07 MH)

And from a student excavator:

> "I also found a some infant human bones and managed to creep out Peter by orientating them on my own arms. It is still very exciting handling human remains, which is perhaps a very morbid thing to say but there it is! It is strange to think that what I hold in my hand was once a part of another human being, and the thought of some future archaeologist casually brushing soil from my bones in the future is a little disconcerting! Nonetheless, I never expected to be in so much contact with skeletons and I am keen to do some work on human remains in the future" (Diary Entry 30/06/07 KH)

The difference can be easily seen. The experienced excavator discusses units and does not elaborate more than what can be found on a completed context sheet. On the other hand, the student excavator's entry is more of a personal account of the individual's day with little discussion regarding the interpretation of the archaeology directly. The diaries therefore also demonstrate how training transforms the mode of discourse.

Methodological and political entries follow similar trends, peaking in the first years before slowly declining. Frequently disagreements on site (categorised as 'political' entries) regard methodological issues; debates span over a number of entries. It is predictable that in the first few years, given the nature of the site, there was a lot more discussion about methods as they became

confirmed and adapted to the practicalities of their use. Many of the entries of both 'political' and 'methodological' nature around 1996/7 were concerned with the 'fault-line' that had grown between 'specialists' and 'diggers' (Hamilton 2000). The peak in recent years was due to further, new 'fault-lines' between different teams on different parts of the site, particularly regarding methodological differences between the East and West mounds. The diary entries led to further discussion in private regarding particular entries and opinions. Through this dialogue methods, were adapted and changed (for example, issues regarding deep unsafe sections on the west mound), though at times discussions became very personal and caused further fractures between groups and, arguably, caused problems in applying a multivocal method.

'Interpretative' entries show a consistent decline over time, with a low in 2008 and then a sharp increase in 2009. The initial aim of the diaries was to show the evolution of interpretation. It was hoped that diaries would show the dialogue on site between competing ideas. On any site it is a common occurrence to see a group of archaeologists huddled around a particular feature, unit, or context, in discussion. As excavation occurs, interpretation can and does change, often passing through a number of stages before a final consensus is reached. This is shown in diary entries from 1996 and 1997. Over a number of entries a particular feature or context is discussed, perhaps by one person or several, and entries show how interpretation evolves. Examples of this are given in the section below on a series of small walls. The majority of the older entries have a large element of discussion regarding the interpretation of the archaeological record. Unit numbers are noted alongside opinions on the archaeology. Many entries postulate theories regarding the interpretation of a building or applicable site wide. This has, over the years, dramatically declined. One possible explanation for this is who is writing the diaries. In the first couple of years the diaries were completed by both Ian Hodder (Project Director) and by Shahina Farid (Field Director), as well as by team leaders and area supervisors. In 2009 these entries rose as the number of entries by area supervisors increased. These people have a lot of archaeological experience and the knowledge and expertise to question and interpret the archaeological record. Over time there was a decline in the number of entries from these people and an increase in the number of entries written by less experienced individuals, who lack knowledge and confidence to take part in the dialogue. This is interesting in terms of the reflexive method, as multivocality is about all voices but when the diaries are written, in general, by less experienced individuals, they write less about the archaeology.

Over the last 12 years diary entries changed. Over time the number of entries has increased, with the west mound team completing them every day. The occurrence of certain themes has increased but the discussion of the archaeological record has dramatically decreased.

3.3.3.2 Ethnography of the diaries

During the 2008 Çatalhöyük field season, as well as taking part in general discussions regarding the diaries, I also interviewed a number of people on site about the diaries. A broad spectrum of individuals was interviewed, from assistants to supervisors and from excavators to lab specialists. This provided an interesting perspective on how the diaries were viewed by the people who completed them and by those who did not. All comments were kept anonymous to ensure that people could be as open as possible about their own personal perspectives on the diaries.

Several repeating themes could be picked out from the interviews. There was a general scepticism regarding the diaries, as individuals did not see the point of them. The 'fault-lines' on site were reinforced by the diaries, as excavators completed diaries and lab specialists generally did not; stopping a two way dialogue occurring. Many of the lab team members kept their own personal diaries but these were not made public. There was a lot of discussion about how frequently diary entries were completed; the vast majority of excavators completed diaries on a weekly basis. In certain teams people were strongly encouraged to complete diary entries on a daily basis. For the diaries to work, everyone on site needed to contribute to the dialogue, however, within a reflexive methodology, forcing people to complete diaries, it could be argued, works against the very idea of the diaries.

A general scepticism was voiced about the usefulness of the diaries. Some excavators believed that anything that could not be recorded on a unit sheet was not worth saying: "*shouldn't really have to write a diary to supplement your interpretation of the data you're digging*". Unit sheets on site include a discussion box, which can be used for any general discussion. It was noted that the diaries have an advantage, as unlike the unit sheets, diaries are not fixed to one unit. Within the diaries it is possible to discuss a unit, a feature, a building or a space in relation to any other part of the site. The diaries may be undermined by personal worries regarding entries being read on site and the publication of the diaries on the web. The diaries are often used to vent concerns on site and in the past this had let to certain diary entries being taken personally. In 2008 certain diary entries discussed issues of health and safety on the West Mound, which mirrored discussions on site; some of these entries were later deleted. For example, regarding controversy over health and safety:

> "Secondly the deep sounding is not only deeper, but it is still open, with what seems like a constant stream of people working in it. It is unclear to me whether these people are being monitored at all times and I am afraid a hard hat and a walkie-talkie may not be enough to save someone if the worst happened, it only takes a split second." (Diary entry JST 2607/2008)

The diary entries also fed into discussion with people reading the entries and further commenting on them, both in the diaries and also privately. The diaries were used to vent frustrations over differences in opinions but the debate became personal and caused further fractions between certain teams.

This led to many discussions regarding self-censorship; individuals choosing not to include specific things in the diaries. Some people had started self-censoring after events like those discussed above. Other individuals were concerned about the publication of the diaries on the internet and self-censored. People did not want to write opinions in the diaries about the archaeology and risk being proven wrong. In the voyeuristic world that we live in today, there is a fear of being searched for on the internet, even possibly by future employers. As of the 2008 season, unlike any previous year, diaries were published on the internet with the initials of the author only. In previous years the full name had been given. If people are self-censoring this could undermine the multivocal aims of the personal diaries, as it would not be an open forum.

Many individuals on site were unsure of what would come from keeping diaries but felt that they were useful in some way, though unclear in what way. Despite the problems regarding who completed the diaries and what was to be included in the entries, there was an overriding open-mindedness to the process and willingness to continue completing entries.

3.3.3.3 Diaries in publication

The diary entries, as well as being accessible on site and posted on the internet, were included in the site report (Hodder 2007). This is different to 'Stone Worlds' (Bender *et al* 2007) where the diaries are presented usually out of any archaeological context. At Çatalhöyük the diaries are used in the same way as other forms of data from site, for example unit sheets. Diary quotes are included within the narrative of the interpretation of the site, within descriptions of particular spaces or units.

Using the same method of textual analysis discussed earlier, all the diary entries used in the site report for 1995-1999 were textually analysed. These diary entries would have been selected by the individuals writing the various sections of the site report. The total number of diary entries and the themes they fall under is shown in figure 6. The total minus those entries in Chapter Ten (Cessford 2007) is also shown. This is because, within the introduction of this chapter, diary entries are used in a very different way to the rest of the volume. Within Chapter Ten the diary entries are used to form a picture of working on site from a very personal angle.

	Ch. 4	Ch. 6	Ch. 7	Ch. 8	Ch. 10	Ch. 11	Ch. 12	Ch. 13	Total	Total - CH. 10
Interpretation	8	7	4	4	3	12	11	1	50	47
Life on site	0	0	0	0	42	2	2	0	46	4
Political	0	0	0	0	7	0	0	0	7	0
Report	9	6	4	5	11	10	18	0	63	52
Methodology	1	0	0	1	13	0	0	0	15	2
Personal	0	0	0	0	0	0	0	0	0	0
Total	9	10	5	5	45	14	20	1	109	64

Table 3 Textual analysis of diaries used in site report.

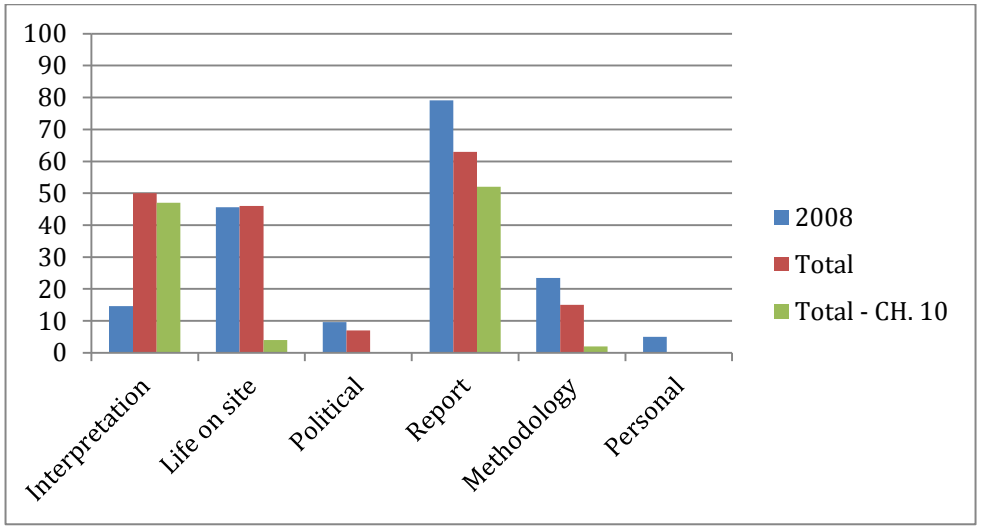


Fig. 4 Comparing results by percentage of textual analysis

Using the diary entries, a narrative is constructed of the work done and personal feelings of the work. Units, features and spaces are discussed but from a personal angle rather than, as in the rest of the volume, where the diary entries could be described as 'dry'. For this reason the total has been shown negating these entries as they skew the results of the textual analysis. Within Chapter Ten almost as many entries are used as in the rest of the volume.

The graph on the previous page (fig. 4) shows that there are some very clear inconsistencies between the diaries in general and the entries used in the site report. The site report heavily makes use of diary entries that fall under the interpretation and report categories, where as a large percentage of the diary entries fall into the report and social category, as discussed in the previous section. If the results of Chapter Ten are taken into account this difference is not so noticeable. This is the case for every category except interpretation, 46% of entries in the site report fell into the interpretative category compared to only 15% of diaries completed in 2008. The decline, identified earlier, in the number of diary entries falling into the interpretative category is even more problematic when considering the use of them in the site report. On the other hand, the number of diary entries that fall into the report category continues at a similar level throughout the years (table 2). Within the publication, entries that fall under the report category have a similar occurrence as the diaries in general.

3.3.3.4 Diaries in pursuit of the reflexive method

The use of diaries at Çatalhöyük aimed to provide additional information, showing both the context and development of knowledge production on site and contributing towards the application of multivocality and a reflexive method. The above assessment of the diaries shows that it both fails and succeeds in these aims. The diaries provide information on the narrative of interpretation, used within the site report. In general over the years interpretative discussion in the diaries has declined. This could be explained by the attitude on site towards the diaries. The diaries are met with a degree of scepticism regarding what they achieve and concern about the level of personal information in them that could be published. On site they had come to be viewed as another piece of paperwork to complete and more bureaucracy that reinforces divisions on site. More experienced excavators treat the diaries as weekly reports and field students treat them as a blog.

The use of the diaries within the site report does show that the diaries could and has provided an interesting and different perspective. Craig Cessford's (2007) discussion of the excavation of buildings 1 and 5 shows how the diaries can be used to create a rich narrative and give an interesting

insight into site politics. The site report covers the period from 1995 to 1999 when a larger percentage of the diaries fell into the interpretative categories. It is thus possible during this period to use the diaries as was originally intended.

It appears that the use of diaries at Çatalhöyük has never reached its full potential in recording the narrative of interpretation. However, during the last two years the number of entries discussing interpretation on site has again increased. The diary entries do not give as in-depth a view as might have been expected, which is a problem when you start trying to uncover the 'narrative of discovery', as in the next sections.

In terms of justification, the diaries both support the underlying theory of the reflexive method and disprove this underlying theory. On the one hand, the diaries show how much individuals on site are thinking about beyond just a record of the excavation. Individuals discuss alternative interpretations and their own lives. Interpretation occurs, not only during excavation but also away from the actual practice of excavation. For example, the following diary entry indicates conversations around a particular feature:

> "Talking of potential misinterpretation we swung by the 4040 yesterday and I'm a bit concerned about whats going on there. For instance Mikes supposed "burnt" building. They don't seem to have noticed that the walls of the building quite clearly cut the "burnt material" if that's what it is. And in Dans area all those little flooring events he has us believe is going on, we had similar deposits in all the buildings we took out which we, I think correctly, identified as one or two events at most, what is going on?" (Diary entry 16/07/2008 RR)

On the other hand, the diaries also indicate how difficult it is to make this process explicit. Attempts to record this process, which is surely not specific to this site, is easier than just putting in processes. The diaries indicate that understanding the 'narrative of discovery', how archaeologists interpret the past and justify these interpretations, is not an easy act.

The diaries indicate that there is much more to interpretation than just reading the archaeological record. Archaeological interpretation involves more than just correspondence or the identification of certain features at play: as will be shown in the examples from the diaries below. The diaries also show the social element to interpretation. The political and methodological elements of the diaries show how personal interactions on site (for example the 'fault-lines') impact the interpretative process. Further and as will be shown below, within the diaries we see interpretation evolve, often passing through a number of different stages before a final consensus is reached. This fits within a pragmatist theory of truth, knowledge is through consensus towards fixed

belief. Beyond this though, looking at the diaries solely, does not give a more explicit insight into justification on site, therefore, the diaries need to be considered within the archaeological context.

3.3.4 A series of small walls

One of the aims of this chapter is to show how archaeologists support truth claims and identify the epistemological model that fits within this. How is the archaeological record interpreted? As archaeological excavation took place on site, interpretation and reinterpretation took place. Additional methods of recording on site are meant to create a record of this as part of the reflexive method. This case study focuses on justification within a reflexive methodology. As noted in the introduction, this example was chosen due to the extra processes making it possible to analyse knowledge production during excavation. This is an attempt to follow one building through the online database and different records, for example, site reports, archive reports, unit sheets and diary entries. The aim is to show how interpretation evolves, becoming more complex and nuanced as more is known about the archaeological stratigraphy. The diaries, in particular, show this and further information can be gained from the archive reports. Searching purely unit sheets and feature sheets is less rewarding as instead of keeping a tally of the changes, the record is rewritten and only the final record is shown. The online archive is retrospectively 'fixed' to eradicate evidence of changes in interpretation.

The building in question, 44, is nothing remarkable but one that was highlighted during my own time on site. Eventually it was found that features belonging to building 44 actually belonged to the later building 10. In the 2003 archive report, certain walls were associated with Building 10 (also shown in figure 5):

> "Work focussed entirely on the domestic space contained within the outer mudbrick walls of Building 10. The west wall (feature F.104) would not, however, seem to be the actual outer wall of the building. Deposits west of the wall show a continuation of the building to the west and the relationship between wall F.104 and F.105 (the north wall) is not certain." (Jónsson 2003, 57-8)

A picture is built through the identification of walls, fills and the relationship between these. At a very simple level interpretation is justified by the archaeological record. Is then a correspondence at play, between interpretation and archaeological evidence? Digging deeper, looking at individual feature sheets:

"The wall forms the western side of building 44 being a combination of a the reused western wall of building 56 F.2068 and reinforcing or foundation wall F.2062 (for longer discussion on the foundations see F.2053)" (Feature 104)

"Eastern wall foundation of building 44 only partially excavated in 2005." (Feature 2054, as shown in figure 6)

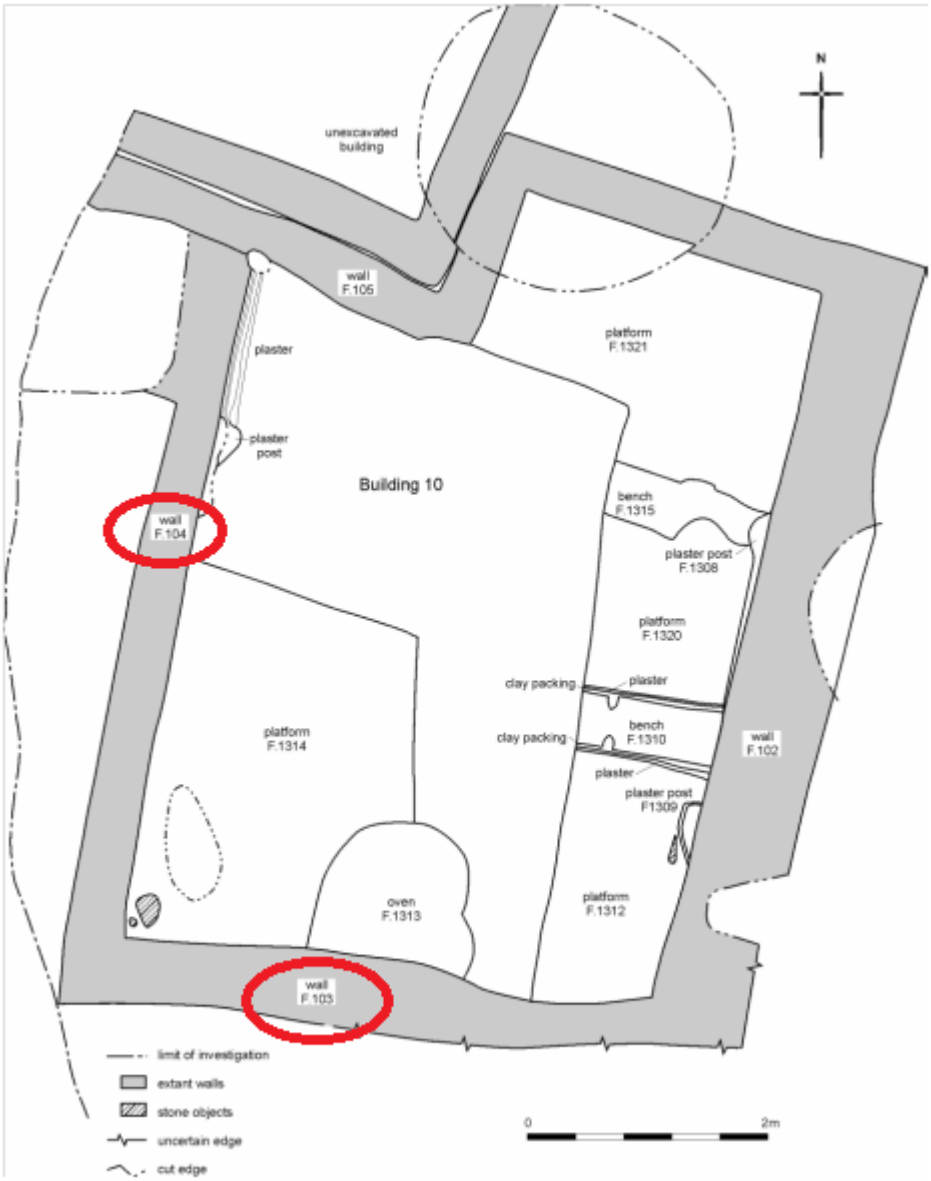


Fig. 5 Building 10 and associated wall from Archive Report 2003 (Jónsson 2003, 54), annotations own.

Fig. 6 Feature 2054 eastern wall foundation of building 44.

Attempts to document specific features show how we are trying to 'capture' the archaeological record, to document what is being seen. At this very basic level it appears that a type of correspondence is at play. As discussed in the last chapter, a correspondence theory of truth holds that truth is justified through correspondence with the world, though it is difficult to pin down what is mean by 'correspondence'. The feature sheets and unit sheets are attempting to capture a mirror image of an external reality; which suggests correspondence through congruence. However it is argued that, as the archaeological record is an incomplete record (Lucas 2012, 18-9), this is an illusion. While it is possible to see layers and cuts, as soon as we start referring to something as a wall or a pit it requires justification beyond just correspondence. There is a shift in justification as there is a shift in scale. As archaeologists go from identifying cuts and layers to identifying features like walls and how these are related.

Looking deeper at the units, unit 11675 (mudbrick, mild orange brown, sandy silt, etc) is interpreted as:

> "mudbrick foundation wall/packing for the main east wall of building 44. Probably once joined to F. 2053 but this relationship cut away by burial pits. Wall reusing mudbricks as evidenced with plaster facings on the inner facings of the mudbrick and also on the base of the bricks." (Unit sheet 11675, discussion)

At the most basic level there is the identification of mudbrick, plaster facings, the cut of a burial bit and how these relate. At this level through inquiry we look to see what is there and record the image. All of this though is informed by general background knowledge, the identification of mudbrick, the identification of a burial cut, the methods to build a matrix to understand the

relationships. Within the record we are trying to decipher the narrative of events. Can this be compared to a simple correspondence: 'our record of building 44 is true if it corresponds to building 44'? Background knowledge is used as a method of translation. In the field we try to identify cuts, fills and layers, however as soon as we try to draw anything more out of the archaeological record, walls, hearths, pits, buildings, there is much more at play then just correspondence as we need to bring in other theories, for example: how to excavate; how to identify layers, cuts and fills; knowledge of archaeological stratigraphy formation and identification, i.e. the layers and cuts that are specific to a hearth or brick wall to interpret something as a brick wall or a hearth. Given the difficulties of pinning down what the correspondence relationship actually is, could this still be called correspondence?

As discussed in the previous chapter, Russell held correspondence to be the relationship between four things (Russell 1912). The first, the subject (the person who has the belief); the second, an object term (roughly the subject of the sentence; or the thing thought to be doing something to something else); the third, also an object term (the object of the sentence; the thought to be having something done to it) and finally, the fourth, the object relation (roughly the verb of the sentence) (Kirkham 1992, 120). Following this, in the case of a wall, where the archaeologists identifies a wall, the object terms are mudbrick and plaster, the relation is a wall. Now the issue for some individuals may be to further question this, for example, what is it to identify mudbrick? An archaeologist is taught how to recognize mudbrick; someone else, not taught to read it in this way, may interpret it as something else. Even the recognition of mudbrick is socially constructed. As discussed in the previous chapters, archaeological practice is in some way theory laden. Archaeologists bring in their own knowledge and training to justify their interpretations of the archaeological record, this knowledge and training is socially mediated. I would argue though, that with some security it is possible to justify an interpretation of a wall through correspondence with the archaeological record. Stratigraphy is an example, in archaeology, of how close it is possible to get to a correspondence theory of truth. We understand archaeological stratigraphy through specific rules. For example, if a feature cuts into another feature we know it is later, if a layer is above another layer it is later. These relationships are identified through a matching process of observations with the archaeological record.

In 2003 the image is incomplete; the relationship between the north wall (F.105) and the west wall (F.104) (Jónsson 2003, also see fig. 5) is not known. In 2004 a new team returned to excavate the same area. Excavation indicated that not all the deposits could belong to the same building, as floors were running under the wall. Evidence from further excavation did not fit with

the previous interpretation and thus, in light of this new evidence, the stratigraphy had to be reinterpreted:

> " It became clear, however, that many of the deposits excavated by the Thessalonki Team as belonging to a single structure, Building 10, in fact belonged to two different buildings. This became apparent when the excavated floors clearly started to run under walls that had been considered contemporary, namely walls F.102, F.103 and F.105. The earlier structure was therefore numbered Building 44, and those features and deposits erroneously allocated were reallocated to their respective structures. The confusion perhaps arose due to the very similar wall alignments of both buildings and perhaps the tendency for floor deposits to be much eroded (by roots and animals) along the interfaces between walls and floors. From the Thessalonki Teams unit records it appeared that only those features associated with the mortar/plaster floors F.116 and F.117 belonged to the earlier structure, Building 44, while the deposits above these belonged to the later building, Building 10."(Regab 2004)

The confusion regarding the stratigraphy is voiced in the following diary entry:

> "Rather humid day under the shelter. What started as a bit of a flap ended fine as we are about the shift some of the platforms or at least eat into them. It appears that what was considered to be the east wall and part of the south and north walls of our building actually belong to a different structure that of building 10, meaning that we have had to renumber our building as building 44. So that means most of last years excavated units were also in building 44 and not building 10, it only remains to untangle the sequence the Greek team excavated to see which stuff belonged to which building which should be fun." (Diary entry RR 07/07/04)

All evidence needs to fit into an interpretation and because the new evidence did not fit into the previous interpretation, the interpretation changes. Coherence theories of truth hold that interpretations are justified, not through their relationship with reality but whether they cohere with each other. In the above examples, we see how as new archaeological evidence is interpreted, these new interpretations of the archaeological record do not fit together, so interpretation shifts. Interpretation changes so that it explains all available evidence and coheres with the entire picture. The reasoning is inductive (as discussed in Chapter One), so that we hold something as long as it fits with what is seen.

Fig. 7 Floor of building 44 (Regan 2004)

Further excavation caused further confusion; the understanding of Building 44 had to be expanded (though this time not changed) to fit with all the available evidence. Through the 2004 season more details were uncovered regarding Building 44:

> "Still some confusion with the south and east walls, it is still possible there is an undiscovered niche or side room to the east. I dug out a bit more of the sondage, and there is some possible blocking appearing - efforts to determine exactly what is going on are hampered/blocked by the presence of other archaeology lying over the walls to this house, and the possible side room." (Diary Entry AP 26/07/04)

At this stage there is not enough information to understand all the stratigraphy. Moving into the 2005 season a complete picture of Building 44 had still not emerged:

> "The alignment of the western side of the construction cut for building 10 was unfortunately coincidental with the alignment of the plaster surfaces on the east wall of the lower building, giving the appearance that the plaster was actually on the later wall. However, excavtion (as usual) has sorted out this little problem. But also as usual it has thrown up more problems/opportunities what we considered the eastern wall of the building 44 would appear to be a partition wall, which would mean we are not seeing all the structure, part of which lies to the east under later material. It might

make sense to dig a sondage through the rest of the remaining wall of building 10 to see what kind of strat we might be dealing with."(Diary entry RR 13/07/05)

Further excavation showed the reasons why walls belonging to the later Building 10 had been confused as belonging to the earlier Building 44. What had been interpreted as the eastern wall of Building 44 was in fact a partition wall belonging to Building 10. At the same time further confusion and further inquiry is required. This illustrates a certain, arguably obvious, dynamic at play. Interpreting the archaeological record is not a passive act. A correspondence theory of truth seems to show the act of 'truth finding'; we have our statements that are true when they correspond to reality. In the above examples not only does interpretation shift as new evidence emerges, the archaeologists is part of this process. On-going interpretation impacts how excavation continues. Interpretation is an interactive exercise, the archaeologists are immersed in the world, as Dewey (1917) highlighted as part of a pragmatic approach; there is more going on than just matching a statement with reality, even against new data. On-going interpretation is part of this process and the image during excavation may not always be clear until further layers are uncovered:

"The wall construction to the east continues to baffle, as it and the roomfill (11416) appear to be cut by the burials, which themselves are proving more complex than first thought. In my mind the burials must be cutting and sealed in a sequence that relates to the filling in of the upper portion of the building, or that there is an intermediate activity phase between the 'true' upper and lower building sequences. At the moment this is not clear nor is the function of another wall appearing along the western wall, which appears later than the plastering of the early building but earlier than the backfilling episodes?"(Diary entry RR 24/07/05)

Fig. 8 Room fill, Unit 11416 (Property of the Çatalhöyük Research Project)[5]

Further evidence brings clarification, so that the phases of construction can be explained:

"As usual the frustration of not knowing has subsided as the archaeology again explains itself as we take things apart piece by piece. The frustration was mainly due to the presence of sub wall structures where there 'should' have been nice straight walls below building 44 leading to nice floor/platform etc deposits. Anyway what appears to have happened is that building 56 (our new older building) was abandoned and a large dump of mixed midden and building material Deposit 11670 was rapidly used to fill it in. Even here care seems to have been taken to dump the more substantial mud brick/demolition material around the edges of the old building, perhaps in preparation for the next deposit, basically a foundation wall F. 2053 (11671, 11672 and 11673) this wall partially cut into 11670 and was widest at the south east. Similar preparations appear to have been constructed along the south and west in preparation for the building of the walls of building 44." (Diary Entry RR 31/07/05)

[5]http://catal.wolfson.cam.ac.uk/netpub/server.np?find&catalog=catalog&template=detail.np&field=itemid&op=matches&value=38256&site=catalhoyuk accessed 11/01/12

Fig. 9 Foundation Wall, F.2053 (Property of the Çatalhöyük Research Project)[6]

This is not straightforward correspondence at play; the archaeologists do empirically see cuts and layers, however, to make sense of what these mean requires using other theories. For example, in the previous citation, it was noted that building 56 was abandoned. To reach this conclusion: interpretations of multiple cuts, layers and fills; the knowledge to read something as a wall, a floor, a platform; recognising the signs of dumping and demolishing and so on, are all brought together.

The archive report for 2005 shows the changes to interpretation that had occurred to Building 44:

> "Excavation of course, has led to a reappraisal of some of the assumptions made about Building 44 last year. This has led to a reallocation of some feature numbers, or contexts within features and these will be discussed within the text. Along with these changes the floor areas within Building 44 have now been allocated a space number, Space 120, in order to group any activities, patterns or artefacts recurring on these surfaces. It is also now apparent that Building 44 continues to the east beyond the

[6]http://catal.wolfson.cam.ac.uk/netpub/server.np?find=&catalog=catalog&site=catalhoyuk&template=results.np&field=Feature&op=matches&value=2053&defaultjoin=or&sorton=Filename&ascending=1 accessed 11/01/12

current edge of excavation, access probably gained by a disturbed crawl-hole in the south-east corner of the building." (Regan 2005, 63)

During the 2006 season the relationship between different features was still being revealed as excavation continued. The following diary entry also explains difficulties caused by the methodology. Sometimes interpretation changes to fit new evidence and sometimes interpretation is not possible until further evidence is uncovered. Methodology impacts justification as only partial understanding of the excavation is possible at certain stages and also can lead to situation like the one with building 10 and building 44 where new evidence can lead to a change in interpretation. The excavation of surrounding units is needed to fully understand the stratigraphy:

"I have given new numbers to the walls that are new or had some alteration before they were incorporated in building 44. The north walls still remain F. 1339 and F. 1342, although there remains the remnants of foundation wall F. 2053 over F. 1339 at the north east which should have been at least partially removed this year, but we only realised the relationship at the end of the season and it is retaining later features to the north that really should be dealt with first before we remove any more walls. The northern and southern walls of small room at the north west of building 56 has are respectively F. 2066 and F. 2067. The west, south and east walls of the building are respectively F. 2068, F. 2069 and F. 2070. These again have only partially been revealed and in the case of F. 2070 still lies completely under the foundation of building 44. Here in lies the problem if we keep going down without actually finishing a building completely, not only can we only partially reveal lower buildings, but the various specialists never get closure on their material if we don't completely excavate everything within a building. My solution would be to at least create a excavation perimeter around a building and there we draw an arbitrary line at where to stop. Basically if we excavated the deposits 3-5cm around Building 10, 44 and now 56 then we would be able to cope with unexpected rooms wider walls etc and we would be able to get some handle on the relationships with the deposits around the building. It would basically give us some freedom of movement around the building while at least excavating one building in its entirety. Of course that would mean other buildings would only get partially excavated but that's always going to happen at Catal, in any area we excavate. If we fast tracked it with discretionary sampling then this could be done relatively quickly and we would be able to catch up with building 56 after the final removal of buildings 10 and 44." (Diary Entry RR 10/08/05)

Fig. 10[7] & 11[8]East Wall of Building 56, F.2070 (Property of the Çatalhöyük Research Project)

Further excavation can make interpretation more elaborate; detail is added to the interpretation, not necessarily contradicting earlier interpretation. Arguably, interpretation becomes more secure as more of the record is uncovered; there is a process of moving towards a stable consensus (as discussed in pragmatist theories of truth), an interpretation moves towards being secure enough that new evidence or insights do not change it. During the 2006 season, the interpretation of Building 44 became more complex with the addition of a side room:

> "Previously İ thought the wall to building 56 had collapsed and been replaced by the foundation to building 44, however it is likely that collapse/demolition does not explain wall absence but perhaps the presence of a crawl-hole or entranceway into a narrow side room with one surviving storage bin." (Diary Entry RR 15/07/06)

> "Previously it was thought that the wall absence was due its collapse or demolition this being replaced by the foundation to Building 44. However it now seems likely that wall absence was explained by the presence of a crawl-hole or entranceway into the western room." (Regan 2006, 96)

---

[7]http://catal.wolfson.cam.ac.uk/netpub/server.np?find&catalog=catalog&template=detail.np&field=itemid&op=matches&value=55834&site=catalhoyuk accessed 11/01/12

[8]http://catal.wolfson.cam.ac.uk/netpub/server.np?find&catalog=catalog&template=detail.np&field=itemid&op=matches&value=55839&site=catalhoyuk accessed 11/01/12

Fig. 12 Southern foundation wall of building 44, F.1341 (Property of the Çatalhöyük Research Project)[9]

The final picture recorded, so far, of building 44 is discussed in the 2008 archive report:

"This phase was represented by the demolition of Building 56, landscaping of the area, and the construction of Building 44. The southern edge of Building 44's foundation cut was not visible within the trench although a northern edge had been picked up in previous seasons. Although it is possible that the wall was trench built to the north, it is more likely that the cut continued to the south, removing most of Building 56's southern wall and horizontally truncating much of the midden that would have built up against its south face. The foundation courses of Building 44's south wall (F.1341) were substantial, measuring 0.9m wide by at least 4.8m long, by 1.0m high. Its bricks comprised compact yellowish light brown sandy clayey silt, with an average size of 500mm by 360mm by 60mm, (16577). On at least two of the bricks the remnants of a plaster face were noted inside the wall, suggesting that these bricks had been robbed and re-used (possibly from the walls of Building 56). The wall's mortar was a compact mid grey sandy silt, (16578). To the north make up layers had been laid to raise the ground level prior to occupation (see *** Archive). The superstructure of the wall was slightly narrower, measuring 0.55m (E-W) and with a surviving height of 0.32m, (16270), (16271). As with the underlying wall F.2096, mudbrick material was banked up against the south face of the foundation, (165590), which also spread out a little forming a levelling

[9]http://catal.wolfson.cam.ac.uk/netpub/server.np?find&catalog=catalog&template=detail.np&field=itemid&op=matches&value=72595&site=catalhoyuk accessed 11/01/12

layer. The banked up portion was 0.35m thick and in places appeared to be bonded into the lowest foundation courses."(Regan *et al* 2008, 63-5)

Interpretation on site evolves as archaeological excavation occurs. Features are identified and a narrative is constructed of the sequence of these features. At the most basic level layers, cuts, and fills are identified; the aim here appears to be to capture an image of the archaeological record, as much as it is possible to do so. At a very basic level this can be compared to a correspondence theory. Holding a correspondence theory in archaeology, arguably, can only be demonstrated at the very lowest level, with the identification of a layer of soil; beyond this uses other forms of knowledge to interpret even a pit, even a cut, what a fill is. Even at this lowest level it is not a pure correspondence theory of truth at play. Interpretation is built upon more than just identifying cuts, layers and fills. Interpretation is built upon these building blocks but our understanding of what they mean is built upon more than pure correspondence with reality. Background knowledge makes it possible to interpret a certain stratigraphic configuration as a pit, as a midden, as a wall or as a house. Background knowledge dictates what type of excavation and recording method is used, for example, in the case of Çatalhöyük, the use of the single context method. Knowledge is required of formation processes of archaeological stratigraphy so that we can identify, cuts, layers and fills. Analogy is needed, from current and more recent examples, to identify middens and walls and to understand the function of such features. It is possible that if the background knowledge is different, the archaeological record would be recorded and interpreted differently.

The next level of justification is to bring these 'mini' interpretations together with on-going excavation to gain a more nuanced image. They must all fit together. These interpretations are drawn together with earlier interpretations of the archaeological record; thus, the entire image should cohere. A constant dialogue occurs between record and interpretation, circular and evolving. As excavation occurs new information is gained about the archaeological stratigraphy, arguably through correspondence. In the above example we see how this shifts as new stratigraphy is uncovered and our interpretation doesn't fit with earlier interpretations. The total interpretation of the stratigraphy must cohere. New evidence has the effect of both changing and adding to interpretation. Further excavation can solve questions which were unanswerable, a constant interlinking occurs between interpretation and the archaeological stratigraphy. For example, in the case above, conclusions were reached at the end of the 2008 season through studying the archaeological record; multiple walls are identified as belonging to building 44 and building 56. Walls are identified as layers within the stratigraphy and the relationship of the walls to each other are identified through the configuration of layers and cuts. The layers and cuts are identified through correspondence but to make sense more information is drawn in. Layers and cuts are identified

within a single context method of recording and excavation. Analogy allows us to recognize a wall as what we understand a wall to be, to identify mudbrick, to build an understanding of what is a foundation wall and not a foundation wall. Different contexts and features are recorded, the relationship of these to one another is mapped within a matrix, and this matrix must fit together. If something doesn't fit, the interpretation shifts, as seen in this chapter. New excavation uncovered archaeological evidence that did not fit with the interpretation reached at the end of the previous year, causing interpretation to change. What was identified as one building became two. Coherence also works in a negative way. Correspondence comes back in to play as usually the next step is to refer back to the archaeology, what is seen in the ground. Justification in this case is through correspondence and coherence. Correspondence occurs when identifying features of the archaeology (an external reality).

Through excavation there is a shift in scale; from interpreting cuts and layers to interpreting feature to linking these together to build a more nuanced picture of the archaeological record. As this shift in scale occurs there is also a shift in the mode of justification: from justification based heavily on correspondence to justification more heavily reliant on coherence.

This process continues until a final stable interpretation is reached and the interpretation fits with all the available evidence. There is a social context of interpretation. Interpretation evolves through discussion, as indicated by the diary entries or known to anyone who has ever worked on a site. Excavators discuss stratigraphy on site to bring together an interpretation that fits all the available evidence. Archaeologists are not passive observers; they interact with the archaeological record and make decisions regarding excavation strategy. Following Dewey, it is not just our beliefs about the situation that change, the situation is also transformed during inquiry (Hookway 2009). This suggests a pragmatist theory of truth.

One thing that is difficult to determine, from this angle of study, is how much our social biases impact interpretation. When people distinguish a wall, why is this? Excavators draw in background knowledge and how they use this is socially mediated; therefore justification is in some way socially constructed. When excavating, decisions are made on how to tackle a building in a certain way, to excavate a layer and it is unclear how much these decisions are socially mediated or mediated by the archaeology. This is unclear in the above study and an issue with studying from this angle. The issue of social biases will be returned to in the next two chapters.

Further questions are raised by this discussion above. During excavation there are no fixed truths; interpretation evolves, changes and progresses with the 'act of discovery'. During the period of excavation these truths are transitory until the complete archaeological record is uncovered. The problem is, given this, at what point does truth become fixed, if at all. Once Building 44 was

excavated and the stratigraphy related to it, does our picture of it become more fixed? Once excavation has finished, is the narrative any more secure? To answer these questions we have to follow interpretation as it becomes more complicated and larger scale.

3.3.5 The final record (?)

Having looked at the different steps towards a reflexive method (some in more detail than others) and looked at how interpretation occurs on site, the question remains, what does this all lead to? How is the interpreted archaeology in the end presented? Not many people will have the knowledge to understand feature sheets and Harris matrices. Archaeological findings are disseminated in different ways to make them more widely readable but also to present interpretations of the archaeological record beyond 'we found a series of small walls'. This requires justification at a larger scale than as seen in the last section.

Within the academic world, knowledge is disseminated through multiple publications. There are numerous publications about Çatalhöyük, as with any site of this size: specialists' reports (Bogaard *et al* 2009); articles on methodology (Hodder 1997) and collections of papers (Hodder 2005). For the purposes of this chapter I am going to concentrate on two of the publications on Çatalhöyük: the only site report published so far *'Excavating Çatalhöyük: North and KOPAL Area reports from the 1995-99 seasons'* (SR) (Hodder 2007) and *'The Leopard's Tale'* (LT) (Hodder 2006).

These two books are very different but they are both products of the excavation on site. LT can be seen as an ultimate end product; it is something that will not be interpreted further by anyone within the Çatalhöyük knowledge process, though, clearly, it is open to criticism or support. SR on the other hand, cannot be described as the final interpretation as it will be used by individuals for their own interpretations.

SR does not appear unusual, appearing no different from any other site report. It contains reports from different teams and specialists, drawings, diagrams, tables and descriptions of the archaeological record. Further down, what could be referred to as the chain of interpretation is LT, a much more generally accessible volume which presents an overall discussion of the site. The book concentrates on daily life and symbolism at Çatalhöyük and also includes a perspective of more long-term processes; placing the site in its historical context. LT is also targeted at a wider audience than SR.

To look at how interpretation is justified, just like in the last section, an example is chosen and traced back through all the records to see how it emerged into what is presented in the publications: LT through SR, to the database records, diaries and unit sheets. This makes it possible to understand how truth claims come to be made and the nature of epistemological reasoning from the ground, right through to publication. To illustrate how the interpretations of the archaeological record presented in LT and SR are justified and the conditions under which they are justified, a single building is traced through both publications. Building 44, used in the previous section is yet to be published, therefore, an alternative example is chosen, Building 1.

In the first chapter of LT, Ian Hodder warns us not to jump to conclusions, summing up in one paragraph the reasons behind a reflexive method.

> "But there is also a danger—that we impose on our destination ideas that we bring from our own world. When things look familiar, we have a tendency to assume they really are comprehensible. One of the challenges of travel to distant times and places is to be sensitive to difference and to be critical of the assumptions we too easily make in confronting other worlds. I have often found when working at Çatalhöyük that people easily jump to conclusions. They assume people must have been disgusted sleeping just above their dead, or that they must have felt cramped living in these small rooms, without recognizing that other people, including other people in contemporary societies today, can have very different attitudes to the dead and to space than are found in developed Western Nations." (Hodder 2006, 24)

We have to beware the implications of our assumptions when we interpret the past, a point to be returned to later. Arguably, we have to ensure that any interpretation is justified in some way.

Chapter Two of LT contains general descriptions of the buildings on site. Hodder identifies four different spheres of life: domestic production, ancestry, exchange and community (Ibid, 53-7). These different spheres that can be viewed as a vector of coherence, as will be discussed later, are drawn from interpretations of the archaeology. Different spheres are identified through the material remains of the houses on site. For example, domestic production is evidenced by everyday objects, discarded around hearths and ovens, and found in middens In Building 1 small bones are concentrated in the western parts of the building and around the grinding and bin areas, in the south of the building. Burials were usually found in the northern parts of the house (Ibid, 50-1). The burials underneath house floors show multiple spheres at play:

> "As settlements became larger and as people moved around from place to place less, leaving out the body or burial away from the settlement may have been seen as both more difficult and less

> appropriate. People began to develop a close relationship with the settlement, the house and its community. Memories and associations with place became stronger in relation to settlement and house…The bones became delegates of the dead and intruded themselves into daily life. One response would have been to use lime plaster to protect against putrefaction and smell…We can see the endless webs of material entanglements which are practical, social, ritual, mythical and so on." (Ibid, 61).

It is implied from the material evidence that the multiple spheres were entangled. The presence of different artefacts is evidence that all these spheres were at play in the home. The important point here is though this evidence may imply this, it does not necessarily logically entail the explanation; the explanation is simply the one used here, from what we know and what we understand that explains the archaeological material. It is possible that there is another explanation (possibly currently undiscovered) that could explain the presence of different artefacts. Therefore, this could be described as given the available evidence our best explanation but not necessarily our only or even, true explanation. These are points to return to later.

The construction of houses is well known from the work of Mellart and more recent excavations. Houses were constructed from mud bricks. Walls were an average 0.4m thick and were frequently built on the partly dismantled walls of earlier buildings. There is no evidence of windows and the entrance was through the roof, usually on the south side of the building. Interior walls, floors and posts were plastered (Ibid, 115). This evidence is built upon, as discussed in the previous sections, observations of the archaeological evidence then built upon by circling back and forth from evidence to interpretation, to explain the archaeological stratigraphy, making it possible to eventually draw out generalizations about the types of buildings on site. Justification occurs through correspondence and coherence

Figure 13 shows a reconstruction based on the findings from building 1. In the image the wall are plastered, there are no windows or doors, there is an oven in the house; all based on interpretations of the archaeology (Ibid, 115). Elements of the picture are not directly based on evidence from excavation. Major posts are found only in main rooms suggesting higher ceilings in these rooms, but this is just one possible explanation. The details on the roof are not directly based on archaeological record but by analogy of things seen elsewhere. The clothing and hair of the individuals is not based on archaeological evidence but on analogy and, arguably, certain artistic licence. Therefore, certain leaps are required to build the below image, more is required then just drawing conclusions from the archaeological evidence. Analogy is most prominently required, knowledge of other societies and other buildings are drawn in and assumptions need to be made. Within justification, therefore, archaeological interpretation draws in knowledge away from the

excavated record to build a more complete image. This is done through a form of coherence as all these elements need to fit together but justification is also theory laden. Decisions are made on what analogies are drawn upon to build a visual representation of the past and these decisions are socially mediated. What assumptions are made and what analogies are drawn upon are based on the training, experience and knowledge of the individual.

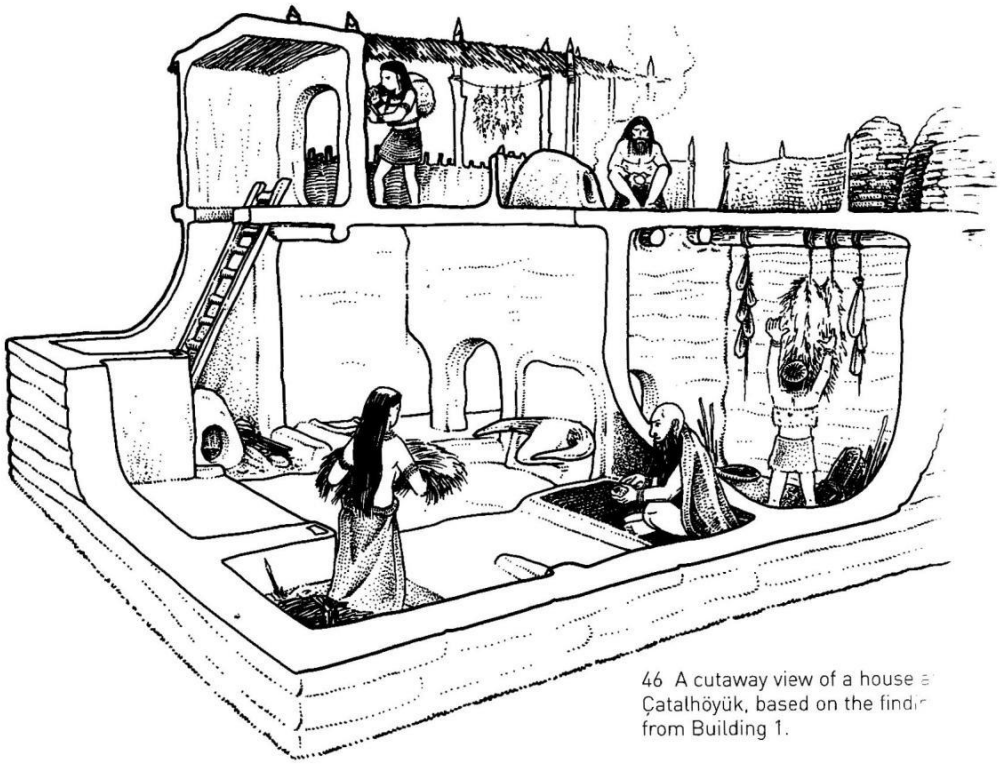


Fig. 13 Reconstruction based on the findings from building 1 (Ibid, 114).

Housing construction was carefully planned and ritually governed, for example building 1:

> "in the south-central area of the main room in one subphase, there was a complete split boar's tusk fishhook pendant, which was fresh and probably built into the makeup of the floor rather than lying on the floor. This could have been intentionally placed, as it is unlikely that it was not noticed when the fine plaster floors were laid. In Building 1 there was a strange hole dug into the south wall of the main room, then plaster inside and then covered over with wall plaster. There is another cone-like insertion on the northern wall. The nature of these features is unclear, but they probably represent pre-existing objects deliberately placed in the wall of Building 1 that were almost immediately removed and the cavities rendered invisible by being plastered over. They are not necessarily of a ritual nature, but they are intriguing."(Ibid, 117)

Here there is caution in the explanation, though it is surmised that certain features may have ritual importance, it is emphasized that this may not necessarily be the case. There is recognition that there is a limit to what can be justified, completely, from the archaeological record which is only ever a partial record, as evidenced by figure 13. There is no direct access to the past and therefore, any explanation of the past will require an abductive leap, this will be discussed in a lot more detail later in this chapter and in the next chapter.

On site there is evidence of continual rebuilding. In the case of building 1, it was substantially reconstructed after a major fire (Ibid, 118). The process of abandonment is outlined in several examples on site. First, there was the cleaning and scouring of walls and plaster features. The roof was then dismantled by first pulling out the main structural posts. The walls were dismantled and then the building was filled in with processed building materials (Ibid, 129). Again generalizations on site about the stratigraphy are made, which can then be used to build a more in-depth explanation of the site. They are built through drawing together different strands of interpretation that must all fit together and with the overall interpretation. For example, in this case, a sequence of events are described which fits with a process of abandonment.

At Çatalhöyük, links to the past may have had social importance. In building 1, a large pit was found that had been dug from higher levels through the building's infill. The pit had been dug, it appears, to retrieve a relief sculpture. In the pit three bone points, a bird bone and eight assorted pieces of obsidian and flint were found. Understanding the archaeological stratigraphy: identifying a pit; the remains of the relief sculpture; the relationship of the features; the decades between the last use of the sculpture and retrieval, is used to imply the social important of the past (Ibid, 145). Again a sequence of interpretations are fitted together to build an overall interpretation of the meaning of a series of events.

Some houses are much more complicated than others. James Mellart called these 'shrines'. This interpretation is best supported by the burial evidence.

> "In the case of Building 1, 62 individuals were interred in the structure during its construction and occupation. Of these at least 30 individuals must have been alive at the same point in time. This is too many to have actually lived in the building on a day-to-day basis, as it is unlikely that more than 10 individuals did so, based on the size of the building and probable sleeping arrangements. This suggests that Building 1 acted as a focus for burial for a number of buildings. Building 1 could also be defined as elaborate in terms of its bucrania, paintings, pots, numbers of platforms and mouldings." (Ibid, 152)

By looking at the approximate ages at death and the phases of burial, it is possible to work out how many of the 62 individuals interred in building 1 would have been alive at different phases of the building (Ibid, 221). Archaeological evidence is used here to reconstruct the lives of individuals. Hodder suggests that individuals were remembered and this memory was embedded in the socialization of the household:

> "People were probably closely allied to family, lineage and to the materiality of the house. Their life cycles and those of houses were closely tied. Identity was closely tied to ancestors and to social memory. While people may have increasingly had a sense of individualized self, perhaps as part of the emergence of 'private' storage and property, at the same time they were increasingly being highly socialized into group norms. I argue that this socialization both produced a very regulated social person that was embedded with the house, was almost part of its fabric, and it also produced a portioning and a greater sense of bodily boundaries." (Ibid, 227)

The vocabulary used in the previous citation has theoretical roots; it was not just invented here, nor is it directly entailed by archaeological interpretation of the excavations. Hodder argues that social theories are needed to understand variation in the archaeological record (Hodder 1991, 139). To interpret the archaeological record theoretical traditions are drawn upon. In this case Hodder draws upon a range of social theories. Literature on the creation of social relationships stems from the work of Durkheim and elaborated by social anthropologists, for example, Radcliffe-Brown (1933) (Earle 1999, 626). Through sociology and anthropology, structural Marxism (Friedman 1974; Giddens 1979) is part of the post-processual critique (Hodder 1982a; Kristiansen 1984). The main focus in archaeology has been to focus on the social determinants of economic behaviour (Earle 1999, 626). Referring to Latour (2004), Martin notes that the theories selected by a certain theoretical camp depended on what intuitively seemed right not on any objective reasoning (Martin 2013, 14). Therefore, it is possible that if Hodder had drawn on different theoretical traditions (for example, functionalist, economic, ecological) the conclusions reached may have been different. As noted earlier, the four spheres, highlighted in LT, represent a specific vector of coherence; the coherence with a particular theoretical milieu. The theory does fit and accepting this, specific conclusions are drawn but the theory chosen is not directly suggested by the interpretations of the archaeological record.

Looking at the spheres Hodder identifies in relation to the houses on site, this interpretation draws on general theory (as detailed above) and more specific 'high level' ideas. Hodder identifies

the sphere of ancestry in LT: "based on the passing down of ancestral rights, material things and memories" (Hodder 2006, 55; 141-168). Ancestors have been a distinct theme in post-processual archaeology for over three decades (for example, Barrett 1990a; Bradley 2005; Thomas 1991; 1999). Hodder interprets the burial evidence at Çatalhöyük as evidence for continuous historical memory; the burial of individuals beneath floors creates genealogical links. Hodder follows a post processual viewpoint of interpreting burial remains in terms of the social meaning of ancestors. An alternative viewpoint is a social evolution approach: burials are interpreted in relation to status and politics (Childe 1951).

Hodder interprets domestic spaces in houses as spheres; spaces are not empty but meaningful (Shanks & Tilley 1987; Tilley 1994). Hodder also draws on concepts like habitus (as discussed in Chapter One) to explain the relationship between social and symbolic structures within the household, this is evidenced in much of the material culture on site. Material culture is produced as a representation of the social structure, but also contests and changes the social structure (Hodder 2006, 204-6).

Following Ingold (2000), Hodder focuses on what it means to 'dwell' within the houses at Çatalhöyük. For example, using the ethnography analogy of the Tikopia, Hodder asks the reader to think in how one moves around space: "The use of the various doorways depends on social position, and where you can eat and sit also depends on your gender, age, and status. How you sit and whether you can sit leaning against a post depend on privilege."(Hodder 2006, 110) Therefore, Hodder in LT goes beyond just discussing the alignment of houses or even the meaning of specific features and considers what it means to 'dwell' with 'meaningful' spaces. This interpretation draws on multiple 'high level' strands: post-processual attitudes towards ancestors; meaningful spaces; and habitus. This is not an exhaustive list of the concepts that are drawn upon to build the interpretations in LT, but does illustrate how Hodder draws on many different 'high level' strands to build an explanation of the archaeological record. At this larger scale different forms of knowledge are drawn upon; theoretical meta-narratives are used, for example like those used by Hodder above. The same mode of justification is used, namely coherence, but the nature of the knowledge is different.

Multiple strands of evidence are brought together to understand the past lifeways of the people of Çatalhöyük. The archaeological stratigraphy is interpreted through on-going excavation. Evidence of the retrieval of a relief sculpture is induced as evidence of memory. The burial evidence, detailed above, is a second strand of evidence for 'ritualistic' behaviour. Specific theoretical stances are drawn upon to build a more elaborate explanation of the archaeology. These strands are brought together to support Hodder's interpretation of the embedding of memory within

the household. It is possible to trace the nature of these interpretations and how they are justified back further through SR.

SR (Hodder 2007) contains a great deal more specific detail regarding building 1. In SR there are detailed descriptions of the archaeological excavation of building 1 (Cessford 2007a), which is followed by an overall discussion of the findings (Cessford 2007b). The overall discussion gives a broad overview of building 1, not unlike some of the details included in LT, for example, the discussion of the construction of building 1:

> "The walls for the next structure Building 1, were built, largely over those of the previous structure. The layout differed somewhat as there was a large squareish main space and two smaller squareish spaces to the west. There was no space to the east of the main space, but there was a pair of projecting walls where this had been. The main space was subdivided into nine smaller parts on a three by three grid. The structure was then equipped with internal features, including stairs in the southeastern part of the main space, an oven cut into the southern wall of the main space and a number of mouldings on the walls." (Ibid, 532)

An understanding of the stratigraphy, as discussed in the previous section, is reported here without the narrative of how the interpretation is built. The final interpretation of the stratigraphy is just reported.

Comparing SR to LT, the discussion of the burials is very similar in both volumes. Though SR states that just under 60 burials are represented in building 1 (Ibid, 541), whereas LT states that there are 62 Individuals (Hodder 2006, 152). Both volumes do state that, given the number, not all the individuals buried in the building could have occupied the structure on a day to day basis.

The major difference between SR and LT is in the interpretation of meaning behind certain patterns in the archaeological remains. This may be a product of the different aims, as noted towards the beginning of this section. SR aims to report findings that are open to further interpretation, whereas SR aims at a wider audience and is further along the interpretive process. In LT, Hodder discusses the different spheres of life (Ibid, 52-7) whereas SR warns against this type of interpretation:

> "Unfortunately the extremely varied nature of this phenomenon at Çatalhöyük renders any attempts at a precise definition impossible and a degree of caution must be exercised. Deliberate deposition occurs in a wide range of constructional, occupational and destruction contexts and includes almost all the types of material or more disparate groups, and items can be either whole or fragmentary." (Cessford 2007b, 543)

This argument fits in with the conventions of SR. SR is designed to present the findings on site, rather than more complex interpretations of the possible meaning behind the stratigraphy. Here is where, arguably, a line is drawn between the aims of LT and the aims of SR. Arguably in SR interpretation becomes more detached from the archaeological excavation, a point that will be explained in greater detail in the next section of this chapter.

SR contains a detailed discussion of the different features and phases of building 1 (Cessford 2007a) and is thus lengthy; therefore, the discussion below will focus on one feature, F.17 a pit. Hodder uses this pit as an example of the historical links to the past having importance (Hodder 2006, 145).

> "Pit F.17 is a large semicircular cut against the eastern face of wall F.3, approximately 2.0m long north-south by 0.95m wide east-west, its depth is uncertain, but is at least 0.7m. Its presence can be identified in the 1993 surface scrape, but this was not apparent at the time. The excavation strategy adopted in 1995 meant that initially only the northern portion of the pit was excavated."(Hodder 2007, 516)

SR runs through the excavation and interpretation of the feature. During the 1996 season it was noted as a:

> "Late intrusive pit. Probably after occupation, and abandonment of Building 1. Cut for pit seen almost at surface of mound. The cut of the pit respects the wall F.3, but cuts platform F.13 and may have exposed some of the human burials. The current interpretation of this feature is that the pit was dug after the abandonment of Building 1. It respects wall F.3 because the excavators of pit F.17 intended to remove mouldings (?) or something else from the wall face. The mouldings have been modified and bone points were found attached to the wall possible placed there when pit F.17 was dug."(FS17, MAU & GML 25.08.96) cited from (Cessford 2007a, 516)

An overall picture of what is seen in the stratigraphy is shown above. The statement cannot simply be said to correspond to a reality out there; as we saw in the previous section, multiple steps are made before the above is reached. The diary entries (included in the site report) show how uncertainties and questions arose during excavation:

> "What on earth is happening with pit F.17? I am now convinced that this is a Neolithic pit. This pit had cut away a lot of information but in turn it has provided some data of its own. We know for sure that the pit was dug in order to investigate the east face wall F.3 and that some lavishly plastered feature was removed from this wall face at this time." (Diary, RJM 26.08.96) cited from (Ibid)

Through excavation the various different layers, cuts and fills of stratigraphy are used to understand the sequence of events. As new stratigraphy is uncovered, interpretation needs to fit with all the available evidence and also our understanding of that evidence.

The conclusion after the 1997 season remained the same. The pit was cut after the abandonment of building 1 for the removal or destruction of a piece of moulding and then was quickly backfilled, inferred by the cuts of the wall and platform. Deposits of bone and lithics seemed to have been deliberately placed; something that has to be partially assumed as deliberate placement cannot really be proven. There is some controversy over the human bones contained within the pit (fig. 13). Originally this material was recorded as part of Burial F.38 and not F.17. The diary entries show that there was difficulty in identifying, during excavation, what was part of the fill of the pit and what was part of the floors the pit cut into (Ibid, 517). There is not one clear decisive interpretation at this stage:

> "The human remains could represent material that was deliberately placed and bears no relationship to the burials in platform F.13. It is, however, more likely, that they were disturbed from a burial in platform F.13, probably F.38, which was exposed and disturbed during the digging of F.17. The lack of damage suggests were removed from the pit and later replaced as close to their original position as possible, although the evidence indicates they are not particularly carefully placed. Whilst in a sense they were not particularly carefully placed…the placement of the skulls suggests that although it was permissible to disturb these individuals the remains still required respect." (Ibid, 518).

The form of reasoning is very different here to when identifying pits, cuts and fills; interpreting what is seen in the archaeological stratigraphy. Here a form of abductive reasoning (as discussed in the previous chapter) is at play: a hypothesis is constructed that seeks to explain all observed data. In this example, the placement of human remains is shown as symbolic of respect to those individuals. The explanation fits but is not logical entailed by the evidence. It is possible that the placement of remains may be due to another reason. However, within this form of reasoning, ones' cultural positioning informs the interpretation such that another person may use a different hypothesis to explain the evidence.

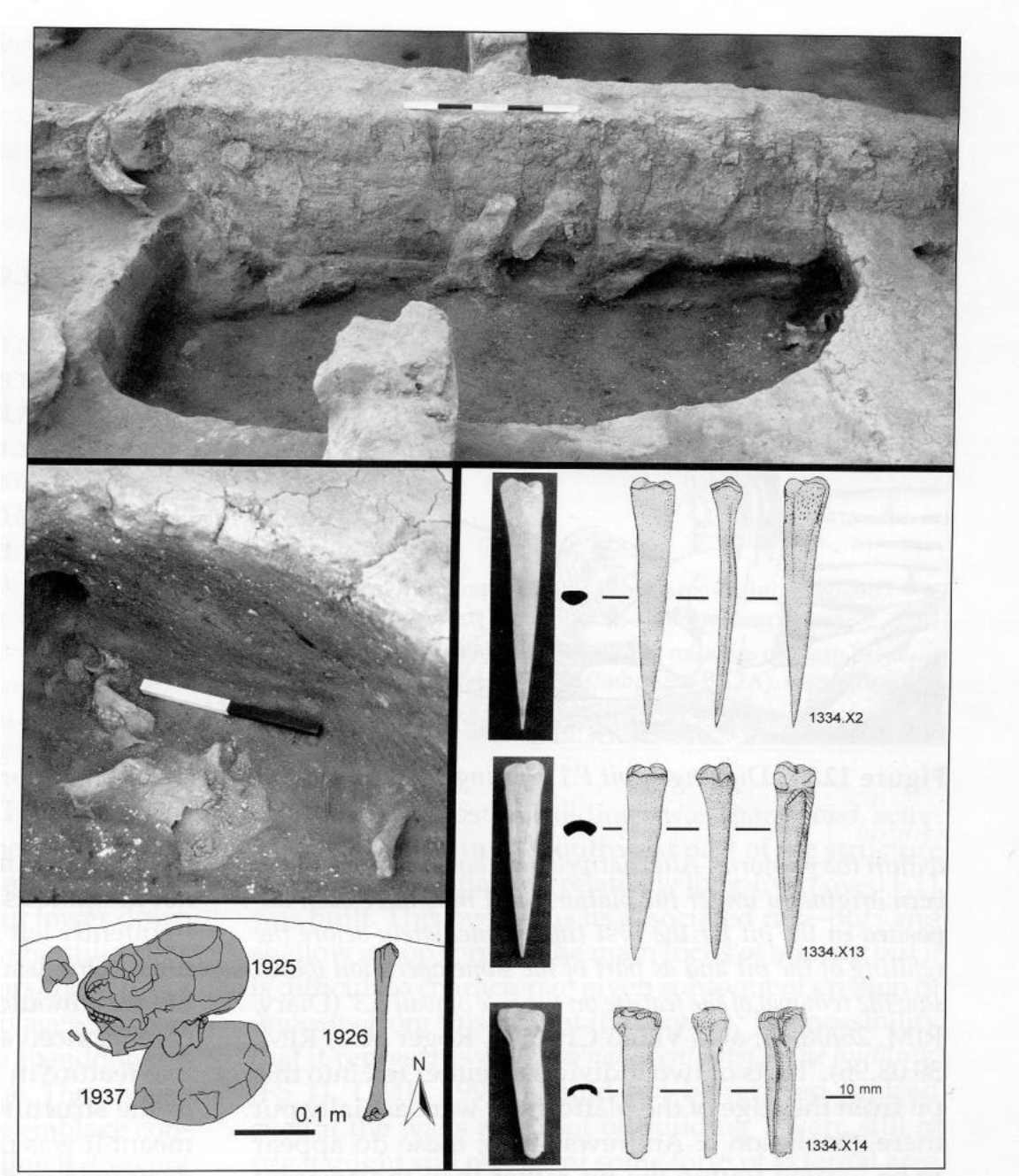


Figure 12.76. *Pit F.17 facing west plus human bone (1925) and (1937) and bone points 1334.X2, X13 and X14 in pit.*

Fig. 14 Pit F.17 (Ibid, 517)

Despite the uncertainty about these human remains it does not impinge on Hodder's interpretation of the pit in LT. As this interpretation is built on so many strands the removal, change or addition of one strand may or may not change overall interpretation. Hypothetically, with enough new evidence, new insights, and changes to underlying theory; it is possible that interpretation, at this level, would and can shift. It is also possible that there are other possible available

interpretations of the evidence (that could or could not be discovered). These are points that will be picked up in the next chapter.

The importance of memory of the past, as illustrated in the removal of the relief, remains. One can wonder though, whether the burials themselves were remembered? Was the person/s that excavated the pit to remove the relief, aware that they would hit the burials? Did they remember? One could argue that the act of replacing the skulls is an act of remembrance, as they remained important enough to be treated in this way. The form of reasoning is abductive, we cannot directly observe the past and with more evidence we can test these hypotheses and tack back and forth again from data to interpretation, just at a higher level.

From the original feature sheet for F.17 the description stated:

> "The current interpretation of this feature is that the pit was dug after the abandonment of building 1. It respects wall F3 because the excavators of pit 17 intended to remove mouldings (?) or something else from the wall face. The mouldings has been modified and bone points were found attached to the wall possible based there when pit 17 was dug." (FS F.17)

From which Hodder, "became alerted to the idea that historical links to the past may have been socially important at Çatalhöyük" (Hodder 2006, 144)

There are clear differences between LT and SR, as stated at the beginning of this section. LT makes use of broader, larger concepts (for example life cycles, lineage and alliance) and cited bodies of literature outside of the site archive. LT can be described as an ultimate end product whereas SR will be used to interpret the site and the findings further. LT, on the other hand, does not discuss the uncertainties of interpretation but instead favours a closed account. Multiple authorship in SR is replaced by singular authorship in LT. There is also a change in the criteria of justification. Within SR the focus much more on the listing features of the archaeological stratigraphy identified through a correspondence criterion. LT on the other hand relies much more heavily on abductive reasoning to build much more elaborate interpretations of the archaeological record. For example, in LT the discussion regarding the multiple spheres within the household is based heavily on abductive reasoning: the explanation is suggested by the archaeological record but is not the only possible explanation of the archaeological record. For example, deconstructing one of these spheres; ancestry:

> "The evidence of this sphere is seen in the circulation of skulls and animal parts. There are examples of the retrieval of human skulls and animal reliefs and their reuse and handing down from generation to generation." (Hodder 2006, 55)

An example of retrieval was discussed in this section. SR details the archaeological stratigraphy and the sequence of event: descriptions of pits, cuts and number of burials. LT, on the other hand, uses this as evidence for memory of ancestors, however, there are other possible explanations; we cannot prove that they deliberately dug the pit to retrieve the bones or the relief. Abductively reasoned and also drawing on, specific theoretical traditions (for example drawing on the work of Durkheim, Structuralism and Structural Marxism), however, the interpretation detailed in SR does cohere with the available interpretations of the archaeology; including descriptions of pits, cuts, burials and buildings.

3.4 Interpretation on site from trowel to pen

The theory of interpretation emphasized at Çatalhöyük is interpretation at the trowel's edge:

> "As the trowel moves over the ground it responds to the changes in texture and colour, but always in a way informed by a particular perspective. The knowledge of the archaeologist influences the way in which the site is dug. There are many classic examples such as the inability of archaeologists trained in northern Europe to "see" mud brick walling in the Near East. But more generally, if excavators have limited knowledge of what they are excavating (Is this a human or animal bone? Is this 4th or 3rd century pottery?), they will be less able to excavate and interpret correctly...If they do not look out beyond the individual context or unit they are excavating, they will not be able to deal with interpretive issues that involve other contexts and other sets of data. So one aim of a reflexive approach is to get the archaeologists as they dig to have as much information as they can so that they can make a good judgement about what it is they are digging."(Hodder 2003, 58-9)

Interpretation is both *a priori* and *a posteriori*. As we excavate our own training influences our interpretation. Interpretation is dependent on our own knowledge thus interpretation is *a priori*. Our interaction with the record though is *a posteriori* and further through excavation archaeologists are trained to interpret the context.

Previous sections of this chapter discussed how interpretations are justified, from excavation through to publication. This included looking at how the interpretation of a single wall changed,

over time and how the findings related to one building were published. In this section the aim is to discuss what this shows us about interpretation on site and situate this in terms of the philosophical theories of truth, discussed in Chapter Two. It is not possible to map one theory straight onto another, when comparing philosophical theories of truth to the formation of archaeological knowledge in the field.

Through the single context system, interpretation is much more in the hands of individuals, bringing individuals closer to the archaeology. The recording process allows interpretation after excavation to occur, at different levels. It is possible to go back and view single contexts on their own, or within wider contexts in the matrix. There is flexibility in constructing the overall context, allowing for the relationship between different units to change as further excavation takes place. The importance of the single context system is in allowing this fluidity of reinterpretation.

In Chapter Two, the correspondence theory of truth was discussed; a proposition is true if it corresponds with the way world is. It has proven very difficult to pin down what is exactly meant as correspondence, for example for Austin (2001) truth is confirmed indirectly, against a state of affairs. Alternatively, correspondence as congruence claims an isomorphism between the state of affairs and the world.

At this most basic level of archaeological interpretation it is possible to posit that what is at play is a form of correspondence, indirect or otherwise. What is interpreted is what corresponds or confirmed by a state of affairs, i.e. the archaeological record (here referring to simply what lies in the ground). At the most basic level a picture of the site is built through the identification of walls, fills and the relationship between these. However, working through the example of building 44 very quickly the picture is much more complicated. Arguably, there is still a form of correspondence at play as the archaeological record is used to confirm the state of affairs, but to build a more nuanced image the archaeologists have to make use of background knowledge to understand all available evidence as it is uncovered. Within justification there is a shift in the scale of interpretation from just thinking of cuts, layers and fills to thinking drawing the interpretation of cuts, layers and fills to identifying and describing features. At the same time that there is a shift in scale, there is a shift in mode of justification towards coherence.

Coherence theories of truth hold that a belief is true if it fits with the rest of our beliefs. On site a tacking occurs back and forth, as shown in the interpretation of a building on site, new stratigraphy causes interpretation to shift or change. For example, in the case of building 44, context and feature numbers are changed after being assigned to a later building, as excavation shows that the original interpretation did not fit as floor layers ran under walls and could therefore not be contemporary. At the same time interpretation evolves in more direct reference to the archaeological record. The

presence of sub-wall structures in building 44 confused earlier interpretations but further excavation made it possible to define the relationship between different buildings and the structure and history of Building 44.

Even at this stage, as excavation is still occurring, interpretation is already theory laden. *A priori* knowledge is used to understand what is a cut, what is a wall, what is a midden, what is a building and so on. The archaeological record is understood in a certain way, as layers, cuts and fills (an *a priori* assumption). Excavation follows a specific methodology, in this case a single context method, *a priori* based. Interpretations of the archaeological record are in some way socially constructed And background knowledge is used to identify walls, floors, and pits. There is more going on than just a simple tacking back and forth between theory and data, as suggested by Hodder:

> "Individuals within society today use the past within social strategies. In other words, the data-theory relationship is conceived and manipulated within cultural and historical contexts."(Hodder & Hutson 2003, 19)

Data and theory tack back and forth, while agency, culture and history interplay in this dynamic. Excavators follow unwritten 'academic' rules and play an active role in interpreting the archaeological record (Holtorf 2005, 57), therefore:

> "Archaeology too, can be taken to provide a collection of ever changing creative commentaries about the past and its remains. Each of these does not offer a contribution to an eventually complete reconstruction of the past, but they reflect the constantly changing approaches of those commentating"(Ibid, 75).

While it is possible to find correspondence at play, this is only at the very lowest level. To make any meaningful statements requires the input of background knowledge. For example: technical knowledge of how to identify even a wall and methodological principles which define how and what we excavate; personal preferences of what we excavate; analogy with modern day and other sites to understand the archaeological record; and so on. Interpretation is inductive as we make generalisations from the features of the observed archaeological record. For example, all stratigraphy we have seen like this, is evidence of a mud brick wall, therefore this must be a mud brick wall. While correspondence is at play at the base, coherence is relied upon to build a richer picture of interpretation. However, there are many different interpretations, analogies, methodologies, and so on, that can be drawn upon to build a coherent model. As discussed in

Chapter Two, it is possible that there exists more than one coherent system of interpretation which could also contradict each other. The choice of which of these will be used, and how they will be applied, will be partly based on what is coherent with the system but also will be socially influenced. For example the choice to use single context recording is due to the education and training of individuals on sight, the artist reconstructions of building on site (for example, figure 13) draws on their own experiences. Therefore, at this level of archaeological interpretation, justification is in socially constructed. The issue though is where this line is drawn. In the section looking at the interpretation of a series of small walls, we see how a building is reinterpreted as new stratigraphy is uncovered and doesn't fit into an earlier interpretation. The question here is to what extent is this final interpretation constrained by reality or influenced by past experiences and interpretations of similar features? It is very difficult to draw the line between evidential constraints (ontologically assuming that there exists an independent reality) and the influence of social construction on knowledge.

As we tack backwards and forwards, between our observations of the record and interpretation, reasoning becomes a form of deduction by testing if our interpretation of new stratigraphy being uncovered fits with the interpretation of the rest of the stratigraphy. Interpretations are tested against the archaeological remains, as excavation uncovers more of the record. One thing that needs to be noted in the below models that has been mentioned previously, the archaeological record is not the past. As Lucas notes it, "can refer both to what archaeologists find in the ground and to their notes, drawings or photographs produced in the course of fieldwork."(Lucas 2012, 18) In this section the archaeological record means just what is found in the ground and as clearly obvious as it is, the archaeological record is only the fragmentary remains of the past, there is no direct access to the 'thing' we are trying to interpret.

Interpretation is indirectly correspondent but it is reached within a system of coherence. Background knowledge makes it possible to interpret the archaeological record beyond the recording of layers of soil. Background knowledge is used to recognize walls, to date material remains. Analogies are made with other sites and modern day examples to make sense of the stratigraphy; to recognize walls, middens and hearths. For example, a hearth, made up of a certain configuration of layers. It is possible to identify a hearth from the burnt layers and remains, the plastered edge; we know the use of the hearth through modern day analogies.

This system self-corrects with new evidence and slowly a more elaborate nuanced interpretation of the site is built. Interpretation is akin to an interweaving web, drawing multiple lines of data from the field, which is understood through background knowledge, which all has to fit together. Eventually a stable interpretation of the archaeological remains is reached. Pragmatists

discuss that idea that truth is stable consensus: in archaeology this appears also to be the case. It is difficult to identify when stable consensus is reached but in the example of one wall in this chapter, interpretation shifts less over time and becomes more fixed. With more complex interpretations it is more difficult to identify when an interpretation becomes fixed and as will be shown in the next chapter, with the use of abductive reasoning, fixed consensus is not always possible.

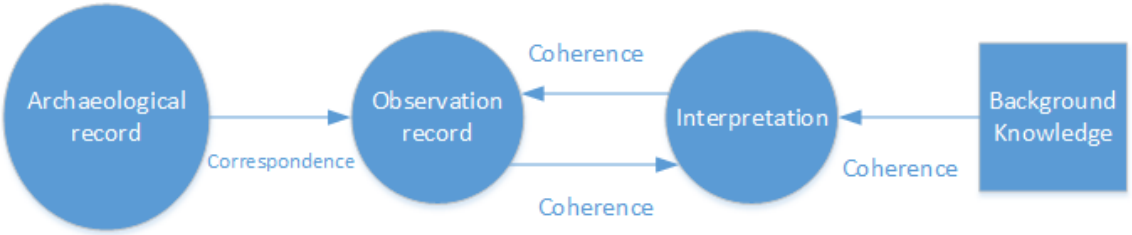


Figure 15 Interpretation in the field

In the site report a more 'polished product' of the above is detailed, without the details of how it is reached; the changes to the interpretations that occurred during excavation are not included. Figure 15 is part of an intricate web so that there are many observations and interpretations, and within this web the interpretations need to fit together. These interpretations of the archaeological record are then brought together to create a narrative. Deconstructing a specific example from building 44:

> "As usual the frustration of not knowing has subsided as the archaeology again explains itself as we take things apart piece by piece. The frustration was mainly due to the presence of sub wall structures where there 'should' have been nice straight walls bellow building 44 leading to nice floor/platform etc deposits. Anyway what appears to have happened is that building 56 (our new older building) was abandoned and a large dump of mixed midden and building material Deposit 11670 was rapidly used to fill it in. Even here care seems to have been taken to dump the more substantial mud brick/demolition material around the edges of the old building, perhaps in preparation for the next deposit, basically a foundation wall F. 2053 (11671, 11672 and 11673) this wall partially cut into 11670 and was widest at the south east. Similar preparations appear to have been constructed along the south and west in preparation for the building of the walls of building 44." (Diary Entry RR 31/07/05)

Multiple interpretations are brought together: the interpretation of the sequence of different walls; the presence and comparison of dump deposits and the evidence for preparation. This is not just a one way static coherence, interpretations interlink. In the case of building 44 everything needs

to fit; new interpretation also need to fit and if it doesn't it becomes necessary to reinterpret other interpretations of a building.

As we move further up the chain of interpretation there is a change. During excavation there is a degree of correspondence with the archaeological record. The further away from excavation, interpretation becomes more reliant on theories fitting together, cohering. For example, ideas about memory, religion, ritual and so on which are drawn from other studies of sociology, anthropology, ethnographies and so on. Returning to the example in '*The Leopard's Tale'* (Hodder 2006) of memory of ancestors. This is built on interpretations of the archaeological record indicating the deliberate retrieval of human remains, as detailed earlier. This interpretation is built upon another interpretation; correspondence is much lower down the chain of reasoning. This will also be discussed in the next chapter.

Within this case study there are four different scales of interpretation. At the smallest scale is the observance of cuts, layers and fills. At the next level these observations of the archaeological record are drawn together to understand features. A further level is reached when these features are brought together to build a more nuanced image of buildings and the site in general. The largest scale of interpretation is as seen in publications like LT, for example, regarding the ritual beliefs on site. As the scale changes so does the mode of justification, from correspondence (at the smallest scale) to more heavy reliance on coherence (the larger the scale).

Reinterpretation lower down may impact at more complex levels of interpretation or it may not. At this level multiple different stands are brought together to create a larger scale, more complex interpretation. Interpretations regarding cultural patterns, ritual behaviours, beliefs are made. This is not the case at earlier stages of inquiry, though arguably individuals will voice their opinions, usually off the record.

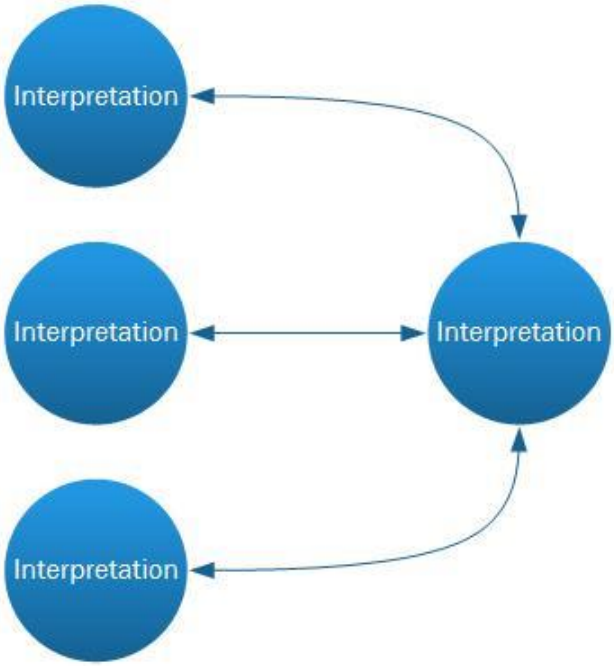


Fig 16 Layers of interpretation

At Çatalhöyük one of the aims of the diaries was to record how interpretation evolves. At the lower level of interpretation, the archaeological record more directly impacts interpretation but at this higher level of interpretation it constrains interpretation. Reasoning becomes abductive rather than inductive. Abductive reasoning, as discussed in the last chapter, is simply when a hypothesis is suggested by the evidence but the evidence does not logically entail or determine the conclusion. It is arguably not aligned with a specific theory of truth, just like inductive and deductive reasoning cannot be said to be associated with a single theory of truth, however the term was first coined by Peirce a pragmatist (Douven 2011) and Putnam (1981), in a later conception of pragmatism, also argued for the presence of abduction in scientific reasoning. Taking a specific example from this chapter, Hodder's interpretation in "*The Leopard's Tale*" on the importance of the past to the people at Çatalhöyük fits in with the all available interpretations of the archaeological record but is not directly suggested by them nor is it the only possible interpretation, it could be suggested that the burial practices were merely practical. These interpretations may be built upon other interpretations, as figure 16, or they may be built upon more direct interpretations of the archaeological record as in figure 15. It is the collection of these different stands are brought together to build more nuanced, higher level interpretations (figure 17). Within this system, as at every level, different forms of background knowledge feed into any final explanation.

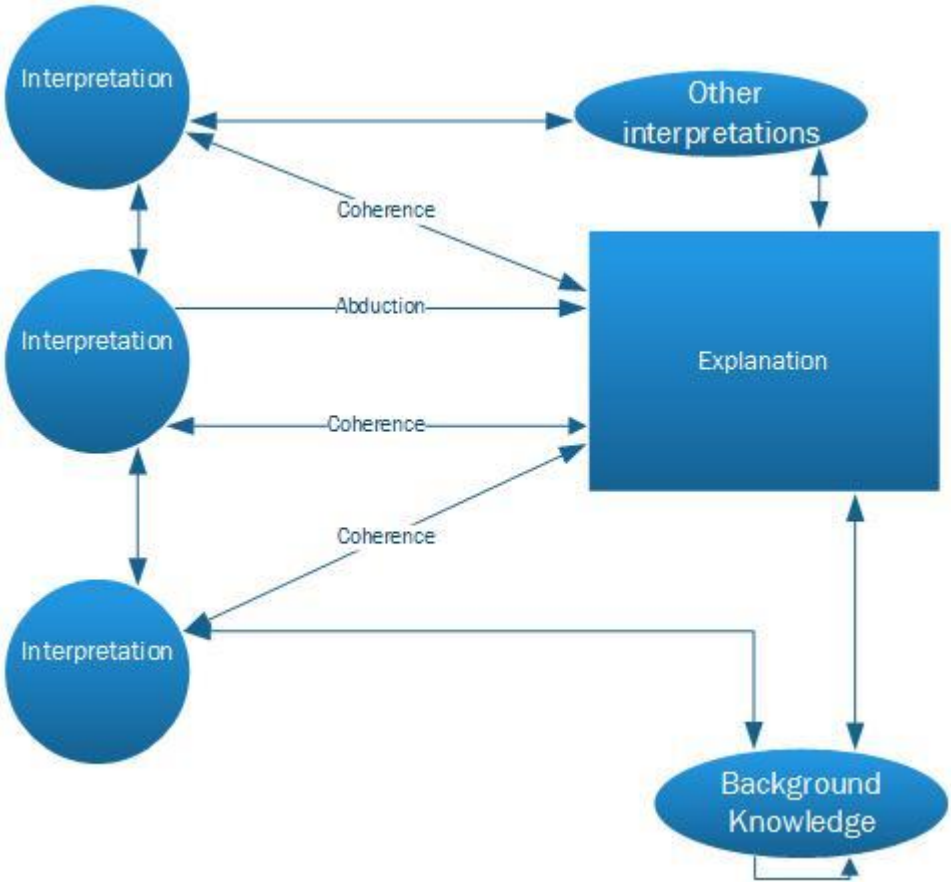


Fig. 17 Layers of interpretation II

3.5 Applying philosophical theories of truth to archaeology in the field

A number of issues were raised at the end of the last chapter about applying philosophical theories to archaeology. The discussion in this chapter clarifies some of these points.

Discussing correspondence theories of truth in the last chapter, it was noted that it is very difficult to pin down the correspondence relationship. In this chapter, it has been argued that the earliest stage of interpretation in the field is through correspondence with the archaeological record. In this sense 'correspondence' means the identification of specific features of the archaeological record; to establish a correspondence between a definition and what is observed. The biggest criticism of correspondence theory is that, it is questioned if is it possible to know when an interpretation is 'true' or accurate (Blackburn 2005). As discussed in Chapter Two, correspondence theory require 'a god's eye view' to be able to detect accurate correspondence between truth (a representation of a fact) and truthbearer (the actual condition of affairs), for example, archaeologically, out interpretation of the pot and the pot itself.

In the field interpretation is changed/altered/corrected as interpretation evolves, for example, in the case, detailed in this chapter, of one wall. The identification of layers, cuts and fills is brought together to build an interpretation of the archaeological record. Earlier statements need to fit in with on-going interpretation which can and does change as new evidence may contradict, or not, earlier interpretations. Therefore, correspondence relations are tested against other parts of the stratigraphy and other forms of knowledge used within interpretation; correspondence is never independent of coherence.

In this chapter, it has been argued that coherence is also used to understand the archaeological record. As a tacking occurs between the observations of the archaeological record and interpretations of it (drawing in other forms of background knowledge), all the different elements need to fit together. One of the questions raised at the end of the last chapter was that if coherence is a condition of justification, would it be the only or central condition of justification? In this chapter it has been argued, that while coherence is a vital component of how interpretation is justified, it is not the only component. Archaeological justification, as practiced in the field, does not map on to just one type of theory of truth. This is not in opposition to philosophical theories of truth; not all philosophers solely support a singular theory of truth. While a theory of truth may be supported as a metaphysical definition of truth, other theories of truth may be supported as epistemic methods. For example pragmatists, as argued in the last chapter, have argued that both correspondence and coherence are part of scientific inquiry.

There are a number of points raised at the end of last chapter that have been touched on in this case study but not fully answered. It was questioned in the last chapter if archaeological justification leads to a singular interpretation of the past or can allow multiple interpretations of the past. In this chapter it has been noted that while archaeologists interpret in the field and present their results with multiple voices, archaeologists present their findings and act in a manner which suggests archaeological interpretation is working towards a singular interpretation of the past. However, in the reflexive method there is also an acceptance that there are multiple different viewpoints of the world. During interpretation and excavation, in the reflexive method, the need to listen to multiple voices is emphasised but in the end this is reduced to one voice. It is interesting that in the field the focus is on recording as many voices as possible but at the stage of publication what is presented, is a unified view. Is this an actual unified truth? Are ambiguities and different opinions suppressed? There is a dichotomy between archaeologists in the field and the underlying theory. This raises the question of what happens when different interpretations are held not just by different groups but between archaeologists: are they accepted as different interpretations of the past or are they competing interpretations of the past? This is something that will be discussed in greater

length in Chapter Five, both in reference to Çatalhöyük but also tied into the larger debate around archaeological ethics.

In a number of places, in this chapter and previous chapters, it was noted that archaeological justification is theory laden or in some way socially constructed. From the case study in this chapter it is easy to posit the occurrence of social construction but it is difficult to measure the impact it has on justification. The role of social construction in archaeological justification is still not clear, though arguably it increases with scale of interpretation. Therefore, the impact of social construction on archaeological justification continues to be considered in the next two chapters.

Finally, given that archaeology is not just excavation, how does justification work in relation to larger explanations of the past? This is discussed in the next chapter. By looking at one specific case study and different interpretations, the aim is to understand the conditions of justification when archaeologists hold different interpretations of the past.

Chapter Four
Justification and the archaeological 'grand narrative'

4.1 The British Neolithic

At the end of the last chapter it was argued that in the field, archaeologists act as though they are aiming for a singular account of the past and yet theoretically accept that there is a plurality of different interpretations of the past. It is also posited that justifying grand scale complex interpretations may be different to justifying knowledge in the field. It was shown in the last chapter that as interpretations become more elaborate justification changes, becoming more reliant on coherence to justify interpretation than correspondence. This chapter therefore tests this at a larger scale than the interpretations in the previous case study. Does the model detailed in the last chapter hold when we move even further away from the act of excavation? Does the mode of justification change, as seen in the last chapter, as the scale of interpretation change? What are the implications for justifying grand scale narratives? Is it ever possible to reach a single interpretation or are multiple interpretations to be expected? The example used in this chapter is the emergence of agriculture in Britain. This is not an exhaustive account and not one that attempts to reach a final conclusion, in terms of an explanation for the emergence of agriculture in Britain.

Putting the debate in context, theories regarding the emergence of agriculture developed throughout the 20th century. It was first suggested, at the beginning of the 20th century, that environmental change was the primary cause for the emergence of agriculture (Pumpelly 1908). Childe described the origins of agriculture as a 'Neolithic Revolution', employing the new concept of centres. Agriculture and other innovations originated in the Near East and moved into Europe (Childe 1925). Within a diffusionist approach, the spread of agriculture was explained by the inherent superiority of farming as a way of life. Piggott (1954) argued that the archaeological site of Windmill Hill is evidence for an intrusive culture. The appearance of an alien culture supports migration. Piggott was one of the first archaeologists to give the indigenous people a role in the emergence of agriculture, developing the concept of a secondary Neolithic.

The 1960's and 1970's, dominated by New Archaeology, saw an intensified search for causality (Price 2000, 1), for example, population pressure (Binford 1968a; Cohen 1977; Flannery 1973). The radiocarbon revolution brought traditional theories into question. For example, the Mycenaean monuments presumed to be the ancestors of the British monuments were found to be

younger (Renfrew 1973). Despite this reaction and the advent of radiocarbon dating, most archaeologists still held to a traditional framework. The most popular explanation was migration and invasion. Clark, for example:

> "We have to begin by recognizing that farming economy and the whole complex of technology, practices and ideas that made up our Neolithic culture must have been introduced from overseas. No one can doubt the invasion hypothesized is here essential and justified."(Clark 1966, 175)

Case (1969) also believed that agriculture was brought by colonists across the Channel and introduced the idea of a pioneer phase. A society, in pioneer phase, practices agriculture but lacks the social or ritual complexity of a full-blown Neolithic society. This pioneer phase is evidenced by a lack of monumental tombs and possibly a more mobile, non-sedentary lifestyle.

During the 1970's and 1980's indigenous people were given a more active role in the emergence of agriculture (Price 2000, 2). This was accompanied with the realization that farming can be more labour intensive than foraging (Zvelebil 1986). Earlier explanations concentrated on deterministic factors: population pressure, environmental change and so on; but theoretical changes during the 1980's questioned the concept of the passive individual and hence, undermined overly deterministic explanations. This theoretical shift led to new explanations for the British Neolithic. Models for the British Neolithic, influenced by the post-processual school, focused on ideological and symbolic factors. Hodder (1990), and later Thomas (1991; 1999), heavily use both ideological and symbolic aspects in their explanations for the emergence of agriculture in Britain. As archaeological theory shifted, different explanations for the Neolithic emerged. This raises the issue of whether different paradigms lead to different explanations and how this impacts justification?

Three different stances can be drawn out from the current debate. In recent years there has been a resurgence of the migration model (Sheridan 2007). At the same time the acculturation model is still supported: some follow a model that emphasises economic change (Fairbairn 2000; Zvelebil & Rowley-Conwy 1984) in Neolithic Britain and others support a model of cultural change (Thomas 1991; 1999; Tilley 2007). It is these three models for the British Neolithic that will be considered, comparing how each are justified from the archaeological evidence. What epistemological stance is taken? How is each interpretation arrived at? And what theory of truth does archaeological interpretation rest upon?

There is the issue of terminology; therefore, in this chapter for clarity, specific terms will be used to reference different facets of the debate. Interpretation will refer to the different facets from archaeological evidence, whether this is more direct or larger interpretations of the archaeological

record. These different interpretations are used to build ‘grand narratives’ as discussed below, these will be labelled as explanations; explanations for the emergence of agriculture in Britain. Explanations are in themselves also interpretations, but this terminology is adopted to separate the two for clarity only. Looking at how explanations for the emergence of the British Neolithic are justified from different interpretations will make it possible to discern a model of justification in archaeology at this level of interpretation.

4.1.1 Migration

The traditional view for the emergence of agriculture in Britain was one of migration, colonisation and invasion, by migrating farmers from the continent:

> “The introduction of agriculture into Europe has since Childe‘s original conceptualization in the 1920‘s been thought to reflect the spread of foreign colonists bearing ceramic containers and domesticated plants and animals, and bringing permanent villages, new architecture, storage facilities, long distance trade and elaborate burial rituals.”(Price 2000, 3)

For example, the culture seen at Windmill Hill is seen as an example of an intrusive culture:

> “an outpost of the great cycle of western Neolithic societies represented beyond the channel in the oldest Swiss lake-dwellings, the Michelsberg settlements of Belgium and the Rhine Valley, Fort Harrouard and la Campigny in the lower Seine basin, and the pre-megalithic graves of Brittany. The whole economy is strikingly similar, with its preference for upland sites, its reliance on cattle-keeping and its communal specialization for flint-mining and manufacturing axes.”(Childe 1980 (1940), 41)

The appearance of a complete Neolithic Package is seen as evidence of migration, the assumption being that: “immigrants will transport all their traits, including unrelated ones and inconsequential cultural baggage, while acculturating foragers will be free to choose what novelties interest them.” (Robb & Miracle 2007, 102)

Migration was strongly supported into the 1980‘s (Dennell 1983; Fowler 1981). During the early 1980’s there was a growing voice that felt that the role of the native Mesolithic population had been underestimated (Bradley 1984). For example, Mercer (1986) in reference to Neolithic

Cornwall, argued that much of the early Neolithic was developed by Mesolithic communities. The underlying reasoning that traditionally supported a migration explanation (the appearance of new material equals migration) is questioned as it did not take into account that new material may be associated with indigenous peoples. This criticism caused a shift in migration models.

In recent times, migration explanations for Neolithic Britain have seen a revival. Discussing the Carinated-Bowl Neolithic, Sheridan (2007) argues, the best explanation for the emergence of the Neolithic in Britain is the arrival of small farming groups from the Continent. Developer funded excavations in the north of Britain have reinforced the previously known data for the Carinated-Bowl Neolithic (Ibid, 442-3). These discoveries have extended the evidence for houses and settlements. For example, two large halls excavated at Claishand Warren Fields, Crathers, Aberdeenshire parallel structures on the Continent (Ibid, 445). Detailed study of lithic tools from the east of Scotland, dating from the fourth millennium cal BC, have shown that there is significant difference with the lithic technology in this area, from the preceding millennium (Warren 2004). The premise again is that different culture equals the appearance of alien peoples. The appearance of new cultural traits is explained by the appearance of new people and hence migration. It appears that abductive reasoning, as discussed in Chapter Two and Three, is used to build an explanation. An explanation is supported by different strands of evidence. In this example, the settlement patterns and the appearance of lithic technology are used to support the appearance of new cultural traits, which supports the explanation of migration but does not logically necessitate it: it is possible that all these strands may fit with a different explanation.

Further pieces of evidence and interpretations of the archaeological record are used to support migration as an explanation for the emergence of agriculture in Britain. Characteristic signs of the Carinated-bowl Neolithic spread quickly over a large area and are given as evidence for the migration of people from the continent. Sheridan (2007, 466) states that there are five key points that support "a widespread, relatively rapid, diaspora-like colonisation, shortly after 4000 cal BC, by small, CB-using groups of farmers from the Continent"(Ibid). Firstly, the appearance over a wide area of novel Neolithic material related to every aspect of life. Secondly, material culture is consistent over a wide area. For example, ceramic culture is homogenous and of consistently high quality and so cannot be evidence of learned technology, in an identical manner, by a wide group of dispersed Mesolithic groups. Thirdly, there is a clear contrast in the location of Mesolithic and Neolithic settlements. Fourth, there is an absence of evidence for contact between Mesolithic communities in Britain and the Continent which makes the acculturation argument unconvincing. Finally, there is also a lack of evidence of gradual transition to farming, as seen for example in the Rhine delta. These different strands are brought together to support a migration explanation: the

appearance of the Neolithic package so quickly; its appearance and nature over a wide area; the contrast between the new material and the old and the lack of evidence of contact between Britain and the continent at the time, support the concept of migration, however, none of these lines of interpretation directly evidence migration. It appears that there is a form of coherence at play, as first discussed in Chapter Two; interpretations are justified by how well they fit together. All these points fit together or cohere: the novel Neolithic material over a wide area, consistency of material culture, clear contrast in settlement location, lack of evidence of gradual change. All the previously listed points fit with a model of migration, but don't guarantee or logically necessitate the conclusion. All five of these points can be explained by migration; the evidence could be indicative of the conclusion but it is possible that another explanation fits the available evidence.

Justification is more elaborate than just finding on explanation that fits with all available 'evidence'; there also occurs a type of tacking back and forth as new evidence and ideas emerge or additional 'evidence' is sought to back up an explanation. The apparent sharpness of the transition between the Mesolithic and Neolithic is used as evidence for migration. To back up this view archaeologists use further interpretations of the archaeological record. This shows further tacking between theory and practice, to justify an explanation. For example, Schulting (2000, 32) points to the lack of evidence for microliths and pottery being used at the same time, suggesting little overlap between Neolithic and Mesolithic ways of life. New dates for Neolithic sites do not support a slow transition over many centuries. Evidence on diet, from staple isotope studies, also indicates a rapid and complete change of diet from wild to domesticated (Ibid). For example, the study of 78 early Neolithic human skeletons indicated a lack of marine foods and implies a rapid change of diet in Southern Britain as marine foods were abandoned and replaced (Richards & Hedges 1999). As quick change is associated with migration, these new strands of evidence (interpretations of the archaeological record) are used to support a migration explanation. Isotope evidence indicates rapid change of diet is based on our understanding that the presence of certain isotopes can be used as an indicator for diet, which is based on the knowledge to date and identify archaeobotanical evidence, which required the knowledge to excavate, and so on: a chain of evidence and argument is used to create a more complex interpretation

As argued in the last chapter, to understand the archaeological record involves drawing in other types of knowledge: ethnographic examples, anthropology, sociology, biology and so on. These background principles make it possible to go beyond saying just a wall is a wall. As seen in the last chapter, layers, cuts and fills build an image of how a house is constructed. Pottery and lithics are dated by their form. An interpretation is built from more direct interpretation of the archaeological record through correspondence with the archaeological record but above this there

are many more interlinking systems. To understand what is alien or new cultural material and what is native or evolved cultural material requires an understanding of the archaeological record, across a wide time frame and geographical area. This requires the comparison of Mesolithic material and Neolithic material. A migration stance implies that different material is linked to different people. This requires a substantial understanding of the archaeological record in England and the archaeological record on the continent. Archaeology on many different sites needs to be interpreted. Our understanding must cohere within a larger framework, concepts of what it is to identify house platforms, lithic assemblages. Certain traits are labelled as Neolithic whereas other traits as Mesolithic, for example, certain types of microliths and pottery, or diet, or settlement types and patterns. Our knowledge of these are built from multiple strands, both archaeologically (interpretations from many sites across England) and using knowledge from outside the discipline (for example, the ability to detect change in diet through isotope analysis). The explanation of migration is built from different strands of interpretations, which are also built from many different strands of interpretation and ultimately the archaeological record. Changes to microliths, pottery, diet or settlement type are seen as being explained by the appearance of new people through migration (abductive reasoning). The change seen in the archaeological record could be due to this reason but not necessarily; it is possible that there is another explanation for the change in material.

The appearance of so many Neolithic cultural traits so quickly is used as evidence for migration. It takes time to learn new skills to the level shown in the material record; ergo it was not possible for the native population to have learned how to produce new 'Neolithic' objects. There is no evidence of slow adoption or even contact and therefore, migration becomes the only clear explanation that coheres with all the evidence. This presupposes that the only possible explanation for quick change is migration. However, again, this is not necessarily the case; it is possible that there is another explanation, one that we may not have even considered. For Sheridan, migration is the only possible explanation for the appearance change as there is no British or Irish parallel for this kind of phenomenon (several waves of migration) on the continent (Sheridan 2010, 191). Sheridan's focus is on material culture and the identification of certain material traits with certain people, following the material indicates the movement of people. The focus is always on comparing material in Britain with the continent; material culture is correlated with people. It is assumed that the indigenous people could not have easily adapted to the changes happening during this period. There is an underlying assumption that the changes to material culture (as rapid, over a wide area) could not have been due to any other mechanism than migration. This is a form of coherence: interpretation is seen to fit/cohere with all the evidence. The migration explanation becomes more

nuanced with more information; migration is assumed due to change in material but the explanation also fits with evidence of fast change in diet.

Once an explanation has been reached, justification does not stop. As new evidence/ interpretations of the archaeological record emerge these can be used to both falsify and confirm explanation, by how they fit within the current system (the many different interpretations and pieces used to support an explanation) of an explanation. Evidence can act as confirmation and falsification; for example, the lack of contact with continental groups is used to falsify an acculturation model. Rowley-Conwy (2004) argues against a purely ideological acculturation model for the emergence of the Neolithic in Britain and against post-processual stances. He argues that the different axioms supporting this are:

> "incorrect: (1) The Mesolithic was not intensifying towards a native agriculture. (2) The Neolithic was not mainly dependent on wild foods and was not nomadic. (3) The transition was not seamless but highly disruptive." (Ibid, s97)

This argument strongly hinges not on proving migration but disproving acculturation: a model for justification acting in a negative way, where evidence can falsify, as in this case. The above is not clear direct evidence of migration but the coherence of certain indicators: no signs of intensification; no seamless overlap between the Mesolithic and the Neolithic. Neither of these explanations for the emergence of agriculture in Britain hinge on direct evidence that there was or wasn't an incoming population but instead state that state that certain traits indicate migration (fast and widespread change) and certain traits indicate acculturation (slower and more partial change). Thus:

> "the arrival of the agriculture was an unforeseeable contingency, and the upheaval it caused must have been huge. For the successful reproduction of local forager descent groups, agriculture must have been a catastrophe. It is almost inconceivable that any socio-ethnic groups survived intact across the transition. Major movements of people were probably frequent. This is not to suggest a return to the demic "wave of advance"...movements were probably much shorter and less directional. Several scenarios can be envisaged, among them "leapfrog" migration, taking a group or subgroup just beyond its neighbours into available space, "trickle" migration, involving movement by individuals, not necessarily of one ethnic group, over periods of a generation or more, and "creep" migration, so slow that it may scarcely be discernible within a human generation."(Ibid, s97)

The interpretation does not return to more extreme earlier interpretations. Instead the explanation that migration led to the emergence of agriculture in Britain has to also fit within newer theories, as discussed above and below, that Indigenous people played a more active role in the transition. This fits with a pragmatist theory of truth that knowledge is through consensus and is justified against experience. Interpretation is developed to cohere to the evidence of the past decades of research.

In the previous citation it is noted that it would be almost impossible for a socio-ethnic group to remain intact across the transition, migration is again assumed and the role of indigenous people is also assumed. Agriculture arrived through a "rapid and massive socioeconomic "wave of disruption""(Ibid, S97). In abduction and in the above example, reasoning begins with the conclusion and the case is built from there. For example, the emergence of agriculture in Britain was caused by migration; material evidence suggests migration and this is further backed up by how rapid this spread is, how wide the spread and so on.

High-level presuppositions are made, for example, it takes time to learn things but once learnt it is difficult to change. This is based on a meta-narrative rather than knowledge gained directly from archaeological practice. Therefore, traditions in most cases can only be reproduced and thus Neolithic culture can only have reached Britain through mainly migration and not acculturation. Sheridan (2007; 2010; 2010a), drawing on the material remains, links specific material cultural patterns to specific cultures and thus, as material culture moves so to must have people. This has roots in the work of Childe (1947) and cultural-historical approaches. Sheridan uses this higher level meta-narrative to support the case for a migration explanation for the emergence of agriculture in Britain.

4.1.2 Acculturation and changing world view

By the late 1980's it had been generally accepted that the initial phases of farming in Britain contained a substantial Mesolithic component. Discussions moved to considering the reasons for the change to farming (Woodman 2000, 221). These factors can be separated into changing economies (Zvelebil & Rowley-Conwy 1984) and changing world views (Thomas 1988).

Julian Thomas (1988; 1991; 1999) is one of the main proponents of the view that agriculture was adopted by the native Mesolithic people of Britain and that a major factor for this to happen was a change in world view/culture. The Neolithic was therefore "a matter of mind, a triumph of the will, a new set of ideas, over matter and circumstances, a new way of organising social labour and

expressing relationships to others through monument construction, the symbolism of pottery and polished stone axes, and herding domesticates and tilling the soil."(Thomas 2007, 329)

Thomas argues that traditional interpretations of Neolithic Britain rest on assumptions that have led archaeologists to move, not towards a more perfect understanding of the past but one that is full of prejudices, stereotypes and assumptions that need to be exposed (Thomas 1999, 1). It for this reason that Thomas bases his methodology on the work of Nietzsche and the use of genealogy, contrastive history and the search for difference which, instead of forcing history to a modernist framework, searches for the alien quality of the past (Ibid, 5).

Thomas stresses that the artefacts found in the British Neolithic do not reflect wholesale transference of the Continental assemblage. For example, the earliest ceramics in Britain indicate a preference for fine carinated bowls and s-profiled, neutral and inflected forms, which represent only a minor element of the ceramic forms found on the Continent (Thomas 2007, 426-7). To prove acculturation, difference between the Continent and Britain is sought. As there is no full-scale transference of material culture from the continent to Britain, it is argued, the changes during this period were due to acculturation, rather than migration. As we saw in the previous section, at this level of explanation, while the line of reasoning does fit (abductively argued), it is not the only possible explanation. Arguably, it is possible that an incoming population did not bring every type of material over with them.

Thomas argues that the arrival of small-scale migrant groups would not cause a transition to farming:

> "Why should such modest incursions bring about the sudden extinction (in cultural or biological terms) of the British Mesolithic? If this were to be achieved by ruthless warfare, a massive influx of population would be required, involving a co-ordinated sea-born invasion by groups from across the seaboard of north-west Europe....Even leaving aside these objections, exogamous introduction arguments cannot explain why, if Neolithic communities had been established on the northern coasts of continental Europe for a number of centuries, they should all have decided simultaneously to migrate to Britain in the period around 4000 cal BC."(Ibid, 427)

If we compare the above statement to that of Rowley-Conwy (2004, s97), cited at the end of the last section, a different assumption is made. Rowley-Conwy assumed that the indigenous populations' society would not survive the transition intact, whereas, the above citation suggests that the indigenous communities would be resilient to the transition. It is concluded that a massive change in population is not possible and therefore, since neither small nor large scale migration is

possible, no migration is possible as an explanation for the emergence of agriculture in Britain. Both Thomas's and Rowley-Conwy's argument here rests on correspondence and coherence, though the explanations diverge on the assumptions used to explain the evidence. Correspondence occurs through the use of ceramic evidence supporting the lack of wholesale transference of continental material culture. As argued in the last chapter, this is not a direct correspondence but an interpretation of the archaeological record. Conclusions are drawn from information from multiple sites, knowledge of methodology to date and place the material evidence in context, analogy with modern day examples to understand ceramic production; multiple strands of interpretation are brought together.

It is argued that large-scale migration is improbable on various grounds and that even if there was small scale migration this could not be the cause behind the emergence of farming and hence it must have been due to acculturation. All of these strands fit with acculturation but none directly logically suggest acculturation. All of this logically strands from the presumption that the emergence of farming in Britain was due to acculturation. None of the evidence directly suggests acculturation. The lack of wholesale transference of continental material culture could be due to acculturation, but it is also possible it is due to other reasons. The lack of evidence of any mass migration fits with acculturation. The argument that the change to farming is unlikely to have happened due to lack of evidence of mass migration also fits with a model of acculturation but again does not logically necessitate acculturation.

Acculturation is further justified against different interpretations of the past. Prolonged contact between British communities and Continental ones would have been a necessity for acculturation as:

> "while domesticated resources and artefacts could be passed from hand to hand, the skills of nurture and manufacture required to use and reproduce them would have to be learned. While new types of stone tools could readily have been made by people already versed in flint knapping and pressure-flaking, and the herding of cattle might not have been beyond the abilities of former hunters familiar with habits of large mammals, both potting and cultivating cereals would have required new skills. These might have been learned through extended visiting or apprenticeship relationships, or acquired through the exchange of marriage partners." (Ibid, 430)

For Thomas, the only explanation for the appearance of the Neolithic in Britain is it having a character that could be assimilated by the indigenous population (Ibid, 427). This is an argument that fits with the available evidence, but again is not directly suggested by the evidence. The above

argument doesn't directly relate to any archaeological evidence but based on assuming how people would react to the emergence of new technologies. It is interesting to note that the above argument is the same used by Sheridan (2007) to argue for migration:

> "The consistency of the material culture and of practices of procurement and manufacture over this wide area. Taking the ceramic evidence, for example, the formal homogeneity and consistently high quality of manufacture attest the existence of a well established tradition: we are clearly not dealing with a new technology that was being learned, in identical ways, by widely disparate Mesolithic communities." (Sheridan 2007, 466)

There are underlying assumptions at play. For Sheridan people don't change easily, whereas for Thomas, the indigenous people displayed fluidity and changed readily. Sheridan and Thomas draw on different philosophical backgrounds. For Thomas (2007) the change in culture is through the transference of skills between the indigenous populations and peoples on the Continent. For Sheridan the change represents the movements of people. Both use the archaeological record but start from different propositions which causes a divergence in explanations. Sheridan and Thomas create a chain of logic to back up their explanations. Thomas, beginning from the premise that the emergence of farming is due to acculturation, uses the material evidence as signs of prolonged contact, which would enable the native population to adopt farming. Sheridan, on the other hand, begins with the premise of migration and argues that the evidence of contact is evidence of migration. The same evidence of continental material culture is used to support both explanations. This indicates the major issue in abductive reasoning; when there is more than one explanation the problem is how to decide which is the best explanation and as noted in Chapter Two, this is not a simple or easy thing.

Focusing more specifically on the idea of an ideological package, it is argued that there was a greater change than just economic or in the way of life, but also in the way people thought: a change in ideology, world view. Tilley states that this change in world view was due to:

> "a sensory revolution in which through altering the earth people transformed their own experiential conditions of existence in a fundamental way. A new sensory experience of place and landscape and new modes of dwelling led directly to new ways of thinking and new sets of cosmological ideas explaining the place of people in the world." (Tilley 2007, 329-30)

The Neolithic fundamentally changed the landscape, for example, through extensive woodland clearance:

> "for late Mesolithic forest people, social relations were structured in relation to the complex woodland mosaic itself, connecting together social groups, game, the individual trees, grassland and clearances. The forest constituted an entire field of meaning wrapped around old trees, fallen trees and tree holes, clearings, regenerating areas, trees connected in memory with specific events, trees providing shelter, firewood, a safe place to sleep and a sense of home. Trees were ultimately connected with the passage of the seasons, the reckoning of time and human lifecycles: an extension of the lives of those who lived among them...These people were of and in the forest in just the same sense as fish are immersed in the sea."(Ibid, 331)

During the early Neolithic, monuments became new cultural reference points in the landscape and thus, an attempt to integrate and incorporate the world and to transcend the fragility of corporeal existence into an enduring form, which became as much an embedded part of the landscape as the hills and rocks and valleys themselves (Ibid. 337). These changes to the sensory world were objectified in the monuments and material culture; incorporating the wild into a cultural material frame (Ibid, 343-4).

Tilley, rather than explaining how an ideological change made the Neolithic possible, discusses how the changes in everyday life may have had wider changes in the way people thought. Ideological change is used to explain changes to the landscape and monuments rather than migration; change in the landscape equals change in ideology. Woodland clearance led to a change in the indigenous population's relationship with the landscape, evidenced by monuments and material culture symbolic of new ideology.

Hodder (1990) uses the terms 'domus' and 'agrios' to explain his ideological theory for Neolithic Britain. The 'agrios' is the wild and the 'domus' is linked to the home and the activities that occur within. The evidence of feasting demonstrates the social control of the individual, entombed, and the blocking of the entrances of funerary monuments illustrates the control of knowledge. This is seen as a form of social and economic control. Long barrow and cursus monuments are hence outposts of the 'domus' and their spread across the landscape symbolized breaking into the 'agrios'. Causeway enclosures emphasised the enclosing of space, with the agrios inside. At the causeway enclosures of Woodhenge, Mount Pleasant and South Circle at Durrington Walls, the remains of wild animals and no domestic counterparts were discovered in the centre but

animal remains with domestic counterparts, like wild pig and wild ox, were in the outer ditch. This is again an expression of the wild and domestic:

> "It is as if unambiguous wild animals can be brought into the centre but the entire fabric of the domus depends on maintaining an opposition between domestic and the wild, wild pig and wild ox must therefore be kept to the margins." (Ibid, 264)

As discussed in Chapter One, habitus is central to Hodder's contextual approach. The above work makes use of habitus to interpret the symbolic function of the material culture. Within habitus, the system is only understood in terms of the structure and vice versa, a tacking occurs from part to whole and whole to part. It was argued in Chapter Two that this form or reasoning can be seen as a method of best fit or coherence: the whole and part need to be in agreement or consistent with each other. The ritual deposit of the dead is seen as a symbolic control of society and the spread of ritual monuments across the landscape, similarly, as symbolic control of the wild. As these two are interlinked, by their spatial situation, the control of the wild was a symbol for the control of society. Domestication and the cultivation of cereals can be seen as a method of controlling the wild; it too represents a symbol for the control of society (Ibid, 293).

Again while the above does fit with the interpretation built, it is not logically entailed from the interpretations. The ritual landscape does not directly prove the above argument but it does fit the interpretation. The argument rests on abduction based on bringing together multiple interpretations (the ritual monuments, the changes to the landscape and so on) that all cohere together. At one level, it requires the identification of cursus monuments, long barrows and causeway enclosures (which return us to the methodology seen on site in the last chapter) which is built on other interpretations (as discussed previously) not with correspondence directly with the archaeological record. On another level, the concepts of 'domus' and 'agrios' coheres with the identification of these different types of monuments. The concept of habitus coheres with these different levels. Even the concept of symbolic control is not directly evidenced by the archaeological record but does cohere with the explanation. All the strands therefore cohere with the final explanation but none directly suggest the final explanation. Additional theoretical components, for example habitus, are also brought in to build an explanation, a point that will be returned to later.

Thomas (1988) also discusses the idea of a type of Neolithic package, characterised by ideology. He believes that agriculture spread across Europe as part of an ideological package. The indigenous people would take on the way of thinking but not always all of the technological elements. Technological elements would, therefore, differ from place to place and time to time.

Thomas argues that the isotope evidence for the abandonment of marine resources may have indicated a change in ideology:

> "the critical change at the start of the Neolithic in Britain involved not relations between people and the sea, but between people and people. If during the earliest Neolithic the consumption of domesticated foods was less a staple diet than a marker of identity, so the rejection of marine foods might also have been bound up with the assumption of a new cultural identification ('being Neolithic')."(Thomas 2003, 70)

In the previous section, a change of diet was used to argue for migration, whereas Thomas instead argues that a change in diet is indicative of a change in ideology, showing that evidence can cohere with more than one interpretation. Thomas follows a phenomenological approach, showing that diet it not tied to a specific people, that identity and society is changeable. Migration models follow more traditional cultural categories in which a people are tied to specific types of economy and subsistence.

At the end of the previous section it was noted that migration explanations cohere with certain underlying theoretical stances or meta-narratives, this is also the case for the model detailed in this section. Thomas, Tilley and Hodder follow specific theoretical stances. All three could be described as belonging to the post-processual school of thought. Certain themes can be picked out from the discussion in this section. There is a focus on the local rather than a 'grand narrative'. There is also a move away from traditional definitions of the Neolithic (Thomas 2007). Tradition, in the examples in this section, is also something the indigenous people of Britain could choose to move away from. Tradition is neither a passive act nor an unchangeable one (as in a migration model, to a certain extent).

In terms of drawing on particular theoretical traditions, Thomas and Tilley lean heavily on phenomenology. Tilley (2007) focuses on the sensory experience of place and landscape, drawing heavily on phenomenological theory in archaeology (Tilley 1994). Thomas also focuses on the meaning of things through engagement with space which is fluid and on-going: "People live in and through experiential rather than geometric space, and they generally perceive the areas they frequent as a network of places connected by pathways and routes." (Thomas 1991, 35) This coheres with Thomas' focus on the impact changes to the landscape had on the ideology of indigenous people. Hodder leans heavily on his own contextual approach (1982; 1986) and thus focusses on material culture as an active element in group relations, disguising and reflecting social relations (Hodder 1982). This fits with concepts of 'domus' and 'agrios' and Hodder's explanation for the ideology of

Neolithic Britain. At this scale of archaeological interpretation, evidence appears to be selectively chosen based on the theoretical meta-narrative that support is sought for and used to build a coherent system that can abductively support a particular explanation. Theoretical stances are used to draw together the archaeological evidence and support a specific explanation for the emergence of agriculture in Britain: abductively reasoned and coherently linked with the archaeological evidence.

4.1.3 Acculturation and changing economies

The alternative view to the above is that the Neolithic way of life was adopted in Britain by the indigenous population due to economic change. This position is clearly seen in the work of Zvelebil and Rowley-Conwy (1984) and Fairbairn (2000). Bogaard and Jones (2007, 357) note that there is a contrast between discussions concerning farming in central Europe (focusing on economic factors) and farming in Britain, which has been given limited economic importance. Comparing the archaeobotanical evidence from these regions, Bogaard and Jones test this assumption and show that there is little difference between Neolithic sites in Britain and LBK sites in Europe. The occurrence of cereal grain in both areas is similar and the weed evidence, in both areas, supports the explanation that cultivation plots were maintained for extended periods of time (Ibid, 359-70). The contrast in interpretation between the two areas is not backed by the evidence and instead "[w]hat has sometimes been interpreted as ritual practice in one area and subsistence in the other probably represents the same activity."(Ibid, 370)

Different explanations have been given for the uptake of cereals in Britain. As already discussed, traditional explanations were criticized for failing to take into account the complexities of human communities. One response to this has been to instead focus on ideological reasons (as discussed above). Cereals were used due to their symbolic power value in social negotiation between groups, as an opposition to nature (Thomas 1993). This explanation is useful in correcting the reduction of humans to mindless entities "[i]t is, however, disappointing that this account explicitly denies that any domesticates had calorific importance, or I assume other utilitarian value" (Fairbairn 2000, 111).

Focusing on value and how this is accrued, Fairbairn's (2000, 112) explanation for the emergence of cereals in Britain, is based on studies of recent non-industrialised societies:

> "For acculturating British Neolithic communities, cereals may have possessed a range of values in different places, depending on the form of the cereal product, the people involved in transactions, the

> place of transaction and the references drawn upon in exchange. Movement of cereals through exchange would depend upon the relationship between groups and in part define future relations." (Ibid, 114)

Evidence suggests that the production of cereals in Britain, at the time in question, was both extensive and, in some places, as evidence by large caches, intensive. Cereals would have had a symbolic element to their use due to their high resource value. As Fairbairn argues they would have had high resource value as "they provide a reliable, calorific, large-seeded resource with unique cooking properties; the potential to produce ale; and large quantities of high-quality vegetation suitable for animal fodder and various domestic crafts."(Ibid, 115) During exchange both the symbolic and utilitarian value of cereals would have been drawn upon.

In previous examples in this chapter, multiple interpretations of the archaeological record are drawn together to reach certain conclusions and argue for a specific explanation, for example comparing Mesolithic and Neolithic material to show rapid change or only partial change. In archaeology the use of analogy is common: comparable samples, with recent history or the present day, are used to understand what happened in the more distant past, as discussed in the introduction. Analogy is an enduring characteristic of archaeological reasoning due to the nature of the record: it is not possible to directly observe the connections between material and behavioural cultural variables within the record. Fairbairn uses evidence from analogy with modern day examples to support his explanation that acculturation and changing economies are behind the emergence of agriculture in Britain. Fairbairn uses studies of recent non-industrialised societies to support the argument that cereals would have had high economic value; providing a reliable and calorific resource and hence explains the occurrence of intensive cereal production. An inference is made in which comparisons can be made between the past and ethnographic examples; the argument must cohere tacking from the past to the present through linking principles gained through analogy with present day and historical examples. Therefore, the interpretation is abductively reasoned, it is suggested by the archaeological record and fits with all the available evidence but is not directly suggested not logically entailed by the evidence: the extensive use and appearance of cereals fits with a model of acculturation and changing economies.

Within an acculturation explanation of changing economies, it is most likely that cereals spread to Britain through existing social and exchange networks from Continental Europe (Fairbairn 2000, 116). Though, there are a lot of maybes:

> "Cereals may have been exchanged initially between groups as a result of regular occasional contacts during expeditions to collect and hunt or as a means of securing social ties and alliances, including via marriages. Tastes and desires may have been fed by the dining of cereal food and drinks in such meetings and prolonged contacts may have provided the context and means for transmission of cereals...Contacts between communities on each side of the Channel may have only been maintained by relatively few individuals, this role and the objects they secured during transactions endowing special status. Representatives of British communities may have imported cereals as a result of successful visits across the Channel or Continental groups may have carried cereals as a means of demonstrating good intent and sealing alliances." (Ibid, 117)

Fairbairn does not rule out immigration (Ibid). The above makes the assumption that cereals would have been highly prized over more traditional foods, and this is used as an explanation why cereals spread so rapidly across Britain:

> "Esteem and exchange value of cereals may have been necessary for participation in some tournaments of value in the diversifying number of social arena's. Cereal establishment would have involve all kinds of pressures and desires that not only fuelled the initial acceptance of cereals into communities, but may also have aided the establishment and maintenance of cereal growth, not necessarily successful or ready in the first instance with unadapted crops and limited expertise. Social as well as functional pressures can be suggested, the maintenance of crops becoming as much a matter of pride and the need to be seen to succeed as a need to produce food and fodder." (Ibid, 118-9)

Fairbairn concludes that cereal uptake would have been from person to person, for a variety of both ideological and calorific reasons (Ibid, 120). Though this fits with all the evidence, it is also an assumption. To reach this explanation requires many steps. At the most basic level this involves the identification of domesticated species in the archaeological record; bioarchaeological samples are studied from many sites across Britain. Other forms of knowledge are used to identify domesticated seeds and to date any remains. Ethnographic examples and modern day inferences are also drawn upon to explain why cereals rapidly spread across Europe. From these ethnographic examples certain premises (i.e. that cereal has high economic value as cereals provide a reliable and highly calorific food source) are built regarding the economic value of cereals. Historical inference is used to support a model of acculturation tied to economic factors. The archaeological evidence suggests that in certain areas cereal production was intensive and fits with this historical inference. Intensive cereal production could very well be linked to cereals having high economic value,

abductively the 'evidence' fits the premise but it is not the logically necessitated from the evidence, nor the only possible explanation.

In this section the focus, at a theoretical 'higher level', is on the economic opposed to the social or cultural and therefore, defines 'the Neolithic' in terms of economic change. The same mode of justification is used compared to previous examples, different lines of interpretation drawn together and abductively linked to an explanation. Divergence from other explanations is caused by using a different meta-narrative to support an abductive leap. The meta-narrative seen in this section harks back to earlier theoretical trends, for example, social evolution (Childe 1951) and cultural ecology (Stewart 1955). The focus is on how humans adapt to changes, at both a biological and cultural level, with a focus on the environment and subsistence. The archaeological evidence is framed within an approach that specifically focuses on economic change.

4.1.4 Justification and the British Neolithic

The aim of this chapter is to understand what happens when archaeologists hold different interpretations of the past. As will be argued below, all three explanations for the emergence of the Neolithic make use of a similar epistemological toolset. The question therefore is why? If all three explanations for the emergence of agriculture in Britain discussed above use the same method of justification, why do they reach different explanations for it? To answer this we need to look in more detail at the framework of justification that is used in the above examples.

If we begin where we left off at the end of the last chapter, through archaeological investigation and analysis different strands of interpretations are brought together. This is repeated across many sites in different countries; not all of these interpretations may fit together and some may still be a matter of debate, whereas some may be held with a higher level of security. All these interpretations put together are still not a complete image. It is the interpretation of a fragmented record of the past, constructed in the present. Just like the criticism against correspondence theory of truth, there is no 'god's eye view' of the past. In this chapter a larger scale of archaeological interpretation is considered. This chapter then considers whether the mode of justification changes at this scale of interpretation.

All three explanations draw on the archaeological record to back up their own interpretations. Through the use of background knowledge and analogy these explanations for the emergence of agriculture are upheld. The same evidence is used to argue for different explanations and arguably these theoretical meta-narratives are, to some extent, *a priori* indicating the role of

social construction in archaeological justification. For example, regional variance is argued by some to be evidence of migration as incoming populations dealt differently with their new surroundings (Sheridan 2007) and by others, as evidence of acculturation (Thomas 2003). Botanical evidence that shows a change in subsistence patterns has been used as evidence for several different explanations for the emergence of the Neolithic in Britain. For Sheridan (2007) change in subsistence patterns are evidence of migration. Whereas Thomas (2004) and Tilley (2007) use it as evidence for a change in ideology; Bogaard and Jones (2007) argue it is evidence of changes in economic patterns and Fairbairn (2000) argues that it is evidence for a different sense of value.

In deconstructing the origins of agriculture, Robb and Miracle note how:

> "What has happened, apparently, has been a case of talking past each other. Because the various schools of thought writing on the issue start from different theoretical propositions—often differing even on what the term 'Neolithic' implies—theorists tend to start out with strong *a priori* views, use the evidence to establish their own position to their own satisfaction, and then get on with writing about what really interests them on the preferred migration-acculturation line" (Robb & Miracle 2007, 99).

All three explanations are framed by an original premise which is then built upon. Thus the original premise, over time, becomes deeply embedded, as Whittle notes:

> "What should concern us is not so much the data alone, though they remain of central importance, but how we think about them. Because the debate on the Mesolithic-Neolithic transition is a very old one, it has accumulated a set of established terms and dichotomies, which it is probably now time to abandon." (Whittle 2007, 623)

Beginning with acculturation views tied to ideology, Thomas, Tilley and Hodder follow specific theoretical stances. Tilley (2007) focuses on the sensory experience of place and landscape, drawing heavily on phenomenological theory in archaeology (Tilley 1994).

Thomas wishes to move away from traditional economic definitions of the Neolithic. Instead, the transition, from Mesolithic to Neolithic, should be thought of in terms beyond looking for the absence or presence of a certain material (Thomas 2007, 423-4) and focus instead on the social elements of material culture (Thomas 1991; 1999; 1999a). Thomas argues: "that the most important level of change lies in people's unconsidered, habitual, routine activities, which might be described as practice of inhabitation or dwelling."(Ibid, 428) Thomas follows the work of Ingold

(2000), that the acquisition of foodstuffs is embedded in social relationships, experience and understanding of the landscape. Thomas' (1991) interpretation of the Neolithic transition seeks to delegitimize the present to recover the difference of the past (Foucault 1984). Thomas describes his position as historical materialism; asserting social being over consciousness and resisting the subjection of specific to general (Thomas 1991, 178). Thomas focuses on the impact changes to landscape had on the ideology of indigenous people

Hodder's contextual approach, as noted previously, focuses heavily on habitus: the strategy generating propensities which enable agents to deal with situations; habitus being an unconscious act and an embodied phenomenon. The body thus is imprinted and encoded through the learning process or socialising, which begins in childhood (Bourdieu 1977). Hodder's explanation aims to uncover the social: "The relationship between social and symbolic structure is complex, meaningful, and itself, socially constructed. Archaeologists have to 'read' the symbolic structures in order to infer the social realism."(Hodder 1990, 14) Hodder defines "structure not as system, pattern or style, but as cores and rules according to which observed systems and interrelations are produced."(Hodder 1982, 7) Hodder in searching for symbolism in the archaeological remains of the Neolithic transition, identifies the 'domus' and 'agrios'.

Within an acculturation model focussing on economic factors, Bogaard and Jones (2007, 357), note that there has been a habit to treat ritual and subsistence as alternative readings. Ethnographic examples indicate that farming activities can be both (Bogaard & Jones 2007; Fairbairn 2000) and therefore the adoption of agriculture by indigenous populations was due to both the social and economic value of cereals.

Sheridan (2007; 2010; 2010a) supports a migration model based on the material evidence. Different types of pottery, lithics and settlement types are equated with the arrival of new people. Sheridan rejects the phenomenological arguments of Thomas (1996a; 1998) and others on multiple grounds: citing the lack of evidence with the continent, no convincing argument to support indigenous change in lifestyle; lack of evidence for to continuity between the Mesolithic and Neolithic and down plays the role of cereal cultivation and domestic nature of house structures (Sheridan 2010a).

Each of the explanations for the emergence of agriculture are built upon multiple lines of interpretation and even the same evidence, but underlying theatrical stances (meta-narratives) cause a divergence of conclusions. This raises the question why a specific meta-narrative is chosen by certain individuals and other individuals choose an alternative meta-narrative. Part of this is, arguably, due to training, those trained within a particular theoretical school will likely continue to follow the same theoretical school. While each individual will probably provide reasons to support a

particular theoretical school, there is likely here a social element at play; an individual's ontology impacts their theoretical sympathies. The central reason why it is possible to apply multiple meta-narratives to a singular phenomenon is the abductive nature of reasoning at this level. There are many examples of this in the above explanations.

Taking an example of abductive reasoning from this chapter, the Carinated-Bowl Neolithic is used as evidence of migration (Sheridan 2007). The Carinated-Bowl Neolithic is evidence of the rapid spread of novel Neolithic Material. If during this period a large scale movement of people into Britain occurred, then the rapid spread of novel Neolithic Material is quite expected and therefore, migration is a reasonable explanation. However, we note how Thomas (2007, 426-7) stresses that the artefacts in the British Neolithic do not reflect wholesale transference of the Continental assemblage and therefore, the Neolithic material in Britain fits with the premise that agriculture in Britain arose through acculturation. Here justification is through the critique of one explanation rather than providing support for an explanation. Thomas supports his explanation for the emergence of agriculture in Britain by critiquing an alternative explanation.

Another example of abductive reasoning, Fairbairn argues that rapid change was due to the high value of the cereal and thus evidence of acculturation. If during this period the indigenous people rapidly took up cereals as it was a highly valued useful commodity then it would be reasonable to accept acculturation as an explanation. The premise here does not logically entail the conclusion; instead it does fit with the available evidence and is a good explanation for the evidence. For example, Sheridan (2007) argues that rapid change is linked to migration. Starting with different premises, the same evidence is used to abductively support different explanations. While interpretations of the archaeological record delimit the number of coherent abductively supported explanations, the choice of explanation appears to be based on theoretical meta-narratives and in some way this choice is socially mediated. Justification is abductive which is influenced by social construction.

The other characteristic of this 'evidence' is itself already an interpretation, reached by interpreting the archaeological record, as illustrated in the last chapter. Returning to the Carinated-Bowl Neolithic, to identify such a phenomenon is built upon many different interpretations of the archaeological record. Excavations on many different sites are completed, the material remains from many different sites is recorded and interpreted. Starting with cuts, fills and layers, settlement sites are interpreted. Background knowledge is drawn in to make sense of this material: to date it, to identify assemblages, to provide context. For example, assemblages of lithic tools need to be studied against what is already known about these tools which allows them to be dated. Comparisons to assemblages from different areas make it possible to see if specific lithics fit in with what is to be

expected or not. Knowledge of continental material and sites is needed to compare material and to possibly identify origins; if it is different to what is expected in the local area. Different material is compared to show change. Many strands are brought together to even identify something as being a 'new' phenomenon.

In the examples above this occurs again and again, and it is these interpretations that are brought together to back up the explanations discussed in this chapter. For example, this is also the case with Tilley's interpretation that the Neolithic fundamentally changed the landscape and thus also the indigenous peoples ideology leading to the emergence of farming. Multiple lines of interpretation of different sites across Britain are needed to show extensive woodland clearance. At this scale of archaeological interpretation, there is selectivity in the use of evidence: interpretations of the archaeological record are chosen that support a particular meta-narratives. To support the explanation that the emergence of agriculture in Britain was due to acculturation and changing world views, Thomas and Tilley draw attention to particular parts of the archaeological record that support a phenomenological approach. The change in landscape is abductively linked to acculturation and ideological change. This system of premise and multiple strands of 'evidence' (interpretations) are required to cohere together. It is possible to compare the justification of grand narratives to justification in publications like '*The Leopard's Tale'* (Hodder 2006), as discussed in the last chapter, though one thing that becomes much clearer at this scale of archaeological interpretation is the role of selection of evidence to support a specific theoretical meta-narrative.

The model of justification as discerned from looking at explanation for the emergence of the Neolithic justification is as shown in figure 18. Explanations are abductively supported by interpretations, which all need to cohere with the explanation. Background knowledge constantly feeds back into everything, knowledge from present day examples, knowledge from theoretical change within the discipline, theoretical stances, and knowledge from other interpretations of the archaeological record from multiple sites. The use of this is background knowledge is socially mediated.

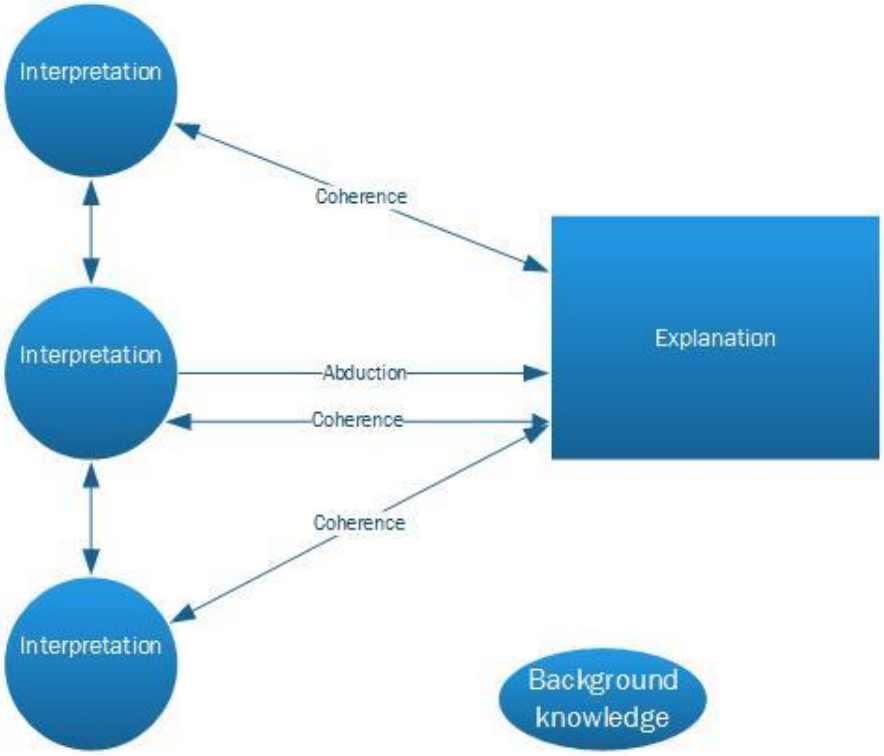


Figure 18 Model of justification

This though is not a fixed picture, as seen in the example of the emergence of the Neolithic, as new interpretations (or archaeological evidence) emerge, explanations change. For example, we see older deterministic models that characterised the indigenous population as mindless individuals cast aside, not because of new archaeological evidence but due to changes within archaeological theory, which impacts all explanations. It is not just the evidence from the archaeological record that can alter interpretations/explanations but also new viewpoints and new theories.

New interpretations may not act to completely falsify an explanation but just lead to an explanation adapting. For example, new isotope evidence indicates a change in diet which could be due to migration but also supports both acculturation models. Schulting (2000) argues that the isotope evidence supports a migration explanation, as it indicates a rapid and complete change of diet. However, a change of diet is also indicative of a symbolic change in world view and acculturation (Thomas 2007). For Fairbairn (2000), the isotope evidence is indicative of a shift towards cereals with high resource value. New evidence, therefore, may not even narrow down the field of explanation; this is due to the epistemological toolset available to archaeologists. Without direct access to the past, archaeologists are always stuck with abductive reasoning. We will always be looking at what has been left behind and trying to explain it without direct access to the original events.

Using the same archaeological evidence it is possible that more than one explanation fits. Competing explanations are caused by the use of a specific interpretation/views/beliefs/hypothesis which may be suggested by the evidence but once established continues to be fitted into any new evidence. For example, in the case of the different reasons given for a change in subsistence, they cohere but are not suggested by the change in subsistence patterns. However, this is a necessary step in interpretation, especially in terms of larger explanations like the origins of the British Neolithic. This conceptualization is necessary to enter the loop from evidence to interpretation, akin to the hermeneutic circle, as discussed in the Chapter One. In the above cases it is frequently very difficult to decide between competing interpretations and as they evolve with new evidence it is very difficult to narrow down the field. It is possible that new evidence may prove a specific explanation as being invalid but it is also possible that the field may never narrow down. This is where a social element to justification can be identified in these larger scale interpretations; different individuals cite from different theoretical traditions. Archaeological justification at this scale is based on correspondence and coherence within an abductive framework and this justification is theory laden. The decision of which meta-narrative is used is constrained by interpretation of the archaeological record and coherence with the system of theories but is also socially mediated. It is possible that there are different explanations that fit the available evidence but we just haven't thought about them yet. Therefore, in some way who we are and what we believe in, impacts the explanations we support and also the ones we know.

4.2 Narrative and justification in archaeology

Different explanations for the emergence of agriculture in Britain were discussed to highlight how explanations are justified. This chapter considers archaeological justification at a larger scale then in the previous chapter. It is noted that archaeology is permeated with the process of creating narratives (Joyce 2002, 1). Yet the role of narratives in archaeology has received little attention (Pluciennik 1999). This is something that largely does not enter the philosophical literature on truth, which generally focuses on singular statements and how these are justified. However, given that narratives play such a big role in archaeology they could have an impact on justification in archaeology.

Narratives are a tool to connect different parts of information: "Narrativization is an activity through which analogical connections between different kinds of knowledge are given an aura of factuality, and thus naturalized, by the sequences of action through which they are joined."(Joyce

2002, 133) Archaeologists use narratives to blur the uncertainties and the gaps in knowledge: giving an illusion of continuity, often within a deliberately large-scale and explicit meta-narrative. Social evolution in one form or another has been the most persistent of these meta-narratives (Pluciennik 2002, 661).

Despite theoretical changes in archaeology over the past decades, when archaeologists write and talk about the past they do so by constructing a narrative. In the examples in the last chapter and this chapter, archaeologists create a story that explains, as well as possible, all the different strands of interpretation so as to create an overarching explanation. However, there is an inherent contradiction within archaeological narratives. As Joyce notes:

> "Archaeological activity takes place through an assembly of utterances and responses constrained by forms and formats, which begin their lives both signed and personalized and end as indirect cited speech, revoiced by the acknowledged authors of research reports. And even so, we have many conventions intended to mark the polyphony of archaeological activity…What we have not perhaps been able to do is achieve a level of comfort with unfinalizability, the open-endedness that our field process has traditionally been aimed to overcome."(Joyce 2002, 127)

Narrative, as a mode of communication, does not recognize that interpretation in archaeology is never final; therefore, leading to certain epistemological ramifications for how we interpret archaeology. In other words as long as archaeological knowledge is phrased in a certain way, this phrasing impacts the way in which archaeologists justify interpretations.

Pluciennik (1999) unpacks the roles of narratives in archaeology. Narratives are made up of three parts: subjects, events and plots, and these are the result of previous analysis or reasoning:

> "Thus events or processes in archaeological narratives such as the origins of agriculture or the Mesolithic-Neolithic transition, are always *constructed*, from elements or occurrences in the past or the present; those elements may be the presence (or absence) of a single potsherd, domesticated bone, or cereal grain at a particular site or archaeological "facts" at a much broader temporal and spatial scale—the appearance of particular material cultures or practices, settlement patterns, or contemporary gene frequency distributions, for example."(Ibid, 660)

The issue with archaeological narratives is that frequently, data is indeterminate, ambiguous or uncertain; narratives blur these gaps in knowledge. Pluciennik argues that different narratives on the Mesolithic-Neolithic transition embody different approaches, motifs, styles and arguments (Ibid,

662). For example, Childe's *'Dawn of European Civilization'* (1947) is framed "within a broadly social evolutionary framework" (Pluciennik 1999, 662). Arguably, this is also the case for the views presented previously, that focus on migration and economic explanations. Therefore, characters are peoples and events are socioeconomic changes. In New Archaeology, narratives shifted to the importance of processes and models and away from the importance of specific events. From the mid-1980's narratives on the Mesolithic-Neolithic transition became more variable and dependent on social context. In the 1990's publications are influenced by the linguistic turn of postprocessualism, however there remains a structure of process and events, for example, in Hodder's '*The Domestication of Europe*' (1990):

> "While the event of the narrative is clearly the spread of the Neolithic understood in symbolic terms, again we are faced with the recursive relationship between event(s), structures, and processes, and each chapter can also be treated as a regional event or process."(Pluciennik 1999, 664)

Pluciennik argues that the changes in narrative style are due to the re-evaluation of the status of hunter-gathers and due to broader political postcolonial understanding, though the basic framework remains, that of Childe's work (Ibid, 666). Archaeological narratives tend to stick to the single-voiced, third person narrative that separates subject and object and linearity of time (Ibid, 668).

As Thomas notes writing prehistory is a textual enterprise and one within which the "problem may not be one of a paucity of evidence, but one of defining which elements of the evidence are significant."(Thomas 1991, 2-3) In building a narrative for the emergence of agriculture, archaeologists draw on theoretical traditions. Interpretations of Mesolithic and Neolithic archaeological assemblages are used to create a narrative of the changes between these two periods.

Tilley (1994; 2007) and Thomas (1991; 1999; 1999a) focus on the landscape; the narrative is constructed around how changes to the landscape impacted the ideology of the indigenous people and how a change in ideology led to changes in the landscape. Within Hodder's (1990) ideological theory of the Neolithic, evidence of feasting and the blocking of entrances to funerary monuments is understood as social and economic control. Fairbairn's (2000) narrative for the emergence of agriculture in Britain centres on the economic and social value of cereals. Fairbairn uses ethnographic analogy to bring more depth and detail to his narrative. Sheridan (2007; 2010; 2010a) leans heavily on the material remains; her narrative is told through detailed chronologies and types of material. Lithics, pottery and housing types from Britain are compared with material from the continent.

Each one of these narrative is built through abductive reasoning, which appear to be provided by drawing on 'higher level' theoretical stances: phenomenology, cultural ecology; social evolution; cultural historical and so on. The role of narratives within archaeological reasoning is partially a reason for these abductive 'leaps' within 'grand narratives'. It is the only epistemological tool available to archaeologists to turn interpretations of the static archaeological record into a flowing narrative. Abduction provides a link between fragmented interpretations of the archaeological record and narratives of the past. Gaps and boundaries are smoothed over to create a linear narrative. In this chapter the case for acculturation and changing economies as an explanation for the emergence of agriculture in Britain was discussed. The archaeological evidence has been interpreted as suggesting that intensive cereal production was taking place. Other archaeological evidence is used as evidence for the quick appearance of cereals. Around these facts, a narrative is constructed, using analogies from non-industrial societies. Different strands are used to build a narrative that agriculture appeared quickly due to the high economic value of the cereal. Archaeologists build narratives from stringing together different, more static interpretations of the archaeological record and sometimes, other information from outside the discipline. Divergence occurs as archaeologists use different mechanisms to present the archaeological evidence. Theoretical traditions are drawn upon (phenomenological, post-structural, cultural-historic and so on) to build a fluid description of the archaeological evidence. Different archaeologists make use of different theories and thus, different narratives are constructed.

Narratives are largely in the third person and single-voiced, giving the illusion of a single objective story. Therefore, the use of narratives gives the illusion of a final voice and a single voice. This contradicts what has been seen in this chapter and the last chapter. Interpretation has been shown to be ever evolving with new evidence and new insights. New evidence does not necessarily lead to completely new narratives; sometimes new evidence or insights may lead to the adaption of current narratives, for example as seen in this chapter. Also there is rarely one voice, there are three contradicting narratives discussed in this chapter alone.

Narratives frame explanations in a linear fashion as a series of events, which are interpreted from a static partial record. In more recent years attempts have been made to overcome this, for example, the use of hypertext to create non-linear, multi narrated explanations (Bauer 2013) but these have not been widely adopted and archaeological explanations remain, arguably, limited to a specific form of narrative.

Narratives, in many ways, are not so much a form of justification, but the reason why archaeologists justify archaeological interpretation in the way they do, as suggested earlier. It is hypothetically possible that archaeologists could just stop the ladder of interpretation at an earlier

stage, stating we have x site and y assemblage, however the need (and understandably) to build a narrative of the past requires a step from these static interpretations to a narrative which requires an abductive leap. Returning to the example of abductive reasoning in Chapter Two, it is like finding the lawn wet and trying to explain why (to build a narrative) but only knowing the lawn is wet. It is possible that it rained last night or maybe it is early morning dew or something else happened. Someone then tells you that they saw the sprinklers turn on in the middle of the night, therefore, giving you a much more likely explanation and one you may not have thought of but you still haven't proved that it didn't rain last night. So when we look at the emergence of agriculture in Britain, we have a number of different explanations of the archaeological evidence. We know there was a change in diet at the time; we know that in certain areas there was a rapid spread of cereals and also the appearance of continental material. So, a possible explanation is migration but it is also possible that it was due to acculturation and changes in ideology, or acculturation and economic factors. In time new evidence may support one explanation but may not necessarily rule out the others and it may be that there is another explanation that we have not even thought of yet. The aim, at the end, appears to be to construct a narrative that fits with all available evidence.

Chapter Five
Ethics of archaeological epistemology

5.1 Archaeology, politics and ethics

The last two chapters have aimed to look at how knowledge is justified; firstly, from a practical angle in the field and secondly, in the case of large-scale explanations. Both of these deal with how archaeologists build an understanding of the past. In Chapter Three it was argued that although archaeologists may work towards a single explanation of the past, it is also recognized that there are multiple ways of knowing the past and thus, multiple explanations of the past. In the last chapter it was shown how archaeologists using the same data and methods of justification may hold competing explanations of the past building different narratives through abduction. In both chapters it has been shown that archaeologists work within a model of justification that combines correspondence and coherence, all the while being constrained by reality but also social constructed in some way. However, interpretation within archaeology requires the use of abductive reasoning to build more elaborate interpretations of the archaeological record. The use of abduction is one of the reasons why in archaeology we end with multiple views of the past which internally cohere and correspond to the archaeological record: connecting data which are collected using tangentially theory-dependent observational methods which cohere with a high level understanding of the field in general.

In the previous two chapters different scales of archaeological interpretation have been considered and it is shown that as the scale increases the mode of justification changes. At the smallest scale it was shown that correspondence was much more important but at a larger scale of justification coherence comes into play. At a larger scale, abduction is used to support theoretical meta-narratives. In the last chapter it was shown that at the scale of 'grand narrative' evidence is selectively chosen to support a particular explanation based on a theoretical meta-narrative. The choice of theoretical meta-narrative appears to be partially *a priori* and socially mediated. This chapter considers an even larger scale of archaeological interpretation. Archaeological interpretation is not done in a vacuum and at the same time as archaeologists have their explanations of the past, other groups have their own explanations and narratives. At this scale of interpretation, justification

is both local and global. Archaeological interpretation needs to deal with political and ethical concerns on a global scale. At the same time, archaeological interpretation deals with multiple interpretations by different groups at a local scale. It is posited that at this scale of interpretation the mode of justification shifts again as the very criteria of justification also shifts.

The last two chapters have stuck to defining epistemic justification (see Chapter Two). However, as discussed in Chapters Two, within a pragmatic approach, archaeology also arguably defines justification according to an additional criterions, that of its practical and social effects. In other words, archaeological truth claims are justified also in terms of ethical criteria. It is this ethical criterion that is the focus of this chapter.

Ethical criteria of justification have been most extensively discussed in relation to debates in multivocality, though clearly, ethical criteria are not just linked to multivocality. It has been noted that we can no longer just think about how archaeologists think about the past. There are many different people out there with their own interpretations of the past and their own explanations of the past. A large amount of modern theoretical debate deals with how we interpret the past, in light of different stakeholders (individuals or groups with an interest); how to reconcile different agendas and how to excavate and interpret in an ethical manner. (Habu *et al* 2008; Kohl & Fawcett 1995; Meskell & Pels 2005). Does this political and ethical awareness, therefore, shift the criteria of justification? How do archaeologists deal with different interpretations of the past? What are the ethical considerations of justifying truth statements? Further, could a more explicit model of justification, based on philosophical theories of truth, help resolve situations in which archaeologists and non-archaeologists come up with competing interpretations of the past? Are these two aims commensurable? Is it possible to aim for epistemic justification and aim for the most 'ethical' interpretation of the past? Or are these two aims of the past inherently at odds with each other?

This chapter aims to answer two questions. Firstly, what does ethical justification mean for the criterion of justification in archaeology? Secondly, what are the consequences of ethical considerations on how we work, in other words, how does ethical justification relate to epistemic justification? This chapter will begin by looking at how political stances have often been associated with epistemological stances. The next sections discuss the case of ethics in archaeology and the practical ramifications of this for archaeological justification. Discussions of the reflexive method and multivocality show how archaeologists have tried to practically deal with political and ethical issues, and this is used to suggest a general pragmatic approach. This pragmatic approach is then explored using the case study of Çatalhöyük and cases of conflicting views around reburial. The last section deals with how, within a pragmatist theory of truth, it is possible to both align the epistemic

aims of justification and also the practical ramifications of the ethical and political nature of archaeology.

5.1.1 The political ramifications of archaeological epistemology

This section explores the political ramifications of issues related to epistemology and how different philosophical stances have been associated with specific political interests. Frequently this debate has focused on an either/or debate. As this section shows certain assumptions are made regarding the practical and ethical consequences of following one epistemological stance over another and these assumptions may be wrong.

Multivocality and reflexivity have arisen out of a concern with ethical considerations of the past, such as who owns the past and who has the right to construct knowledge of the past (Hodder 1997; 1998). This is not just limited to archaeologists of the post-processual school. A new trend is emerging within archaeology: archaeology as a political tool.

Philosophical stances have been associated with political stances. This has not been so clear cut in archaeology; both processualists and post-processualists have often been associated with liberal and left wing politics. Nevertheless objectivist stances have been criticised for their possible right wing logical conclusions. The title of Hodder's (1984) paper '*Archaeology in 1984'* is a reference to George Orwell's famous novel. Hodder argues, based on Orwell, that who controls the past controls the future and that:

> "such control of knowledge can amount to a form of hidden social control, in which one view of the past is seen as correct, in objective terms. The interests of one social class are seen as universal and the implications of Orwell's statement, quoted at the beginning of this article, loom before us...different pasts will be constructed...If these different but coherent viewpoints can be discussed openly, then the past will play a role in unearthing and objectifying alternative viewpoints and social dispositions, contributing to social change. The past is everybody's past and by releasing it the dangers of Orwell's totalitarianism are lessened and the central role of the past is assured."(Ibid, 30-1)

Similarly, it has been argued in archaeology that processualism is inhibiting and can support a fascist doctrine:

> "Positivist/empiricist discourse is a closed philosophy. By this is meant it supposes that there is only one correct and proper manner of approaching, describing and explaining reality" (Shanks & Tilley 1987, 103).

Barrett, for example, argues that such an archaeology supports "the violence of ideological authority" (1994, 171). The political argument within archaeology often goes as follows:

> "critiques of the enterprise of archaeology as a whole that indict its methodological and epistemic stance—its commitment to scientific ideals of objectivity—on the grounds that these effectively reinforce, rather than counter, the partiality of its makers...under these conditions, the attempts made by archaeologists to maintain a stance of political neutrality and professional disengagement serve not to defuse the problem but to sustain and legitimate the existing order." (Wylie 2002d, 188)

> "It didn't do to thump the table or insist too much: philosophers, it was supposed, had taught us to see any such exhibition of critical reason as nothing more than a bid for power, a rhetorical trick for imposing ourselves on others, and with such bad manners, or words. Especially it would not do if the ones who were being thumped at were victims of colonial past, or descendants anxious to claim the status of victim. In that sacred sector, respect was the order of the day, even if it meant smiling politely at creationist timetables on earth history."(Blackburn 2008)

The issue is complex; these innocent times, however, don't exist anymore, we now live in an era where difference matters and needs to be dealt with (Ibid). Quoting Orwell, the issue works both ways:

> "I know it is the fashion to say that most of recorded history is lies anyway. I am willing to believe that history is lies anyway. I am willing to believe that history is for the most part inaccurate and biased, but what is peculiar to our own age is the abandonment of the idea that history COULD be truthfully written...Nazi theory indeed specifically denies that such a thing as 'the truth' exists...The implied objective of this line of thought is a nightmare world in which the Leader, or some ruling clique, controls not only the future but THE PAST...If he says that two and two and five—well, two and two are five. This prospect frightens me much more than bombs. (Orwell 1943, 164)

In '*1984'* the main protagonist is electro shocked into eventually declaring that he can see five fingers when he in fact only sees four. What is important here is that "freedom is the freedom to say two plus two make four. If that is granted, all else follows" (Orwell 1949, 67-8).

Orwell writes:

> "In the end the Party announce that two and two make five, and you would have to believe it. It was inevitable that they should make that claim sooner or later: the logic of their position demanded it. Not merely the validity of experience, but the very existence of external reality, was tacitly denied by their philosophy. The heresy of heresies was common sense." (Ibid, 67)

Clearly, a balance is needed within which standards of truth are kept but where not one party controls knowledge. The question remains what does this mean for the justification of archaeological knowledge, and the status of our knowledge claims about the past?

5.1.2 The burden of the past

This is not merely an academic question: the past can be used and misused in the present in ways which have real consequences. Any attempt to learn and gain knowledge of the past is both a burden and a responsibility. As Faulkner stated: "[t]he past is never dead, it's not even the past." (Faulkner 1950) There are many examples where the past has been used to reinforce modern day values and beliefs:

> "The past validates present attitudes and actions by affirming their resemblance to former ones. Previous usage seals with approval what is now done. Historical precedent legitimates what exists today; we justify current practice by referring to 'immutable' tradition."(Lowenthal 1985, 40)

There are a number of documented cases where archaeology has been misrepresented for modern day political and social reasons. Historical examples include the Nazi regime, in which archaeology was used to promote Aryan supremacy (Arnold 1990) and the interpretation of Great Zimbabwe as a product of lost white civilization to reinforce colonialism (Hall 1984). It is also possible to find examples in more recent times. Byrne traces the development of archaeology and archaeological management, showing how it has been influenced by both internal nation-building and western secular-rational modernity, blanking out localised traditions and supernatural beliefs (Byrne 2009). An on-going example is the privileging of nature over culture in Kruger National Park. In South Africa "irrespective of leadership or regime change, the mobilization of state power continues to devalue the archaeological past and its indigenous histories." (Meskell 2009, 89) The

two last examples appear to arise, from a lack of consideration of local indigenous contexts, something of increasing concern in archaeological literature (for example see Smith & Wobst 2005, Meskell & Pels 2005).

The past can be used to validate the present in two distinct ways: by restoring and preserving (Lowenthal 1985, 40-1). Comparisons are made between the past and the present. The identification of similarities reinforces and validates modern day values and beliefs. The past makes up an integral part of who we are. We recall and identify with our own past, which gives our own existence, meaning, purpose and value: "the sureness of "I was" is a necessary component of the sureness of "I am" " (Ibid, 41). The past not only affects our own individual identity, it also affects our relationship with others, and communal and national identities. Without our knowledge of the past, the present would look very different:

> "Tradition would be farcical. Few would heed the consequences of their actions. No one would apprehend wrong-doers if there was no past when their crimes could have taken place. Effects could not be traced back to causes, nor behaviour to motives. Nothing could be proved, for to doubt our senses of past experience as founded in actuality, would be to lose any criterion by which either the doubt itself or what is doubted could be corroborated; and to erase altogether the distinction between empirical fact and fantasy."(Ibid, 190)

Identity is a complex thing. Comparable to memory it is intangible and fluid, such that no person possesses a single identity. Identities are made up of 'who we are' as much as 'who we are not' (Smith & Waterton 2009, 48). This can be seen in the way people interact with historical sites. For example, the Warsaw Ghetto Monument for different people evokes different memories, which in turn leads to different forms of commemoration in and around the monument (Ibid, 46). Memory and identity are anchored to material culture and place, but neither is fixed or on a one to one basis; complicating any interpretation of the past. In line with the social constructionist position, as discussed in Chapter Two, knowledge can be the product of social context. Dealing at this scale justification is even more heavily influenced by social construction as different social contexts give way to different ways of interpreting the past. As the past plays such a crucial role in our present day identities, any interpretation of it will have a power over the present. This is why the past can be used to support political and ideological agendas and this is why it has been the target for so many groups.

Archaeology can be easily manipulated

> "for nationalist purposes because it is physical and visible to a nation's citizens who interact with it, consciously or not, on a daily basis. Archaeological sites become national monuments, which are increasingly being transformed into lucrative tourist attractions. Their artifacts are stored and displayed in national museums and constitute an invaluable part of the national patrimony, a heritage that becomes more and more broadly defined....All such uses demonstrate forcefully how national identity is continuously constructed through the commemoration of the remote, archaeologically ascertainable past."(Kohl 1998, 240)

Within the postmodernist era, such concerns have increasingly been addressed through the concept of to a code of ethics. Notions of 'fairness', 'balance' and 'inclusiveness' are concepts not alien to the modernist era. In the postmodernist era, the question of truth has moved on to the question of 'whose truth?' (Pluciennik 2001a, 3) The problem here is that, when multiple interpretations of the past exist, there is no clear cut, uncontested answer. Referring to abstract concepts is useless as a divergent plurality of interests is always in play, which varies dependent on time, place and context.

Complete inclusion is not always a positive initiative. For example, the site Mapungubwe in South Africa was declared a UNESCO world heritage site in 2003. Multiple interested parties seek to conduct research at the site including Richard Wade, a self-proclaimed archaeologist/astronomer and AFRA, a private organisation researching mysterious balls of light captured using digital photography. Both of these "take public attention away from the real issues and stakeholders of archaeological sites."(Meskell 2005, 74) So, for example:

> "if white new age spiritualists seek state support in the form of SANParks recognition for their own particular work in the park, publicly present their interpretations and implicitly appropriate themselves the legacy of Iron Age Mapungubwe...it belies the factiticy of the archaeological record, black history and achievement, and once again supplants African identity with the higher spiritual wisdom of white culture."(Ibid)

Further complications fall into place if we consider the theories of Foucault. 'Truth' becomes a term of irony as within academic circles there exists a 'regime of truth', which "is not merely ideological or superstructural: it was the condition of the formation and development of capitalism."(Foucault 1980, 133) The power of truth, therefore, needs to be detached from social, economic and cultural factors. Academia, by its very nature, is a regime of power by Foucault's definition: "it accords distinction to particular types of achievements within particular discursive, socio-political and economic frameworks" (Pluciennik 2001, 21). This can lead to privileging;

archaeologists are often given a relatively strong position in comparison with other interest groups and "archaeology's power lies in the construction of the narrative and in influencing how the past is represented in the present."(Kintz 2001, 47)

A balance is required: it is not just about how archaeologists build a narrative about the past, there is also a real need to understand and engage with how others see the past. The misrepresentation of archaeology has occurred when archaeological evidence has been ignored but also when explanations from other parties have been ignored. Further, complete inclusion also has ethical ramification. The case of Ayodhya makes very real, difficult and in this case, deadly, the impact of archaeological interpretation on present day identities can be. In 1992 Babri Mosque was destroyed by Hindu groups who claimed it was the site of an earlier Hindu temple, more than 200 people were killed in the riots that followed (Bernbeck & Pollock 1996). Within this case, archaeology had been used to forward some Indians sectarian agendas (Ratnagar 2004). Hamilakis (1999) argues that archaeologists have a privileged position as intellectuals and with this, archaeologists carry a special responsibility. Though some of this authority should be relinquished to allow multiple voices to emerge, some authority should be maintained to make it possible to take an active stance in present day political reality: "archaeologists as cultural producers contribute to the construction and establishment of 'regimes of truth' " (Ibid, 73). He concludes that, since the 'truth is not out there', archaeologists' responsibility is to:

> "interrogate and challenge institutional regimes for the 'production of truths', illuminate and expose the links of knowledge with power, and adopt a critical stance in the current global battlefields of cultural production and consumption."(Ibid, 74)

Therefore, matters are more complex than just trying to understand justification through epistemic criterion. Archaeologists do have an ethical responsibility but how do we go about it? How does this responsibility fit with what was seen in the previous chapters? What impact does this responsibility have upon how archaeologists justify knowledge and upon the status of knowledge claims of the past?

5.1.3 Archaeology as political action

How is a balance reached, between archaeological interpretations of the past and other parties' interpretations of the past and how does this impact how knowledge is justified in

archaeology? How are the epistemic aims of archaeological justification balanced against the ethical ramification of justification?

Recent theoretical movements in archaeology can be linked to the recognition that archaeology is politically active. Trigger's 1984 paper '*Alternative Archaeologies: Nationalist, Colonialist, Imperialist*' has strongly influenced discussions regarding the socio-political context of archaeological knowledge (Fawcett *et al* 2008, 1). Trigger highlights how archaeological evidence (and archaeologists by association) plays a major role in wider struggles, for example, between evolutionists, creationists, pseudo-archaeologists (such as Erich von Däniken) and in the extreme, totalitarian governments controlling the interpretation of archaeological data, for example, in Japan in the 1930's and 1940's (Trigger 1984, 357). He identifies three different social contexts in the broadest sense: nationalist, colonialist and imperialist (Ibid, 358-68). From this Trigger makes two general conclusions, firstly:

> "that archaeology does not function independently of the societies in which it is practiced. The question that are asked and the answers that appear reasonable reflect the position that societies occupy within the modern world-system and change as the positions of countries alter within that system." (Ibid, 368)

Interpretation is influenced by the viewpoints of the individuals interpreting. Secondly, this does not mean that the search for objectivity should be abandoned, in fact as Trigger argues, "[t]he findings of archaeology can only have lasting social value if they approximate as closely as possible to an objective understanding of human behaviour." (Ibid, 368)

Hodder (1999) considers the effects of globalization on archaeology. Globalization has increased communication between individuals and groups across the world. Hodder highlights that this has led to a contradictory pattern. Globalization has caused the homogenization of culture and identity; archaeological sites and remains are interpreted within a pan-human heritage framework. At the same time, there has also been a fragmentation, as individuals and small groups make use of local heritage sites as symbols of local or individual identities (Ibid, 161). It is postulated that this contradictory pattern is due to current social philosophy, in a world where individuality is given prominence, but where individual freedom is arguably diminishing (Insoll 2007, 29).

Postmodernism can be understood as a method of empowerment, compensating for the loss of power socially in the wider world. Archaeologists in a postmodern world, as Hodder (1999) argues, have the responsibility to empower underrepresented groups through the facilitation of group and individual participation in interpreting a site: multivocality. This raises the issue of how, on the

one hand, can archaeologists aim to gain knowledge of the past through their own methods of justification and on the other, balance this with the fact that knowledge is always situated within a political and social context. It is essential that archaeology deals with this burden in an ethically responsible manner, given its privileged position in dealing with the past. However, as McGuire (2008) notes, there has been a huge amount of work developing a self-critical archaeology but very little work on how to develop a politically active archaeology. He is critical of much of current archaeological thought as being either too objective, which leads to social engineering, or too subjective, which leaves archaeologists with no way to reject the silly, the delusional or the pernicious. Again a balance is sought. Archaeological interpretation at this global scale needs to deal with other ways of knowing the past, therefore archaeological justification needs to adapt to understand and consider other interpretations of the past that may use vastly different methods and criteria of justification.

One method is to use archaeology as a tool of mitigation. Tilley (1989) views archaeology as a socio-political action in the present which impacts the world, though he acknowledges that no archaeologist is likely to transform the world single handily, end war or mitigate global inequality. Archaeology, Tilley argues, can be a medium to criticize ideologies. Within archaeology there is a:

> "wish to find a place for the ethical, for values inherent in archaeological…This has involved an acceptance or, rather, an embrace of the subjective and political dimensions of archaeological work: our living today, its attendant biases, slants, values, politics, projects and aspirations is the condition of knowing the objective and material past." (Shanks & Tilley 1992, xviii)

Marxist archaeology is an example of a practical attempt to do this. Marxist theories came into popularity in the social sciences in the 1960's and 1970's due to the widespread realization of the inadequacies of more traditional approaches and the current international economic and political issues (Spriggs 1984). Marxism has come to mean different things to different people, and there are different positions within archaeology. These different positions are united by a number of views. All view Marx as an important intellectual ancestor but do not adopt his work wholesale. Social structures are seen as dialectical, dynamic and in a process of constant change. Knowledge is socially contingent and therefore, historically dependent; objectivity is unobtainable (Ibid, 3). McGuire (2008) applies praxis (in a Marxist sense) to archaeology with the aim to create a more socially aware archaeology:

> "Praxis refers to the distinctively human capacity to consciously and creatively construct and change both the world and ourselves...Praxis becomes emancipatory when it advances the interests of the marginalized and the oppressed against the interests of the dominant. Praxis implies a process of gaining knowledge of the world, critiquing the world, and taking action to change the world. All archaeologists contribute to praxis, although only a minority of archaeologists ever complete the process and take action to change the world."(Ibid, 3)

Beyond Marxism, others have called for archaeology to have a role in shaping the future (Hodder 1984; Insoll 2007; Meskell 2002). It is argued that archaeology has a special viewpoint on major modern day social problems, given the long time span it deals with. For example, archaeology may provide historical context on issues of climate change, urbanization, agricultural sustainability and boom-bust cycles of capitalism (Dawdy 2009, 140) To what extent archaeology can solve modern day global and serious issues is certainly questioned (Pluciennik 2009, 156). It is possible, however, as McDavid (2009) shows us, to find examples of archaeological research being used for social good; its uses range from empowering low-income groups to give them voice in environmental planning, to helping descendant communities in reclaiming their community history, to bridge conflict in the Palestinian territories and South Africa. How successful archaeology is in these endeavours remains to be completely seen and it remains unclear how archaeology can deal with the bigger issues of global warming or conflict and war. However, it remains that archaeology can and does have a wider impact than ever envisioned in decades past. Accepting that:

> "Troubles can arise when a group insist on the sole validity of its own reading of the past, whether this be the self-flattering 'histories' once produced by colonially-minded white Europeans with an ingrained sense of their racial superiority, or the occasionally encountered rejections by Indigenous groups of any alternatives offered by archaeologists or anthropologists to traditional stories of origins."(Scarre & Coningham 2013, 6)

It is widely argued that bringing together different pools of knowledge allows for a more holistic and richer understanding of the past (Bauer 2013; Joyce 2002; Scarre & Coningham 2013; Trigger 2008). However, it would be naïve to think this was an easy task. It is not easy to negotiate dialogue when often different interpretations of the past are built upon very different views of the world, for example balancing different concepts of time (Scarre & Coningham 2013). In indigenous societies time is not always viewed as linear, as in western societies (Guarlec 2006). Often Indigenous communities have very different connections with the dead across long time spans (Bienkowski 2013, 46-8). These are differences that archaeologists have to engage with and we have

to be careful not to create a new dichotomy between archaeologist and indigenous people (McGhee 2008).

Different solutions are put forward to resolve debates regarding the interpretation of the past. A lot of these revolve around ownership, for example, Young argues that ownership should be decided on the grounds of four types of value: cognitive, economic, cultural and cosmopolitan (Young 2013). Issues of ownership require negotiation with all parties with an interest: indigenous groups and archaeologists (Thompson 2013, 96-7). Alternatively, Zimmerman argues that archaeologists should let go which will allow for a greater degree of collaboration with indigenous groups (Zimmerman 2013).

Holtorf, in discussing interpretations of the past by outsiders or fringe and pseudo-archaeologists, argues we need to be reminded that every past is a construct of the present (Holtorf 2005a, 549). Therefore, we need to engage constructively with alternative interpretations of the past as there are implications and consequences for each approach (Ibid, 549) It is argued that Holtorf's views fail to recognize that there should be boundaries. The goal of archaeology should always be to improve accuracy of past interpretations, not view it as a mosaic of contemporary interpretations (Fagan & Feder 2005).

This draws in though another issue, that of the pseudo-archaeologist. It is noted that critical dialogue with groups and individuals of this ilk, almost instantly devolves into slanging matches (Ibid). An example of this is the relationship between archaeologists and Graham Hancock. In 1998 an episode of Horizon was aired highlighting the errors in Hancock's work. The programme makers' aims were to film a factual documentary with a commitment to impartiality that tested the particular argument in hand without misrepresenting views (Hale 2006). The programme makers were taken to court by Hancock. The programme dealt with Hancock's theory that survivors of a cataclysmic destruction of a nameless civilisation some 10,500 years ago carried the seeds of culture across the world. It was pointed out that many of the facts stated by Hancock were never backed up, for example, claims regarding the Sphinx being much older than the accepted date of 2500BC or claims regarding the much earlier emergence of civilisation. This is the problem when we end up in an either or debate, endlessly circular. Sometimes constructive dialogue is not possible, which in these cases come down to a lack of understanding from either party.

Within multivocality, we recognize that there are multiple different windows into the past and by bringing together these different interpretations, we gain a richer more holistic understanding of the past. In terms of justification there are real gains to be made by involving all possible interpretations of the past within the dialogue. Within multivocality, it is not an extreme relativism and as noted above, there still remains a requirement to maintain epistemic standards.

> "The advocacy of an "anything goes" approach to scientific methodology also creates major social and political problems. If the social sciences lack integrity, they are vulnerable to manipulation by any interest group, however reprehensible its goals and beliefs...By adopting such a position, Western social scientists play, in the manner of a self-fulfilling prophecy, into the hands of reactionary elements in their own societies." (Trigger 1989a, 789)

Joyce (2002) equates multivocality with Bakhtin's (1984) polyphony, the representation of multiple distinct languages, heteroglossia. In this framework extreme relativism is rejected but archaeologists need to be aware that their choice of narrative has real consequences (Joyce 2002, 14).

Cosmopolitan archaeology aims to deal with the politics of contemporary archaeological practice by extending our obligations and honouring these obligations (Meskell 2009a). Based on the contemporary cosmopolitan theorist Anthony Appiah, plurality is emphasized: "People are different, the cosmopolitan knows, and there is much to learn from our differences. Because there are so many human possibilities worth exploring, we neither expect nor desire that every person or every society should converge on a single model of life."(Appiah 2006, xv) Cosmopolitan archaeology embraces the cultural differences of particular interests, places, practices and sentiments and is therefore dependent on context, which means there is no universal solution to archaeology's political burdens (Meskell 2009a).

While clearly there are benefits to bringing together different forms of knowledge there has to be repercussions. Kuhn (1962) notes that knowledge from different scientific paradigms are incommensurable. Archaeologists aren't only dealing with different disciplinary paradigms; different forms of knowledge have developed from paradigms external to the discipline which are likely to have very different modes and criteria of justification. Therefore, while alternative forms of knowledge may strengthen archaeology, the use of them may be complementary but also, arguably, could be incommensurable.

If we compare the trends seen so far in this chapter, with the philosophical theories of truth discussed previously, two strong parallels can be drawn. Firstly, there appears to be a call for a pragmatic form of justification, one that does not just follows the evidence, but also considers the ramifications of interpretations of the past. To answer the political call, justification within archaeological interpretation needs to be a practical virtue. The second parallel is multivocality or plurality, as suggested by cosmopolitan archaeology. Given how dependent archaeological

justification is on context, there is no expectation or even possibility that justification will converge on one interpretation, one explanation of past events and peoples.

5.1.4 Epistemic Inclusion and Multivocality

As noted in the previous section, multivocality is a key issue in discussing the ethical responsibility of archaeology. Multivocality, arguably, embodies both pragmatism and plurality and could possibly provide a solution to balancing the ethical and epistemic. This section reviews the contribution the discussion om multivocality makes to the problem of justification.

Within archaeology there has been a growing trend towards the 'inclusion' of people and groups from outside archaeology into various parts of archaeology. Multivocality (following Hodder 1999, see also Chapter Three) is viewed as part of the answer, in giving a voice to the voiceless. Following Hodder (1999), the goal of multivocality is to take account of multiple interpretations of the past through the participation of different groups and individuals with different views about the past. As discussed in the previous section, inclusion is a necessary component to ensure an ethical archaeology; there are other windows into the past beyond just the archaeologists'. It is clearly unethical to allow any group sole rights to interpret the past. It is argued that archaeology enforces certain values, certain systems of knowledge on very different ones. Periods of time defined by the archaeological discipline are forced upon indigenous pasts, rupturing indigenous period boundaries and further separate modern day indigenous groups from their indigenous past (Wobst 2005, 24). Many descendant communities feel victimized and alienated by an archaeology that doesn't voice their needs and is impenetrable in jargon and lack of access (Zimmerman 2005, 307).

Despite the growing popularity of multivocality, there are a number of critics who are fearful of its impact on archaeology and how archaeologists interpret the past. Critics of multivocality note that it undermines the complexity of archaeology and gives little guidance on how to decide between competing voices (McGuire 2008, 61-3). As Kohl states:

> "Should multiple perspectives always be encouraged or should some be resisted? How and who decided the latter?"(Kohl 2004, 297)

Critics equate multivocality with the requirement to listen to all voice and yet within common sense, not all voices may be worth listening to, those with questionable political agendas,

for example holocaust deniers. Furthermore, extreme readings of multivocality hold that it also leads to the loss of any ability to even write about the past:

> "The politics of identity, feminist and otherwise, rests on a disturbing epistemological ground in which the group's fragile unity, rooted in the emergent sense of identity as an oppressed other, is shielded from white male colonization by asserting the inaccessibility of one's experience. Only those who share the group identity and have lived its experience, whether seen as biologically given or socially constructed, can know what it means to be black, a women, blue-collar, or ethnic, in an American constructed as white, Anglo-Saxon and Protestant."(Downs 1993, 416)

This implies that no group can write the history of another and thus ultimately, no one can know anything beyond their own identity and situated experience. Experience becomes the ultimate arbiter of truth and in the end no history would ever be possible, only autobiography. Among other things, this is political limiting. When discussing the past, different groups have affected other groups, and it should be possible for the oppressed to discuss their oppressors (Evans 1997, 211-5).

Such an extreme form of multivocality can be equated with 'epistemic inclusion': the concept that archaeologists have no privileged authority in establishing, disseminating and interpreting truths about the past (Cooper 2006). This has the potential to lead to a complete impasse of truth and while it overcomes any issue of one group having authority over another; it makes any form of justification impossible as it is not possible to delimit the field of interpretation as an extreme relativism comes into play. This is all theoretical, as no archaeologist has argued for the practical application of this. However the issue remains on where the line is drawn between one group's authority over another group and still allowing justification of archaeological interpretation.

Cooper identifies the increasingly inclusive character of archaeology in recent years, with the increasing participation of indigenous groups due to post-colonial guilt (Ibid, 131). Cooper puts the appearance of epistemic inclusion down to a variety of reasons. Firstly, sceptical worries in philosophy can also be found in archaeology. Secondly, a drive for a socially aware archaeology, working towards a better future, as discussed above. Archaeologists have embraced political and ideological issues. This has been coupled with a growing appreciation of the importance of archaeology to people outside the discipline; archaeological interpretations and knowledge have the power to arouse strong feelings in people of different backgrounds, allegiances and identities (Cooper 2006, 131).

It can be linked historically to the philosophy of Kuhn. Kuhn (1962) discussed the incommensurability of scientific theories due to the existence of different paradigms; in his view, it

is not possible to compare scientific theories between different paradigms. So, for example, the Newtonian paradigm is incommensurable with Cartesian and Aristotelian paradigms, as they lack common measures. Communication is not possible across paradigms as they use different concepts and methods (Oberheim & Hoyingen-Huene 2009).

This can lead to a fear that:

> "[i]f we abandon our standards for choosing between alternate explanations, we abdicate any right to exclude explanations that promote bigotry, nationalism, and chicanery."(Anthony 1995, 88)

Archaeologists are torn between scientific ideals and the appreciation of natives' culture. Caught between these different viewpoints, it is argued, has driven the archaeological discipline closer to a postmodern science (Boghossian 2006, 2). Within the concept of epistemic inclusion, archaeologists do not have privileged or sole authority over establishing, interpreting or disseminating knowledge of the past (Cooper 2006, 131).

The past can never be fully verified. It is never possible to be completely sure that what we think of as the truth is completely true or false. To some philosophers it is not possible to even prove that the past is not just a fiction, following "Ron Hubbard's simulacra who were convinced they lived in a real world and thought they remembered long past and ancestors" (Lowenthal 1985, 188). Similarly, Bertrand Russell argued that it was not possible to prove that the planet may have only been created five minutes ago with a population that had complete memories of an illusionary past (Russell 1921, 159).

But even if we can never really know completely if we are correct, does this mean we should rally to the other extreme, that of knowing nothing?

Epistemic inclusion is not widely cited and Cooper is the first to refer to it as such. Epistemic inclusion is comparable epistemologically to an 'anything goes' type of relativism. This is not the balance mentioned throughout this chapter, but an extreme subjectivism, one that would nullify all the arguments regarding justification so far discussed in this thesis. If epistemic inclusion were equated with multivocality, it would arguably bankrupt the theory, for all the reasons above. At the same time, complete epistemic inclusion gets us nowhere as we would still have not solved the political and ethical concerns of archaeology in the modern day. Instead, we would be back to the black and white debate of all or nothing. However, multivocality, as will be argued, is not the same as epistemic inclusion. A multivocal framework involves the acknowledgement that people have different views and the right to their own views. Multivocality involves polyphony (many voices) and heteroglossia (multiple languages) (Joyce 2002). Multivocality is not just about how we discuss

the past but also how we interpret the past: “Including inquirers and investigators with different knowledges, experiences, and perspectives in formulating research questions, developing hypotheses, and offering interpretations allows for a more holistic archaeology, thus providing a richer understanding of the past and the present.”(Bauer 2013, 177) The issue becomes, within a multivocal framework, how to deal with multiple and sometimes contradictory interpretations of the past.

Before returning to justification, it is useful to look at a few examples of multivocality in practice. Lilley, in relation to a cosmopolitan archaeology, believes the practical answer is hybridization (Lilley 2009). A recent project, working with Aborigines in Australia, researches the indigenous visualization of landscape. The aim is to apply ethnographic information about hunter-gatherers to the landscape archaeology of hunter-gatherers: “the general proposition that the way the physical landscape appears to Aboriginal people…contains spiritual information concerning the organisation or structure of the landscape that constrains people’s behaviour.”(Ibid, 58) This echoes a lot of other work in Australia; for example, the way the landscape is read by Aborigines and shaped by their memory of ancestors (Godwin & Weiner 2006). The underlying methodology of such research is negotiation, through dialogue and conversation. The strength of such work is in the opening of new lines of inquiry and a richer understanding of the past. New lines of inquiry need to be contextualised. It is argued, that local knowledge needs to be coupled with the global and political context, for example, ethnoarchaeological studies of indigenous tribes in Brazil and the impact of international development agencies and multinationals (González-Ruibal 2009, 115-6).

Multivocality can feed into research in a number of different ways, its strength, as in the above examples, is in producing richer more in-depth interpretations of the archaeological record. For example, multivocality was an integral part of the archaeological investigation of the New York African Burial Ground, allowing for a richer understanding of the site and wider dissemination of the findings. Engaging with African Americans and others, who were interested in the site, produced a greater understanding of the cultural background and history related to the burial ground (Blakey 2008).

Multivocality does not need to be at odds with mainstream archaeological practice and interpretation. Despite a lot of controversy, it is noted that repatriation under NAGPRA, and working closer with Native Americans, has led to an increased understanding of the peopling of America and a better understanding of the consequences of contact and colonization (Killion 2007). Atalay argues that the aim of Indigenous archaeology is to avoid replicating mainstream western archaeological practice and thus moves beyond colonialist and imperialist archaeology (Atalay

2008, 31). As Atalay argues, Indigenous archaeology does not come with a need to dismantle western archaeological practice:

> "Indigenous archaeology approaches offer a set of tools to use in building positive change from the discipline; but these are tools, concepts, epistemologies, and experiences for remodelling, not dismantling."(Ibid, 33)

At every stage of research, Indigenous approaches and knowledge structures should be incorporated within a comprehensive multivocality. Atalay uses the case study of an exhibition at the Ziibiwing Cultural Centre in which the Ojibwe (a native tribe of Michigan) worldviews and beliefs are privileged but are constantly combined with Western viewpoints (Ibid).

Multivocality does not in the cases above fulfil the worries of its critics. "Multivocality enhances rather than relieves the need for archaeologists to weed out erroneous assumptions and interpretations and to synthesize divergent viewpoints to produce more holistic explanations of the past."(Trigger 2008, 190) This would suggest that within justification, the ethical and political concerns linked to archaeological interpretation are not in competition to epistemic aims but actually beneficial.

Multivocality illustrates how archaeologists are working towards balancing the ethical and epistemic; not by separating the two but by bringing them together. Within multivocality, what is crucial, from an epistemological point of view, is to maintain the ability to warrant and contest claims about the past: there is a need for empirical and conceptual integrity (Wylie 2008). Multivocality then becomes part of the process of building a coherent set of interpretations within archaeological justification. There is still a requirement to maintain standards. The case of Ayodhya illustrates the dangers of falsifying archaeological data (Trigger 2008). Trigger holds that the primary job of archaeologists, within multivocality, is to determine how different interpretations can be combined to produce a richer understanding of the past (Ibid). Truth claims within multivocality, therefore, still have to be epistemically justified.

5.2 A pragmatist approach to archaeological ethics and epistemology

As stated earlier in this thesis, pragmatism has been receiving increasing attention in archaeology. Pragmatism hinges on the concept that what is true is linked to practical outcomes, though, as stated in Chapter Two, this is taken to mean a number of different things. Within

pragmatism the aim of inquiry still remains to do our epistemic best. Despite this, pragmatism is not in opposition to coherence or correspondence as modes of justification. However, pragmatism holds that correspondence on its own is not enough (James 1907, Putnam 191) and coherence, central to pragmatism, is not enough as truth is only an aspect of inquiry (Haack 2009), and there are the practical consequences of inquiry which must be considered.

Within pragmatism an interpretation is justified by how well it stands up to our own experience. As discussed in Chapter Two, there is a divergence of opinion on what is meant by 'satisfactory' and 'practical' as a goal of justification in pragmatism. This is where there is a divergence of opinion; Rorty (1991; 1999a) abandons any concept of truth, replacing with the concept of social utility (also adopted by archaeologists working on the subject, for example Preucel & Mrozowski 2010). Others, though, see the value of inquiry; through coherence of individuals conceptions of reality (for example Putnam 1991) and through inquiry (for example Haack 2009).

As discussed in the previous chapters archaeological knowledge is in some way socially influenced and mediated. Pragmatism arguably bridges more traditional theories of truth like correspondence and coherence with social constructivism; and thus provides a middle ground that is highly sought for in archaeology (as indicated in Chapter One). Pragmatism, as related to archaeology, emphasizes the social element of interpretation (Preucel & Mrozowski 2010). The writings related to pragmatism in archaeology draw out to specific components of pragmatism, Peircian semiotics and material meanings (Preucel 2006). Semiotics is the study of humans' production and comprehension of signs which are the ideas, words, images, sounds and objects utilised in the communicative process (Ibid, 5). These signs highlight the multiplicity and ambiguity of meaning, though, signs are not inherently so, just when different knower's engage with them (Preucel & Bauer 2001). Peircian semiotics gives us:

> "a common language with which we can understand the structure of contrasting interpretative approaches and communicate across these boundaries while at the same time acknowledging the validity of our different theoretical commitments."(Ibid, 93)

Pragmatism enables us to recognise the plurality of the past, without devolving to extreme relativism. Pragmatism, as discussed in Chapter Two sits between objectivism and subjectivism. Given that each of us has our own perspective, our interpretations of the world are different. In the above sections, we have seen how different groups and individuals hold different interpretations of the past. As noted in Chapter Two, that Dewey, like many other pragmatists believed that it was not possible to determine if a correspondence between a proposition and an object was true (Dewey

1941). Dewey held that inquiry is not a passive act and that inquiry can lead to different truths under different conditions. However, interpretation is still made true by objective experimental inquiry. As Haack argues, though science is a deeply social enterprise, consensus is still epistemologically significant. Many of the themes in this chapter appear to be closely aligned with pragmatism. Pragmatism shifts the issue, though it recognizes, as a knower in the world, that archaeologists are not standing on the outside viewing in but are part of the process of interpretation. Pragmatism recognizes that inquiry is not a passive act and neither is inquiry free from context. Dealing with multiple different interpretations we are guided by considering the practical outcomes to understand the social element of interpretation. Knowledge is by consensus, which leads to stable belief. This also fits with the need, highlighted in the above sections, for dialogue with all parties, as only through this dialogue can any form of consensus can be reached.

In thinking how practically we could apply a pragmatist approach to justification in archaeology the concept of truthfulness seems most appropriate: "a pervasive suspiciousness, a readiness against being fooled, an eagerness to see through appearances to the real structures and motives that lie behind them." (Williams 2002, 1) As Bernard Williams states, there is a desire for truthfulness while at the same time a suspicion of any type of truth. As Williams argues, Accuracy and Sincerity are the two basic virtues of truth (Ibid, 44). There is value in both accuracy and sincerity. Truth is essential in use and acquisition of language: "Children learn language in many different kinds of situation, but one essential way is that they hear sentences being used in situations in which those sentences are plainly true" (Ibid, 46) and also, for example, "[t]he community has an interest in having correct information about the environment, its risks and opportunities, and so does each individual."(Ibid, 58) In fact the word "truth originally, in its Early and Middle English ancestry, meant fidelity, loyalty, or reliability" (Ibid, 93-4). This is where truthfulness as a concept can help guide archaeologists: a will to truthfulness (to do our epistemic best) instead of the standards of an unobtainable single truth.

To summarise, a pragmatist position for justification in archaeology is both ethical and epistemic. A pragmatist approach to archaeological ethics and epistemology is summarised in the points below.

Firstly, epistemic justification occurs, as highlighted in Chapters Three and Four, within a correspondence and coherence framework. Abductive reasoning is used to build grand scale narratives, possibly leading to multiple explanations for a single phenomenon. Therefore, at this level normal epistemic justification criteria apply. This is also referred to in a commitment to truthfulness; ethical justification is not a substitute for epistemic justification. Archaeological interpretation is guided by this commitment to truthfulness; that claims about the past are well-

founded and through inquiry, fit our experience of the world, justified through correspondence and coherence. Claims about the past are always open to reinterpretation.

As argued in the previous sections of this chapter, archaeology has both ethical and political ramifications and therefore, how we interpret the past is very important. Archaeology has both ethical and political ramifications and therefore, how we interpret the past is very important. A lot can be learnt from listening to different interpretations of the past. The strongest argument that comes through from all the sections above is balance. There is recognition that there are multiple ways of knowing the past but without condoning an extreme relativism. The reflexive method attempts to put this into practice though still appears to struggle from the contradiction of one voice (how the archaeological findings are presented) and the many within dialogue on site. Therefore, it is important that the consequences of archaeological knowledge are considered as part of the justification process. For example, will a specific interpretation support a questionable political agenda or will it have an economic effect on individuals. However, referring back to Orwell, the greatest strength is in the ability to declare things as what they are. In cases where archaeology has been misused it has been frequently the case that archaeology has been misrepresented, as illustrated in earlier examples. Therefore, a will to truthfulness is also a path to a more ethical archaeology. This is not to state that the epistemically most accurate interpretation or the truth is always going to necessarily be the most ethical answer (especially since there is never any guarantee we can reach it) but epistemic justification is a pretty good guiding rule towards an ethical archaeology.

While in archaeology we may aim for the most epistemically accurate interpretation, any interpretation will always be made from a very specific standpoint and there will always be other standpoints; inquiry is never a passive act. Each individual has their own viewpoints and this is why truthfulness is so important, if we are going to interpret the past we have to make sure that we build, as much as possible, the most accurate interpretation of the past, one that is not necessarily the 'truth' but' one that is our best explanation though in most cases probably not the only explanation. Multivocality strengthens archaeology, as previously argued, by creating a more holistic archaeology. Considering different viewpoints may pose questions that have not been considered before and may also provide possible explanations that previously had not been considered. Integrating multiple viewpoints into any archaeological interpretation integrates the epistemic and ethical. Multivocality is not an all or nothing, within two positions that is always a divergence of views and at the same time a convergence. Therefore, multivocality is about a balance and an understanding of different viewpoints, negotiation, understanding and cooperation.

As a final note, there is no magic bullet: balancing the epistemic with the ethical is very difficult. This process takes a lot of hard work and a lot of negotiation and may not completely

satisfy everyone nor may there ever be one agreed upon answer. This is not a defect of the process but down to the fundamental nature of justification in archaeology.

5.3 Ethical justification in practice: a pragmatist approach

The previous section concluded that archaeology should follow a third criterion of justification, ethical justification deriving from a pragmatic position, given the ethical and political ramifications of archaeology. This section looks at this in practice through two brief case studies in which differences of opinion between archaeologists and non-archaeologists have been prominent. The first is the reflexive method at Çatalhöyük. The reflexive method aims to practically apply a lot of the above, putting multivocality into practice. Reflexive archaeology, for Hodder, is a self-reflexive archaeology linked to contextuality, interactivity and multivocality (Hodder 2000, 9). How does reflexive multivocality impact justification in archaeology? The second is in cases of contestation over burial remains and repatriation, in North American and in the United Kingdom.

5.3.1 The reflexive method at Çatalhöyük: Multivocality through access and dialogue

Chapter Three focussed on epistemic justification at Çatalhöyük, this section focuses primarily on the ethical issues related to the excavations and methodology at Çatalhöyük.

Multivocality as part of the reflexive method is the empowerment of individuals within the interpretive process (Bender *et al* 2007; Hodder 1997). This mirrors the above discussion on multivocality. Archaeology traditionally suffers from a hierarchical top-down division of interpretation (Hamilakis 1999). Several steps are taken towards a reflexive archaeology at Çatalhöyük. These steps aim to empower individuals (including the archaeological individual) and stop hierarchical power-plays over interpretation.

The first step towards a reflexive method at Çatalhöyük was the specialists' tours on site, which attempt to contextualise finds passed to specialists and to give more information to excavators: in both cases they help to contextualise interpretation (Hodder 2000, 5-6). The site tours require people to listen and talk to each other, to be open to other opinions, and to other areas of expertise. On site there is an emphasis on including as many of the archaeological team in the interpretive dialogue, though on the other hand (as shown in Chapter Three) it is a minority that provide input into final reports.

The archaeologist is not the only voice with an interest in the excavation at Çatalhöyük. The site is located in a rural, traditionally conservative, strongly religious area and yet sits within a global arena. The site introduces both commercialism and Western attitudes and a foreign team studying a pre-Islamic site (Hodder 1998, 128-9). Bartu (2000) argues for the dispersal of the site, the presence of multiple Çatalhöyüks. Different excavation styles construct different windows into the site (Tringham & Stevanovic 2000). Externally, different ways of knowing are produced and consumed.

On a daily basis members on site interact with people from the local community: local bureaucrats, government officials, people living close by and people working on site. Local people's relationship with the mound is two sided; local people hold their own beliefs about the mounds and also use the mounds in the modern day as a practical resource. The current excavation provides work and an influx of money into the area. The current excavations, far from alienating them, it is argued, strengthen their own sense of identity and community through drawing parallels with their own lives (Hodder 1998).

The involvement of local people has been encouraged and facilitated. Slide shows in the local village of Küçükköy have been used as a way of informing locals about the work on site. Modern day concerns were vented through the preparation of a community exhibit at the visitor centre on site, for example, discussing concerns regarding the falling water table on the Konya plain. Local women were interested in telling the story of the mounds through the plants they harvest; routes are chosen dependent on the location of certain plants: plants for medicine; plants to eat, plants used as brooms; plants for makeup and plants for protection against the evil eye (Bartu 2000, 105-7). Sadrettin Dural wrote an account of Çatalhöyük from his perspective as a site guard on site in the 1990's (Dural 2007). Dural draws parallels between the site and his own life, offering new possible interpretations of the landscape based on his own life experiences and knowledge of the area; present and past. Interactions with the locals provide different windows into the site and dialogue is encouraged to include these different windows into the interpretative process.

Local people, mainly from the local village, work on site as labourers, as guards (as in the previous example), as guides, as flotation assistants (Hodder 2006, 37). This can be found on many excavations around the world. Training of indigenous peoples has allowed a greater deal of multivocality but this is usually within the methods set by those running the excavation. Further, though there has been a push to open up access, it is also not possible to let a large number of unskilled people (as defined by the chosen site methodology) to excavate. Therefore frequently, as at Çatalhöyük, local people may take part on site, but they are not part of the process of interpretation at the trowel's edge. One answer to this has been the dissemination of knowledge on

the widest scale possible, so that data can be reinterpreted at a later stage. Documentation becomes central to the reflexive method (Hodder 2003, 60-1); crucial in meeting the multivocal component of the reflexive method is allowing as many voices to play a role in the interpretive process.

Çatalhöyük thus exemplifies the practical application of multivocality to allow for as many voices to be part of interpreting the archaeological record, though it does illustrate how difficult this is do. The question is how successful is this, does the practical application of multivocality match up to pragmatism?

So far the issues discussed above have been about access and dialogue as part of the archaeological interpretive process. In Chapter Three it was shown that within the archaeological literature one unified interpretation is presented, however on site there are multiple voices and these are frequently contradictory. As well as the local voices discussed above, there is also the national voice. At Çatalhöyük the central political voice is the nation state of Turkey. A central aim of the site is the development of a heritage site in consultation with Turkish officials (Hodder 2006, 37). At times different political interests are voiced on site:

> "the Ambassador of the European Union makes very different speeches when he speaks to the press at the site. His aim is to speak to those in Turkey who, in contrast to the nationalist politicians, wish to take Turkey into the European Union. The Ambassador talks of the fact that there was no boundary between Europe and Asia at the time of Çatalhöyük. He refers to the evidence we have discussed with him for cultural contacts between central Anatolia and southeast Europe in the Neolithic…he looks at the evidence through his own political lenses."(Ibid, 35)

The site has been criticised for its political positioning, specifically its relation with the nation-state of Turkey and global financial corporations. The project is also dependent on several global corporations for funding who in return gain a public relations project on a global scale, for example Visa (Hodder 1998, 134). The reflexive methodology at Çatalhöyük aims to overcome the issues of Orientalism and the 'other'; however, it is argued that certain positioning of the site may support different political agendas. As Hamilakis (1999, 72) highlights, the approach at Çatalhöyük supports the national myth that Anatolia is the cradle of civilisation. The foundation of the Turkish nation-state rested on the idea of Anatolia as a mythical motherland. This association need not be intentional; arguably, the prominence of the site alone makes it amenable to nationalism (Ibid, 73).

In line with pragmatism, as concluded earlier, there is not one unique interpretation of the site. A very different voice is that of the New Age Goddess groups who regularly visit the site, and though they are a confrontation to traditional local Islamic attitudes towards women they are still

welcomed (Hodder 1998, 132). Goddess groups come from USA, Germany and Istanbul. They come to feel the power of the Goddess, to pray and to hold circle dances. Views within these groups are varied. Some take a strong line that women were dominant in past societies, whilst others simply wish to engage with the site in a spiritual and religious way. This association stems from Mellaart's 1960's excavations and his discovery of numerous 'mother goddess' figurines which he associated with a female dominated religion (Mellart 1967).

Further publications (Batstow 1978; Gimbutas 1991) led to Mellaart's work being brought to the attention of some feminist groups. Çatalhöyük has become known to this community as one of the earliest sites in the world where the divine feminine form was revered and a site of sacred pilgrimage (Rountree 2007, 9). Archaeologists' views have progressed away from any form of matriarchy on site, which obviously counters the Goddess stance. Rountree raises certain issues regarding this:

> "The views of the current archaeological team have been published in scientific journals and books and are generally regarded as the most up to date (surpassing Mellaart and largely dismissing Gimbutas) authoritative interpretations of the evidence. The Goddess perspective has been mostly published in feminist and religion academic journals; books, magazine, and Web sites read mainly by the Goddess community; and in less formal communications such as e-mail correspondence among those who belong to a "Goddess Scholars" electronic list. This state of affairs led me to think about how power is articulated and negotiation in a multivocal context: specifically how one voice of vocal category (archaeology) acquires interpretive authority while another (Goddess feminism), which produces a dissenting interpretation, does not (or acquires less authority, or authority restricted to a particular audience) and how the former voice consequently gains power over the latter."(Ibid, 14)

Rountree goes on to note that, despite the multivocal approach on site, amongst the archaeologists there is little variation in opinion, and the reason for this is power. The Goddess voice can never be on an equal footing to the voice of the archaeologist as Goddess scholars do not have immediate access to the archaeology; hence the Goddess voice will always be dominated by the scientific one. Rountree further argues that this amounts to giving one interpretive voice the right of veto over another (Ibid).

This brings into play the constructivist nature of archaeological interpretations. All interpretation is in some way theory-laden, we bring our own social biases to any interpretation. It is argued that interpretation is as much a product of the present as the past (Hodder 1984; Shanks & Tilley 1987). A multivocal approach tries to practically apply issues of theory-ladenness, by listening to and recording as many different voices as possible. Returning to the chapter on truth it

was posited within pragmatism that justification may never work towards a single truth. Instead there may be a plurality of truths. Within pragmatism, interpretation is justified against our experience of the world and given that our experience is always an individual one, it may never be possible to reduce justification to a single truth. Pluralism and pragmatism does not necessitate relativism, as knowledge is still restrained by our experience of the world.

Integral to the process of listening to all voices is the issue of access. By its very nature archaeological practice is a privileged position; by the very act of excavation, we have exclusivity over the archaeological site and the material. Is an alternative even practically possible, though? As Hodder (2003, 61) points out, it is simply not possible to allow large numbers of skilled people to excavate. It is possible that individuals from different groups could be trained to become skilled excavators. Does this mean that we teach them to interpret in a different way and not their own? Complete inclusion is not possible, and given the multiple interests at play at Çatalhöyük this makes the reflexive method even more important. By questioning our methodology, by listening to many voices, it could be argued, we become more aware of the many different windows to the past:

> "As the archaeological site become involved in a negotiation with many other sites, it is impossible to try and remain neutral, objective, distanced. As one's words and as the data get taken and reinterpreted within other sites, there may be a desire to scream that 'there is no evidence for that'. But in the same desire to produce the evidence as objective, one recognizes the desire of others to do the same, from a different point of view...One is forced, then, to take a stand. As the evidence is taken by others to show that a matriarchy existed at Çatalhöyük, the archaeologist is drawn into an opinion, for or against."(Hodder 2000, 10-1)

Therefore, we return to where this section first started, access and dialogue as part of the archaeological interpretive process. At Çatalhöyük it is both a difficult and fragile balance that is sought.

Balancing multiple voices raises the question, whether every voice should be listened to, every window looked through? This leads to the major criticism of the reflexive method:

> "A key problem in Hodder's proposal resides in predicating a change in archaeological methodology on the basis of goddess-worshippers, nationalists, ecofeminists or any such 'fringe' groups, as Hodder calls them. A dialogue with those users of archaeological data may require forms of communication and modes of presenting archaeological results that acknowledge their voices but stand by the methods of science against dogmatism, chauvinism, demagoguery and idiosyncratic beliefs and revelations that cannot be cross-examined or openly and freely debated in order to arrive

> at a consensus. Archaeology, as a scientific discipline within the academy, cannot be driven by *a priori* beliefs about a universal mother goddess, Aryan ancestry or extraterrestrial origins of civilisations." (Hassan 1997, 1021)

The archaeology Hassan describes (an 'anything goes' type of approach) is clearly untenable but does the reflexive method actually do this? Multivocality as part of the reflexive method provides the mechanisms to allow for different discourses (Hodder 2000, 9-10). However, it is flawed logic to hold that multivocality necessarily condones an 'anything goes' type of approach; listening to all voices does not necessarily mean that they are all held to be equally valid. As seen in Chapter Three, on site interpretations are still justified epistemically through correspondence and coherence with the archaeological record. This is also illustrated by an example in this section, the Goddess groups' frustration that the Mellaarts model of a matriarchal society is now discredited. In many of these arguments it comes down to the extremes of all voices or one voice, however the argument in this chapter is that it is about balance and multivocality attempts to balance multiple viewpoints by listening to and making them part of the interpretive process.

The methodology on site aims to be reflexive at every stage, in the light of new information or reflection; interpretation can evolve and change (Hodder 2000, 9). This echoes the viewpoint in pragmatism that all interpretation is never a passive act, an individual is always part of inquiry. However, this is not an easy process and one, as noted in the previous section, which may not completely satisfy everyone. Further, as argued complete inclusion is neither practical nor ethical.

Looking at the case study at Çatalhöyük and specifically at the use of multivocality links, in many ways it exemplifies the emerging pragmatic approach to justification. On site a plurality of interpretation are studied and it is accepted that inquiry is never a passive act; through recording and listening to multiple views and, as noted in the previous chapter, trying to record the narrative of interpretation. Therefore the reflexive method at Çatalhöyük tries to balance the epistemic (through correspondence and coherence) and account for the ethical ramifications of archaeology, through dialogue and access. However there is the issue that by trying to bring together interpretations from such different paradigms, at times an impasse may reached as the different interpretations become incommensurable. Although dialogue is claimed, in the case of the Mother Goddess voice and the archaeological voice at Çatalhöyük, in the end both sides, arguably, reach an impasse where two different interpretation of the same site will continue to be accepted but only within specific communities. Interestingly this is not so dissimilar to the debate surrounding the origins of agriculture in Britain; different camps continue to provide support for their own explanations and criticize any alternative explanation.

Clearly much more work is needed to understand if the methodology on site achieves what is intended, but it indicates how an epistemic and ethical framework of justification may work in practice. As shown in Chapter Three, the site is still extremely 'traditional' in the way it reaches an interpretation. Arguably, where Çatalhöyük differs is the way in which it attempts to be explicitly engaged with the political and ethical nature of justification and therefore, drawing the two together to inform each other.

5.3.2 Achieving 'Satisfactory' Justification (or not): some conflictual examples

Although justification in archaeology, when we consider the role of alternative interpretations of the past, fits in with a pragmatist theory of truth, there is still the issue of how to define 'satisfactory' and 'practical' as a goal of justification. This section explores how archaeologists deal with different interpretations of the past in more conflictual cases, when what is 'satisfactory' may be a matter of strong contention.

In the UK there is a growing but still small voice calling for the repatriation of ancient individuals. British Pagan groups are increasingly requesting the return of human remains from pre-Christian burial. For example, the Council of British Druid Orders in 2007 demanded the reburials of child skeletons excavated in 1929 from Windmill Hill (Randerson 2007). After consultation, English Heritage refused the request on the grounds that the benefits to future understanding, far outweighed the likely harm to the individual resulting from not burying them (Thackray 2009). This rejection contrasts with requests to repatriate colonial-era indigenous remains: such as the repatriation of the bones and teeth from 17 Tasmanian Aborigines from the Natural History Museum in 2007 on similar grounds as NAGPRA. DNA testing was abandoned due to an injunction (Henderson 2007).

In the UK current guidelines only address the reburial of Christian remains and provide no guidance on the treatment of pre-Christian graves (Sayer 2009, 199). Repatriation claims for British material in the UK have been met with disagreement and a general siding with scientific research, which is in stark contrast to America. The question, therefore, is why is there such difference in opinion? The simplest answer is that Druid groups cannot argue the same privileged linkage to ancient remains that certain Native American groups can, but even when there are cases in the United States where a specific link cannot be found, public opinion and even legislation often sides on the case of repatriation. Thus in dealing with multiple interpretations, other issues are drawn into play, for example political concerns and public opinion. A small survey showed that 88% of

respondents felt that skeletons should be kept for future scientific research (Carroll 2005). The English Heritage consultation also took into account the more widely held view by the public for the continued study of the skeletons (Thackray 2009).

Cases are context dependent. What the above illustrates is that epistemic reasoning rejected the claim that Druid groups had privileged links to the ancient remains. In cases like the above, a pragmatic approach helps guide archaeologists by understanding what the practical ramifications are of the interpretations gained through correspondence and coherence. Clearly, practical ramifications will vary from case to case. In the case of bones and teeth from 17 Tasmanian Aborigines, it could be argued, it is much more reasonable to argue that 'harm' will be done by not repatriating the remains than compared to the example of the druid groups. In the case of the British Pagans this was concluded not to be the case. Therefore, the above case is guided by a pragmatic theory of truth. Justification is sometimes about more than just finding the most accurate answer; it is also about the practical consequences of interpretation. Decisions are made not on what is epistemically justified but on what to do, within this process though the 'facts' as they are, play a role in deciding the final outcome. Therefore 'satisfactory' in archaeology means both ethical and epistemic.

It is possible to compare the case of the druids to a much more infamous case. The case of the Kennewick man is a difficult one, as it turns upon the issues of unitary ownership and control. In many ways this example illustrates the problems when a decision needs to be made by one side or the other, in this case by the court. This draws in other issues, beyond justification, for example, power relations. Clearly the situation is a delicate one. Zimmerman argues that sometimes we need to let go and in the case of the Kennewick man, "holding onto one set of values entails rebuffing other, which usually is alienating if you hold the rejecting values."(Zimmerman 2013, 114) It is argued that Kennewick Man became a symbol in a conflict over the issues of power and control (Thomas 2007, 73-4). In disputes like this, the issue is always how to balance multiple perspectives. The ideal situation is negotiation by all parties, recognizing the importance of all interested parties concerns (Thompson 2013, 96). For example, in the case of the remains of a women found near Lake Mungo (southern New South Wales, Australia), after the remains were studied by scientists they were repatriated. Today they are kept in a vault which can be opened by one key in the control of local indigenous groups and one key held by archaeologists (Ibid, 97).

The relationship between archaeologists and Native Americans historically has been one of conflict and controversy, largely due to the objectifying and dehumanizing of Native Americans by archaeologists (Downer 1997, 23). Standard archaeological approaches do not allow for the existence of other ways of knowing the past. The Native American Graves Protection and Repartition Act (NAGPRA) aims to change this: "Archaeologists must deal directly with Native

Americans and deal with them as equals."(Ibid, 32) NAGPRA facilitates the return of certain Native American cultural items to lineal descendants and culturally affiliates tribes and organizations[10]. Yet enfranchising Native Americans to control their own past has often proven complex.

An example of an unclear case is that of the now famous "Kennewick Man". The accidental discovery in July 1996 of an almost complete skeleton, on the bank of the Columbian River, Kennewick, Washington in North America, led to widespread media attention and became the subject of legal action between Native Americans and archaeologists (Downey 2000; Walker Jr. & Jones 2000). When the skeleton was first discovered, anthropologists concluded that it was a Caucasoid male. The discovery of a stone point dated the skeleton as 9,200 to 9,600 years old meaning that there was no way it could be of European origin. This interpretation was justified by the archaeologists. In keeping with legislation, five Native American tribes (the Umatilla, the Yakama, the Nez Perce, the Colville and the Wanapum) filed joint claims for the remains. Eight anthropologists then filed suit to block the repatriation of Kennewick Man (Watkins 2001, 59-60). The anthropologists' lawsuit questioned whether NAGPRA was appropriate for remains of this deeply prehistoric age and cited a lack of due process, accusing the Army Corps Engineers (which excavated the burial) of arbitrary decision making (Thomas 2000, xxiii). Meanwhile a further group also filed its own lawsuit. The Asatruans, a religious group who trace their ancestry to Scandinavian and Germanic tribes of northern Europe, sued the American Government to stop the repatriation of the skeleton on the grounds that Kennewick Man was their kin (Ibid, xiv). A long legal battle ensued. The Secretary of the Interior first held in favour of the Native American claimants but this judgement was subsequently overturned by the Oregon District Court. The skeleton was then barred from reburial and scientific study was permitted, as the remains were not classed as Native American, and the remains did not fall under the jurisdiction of NAGPRA, (McEvoy & Conway 2004, 545). The conclusion reached is based on the conclusions of archaeological interpretation. An amendment to NAGPRA in early 2010, allowing the return of remains even when tribal origins have not been identified, made special mention that Kennewick Man would not be affected on the grounds of its importance to scientific study[11]. The controversy, however, continues. The case is seen as stripping NAGPRA of its effectiveness and damaging the relationship between archaeologists and Native Americans (Stapp & Longenecker 2005, 171-4).

Kennewick illustrates four important points for understanding justification in archaeology. Most fundamentally the conclusions reached by different groups, in the case of Kennewick Man,

[10] Further information http://www.nps.gov/history/nagpra/INDEX.HTM

[11] http://edocket.access.gpo.gov/2010/2010-5283.htm. Last accessed 02/02/2013

each draw on the available evidence to build a narrative. Just as in Chapter Four, each narrative internally coheres but they cannot agree on the conclusions from the evidence, for example, the dating of the skeleton. Secondly, it illustrates how making the debate about one side against another makes everything much more complicated and more political loaded; agendas become the centre of attention. Negotiation therefore is key; which involves understanding different interpretations and accepting that alternative views at least have a right to exist. Thirdly, ethical justification is heavily context dependent; what may have positive effects in one case may not in another. It would be naïve to think, even in the case of NAGPRA, that every Native American group possess the same or even similar views. In dealing with competing claims it does not just come down to finding the most accurate, the single statement but also about understanding the ethical consequences of interpretation. Finally, in the end the Kennewick Man case was decided by the most likely explanation, in this case the archaeological interpretation of the origins of Kennewick Man.

Both cases in this section fit within a pragmatist approach to justification. Multiple different viewpoints are weighed against each other against the criterion of epistemic justification. Arguably, when dialogue and ethical justification have broken down between different parties it became only possible to weigh out the different opinion and decide on the one that is best justified on epistemic grounds and ethical grounds. Some may argue that the view of the group with the power did the deciding, however arguably, as argued earlier in this chapter, ethical justification is linked to epistemic justification, therefore, in difficult cases a will to truthfulness may offer us the most ethical route when one needs to be decided and there is no other way to make a decision.

5.4 Archaeological ethics and justification

In the previous two chapters a model of interpretation in archaeology was outlined and shown to be correspondent at the lowest level of interpretation but to make any complex and meaningful interpretations of the past required the coherence of a web of interpretations, in which interpretations are built on interpretations. As the scale of interpretation shifts, the mode of justification also shifts to become more reliant on coherence. This system is constantly changing as interpretations tacks back and forth from theory to interpretation and vice versa. Arguably, interpretation does correspond to a reality but largely coheres within a larger framework which is socially influenced. In this chapter the scale of interpretation gets bigger and smaller. On the one hand, archaeology needs to consider alternative interpretations for the archaeological record and different political contexts on a global scale. Yet, frequently, dealing with multiple different

interpretations is generally done at the local scale. It is clear that knowledge claims emerge from different processes of justification and it is a growing concern for archaeologists on how to deal with these multiple issues and how to drawn these different ways of knowing the world into the archaeological mode of justification.

All claims regarding the past are contextually driven but this context, i.e. background knowledge, must also be supported by the evidence (Kosso 2006, 8). Archaeologists refer to the archaeological record to gain knowledge of the past and more complex theories are interpreted through the use of multiple chains which must cohere with the evidence and each other. Multiple lines of reasoning are used to strengthen justification. This can be used to evaluate competing claim. In both cases above (Kennewick Man and repatriation in the UK) what was decided on was the best explanation according to standard archaeological criteria; though it could be questioned whether the challenging groups lacked the power to overturn any decision. Within a pragmatist framework justification is about more than just epistemic criteria, it is also about the practical outcome of truth and this can help in cases where a plurality of truths are discovered. In pragmatism, interpretations are justified against experience. Interpretations are tested not only against the archaeological evidence but also the practical ramifications of interpretation; for example, in the case of the British Pagans versus the remains of Tasmanian Aborigines discussed above. This would suggest that within archaeological reasoning the practical and epistemic are not incommensurable but entwined. Truth is not in opposition to ethics.

As noted in Chapter Two, pragmatists hold different definitions of what is 'satisfactory' or 'practical'. In this chapter it has been shown that in archaeology for something to be 'satisfactory' it needs to be justified on epistemic ground but also on ethical ones, especially when dealing with interpretations that belong to paradigms so epistemically different they become incommensurable. The problem is that, as seen in Chapter Four, there are limits to epistemic justification. Sometimes a final narrative is not reachable and there may be multiple narratives of the same evidence, due to the reasons highlighted in Chapter Four. Alternatively, different interpretive frameworks may diverge as they cohere with different types of evidence. The problem is that sometimes what is ethical and what is epistemically justified will not align and there is no general solution available. In such cases it would be wrong to suggest that an interpretation is necessarily invalid on epistemic grounds or even on ethical grounds. It is a difficult balance between the ethical and epistemic standards of archaeological justification. By the very nature of archaeological justification a tension is created that needs a lot of work to resolve. The general stance held in this chapter is that an ethical archaeology should always see through a cloud of ethics, always situated contextually and thus the

ethical justification and epistemic justification are not separable. Knowledge is situated between the objective and the subjective. There is no available stance, beyond the points listed below.

There are practical ramifications to archaeological interpretations. In dealing with competing claims it goes beyond just separating interpretations on purely epistemic grounds. As the scale of archaeological justification becomes global (and back to the local), the very criteria of justification shifts to be able to deal with different knowledge claims which are the product of different paradigms and different modes of justification. Justification in archaeology therefore jointly uses epistemic criteria of justification and ethical criteria of justification. Pragmatism hinges on the concept that what is true is linked to practical outcomes and here this understood as being equated with both epistemic best and social value. Thus "[i]nstead of simply asking whether a claim about the past is empirically sufficient in light of available data, pragmatism asks what *difference the claim makes to how we want to live*." (Saitta 2008, 269) For Peirce (1877) this was only possible at the end of inquiry as justification evolves over time as it is tested against experience. Justification appears to work within a pragmatist framework. Differing interpretations are decided dependent on the practical ramification of the interpretations. Arguably, this is not that different from what was seen in the last two chapters, interpretation is justified through our many experiences of the world: experience of excavating, experience of other societies, experience of dialogue between other groups, experience of the impact of interpretation. Archaeology is not done in isolation from the world but within the world.

There are several steps that can be taken towards an ethical more holistic and richer archaeology. The first step, in any case, is to listen to all voices. As part of any study, to create the most accurate line of reasoning, every voice needs to be heard, a multivocal approach is thus required. Much of the literature on indigenous archaeologies discusses the multiple methods being employed to include all stakeholders within this dialogue (Meskell 2009; Smith & Wobst 2005). Further, an ethical archaeology is also a more holistic one as it helps direct the questions we ask and the possible answers for the questions by opening up new possibilities.

Secondly, there are still standards; truthfulness needs to be embedded in archaeology. In certain cases (Aryan supremacy; nation building; Ayodhya), it is frequently the lack of standards that cause political and personal harm. When archaeology is fuelled by the ethical standards of authenticity and accuracy (as Williams argued and discussed earlier), archaeology actually becomes a stronger, more accurate and more ethical discipline that can work towards real positive change. Compared to theories of truth, archaeologists justify interpretation through coherence with other interpretations and other forms of knowledge, though also correspondence. This does not mean that just because archaeologists hold something as epistemically unjustified that it is unjustified; as in the

case of Mother Goddesses, their viewpoint still holds. There are epistemic limits, especially when constructing a narrative of past events but simply, truthfulness is a tool that can better guide archaeologists towards an ethical solution.

Thirdly, looking at how archaeologists deal with different interpretations of the past illustrates both the occurrence and value of pragmatism in archaeology. That justification is also guided by the practical consequences of different interpretations; for example, the concept of harm which guided the repatriation case in the UK and also the case of 17 Tasmanian Aborigines. Pragmatism is compatible with both correspondent and coherence theories of justification. Archaeologists are also not independent observers of the past but are part of the process of interpretation. This is attached with the acceptance of a plurality of interpretations of the past.

In the opening section of this chapter some of the ideas from Orwell's 1984 were discussed and from this it was argued that there is a freedom in stating things as they are. Unfortunately, in archaeology interpretation is never as easy as two plus two is four. An alternative Orwell quote is that "some animals are more equal than others' (Orwell 1945, 90). Applied to archaeology, this would equate with archaeologists espousing a multivocal approach but still maintaining privileged access to interpretation, in which certain groups are given a voice and others are not. We have to be careful not to just draw lines in the sand between theories. Complete epistemic inclusion is not only impossible but is also ethically irresponsible and it has never been seriously advocated in archaeology. Interpretation has to be a balance, a dialogue between the past, the present and also the future, within which it is key we are always mindful of the impact of our interpretations. The issue here is how to do this. It is much easier to think that we are just right or there is just a multitude of all equally valid beliefs, but ethical archaeology requires us to negotiate a more challenging path between these two simplistic opt-outs. We must continue developing new techniques to gain greater access and insight of the archaeological record, new methods, more research, more excavation and, most of all, be open and aware of what our interpretations and how we justify them. Epistemological stances have been too frequently painted in black and white. However neither extreme work. We can no longer deny the contextually influenced element of archaeological knowledge; in looking at the past we are always trapped in our own partial viewpoint situated within our own ontology. Yet at the same times, this does not mean the abandonment of all epistemological standards. Common sense and the freedom to state something will give us the firm ground to build upon and stop us entering the Orwellian world where "All animals are equal, but some are more equal than others."(Orwell 1945, 112).

Chapter Six
Archaeology and Truth

6.1 Truth and archaeology

Truth in archaeology is a very uncomfortable term. It is one not naturally associated with the discipline and despite philosophers' fascination with its nature, archaeologists have shrunk away from it. Philosophers' search for truth is multifaceted: it is a metaphysical question (what does truth consist in?); it is an epistemological question (how can we learn truth?) and it is a question of language (what we are doing when we are making any utterance?) (Kirkham 1992, 3). This thesis has aimed to look at one of these questions, the epistemological question. How is interpretation in archaeology justified?

The aim of this thesis is twofold. The first aim is to understand the epistemological criteria used in the formulation and assessment of archaeological knowledge and secondly, to do this in light of philosophical theories of truth.

The debate in relation to truth, across many disciplines, has been strongly polarised: frequently individuals shouting past each other, rather than debating with each other. This is a huge debate and a huge issue, one that has been debated and theorized for millennia. This thesis has aimed to better understand this debate in archaeology by looking at theories of truth in philosophy and to better understand how it is possible to deal with competing theories.

In the introductory chapter of this thesis, the theoretical debate in archaeology was discussed. It was concluded that in recent decades archaeological theory has become more fragmented. The identification of a middle ground approach was identified and it was argued that despite this, there is not an explicit understanding of how archaeological theories are justified. There is a general, if not stated, acceptance of a 'seat of your pants' epistemology. Archaeologists are working towards a justified account of the past. It is not stated openly but it cannot be denied that archaeologists generally believe that what they are doing is correct, though not necessarily true. Archaeologists do not have direct access to the past and therefore, there is always room for error. This is further complicated as all knowledge is in some way theory-laden or influenced by our own ontologies.

It was concluded that philosophical theories of truth may provide a new and useful insight into understanding justification in archaeology. Therefore, in Chapter Two the many different theories of truth were discussed and how these related to archaeology. Five theories were discussed:

correspondence (truth is correspondence with reality); coherence (true statement internally cohere); deflationary theories of truth (truth is as defined by the t-schema); pragmatism (truth is 'satisfactory') and constructivist theories of truth (truth is linked to social contexts). It was shown that there is not one prevalent theory of truth and that each has its own strengths and weaknesses.

To understand how interpretations in archaeology are justified, in relation to philosophical theories of truth, three angles were used. The first angle, presented in Chapter Three, looked at justification on site using the site of Çatalhöyük in Turkey. The second angle, to understand justification within larger scale 'grand narratives', was the emergence of agriculture in Britain. The final angle looked at how interpretations are justified in light of multiple different interpretations of the past and beyond just how archaeologists interpret the past. This conclusion aims to draw together the findings from these three angles.

6.1.1 Archaeological justification on site.

In Chapter Three the case study of Çatalhöyük was used to understand how justification works in the field. A number of conclusions were reached regarding justification in archaeology, in relation to philosophical theories of truth.

At the very earliest stage of excavation, a form of correspondence is at play (correspondence is the identification of interpreted features in an external reality). In archaeology this happens as archaeologists excavate, as they view layers, cuts and colours in the soil. Taking the most simple definition of correspondence, as introduced in Chapter Two: 'a proposition is true if it corresponds with the way the world is'. As discussed in Chapter Two, there are problems with a correspondence theory of truth. Firstly, the correspondence relationship is very vague; what is exactly meant by correspondence is not fully understood. Secondly, within a correspondence theory of truth, it is very difficult to know if a statement is true as it is not possible to get a 'god's eye view' of reality. These are both true for archaeology. Correspondence is only used in connection with the features identified in the ground; the cuts, layers and fills of the archaeological record. Archaeologists do not interpret from an external perspective but are part of the interpretive process; there is no external viewpoint from which correspondence can be evaluated.

To make any sense of the features of the fragmented archaeological record requires the use of other forms of knowledge. For example, to understand that a certain set of layers is a hearth requires knowledge of excavation techniques and archaeological stratigraphy. Therefore, justification becomes a matter of fitting together different pieces of knowledge which need to fit

together or cohere. Coherence theories of truth, as discussed in Chapter Two, hold that a statement is true within a system, if all statements within a system agree or fit together. Coherence can both falsify and confirm a statement. Thus, to understand and interpret part of the archaeological record as a hearth requires all our statements to fit together.

Even at this level of interpretation our own ontologies/beliefs impinge on excavation: firstly, by dictating what we excavate and how we excavate it and secondly, by dictating the knowledge we use to interpret the archaeological record. Justification in archaeology is thus in some way socially constructed and theory laden. These beliefs can be anything: information from other archaeological sites; archaeological methodology; ethnographic analogy or our own personal convictions about reality.

As excavation continues, more of the archaeological record is uncovered and these new pieces of evidence need to fit into a growing interpretation of the site. These new pieces of evidence may fit with the growing interpretation, or they may not which causes a change to the on-going interpretation. Interpretation at this stage is both inductive and deductive. So we inductively recognize features within the archaeology, such as the cuts and layers, and we deductively test this knowledge against other theories and other parts of the archaeological record. Interpretations are built upon interpretations. There is a hearth, a wall, an entrance, a midden, which are brought together to describe a house and then a plan of houses, a site, a region, patterns of habitation and so on. At each stage, tacking back and forth, more information is brought into a system that must cohere. All the components cohere together to build a larger interpretation.

At the publication stage, interpretation evolves further to understand the daily practices of the people of Çatalhöyük. The further up this chain of interpretation, the role of correspondence becomes less and less. Justification becomes more reliant on the coherence of multiple different interpretations. There is also a change in the form of reasoning. Interpretations become abductive. Explanations are not logically and uniquely entailed by the different strands of interpretation but do fit with them. For example, Hodder (2006) discusses the four ‘spheres’ of life (domestic production, ancestry, exchange and community) represented in the material remains of houses at Çatalhöyük. Hodder’s explanation fits with the interpretations but is not directly and uniquely logically entailed by them; other abductive narratives could also encompass them.

As archaeological interpretation increases in scale there is a shift in the mode of justification. The larger the scale the more archaeological justification relies on coherence. On site we move from correspondence with the archaeological record, to building a coherent system of interpretations to form more complex, nuanced interpretations of the site within a web of interpretations built upon interpretations. This system is not static and new knowledge, new theories or even a new, unrelated,

understanding may cause a shift in interpretation. Interpreting the archaeological record, interpretations shifts until a consensus is reached which fits with a pragmatist theory of truth, as discussed in Chapter Two. Archaeologists discuss the many features on site, with the aim of reaching an interpretation that fits with all available evidence. Therefore it could be argued that knowledge shifts towards stable belief, though as noted by Peirce (1877) this is only possible at the end of inquiry. Certain parts of this system shift less than others. At the lowest level of interpretation of the archaeological record, when building a basic interpretation of the archaeological record through excavation, once an area has been completely excavated this is less likely to change. However, changes in archaeological technology, methodology and theory mean it is still possible for it to do so, though clearly it is never possible to go back and re-excavate in quite the same way.

6.1.2 Justification and the archaeological 'grand narrative'

Chapter Four looked at the different explanations for the origins of agriculture in Britain. For the sake of comprehension, 'interpretations' referred to the strands of interpretation built at the very base from the archaeological record and 'explanations' referred to those larger 'grand narratives', which in many ways, as argued, are also interpretations built from the archaeological record.

In Chapter Four three different explanations for the emergence of agriculture were discussed: migration; acculturation and changing world view, and acculturation and changing economies. All three explanations for the British Neolithic relied on multiple strands of 'evidence' or different interpretations to advance an explanation. At times the different explanations relied on the same evidence or interpretations but came to different conclusions for the emergence of agriculture in Britain. Reasoning within these 'grand narratives' involves an abductive 'leap', therefore, while explanations are supported by the different interpretations, explanations are not logically entailed by them, hence different explanations exist. One of the reasons for a divergence of narratives is that different archaeologists make use of different theoretical stances to frame these abductive 'leaps'. Different theoretical meta-narratives are used which are to some extent *a priori* and are chosen based on more than just an explanation built from different strands of interpretation. The choice of theoretical meta-narrative is ontologically influenced and social construction is at play. Further, different strands of interpretation are selectively chosen to support certain theoretical meta-narratives (and by extension particular explanations) over others. As the scale of archaeological interpretation increases, the mode of justification becomes abductive, with evidence being selectively used dependent on a chosen theoretical meta-narrative.

Bringing together the conclusions of the Chapter Three with the conclusions of Chapter Four, in archaeology reasoning begins at both ends of an interpretive web, through correspondence at the base and abductive reasoning at higher levels with coherence throughout. This does mean that it is possible for two competing pictures of the world to exist: two different explanations of the archaeological past may cohere internally but the explanations may contradict each other, even when based on the same interpretations of the archaeological record. In the examples in Chapter Four, one reason given for the divergence of explanations was due to the embedding of different explanations in different theoretical traditions.

Over time explanations may change, new interpretations, new evidence or new theories, may result in some explanations being abandoned and others to be changed. Justification of 'grand narratives' is also influenced by the way in which they are presented. Archaeological explanations tell stories: third person, single voiced narratives which give the illusion that a single explanation is the final and only possible explanation. The use of narratives is also one of the reasons behind the use of abduction. Abduction makes it possible to build a narrative from the static archaeological record. Edges are blurred and gaps need to be filled, time is linear. Narratives are built based on different theoretical traditions. The static record becomes a fluid account of the past. Justification within a 'grand narrative' is akin to a coherent theory of truth, different strands of different interpretations are brought together to build a narrative. All of these strands need to fit together/ agree.

6.1.3 Justification and multiple interpretations.

In the fifth chapter of this thesis and the last angle, justification in archaeology was looked at in relation to ethical concerns in archaeology. At this scale archaeological interpretation is both global and local. Archaeologists have to deal with the political and ethical ramifications of archaeology on a global scale and deal with different interpretations of the past at a local level. Chapter Five aimed at understanding the ramification of ethical and political issues on justification. How do archaeologists deal with multiple interpretations of the past, when ethical and political issues come into play? This is a topic that has led to passionate debate and at times individuals have rallied to the extremes. There is a worry that the adoption of multivocality will lead to the abandonment of epistemic standards. At the same time it is recognized that it is unethical to ignore other ways of knowing the past and that archaeology is much richer and more holistic when it engages with different ways of knowing. In Chapter Five it was argued that the criteria of

justification in archaeology are not always epistemic and sometimes archaeological justification is about more than finding the most accurate answer. Interpretations are tested not only against the archaeological evidence but also the practical ramifications of interpretation. This would suggest that within archaeological reasoning, the practical and epistemic are not incommensurable but entwined.

Pragmatism was put forward as fitting with a multivocal archaeology. At times justification in archaeology is not just about those theories that most accurately capture the past, but also about the practical ramifications of different interpretations. Archaeological justification, as seen in the discussion on 'grand narratives', does not necessarily result in one single true interpretation of the past: there can be a plurality of interpretations. As shown in Chapter Four, within archaeological justification, the use of abductive reasoning means that interpretation is underdetermined. Further, difficulties of an ethical nature can arise if we stick to the idea of one true interpretation.

Pragmatism, as argued in Chapter Two, accepts that both correspondence and coherence provide valid forms of inquiry. Pragmatism recognizes that it is not possible to know everything and it is not always possible to know how accurate what we know is. Pragmatism also recognizes that knowledge is not a passive act. The epistemic aims of justification are not incommensurable with concerns regarding the ethical and political ramifications of archaeological interpretation. Arguably, these two issues are entwined and help each other. Understanding different interpretation of the past enriches the justification project and the justification project helps us to work towards a more ethical archaeology.

Within this, there is not, as some have feared, an abandonment of epistemic standards. Truthfulness (the will to accuracy and sincerity) is introduced as a concept to help guide archaeologists. Though we do not settle for one true answer, aiming to do our epistemic best has its own virtues; for example, to create the most accurate line of reasoning and more ethical archaeology.

When dealing with multiple interpretations of the past the exact model of justification will vary from case to case and while it is argued, that a balance of negotiation and truthfulness, within a pragmatist attitude to truth works as a general model, it may not hold in every case. Too frequently debates become emotional and personal agendas become the centre of attention. Truthfulness and pragmatism, though, help guide archaeologists when dealing with multiple interpretations of the past and from repeating past mistakes

6.2 Archaeology and Truth

The original aims of this thesis were to show how archaeological interpretations are justified; to understand the epistemological criteria in formulating and assessing archaeological knowledge in light of philosophical theories of truth. The model of justification discussed in this thesis, clearly suffers, like any, from over generalization. Archaeological justification works, to add another analogy to those already in the literature, in a web-like structure. As the scale of archaeological interpretation increases we move out from the centre of this web. At the centre is the archaeological record and through correspondence we identify basic units of observations: cuts, layers, colours, simple events, the constituents of the archaeological record. As we move to the next strands of the web, to interpret the archaeological record we draw in other pieces of information; pieces from other sites, methodological pieces, analogical pieces, examples from the present day and so on. Interpretations are built upon interpretations in this web; based on the requirement that the web fits together and coheres. This web still needs to fit within a defined space, representative of the theory ladeness of archaeological reasoning. An interpreter's ontology is part of a coherent framework and while the web constrains (as reality constrains interpretation) it is still socially mediated: archaeological justification is not free from social construction. As we move away from the archaeological record, justification relies more on coherence opposed to correspondence. Further, the form of reasoning is shifted and through abduction it is possible for more than one interpretation to fit all the available evidence. As the web gets bigger, selectivity begins to a play a role in archaeological justification: evidentiary strands are selected to support a particular theoretical meta-narrative. Different meta-narratives use the same threads to build a complete story and a fluid grand narrative.

This web is not static and new strands may lead to changes and they may not. The web is made up of many different strands. Interpretations from other groups are drawn in and though they may come from their own web of knowledge and belief there is an overarching framework in which the practical ramifications play a part. In this web there is an acceptance of truthfulness for archaeologists to do their epistemic best and also to be pragmatic about how they do this. Archaeological justification could arguably be said to contain a grain of truth, though heavily influenced by ourselves so that there can never be one truth.

As noted in the introduction, archaeological theory in many ways has moved away from overarching discussions on epistemology to discuss more fragmented theoretical issues. However, arguably, it is always important to gain a better understanding of how we know what we allegedly know. Future research, therefore, could include looking in more depth at specific examples of

justification at work. The multivocal method has never been fully assessed and therefore it would be interesting to deconstruct multivocality in more detail. Does the multivocal method meet the original intentions to practically answer the theoretical issues raised by post-processualism? Further research could be done into understanding in specific cases the reasons why interpretations diverge and whether this is a bad thing.

The conclusions reached in this thesis, that archaeological justification is based on both evidence and the use of abductive reasoned narratives could have important implications for public archaeology. For example, is it ever possible to reach a unified narrative that is needed for a sense of identity? In general the conclusions in this thesis have ramifications for archaeology in general. In archaeology is a single narrative a goal that should be strived for and what happens in debates that have important implications (for example, archaeology related to global warming)? At what point is it no longer possible to delimit the field of possible interpretations any further?

This framework helps archaeologists in understanding the nature of their truth claims and in spelling out their criteria for justifying an interpretation of the past. Our knowledge of the world aims to reach the truth but it is limited. Ethically we also can and do aim for the right/good/correct answer. Recognizing that there is such a thing as truth enables us to have a goal to aim for, a search that will continue forever.

Bibliography

Alston, W. P. 1985. Concepts of Epistemic Justification. *The Monist*, **68** (1), 57-89.

Andrews, G., Barrett, J. & Lewis, J. 2000. Interpretation Not Record: the Practice of Archaeology. *Antiquity*, **74**, 525-30.

Anthony, D. W. 1995. Nazi and eco-feminist prehistories. In P. H. Kohl & C. Fawcett (eds), *Nationalism, Politics and the Practice of Archaeology,* 82-96 (Cambridge: Cambridge University Press).

Appiah, K. A. 2006. *Cosmopolitanism: Ethics in a World of Strangers* (New York: W. W. Norton).

Armstrong, D. M. 1997. *A World of States of Affairs* (Cambridge: Cambridge University Press).

Arnold, B. 1990. The past as propaganda: Totalitarian archaeology in Nazi Germany. *Antiquity*, **64**, 464-78.

Atalay, S. 2008. Multivocality and Indigenous Archaeologies. In J. Habu, C. Fawcett & J. M. Matsunaga (eds), *Evaluating Multiple Narratives: Beyond Nationalist, Colonialist, Imperialist Archaeologies*, 29-44 (New York: Springer).

Austin, J. L. 1950. Truth. *Proceedings of the Aristotelian Society*, **24**, 111-128.

---. 1975. *How to do things with Words*, 2nd edn. (Oxford: Oxford University Press).

---. 2001. Truth. In M. P. Lynch (ed.), *The Nature of Truth: Classic and Contemporary Perspectives*, 25-40 (London: MIT Press).

Ayer, A. J. 1946. *Language, Truth and Logic* (New York: Dover Publications Inc.).

---. 2000. Knowing as having the right to be sure. In S. Bernecker & F. Dretske (eds), *Knowledge: Readings in Cotemporary Epistemology*, 7-12 (Oxford: Oxford University Press).

Baert, P. 2005. *Philosophy of the Social Sciences: Towards Pragmatism* (Cambridge: Polity Press).

Bakhtin, M. M. 1984. *Problems of Dostoevsky's Poetics* (Minneapolis: University of Minnesota Press).

Baldwin, T. 1991. The Identity Theory of Truth. *Mind*, **100**(1), 35-52.

Barrett, J. 1990. Sciencing archaeology: a reply to Lewis Binford. In F. Baker & J. Thomas (eds), *Writing the Past in the Present*, 42-48 (Lampeter: Saint David's University).

---.1990a. The monumentality of death: the character of Early Bronze Age mortuary mounds in southern Britain. *World Archaeology*, **22**(2), 179-189.

---. 1994. *Fragments from Antiquity: an archaeology of social life 2900-1200 BC*. (Oxford: Blackwell).

Barrett, J., Andrews, G. & Lewis, J. S. C. 2000. Interpretation not record: The Practice of Archaeology. *Antiquity*, **74**, 525-30.

Bartu, A. 2000. Where is Çatalhöyük? Multiple sites in the Construction of an Archaeological Site. In I. Hodder (ed.), *Towards reflexive method in archaeology: the example of Çatalhöyük*, 101-18 (Cambridge: McDonald Institute for Archaeological Research).

Barstow, A. L. 1978. The Uses of Archaeology for Women's History: James Mellaart's Work on the Neolithic Goddess at Çatal Hüyük. *Feminist Studies*, **4**(3), 7-18.

Bauer, A. E. 2013. Multivocality and "Wikiality": The Epistemology and Ethics of a Pragmatic Archaeology. In G. Scarre & R. Coningham (eds), *Appropriating the Past: Philosophical Perspectives on the Practice of Archaeology*, 176-194 (Cambridge: Cambridge University Press).

Beebe, J. R. 2006. Reliabilism and Deflationism. *Australasian Journal of Philosophy*, **84**(4), 495-510.

Bender, B., Hamilton, C. & Tilley, C. 1997. Leskernick: Stone Worlds; Alternative Narratives; Nested Landscapes. *Proceedings of the Prehistoric Society*, **63**, 147-78.

---.. 2007. *Stone Worlds: Narrative and Reflexivity in Landscape Archaeology* (Walnut Creek, CA: Left Coast Press).

Benson, O. & Stangroom J. 2006. *Why Truth Matters* (London: Continuum).

Berggren, A. 2009. Evaluation of a Reflexive Attempt - the Citytunnel Project in Retrospect. *Archaeological Review from Cambridge*, **24**(1), 23-37.

Berggren, A. & Hodder, I. 2003. Social practice, method, and some problems of field archaeology. *American Antiquity*, **68**(3), 421-34.

Berger, P. L. & Luckmann, T. 1966. *The Social Construction of Reality: A Treatise in the Sociology of Knowledge* (Middlesex: Penguin Books).

Berglund, M. H. 2000. Consequences of Styles of Thinking: On the Relative and the Absolute in Archaeology at the End of the Twentieth Century. *Norwegian Archaeological Review*, **33**(2), 105-15.

Bernbeck, R. & Pollock, S. 1996. Ayodhya, Archaeology and Identity. *Current Anthropology*, **37**(1), S138-S142.

Bernstein, R. J. 1983. *Beyond Objectivism and Relativism: Science, Hermeneutics and Praxis* (Philadelphia: University of Pennsylvania Press).

Bhabha, H. 1994. *The Location of Culture* (London: Routledge).

Bienkowski, P. 2013. Whose Past? Archaeological Knowledge, Community Knowledge, and the embracing of conflict. In G. Scarre & R. Coningham (eds), *Appropriating the Past:*

Philosophical Perspectives on the Practice of Archaeology, 42-62 (Cambridge: Cambridge University Press).

Binford, L. R. 1962. Archaeology as Anthropology. *American Antiquity*, **28**, 217-25.

---. 1967. Smudge Pits and Hide Smoking: The use of Analogy in Archaeological Reasoning. *American Antiquity*, **32**, 1-12.

---. 1968. Archaeological Perspectives. In S. R. Binford & L. R. Binford (eds), *New Perspectives in Archaeology*, 5-32 (Chicago: Aldine Publishing Company).

---. 1968a. Post-Pleistocene adaptations. In L. R. Binford & S. R. Binford (eds), *New Perspectives in Archaeology*, 313-41 (Chicago: Aldine).

---. 1977. *For Theory Building in Archaeology* (New York: Academic Press).

---. 1981. *Bones 'Ancient Men and Modern Myths'* (London: Academic Press).

---. 1983. *Working at Archaeology* (New York: Academic Press).

Binford, L. R. &. Sabloff, J. A. 1982. Paradigms, Systematics, and Archaeology. *Journal of Anthropological Research*, **38**, 137-53.

Bintliff, J. 1993. Why Indiana Jones is Smarter than the Post-Processualists. *Norwegian Archaeological Review*, **26**(2), 91-100.

Bintliff, J. & Pearce, M. (eds) 2011. *The Death of Archaeological Theory* (Oxford: Oxbow Books).

---. 2011a. Introduction. In J. Bintliff & M. Pearce (eds), *The Death of Archaeological Theory*, 1-6 (Oxford: Oxbow Books).

Bird, A. 1998. *Philosophy of Science* (London: UCL Press).

Blackburn, S. 1984. *Spreading the Word* (Oxford: Oxford University Press).

---. 2005. *Truth: A Guide for the Perplexed* (London: Penguin Books).

---. 2008. Truth's Caper. *The New Republic*. Retrieved: 02/08/10 URL: http://www.powells.com/review/2008_08_14.html

Blackburn, S. & Simmons, K. 1999. Introduction. In S. Blackburn & K. Simmons (eds), *Truth*, 1-28 (Oxford: Oxford University Press).

Blakey, M. L. 2008. An Ethical Epistemology of Publicly Engaged Biocultural Research. In J. Habu, C. Fawcett & J. M. Matsunaga (eds), *Evaluating Multiple Narratives: Beyond Nationalist, Colonialist, Imperialist Archaeologies*, 17-28 (New York: Springer).

Blanshard, B. 1941. *The Nature of Thought*, Vol. 2 (New York: Macmillan).

Boghossian, P. 1998. What the Sokal Hoax Ought to Teach Us. In N. Koertge (ed.), *A House Built on Sand*, 23-31 (Oxford: Oxford University Press).

---. 2006. *Fear of Knowledge: Against Relativism and Constructivism* (Oxford: Clarendon Press).

Bogaard, A., Charles, M., Twiss, K. C., Fairbairn, A., *et al*. 2009. Private pantries and celebrated surplus: storing and sharing food at Neolithic Catalhoyuk, Central Anatolia. *Antiquity*, **83**(321), 649-68.

Bogaard, A. & Jones, G. 2007. Neolithic farming in Britain and central Europe: contrast or continuity? In A. Whittle & V. Cummings (eds), *Going Over: The Mesolithic-Neolithic Transition in North-West Europe*, 357-75 (Oxford: Oxford University Press).

Bonjour, L. 1969. *Knowledge, Justification and Truth*. Thesis (Ph.D), Princeton University. Retrieved: 19/02/2010. URL: http://www.ditext.com/bonjour/bonjour0.html

Bourdieu, P. 1977. *Outline of a Theory of Practice* (Cambridge: Cambridge University Press).

Bradley, F. H. 1999 (1907). On Truth and Copying. In S. Blackburn & K. Simmons (eds), *Truth*, 31-45 (Oxford: Oxford University Press).

Bradley, R. 1984. *The Social Foundations of Prehistoric Britain* (London: Longman).

---. 2005. *Ritual and domestic life in prehistoric Europe*. (London: Routledge).

Brigham, T., Spence, C. & Wootton, P. 1994. How to complete the general Context Recording Sheet, in *Archaeological Site Manual* (London: Museum of London).

Brück, J. 2005. Experiencing the past? The development of a phenomenological archaeology in British prehistory. *Archaeological dialogues*, *12*(01), 45-72.

Burch, R. 2010. Charles Sanders Peirce. *Stanford Encyclopedia of Philosophy*. Retrieved: 02/05/2010. URL: http://plato.stanford.edu/entries/peirce/#dia

Byrne, D. 2009. Archaeology and the Fortress of Rationality. In L. Meskell (ed.), *Cosmopolitan Archaeologies*, 68-88 (London: Duke University Press).

Case, H. 1969. Neolithic Explanations. *Antiquity*, **43**, 176-86.

Carroll, Q. 2005. Bodies - Who wants to rebury old skeletons? *British Archaeology*, **82**, 11-15.

Cessford, C. 2007. History of Excavation of Buildings 1 and 5 and Summary of Phases. In I. Hodder (ed.), *Excavating Çatalhöyük: South, North and KOPAL Area reports from the 1995-99 seasons*, 345-60 (Cambridge: McDonald Institute for Archaeological Research; London: British Institute at Ankara).

---. 2007a. Building 1. In I. Hodder (ed.), *Excavating Çatalhöyük: South, North and KOPAL Area reports from the 1995-99 seasons*, 405-530 (Cambridge: McDonald Institute for Archaeological Research; London: British Institute at Ankara).

---. 2007b. Overall Discussion of Buildings 1 and 5. In I. Hodder (ed.), *Excavating Çatalhöyük: South, North and KOPAL Area reports from the 1995-99 seasons*, 531-49 (Cambridge: McDonald Institute for Archaeological Research; London: British Institute at Ankara).

Chadwick, A. 1997. Archaeology at the edge of chaos: Further towards reflexive excavation methodologies. *Assemblage*, **3**. Retrieved: 19/02/2010. URL: http://www.assemblage.group.shef.ac.uk/3/3chad.htm

---. 2003. Postprocessualism, professionalization and archaeological methodologies. Towards reflective and radical practice. *Archaeological Dialogue*s, **10**, 97-117.

Childe, V. G. 1925. *The Dawn of European Civilisation* (London: Kegan Paul).

---. 1947. *The dawn of European civilization*, 4th edition (London: Kegan Paul).

---. 1951. S*ocial evolution* (Watts and Co; London).

---.1980 (1940). *Prehistoric Communities of the British Isles* (New York: Arno Press).

Clark, G. 1966. The Invasion Hypothesis in British Archaeology. *Antiquity*, **40**, 172-89.

Clarke, D. L. 1973. Archaeology: The Loss of Innocence. *Antiquity*, **47**, 6-18.

Clarke, J. G. D. 1951. Folk-Culture and the Study of European Prehistory. In W. F. Grimes (ed.), *Aspects of Archaeology*, 49-65 (London: Edwards).

Cohen, M. N. 1977. The *Food Crisis in Prehistory* (New Haven, CN: Yale University Press).

Cohen, S. 1984. Justification and Truth. *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition*, **46** (3), 279-295.

Collin, F. 1997. *Social Reality* (London: Routledge).

Collingwood, R. G. 1946. *The Idea of History* (Oxford: Oxford University Press).

Cooper, D. E. 2006. Truthfulness and 'inclusion' in archaeology. In C. Scarre & G. Scarre (eds), *The Ethics of Archaeology: Philosophical Perspectives on Archaeological Practice*, 131-45 (Cambridge: Cambridge University Press).

Cowgill, G. L. 1993. Distinguished Lecture in Archeology: Beyond Criticizing New Archeology. *American Anthropologist*, **95**(3), 551-73.

Curren, G. B. 1977. Potential Interpretations of 'Stone Gorget' Function. *American Antiquity*, **42**, 97-101.

David, M. 2001. Truth as Identity and Truth as Correspondence. In M. P. Lynch (ed.), *The Nature of Truth: Classic and Contemporary Perspectives*, 683-704 (London: MIT Press).

---. 2005. The Correspondence Theory of Truth. *The Stanford Encyclopedia of Philosophy*. Retrieved: 23/04/08 URL: http://plato.stanford.edu/entries/truth-correspondence/

Davidson, D. 1969. True to the Facts. *Journal of Philosophy*, **66**, 748-64.

---.1983. A Coherence Theory of Truth and Knowledge., in D. Davidson (ed.) *Subjective, Intersubjective, Objective*, 137-53 (Oxford: Clarendon Press).

---. 2001. A Coherence Theory of Truth and Knowledge (1983). In D. Davidson (ed.), *Subjective, Intersubjective, Objective*, 137-53 (Oxford: Clarendon Press).

Dawdy, S. L. 2009. Millennial archaeology. Locating the discipline in the age of insecurity. *Archaeological Dialogues*, **16**(2), 131-42.

Dennell, R. W. 1983. *European Economic Prehistory: A new approach* (London: Academic Press).

Descartes, R. 1996. *Descartes: Meditations on First Philosophy*, Trans. J. Cottingham (Cambridge: Cambridge University Press).

Devitt, M. 2001. The Metaphysics of Truth. In M. P. Lynch (ed.), *The Nature of Truth: Classic and Contemporary Perspectives*, 579-611 (London: MIT Press).

Dewey, J. 1917. *Creative Intelligence Essays in the Pragmatic Attitude* (New York: Holt).

---. 1938. Logic: The Theory of Inquiry. In J. A. Boydston (ed.) (1986), *John Dewey: The Later Works (1925-1953) Volume 12* (Carbonville and Edwardsville, Southern Illinois University Press).

---.1941. Propositions, Warranted Assertibility, and Truth. In J. Dewey (1946), *Problems of Men*, 331-53 (New York, Philosophical Library).

Dobres, M.-A. & Robb, J. (eds) 2000. *Agency in Archaeology* (London: Routledge).

Douven, I. 2011. Abduction. *Stanford Encyclopedia of Philosophy*. Retrieved: 16/04/2008. URL: http://plato.stanford.edu/entries/abduction/

Downer, A. S. 1997. Archaeologists-Native American Relations. In N. Swidler, K. E. Dongoske, R. Anyon & A. S. Downer (eds), *Native Americans and Archaeologists: Stepping Stones to Common Ground*, 37-43 (London: AltaMira Press).

Downes, S. M. 2000. Constructivism. In E. Craig (ed.), *Concise Routledge Encyclopedia of Philosophy*, 171-2 (London: Routledge).

Downey, R. 2000. *Riddle of the Bones: Politics, Science, Race, and the Story of Kennewick Man* (New York: Copernicus).

Downs, L. 1993. If "Woman" is just as Empty Category Then Why Am I Afraid to Walk Alone at Night? Identity Politics Meets the Postmodern Subject. *Comparative Studies in Society and History*, **35**, 414-37.

Dunnell, R. C. 1992 Is a Scientific Archaeology Possible? In L. Embree (ed.), *Metaarchaeology: Reflections by Archaeologists and Philosophers*, 75-97 (London: Kluwer Academic Publishers)

Dural, S. 2007. *Protecting Catalhoyuk: Memoir of an Archaeological Site Guard* (Walnut Creek, CA: Left Coast Press).

Durkheim, E. 1915. *Elementary Forms of Religious Life* (London: George Allen & Unwin).

Earle, T. 1999 Production and Exchange in Prehistory. In G. Barker (ed.), *Companion Encyclopaedia of Archaeology*, 608-636 (London: Routledge).

Edgeworth, M. 2006. *Ethnographies of Archaeological Practice* (Oxford: AltaMira Press).

---. 2006a. Multiple Origins, Development, and Potential of Ethnographies of Archaeology. In M. Edgeworth (ed.), *Ethnographies of Archaeological Practice: Cultural Encounters, Material Transformations*, 1-19 (Oxford: AltaMira Press).

Evans, R. J. 1997. *In Defence of History* (London: Granta Books).

Fagan, G. G. 2006. Concluding observations. In G. G. Fagan (ed.), *Archaeological Fantasies*, 362-67 (London: Routledge).

Fagan, G. G. & Feder, K. L. 2005. Crusading against Straw Men: An Alternative View of Alternative Archaeologies: Response to Holtorf (2005). *World Archaeology*, **38**(4), 718-729.

Fairbairn, A. 2000. On the spread of crops across Neolithic Britain, with special reference to the southern England. In A. Fairbairn (ed.), *Plants in Neolithic Britain and beyond*, 107-21 (Oxford: Oxbow Books).

Farid, S., Cessford, C., Berggren, Cooper, A., *et al*. 2000. The Excavation Process at Çatalhöyük. In I. Hodder (ed.), *Towards reflexive method in archaeology: the example at Çatalhöyük*, 19-35 (Cambridge: McDonald Institute for Archaeological Research; London: British Academy of Archaeology at Ankara).

Faulkner, W. 1950. *Requiem for a nun* (Random House: London).

Fawcett, C., Habu, J. & Matsunaga, J. M. 2008. Introduction: Evaluating Multiple Narratives: Beyond Nationalist, Colonialist, Imperialist Archaeologies. In J. Habu, C. Fawcett & J. M. Matsunaga (eds), *Evaluating Multiple Narratives: Beyond Nationalist, Colonialist, Imperialist Archaeologies*, 1-11 (New York: Springer).

Field, H. 1972. Tarski's Theory of Truth. *Journal of Philosophy*, **69**, 347-75.

---. 1994. Deflationist Views of Meaning and Content. *Mind*, **103**, 247-285.

---. 2001. Correspondence Truth, Disquotational Truth, and Deflationism. In M. P. Lynch (ed.), *The Nature of Truth: Classic and Contemporary Perspectives*, 483-503 (London: The MIT Press).

Flannery, K. V. 1973. Archaeology with a Capital S. In C. L. Redman (ed.), *Research and Theory in Current Archaeology*, 47-58 (New York: Wiley).

---. 1973a. The origins of agriculture. *Annual Review of Anthropology*, 271-310.

Foucault, M. 1980. Truth and Power. In C. Gordon (ed.), P*ower/knowledge. Selected interviews and other writings 1972-1977*, 109-33 (New York: Harvester Wheatsheaf).

---. 1984. Space, knowledge and power. In P Rabinow (ed.), *The Foucault Reader*, 239-56 Harmondsworth: Peregrine).

Fowler, P. J. 1981. The Farming of Prehistoric Britain. (Cambridge: Cambridge University Press).

Frege, G. 1918. Thoughts. In B. McGuinness (ed.), *Collected Papers on Mathematics, Logic, and Philosophy*. 1984 edition, 351-72 (Oxford: Basil Blackwell).

Fried, M. H. 1975. *The Notion of Tribe*. (Menlo Park, CA: Cummings).

Friedman, J. 1974. Marxism, Structuralism and Vulgar Materialism. *Man*, **9**, 444-69.

Gaffney, C. F. & Gaffney, V. L. (eds) 1987. *Pragmatic Archaeology* (BAR: Oxford).

Gee, J. P. 2005. *An Introduction to Discourse Analysis* (Routledge: London).

Geertz, C. 1979. From the Native's Point of View: On the Nature of Anthropological Understanding. In P. Rainbow & W. M. Sullivan (eds), *Interpretive Social Science: A Reader*, 225-42 (Berkeley: University of California Press).

Giddens, A. 1979. *Central Problems in Social Theory: Action, Structure and Contradictions in Social Analysis* (London: Macmillan).

Gimbutas, M. 1991. *The Language of the Goddess* (London: HarperCollins).

Glanzberg, M. 2006. Truth. *The Stanford Encyclopedia of Philosophy*. Retrieved: 2008, 23/04/08. Last updated: 13/01/06 URL: http://plato.stanford.edu/entries/truth/

Godwin, L. & Weiner, J. 2006. Footprints of the ancestors: The convergence of anthropological and archaeological perspectives in contemporary Aboriginal heritage studies. In B. David, B. Barker & I. McNiven (eds), *The Social Archaeology of Australian Indigenous Societies*, 124-38 (Canberra: Aboriginal Studies Press).

González-Ruibal, A. 2006. Vernacular Cosmopolitanism: An Archaeological Critique of Universalistic Reason. In L. Meskell (ed.), *Cosmopolitan Archaeologies*, 113-39 (London: Duke University Press).

Gosden, C. 1999. *Anthropology and Archaeology: A Changing Relationship* (London: Routledge).

---. 2001. Postcolonial Archaeology. In I. Hodder (ed.), *Archaeological Theory Today*, 241-61 (Cambridge: Polity Press).

---. 2004. *Archaeology and Colonialism: Cultural Contact from 5000BC to the present.* (Cambridge: Cambridge University Press).

Grayling, A. C. 1997. *An Introduction to Philosophical Logic* (Oxford: Blackwell).

Guarlec, S. 2006. *Thinking in Time: An Introduction to Henri Bergson* (Ithca, NY: Cornell University Press).

Haack, S. 1976. The Pragmatist Theory of Truth. *British Journal for the Philosophy of Science*, **27**, 231-49.

--. 1998. *Manifesto of a Passionate Moderate* (London: The University of Chicago Press)

--. 2004. Coherence, Consistency, Cogency, Congruity, Cohesiveness, & c.: Remain Calm! Don't Go Overboard! *New Literary History* **35**(2), 167-183.

--. 2005. The Unity of Truth and the Plurality of Truths. *Journal of Epistemology*, **9**, 87-109.

--. 2009. *Evidence and Inquiry: A Pragmatist Reconstruction of Epistemology* (New York: Prometheus Books).

Habu, J., Fawcett, C. & Matsunaga, J. M. (eds) 2008. *Evaluating Multiple Narratives: Beyond Nationalist, Colonialist, Imperialist Archaeologies* (New York: Springer).

Hacking, I. 1999. *The Social Construction of What?* (London: Harvard University Press).

Hale, C. 2006. The Atlantean Box. In G. G. Fagan (ed.), *Archaeological Fantasies*, 235-58 (London: Routledge).

Hall, M. 1984. The burden of tribalism: The social context of southern African Iron Age Studies. *American Antiquity*, **49**, 455-67.

Hamilakis, Y. 1999. La trahison des archaeologues? Archaeological practice as intellectual activity in postmodenity. *Journal of Mediterranean Archaeology*, **12**(1), 60-79.

Hamilton, C. 2000. Faultlines: the Construction of Archaeological Knowledge at Çatalhöyük. In I. Hodder (ed.), *Towards reflexive method in archaeology: the example of Çatalhöyük*, 119-28 (Cambridge: McDonald Institute for Archaeological Research).

Hassan, F. A. 1997. Beyond the surface: comments on Hodder's 'reflexive excavation methodology'. *Antiquity*, **71**, 1020-25.

Hawkes, C. 1954. Archaeological Theory and Method: Some Suggestions from the Old World. *American Anthropologist*, **56**, 155-68.

Heidegger, M. 1962. *Being and Time* (Oxford: Blackwell).

Hegel, G. 1977. *Phenomenology of Spirit* (Oxford: Oxford University Press).

Hempel, C. 1965. *Aspects of Scientific Explanation and Other Essays in the Philosophy of Science* (New York: Free Press).

Henderson, M. 2007. *Museum surrenders vital clues to human evolution*. The Times, May 12th.

Hickmann, L. 2009. John Dewey: His Life and Work. In L. Hickmann, *John Dewey between pragmatism and constructivism*, 3-18 (New York: Fordham University Press).

Hodder, I. 1982. Theoretical Archaeology: A Reactionary View. In I. Hodder (ed.), *Symbolic and Structural Archaeology*, 1-15 (Cambridge: Cambridge University Press).

---, 1982a. *Symbols in Action* (Cambridge: Cambridge University Press).

---. 1984. Archaeology in 1984. *Antiquity*, **58**, 25-32.

---. 1985. Post-Processual Archaeology. In M. B. Schiffer (ed.), *Advances in Archaeological Method and Theory*, **8**, 1-26 (London: Academic Press).

---. 1986. *Reading the Past*, 1st edition (Cambridge: Cambridge University Press).

---. 1989. Writing Archaeology: Site Reports in Context. *Antiquity*, **63**, 268-74.

---. 1990. *The Domestication of Europe* (Oxford: Basil Blackwell).

---. 1991. *Reading the Past*, 2nd edition (Cambridge: Cambridge University Press).

---. 1992. *Theory and Practice in Archaeology* (London: Routledge).

---. 1996. Re-opening Çatalhöyük. In I. Hodder (ed.), *On the surface: Çatalhöyük 1993-95*, 1-18 (Cambridge: McDonald Institute for Archaeological Research; London: British Academy of Archaeology at Ankara).

---. 1997. 'Always momentary, fluid and flexible': towards a reflexive excavation methodology. *Antiquity*, **71**, 691-700.

---. 1997a. Whose rationality? A response to Fekri Hassan. *Antiquity*, **72**, 213-17.

---. 1998. The past as passion and play: Çatalhöyük as a site of conflict in the construction of multiple pasts. In L. Meskell (ed.), *Archaeology under fire: Nationalism, Politics and Heritage in the Eastern Mediterranean and Middle East*, 124-39 (London: Routledge).

---. 1999. *The Archaeological Process: An Introduction* (Oxford: Blackwell).

---. 2000. Developing a Reflexive Method in Archaeology. In I. Hodder (ed.), *Towards reflexive method in archaeology: the example at Çatalhöyük*, 3-15 (Cambridge: McDonald Institute for Archaeological Research; London: British Academy of Archaeology at Ankara).

---. 2003. Archaeological Reflexivity and the "Local" Voice. *Anthropological Quarterly*, **76**(1), 55-69.

---. 2005. Peopling Çatalhöyük and its Landscape. In I. Hodder (ed.), *Inhabiting Çatalhöyük reports from the 1995-99 seasons*, 1-30 (Cambridge: McDonald Institute of Archaeological Research; London: British Institute of Archaeology at Ankara).

---. 2006. *Çatalhöyük The Leopard's Tale: Revealing the mysteries of Turkey's ancient 'town* (London: Thames and Hudson).

--- (ed.) 2007. *Excavating Çatalhöyük: South, North and KOPAL Area reports from the 1995-99 seasons* (Cambridge: McDonald Institute for Archaeological Research; London: British Institute at Ankara).

Hodder, I. & Hutson, S. 2003. *Reading the Past*, 3rd edition (Cambridge: Cambridge University Press).

Holtorf, C. 2000. Towards a Democratic Relativism in Archaeology. In C. Holtorf and H. Karlsson (eds), *Philosophy and Archaeological Practice: Perspectives for the 21st Century*, 241-60 (Göteborg: Bricoleur Press).

---. 2005. *From Stonehenge to Las Vegas: Archaeology as Popular Culture* (Oxford: AltaMira Press).

---.2005a Beyond Crusades: How (Not) to Engage with Alternative Archaeologies. *World Archaeology*, **37**(4), 544-551.

Hookway, C. 2008. Pragmatism. *Stanford Encyclopedia of Philosophy*. Retrieved: 07/08/10 URL: http://plato.stanford.edu/entries/pragmatism/

Horwich, P. 1998. *Truth* (Oxford: Clarendon Press).

---. 2010. *Truth-Meaning-Reality* (Oxford: Clarendon Press).

Hume, D. 1978. *A Treatise of Human Nature* (Oxford: Oxford University Press).

Ichikawa, J. J. 2012. The analysis of knowledge. *Stanford Encyclopedia of Philosophy*. Retrieved: 07/04/2013 URL: http://plato.stanford.edu/entries/knowledge-analysis/#JusCon

Ingold, T. 2000. *The Perception of the Environment: Essays on Livelihood, Dwelling and Skill* (London: Routledge).

Insoll, T. 2007. *Archaeology: The Conceptual Challenge* (London: Duckworth).

James, W. 1907. *Pragmatism* (New York: Longman's Green).

Joachim, H. H. 1906. *The Nature of Truth* (Oxford: Clarendon Press).

Johnsen, H. & Olsen, B. 1992. Hermeneutics and Archaeology: On the Philosophy of Contextual Archaeology. *American Antiquity*, **57**(3), 419-36.

Johnson, M. 1989: Conceptions of agency in archaeological interpretation. *Journal of anthropological archaeology*, **8**, 189–211.

---. 1999. *Archaeological Theory: An Introduction* (Oxford: Blackwell Publishers).

--. 2006 On the nature of theoretical archaeology and archaeological theory. *Archaeological Dialogues*, **13**(2), 117-132

Jónsson, G. H. 2003. South Summit Area, Excavation of Building 10. In I. Hodder (ed.), *Çatalhöyük Archive Report 2003*. Retrieved: 12/01/12 URL: http://www.catalhoyuk.com/archive_reports/2003/index.html

Jones, A. 2002. *Archaeological Theory and Scientific Practice* (Cambridge: Cambridge University Press).

Joyce, R. A. 2002. *The Languages of Archaeology: Dialogue, Narrative and Writing* (Oxford: Blackwell).

Kant, I. 1781. *Critique of Pure Reason*, trans. P. Guyer & A. W. Wood (Cambridge: Cambridge University Press).

Killion, T. W. 2007. Opening Archaeology: Repatriation's Impact on Contemporary Research and Practice. In T. W. Killon (ed.), *Opening Archaeology: Repatriation's Impact on Contemporary Research and Practice*, 3-26 (Santa Fe, School for Advanced Research Press).

Kirk, R. 1999. *Relativism and Reality: A Contemporary Introduction* (London: Routledge).

Kirkham, R. L. 1992. *Theories of Truth: A Critical Introduction* (London: MIT Press).

---. 2000. Truth, Correspondence theory of. In E. Craig (ed.), *Concise Routledge encyclopedia of philosophy*, 900 (London: Routledge).

Kitcher, P. 1998. A Plea for Science Studies. In N. Koertge (ed.), *A House Built on Sand*, 32-56 (Oxford: Oxford University Press).

---. 2002. On the Explanatory Role of Correspondence Truth. *Philosophy and Phenomenological Research*, **64**(2), 346-64.

Kintz, T. 2001. Archaeologists as Intellectuals: Agents of the Empire or Defenders of Dissent? In M. Pluciennik (ed.), *The Responsibilities of Archaeologists: Archaeology and Ethics*, vol. BAR International Series 981, 47-55 (Oxford: Archaeopress).

Koertge, N. 1998. Scrutinizing Science Studies. In N. Koertge (ed.), *A House Built on Sand: Exposing Postmodernist Myths About Science*, 3-6 (Oxford: Oxford University Press).

Kohl, P. H. 1998. Nationalism and Archaeology: On the Constructions of Nations and the Reconstructions of the Remote Past. *Annual Review of Anthropology*, **27**, 223-46.

---. 2004. Making the Past Profitable in an Age of Globalization and National Ownership. In Y. Rowan & U. Baram (eds), *Marketing Heritage: Archaeology and the Consumption of the Past*, 295-302 (Walnut Creek, CA: AltaMira Press).

Kohl, P. H. & Fawcett, C. (eds) 1995. *Nationalism, Politics and the Practice of Archaeology* (Cambridge: Cambridge University Press).

Kosso, P. 1991. Method in Archaeology: Middle-Range Theory as Hermeneutics. *American* Antiquity, 56(4), 621-27.

---. 2001. Knowing the Past. (New York: Prometheus Books).

---. 2006. Introduction: the epistemology of archaeology. Archaeological Fantasies: How Psuedoarchaeology Misrepresents the Past and Misleads The Public, 3-22.

Krieger, W. H. 2006. Can There Be a Philosophy of Archaeology? Processual Archaeology and the Philosophy of Science (Oxford: Lexington Books).

Kristiansen, K. 1984. Ideology and material culture: an archaeological perspective. In M. Spriggs (ed.) *Marxist Perspectives in Archaeology*, 72-100 (Cambridge: Cambridge University Press).

---. 2011. Theory Does Not Die it Changes Direction. In J. Bintliff & M. Pearce (eds), *The Death of Archaeological Theory*, 72-89 (Oxford: Oxbow Books).

Kuhn, T. S. 1962. *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press).

---. 1976. Theory-Change as Structure-Change: Comments on the Sneed Formalism. *Erkenntnis*, **10**, 179-99.

Kukla, A. 2000. *Social Constructivism and the Philosophy of Science* (London: Routledge).

Latour, B. 2004. Why has Critique run out of Stream? From Matters of Facto to Matters of Concern. *Critical Inquiry* **30**(2), 225-48.

Latour, B. & Woolgar, S. 1979. *Laboratory Life: The Construction of Scientific Facts* (Princeton, N.J.: Princeton University Press).

Lehrer, K. & Truncellito, D. A. 2004. Knowledge, Justification and the Cooperative World. In R. Schantz, *The Externalis Challenge*, 169-80 (Walter de Gruyter gmbH: Berlin)

Liebmann, M. & Rizvi, U. (eds) 2008. *Archaeology and the Postcolonial Critique* (Plymouth: AltaMira Press).

Lilley, I. 2009. Strangers and Brothers? Heritage, Human Rights and Cosmopolitan Archaeology in Oceania. In L. Meskell (ed.), *Cosmopolitan Archaeologies*, 48-67 (London: Duke University Press).

Lipton, P. 2000. Inference to the Best Explanation. In W.E. Newton-Smith (ed.), *A Companion to the Philosophy of Science*, 184-193 (Blackwell: London)

Lowenthal, D. 1985. *The Past is a Foreign Country* (Cambridge: Cambridge University Press).

Lovejoy, A. O. 1936. *The Great Chain of Being: A Study of the History of an Idea* (Cambridge, MA: Harvard University Press).

Lucas, G. 2001. *Critical Approaches to Fieldwork: Contemporary and Historical Archaeological Practice.* (London: Routledge).

---. 2012 *Understanding the Archaeological Record* (Cambridge: Cambridge University Press)

Lynch, M. P. 1998. *Truth in Context: An essay on Pluralism and Objectivity* (London: The MIT Press).

---. 2001. Coherence Theories: Introduction. In M. P. Lynch (ed.), *The Nature of Truth: Classic and Contemporary Perspectives*, 99-102 (London: MIT Press).

---. 2001a. Pragmatism and Verficationism: Introduction. In M. P. Lynch (ed.), *The Nature of Truth: Classic and Contemporary Perspectives*, 185-91 (London: MIT Press).

---. 2001b. Tarski's Theory and Its Importance: Introduction. In M. P. Lynch (ed.), *The Nature of Truth: Classic and Contemporary Perspectives*, 331-63 (London: MIT Press).

---. 2005. Functionalism and our folk theory of truth: reply to Cory Wright. *Synthése*, **145**, 29-43.

---. 2009. *Truth as One and Many* (Oxford: Oxford University Press).

Mackie, J. L. 1973. *Truth, Probability and Paradox* (Oxford: Clarendon Press).

Mannheim, K. 1936. *Ideology and Utopia* (New York: Harvest Books).

Martin, A. M. 2013 *Archaeology Beyond Postmodernity: A Science of the Social* (Plymouth, AltaMira Press).

Marx, K. & Engels, F. 1963. *The German Ideology* (New York: International Publishers).

McAnany, P. A. & Hodder, I. 2009. Thinking about archaeological excavation in reflexive terms. *Archaeological Dialogues*, **16**(1), 41-49.

McDavid, C. 2000. Archaeology as Cultural Critique: Pragmatism and the Archaeology of a Southern United States Plantation. In C. Holtorf & H. Karlsson (eds), *Philosophy and Archaeological Practice: Perspectives for the 21st Century*, 221-39 (Göteborg: Bricoleur Press).

--. 2002. Archaeologies That Hurt: Descendants That Matter: A Pragmatic Approach to Collaboration in the Public Interpretation of African-American Archaeology. *World Archaeology,* **34**(2), 303-14.

---. 2009. Back to the futurist. Response to Dawdy. *Archaeological Dialogues*, **16**(2), 163-69.

McDermid, D. 2006. *The Varieties of Pragmatism: Truth Realism and Knowledge from James to Rorty* (London, Continuum).

McEvoy, K. & H. Conway. 2004. The Dead, the Law, and the Politics of the Past. *Journal of Law and Society*, **31**(4), 539-62.

McGhee, R. 2008. Aborginalism and the Problems of Indigenous Archaeology. *American Antiquity*, **73**(4), 579-597.

McGuire, R. 2008. *Archaeology as Political Action* (London: University of California Press).

Mellaart, J. 1967. *Çatal hüyük: A Neolithic Town in Anatolia* (London: Thames and Hudson).

Mercer, R. J. 1986. The Neolithic in Cornwall. *Cornish Archaeology*, **25**, 35-80.

Meskell, L. 2002. The Intersections of Identity and Politics in Archaeology. *Annual Review of Anthropology*, **31**, 279-301.

---. 2009 The Nature of Culture in Kruger National Park. In L. Meskell (ed.), *Cosmopolitan Archaeologies*, 89-112 (Duke University Press: London).

---. 2009a. Introduction: Cosmopolitan Heritage Ethics. In L. Meskell (ed.), *Cosmopolitan Archaeologies*, 1-27 (London: Duke University Press).

Meskell, L. & Pels, P. (eds) 2005. *Embedding Ethics* (Oxford: Berg).

Miller, D. 2005. *Materiality* (London: Duke University Press).

Moore, G. E. 1899. The Nature of Judgement. *Mind*, **8**, 176-93.

---. 1902. Truth. In J.M. Baldwin (ed.), *Dictionary of Philosophy and Psychology*, vol. 2, 716-18 (New York: Macmillan).

Munson, P. J. 1969. Comments on Binford's "Smudge Pits and Hide Smoking: The Use of Analogy in Archaeological Reasoning". *American Antiquity,* **34**(1), 83-5.

Newman, A. 2002. *The Correspondence Theory of Truth: An Essay in the Metaphysics of Prediction* (Cambridge Cambridge University Press).

O'Brien, J. 2009. *New techniques undermine 'mother goddess' role in ancient community*. The Irish Times, Thursday, September 10, 2009.

Oberheim, E. & Hoyningen-Huene, P. 2009. The Incommensurability of Scientific Theories. *Stanford Encyclopedia of Philosophy*. Retrieved: 04/01/2011 URL: http://plato.stanford.edu/entries/incommensurability/#KuhRouInc

Orwell, G. 1943. *Looking Back on the Spanish War* (London: New Road).

---. 1945. *Animal Farm* (London: Secker and Warburg).

---. 1949. *1984* (London: Secker and Warburg).

Patterson, T. C. 1999. Archaeologists, Intellectuals and Postmodernity: Some Thoughts about Yannis Hamilakis. *Journal of Mediterranean Archaeology*, **12**(1), 80-82.

Parker Pearson, M. 1998. The beginning of wisdom. *Antiquity*, **72**, 680-6.

Pearce, M. 2011. Have Rumours of the 'Death of Theory' been Exaggerated? In J. Bintliff & M. Pearce (eds), *The Death of Archaeological Theory*, 80-89 (Oxford: Oxbow Books).

Peirce, C. S. 1877. The Fixation of Belief. *Popular Science Monthly*, **12**, 1-15.

---. 1878. How to Make Our Ideas Clear. *Popular Science Monthly*, **12**, 286–302.

---. 1992. *The Essential Peirce, Selected Philosophical Writings (1867-1893)* (Bloomington: Indiana University Press).

Piggott, S. 1954. *The Neolithic Culture of the British Isles.* (Cambridge: Cambridge University Press).

---. 1959. *Approach to Archaeology* (Cambridge, MA: Harvard University Press).

Pluciennik, M. 1999. Archaeological narratives and other ways of telling. *Current Anthropology*, **40**(5), 653-678.

---. 2001. Archaeology, advocacy and intellectualism. In M. Pluciennik (ed.), *The Responsibilities of Archaeologists*, vol. BAR International Series 981, 19-29 (Oxford: Archaeopress).

---, 2001a. Introduction: the responsibilities of archaeologies. In M. Pluciennik (ed.), *The Responsibilities of Archaeologists*, vol. BAR International Series 981, 1-8 (Oxford: Archaeopress).

---. 2009. Fortuitous and wasteful mitigations.... *Archaeological Dialogues*, **16**(2), 152-57.

Popper, K. 1963. *Conjectures and Refutations* (London: Routledge and Kegan Paul).

Preucel, R. 1995. *The Postprocessual Condition. Journal of Archaeological Research* **3**(2), 147-75.

---. 2006. *Archaeological Semiotics* (Oxford: Blackwell Publishing).

Preucel, R. & Bauer, A. 2001. Archaeological Pragmatics. *Norwegian Archaeological Review*, **34**(2), 85-96.

Preucel, R. & Mrozowski, S. A. 2010. The New Pragmatism. In R. Preucel & S. A. Mrozowsi (eds), *Contemporary Archaeology in Theory: The New Pragmatism*, 3-49 (Oxford: Wiley-Blackwell).

Price, T. D. 2000. Europe's first farmers: an introduction. In T. D. Price (ed.), *Europe's First Farmers*, 1-18 (Cambridge: Cambridge University Press).

Price, T. D. & Gebauer, A.B. 1992. Transitions to Agriculture in Prehistory. In T. D. Price & A. B. Gebauer (eds), *Last Hunters, First Farmers: New Perspectives on the Prehistoric Transition to Agriculture*, 1-10 (Madison, Wisconsin: Prehistory Press).

Pumpelly, R. (ed.) 1908. *Explorations in Turkestan. Expedition of 1904. Prehistoric Civilizations of Anau: Origins, Growth, and Influence of Environment* (Washington DC: Carnegie Institution).

Putnam, H. 1981. *Reason, Truth and History* (Cambridge: Cambridge University Press).

---.1985. A Comparison of Something with Something Else. *New Literary Review,* **17**(1), 61-79.

Radcliffe-Brown, A. R. 1933. *The Andaman Islanders* (Cambridge: Cambridge University Press).

Ramberg, B. 2007. Richard Rorty. *Stanford Encyclopaedia of Philosophy*, Retrieved: 16/04/2008. URL: http://plato.stanford.edu/entries/rorty/

Ramsey, F. P. 1927. Facts and Propositions. *Proceedings of the Aristotelian Society,* **7**, 153-70.

Randerson, J. 2007. *Give us back our bones, pagans tell museums*. Guardian, 5th February.

Ratnagar, S. 2004. Archaeology at the Heart of a Political Confrontation: The case of Ayodhya. *Current Anthropology*, **45(**2), 239-259.

Regan, R. 2004. Excavations of the South Area: Building 44, South Summit Area. In I. Hodder (ed.), *Çatalhöyük Archive Report 2004*. Retrieved: 17/01/12. URL: http://www.catalhoyuk.com/archive_reports/2004/index.html

---. 2005. South Area Excavations: Buildings 44 & 56. In I. Hodder (ed.), *Çatalhöyük Archive Report 2005*, Retrieved: 17/01/12. URL: http://www.catalhoyuk.com/archive_reports/2005/index.html

---. 2006. SOUTH Area: Buildings 56 & 65. In I. Hodder (ed.), *Çatalhöyük Archive Report 2006*, Retrieved: 17/01/12. URL: http://www.catalhoyuk.com/downloads/Archive_Report_2006.pdf

Regan, R., Sadarangani, F. & Taylor, J. 2008. SOUTH Area: Building 75 & assoc. spaces and middens. In I. Hodder (ed.), *Çatalhöyük Archive Report 2008*. Retrieved: 17/01/12. URL: http://www.catalhoyuk.com/downloads/Archive_Report_2008.pdf

Renfrew, C. 1973. *Before Civilisation: The Radiocarbon Revolution and Prehistoric Europe* (London: Penguin Books).

---. 1982. Socio-economic change in ranked societies. , in A. C. Renfrew (ed.) *Ranking Resourse and Exchange: Aspects of the Archaeology of the Early European Society*, 1-8 (Cambridge: Cambridge University Press).

Rescher, N. 2006. *Metaphysics: The Key Issues from a Realistic Perspective* (New York: Prometheus Books).

Richards, M. P. & Hedges, R. E. M. 1999. A Neolithic revolution? New evidence of diet in the British Neolithic. *Antiquity*, **73**, 891-7.

Robb, J. & Miracle, P. 2007. Beyond 'migration' versus 'acculturation': new models for the spread of agriculture. In A. Whittle & V. Cummings (eds), *Going Over: The Mesolithic-Neolithic Transition in North-West Europe*, 99-115 (Oxford: Oxford University Press).

Rorty, R. 1979. *Philosophy and The Mirror of Nature* (Princeton: Princeton University Press).

---. 1980. *Philosophy and the Mirror of Nature* (Oxford: Blackwell).

---. 1991. *Objectivity, Relativism, and Truth: Philosophical Papers Volume 1* (Cambridge: Cambridge University Press).

---. 1999. Pragmatism, Davidson, and Truth. In S. & Simmons K. Blackburn (ed.), *Truth*, 323-50 (Oxford: Oxford University Press).

---. 1999a *Philosophy and social hope* (London: Penguin).

---. 2001. Is Truth a Goal of Inquiry? Donald Davidson versus Crispin Wright. In M. P. Lynch (ed.), *The Nature of Truth: Classic and Contemporary Perspectives*, 259-86 (London: The MIT Press).

---.2007. Main Statement by Richard Rorty. In R. Rorty and P. Engel (eds), *What's the use of truth*. (New York: Columbia University Press).

Rountree, K. 2007. Archaeologists and Goddess Feminists at Çatalhöyük: An Experiment in Multivocality. *Journal of Feminist Studies in Religion*, **23**(2), 7-26.

Roveland, B. E. 2006. Reflecting upon Archaeological Practice: Multiple Visions of a Late Paleolithic Site in Germany. In M. Edgeworth (ed.), *Ethnographies of Archaeological Practice: Cultural Encounters, Material Transformations*, 56-67 (Oxford: AltaMira Press).

Russell, B. 1904. Meinong's theory of complexes and assumptions I, II, III. *Mind*, **13**, 204-19, 336-54, 509-24.

---. 1907 On the Nature of Truth. *Proceedings of the Aristotelian Society*, **7**, 228-49.

---. 1912. *The Problems of Philosophy* (Oxford: Oxford University Press).

---. 1921. *The analysis of mind* (London: George Allen & Unwin).

Rowley-Conwy, P. 2004. How the West Was Lost: A Reconsideration of Agricultural Origins in Britain, Ireland and Southern Scandinavia. *Current Anthropology*, **45**(Supplement), S83-S113.

Sahlins, M. D. 1985. *Islands of History* (Chicago: University of Chicago Press).

Said, E. W. 1978. *Orientalism* (London: Routledge and Kegan Paul).

Saitta, D. J. 2007. *The Archaeology of Collective Action: The American Experience in Archaeological Perspective* (Gainesville, FL: University Press of Florida).

---. 2008. Ethics, objectivity, and emancipatory archaeology. In P. Duke and Y. Hamilakis (eds), *Archaeology and Capitalism: From Ethics to Politics*, 267-280. (Walnut Creek, CA Left CoastPress).

Salmon, M. H. 1982. *Philosophy and Archaeology* (New York: Academic Press).

--. 1992. Philosophical Models for Postprocessual Archaeology. In L. Embree (ed.), *Metaarchaeology: Perspectives by Archaeologists and Philosophers*, 227-41 (London: Kluwer).

Salzman, P. C. 2002. On Reflexivity. *American Anthropologist*, **104**(3), 805-13.

Sayer, D. 2009. Is there a crisis facing British burial archaeology? *Antiquity*, **83**, 199-205.

Scarre, G. & Coningham, R. 2013 Introduction. In G. Scarre & R. Coningham (eds), *Appropriating the Past: Philosophical Perspectives on the Practice of Archaeology*, 1-21 (Cambridge: Cambridge University Press).

Scarre, C. & Scarre, G. 2006. *The Ethics of Archaeology: Philosophical Perspectives on Archaeological Practice* (Cambridge: Cambridge University Press).

Scheler, M. 1980. *Problems of a Sociology of Knowledge*. Trans. K. W. Stikkers (London: Routledge and Kegan Paul).

Schmitt, F. F. 2004. Truth: An Introduction. In F. F. Schmitt (ed.), *Theories of Truth*, 1-38 (Oxford: Blackwell Publishing).

Scholte, B. 1972. Toward a Reflexive and Critical Anthropology. In D. Hymes (ed.), *Reinventing Anthropology*, 430-57 (New York: Pantheon).

Schulting, R. 2000. New AMS dates from the Lambourn long barrow and the question of the earliest Neolithic in sourthern England: repacking the Neolithic package? *Oxford Journal of Archaeology*, **19**, 25-35.

Searle, J. R. 1995. *The Construction of Social Reality* (London: Allen Lane).

Shankland, D. 1996. Anthropology of an Archaeological Practice. In I. Hodder (ed.), *On the Surface: Çatalhöyük 1993-95*, 349-57 (Cambridge: McDonald Institute for Archaeological Research, London: British Institute of Archaeology at Ankara).

Shanks, M. 1992. *Experiencing the past: on the characters of archaeology* (London: Routledge).

Shanks, M., and Tilley, C. 1987. *Re-constructing archaeology. Theory and practice* (Cambridge: Cambridge University Press).

---. 1987a. *Social Theory and Archaeology*. (Polity Press: Cambridge).

---. 1992. *Re-Constructing Archaeology*, 2nd edition. (London: Routledge).

Sheridan, A. 2007. From Picardie to Pickering and Pencraig Hill? New information on the 'Carinated Bowl Neolithic' in Northern Britain. In A. Whittle & V. Cummings (eds), *Going Over: The Mesolithic-Neolithic Transition in North-West Europe*, 441-92 (Cambridge: Cambridge University Press).

---. 2010 The earliest potter in Britain and Ireland and its Continental background. In B. Vanmontfort, L. L. Kooijmans, L. Amkreutz & L. Verhart (eds), *Pots, farmers and foragers: pottery traditions and social interaction in the Earliest Neolithic of the Lower Rhine area*, 189-207 (Leiden: Universiteit Leiden).

---. 2010a. The Neolithization of Britain and Ireland: The 'Big Picture'. In B. Finlayson & G, Warren (ed.), *Landscapes in Transition*, 89-105 (Oxford: Oxbow Books).

Siegel, H. 1992. Relativism. In Dancy J. & E. Sosa (eds), *A Companion to Epistemology* (Oxford: Blackwell Publishers Ltd.).

Smith, J.E. 1978. *Purpose and Thought* (Chicago: University of Chicago Press).

Smith, L. & Waterton, E. 2009. *Heritage, Communities and Archaeology* (London: Duckworth).

Smith, C. & Wobst, H. M. (eds) 2005. *Indigenous Archaeologies: Decolonizing theory and practice* (London: Routledge).

Soames, S. 1999. *Understanding Truth* (Oxford: Oxford University Press).

Sokal, A. 1996. Transgressing the Boundaries: Towards a Transformative Hermeneutics of Quantum Gravity. *Social Text*, (Spring/Summer), 217-52.

---. 1996a. A Physicist Experiments with Cultural Studies. *Lingua Franca*, (May-June), 61-64.

Spence, C. 1993. Recording the archaeology of London: the development and implementation of the DUA recording system. In E. C. Harris, M. R. Brown III & G. J. Brown (eds), *Practices of Archaeological Stratigraphy*, 23-46 (London: Academic Press).

Spriggs, M. 1984. Another way of telling: Marxist perspectives in archaeology. In M. Spriggs (ed.), *Marxist perspectives in archaeology*, 1-9 (Cambridge: Cambridge University Press).

Stapp, D. C. & Longenecker, J. G. 2005. Reclaiming the Ancient One: addressing the conflicts between American Indians and archaeologists over the protection of cultural places. In C. Smith & H. Martin Wobst (eds) *Indigenous Archaeologies: Decolonizing theory and practice*, 171-84 (London: Routledge).

Stewart, J. H. 1955. *Theory of culture change: The methodology of multilinear evolution* (Urbana, IL, University of Illinois Press).

Stoljar, D. 2007. The Deflationary Theory of Truth. *Stanford Encyclopaedia of Philosophy*, Retrieved 09/05/08. Last updated: 29/05/07 URL: http://plato.stanford.edu/entries/truth-deflationary

Strawson, P. F. 1950. Truth. *Proceedings of the Aristotelian Society*, **24**, 129-56.

Sturgeon, S., Martin M. G. F. & Grayling A.C. 1998. Epistemology. In A. C. Grayling (ed.), *Philosophy 1: A guide through the subject*, 10-26 (Oxford: Oxford University Press).

Talisse, R. B. & Aikin, S. F 2011. Introduction . In R. B. Talisse & S. F. Aiken (eds), *The pragmatism reader: From Peirce through the present*, 1-11 (Oxford: Princeton University Press).

Tarski, A. 1944. The Semantic Conception of Truth and the Foundations of Semantics. *Philosophy and Phenomenological Research*, **4**, 341-76.

---. 1969. Truth and Proof. *Scientific American*, **220**(June), 63-77.

---. 1983. *Logic, semantics, metamathematics: papers from 1923 to 1938*. J. Corcoran (ed.) (Indianapolis: Hackett).

Thackray, D. 2009. *Report on Consultation on the Request for Reburial of Prehistoric Human Remains from the Alexander Keller Museum at Avebury* (English Heritage).

Thomas, D. H. 2000. *Skull Wars: Kennewick Man, Archaeology, and the Battle for Identity* (New York: Basic Books).

---. 2007. American Archaeology in the Twenty-First Century: Back to the Future? In T. W. Killion (ed.), *Opening Archaeology: Repatriation's Impact on Contemporary Research*, 57-76 (Santa Fe: School for Advanced Research Press).

Thomas, J. 1988. Neolithic Explanations Revisited: The Mesolithic-Neolithic Transition in Britain and South Scandinavia. *Proceedings of the Prehistoric Society*, **65**, 59-66.

---. 1991. *Rethinking the Neolithic* (Cambridge: Cambridge University Press).

---. 1993. Discourse, Totalization and 'The Neolithic'. In C. Tilley (ed.), *Interpretative Archaeology*, 357-94 (Oxford: Berg).

---.1995. Where are we now: Archaeological theory in the 1990's. In P. J. Ucko (ed.), *Theory in Archaeology: A World Perspective*, 343-62 (London: Routledge).

---. 1996. *Time, Culture and Identity: An Interpretive Archaeology* (London: Routledge).

---. 1996a . Neolithic houses in mainland Britain and Ireland – a sceptical view. In T Darvill & J. S. Thomas (eds), *Neolithihc houses in northwest Europe and beyond*, 1-12 (Oxford: Oxbow)

---. 1998. Review of 'Neolithic Landscapes. *Antiquity* **72**, 455-6

---. 1999. *Understanding the Neolithic* (London: Routledge).

---. 1999a An Economy of Substances in Earlier Neolithic Britain.. In Robb, J. E. (ed.) *Material Symbols: Culture and Economy in Prehistory*, 70-89 (Carbondale, Illinois: Centre for Archaeological Investigations).

---. 2003. Thoughts on the 'Repacked' Neolithic Revolution. *Antiquity*, **77**, 67-75.

---. 2004. *Archaeology and Modernity* (London: Routledge).

---. 2007. Mesolithic-Neolithic transitions in Britain: from essence to inhabitation In A. Whittle & V. Cummings (eds), *Going Over: The Mesolithic-Neolithic Transition in North-West Europe*, 423-39 (Oxford: Oxford University Press).

Thompson, J. 2013. The Ethics of Repatriation: Rights of Possession and Duties of Respect. In G. Scarre & R. Coningham (eds), *Appropriating the Past: Philosophical Perspectives on the Practice of Archaeology*, 82-97 (Cambridge: Cambridge University Press).

Tilley, C. 1989. Archaeology as Socio-political Action in the Present. In V. Pinsky & A. Wylie (eds), *Critical Traditions in Contemporary Archaeology: Essays in the Philosophy, History and Socio-politics of Archaeology*, 104-16 (Cambridge: Cambridge University Press).

---. 1989a. Excavation as Theatre. *Antiquity*, **63**, 275-80.

---. 1994. *A Phenomenology of Landscape: Places, Paths and Monuments* (Oxford: Berg).

---. 2007. The Neolithic sensory revolution: monumentality and the experience of landscape. In A. Whittle & V. Cummings (eds), *Going Over: The Mesolithic-Neolithic Transition in North-West Europe*, 329-45 (Oxford: Oxford University Press).

Tringham, R. & Stevanovic, M. 2000. Different Excavation Styles Create Different Windows into Çatalhöyük. In I. Hodder (ed.), *Towards reflexive method in archaeology: the example at Çatalhöyük*, 111-18 (London: McDonald Institute for Archaeological Research).

Trigger, B. 1984. Alternative Archaeologies: Nationalist, Colonialist, Imperialist. *Man*, **19**(3), 355-70.

---. 1989. *A History of Archaeological Thought* (Cambridge: Cambridge University Press).

--- 1989a. Hyperrelativism, Responsibility and the Social Sciences. *Canadian Review of Sociology and Anthropology*, **26**, 776-97.

---. 1995. Expanding Middle Range Theory. *Antiquity*, **69**, 449-58.

---. 2006. *A History of Archaeological Thought*, 2nd edition (Cambridge: Cambridge University Press).

---.2008. "Alternative Archaeologies" in historical perspective. In In J. Habu, C. Fawcett & J. M. Matsunaga (eds), *Evaluating Multiple Narratives: Beyond Nationalist, Colonialist, Imperialist Archaeologies*, 187-95, (New York: Springer).

Tschauner, H. 1996. Middle-Range Theory, Behavioural Archaeology, and Postempiricist: Philosophy of Science in Archaeology. *Journal of Archaeological Method and Theory*, **3**(1), 1-30.

Turner, D. 2007. *Making Prehistory* (Cambridge: Cambridge University Press).

Ucko, P. J. 1992. Subjectivity and the recording of Palaeolithic Cave Art. In T. Shay & J. Clottes (eds), *The Limitations of Archaeological Knowledge*, 141-80 (Liege: University of Liege Press).

Walker Jr, D. E. & Jones, P. N. 2000. Other Perspectives on the Kennewick Man Controversy. *American Anthropologist*, **12**(4), 907-10.

Warren, G. 2004. The start of the Neolithic in Scotland. In I. A. G. Shepherd & G. J. Barclay (eds,) *Scotland in Ancient Europe: the Neolithic and Early Bronze Age of Scotland in their European Contact*, 91-102 (Edinburgh: Society of Antiquaries of Scotland).

Watkins, J. 2001. Yours, Mine or Ours? Conflicts between Archaeologists and Ethnic Groups. In T. L. Bray (ed.), *The Future of the Past: Archaeologists, Native Americans, and Repatriation*, 57-68 (London: Garland Publishing).

Watson, P. J. 1986. Archaeological Interpretation, 1985. In D. J. Meltzer, D. D. Fowler & J. A. Sabloff (eds), *American Archaeology Past and Future: A Celebration of the Society for American Archaeology*, 439-57 (Washington: Smithsonian Institution Press).

---. 1992. The Place of Archaeology in Science. In L. Embree (ed.), *Metaarchaeology: Reflections by Archaeologists and Philosophers*, 255-67 (London: Kluwer).

Watson, P. J., LeBlanc, S. A. & Redman, C. L. 1971. *Explanation in Archaeology: An Explicitly Scientific Approach* (New York: Columbia University Press).

Watson, R. A. 1976. Inference in Archaeology. *American Antiquity*, **41**(1), 58-66.

Webmoor, T. 2005. *Symmetrical Archaeology, Pragmatism and Archaeological Hope.* Retrieved: 2010, 08/08/10 URL: http://humanitieslab.stanford.edu/23/821

-- 2007. The dilemma of contact: archaeology's ethics-epistemology crisis and the recovery of the pragmatics sensibility. *Stanford Journal of Archaeology*, **5**, 224-46.

Whittle, A. 2007. Going over: people and their times. In A. Whittle & V. Cummings (eds) *Going Over: The Mesolithic-Neolithic Transition in North-West Europe*, 357-75 (Oxford: Oxford University Press).

Williams, B. 2002. *Truth and Truthfulness* (Oxford: Princeton University Press).

Williams, C. F. J. 1976. *What is Truth*? (Cambridge: Cambridge University Press).

Williams, M. 2006. Realism: What's Left? In P. Greenough & M. P. Lynch (eds), *Truth and Realism*, 77-99 (Oxford: Oxford University Press).

Wittgenstein, L. 1921. *Tractatus Logico-Philosophicus*. 1961 edition. (London: Routledge).

Wobst, H. M. 2005. Power to the (Indigenous) past and present! Or: the theory and method behind archaeological theory and method. In C. Smith & H. Martin Wobst (eds), *Indigenous Archaeologies: Decolonizing Theory and Practice*, 17-32 (London: Routledge).

Woodman, P. 2000. Getting back to basics: transitions to farming in Ireland and Britain. In T. D. Price (ed.), *Europes First Farmers*, 219-59 (Camrbidge: Cambridge University Press).

Wright, Crispin, 1992, *Truth and Objectivity* (London: Harvard University Press).

---. 2001. Minimalism, deflationism, pragmatism, pluralism. In M. P. Lynch (ed.), *The Nature of Truth: Classic and Contemporary Perspectives*, 751-788 (London: MIT Press).

Wright, C. & Pedersen, N. (eds), 2010, *New Waves in Truth* (New York: Palgrave Macmillan).

Wylie, A. 1985. The Reaction against Analogy. *Advances in Archaeological Method and Theory*, **8**, 63-111.

---. 2002 (ed.) *Thinking from Things: Essays in the Philosophy of Archaeology* (London: University of Californian Press).

---. 2002a. The Reaction against Analogy. In A. Wylie (ed.), *Thinking from Things: Essays in the Philosophy of Archaeology*, 136-53 (London: University of California Press).

---. 2002b. Archaeological Cables and Tacking: Beyond Objectivism and Relativism. In A. Wylie (ed.), *Thinking from Things: Essays in the Philosophy of Archaeology*, 161-67 (London: University of California Press).

---. 2002c. "Heavily Decomposing Red Herrings" Middle Ground in the Anti-/Postprocessualism Wars. In A. Wylie (ed.), *Thinking from Things: Essays in the Philosophy of Archaeology*, 171-78 (London University of California Press).

---. 2002d. The Constitution of Archaeological Evidence, in A. Wylie (ed.) *Thinking from Things: Essays in the Philosophy of Archaeology*, 185-99 (London: University of Californian Press).

---.2008 The Integrity of Narratives: Deliberative Practice, Pluralism and Multivocality. In J. Habu, C. Fawcett & J. M. Matsunaga (eds), *Evaluating Multiple Narratives: Beyond Nationalist, Colonialist, Imperialist Archaeologies*, 201-11 (New York: Springer).

Young, J. 2001. *The Coherence Theory of Truth. The Stanford Encyclopedia of Philosophy*. Retrieved: 2008, 23/04/08 URL: http://plato.stanford.edu/entries/truth-coherence/

Young, J. 2013. The Values of the Past. In G. Scarre & R. Coningham *Appropriating the Past: Philosophical Perspectives on the Practice of Archaeology*, 25-41 (Cambridge: Cambridge University Press).

Zimmerman, L. J. 2005. First, be humble: working with Indigenous peoples and other descendant communities. In C. Smith & H. Martin Wobst (eds), *Indigenous Archaeologies: Decolonizing theory and practice*, 301-14 (London: Routledge).

---. 2013. On Archaeological Ethics and Letting Go. In G. Scarre & R. Coningham (eds), *Appropriating the Past: Philosophical Perspectives on the Practice of Archaeology*, 98-118 (Cambridge: Cambridge University Press).

Zvelebil, M. 1986. Mesolithic prelude and Neolithic revolution. In M. Zvelebil (ed.), *Hunters in Transition: Mesolithic Socities of Temperate Eurasia and their Transition to Farming*, 5-16 (Cambridge: Cambridge University Press).

Zvelebil, M. & Rowley-Conwy, P. 1984. Transition to farming in northern Europe: A hunter gatherer perspective. *Norwegian Archaeological Review*, **17**, 104-28.