

# The social world of hunter-gatherers in early Holocene Lesotho: integrating method and theory

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## Abstract

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This thesis presents new early Holocene excavations at Ntloana Tšoana in western Lesotho and makes the case for reintegrating method and theory in southern African Later Stone Age archaeology. It is argued that the distancing of method and theory relates to discipline-wide economic and material culture biases. An alternative is proposed which focuses on the everyday residues and temporal relations of hunter-gatherer life in order to build an understanding of attachment to place. This approach, which is more accepting of the multi-temporal qualities of complex stratigraphies, is ideally suited to the abundant and well-stratified rockshelters of southern Africa. Importantly, tracing sequence in the construction of stratigraphic diagrams, the modelling of radiocarbon dates, as well as in studies of artefact production use and discard, remain central to the work presented here. At the same time, however, equal weight is placed on the durational and imbricated qualities of the archaeological record, which, it is argued, deserve to be repositioned as positive attributes. In this way of thinking sedimentation and erosion are vital to the human story and provide much of the movement and depth to the history-writing process. These insights are brought to bear on the 600–1700 calendar years of early Holocene stratigraphy at Ntloana Tšoana, during which time a complex history of social fragmentation and coalescence is traceable, sandwiched between, and partly overlapping with, two major flooding events. The site also becomes associated with a specific set of practices over many centuries involving the construction of large hearth features and the working of animal hides. Discussion revolves around the manner in which rockshelter residues may have acted as a stabilising force within the fluid socio-material world of hunter-gatherer groups and how this may have operated over an inter-generational timeframe.



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## **Chapter 1.**

### **Introduction and chapter outline**

#### **1.1. Initial encounters**

This thesis is based on questions that arose during the excavation of sandstone rockshelters along the Phuthiatsana River of western Lesotho between 2009 and 2010, conducted as part of the broader Metolong Cultural Resource Management Project (MCRM, Arthur & Mitchell 2010; Arthur *et al.* 2011). The threat of dam construction combined with the knowledge generated by prior research in the area, meant that there was a rare opportunity to excavate larger areas than had previously been carried out in Lesotho's rockshelters. Earlier work at the two main shelters within the dam's impact zone, Ntloana Tšoana and Ha Makotoko, had indicated that, as is commonly reported for southern African rockshelter sites (Deacon 1972; Barham 1992), the sediments were horizontally discontinuous, and difficult to differentiate in the vertical dimension (Mitchell 1993a). The excavations I directed revealed both these qualities to be genuine and challenging aspects of the Phuthiatsana sites. Yet opening more extensive areas allowed the excavators to follow and expose layers used as surfaces, on top of which lay hearths, pits, post-holes and clusters of stone tools. It was also frequently possible to excavate sequences of related features and associated habitation layers. In other words, two further qualities of these rockshelter records, not often reported in the literature, were present in abundance: spatial patterning and recognisable sequences of human action.

A common method in southern African Later Stone Age (LSA) archaeology (Mitchell *et al.* 2006: 82) and indeed more broadly in rockshelter and cave archaeology (Gamble & Porr 2012: 6) is narrow, deep 'telephone booth-style' excavations. These have obvious advantages in evaluating a site's potential, preserving the archaeological record for future generations and enabling smaller, sustainable projects in under-funded, under-resourced regions of Africa. Yet there are also obvious drawbacks in terms of interpretation. Limited light and space present serious obstacles for establishing the surfaces and edges of sedimentary contexts in either horizontal or vertical dimensions, meaning that there is little chance of gaining a proper understanding of what is under excavation and little choice but to report the findings only at the level of major sedimentary units. As soon as the last of the clay-rich fluvial



silts were trowelled away early in the first season at Ntloana Tšoana, the first major rockshelter to be investigated on the MCRM Project, the potential to excavate at this human scale was clear.

In contrast to the short-term projects that have characterised earlier work in Lesotho, the MCRM programme was based around long, extended fieldwork seasons, including nine months of continuous excavation at the two main shelters, with structured teams consisting of mentors and local trainees. A team of four professional field archaeologists was assembled with two specific yet inter-related aims in mind. First, to work at the highest level of stratigraphic resolution possible, and, second, to mentor the first generation of Basotho archaeologists (Arthur & Mitchell 2010, 2012; Arthur *et al.* 2011). Once the potential to excavate stratigraphically was established, we all understood there was a rare opportunity to be amongst the first to apply the horizontally extensive methods known as ‘single-context-recording’, to a southern African rockshelter context (MoLAS 1994). Initially designed as a way of keeping track of individual stratigraphic units in very complex urban deposits, this way of excavating offers significant advantages for equally complex rockshelter sites. Other than being a system designed for discontinuous and unevenly distributed stratigraphy, its main strength is that it encourages excavators to construct a complete archive, including interpretation, themselves, rather than relying exclusively on the site diary of the director (Lucas 2002). As such, it affords the generation of more information from sedimentary contexts than is typical of rockshelter excavations, and, helps foster a less hierarchical structure in the field, itself a necessary part of the transformation of African archaeology away from the problematic, colonially derived, director–local labour model of organisation (Shepherd 2003; Ndlovu 2009; Arthur *et al.* 2011; Arthur & Mitchell 2012; King & Arthur 2014).

We began our work at Ntloana Tšoana following this method to the letter, cleaning individual stratigraphic layers to expose their full extent, photographing, drawing, describing, offering interpretations, removing them one by one, and fitting them into Harris matrix diagrams. At the same time, it also felt we were stepping into the unknown and it soon became apparent that excavating solely in this single context manner would only take us so far in these complicated and sometimes interlensing contexts, where it was clear the potential for translocation of finds and particles was high. We did what we could to adapt our methods, both to increase empirical accuracy and the potential for interpretation. By combining stratigraphic excavation with 25 mm

spits where needed to enable finer horizontal and vertical control, redesigning the interpretive boxes on record sheets to include a greater number of *physical* relations between contexts, and expanding the space for drawings.

Even at this early stage, it was also obvious that once fieldwork was complete, writing up the excavations was not going to be straightforward. To do the site justice, which would involve writing a feature-based rockshelter archaeology paying equal attention to the non-sequential aspects of both human habitation and sedimentary processes, required rethinking some of the fundamentals of the post-excavation process itself.

At the same time, I began thinking more widely about why this sort of archaeology had not been written before and asking why, when reading the LSA literature, I was left with the impression that rockshelter stratigraphies of hunter-gatherer archaeology are more suited to geological description rather than interpretation of human habitation? What was behind this absence of humanity in the publication of Stone Age stratigraphy, was it the sheer complexity and negative perception of these sorts of records, the way archaeologists were approaching excavation and analysis, or the way they thought about prehistoric hunter-gatherers?

A closer reading of LSA site reports revealed that good stratigraphic preservation is in fact more widespread than established methods and commentaries would lead us to believe (e.g. Barham 1992), and that in contrast to how most Stone Age research was published, most archaeologists had, in fact, been excavating at a much finer level of detail than was immediately apparent. LSA publications only ever seemed to mention thick sedimentary ‘layers’, and one had to read between the lines to understand that these units were the result of aggregation during post-excavation work in order to make the numbers of diagnostic finds add up to a meaningful statistic (e.g. Wadley 2000a).

Essentially, this was the same conclusion reached by John Parkington (1993: 95), a leading LSA researcher, some 18 years earlier following his unusually fine-grained excavation of Elands Bay Cave, namely that the dominance of the coarse “geological model” was not the result of a lack of potential in rockshelters themselves, but more the absence of a clear method for dealing with the complex nature of their habitation residues (see also Parkington *et al.* 1992). As Parkington realised, it was also obvious that this was not a simple case of the techniques not being up to scratch, it was about the kind of writing archaeologists aimed to produce. Indeed, other

researchers commenting on the southern African LSA and Australian Stone Age archaeology have argued that there is a close relationship between the preferences for deeper, vertically-orientated excavations and the sorts of questions asked about the past, to the extent that it is impossible to tell which is driving which (Mitchell *et al.* 2006: 82; Gamble & Porr 2012: 6).

It was also increasingly clear that our fieldwork at in the Metolong area was at odds with current research trends. The study of the southern African LSA from the 1960s through to the mid-1990s was the most intensive phase of archaeological research on hunter-gatherers ever undertaken in Africa, yet today only a handful of researchers claim this as their primary research area. Prior to our excavations, there had been no major early-to-mid-Holocene LSA excavation for some 20 years. There had been consistent interest in the origins of pastoralism around 2000 BP, and the interpretation of rock art, but the rest of the LSA remained as – if not more – silent as it was when Mitchell’s (2005) review of the field concluded the same. What makes this all the more surprising is that from the very end of this heyday of LSA studies, (mid-1980s to mid-1990s), the literature is full of proud declarations that hunter-gatherer archaeology was undergoing a radical transformation (Mazel 1989a: 39). History and politics were reinstated at the centre of archaeology as a plethora of papers firmly positioned themselves in opposition to the environmental and neo-evolutionary approaches of the previous two decades (Lewis-Williams 1993). The focus had switched from a concern with “people-to-nature” relations to one in which “people-to-people” enquiries took centre stage (Bender 1985b: 21; Mazel 1989b: 23).

These ideas remained prominent in LSA archaeology for over a decade, yet by the early 2000s the momentum for a social archaeology of hunter-gatherers, outside of rock art research, appeared to have been lost and, with it, LSA studies in general (Mitchell 2005). In the early stages of reading around the two problems identified thus far – the methodological and conceptual difficulties posed by rockshelter stratigraphy, and the problems of constructing and sustaining a relevant LSA social archaeology – I began to realise that they were connected at a deeper level than was first apparent, relating firstly, to what archaeologists consider to be ‘social’ or ‘cultural’ as opposed to ‘natural’ aspects of past peoples’ lives, and secondly, to how archaeologists perceive time.

The difficulties of sustaining a socially relevant Stone Age archaeology were of course, not only felt in the southern African LSA. Hunter-gatherer records around the

world struggled to gain attention in the new interpretive paradigms of the 1980s and 1990s (e.g. Hodder 1982; Shanks & Tilley 1987) which aimed to distance themselves from the dominant economic and ecological theories of the previous generation. The emphasis in the early social archaeology of hunter-gatherers was on overtly symbolic material culture as this was thought to directly reflect ideologies or social strategies (e.g. Bender 1985a). Yet, not only was this wildly at odds with what we know from ethnography about how hunter-gatherers perceive their world, which is clearly *not* from a standpoint that divides life into symbolic and mundane domains (Ingold 2000: 40–47), it also fails to offer a satisfactory method for dealing with the vast majority of the earlier prehistoric record. Certain hunter-gatherer pasts flourished within this dominant symbolic framework, such as those whose material records included monuments (e.g. Gibson 1996), cemeteries (e.g. Pardoe 1988) or rock art (e.g. Conkey 1982). The majority of hunter-gatherer archaeologies, and in particular those of the deeper past, however, where elaborate material culture with obvious symbolic content was often lacking, remained marginalised, outside history and firmly in the realm of nature (e.g. Hodder 1990; cf. Gamble & Gittens 2004).

These broad realisations do not, in themselves, provide any immediate solutions for regenerating LSA rockshelter archaeology. In my own case, however, what they did do was to chart the first step forward for analytical work following the Phuthiatsana excavations. It was clear that what I needed to do was keep an open mind towards seemingly asocial, subsistence and technology-related aspects of hunter-gatherer life. This thesis thus began with the primary aim of following Parkington's (1993) lead and further exploring the connection between how we think about excavating and writing rockshelter archaeology and how we think about past hunter-gatherers. Its more substantive secondary aim is to utilise this understanding to explore how it might be possible to rejuvenate a social archaeology of the LSA.

## 1.2. Chapter outline

Chapter 2 seeks to place the current theoretical impasse within LSA research into a broad global context. It begins by exploring the continued marginalisation of hunter-gatherers in archaeological theory. Despite recent reorientation away from symbolic and ideological explanations, in current overviews of prehistory from these new perspectives hunter-gatherers still provide the 'simple' baseline from which the

complexities of human-thing involvements develop (e.g. Hodder 2012). However, at the level of individual knowledge, and in terms of how hunter-gatherers perceive their world, there is simply no case that their social relations are any less complex than those of other groups with clear institutions and externally represented differentiation. I draw on the work of Tim Ingold (2000, 2011, 2012), and argue the case for ethnographic and historical generalisation as a tool to think with and contrast this with the use of direct historical analogy as an empirical method. I conclude that generalised ideas from a broad range of sources can be used to enliven stratigraphic interpretation and develop a temporally aware *archaeology of attention* that builds long-term histories from microscale observations.

Chapter 3 traces similar themes in southern Africa by reviewing in more detail the emergence of an overtly social archaeology of hunter-gatherers in the mid-1980s and the phase of methodological conservatism that followed. In addition to the distancing of theory from method, and the problematic separation of symbolic and functional aspects of hunter-gatherer life highlighted above, the polarisation of long- and short-term perspectives is found to be a major conceptual obstacle for the southern African LSA. In the final part of this chapter, I present a more detailed review of approaches to the early Holocene of southern Africa (c. 12,000 – 8000 cal. BP), which serves to bring these problems into sharper focus. The uneasy relationship between conventional geological modes of writing and incipient social perspectives leads to a variety of contradictory origins narratives emerging in the late 1990s in which the early Holocene is framed as either the destination of travel out of a cold and inhospitable late Pleistocene, or the point of departure for the beginning of the Holocene story, after which everything simply keeps on increasing in intensity towards the present.

Chapter 4 outlines an alternative theoretical framework in more detail. First, I explore relevant aspects of non-representational theory, including perspectives on practice, materiality and temporality, before following their influence in the rethinking of stratigraphy as material culture. Too much emphasis on intentionality in recent memory and stratigraphic work is shown to miss the potential of drawing less clear-cut distinctions between natural and cultural deposition. I argue that the particular qualities of rockshelters and caves and their unparalleled ability to preserve evidence of previous occupations would have served as an important mnemonic resource for past hunter-gatherers.



Chapter 5 explains the physical and social contexts out of which the thesis emerged, beginning with the extensive field seasons and prioritisation of training and community engagement within the MCRM and focussed on the ways in which these structural elements were interconnected with, and mutually constitutive of, the interpretive approach to excavation. The Caledon Valley and Phuthiatsana gorge landscapes are introduced in the second part of this chapter, paying specific attention to the way that contemporary cultural practices are linked to the latter's contradictory qualities of place. The chapter finishes with a look at two rock art traditions found in the Phuthiatsana gorge, one associated to hunter-gatherers and dating back at least one thousand years, and the other associated to contemporary use of rockshelters by initiation schools. Without claiming to trace a 'direct-historical' connection between the symbolism or meaning of these traditions, shared ideas about the aliveness of rockshelters and the material culture traces left in them, is striking, and poses some pertinent questions for the excavated record.

Chapter 6 takes a closer look at Ntloana Tšoana, its physical situation and the history of excavation. Its low-lying rivers edge setting defines both the experience of being in the shelter today as well as the character of its ancient sediments. An overall stratigraphic and chronological framework is provided before taking a closer look at the Phase 3 sediments that form the focus of this thesis. Two alternative Bayesian models demonstrate the utility of multi-temporal thinking and draw attention to the importance of interpretation alongside such modelling.

Chapter 7 and 8 are sedimentary histories. Episodes of consecutive large hearth construction, intensive use of scrapers, major flood events, and group fragmentation and aggregation, are all repeated patterns discernible from stratigraphic analysis. The challenging concepts of residuality and intrusion are also discussed in relation to the deposition of major silt layers, their transformation into surfaces, and their continued exposure during later parts of the sequence. Rather than viewing this sort of non-sequential record as a 'problematic palimpsest', a case is made for alternative methods of analysis that seek to rethink these non-linear aspects of rockshelter sedimentation as positive elements of interpretive value.

Chapter 9 presents the results of a detailed study of a large sample of 209 endscrapers. Previous analyses of southern African scraper assemblages have focused almost entirely on studying shape and size changes over time. This remains a fundamental part of the approach adopted here, yet a whole range of more specific

attributes are also considered to provide a fuller picture of tool life history, including the non-linear qualities of the artefacts. Key findings include the clear identification of early-mid and-late stages of use-life, strong indications of an *end-mounted* and *enclosed-lateral* hafting method, intensive use of salvaged tools from earlier levels, and wider chains of re-use and recycling that connect to other pathways such as bipolar percussion and the use of broken-edges tools.

Chapter 10 brings some of the broader ideas about place, time and the nature of hunter-gatherer society together with the empirical work from the second half. I revisit the question of hunter-gatherer temporality and outline some alternative ideas along the lines of an *archaeology of attention*, emphasising the potential of working with more-than-sequential and other-than-intentional understandings of human action and archaeological materials. I then tackle the problematic separation of scales of analysis and argue for a more connected inter-scalar approach. These temporal understandings are discussed in terms of their intersection with place and practice and the reproduction of cultural form in early Holocene hide-work. Finally, I assess the broader contribution of the thesis in terms of offering new perspectives for southern African LSA and hunter-gatherer archaeology in general.

## Chapter 2.

### Hunter-gatherers: the people without

#### 2.1. Introduction

To introduce the key ideas of this thesis, this chapter explores the reasons behind the long-standing marginalisation of hunter-gatherers in archaeological theory. I ask why ideas of society and history, or the social and the temporal, have been so problematic for hunter-gatherer studies, so much so that they have threatened its very existence (Lee 1992; Burch 1994). In nearly all archaeological and most anthropological theory it is possible to find some aspect of the implicit, and sometimes even explicit, negative assumptions that hunter-gatherers have *no society* and *no history*. To address this, I begin by tracing the origins of these ideas in early twentieth century anthropology, when the concept of ‘complex society’, based on horizontal and vertical differentiation, was founded in opposition to that of the ‘simple’, ‘primitive’ group, thought to have few working parts, the arch example of which were hunter-gatherers such as Australian Aborigines (e.g. Durkheim 1984[1893]; Radcliffe-Brown 1931). Staying with anthropology and the birth of hunter-gatherer studies in the 1960s, which for the first time asserted the positive attributes of egalitarian, flexible ‘anti-structural’ ways that foragers organise themselves (Guenther 1999), the second part of this review charts how this new sub-field flourished as hunter-gatherer groups were finally afforded the status of being bona-fide societies. Yet we find that *both* the universalising ‘original affluence’ models of the early period *and* the later ‘revisionist’ reaction – which stressed recent hunter-gatherer contact with, and domination by, larger societies – failed to assign historical agency in different ways, the former by de-historicising contemporary groups, the latter in its claims that prehistoric hunter-gatherers were automatically transformed at contact with food producers. Not only is this problematic in its own right for encouraging a teleological view of precolonial southern African, it has meant that studies of the southern African LSA – like other hunter-gatherer records around the world (e.g. Richter et al. 2011) – have found themselves caught between the theoretical perspectives and aims of those archaeologists working on more recent periods and those engaged with the deeper past.

In the third part of this chapter I turn away from the southern African situation and the anthropological literature towards archaeology and concentrate on the *no*

*society* part of the assumption. Clear evidence of conceptual slippage is found in the way that scholars confuse, on the one hand what they are writing about the paucity of the archaeological record, both in terms of its supposed lack of complexity, and due to the ravages of time, and, on the other hand what they are writing about hunter-gatherer lives in the past. There is, it would seem, a need for a radical rethink of what has become a default position to categorise prehistoric hunter-gatherer archaeology as being mere palimpsestual “scraps of data” (Gamble 1999: 5), suitable only for ‘time-averaging’ and the study of evolutionary patterning. This leads directly on to the fourth part of this review, in which two different versions of evolutionary thinking are assessed; one of a purely Darwinian type, which emphasises adaptive fitness of hunter-gatherers to a particular ecological niche, the other of a more Spencerian kind (Johnson 2010), which argues in a similar vein to the revisionist version of political economy, that inequality and social ‘closure’ is the proper subject of hunter-gatherer archaeology, and places emphasis on the rise of ‘complex’ hunter-gatherers in prehistory. What becomes clear is that although both have contributed to our understanding of hunter-gatherer diversity, both also reinforce, in a largely implicit manner, the age-old and erroneous structuralist interpretation that the majority of hunter-gatherer pasts are defined by social simplicity, the first through its commitment to ecological reductionism, the second through its explicit focus on elaborate ritually-associated material culture. The other problematic assumption inherited from mid-twentieth century structuralism, that societies without obvious leaders or signs of stratification, including all ‘simple’ hunter-gatherers, live in a world of immediate relations, is also reinforced by the theoretical frameworks of these two dominant perspectives.

Rather surprisingly, both foundational concepts – the understanding that complexity inevitably increases over time and that human societies developed from a baseline of immediacy and became increasingly temporally connected with the material world – also underpin some current ‘relational’ interpretations of long-term change in archaeology. The final part of the chapter tackles these two misunderstandings, employing Tim Ingold’s alternative version of relational theory, which places as much emphasis on the non-artefactual world to expose as completely erroneous the idea that hunter-gatherer relations with materials and time could be considered either less complex than any other human group.

I conclude by arguing that it is precisely because of these embedded yet erroneous assumptions regarding hunter-gatherers’ relation with time and the material

world, that most of our prehistoric pasts lie theoretically dormant today. To combat this, I propose that we reinstate the role of broad generalisation as a tool with which to think with and make the case for an *archaeology of attention*, which explicitly focuses on the everyday residues and temporal relations of hunter-gatherer life to build an understanding of attachment to place. I begin, however, by outlining the problem of marginalisation in more detail and ask to what extent this can be attributed to the disciplinary-wide emphasis on origins, which consigns so much of our global hunter-gatherer past to the *time-before-which* or a *time-in-between*.

## 2.2. The marginalisation of hunter-gatherers in contemporary theory

According to recent reviews of archaeological theory, great progress has been made since the polemical positivist science versus interpretive art debates of the 1980s and 1990s (Jones 2001; Johnson 2010). Archaeology is apparently now poised to make significant contributions to broader theory in the humanities and sciences (Witmore 2007; Olsen 2012: 20). At the centre of this resurgence are attempts to overcome modern ‘dualistic’ thinking, which constrained the previous orthodoxies of materialist and constructivist frameworks. Much of this work has concerned the blurring of the ontological boundaries between the social and the natural, and the mental and the material. Taking these ideas seriously as theories relevant to *all* human life, one would have expected the hunter-gatherers of our Palaeolithic pasts, who had been struggling to make themselves ‘symbolic’ or ‘social’ enough under previous theoretical conventions, to have now paid their dues and thrown off their deterministic shackles. After all, was it not precisely the fluidity and all-pervasive relationality of hunter-gatherer ontologies – arguably the two features of human experience that underpin the new orthodoxy of mainstream archaeological theory today – which excluded them from the social archaeologies of power and prestige associated with stratified culturally elaborate social forms? Of course, this has not yet happened. Vast swathes of prehistory, most of it in fact, are still considered beyond the theoretical and unsuitable for thinking about people and their lived experiences (Gamble & Gittens 2004). There have been notable theoretical developments in some regions such as the research into the ‘complex hunter-gatherers’ of the Archaic of southeastern North America (Section 2.8) and Mesolithic of north-west Europe (e.g. papers in Conneller & Warren 2006), yet by and large origins, transitions, ecological adaptations and dispersals remain the

only topics considered worthy of proper treatment for most hunter-gatherer archaeology. This is particularly the case for the earlier Pleistocene worldwide, not to mention those sizeable portions of the globe such as southern Africa or Australia that domesticated plants and animals did not reach till very late in the Holocene.

Despite the fact that recent hunter-gatherer ethnographies have themselves been key influences for current shifts in anthropological thinking in terms of breaking down the nature-society divide and focusing attention on ways of being in and relating to the world, (Hallowell 1960; Bird-David 1992; Ingold 1996), when it comes to archaeological theory tackling the same themes, hunter-gatherer pasts rarely feature. Dominant archaeological accounts of long-term change from a relational perspective, such as that provided by Hodder (2012), still rely on the Palaeolithic as a foil for what comes next, a time before things really got going. Reading Hodder – and his thesis is simply the most explicit of a number that stress the shift from hunter-gatherer to settled farmer was defined by increased mixing of the material and mental (e.g. Olsen 2010, Lucas 2012) – one gets the impression that unless the groups in question can prove they have made at least part of the evolutionary transition by broadening their spectrum or delaying their returns, they still find themselves labelled with the oppositional status of the timeless or the simple. Even those groups who appear to have actively resisted the forces of domestication (Head 2014), remain, according to the rules of this new canon, firmly stuck in the time before humans and the material world became really relational, before they became “drawn into the different temporalities of things”, and it is very clear that here Hodder really means only human-made things (Hodder 2012: 84, see section 2.10 for further discussion of Hodder’s ‘things’). Ironically, in an earlier treatise on the Neolithic, Hodder (1990) argued precisely for the reverse, that the major shift that accompanied the advent of domesticated sedentary life, was the emergence of cultural distinction between people and the natural world, in other words, before farming, there was ontological symmetry between culture and nature.

A straightforward explanation for this continued relegation of hunter-gatherers to a baseline status, regardless of the theory that is in vogue, would be to point the finger at origins research and argue that if more glamorous, publishable phases of change from pre-modern to modern, forager to farmer, and pre-colonial to colonial were not so central to archaeological thought, then we could get on with actually studying how hunter-gatherers were experiencing life in different times and places. Yet this would be to miss the depth of the issue and the various strands of thinking that keep origins

research at the heart of our discipline, despite longstanding criticisms (Conkey & Williams 1991; Moore 1995). Arguably, however, today, the pull, or perhaps more accurately, the push factors are stronger than they have ever been, with those writing research proposals and those controlling the budgets of funding and departmental outcome schemes all mutually reinforcing the need to be in the business of human beginnings.

In southern Africa, for example, there is little doubt, that the success of two major origins projects bracketing the LSA, the supposed emergence of ‘symbolic’ or ‘modern’ behaviour between *c.* 70 and 50 kya (e.g. Wadley 2001; Henshilwood & Marean 2003; Henshilwood & Dubreuil 2011) and the arrival of pastoralism around 2000 BP (e.g. Sadr 2003; Orton *et al.* 2013), have done little to encourage research on those largely silent but vast ages in between. Some ‘transitions’ like that spanning the MSA and LSA and the Pleistocene-Holocene boundaries, at *c.* 40-20 kya and *c.* 14-12 kya, respectively, receive sporadic attention (e.g. Mackay *et al.* 2014; Mitchell & Arthur 2014; Pargeter 2017), but, as I explore in more detail in Chapter 3, the early and mid-Holocene are no longer seen as the origin sites that they were previously (e.g. Wadley 1987, 1989b) and have thus received far less attention in the last two decades.

This is, of course, part of a deeper problem in hunter-gatherer archaeology which excels at beginnings and endings but struggles to write about human experience in particular times and places (Finlay 2003: 87). However, it would be a gross simplification, and counter-productive, to suggest that the origins quest – the main source of public attention for prehistoric archaeology – was at fault here. Nor would it be correct to argue against the more general emphasis on long-term directional change and the effects of certain ‘events’ or ‘emergences’ within these trajectories, there being no doubt, for example, that the Near Eastern Neolithic or the arrival of domestic stock in southern Africa *did* precipitate social change.

As others have made clear, there are strategies for balancing out the disciplinary disposition for origin events and over-arching progressivist thought, including targeting research on the silences, the ‘bits in-between’, and ‘writing across’ social-evolutionary stages (Pluciennik 2002), such as, in the southern African case, pre-and post-the behavioural emergences of the MSA and pre-and post the arrival of herding *c.* 2000 BP (e.g. Mitchell 2002). Blurring boundaries in the time-line is important, but often reactions to progressivism, such as the wealth of papers arguing against the Mesolithic-Neolithic as a social transition on the grounds that many Mesolithic contexts in

northwest Europe were already showing traits of ‘complexity’ (see examples in Rowley-Conwy 2001) simply move the origins event further back in time. Indeed, the very same argument, based on similar intensification model of coastal adaptations *c.* 3000 BP, has been employed in southern Africa with respect to the subsequent arrival of domesticated stock and pottery *c.* 2000 BP (e.g. Jerardino 1998). As I explore further below, this adding of stages to emphasise the activeness of these formerly overlooked periods of time or transitions only serves to extend the *time of the haves* and to reinforce the idea that prior to this came a passive, inert, *time of the have nots*, without these traits, i.e., a time before history (Wolf 1982). Thus, for the LSA, this becomes pre-3000 BP instead of pre-2000 BP; for British prehistory, the sliding marker of origins is moved to earlier parts of the Mesolithic or back to the Late glacial Upper Palaeolithic.

A number of more radical perspectives on long-term change offer alternative insights into overlooked hunter-gatherer records such as the southern African LSA. Following a broader reworking of evolutionary theory that stressed contingency and multi-directionality (Gould 1989, 2002), the contemporary Darwinist archaeology of cultural transmission emphasises “branching differentiation rather than directional change” (Shennan 2009: 12). Others also working within a broadly evolutionary framework have made concerted efforts to show that there is abundant archaeological evidence for the disappearance of societal complexity, or processes of ‘simplification’, such as Kuijt’s (2009) work on the abandonment of ‘mega-villages’ and return to dispersed settlement in the Levant *c.* 8700 BP, and Rowley-Conwy’s (2001: 56–57) discussion of the replacement of sedentism by high-mobility in the eastern Arctic, *c.* 3600 BP (Fitzhugh’s 1983). More recently, as part of a critical reassessment of time, models of overlapping processes (Lucas 2015) have been added to this mix, that appear to reflect better the durational nature of the material world in general, including *all* human experience of it. Finally, a necessary corrective on the concept of change itself has emerged as a result of discussions of agency and practice and the focus on the role of embodied everyday life in recreating social structures (Section 4.2.1). What may appear like cultural stasis, a period of inaction, or non-development may in fact be quite the reverse and involve more dynamic phases of recreation in the face of adversity (Joyce & Lopiparo 2005), or active resistance to external and internal forces (Head 2014). Non-progressive yet highly active histories are thus also important to consider.

All these approaches are part of the solution, but before I explore these ideas further, we must tackle the embedded assumption of unilineal progressive change



towards a more complicated present i.e., “...*the sequence from incoherent homogeneity to coherent heterogeneity or differentiation and specialization as a meta-sign of progress*” (Rowlands 1988: 36), as it is this which seems to be at the core of why we fail to build adequate theories for most of our hunter-gatherer past. It is so much a part of what we do as archaeologists, and in particular the way that hunter-gatherers fit within the wider discipline, that it often goes completely unrecognised. A sizeable shift in our thinking is therefore required if we are to both expose it and find ways around it. As already noted, it is rather ironic that nowhere is this social evolutionary narrative more clearly reproduced than in contemporary theoretical text books and long-term narratives of social change from within currently popular relational schools of archaeological thought, that explicitly aim to break down other modernist assumptions.

In the remainder of this chapter, I explore how the idea of origins is fused at a deeper ontological level with ideas of hunter-gatherer society and history that cross-cut seemingly opposed theoretical perspectives. The origins of the idea that hunter-gatherers are an essential baseline from which all else stems are first briefly outlined by charting the invention of the ‘simple’ hunter-gatherer as a concept in Enlightenment thought and its reification in late nineteenth and early-mid twentieth century structuralisms as an oppositional concept to that of society, itself defined as all that hunter-gatherers lack.

### 2.3. The essential baseline

Negative statements about hunter-gatherers have always played a central role in anthropological and archaeological thought, associated with the emergence of the social sciences at the height of European imperialism. Of course, the generalised idea of the simple savage residing in the wild, and therefore being closer to the animal kingdom, has a much greater antiquity reaching back to the medieval ordering of different human cultures and animals in *The Great Chain of Being*, and beyond this to the Classical world (Rowlands 1988). Yet as both Pluciennik (2002) and Barnard (2004) make clear, the specific notion of non-agricultural and pre-herding hunters as a description of real living peoples encountered at a time of mercantile expansion and increasing colonial occupation *and* an earlier stage of social evolution first appears as a conjoined philosophical concept in the seventeenth and eighteenth centuries. While this produced many variations on the theme of the simple hunter-gatherer as a baseline of society or

culture, the defining characteristic, even in those less common, romantic versions of the primitive such as Rousseau's (1994[1755]) noble savage (Pluciennik 2002: 137), was that of absence. The crystallisation of social evolutionary thought in the nineteenth century both elaborated and cemented these earlier ideas of the past as a progression from savagery through barbarism to civilisation (Morgan 1877). The less savoury idea that unilinear evolution concerned moral development and that it was largely determined by biology was an assumption shared by all Victorian scholars (Kelly 1995: 8).

The development of various structuralisms and functionalisms in the emerging field of anthropology in the early twentieth century, with the general aim to study society as a superorganic whole with interrelated parts, remained influenced by the popularity of social evolutionary thought and only further cemented this widespread belief in the inferiority of small-scale societies. Durkheim's (1984[1893]) hugely influential work on the division of labour located hunter-gatherers and other small-scale societies, who lacked social differentiation at one end of the scale, with kinship and gender their only axes of 'segmentation', and whose structure was held together solely by common values and beliefs. At the other end was modern society with its varied cultural norms, cohered through interdependence of its many specialised parts. Another widely accepted component of early twentieth century concepts of primitive society, of which hunter-gatherers were the example *par excellence*, was that because they were socially undifferentiated, they lacked the internal forces for change associated with increased interaction and competition between individuals or groups found in modern societies (Schnore 1958). Despite an explicit move away from evolutionary or historical explanations, towards a concern with the workings of society, the foundational texts of British structural-functionalism, which developed from Durkheim's concept of segmentation, required a more refined typology of social systems. Hunter-gatherers once again found themselves shunted even further down the scale to distinguish them from more differentiated and thus more 'complex' pastoralists and farmers (Radcliffe-Brown 1940), a way of thinking eventually enshrined in the classic 'band' versus 'tribe' distinction (e.g. Service 1962).

Leach (1986: 1) reminds us that the unsavoury, moral progress side of evolutionary thought prevailed well into mid-twentieth century anthropology, and that "Radcliffe-Brown was writing about the Australian Aborigines as prototypical representatives of 'the lower races' as late as 1945." Likewise, in archaeology, the

Mesolithic faced dismissal as “the impasse of savagery” by another disciplinary forefather, Vere Gordon Childe (1942: 55). Indeed, these attitudes remained deeply embedded in cultural evolutionary models during the 1960s and 1970s, in which the natural baseline of the hunter-gatherer was paramount for the origin narratives of the rise of Eurasian civilisation, as exemplified by Colin Renfrew’s (1972: 11) sweeping statement:

And whereas the savage hunter lives in an environment not so different in many ways from that of other animals, although enlarged already by the use of language and of a whole range of other artefacts in the culture, civilised man lives in an environment very much of his own creation. Civilisation, in this sense, is the self made environment of man, which he had fashioned to insulate himself from the primaeval environment of nature alone.

Lévi-Strauss’s structuralism attempted to “replace the clumsy distinction between ‘peoples without history’ and others” by emphasising the role of myth in traditional structures which worked to “annul the possible effects of historical factors on their equilibrium and continuity in a quasi-automatic fashion” in contrast to Western societies which used the past by “resolutely internalizing the historical process and making it the moving power of their development” (Lévi-Strauss 1966: 233–234). This was not to say that primitive societies did not experience cultural change; it was just that they lacked self-awareness of it. Famously, Levi-Strauss labelled this distinction as between “cold” and “hot” societies, and again hunter-gatherers, in particular Australian Aborigines, were, the key examples of the former. There is no doubt that some aspects of this idea, in particular the notion that ritualised knowledge and practice works to habituate changing circumstances, continue to resonate in more recent theory (e.g. Gosden 1994), but in general, Levi-Strauss’ denial of history-making in non-Western society only further entrenched the distinction and distance between those with and those without.

Although the terms ‘primitive’ and ‘savage’ no longer feature, all these ideas from the formative days, including both positive and negative versions of the original human society, the conflation of contemporary hunter-gatherer societies with the Stone Age past, the structuralist equations that more parts equal more society *and* more history, and the material culture poverty of mobile people, are still very much a part of mainstream archaeological theory. The prime example of the complex society for the

early twentieth century social scientists was, of course, their own: the industrial Western state. Not surprisingly then, the first major period of hunter-gatherer reinvention, which followed the end of the most violent phase of conflict between industrialised nations, saw them defined, in the new anthropological field of hunter-gatherer studies, more in line with Rousseau's noble savage, a peaceful baseline, at a time when the search for a narrative of prior universality was paramount. The inherent problems with the Enlightenment method of conflating present-day small-scale societies with the imaginary original humans, were not yet on the agenda.

#### 2.4. The desire for a universal past

It is always worth remembering the historical context of the 1950s and 1960s when the initial wave of Marxist-infused hunter-gatherer anthropology took off, as it was both this desire for a universal past (Harraway 1992: 197) and the general positivist mood of the post-war social sciences (Marcus & Fischer 1986: 22) that influenced the search for singular global models of *the* hunter-gatherer past. Research focused initially on the Kalahari San of southern Africa and the Hadza of East Africa, yet soon extended elsewhere. High mobility, a lack of property and egalitarian social relations based on sharing were the defining attributes of the reimagined hunter-gatherer (Marshall 1961; Lee & DeVore 1968).

In general terms, hunter-gatherer studies as a subfield did much to overturn longstanding negative assumptions concerning the inferiority of small-scale societies. Sahlins' (1968) idea of the Original Affluent Society, in particular (drawing heavily on the work of Richard Lee (1968)), explained that hunter-gatherers were not poverty stricken, but simply wanted for less and, in fact, spent fewer hours acquiring food than farmers. At the time, this revelation was claimed as a critique of the Enlightenment concepts of technological and moral advancement associated with civilisation, and indeed it has had significant influence more recently on the critique of Western ideas of progress from anti-capitalist standpoints (e.g. Rahnema 1997: 12–13, though see Kuper 2003). However, and despite its revival of the positive image of non-farming peoples and its association with the multilinear evolution of Julian Steward (Lee 1972: 177) progressivist ideas were implicit in this early phase of hunter-gatherer anthropology. In addition to all the usual traits hunter-gatherers had been thought to lack since the term was first invented in the eighteenth century, including the absence

of property, the key thing that these materialist models emphasised was the absence of food storage, i.e. the accumulation of economic surplus and thus, importantly, the delayed returns associated to the investment of time (Sahlins 1972).

One of the reasons the popularity of this first wave of hunter-gatherer anthropology was maintained for so long both inside and outside academia was because it provided the narrative of a universal peaceful past so desired in the 1950s and early 1960s, as well as a counterpoint for the uncertain future that dominated political and cultural thought in the late 1960s and 1970s. The Enlightenment ideal that moral betterment was directly linked to technological progress was losing its power in the post-Vietnam world (Kelly 1995: 15). Ecological and population concerns fuelled the public and academic appetite for a revival of Rousseau's romantic version of the past in which peaceful, low density societies lived in balance with nature (Trigger 2006).

Hunter-gatherer studies were, however, more varied than this characterisation affords, and, despite giving priority to ecological context and economy, the social relations of production of egalitarian small-scale non-food producing societies also gained anthropological attention for the first time. As the volume of research increased during the 1970s and 1980s, the prior position of economic and environmental factors was increasingly brought into question. This broadening of the theoretical repertoire led to a much deeper understanding of the complexities of hunter-gatherer social relations. Far from being absent, the key components of these relations were dispersed in complex, non-structured and difficult-to-see (from a Western perspective) practices. In southern Africa alone, religious practice (Guenther 1979), egalitarianism (Cashdan 1980), sharing (Kent 1993), exchange (Weissner 1982), gender relations (Draper 1975), kinship (Barnard 1988), and part assimilation within neighbouring food-producing societies (Guenther 1977) all became major research foci in their own right. Hunter-gatherers did, after all, have society, and the structuralist and evolutionary frameworks were beginning to creak as a result. Morris (1982) reminds us just how challenging the lack of horizontal or hierarchical structure was for the mainstream anthropological community, which initially treated the study of hunter-gatherer social relations with sheer disbelief.

In archaeology, however, it was the ecological and economic aspects of hunter-gatherer studies that gained most attention as these were seen to match more closely the timescales and types of evidence available (see section 2.6). In particular, models of seasonal movements and resource use based on southern African anthropological

ethnographies were seized upon by those working in Pleistocene and Holocene hunter-gatherer archaeology worldwide (e.g. Clarke 1976; Shott 1989). Finally, archaeologists had tools with which to think. The collapsing or refusal of time inherent in these models was, however, about to catch up with those who should have known better.

Indeed, it was the explicit cross-temporal and cross-geographical ambitions of leading Kalahari anthropologists such as Richard Lee, and their avid take-up within archaeology as *the* model of hunter-gatherer society, that sowed the seeds of the revisionist critique that emerged in the 1970s and 1980s. It was, of course, no accident that its two leading exponents, Carmel Schrire and Edwin Wilmsen, had previously been active in mainstream economic hunter-gatherer archaeology (e.g. Schrire 1962; Wilmsen 1970). There were different strands to this debate, both in the initial critique as well as in the strong reaction from anthropologists and archaeologists (see Kent 1992; Sadr 1997; Barnard 2007: 97–112 for extensive reviews), but at its centre was the claim from the revisionist side that the Kalahari school of anthropology was working in a historical vacuum. Its practitioners were accused of denying the long history of interaction between hunter-gatherers and food-producers in the region and of ignoring the evidence that those groups described as hunter-gatherers were impoverished and marginalised peoples, who had, in fact, once been herders, and possibly farmers, themselves (Schrire 1980; Headland & Reid 1989; Wilmsen 1989).

This claim of de-historicisation was, of course, being made more broadly within an emergent critical anthropology at this time (Fabian 1983; Marcus & Fischer 1986; Thomas 1996), and also connects to a larger debate in other historical disciplines (Wolf 1982) and the wider social sciences (Said 1978; Escobar 1988) about the colonial and imperialistic tendencies of Western thought and its positioning of the timeless and undeveloped ‘Other’. The eye of this particular storm was the Kalahari but there were, and still are, global repercussions about the implications of studying non-Western societies in isolation, or even at all. Few anthropologists today would claim that it is possible to write an accurate ethnography of hunter-gatherers or any small-scale society without acknowledging their connections to a wider global system. Yet, whilst not denying the importance of this post-colonial awakening across the disciplines, the revisionist critique offered no *framework* for studying social relations and historical change in the pre-colonial past. We are still left with the enormous variety of past hunter-gatherer records.

## 2.5. Post-revisionist LSA archaeology

Some archaeologists have attempted to take the positive from the revisionist critique. As Mitchell (2005) has pointed out, the lessons of the Kalahari debate provide us with a critical standpoint from which to rejuvenate hunter-gatherer archaeologies, such as the southern African LSA, that currently lie outside of major origins research. They provide the opportunity to break free from the “tyranny” of the ethnographic record (Wobst 1978) and reposition *all* hunter-gatherer archaeology as a historical enterprise (see also Parkington 1984a, and Sassaman 1998: 95 for similar views from a North American perspective).

Yet, in general terms, the effects of the revisionist critique on the southern Africa LSA have been far from positive. Instead of embracing the variety of times and places of hunter-gatherer pasts, southern African and in particular South African, archaeology has moved in two opposite directions. Many former LSA specialists now work on the much earlier >40 kya MSA origins quest associated with the emergence of ‘modernity’, safely distanced from any association with the politicised present (although see Mitchell 2012; Pargeter *et al.* 2016), or, solely on the last 2000 years. The second of these trends is clearly associated with the revisionist critique and the broader post-colonial mood of the social sciences in South Africa and takes the form of a sort of implicit assumption that history, in terms of being able to identify the subjugated and subaltern, really begins post-2000 BP when the ‘shared landscapes’ of hunters and herders first appears. From this point forward, archaeologists feel justified in their claims to be conducting research into a multi-cultural past relevant to the identity politics of contemporary South Africa. For many, archaeology has understandably become an explicitly political enterprise, a way of decolonising the academy and challenging essentialising racist science (Shepherd 2003; Ndlovu 2009). Although this more overt politicisation of archaeology has to be seen as a necessary direction in a region plagued by inequality and still struggling to free itself from the injustices of the recent past, one side-effect is less desirable, namely the growing divide between those archaeologists studying the deeper past and those studying more recent periods. In this climate, earlier prehistory, with the exception of rock art, became associated more strongly with positivist natural science, and later Holocene prehistory, in particular the last 500 years, with the humanities and politics (Swanepoel *et al.* 2008). By distancing itself from the deeper hunter-gatherer past, the post-colonial critique has, thus far at

least, only further impeded the former's transformation into a socially relevant area of research.

There was, however, a more specific kind of origins discourse within the revisionist argument. Hunter-gatherers were assumed to have lacked the ability to resist change when coming into contact with food-producers. There was an inevitability, a teleological flavour to the revisionist argument. As Kent (2002: 1) puts it, "*The so-called revisionist anthropologists claim that all southern African hunter-gatherers, including those occupying the Kalahari Desert, lost their hunter-gatherer culture circa 1,500–2,000 years ago.*" The San were repositioned as the dispossessed, which, though no doubt factually correct in some contexts, became the new orthodoxy for an incredibly diverse set of peoples from a wide geographical area (Wilmsen 1989). As well as forcing a crucial reinsertion of the contemporary political situation of hunter-gatherers in semi-arid southern Africa, the revisionist project had thus set another marker on the sliding scale of when, or after which time, we allow hunter-gatherers to have history. Prior to 2000 BP, southern Africa south of the Limpopo has been reimagined as a time before culture contact, before identity politics, before the emergence of the modern condition of cultural diversity. Ironically, considering their claims to counter the timeless image of the hunter-gatherer past, in this way the revisionists inadvertently dehistoricised the rest of the Holocene and Pleistocene.

As I have mentioned, the Kalahari Debate is part of a much wider critique of traditional anthropology epitomised in Adam Kuper's now classic extended essay (Kuper 1988) and its more recent update (Kuper 2005). As an archaeologist, it seems reasonable to agree with Kuper that there is no such thing as the ethnographic present, which can be used as a direct window into the '*pre-historic*' past, and also to take his side against the lazy use of terms such as 'primitive' or 'indigenous'. It is also reasonable to assert, however, with equal conviction, that there was indeed a time before farming, a time before states and cities. This is a point asserted by Tim Ingold (1989) in his response to Kuper (1988), in which he also makes the case that denying all directionality in history would be simply absurd. I would, however, qualify this and add that global history is also full of examples of small-scale societies never having been fully encapsulated, and thus managing to remain largely independent of their farming and pastoralist neighbours, something that is evident even for some hunter-gathering groups in the Kalahari (e.g. Sadr 2002). Acknowledging the diversity of earlier human history, where hunter-gatherers uncontrovertibly did exist independently



of food-producing societies, trying to understand these *times before* (cf. Rowley-Conwy 2001: 44) as times with just as much social activity and history as the *times after* is therefore increasingly important.

Perhaps the major challenge that the revisionist critique presents is to revisit those varied contexts of the deeper archaeological past that clearly include ways-of-being not recorded ethnographically. However, as Ingold (2007) rightly reminds us, the importance of studying human history over the long-term has a much broader appeal than anthropology or archaeology typically grasps. As both socio-cultural anthropology, and much of archaeology, moves away from studying longer term change, the space gets filled by those with an explicit agenda to flatten time, as seen in the linked endeavours of sociobiology and its more recent associate, evolutionary psychology, which position present-day hunter-gatherers as correlates of a Stone Age past without any recourse to their current political and economic context.

To summarise, in terms of the southern Africa LSA the archaeological reaction to the revisionist critique brought a whole new dimension to *later* Holocene history. Yet the deep silence on the other eight thousand years of the Holocene, a topic which I explore in greater detail in the next chapter, is deafening. It is important to note, however, that the southern African situation is far from unique. Globally, hunter-gatherer archaeologies, outside the sorts of origins projects and studies of complexity discussed below, have yet to receive the level of critical attention that they deserve. Unlike the enduring state of inertia in LSA archaeology, however, alternatives to the ecological versus social stalemate have begun to gather momentum in Britain and North America in the last decade and an increasingly broad theoretical canvas is being tabled to circumvent this “analytical impasse” (Jordan 2006: 83), allowing archaeologists to move beyond having to choose between functional and adaptive interpretations on the one hand or constructivist and textual approaches on the other (e.g. Finlay 2003; Warren 2006; Canon 2011; Conneller 2011).

A key question at the forefront of these new ways of thinking about hunter-gatherer archaeology is what constitutes social relations, and it is to answering the theoretical aspects of this that I turn to shortly. First, however, it is important to think a little about the archaeological record itself. Many of the assumptions that conspire to deny hunter-gatherers a social world appear to rest on outdated and often incorrect notions that because the material traces they leave behind consist largely of accumulations of animal bone and chipped stone, which have been more ravaged by

the passage of time than those from later periods, they are only good for recording broad changes in subsistence practices or techno-cultural sequences.

## 2.6. Scraps of data

The notion that the global hunter-gatherer record is too poor to be of social value is part and parcel of the less than favourable attitudes that mainstream archaeology expresses more generally towards the deeper past. Like the *time before history* trope described above, this is a concept rehashed through virtually every successive phase of archaeological thought from the beginnings of the discipline, most famously articulated with Childe's (1951: 85) characterisation of the Mesolithic record as consisting of meagre "scraps". It is, of course, beyond doubt that there is generally an increased fragmentation and decay of organic materials as we move further back in time. The most worrying thing about the scraps of data thesis, however, is that it is often not easy to distinguish the archaeologist's assessment of the degree of material preservation left behind from her standpoint on the degree of a particular trait of modernity in past peoples' lives, and that judging by the lack of critical reflection on this point it seems that authors are often less than clear themselves. This slippage is, perhaps, most obvious in overtly post-modern texts from the late twentieth century. These typically took radical stances against the progressivist tropes of high modernism (Wobst 1997), such as 'civilisation' and the 'primitive' (e.g. Shanks & Tilley 1987), yet because of their explicit focus on material culture as symbolic representation, i.e. akin to a text, they emphasised monumental architecture, art and ritual objects, in other words, the stuff of Western civilisation, and in so doing fell straight into the very epistemological trap – of dividing the past into the haves and the have nots – they were trying to deconstruct! It seems that the "paradigm shift" towards ideological concerns heralded by postprocessualists (Tilley 1989: 185) did not include those societies without elaborate material culture. Gamble & Gittins (2004: 99) sum this up in their review of Palaeolithic archaeology, suggesting that the deeper past had been "abandoned" by social archaeologists because of its "slim pickings" and as a result was confined to the "broader interests of neo-evolutionary typologies."

Evolutionary archaeology clearly worked the other side of the scraps of data canon as best seen in Bailey's (1981, 2007) now oft-repeated arguments for Palaeolithic archaeology to have a different set of theories more suited to its undifferentiated record

(cf. Ames 1991; Stern 1994). This notion, that different grades of temporal resolution are suited to different types of questions, has, in its most cogent form, been called time perspectivism (Bailey 1981), and was associated to a broader debate in behavioural archaeology that exposed the erroneous ideal that archaeological deposits could be interpreted as if they were direct reflections of past events (Binford 1981). The important difference between Bailey's time perspectivism and the negative dismissals of the hunter-gatherer record from social archaeologies of later prehistory is that the palimpsestual nature of the record is reimagined as a positive attribute in the sense that it provides justification for both the long-term, adaptive and economic focus of hunter-gatherer archaeology and for the rejection of theory from other social sciences.

The original arguments for, and the more recent revival of, time perspectivism (Bailey 2007; Holdaway & Wandsnider 2008) raise important considerations for any archaeologist. Simply put, time perspectivism (correctly) treats all archaeological material records as palimpsests (Holdaway & Wandsnider 2008: 1), arguing that there is an important difference between the material assemblages we study as archaeologists and the sediments from which we excavate them. In other words, that one cannot necessarily be directly equated with the other. Less easy to support however, is the implication that instead of attempting to work with the more complicated scenario that this actually reveals (see below), we should view deposits and the assemblages contained within them as time-averaged aggregates of repetitive action, reflective more of the adaptive behavioural system than of the choices and cultural forces driving individual or even group action.

Although the implication of these observations is at odds with my own perspective, the issues raised are clearly important. As Lucas (2012) effectively argues, the problem with time perspectivism is its rigidity. It does not allow for the fact that a significant amount of the Palaeolithic archaeological record does, in fact, also contain sedimentary deposits that were, at least in part, formed by human action (hearths, middens, refuse and storage pits, surfaces, burials etc.). Second, though I agree with the adherents of time perspectivism that the relationship between artefactual assemblages and sediments is not as straightforward as archaeologists have traditionally assumed, there is commonly still some correlation between specific human-action, sedimentary contexts and their material components, that is vital to explore. In other words, in their commendable drive to critique the archaeological ideal of the event, the time perspectivists have gone too far in their labelling of all Palaeolithic archaeology as an

undefined palimpsest. As Lucas (2012) reminds us, the reality is that no archaeological layer or feature is ever truly a palimpsest or a stratigraphic event, they are all both, at all times. The repackaging of palimpsests as a positive attribute is also to be supported but not in the way that time perspectivism has asserted. They are there to be interpreted, not presumed to be uninterpretable and therefore suitable for flattening, as time perspectivism appears to intend.

Palimpsests are, of course, often a patchwork of events, mixed up with overlapping, contemporaneous, and sometimes even sequential relations between sedimentary and artefactual elements. And it is an important aim of this thesis to highlight this and attempt to turn it into a positive attribute. In particular, the acceptance of both the palimpsestual *and* eventful nature of past material records is, in my opinion, one of the most important steps that hunter-gatherer archaeologists need to take. This is especially for those working with records like the southern African LSA, which are in a sense caught between these two disciplinary worlds of, on the one hand, later prehistory, characterised by the ideal of the event, from which we can interpret either function or symbolic acts, and, on the other, earlier hunter-gatherer prehistory, apparently limited to the ideal of the aggregate deposit, suitable only for reconstructing adaptive systems and processes of cultural drift.

The intricacies of how we might actually go about working with complicated material records that can more accurately be said to simultaneously consist of both these ideal forms is key theme of later chapters. Of more immediate concern is the way that the reductionist framework of time perspectivism filtered into broader prehistoric research and then gained tacit approval within archaeology generally (e.g. Trigger 2006: 518). In part, this seems to be the result of a sort of comfortable truce, after the polemical years of debate between those in favour of a behavioural science approach to the past versus those who viewed archaeology as historical interpretation. In a sense it suited the orthodoxies on both sides to keep these two ideal versions of the archaeological record alive. In my opinion this has been extremely damaging to many hunter-gatherer contexts around the world. The problematic palimpsest concept – in many ways the main assumption of time perspectivism – has become an *implicit*, accepted way of thinking about the archaeological record, at least in southern African Stone Age archaeology, despite well-stratified LSA and MSA sites being the norm, a theme I explore in more detail in Chapter 3.

There is also an inherent contradiction in time perspectivism, which on the one hand claims that the record is differentially preserved over time so that long-term adaptive processes are the only ones suitable for the Palaeolithic, while on the other arguing that the recognition of such changes over the *longue durée* depends on the assumption that the record is *not* differentially preserved. This is a major concern for origins projects such as those seeking Holocene intensification, which often rely specifically on the recognition of increases in organic materials such as plant-food remains, fishing technology, painted rock art, and so forth (Clarke 1976; Bender 1985a: 54).

It is not, however, only the resolution of the record that is at stake in time perspectivism and the broader scraps of data thesis, it is the question of what being a hunter-gatherer entails. Since the beginning of archaeological thought, we can trace the generalised idea that because most mobile hunter-gatherer material culture is geared towards technological and subsistence practices it is somehow not suitable for interpretation in any terms outside these two realms (Bradley 1984). Of course, a strict division between economic and social, or between secular and ritual, spheres of life does not stand up to recent ethnographic and archaeological work and, as already noted, the breaking down of these dualisms and the underlying nature-culture and subject-object problematics has been at the heart of much contemporary theorising for some time (Gosden 1994; Ingold 1996; Descola 2006). In general, however, and despite the flurry of major texts on the problems of dualistic thought in recent years, we are far from achieving the breakthroughs for broader archaeology that have long been proposed (Johnson 2010). Nowhere is this more evident than in the study of the earlier prehistory of hunter-gatherers, which by and large remains firmly entrenched in *either* an explicitly technological and subsistence framework, *or* – where suitably elaborate material culture is available – one that stresses ritual and symbolic types of behaviour. As mentioned in Chapter 1 and explored in the following chapter, this symbolic/economic divide is still alive and well in southern African Stone Age archaeology (cf. Dowson 2007; Low 2014; Guenther 2015). Worldwide, there are, of course, some notable exceptions, chief amongst them a small group of researchers working on the British and Irish Mesolithic over the last decade who have made a concerted effort to revisit familiar, and readily available, types of material such as faunal remains and lithic assemblages, and emphasise the importance of seemingly

mundane, subsistence-related tasks in the reproduction of social worlds (e.g. Conneller & Warren 2006: 8; Finlayson 2006: 98).

In summary, the ‘scraps of data’ assumption offers the same negative perspective that troubled us during the initial excavations in Lesotho described in Chapter 1 and is a central theme I will be exploring in the following two chapters. The broader point here, however, is not to assert that the hunter-gatherer record is richer than has generally been thought, but rather to highlight that our conceptions of the archaeological record are inextricably tied to the way we think about past people and that in order to get a closer understanding of one or the other we need to pay due attention to both simultaneously.

It is to the latter part of this method-theory entanglement, the question of whether people known as hunter-gatherers live within a structure that can be called a society, to which I now return in order to conclude this chapter. Whilst acknowledging the privileged position of hindsight, looking back over the history of archaeology of the late twentieth and early twentyfirst century it becomes increasingly apparent that the seemingly opposed pillars of behavioural and interpretive theory were propping up the same sliding scale that had always been present and that both, in their own way, implicitly reinforced the conventional view that the majority of the hunter-gatherer past was unsuitable for questions concerning social relations. I begin by briefly exploring Darwinian approaches in hunter-gatherer archaeology which are underpinned by a general belief that environmental constraints are determinate, before looking at the problematic connections between complexity, elaborate material culture and time.

## 2.7. Society as adaptation

We have already seen how the scraps of data argument is an explicit assumption of some evolutionary branches of hunter-gatherer archaeology, thereby justifying their focus on adaptive processes and natural selection operating over the *longue durée* (Braudel 1972). The other foundational principle, at least of the cultural ecology wing of evolutionary thought that still dominates hunter-gatherer archaeology in many parts of the world, including North America and Australia, is that social relations are secondary to economic concerns. Early versions of cultural ecology in archaeology, part of the broader re-emergence of evolutionary theory in North American anthropology in the 1960s, such as that proposed by Binford (1962, 1965), defined

culture as the means by which a society adapts to its environment and dismissed traditions and specific beliefs that could not be shown to be adaptive as inconsequential. The assumption was that prehistoric people possessed an accurate knowledge of their environment, and “could calculate the most rationale response to any problem. That meant that human beings could be analysed in the same manner as any other part of the ecosystem” (Trigger 2006: 395).

Recent ‘softer’ versions of cultural ecology (Johnson 2010) aim to be more holistic, claiming that ecological reductionism is simply a necessary first step in the process (Winterhalder & Smith 2000). This contemporary form of cultural ecology generally falls under the rubric of behavioural ecology and has growing influence in southern African hunter-gatherer archaeology (e.g. Humphreys 2007; Dusseldorp 2012). The belief that individuals act rationally in response to ecological problems remains central, yet in recent work it is more explicitly associated to the Darwinian idea that such decision making is undertaken to maximise reproductive fitness. This idea of fitness is linked by its practitioners to micro-economic cost-benefit and rational choice theory based on the idea of optimal solutions to given problems. Reductionism is explicit in order to build replicable models and defended on the grounds that it is not meant to reflect reality but rather test certain variables in a clear and concise manner. Explanations can then focus on how far archaeological data diverges from expectations (Broughton & O’Connell 1999). One of its most positive outcomes is that it has been instrumental in deconstructing dichotomous models of immediate versus delayed return hunter-gatherers, as modelled by Woodburn (1982) or the comparable archaeological version of forager versus collector constructed by Binford (1980) that essentially divide all hunter-gatherers into simple and complex, by providing insights into the *diversity* of contemporary foraging societies (Kelly 1995).

Yet, despite these successes, the same problem that the older generation of cultural ecologists failed to address, that of human agency, still troubles the more recent applications of behavioural ecology. Models remain solely at the macro-level of structural change and individuals remain passive decision makers, bound to the path of least resistance (Bender 1985a; Mazel 1989b; Parkington 1993). Social relations have been incorporated into these models in recent years, yet the emphasis has been restricted to studies of mobility, exchange and storage (Habu & Fitzurgh 2002), in other words, aspects of social life that have directly measurable economic and adaptive correlates. A more fundamental criticism comes from Ingold (2000: 30), who targets the weakness

of the central assumption that the rational decisions which guide human behaviour, such as choices to procure food from one species of animal or plant or another, operate through a cognitive template and that this template is an adaptive phenomenon, i.e. is generated by natural selection, rather than during interaction with the world. For Ingold, human knowledge and skilled activity cannot be reduced to such a one-way process but form a more complex and *relational* process than simply mind reacting to ecological opportunity. Relations between a person and the external world, including all other human persons, are what constitutes the social world, so simply doing away with them because they are not as easily measured makes no sense at all.

Instead of engaging with Ingold's argument, in a recent reply Bettinger *et al.* (2015) proclaim that their model is intentionally pared down to bare economic decision making in order to make it scientifically robust, with the implication that if they wanted to, they could, of course, interpret it in Ingold's terms, but because his ideas cannot be 'falsified' they will not be entertained. Self-confessed economic reductionism and dogmatic adherence to scientific laws such as this may appear elegant to some, but in truth the next stage of interpretation outside hypothesis testing rarely sees the light of day and in most applications of behavioural ecology, the social remains firmly in the epiphenomenal realm. There are indeed some notable exceptions in archaeological applications of behavioural ecology, such as Tostevin's (2007) attempt to combine Ingold's (2000) idea of the taskscape, with ecological approaches in the analysis of lithic assemblages. Yet hybrid versions such as this, which actually elevate social factors to a higher level of explanation, remain problematic precisely because they make this rigid separation. Social relations remain abstracted from the world in which hunter-gatherers live, detached from the material traces they leave behind.

The future was, according to its leading proponents, meant to see the application of behavioural ecology extended to non-hunter-gatherers (Winterhalder & Smith 2000), but despite having been around for at least four decades, attempts to apply this line of thinking to larger-scale societies have rarely materialised. Why then, we must ask, are such ultra-reductionist models suitable for hunter-gatherers, hunter-gatherers in transition and some small-scale food-producers, but no-one else? In truth, this is because the one assumption that is not as explicit is that there remains a deep unilinear evolutionary scale underlying the Stewardian multilinear one, based on the division of humanity into those whose lives are thought to be within nature, and thus ruled by



ecological and economic factors, and those whose lives are within society and whose behaviour is determined by their relations to other people.

## 2.8. Society as ‘complexity’

One research area in which both the older type of cultural ecology and the new breed of behavioural ecology have been particularly active is in providing explanations of hunter-gatherer subsistence ‘intensification’. This was originally associated with the emergence of agriculture (Flannery 1969), but by the mid-1980s, in line with the broader focus on hunter-gatherer diversity noted above, archaeologists began emphasising the fact that many of the typical traits of ‘complex’ agricultural societies – such as sedentism, food storage, stratification and wealth accumulation – were recognisable in the material remains of prehistoric foragers. Therefore, there must have been processes of productive intensification similar to that which led to agriculture, but without domesticated crops or animals playing a part. A surge of interest in the rise of inequality and the transition from simple to complex social forms in the later Pleistocene and Holocene followed (e.g. Bender 1985; Price & Brown 1985; Arnold 1987; Keeley 1988). The main concepts were, however, transferred directly from one archaeological domain to another, from the 1960s emergence of agriculture model to the 1980s emergence of inequality model. The underlying framework remained very much the same, with environment and demographic pressure the most important factors. Cultural institutions and structures, such as specialisation, ranking, and sedentism, were viewed as adaptive phenomena for resolving imbalances and economic risks inherent in the system. Complexity was typically presented as a model-like package of dependent traits, borrowed from those same models of agricultural origins such as hereditary-inequality and large group size, which were said to distinguish the transformed type of hunter-gatherer society from those that came before. The scales of analysis were once again kept at the macro-level and individuals viewed as rational decision makers, left with little choice but to gradually follow “*the path of least resistance*” along the road to intensification (Price & Brown 1985: 7–10).

In reaction to this overt economic determinism, a new generation of Marxist-influenced archaeologists had already begun to write counter explanations in which internal dynamics were seen as the determining factor for the appearance of complex social forms associated with the emergence of agriculture (Bender 1979). These were

also similarly transferred across to the new domain of hunter-gatherer complexity (e.g. Bender 1985a, 1985b, 1988). In direct response to the long-standing characterisation of hunter-gatherer groups as ‘cold’ societies, without the internal contradictions needed to generate change, Bender (1985b) argued that competing social strategies were causal forces of change in *all* societies. Tensions between social arenas, such as gender, age and kinship, and the processes of manipulation and conflict resolution that arose (social strategies) in response to them, were thought to be the important drivers of transformation. One of the main social strategies that was said to have resulted was additional investment of time and materials in aggregations and exchange. Productive and technological intensification is said to occur in order to compensate for this investment. Individuals or groups could exploit inequalities by controlling the exchange itself or the ritual activity that surrounds it. Over time these inequalities are thought to have the potential to become institutionalised within exchange and alliance networks, and thus either become a temporarily accepted norm, thereby slowing down or preventing change, or create further tensions, thereby initiating or speeding up change (Bender 1985a: 55). The rituals and symbolic material culture involved in the social side of this intensification process were traceable archaeologically in monument construction, elaborate burials, rock art, valuable items and traded goods. In common with the ecological and economic approaches, one deeply entrenched assumption that these Marxist approaches took for granted, is that complexity is equivalent to the degree of vertical and horizontal “closure” between different areas of a society (Bender 1985a: 55–56). Bender’s work was in many ways ground-breaking, yet it was limited by the insistence that the appearance of horizontal differentiation in the form of technological and subsistence specialisation and “exotica” in the form of rare objects automatically equals hierarchical forms of organisation (Bender 1985b: 47).

Whilst economic approaches dominated North American hunter-gatherer research well into the 2000s, there remained a strong counter-tradition of historical-social approaches which built on Bender and others’ early work (see also Lewis-Williams 1981; Conkey 1982; Gamble 1982; Lourandos 1983 for similar pioneering social approaches elsewhere), although this was almost entirely restricted to those particular areas and periods in which unusual or elaborate material culture was already well-documented. Sassaman’s (2004) favourable review of the field gives a sense of the enduring legacy of this symbolic/structuralist framework in North American archaeology, in which the focus on ritual and elaborate material culture is continually

reproduced. The Kalahari model of ‘the egalitarian hunter-gatherer’ remains the straw man against which this self-declared ‘historical’ archaeology casts itself. In common with the 1980s and 1990s post-processual emphasis on Neolithic and Bronze Age archaeology in Britain and to a certain extent the post-*apartheid* landscape of archaeology in South Africa described earlier in this chapter, history is synonymous with inequality and hierarchical social formations and with the power-struggles within and between groups. In this way of thinking, all material culture elaboration must somehow symbolise structures of inequality and the stratification of society. According to Sassaman (2004: 265), egalitarianism can only be derived historically from unequal relations with complex societies, and archaeologists who think they are working with egalitarian hunter-gatherers need to change their methods in order to identify the networks of interaction in which inequality must surely be manifest.

Granted, the application of the egalitarian model to North American hunter-gatherer contexts – as was common at the height of the Kalahari model’s influence (e.g. Shott 1989) – was an analogical stretch for even the most uniformitarian thinker, but there is little doubt that the pendulum has now swung too far in the opposite direction, with the almost uniform interpretation of any material culture differentiation as social closure or elaboration as representing control by powerful leaders or lineages. Of course, the more moderate claim that there is inequality in all hunter-gatherer societies is not in dispute here, an understanding that has enjoyed widespread acceptance for some time (Bender 1988; Flanagan 1989). I would also add, however, that practices seeking to reproduce relations of equality are similarly ubiquitous and just as likely to account for increases in ritualised activity seen in the archaeological record.

Relations of equality, such as sharing, may have been over-emphasised by the previous generation of hunter-gatherer anthropologists and archaeologists as a type of adaptive behaviour, but that does not mean that the observed practices themselves should be considered conceptually redundant. Any claims that egalitarianism was an all-pervasive cultural norm, or indeed an independent phenomenon that can be isolated and empirically measured, should also be viewed with scepticism. In truth, equality and inequality typically work in tandem – they are both present in any interaction. The Marxist model allows for this in its notion of tension and mediation of tension at the level of the group. Ritual and exchange mediate tensions but also create further imbalances and it is this cycle or *dialectic* in Marxist terms, which is thought to generate change. Yet in these accounts, as in the dominant adaptive models of complex hunter-

gatherers influenced by cultural ecology (e.g. Hayden 1995), the stronger tendency is typically towards increasing tension and eventually control of these relations through mediation by aggrandising ritual specialists or incipient chiefs. In this line of thinking there does not appear to be much room for other forms of change. Thus, applying the logic of the complexity model to those, such as pre-6000 BP North Americans and pre-2000 BP southern Africans, whose lack of obvious signs of rank must mean that tension and mediation had cancelled each other out, we are left with the sense they have no social history, other than maintenance of a *status quo*. They remain as a “slate of simplicity” (Wiessner 2002). It is exactly this problem – how to explain change in a non-hierarchical context – that Lyn Wadley (1987, 1989a, 1989b) and Aron Mazel (1987, 1989a, 1989b) set out to solve in the southern African LSA with their focus on tensions in the social arenas of gender and kinship. As I explore in detail in Chapter 3, their models succeed in demonstrating the potential for change without the institutionalisation of rank or leadership, yet remain limited by being based on a direct link between these tensions and the circulation of elaborate, or ‘symbolism-rich’, material culture at the expense of the majority of the archaeological record.

One possible avenue through the conceptual barriers posed by these issues is to broaden the scope of comparative literature to include, for example, ethnographies and archaeologies of non-hierarchical food producers, whether or not they are fully enmeshed within larger state polities. Alternative models of non-hierarchical societal forms, such as the horizontal structures of specialisation that fall under the rubric of *heterarchy* (Crumley 1995) and the extremely varied forms of leaderless collectives recorded historically under the umbrella of *anarchy* (Gibson & Sillander 2011; Scott 2014), offer useful pathways for thinking beyond this hierarchy-or-nothing orthodoxy. The potential of these alternative ethnographies lies not in providing wholesale models of societal structure or direct historical analogy of specific practices, but in providing theoretical critiques to expose the unhelpful correlation between horizontal and vertical differentiation. Even more relevant, however, for my argument are the questions raised about definitions of complexity when we reduce the scale from the structural level to that of the individual.

Weissner (2002) points out that both the economic and the social models of complexity reviewed above remain problematic as they presume a *tabula rasa* that aggrandisers, such as ritual specialists, can exploit and urges instead that we need to appreciate egalitarianism in practice theory terms, i.e. how through individual and

group actions the rules and institutions of society are reproduced. The main issue here is that if we follow the logic of complexity in terms of the individual actant, hierarchical societies are no more complex than egalitarian ones. Clark's statement in support of Wiessner's critique of complexity is clearest on this point:

Egalitarian societies are not civilized societies stripped of all accessories; rather, they are viable social organisations with deep histories and prescribed practices of group in which individual agents act to reproduce traditional ways of life. At the level of agents and the prerequisites of personhood, all societies have interactional asymmetries and inequalities, and all are equally complex. (Clark 2002: 255)

Beyond the truism that all societies are equally complex, Clark's idea of scale is key when thinking about what we mean when we classify societies. If we think of the construct of complexity as the number of vertical levels or horizontal parts, then it appears to work quite well. Yet if the aim is to write about individual experience and practice, and in Wiessner and Clark's view all change occurs as a result of this tension in the relations between individual and the structures of society, this is the only scale that there is. Of course, there is no doubt that the number of connections between parts of society and from one society or group to another can vary and that these can be described on a complexity scale. A group of Bronze Age traders embedded in networks across thousands of kilometres of the Mediterranean would, in terms of the number of different nodes of interaction, be deemed more complex than most small-scale societies. Yet, as Wiessner's (1982) now classic earlier work on the Ju/'hoansi demonstrated, at the level of individual practice and knowledge, some hunter-gatherers in what have been typically characterised as socially simple groups are enmeshed in *"some of the most complex alliance networks known to anthropology"* (Rowley-Conwy 2001: 47).

Unfortunately, these ethnographically informed perspectives on less hierarchical but equally complex forms of social life have made little impact on mainstream archaeological theory. In general, hunter-gatherer social archaeology has struggled to escape the legacy of constructivist thought and, in my opinion, this is one of the key reasons it has failed to make an impact more broadly on archaeological theory. To understand why this is the case it helps to trace the origins of this legacy in post-processual theory.

## 2.9. But we have monuments too!

The overwhelming focus on monuments and exotic artefacts in landscapes and burial sites as representations of prehistoric peoples' worldviews dominated the post-processual literature on later prehistory in the 1980s and 1990s to such an extent that there must have appeared little alternative at this time than to make hunter-gatherers appear as if they were more like monument-building farmers. Those archaeologists interested in social approaches to hunter-gatherers during these years bemoaned the division between social farmers and ecological hunter-gatherers and made it their business to transform the Palaeolithic, the Archaic, the Mesolithic and, as we will see in the next chapter, even the southern African LSA, into 'symbolism-rich' periods on a par with farming societies. "eco-functionalism" (Sassaman 2004) became the enemy for these new social archaeologies, which sought to free hunter-gatherers from nature and technology and release them into the world of ideology and politics.

The second wave of post-processual thinking influenced by the practice theories of Giddens (1984) and Bourdieu (1977) and the phenomenology of Heidegger (1971) and Merleau-Ponty (1962) slowly began to reorientate archaeological work away from ideology and cultural construction and to situate prehistoric people back in the world. Marxist ideas of structures of power gave way to ideas of society being reproduced through the embodied actions and experiences of individuals (see Section 4.2 for a detailed exploration of these trends). However, despite a growing awareness that society was something recreated largely in the everyday sphere and that cultural construction, symbolism and power were dispersed in all actions, the emphasis remained on the same elaborate archaeologies of public and ritual life as before (e.g. Gosden 1994). More embodied, experiential interactions seemed only to apply to those same old traits of complexity that increase as one gets closer to the present, as though human experience itself was something that followed this trajectory.

Hunter-gatherer specialists once again followed the same theoretical frameworks that Neolithic researchers had charted before them and attempted to prove that this version of experiential complexity extended to their subject areas. Thus, the shell mounds of the Mesolithic (e.g. Cobb 2005) and Archaic (e.g. Randall 2011) became ritualised monuments imbued with memory and meaning through habitual action, even as the rest of the hunter-gatherer landscape remained part of the seasonal round and the majority of the prehistoric past without monuments, art or much in the

way of burial practices, remained outside the realm of society. These were, of course, vital developments in theoretical archaeology and, as I explore in Chapter 4, led to an extremely important renewal of interest in time, place and the potential of detailed stratigraphic work. These accounts failed, however, to take the extra step and extend the application of these ideas beyond just the elaborate and exotic realms of human life.

At the beginning of the twenty-first century, theoretically speaking, if not in practice, the dualisms of the public and the habitual, the ritual and the profane, the social and the natural were looking increasingly fragile. With these much criticised conceptual boundaries about to crumble, it would thus have been reasonable enough to presume the division between the *time before* and the *time after*, the idea that artefactual complexity mirrors the richness of human experience, must have been ready to fall.

#### 2.10. The return to things

Disappointingly, however, what we find today is that the much celebrated ‘return to things’ has only further reinforced these entrenched ideas about the trajectory of human complexity. This can be seen most clearly when theorists attempt to explain long-term changes in the archaeological record. Just as we saw in both Bender’s and Sassaman’s respective overviews of the rise of inequality in North America, recent attempts to write such ‘big histories’ still assume that a greater number of things, and the presence of things with more component parts than was seen in earlier times, are equivalent to increased complexity; in other words, more society. In most cases the social evolutionary legacy is implicit (e.g. Gosden 2008; Lucas 2012), but remarkably this is not the case with some who, harking back to the old days of more explicit dismissal of hunter-gatherers cited earlier (e.g. Renfrew 1972: 11), seem to be overtly searching for a time when the modern condition, now reformulated as the consumerist phenomenon of ‘peak stuff’, began (Hodder 2012). Hodder’s remarks quoted at the beginning of this chapter are not unique in this respect. Olsen’s (2010) account, considered to be one of the classics of materiality theory in archaeology, is just as clear:

If there is one historical trajectory running all the way down from Olduvai Gorge to Postmodernia, it must be one of increased mixing: that more and more tasks are delegated to nonhuman actors, and more and more actions mediated by things. Only by increasingly mobilizing things could humans come to experience ‘episodes’ of history such as the advent of farming,

urbanization, state formations, industrialization, and post industrialization.  
(Olsen 2010: 9–10)

Interestingly, Hodder's (2012, 2016: 20) version of increasing relationality is based on the long outdated dichotomy between immediate and delayed returns mentioned earlier. Woodburn's (1982) model explicitly states that hunter-gatherers who follow an immediate return system are disengaged from property and the potentialities of dependency by the principles of egalitarianism. Woodburn was attempting to explain the centrality of individual autonomy in egalitarian hunter-gatherers, their "anti-structure" (Guenther 1979, 1999), which had been a major conceptual problem for an anthropology long-enthralled to Durkheim's problem of group coherence (Ingold 2000: 71). For Woodburn (1982: 445), individual autonomy thus reflected – in the grand old tradition of hunter-gatherers as the people without – an *absence* of specific commitments and enduring relationships:

the ability of individuals to attach and to detach themselves at will from groupings and from relationships, to resist the imposition of authority by force, to use resources freely without reference to other people, to share as equals in game meat brought into camp, to obtain personal possessions without entering into dependent relationships-all these bring about one central aspect of this specific form of egalitarianism. What it above all does is to disengage people from property, from the potentiality in property rights for creating dependency.

Woodburn (1982: 431) himself stressed that egalitarian principles were asserted, i.e. that this is not a passive theory of sociality, yet in the more recent archaeological revival of this model, found in Hodder's thesis, this activeness has been replaced by an absence of relations. For Hodder (2016: 20), in immediate returns hunter-gatherer groups "People were little entangled in human-made stuff". Later, after undergoing productive and social intensification, and here Hodder quotes Renfrew directly (2001: 128), "human culture became *more* substantive, *more* material" (Hodder 2016: 20; my emphasis). The presentism in these accounts is often explicit. It is only through entanglements with elaborate artefacts, which are the result of specialised and institutionalised structures of architecture, technology, and organised religion, that we become truly connected to the substantive non-human world of materials. Despite its origins in post-structuralist thought, and the widespread acceptance that we need to move on from any idea of an overarching superstructure, Hodder's material culture



thesis remains focussed on societies with clear institutional structure. Even more worryingly, although Hodder (2012: 7) defines ‘things’ as including all animal and material substances, he slips into emphasising human-made ‘stuff’ and refers to the artefactual world as if that were the only substantive domain with which humans could become entangled, a point that Ingold (2012) tackles head on in his sustained critique of both evolutionary and material culture schools of thought (see also Conneller 2011). Woodburn’s model of the lack of dependency and thus engagement in property has been rephrased as a lack of dependency on things and forms the foundation, or foil rather, for Hodder’s latest model of the Neolithic process (see Hodder (1990) for an earlier version of the ahistorical and natural Mesolithic hunter-gatherer versus historical and cultural Neolithic farmer, and Tilley (1996) for a similar dichotomy). Simple immediate returns hunter-gatherers are thus *less* “drawn into the different temporalities of things” (Hodder 2012: 84), in contrast to the complex hunter-gatherers and Neolithic food producers that followed.

The claims of immediacy on which Hodder’s theory of dependency is based, have however, long been debunked by Ingold (2000: 66–71, 2005). His critique targets the basic assumption underlying Woodburn’s thesis – and this can be extended to the more recent arguments for increased human-thing entanglement over time – that temporal engagement with the material world is about dependency on property, and that because hunter-gatherers do not have this they are “present-oriented” (cf. Sahlins 1972: 30), which simply does not stand up to the majority of hunter-gatherer ethnographies. Ingold argues that Sahlin’s atemporal hunter-gatherers keep resurfacing in the literature in texts like Hodder’s because of the failure to properly resolve not only the apparent paradox between societies that prioritise both individual freedom and equal distribution of resources, which drew Woodburn and many others in, but also because of the limitations of the genealogical model which presumes that past, present and future generations are connected by memory transferred through property (Ingold 2000: 132-151, 2005). As Ingold makes plain, whilst perfectly logical for explaining temporal entanglements with things for societies with inheritance structures, when applied to hunter-gatherer ethnographies, the only conclusion reached, will, once again, be one of absence.

The argument against the materiality model of absence espoused by Hodder, Olsen and others is based on the simple premise that if a model can only describe what hunter-gatherers lack, rather than the ways in which they might live differently in the

world, then there must be something wrong with the model itself. Following Hallowell (1960), Ingold sketches out an alternative way of seeing hunter-gatherer relations with the *other-than-human* world that not only exposes the latent representationalism in current thinking including the thing-as-mediator (Olsen 2010) and thing-as-property (Hodder 2012) models, but also offers a way through the troubling problematics of individualism versus communalism, property versus sharing, and inequality versus egalitarianism. Drawing also on the work of Bird-David (e.g. 1992), Ingold correctly asserts that far from being disengaged with the material world and the past, the processes of sharing observed by anthropologists are best envisaged as a continual engagement of care and attention with the non-human world. Hunter-gatherers do not live in the past or the future, yet both are continually enacted in everyday life through relations of trust founded on knowledge of past interactions. In other words, it is a way of being that can be considered as total involvement in the world. Of course, Ingold is not the only one offering a relational way of thinking about hunter-gatherers, something I review further in Chapter 4 when I explore the difference between those, such as Olsen and Hodder, who emphasise the artefactuality of human relations, and those, such as Conneller (2011), arguing for an archaeology and anthropology of materials and substances. For the moment, however, I stay with Ingold as he provides the clearest critique of this erroneous connection between property, time and relationality.

### 2.11. Relations of trust

For Ingold, the essence of trust is a combination of individual autonomy and dependency. This notion of dependency is of a very different kind to that envisaged by Woodburn and recently taken up by Hodder. For Ingold (2000: 69–70): “*To trust someone is to act with that person in mind in the hope and expectation that she will do likewise – responding in ways favourable to you – so long as you do nothing to curb her autonomy to act otherwise.*” Reciprocation is never enforced, otherwise the risk of not receiving is increased. All group members understand the importance of individual freedom and in this way autonomy is preserved. Freely terminable and voluntary companionship thus forms the basis of relations of trust. It is then precisely in relations of trust that autonomy is retained *despite* dependency. The reason relations of trust work so well is that they are based on accurate knowledge of past interactions between humans and the world, including other-than-human persons.

Ingold is at pains to distinguish trust from faith, with trust being based on active involvement in the world. Far from being detached from the substantive materialness of life and the past memories carried with it by an absence of property as Hodder would have it, hunter-gatherers are continually engaged in acts of remembering with non-human-others. The past is very much alive in, and is continually recreated in everyday life through, acts of remembering, such as hunting, eating and disposal of remains, as summarised in the following two passages:

Let me dwell on the hunting encounter for a moment. An animal is intercepted and killed; within a short time it has been distributed and eaten. At first glance this looks like a straightforward case of immediate return. Amongst most northern hunters, however, hunting, killing and eating are acts that secure the generation ('continuous birth') of the world. Hunting is compared to sexual intercourse, and eating and the disposal of the bones to parturition. By following the proper procedures in these activities, hunters ensure that the animals will come round again in the future. Likewise, the animal that came to the hunter today only did so on account of all the work and thought invested in it, and its kind in the past. Should we conclude then that contrary to first impressions, this is a case of delayed return? (Ingold 2005: 169–170)

...the idea that success in present hunting depends on personal relationships built up and maintained with animal powers through a history of previous hunts, quite contradicts Woodburn's notion of immediate returns. For in the Cree conception, the meat that the hunter obtains now is a return on the investment of attention he put in on a previous occasion – when hunting the same animal or its conspecifics – by observing the proper procedures. (Ingold 2000: 67)

Following the same relational logic described above, Ingold (1999) has also long been asking whether the concept of society is at all appropriate for describing how hunter-gatherers relate to one another and the world. It is in this line of thought that the final and only positive version of the no-society argument, based on a presence rather than an absence, can be found. For Ingold, it is through shared activity and companionship that groups relate, not formalised kinship rules. As outlined above, this operates through relations of trust founded on principles of autonomy and dependency, which, although replete with tension, are not enforced due to the dependency of both parties on one another. Autonomy is created in the act of relating to others and contrasts sharply with the abstract western notion of the private individual relating to a public world through

a set of cultural rules. Perhaps most importantly, however, the others with whom a person relates also includes non-human beings, places and things. Importantly, Ingold is *not* arguing that there is an absence of social relations. Indeed, if the world is thought to exist of many different types of persons, most of whom are of the other-than-human variety (Hallowell 1960), and each kind of person has a prescribed way of acting when encountering other types of person, then it becomes very difficult to argue for an undifferentiated social world. If anything, Ingold's version of social relations could, contrary to the artefactual thesis of Hodder and the materiality and material culture schools of thought more broadly, be read as an argument for a *more* complex relationality amongst hunter-gatherers. To do so, would, however, be to fall into the same trap of arguing for more or less of something, that I have been arguing against throughout this chapter, rather than the more interesting alternative of different *kinds* of relationality.

In summary, Ingold presents a powerful case against the often implicit, yet ultimately negative, concept of hunter-gatherers as the people without some crucial aspect of the modern human condition. In so doing he has necessarily had to build a very generalised account, for it is the weight of a broad ethnographic canvas which provides the strength in his argument. Any attempt at generalisation will be rightly questioned and much of mainstream anthropology and archaeology is automatically opposed to any such endeavour. As such Ingold has faced criticism for this 'traditionalist' generalising approach (Sassaman 2004). Two other more specific problems with Ingold's generalised concept of hunter-gatherers also need to be addressed. First, relations of trust are set up in opposition to relations of dominance in pastoralist societies. Although he is clear that many small-scale herding societies also have intimate relations with their herd animals and many consider them as powerful sentient beings, in my opinion, Ingold's distinction is nevertheless too rigid for the levels of variation in human-animal relations amongst small scale societies in general, regardless of their involvement with wild or domesticated animals. Second, though Ingold strongly asserts the highly temporal nature of hunter-gatherer relations, there is no real explanation of how hunter-gatherer groups may change over time. Leaving aside the problems with the hunter-herder dichotomy as this has been examined in detail elsewhere (Arthur 2008), I conclude this chapter by providing short answers to the remaining two criticisms, which can be rephrased as the following questions of wider relevance: what is the proper role of ethnographically-based generalisations, and,

indeed, other forms of generalisation? And, how can we develop this theory of hunter-gatherer relations to account for change over time?

## 2.12. Conclusion: an archaeology of attention

Despite its depreciated position within post-colonial discourse, the practice of using ethnography to further the interpretation of hunter-gatherers of the non-recent past remains as, if not more, vital than it has ever been. Its relevance does not, however, lie as a resource for building singular or multi-tiered models of hunter-gatherer thought or behaviour. Neither is it to be found in the use of ethnography as direct historical analogy. Rather, its principal role, as I see it, is as a tool to think with, a tool to assist in the exposure and inversion of problematic assumptions such as simple versus complex societies and technological versus social action. For me, this is exactly what Ingold does. Take, for example, the idea of temporality or its stated absence from hunter-gatherer life due to their lack of property and relations of immediacy (Sahlins 1972; Woodburn 1982; Hodder 2012). We are encouraged by Ingold, using powerful ethnographic examples, not to fall into the trap of seeing the same absence. It is simply somewhere else, in another relational field. In the example outlined above it was in the way that food is obtained, prepared and disposed. It is not more or less complexity.

Whether this is in terms of symbolism, experience of time and place, or human-things relations, when aspects appear to be missing from anthropological or archaeological accounts it is surely only because they are found in other areas of life that may or may not be traceable in conventional archives. What we should be looking for are different ways of relating, but crucially none are more or less. As archaeologists interested in hunter-gatherers or long-term pasts in general, it seems to me that we would be wise to think beyond the recent literature emphasising the pre-eminence or special case of the artefactual entanglements of the material-culture school. The broader perspectives long provided by anthropologists such as Hallowell (1960), Viveiros de Castro (1998), Bird-David (1992) and Ingold (2000) can assist in this re-anchoring of archaeological theory and prevent the sort of slippage outlined above, in which classifications of supposedly artefactually-rich or artefactually-poor records are said to define our prehistoric pasts. It is our imperative to build the case against those who try to convince us that there are times and places where material, animal and human relations were less important to people than they were in another time or place.

We can thus categorically refute the suggestions of an absence of history reviewed in the current chapter. If by history we understand that for hunter-gatherers and all other humans, we are thinking about much more than Durkheimian and Marxian dialectics between closed ‘segments’, Straussian self-conscious internalisation, or, indeed, Sahlin and Woodburn’s association of delayed returns associated with private property, then the potential to reconceptualise past history-making practices is clear. Of course, this also goes for both the cultural ecologist and constructivist versions of the no society assumption based on models of detached microeconomics or subjective representation, both of which also deny the importance of other relations between people and the material world through embodied practice in daily life.

There is a one word answer to the second question regarding change over time, and that is archaeology. If temporality for hunter-gatherers (and, of course, all other humans) is neither the delay of economic (Woodburn 1982) or social returns (Bender 1985b), but is created in the act of remembrance, long-term inhabitation places such as rockshelter sites are surely open to an archaeological exploration of this. An archaeology of remembrance is thus, following this idea of temporality, an archaeology of care and attention, and an archaeology of place. It is also an elementary and animal archaeology (c.f. Overton & Hamilakis 2013) as much as it is an archaeology of human-made things. The remaining and central aim of this thesis is thus to convert these ideas, which I shall call for now *an archaeology of attention* into a practicable, useful way of working with and writing about past material entities.

## **Chapter 3.**

### **Time and place in the Later Stone Age**

#### **3.1. Introduction**

The reasons why LSA social archaeology burnt so brightly for a short time but then fizzled out are complex and include factors beyond the control of individual researchers, including broader shifts in the direction of the social sciences in post-*apartheid* South Africa. Reading the proud and self-aware statements of the late 1980s, it is nonetheless still surprising that LSA archaeology has remained so quiet in recent years (Mitchell 2005). In this chapter I argue that we have to look deeper at the underlying relationships between method and theory in order to rejuvenate the LSA as a vital area of historical debate. In order to make these method-theory relations visible, we have to first take a step back to the mid-1980s, when a social archaeology was first declared along with the construction of a series of Marxist-influenced models on cultural change. What becomes apparent is this early phase was all about theory. In the rush to become socially relevant, new models tackling inequality, gender and identity were applied to the same coarse-grained geological scales employed by the previous generation for culture historical, settlement pattern and systems theory models (Parkington 1993, 1998). Related to this was the second problematic convention of this early phase of LSA social archaeology: the assumption that meaning is only encoded purposefully in obviously ‘symbolic’ material culture such as specific types of retouched implements, items of personal adornment, rock art or burial traditions. Unilinear evolutionary thinking and the desire to match archaeology directly with regional ethnography presented additional obstacles for rethinking the LSA.

The second part of this chapter follows the reaction to this initial phase of social explanation and the return to largely functional interpretations of high-resolution open-air sites in the late 1990s and 2000s. Although crucial to the development of southern African archaeology, ever greater resolution does not, in itself, help overcome ingrained conceptual orthodoxies, and neither does it offer any prospect of making the LSA more socially relevant. LSA archaeology holds incredible promise, with a strong tradition of both theoretical and methodological discourse, but it can only move forward if these perspectives are woven together in all stages of archaeological work.

In the third and final part of this chapter I look at one part of the LSA – the terminal Pleistocene/early Holocene – as this provides a clear example of how method and theory intersect with each other and with broader global narratives of climate change and social and economic intensification. The uneasy relationship between conventional geological modes of writing and incipient social perspectives leads to a variety of contradictory origins narratives emerging in the late 1990s in which the early Holocene is framed as either the destination of travel out of a cold and inhospitable late Pleistocene, or the point of departure for the beginning of the Holocene story, after which everything simply keeps on increasing in intensity towards the present.

### 3.2. Social models and their critics – the 1980 and 1990s

The social archaeology of hunter-gatherers that emerged in 1980s South Africa can first and foremost be described as a reaction against the economic and ecological determinism that had dominated LSA interpretation since the 1950s (Lewis-Williams 1993). Although influenced by the first wave of British and American post-processualism (e.g. Bender 1978, Tilley 1981, Hodder 1982), the movement which began with Lewis-Williams' (1981, 1982) reinterpretation of San rock art had its own distinctly southern African origin owing to its particular reliance on 'direct historical' analogies derived from San ethnography (Barham 1992), plus, of course, the particular political climate of the time (Mitchell 2005). San ethnography had already been employed to model the seasonal movement of LSA hunter-gatherers in the Western Cape (Parkington 1972), but Lewis-Williams' (1981, 1984) success in matching iconography in paintings to practices observable in contemporary Kalahari San trance dance rituals and nineteenth century testimonies from South Africa and Lesotho demonstrated for the first time that aspects of modern San *social* life may have wide geographical and temporal relevance and provide analogies for the deeper past.

Lewis-Williams' work provided a way into the social world of hunter-gatherers and inspired a generation. He was also the first southern African archaeologist to introduce historical materialism as a tool to explain social change, something that appealed at a time when contemporary politics was particularly volatile (Lewis-Williams 1982). The oppression and violence of the *Apartheid* government was being exposed on a daily basis, but until the mid-1980s there were few published political statements from South African archaeologists (although see A. Smith 1983). This all



changed in 1986, however, when the international community refused their South African counterparts entry to the World Archaeological Congress meeting. Both Mazel (1987) and Mitchell (2005) identify the conference during which the news of the boycott was received – the meeting of SA3 (now known as ASAPA)<sup>1</sup> in Grahamstown in 1985 – as a turning point.

Many leading researchers and students switched, over the next few years, from an almost purely ecological focus to one centred on social interpretation (S. Hall & Binneman 1987; Wadley 1987; Mazel 1987; Brooker 1989; Deacon 1990; Mitchell 1993; Parkington 1993). The speed at which this took place is clear from Aron Mazel's (1989a: 33) doctoral publication in which he describes how he began with purely ecological questions in mind but ended up writing a treatise on the merits of social theory. Although the hastiness with which a social perspective was taken up by Mazel and others was understandable considering the political and social climate, this meant that there was somewhat of a lag before anyone thought about the relationship between these new concepts and methods of excavation and analysis (Barham 1992; Parkington 1992, 1993; Parkington *et al.* 1992).

### 3.2.1. Macrosocial models

The two main models that have come to characterise the initial phase of social interpretation in LSA archaeology are Lyn Wadley's (1987, 1989a, 1989b) aggregation and dispersal model and Aron Mazel's (1989a, 1989b) social region model. Wadley's model was based on the seasonal aggregation and dispersal of Kalahari San, described as a "universal practice amongst hunter-gatherers" (Wadley 1989b: 42). The public aggregation phase essential for maintaining social ties was expected to leave high-density deposits in the archaeological record with abundant evidence for formalised and symbolic behaviour, including the structuring of camp space, increased numbers of ritual objects and "material culture rich in symbolism" to be used for gift exchange (Wadley 1987: iv). The 'direct historical' element of this model identified two frequently recovered archaeological finds – ostrich eggshell beads and bone points interpreted as arrowheads – as favoured items in the aforementioned Ju/'hoansi gift exchange practice known as *hxaro* (Wiessner 1982).

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<sup>1</sup> Southern African Association of Archaeologists (SA3) is now known as the Association of Southern African Professional Archaeologists (ASAPA)

Mazel (1989a, 1989b) undertook a regional study in which he excavated eight rock shelters in different ecological zones of the Thukela Basin of KwaZulu-Natal. Like Wadley, his social region model was based on Wiessner's *hxaro* model, its focus being on identifying "rich" rockshelter deposits including "cultural items" (similar to Wadley's 'symbolism-rich' artefacts) that would have been circulated as gift-exchange items. He linked the formation of alliance networks to a growing population and the requirement to find marriage partners, which over time would lead to the formation of *social regions*, defined as "*discrete geographical zones, which contain dialectically, socially and economically distinct groups of bands integrated through a dynamic network of social interaction into cohesive social units which are able to reproduce themselves socially and biologically*" (Mazel 1989a: 35). In addition to a number of later structural changes, he proposed that after *c.* 5000 cal. BP the Thukela Basin (some 27,000 km<sup>2</sup>) could be separated into three social regions based on the numbers and the types of *hxaro* items and the stylistic elements of lithic artefacts (Mazel 1989b: 91).

In line with the emergent feminist critique in world archaeology (e.g. Conkey & Spector 1984), both Wadley and Mazel highlighted the role of gender as an important axis of social differentiation in egalitarian hunter-gatherers and introduced the concept of the division of labour into LSA studies by linking certain tool types to gender-specific activities. Based on the assumption that adzes were woodworking tools used to make digging sticks for plant food extraction, Mazel (1989a, 1989b), interpreted an increase in their frequency as an increase in women's contribution to the diet. Wadley (1987, 1989b) also concentrated on the sexual division of labour, linking the abundance of bone points during the early Holocene with the widespread adoption of bow and arrow technology (something that most assume now happened much earlier (Lombard & Phillipson 2010)), and a switch from mixed gender to exclusively male hunting practices. Wadley (1989b, 2000) also extended her gender study to the recognition of male and female activity areas around hearths. This was again based on the linking of certain manufacturing debris to specific gendered divisions of labour and the analogy with modern San groups who employ a more formal organisation of space during the aggregation phase.

Both Wadley and Mazel used the relative proportions of 'symbolic' artefacts to explain observed long-term social change in their particular regions. Gift-exchange was said to increase at times of stress, such as during periods of migration or environmental change (Wadley 1989b: 49–51; Mazel 1989a: 37–39). The ecological and demographic

models of the previous two decades featured in their interpretations but even with the coarse-grained nature of their published data, both made a convincing case (following Marxist-inspired hunter-gatherer archaeologies elsewhere (e.g. Bender 1978)), that internal societal struggles are just as likely to impact on population growth as the other way around. Both also emphasised the resolution of tensions associated with the gendered division of labour as one of the main drivers of social change. For Wadley, the introduction of the bow and arrow and the privatisation of the hunt in the early Holocene was a key development. Mazel, on the other hand, was heavily influenced by the social versions of the ‘intensification/complexity’ model described above (section 2.8), previously employed for hunter-gatherers in both an Australian and North American context (Lourandos 1983; Bender 1985a), and in contrast to Wadley he argued that this was linked to increasing gender parity. Women were said to have intentionally raised their status in the Thukela Basin during the mid-Holocene by contributing more to the group diet which then increased the group nutritional intake and initiated a positive feedback mechanism of intensification involving population growth and further increases in gender equality.

As a group of researchers united by their use of San ethnography to build models of hunter-gather social relations, there is little doubt that Mazel, Wadley, Lewis-Williams and others made a substantial contribution. Importantly, they demonstrated the potential for recognising social divisions in the archaeological record such as those between the sexes, or in the case of rock art, between those who controlled access to ritual knowledge and those who consumed it (Campbell 1986). It was these tensions and the desire to resolve them that were seen as the driving force in societal change, something researchers at the time clearly thought would make LSA studies more relevant to contemporary South African society as the *apartheid* era came to a close.

### 3.2.2. Method or theory?

Theoretical awareness and an emphasis on the social capacity for change were undoubtedly the most positive elements of the LSA models of the late 1980s and 1990s, but it is these two areas that also proved to be the most problematic. There was an explicit recognition that the political context of the moment dictates the questions asked about the Stone Age past (Mazel 1987), but there was, initially at least, little appreciation that this contingency goes further down the line of archaeological enquiry.

The shift to social *explanations* was thought of as just that, solely about explanation, almost as if ‘theory’ – be it environmental or social in nature – could be applied after the data were ‘analysed’. Apart from the new focus on social explanations, in other respects there was little to separate the LSA archaeologies of the mid/late-1980s from earlier ecologically and economically orientated research.

Critics writing a few years later picked up on this, pointing out that the application of social theory was out of step with the quality of the data (Barham 1992). The problem for Barham, however, was purely methodological rather than theoretical. He supported the search for social relations but thought they could only be identified once functional explanations had been ruled out by further empirical work. Barham noted the lack of understanding regarding the function of stone tools and pointed out that stylistic or symbolic explanations for the prevalence of stone tool types must be withheld until more experimental work was conducted. With a classic ‘scraps of data’ line of argument (section 2.6), he also pointed to the fact that rockshelter deposits are palimpsests that prevent archaeologists from isolating the individual occupations required for the sorts of social questions being asked (Barham 1992: 46).

Britt Bousman (1991: 221) also strongly criticised Mazel and Wadley for their failure to consider “*how and in what condition artifacts are discarded, and the ways this affects their archaeological observations*” and making the valid point that their reliance on artefact frequencies was no different to the more traditional culture-historical methods. Yet according to Bousman, to do this required the development of Middle Range Theory, i.e. models that tell us what archaeological signature we can expect for a certain type of behaviour. Middle Range Theory is essentially the basic process of constructing questions, yet its adherents often dress them up as falsifiable hypotheses (cf. Popper 1959) that researchers can use to connect the ‘statics’ of the archaeological record and the ‘dynamics’ of human behaviour (Binford 1983). Rarely, however do such approaches, consider the more fundamental questions that arise from the relationship between the archaeological account and the actual process of recovery, which is an altogether less testable relationship. The theoretical limitations of the Middle Range concept are explored more in Chapter 4, for now it is important to note that both Bousman and Barham make similar useful points regarding the need to problematise the connection of theory to the archaeological record. Interestingly, however, neither mentioned the practice of excavation or analysis most likely because they were approaching rockshelters in exactly the same way as those they criticised.

### 3.2.3. The big site, big sample orthodoxy

Published shortly after Bousman and Barham's empiricist critique, John Parkington's (1993) paper titled "*The neglected alternative: historical narrative rather than cultural labelling*" avoided referring to specific social models. Instead, it highlighted much deeper problems in LSA archaeology, and in so doing remains the most radical and useful statement on the relationship of theory to method published in southern African hunter-gatherer archaeology. The premise was that all LSA archaeology, be it ecological or social, relied on the same orthodox methodological foundations and that a true social archaeology would not emerge until this fact was confronted. The main problem was the persistence of typological labels, "the game of cultural chronology", that requires archaeologists to target large sites, dig deep holes and obtain large samples (Parkington 1993: 96; see also Parkington *et al.* 1992). Parkington appeared to be taking aim at the entire history of LSA archaeology and he was speaking with authority, as he had been one of its central figures for a quarter of a century.

Although Parkington and other LSA archaeologists had introduced new economic and ecological explanations during the 1960s to 1980s, the traditional culture-historical method was still very much in place. Large numbers of 'formal tools', and thus large samples, remained the principal focus of interpretations. The emphasis on chronological change in ecological archaeology required deep sequences and the regional seasonality model of Parkington and others demanded that large numbers of sites were compared (Parkington 1972). Excavations were thus typically restricted in the horizontal dimension as described in Chapter 1. Neither the resources nor the incentive existed to excavate larger areas. The extent to which long, deep sequences were preferred is obvious from the language of publication, and, tellingly, Parkington himself was described as being initially "frustrated" at the shallowness of the deposit at De-Hangen, which later revealed a wealth of information on spatial patterning and the use of organic materials (Mazel 1987: 512–513). The same sense of frustration can also be gleaned from Mazel's own work in KwaZulu-Natal where he could often only locate relatively shallow sites (four out of eight were under 50 cm deep), something Wadley (1989a: 123) highlighted as a limitation of his research. Deep sequences and long, multi-millennial timeframes were, it seems, a prerequisite for LSA research.

Deep and narrow excavations require stratigraphic units to be lumped together in order to make sure there are enough diagnostic fauna and stone artefacts from each

‘layer’ for comparison, as demonstrated in the well-known publications from Nelson Bay Cave (cf. Klein 1972; Deacon 1984; Inskeep 1987). It is this methodology that was inherited by the social archaeologists of the mid-late 1980s. Parkington did not have to spell it out as such, as the message was clear. Both Wadley’s aggregation and dispersal and Mazel’s social region model were just as dependent on sample size and high numbers of diagnostics as the culture-historical and ecological models that came before them. Even Wadley’s (1987, 1996, 2000a, 2000b) pioneering attempts to move beyond comparing numbers of finds from vertical sequences by investigating the social use of space at Jubilee Shelter and then – much more extensively – at Rose Cottage Cave, relied so heavily on diagnostic elements (and thus large sample sizes) that many contexts had to be lumped together, rendering her spatial patterns open to criticism (cf. Barham 1992).

The origins of this orthodoxy can be found in the desire of LSA archaeologists to develop a methodology in line with the natural sciences during the 1960s and 1970s, when the American *New Archaeology* and British *palaeoeconomy* schools were most influential (Trigger 2006), which in turn led them to favour geological descriptions of stratigraphy (Parkington 1993: 95). In part, this was also a reaction against the longstanding tradition of using surface sites to construct a culture history. Huge swathes of southern Africa are largely erosional and archaeological visibility is extremely high, something that proved extremely useful in the formative, largely amateur archaeology of the early twentieth century. But this type of archaeological occurrence has no stratigraphic context so it was largely redundant when the main task switched from constructing cultural groups to constructing chrono-stratigraphic sequence (Parkington 1993). Caves and rockshelters with deep sequences and high densities of finds were favoured and the majority of the more ephemeral archaeological record, as well as the potential for larger excavations in rockshelters, was largely ignored.

Although Barham (1992) and Parkington (1993) were correct to point to the difficulty of identifying individual occupations in rockshelters, this seems now to be more to do with how rockshelters have been approached rather than a problem with the rockshelters themselves. LSA archaeology since the 1960s emphasised the palimpsest nature of their deposits and the lack of stratigraphy at open-air sites. As I describe below in more detail (section 3.3), research conducted since the 1990s has begun to change the way researchers view open-air sites and a number of projects have highlighted the potential for spatial analysis inside rockshelters when the horizontal dimension is

increased (Parkington *et al.* 2009; Mitchell *et al.* 2011). Unfortunately, and despite Parkington's (1992a) emphasis on understanding stratigraphy context-by-context at Elands Bay Cave, this methodological transformation has not otherwise been extended to other LSA rockshelter excavations. In the third part of this chapter (section 3.4), I explore the link between the geological approach and evolutionary narratives across the Pleistocene/Holocene transition; first, however, I review the limitations imposed by the direct historical method and, the problematic dichotomy between the symbolic and functional aspects of human experience.

#### 3.2.4. Ethnography as method or theory?

In general, it is fair to say that in the mid-1980s the ethnographic record was used by LSA archaeologists such as Lewis-Williams, Mazel and Wadley as if it were part of the scientific method, unhindered by the complications of theory. This innocence was certainly tempered by waves of revisionist critique described in the previous chapter (e.g. Wilmsen 1989), but even the more cautious interpretive work in the late 1990s (e.g. Parkington 1998), maintained the separation between the application of ethnography and theory, a distinction that remains current in rock art studies (Pearce *et al.* 2009). In this line of thinking if close enough direct connections can be demonstrated between present and past then the use of ethnography is clearly part of method, *not* theory. Moreover, the direct historical method seems to have become something of a mantra for rock art studies, leaving little room for other approaches (cf. Solomon 2013). Recent statements from those at the forefront of rock art interpretation claiming that without an ethnographic context, researchers' conclusions would be "*embarrassingly far off the mark*" (Smith & Blundell 2004: 259; see also Lewis-Williams 2010: 1), show how this perception remains current and appear rather similar to those made by Wadley for the excavated record (1989b: 43), who stated that "*to ignore the wealth of ethnography about the living descendants of Stone Age people in southern Africa is the equivalent of trying to learn language without opening the dictionary.*" Barham's critique of Wadley and Mazel was partly based on the weakness of their use of San ethnography, yet his solution was solely to turn to the testing of experimental manufacture and use of implements. No doubt greater experimental work would provide a great deal of insight into stone tool production use and discard cycles, but are we simply to abandon the use of ethnography in those instances when direct

connections cannot be made between archaeological and ethnographic accounts? As noted towards the end of the last chapter, a number of writers have, instead, been calling for a more generalised use of global hunter-gatherer ethnography (Parkington 1984a; S. Hall 1990; Mitchell 2003).

Barham's (1992) point in relation to this was that there is very little ethnography of stone tool manufacture and use in southern African and virtually none of hunter-gatherers occupying caves and rockshelters, and this may be so, but his argument that this then means we must resort to purely functional interpretations instead of considering social relations is also flawed. As I have already made clear, this separation of functional from social aspects of human experience has, until recently, severely restricted much hunter-gatherer archaeology worldwide (cf. Cobb & Price 2005: 66; Milner 2006). The southern African LSA is no exception, and it is to this problem that I now turn.

### 3.2.5. Social versus economic?

In the previous chapter we saw how the emphasis on symbolism and ritual in the archaeology of complex hunter-gatherers and the almost exclusive association of the remainder of hunter-gatherer material record with subsistence-related tasks perpetuated the false dichotomy between the 'social' and 'functional' aspects of hunter-gatherer lives. The emerging social archaeology of the LSA was also founded on this same erroneous assumption, leading its key researchers to assume that meaning is only encoded purposefully in obviously 'symbolic' material culture such as specific types of retouched implements, items of personal adornment, rock art or burial traditions. This is no surprise really as both the archaeology of complex hunter-gatherers and the early phase of LSA social archaeology were explicitly working within the same Marxist framework of historical materialism, in which the central tenet is the distinction between the forces and relations of production. The dialectical relationship or 'conflict' between the two is said to be constant and one cannot be considered without the other (Mazel 1989a: 34), yet it is the separateness of the two realms that makes this conception of society work and their eventual 'contradiction' that leads to societal change. In archaeological models based on this premise, non-symbolic material culture, i.e. the functional and technological aspects of society, provided the evidence for the forces of production, while symbolic material culture was thought to reflect the more



dominant social relations of production, e.g. gender, group identity or status. LSA social models based on historical materialism were thus dependent on identifying material culture imbued with symbolic meaning. The main problem with this is that it relegates supposedly non-symbolic material culture to being rather mute, a mere backdrop to the more determinant social relations. As discussed in Chapter 2 (section 2.6) in reference to North America, this poses a significant problem since the bulk of the Stone Age record consists of lithic and faunal assemblages without obvious symbolic traits. Moreover, if we miss the depth of hunter-gatherer relations with their environment, the mixing of material and mental phenomena inherent in daily life – and it is here that we see the proper role of both more generalised (e.g. Ingold 2000; Descola 2006) and specific regional ethnographic insight (cf. Dowson 2007; Low 2014; Guenther 2015) – then the idea that everything gets more complex as we move forward in time, as things become better preserved and include more parts (cf. Hodder 2012), remains a given. This is a theme I pick up again below (section 3.4–3.6) when I trace similar intensification and complexity narratives in archaeological accounts of the terminal Pleistocene/early Holocene LSA and look in more detail at how they intersect with methodological orthodoxies.

### 3.3. A methodological solution? – the 2000s and beyond

Following a decade of rather bold interpretive work in LSA archaeology, a much more cautious tone can be detected in the literature of the late 1990s and 2000s. Having been battered on four sides by the revisionist critique of Kalahari San anthropology, the increasing disdain for universalising models in general (Hodder 1986), a lack of ‘direct historical’ analogies for excavated remains and the supposedly poor quality of the available data (Barham 1992; Parkington *et al.* 1992; Parkington 1993), it is no surprise that the initial version of social hunter-gatherer archaeology began to fade from view, especially as the popularity of the MSA origins quest began to grow. Nevertheless, it is surprising that social theory in LSA archaeology has still not developed beyond the search for symbolism, gender and alliance networks. Indeed, only rock art research has maintained a link with the rapidly diversification of interpretive archaeology elsewhere in the world (e.g. Ouzman 2001; Lewis-Williams & Pearce 2004; Blundell 2004; Dowson 2009; Mazel 2009; Challis 2012).

Two trends can, however, be discerned during the late 1990s and early 2000s, both of which I have already touched upon. One does not represent a new approach as such, but rather a pragmatic adjustment towards a new centre-ground, represented by Mitchell's (2000; Mitchell *et al.* 1998) attempt to merge coarse-grained social narratives with those of an environmental or technological nature and Parkington's (1998) cautious assessment of the association between gendered division of labour and material culture in the LSA as a whole. Examples of this later more reserved social archaeology as applied to the early Holocene are reviewed in more detail below (section 3.4).

The second trend is the explicit linking of social questions with high-resolution open-air sites, best exemplified by the work of Parkington and his team at Dunefield Midden (Parkington *et al.* 1992, 2009; Parkington & Fisher 2008; Parkington *et al.* 2009; Stewart 2009) and also by Mitchell and colleagues in their investigation of a buried open-air campsite on the Senqu River in highland Lesotho (Plug *et al.* 2003; Mitchell *et al.* 2008, 2011). This collection of papers arguing for an archaeology of the short-term was radical in terms of methodology and followed directly from Parkington's call for a shift towards small samples and higher temporal resolution, though it remained cautious and pragmatic in terms of explanation. In the same way that social models of the 1980s overlooked methodological concerns, a new focus on high-resolution open-air campsites played down interpretation beyond the function of the specific site. The solution to the problems of the geological model was thought to be purely a question of resolution (Parkington 1998: 25; Parkington *et al.* 1992).

Dunefield Midden is an exceptional site, preserved by a mobile dune system on the Western Cape Coast, some 200 km north of Cape Town. Over 850 m<sup>2</sup> have now been excavated, a large portion of which appears to date from an occupation thought to have lasted no more than a few weeks between AD 1300 and 1400 (Parkington *et al.* 2009: 106). Coherent spatial patterning between various artefacts, food remains, and hearth-related features allowed for a wide variety of interpretations, relating to the duration of visits, seasonality, the function of the camp and various areas within it. Work commenced at Dunefield Midden in 1988 and, although it is not made explicit, there is little doubt that its discovery spurred Parkington's (1993) call to arms. Parkington and colleagues' work at Dunefield Midden set new methodological standards in the analysis of taphonomy, spatial patterning, refitting and the analysis of anthropogenic features. Mitchell and colleagues followed suit and paid similar attention

to issues of stratigraphic integrity during their excavations at Likoaeng. Although a much smaller site, it was also exceptionally well-preserved with evidence of knapping episodes and possibly four dwelling spaces consisting of hearths and dense scatters of faunal and lithic material, with the best preserved occupation dating to the early centuries AD (Mitchell *et al.* 2011).

Interpretation of both sites has, however, been extremely guarded. Publications have sensibly avoided the rather simplistic associations of artefact function and gender that characterised the earlier social archaeology and make only limited use of campsite layout models from Kalahari ethnography. Tentative reference is also made to models of ‘intensification’ and ‘specialisation’, but one senses a general reluctance to go beyond functional interpretations to look at temporal or spatial dimensions of the camps. Brian Stewart’s (2009) doctoral work on food-sharing at Dunefield Midden is the exception, but in other respects the tantalising glimpses into the meaning of these sites and the activities carried out there, such as the ritualised burial of animals (Parkington & Fisher 2008) and the exceptional focus on the large-scale harvesting and consumption of fish (Plug *et al.* 2003) await further elaboration.

Both the Dunefield Midden and Likoaeng projects have charted new territory for LSA archaeology in terms of finally shifting emphasis away from deep narrow rockshelter samples and the detailed manner in which they were published. One drawback of this new methodological direction is that it was set up in opposition to, rather than inclusive of, rockshelter archaeology. Most of the papers begin by re-emphasising the ‘palimpsest problem’, denouncing rockshelters as not suitable for resolving the crucial dimension of time, space or person. The exception is Mitchell *et al.*’s (2011) summary paper, which recognises the recent work of one of their contributors, Geoff Bailey, who, together with Nena Galanidou (2009), has attempted to counter this negative perception of cave and rockshelter archaeology through his work in Greece. Whilst it may have been necessary at least in the beginning (e.g. Parkington *et al.* 1992) to contrast these high-resolution open-air sites to coarse rockshelter data, it is clearly now time to expand the discussion of method and theory beyond the disciplinary ideals of deep vertical rockshelters as records of long-term processes and open-air sites as direct windows into past events.

The final rather obvious point to make in regard to this reorientation towards high-resolution open-air sites is that they are notoriously difficult to find. Parkington and colleagues realised that the wider significance of open-air campsites would remain

limited unless this could be resolved (Parkington *et al.* 1992: 13), yet the dune systems of the Atlantic coast are a restricted geomorphological occurrence and even for researchers with access to them there is little indication of the potential to locate similar high resolution sites. Most other work in the area has, in fact, dealt with deflated surface sites (e.g. Manhire 1987; Kandel *et al.* 2003). The fact that Likoaeng was buried under alluvial silts offers more encouragement considering the far greater prevalence of floodplain environments in most regions of southern Africa, yet Mitchell *et al.* (2011) note that it was discovered by accident eroding out of a footpath. As with Dunefield Midden, a great deal of systematic landscape work is thus required to understand Likoaeng's geomorphological context and to develop strategies for further work. In the face of these difficulties, one important strategy is, as I have advocated elsewhere (Arthur 2008), to develop methods for dealing with the much more widespread surface archaeology phenomenon.

Another, of course, is to apply the same concern for high resolution methods back to rockshelters themselves. Indeed, there is currently a push towards high-resolution studies of rockshelters in MSA archaeology through the analysis of microstratigraphic sequences (e.g. Goldberg *et al.* 2009). The same conservative outlook can, however, also be found in this high-resolution rockshelter work. Despite really promising results, there is very little interpretation associated with these geoarchaeological studies beyond the characterisation of the sediments or features themselves and one gets the sense that the main aim of much of this work is to demonstrate stratigraphic integrity for the sake of artefactual and palaeoenvironmental analyses. Recent work at Sibudu rockshelter has begun to develop combine microstratigraphic analysis with macrostratigraphic observations, the latter involving the interpretation of individual anthropogenic features observed in excavation rather than under the microscope. At present this is restricted to the study of combustion features and bedding patches (e.g. Wadley 2012; Bentsen 2014) and there is so far little attempt to link these pioneering studies to broader habitational interpretations. Nonetheless, this sort of multi-scalar approach to stratigraphy represents a promising new direction for rockshelter archaeology and one that I attempt to expand upon here by introducing a greater depth of stratigraphic interpretation.

In summary, the work of Parkington and Mitchell and their respective colleagues in the 1990s and 2000s can be seen as the second wave of LSA social archaeology representing a radical break with the orthodoxy of high-density sites and

the reliance on numbers of diagnostic organic remains and symbolic artefacts. In particular, the inferential arguments put forward in a series of papers from both Dunefield Midden and Likoaeng, dealing carefully with duration of occupation and site taphonomy, relied more on the relation between things than on the numbers of things themselves, and charts a crucial way forward for the current thesis. The more recent application of microstratigraphic techniques to rockshelters together with the equally welcome increase in the number of direct dates, can be seen as part of the same general push towards ever-higher resolution. In order to avoid the dichotomous thinking which pits the high-resolution event against the rest of the archaeological record, it is crucial that this concern with resolution and application of scientific techniques is accompanied by fresh theoretical perspectives.

It is to this theoretical challenge of reconciling sequence with palimpsest that I return to in Chapter 4, when I review developments elsewhere in the world and outline a framework for stratigraphic interpretation in LSA rockshelters. First, however, in the final part of this chapter, I narrow in on one part of the LSA and review approaches to the terminal Pleistocene and early Holocene of southern Africa (*c.* 14,000–7000 cal. BP), which serves to bring the historical trajectory outlined above and the relationships between method and theory into even sharper focus. I begin with a brief overview of environmental changes that characterise this period, review the approaches of four leading LSA researchers, John Parkington, Jeanette Deacon, Lyn Wadley and Peter Mitchell, and finish with a discussion of the relationship between narrative and scale.

### 3.4. A time after which: the terminal Pleistocene and early Holocene

Whilst southern African archaeologies of the terminal Pleistocene/early Holocene are not framed by the retreat of continental ice sheets and megafaunal extinctions that define this period in the northern hemisphere, this was nevertheless a time of significant climatic, environmental and demographic changes, themes that remain central in LSA studies. In general terms, and considering its full duration, a process of climatic amelioration can be traced across southern Africa during the *c.* 14,000–7000 cal. BP period. Significant temperature and rainfall fluctuations can be traced over time (e.g. Roberts *et al.* 2013), yet coarse-grained and sparsely sampled palaeoenvironmental records mean that outside the Western Cape most regions remain poorly understood (Mitchell 2002: 137–140). Other general trends include an increase in biological

diversity and productivity and the disappearance of a number of large specialised grazers, though this is now thought to be a result of these species' sensitivity to vegetational changes (Faith 2014: 115), rather than a result of overhunting as was once proposed (Klein 1984). In the Western Cape, the replacement of open grassland ecosystems with more closed habitats has been convincingly linked to an increased range of animal species appearing in archaeological faunas, including a greater number of smaller animals, and a shift towards more territorial, browsing antelope (Klein 1978). Similar changes have been detected in the Caledon Valley of the eastern Free State and western Lesotho (Plug & Engela 1992; Mitchell 1993a), although this appears to be far from a uniform sub-continental occurrence, and many regional faunas, such as those in Mpumalanga, the Lesotho Highlands and the northern Eastern Cape, indicate limited change across the Pleistocene/Holocene transition (Mitchell 2002: 150). A less equivocal and dramatic process that undoubtedly precipitated major adjustments in human populations was the substantial loss of coastal plains to early Holocene sea level rises of up to 100 m (Parkington 1987: 359; Compton 2011).

Despite the fact that many areas of southern Africa did not experience the same kind of occupational hiatuses linked to the advance of continental ice sheets as Europe and North America, overviews of this period have generally been produced within frameworks set by archaeologists working in post-glacial northern hemisphere contexts (e.g. papers in Straus 1996), characterised by narratives of stressful migration and demographic expansion (Parkington 1980, Wadley 1987, Mazel 1989b, Mitchell 2000). The notable increases in radiocarbon dates *c.* 14,000 and 12,000–12,400 cal. BP (Mitchell 1996: 41; Mitchell *et al.* 1996: 29) certainly attest to an expanding population in most parts of the sub-continent, yet the record remains almost wholly based on rockshelter sequences. With vast alluvial plains left untested it is thus impossible to tell, on present evidence, whether this spike in dates is simply a change in the type of sites inhabited. The large numbers of surface sites in northern South Africa (e.g. Wadley 1987, 1989b) and the Seacow Valley (Sampson 1985) regions conventionally associated with a population expansion into the interior *c.* 14,000 cal. BP (Deacon 1984; Mitchell 2002) are only supported by a small number of rockshelter excavations, and may well include late Pleistocene components (cf. Parkington 1980). Nonetheless, the southern Transvaal, the southern Cape coast and the Caledon Valley all contain a series of overlapping rockshelter occupations from the terminal Pleistocene/early Holocene

that do suggest a significantly higher population density than was present in the late Pleistocene.

By its very nature of being the transition from the end of the last glacial period into our current geological epoch, globally the period 14,000–7000 cal. BP struggles to escape characterisation as both a transition and a time of progress towards the modern situation. The southern African archaeological literature from 1980–2002 reviewed below certainly reflects both these themes, with the main aim being to find *the* breakpoint in the sequence and ultimately to compare and contrast Pleistocene and Holocene. Perhaps unsurprisingly, considering the complex environmental story in southern Africa, which is not as clear-cut as a before/after the Ice narrative, each researcher has had a different idea about where the major break should be placed. The following review is not, however, concerned with the whens and wheres, or even the merits of the different explanations for change (for this see Mitchell 2002). Instead, it attempts to draw out the relationships between origins work and the particular practices of LSA archaeology. The problematic separation of short-term event versus long-term process and a reliance on dichotomous *before and after* models are exposed as underlying method-theory orthodoxies that limit our current understanding.

#### 3.4.1. Deacon's culture theory

J. Deacon's (1984) monograph illustrates well the state of play prior to the social reorientation of the mid-1980s described in Section 3.2. Dissatisfied with the potential of systems theory to explain long-term evolutionary processes, Deacon (1984: 362–363) turned to theories of modern technological development (e.g. Van Wyk 1979) and a distinction between macro- and micro-evolutionary change borrowed from biology. At the macroscale, technology was thought to become more efficient by reducing input and increasing output through processes of miniaturisation and improved time effectiveness (J. Deacon 1984: 274). These “general trends” were thought to operate via processes of diffusion and were “*responsible for the widespread occurrence of new artefact designs that transcend environmental boundaries and subsistence strategies.*” Termed “innovative change” by Deacon (1984: 367–368) they were distinct from the micro-evolutionary “post-innovative” adaptations that affected stylistic changes in artefact size and shape. Importantly, the latter were *not* thought to contribute to the appearance of new artefact designs – they could only modify existing ones.

On one level the idea that technology had its own macroscale momentum appeared like a conceptual break with most LSA archaeology of the 1970s and early 1980s, including both J. Deacon's own and H.J. Deacon's earlier positions in which environmental adaptations were seen as the prime mover of all cultural change (Mazel 1989b: 21), yet the introduction of a causal hierarchy also allowed the anomalous position of terminal Pleistocene/early Holocene assemblages to be subsumed within the conventional definition of the LSA as a microlithic phenomenon. Three higher-level macro-evolutionary introductions were thus identified and disassociated from the anomalous terminal Pleistocene/early Holocene part of the sequence: bladelet core technology in the late Pleistocene; retouched microliths in the mid-Holocene; and pottery with pastoralism in the late Holocene. In the new model, southern African assemblages dating 14,000–9000 cal. BP, which had previously been defined as the *Albany* in the Cape Fold Mountains (J. Deacon 1978), or the *Oakhurst* in the interior (Sampson 1974), were relabelled in the negative as the “Terminal Pleistocene/early Holocene non-microlithic” (J. Deacon 1984: 308, my emphasis), and almost entirely defined by absence. Aside from an increase in bone tools, a *lack* of bladelet technology, a *lack* of microliths, a *lack* of formal tools, and a general *lack* of standardisation in flake production were its defining characteristics.

It was clear to J. Deacon (1984: 276) that the “regression” to non-microlithic technology and the decrease in large mammal fauna between 14,000–9000 cal. BP were out of synch with the southern Cape climatic data, lagging behind by some 2000–3000 years. A more complicated scenario was thus proposed with climatic, vegetation and faunal changes conceived as a stage-like adaptive process that likely took millennia to complete. Therefore, it was more appropriate to think about such environmental forces precipitating “sociocultural change” in an indirect manner, which stylistic variation, such as the regression to large unstandardised tools in the terminal Pleistocene/early Holocene, was thought to reflect (J. Deacon 1984: 291, 301–303).

In the new model, functional interpretations for tools were placed at the base of a three-tiered explanatory scheme, with macro-evolutionary stages at the top, micro-evolutionary adaptations operating via sociocultural stresses in the middle, and only right at the bottom, the actual things that human beings do (J. Deacon 1984: 362–363). Contrary to the claim of developing an integrated approach, this hierarchical model explicitly did *not* allow for interrelations between these levels, which were thought to be associated to different scales of analysis, and ultimately this is where Deacon's



approach falls down. Studying different types of evolutionary processes in isolation can silence those parts of the story that do not fit the “logical” trajectory (Deacon 1984: 119). By jumping up a level from human action to an abstract notion of human culture, the actual details of what people did in particular places are said to be “ironed out” by larger evolutionary trends (J. Deacon 1984: 89). Even more concerning, however, is that with a further leap up Deacon’s ladder to technological innovation, the entire LSA can be defined as a stage characterised solely by bladelets, bladelet cores and microliths, such that the terminal Pleistocene/early Holocene as a whole and with it 5000+ years of hunter-gatherer history, can be airbrushed out of the picture. The problem, of course, is not the understanding that there would have been different processes operating over different durations and at different tempos, but the removal of the potential for two-way relations between them, a point to which I return below (Section 3.6).

#### 3.4.2. Parkington’s theory of place

Running parallel to the Deacons’ southern Cape project, were Parkington and colleagues’ excavations and surveys of the Atlantic coastal plain and the Cederberg mountains of the Western Cape (Parkington 1980, 1981, 1984b, 1987, 1988). Parkington’s initial interpretation of the rockshelter site of Elands Bay Cave followed H. J. Deacon’s (1976) model, with the pre-13,000 cal. BP levels thought to reflect a diet geared towards large, gregarious grazers and later, *c.* 13,000–9000 cal. BP levels orientated more towards smaller, territorial browsing antelope species. As also observed at Nelson Bay Cave (Inskeep 1987), Parkington’s (1984b: 120) excavations showed a notable increase in fish, shellfish and seabird remains in levels thought to coincide with sea-level rises. In terms of what these site-level interpretations meant, however, there was considerable differences between the two approaches.

Arguing against the Deacons’ construction of cultural boundaries on either side of the Pleistocene/Holocene transition, Parkington (1980, 1984b, 1987, 1988) proposed a gradual model of change for the Elands Bay Cave sequence by highlighting continuity in tool types and a regular, slow decrease in the frequency of bladelets over time. For Parkington (1987: 359, 1988: 200–201), the difference between pre-and post-13,000 cal. BP assemblages at Elands Bay Cave did *not* represent a fundamental difference between hunter-gatherer behaviour in general, but was more likely to reflect changes

in hunter-gatherer behaviour in a particular “place”; it was the economic opportunities, not the system, that was thought to have changed. Increases in the frequency of a broader range of material culture types, such as ostrich eggshell beads, bone tools, grindstones, ochre and palettes, as well as a dramatic increase in evidence for on-site manufacturing from *c.* 13,000 cal. BP onwards, were said to reflect this change in the site’s role. The shift towards smaller, less mobile food packages, such as tortoises and newborn antelope, alongside the first shellfish deposits, were seen as reflecting the subsistence activities of women and children, and thus indicated a ‘homebase’ form of occupation, an interpretation supported by four burials within units dated to *c.* 13,000–10,600 cal. BP (Parkington 1988: 202).

Taking inspiration from Flannery’s (1968) ‘broad spectrum revolution’ and Cohen’s (1977) population pressure theory, Parkington (1980: 82–83, 1984b: 121–122) proposed that demographic expansion and increased technological efficiency could be accepted as two basic assumptions. In brief, he suggested that the loss of land through sea level rise in the early Holocene combined with the hypothesised aridification of the interior (J. Deacon 1974), increasingly encouraged people to move to coastal or mountain regions. Higher population density in these areas lead to stress on resources, which, in turn, had the effect of encouraging people to intensify economic output by specialising production and accessing a greater number of resources (Parkington 1980: 82–83). In direct contrast to J. Deacon’s characterisation of the terminal Pleistocene/early Holocene as a regressive phase of technological development, unconnected to what follows, the period was thus recast as a time when many of the characteristic traits of the Holocene LSA got underway.

Parkington’s *modus operandi* appeared to be to demonstrate continuous adaptive change throughout the LSA rather than abrupt replacements of ‘cultural systems’ at 14,000 BP and 9000 cal. BP. Yet as is often the case in work that claims to be critiquing particular origins narratives (Section 2.2), his alternative model ultimately ends up shifting the sliding marker of origins back in time. Despite disagreements about the timing and tempo of change, and different emphases on function or style, in other respects, Parkington’s model had much in common with that of J. Deacon. Both were based on the conventional narratives of intensification and the broad-spectrum revolution, and both were also unashamedly teleological in their view of increasing technological efficiency over time, despite the paucity of supporting evidence for this.

### 3.4.3. Wadley's social revolution

In sharp contrast to the Deacons' portrayal of the 14,000–9000 cal. BP period as a regressive phase of cultural development, and Parkington's gradual economic intensification model, Wadley (1989b: 50) envisioned nothing less than a “*social revolution*” at this time. Employing a methodology that set the precedent for later attempts to define the origins of *modernity* in the MSA (McBrearty & Brooks 2000: 492; Wadley 2001, 2003), a trait-list was marshalled to demonstrate the emergence of ethnographically observed hunter-gatherer behaviour, the key signifiers of which included the appearance of rock art, a higher concentration of open-air sites in a wider variety of geographical areas, greater numbers of symbolism-rich artefacts such as ostrich eggshell beads and bone tools, the development of bow and arrow technology, and a proliferation of spatially structured rockshelter occupations (Wadley 1989b: 50–51).

As we have already seen, Wadley did not share J. Deacon and Parkington's reservations about explicitly linking artefact style with cultural identity. The Oakhurst's paucity of standardised tool forms was accordingly explained in social terms as reflecting the need to downplay difference during this period of frequent migration. An alternative gift exchange item (see Section 3.2.1) of uniform appearance – the bone point – thus grew in popularity during a time of residential instability as a way to encourage fictive kin-relations between existing residents and immigrants, a pattern attested archaeologically by the spike in numbers of this artefact type (Wadley 1987: 87, 1989b: 50–51). Wadley's Oakhurst hunter-gatherers were also thought to have been organised in smaller groups than before with more restricted territories, which meant that an increased reliance on inter-group relations was necessary both to provide a safety net in times of drought or food shortages, and to secure suitable marriage partners (cf. Weissner 1982). In a reversal of the ecological model, the change to smaller groups was thought to have influenced the shift observed in faunal assemblages from gregarious grazing to smaller browsing antelopes, as the latter were more solitary animals and did not require the co-ordinated group work needed to successfully bring down a large bovid. The new form of hunting required stealth and surprise, a strategy linked to the hypothesised invention of bow and arrow technology, which the Kalahari ethnography indicated was typically carried out by just a few men. This interpretation formed the crux of Wadley's (1989b: 50) “social revolution”, as it was thought to have heralded the

exclusion of women from the hunt. Employing further ethnographic observations that stricter rules apply to the division of antelope brought back to the camp following a bow and arrow hunt compared to those larger animals obtained by a group, Wadley (1989b: 50) proposed that this could have been a watershed moment when access to meat became associated more strictly with the male domain, as attested in ethnographic accounts from the Kalahari.

For Wadley (1989b) both the inter-group and gender relations observable today amongst contemporary hunter-gatherers began in the Oakhurst. The link between the ‘modern San’ and the 14,000–9000 cal. BP period was further strengthened for Wadley by the appearance of a wide variety of ostrich eggshell items and bored stones at this time, both of which are still part of the material culture repertoire of contemporary Khoisan groups. The association of Oakhurst-like surface sites and rock art in the Transvaal also suggested that shamanistic beliefs were likely to have extended this far back in time (Wadley 1989b: 50). Wadley (1989b: 51) made it very clear that it was the Oakhurst and *not* the Wilton, as had been claimed by J. Deacon (1984), that was the proper San origins site:

All these material representations give the Oakhurst and subsequent Stone Age industrial complexes a closer relationship to the modern San organization than any previous industrial complex. The Oakhurst may therefore be the starting point for the type of social relations that we now recognize in modern San hunter-gatherer societies.

As already noted, few would now believe in the invention of the bow and arrow technology at this time, neither is the Oakhurst seen as the period when either the proliferation of “symbolism-rich” artefacts, or spatially structured campsites emerged, as all three of these ‘traits’ are now well established in the Pleistocene MSA (Wadley 2015). However, as a counter narrative to Deacon’s regressive technology model or Parkington’s economic determinism, Wadley’s version of the terminal Pleistocene/early Holocene unsettled the *status quo* and, at the very least, offers a clear example of how the same or very similar data can be assembled to say very different things, depending on the theoretical outlook of the time.

#### 3.4.4. Mazel's pioneer narrative

Mazel's (1989a, 1989b) Thukela Basin model offers yet another permutation on the early Holocene that reflected this being the earliest period of occupation identified in his research area. In line with the generalised understanding that the terminal Pleistocene/early Holocene was a period of population expansion across southern Africa (Parkington 1980; Deacon 1984; Wadley 1989), Mazel (1989b) described groups moving into the region for the first time. Yet in contrast to Parkington and Wadley's vision of densely populated Western Cape and highveld landscapes where processes of economic and social intensification were thought to be well underway, the low-density signature in the Thukela Basin at this time was interpreted as a "Pioneer Stage", c. 11,600–7800 cal. BP (Mazel 1989b: 46). The terminal Pleistocene/early Holocene was cast as a *beginning time*, when male dominance associated with hunting prevailed, a situation thought to have changed in the mid-Holocene as population rose, social stress declined through the deepening of alliance networks, and woman's status became more equal due to an increase in their dietary contribution. As in Wadley's model, early Holocene population expansion is associated with "*social, demographic, nutritional and economic stress*" (Mazel 1989b: 46) but in this version the period of migratory adversity did not lead to social change yet was sustained for millennia. In a further shifting of the origins marker forwards in time, once again the early Holocene became a foil for the narrative of mid-Holocene 'social complexity' (cf. Bender 1978, 1985a, 1985b, see Chapter 2.8).

#### 3.4.5. Mitchell's model of exchange

Armed with a wealth of new data from five key sites with overlapping early Holocene sequences, including three pioneering excavations in western Lesotho's Phuthiatsana Basin, at Ntloana Tsoana, Ha Makotoko and Tloutle, additional excavations from Sehonghong in the Lesotho highlands, and the emerging data from Wadley's work at Rose Cottage Cave, Mitchell (1990, 1993a, 1993b, 1994, 1996, 2000, 2002; Mitchell *et al.* 1996, 1998) published a series of site reports and a number of co- and single-authored regional syntheses, which still represents some of the most detailed thinking on the terminal Pleistocene/early Holocene LSA. Unlike other authors reviewed here, he attempted to move away from trying to identify single origin events and what emerges is a more complex imbricated set of processes that combines Parkington's

emphasis on more gradual *technological* change across the Pleistocene/Holocene boundary with Wadley's idea that 14,000 cal. BP *did* represent a major break in *social* relations, associated with the emergence of deepened exchange networks. Mitchell's (1993a, 1993b; Mitchell & Vogel 1992) more subdivided scale included a population spike at c. 12,500 cal. BP, the beginnings of formal tool standardisation and a further surge in exotic items exchanged over considerable distances, c. 10,800–10,200 cal. BP, and a final phase of social adjustment leading into the Wilton at c. 9000–8000 cal. BP.

Mitchell's (1996) key interpretive contribution was scaling-up Mazel's (1989a, 1989b) alliance network model to an inter-regional level, which allowed him to convincingly demonstrate long-lasting and extensive early Holocene exchange routes linking ostrich eggshell bead production in the Caledon Valley to the Lesotho highlands and the movement of Indian Ocean shell inland over distances of more than 300 km. As noted earlier, however, his work was part of a second wave of social archaeology carried out in the wake of the broader Kalahari debate (Section 2.4) and was written in a notably more cautious tone. Ethnographically informed interpretations exploring aggregation and dispersal and the gendered division of labour that took centre stage in Mitchell's (1993, 1994: 91, 1996: 62) initial writing on the early Holocene are downplayed in later publications (Mitchell 2000, 2002: 155–160), where the aim was explicitly to find a middle-ground between social and ecological perspectives. For Mitchell (2000), the answer was to combine ideas about economic maximisation from the North American cultural ecology school (Binford 1979, Bamforth 1986, Bleed 1986, see Section 2.7) with those found in early British post-processual theory, which emphasised identity formation and societal differentiation through studies of exchange networks (Gamble 1982; Bender 1981, see above, section 2.8). This was achieved through an overarching model that portrays both as risk-management strategies for coping with time stress (cf. Torrence 1983), whether this was environmentally or demographically induced. Economic strategies were said to take prominence in the 22,000–14,000 cal. BP terminal Pleistocene, when maintainable and reliable bladelet technologies were seen as vital adaptations, with the more social behaviours associated with alliance formation rising to prominence in the post-14,000 cal. BP period when 'informal' technologies are found together with high densities of exotic material culture (Mitchell 2000, 2002: 155–160).

Despite Mitchell's seemingly more complex narrative of the period incorporating more chronological 'breakpoints' as well as a mixture of social and

economic explanation, the model of culture change that he proposed ultimately reaffirmed the long-established progressivist standpoint and the terminal Pleistocene/early Holocene LSA remained a transitional phase on the journey towards complexity. Late Pleistocene material culture continued to be associated solely with economic and technological forces. Nascent social relations appear at the transition to the Holocene, yet even these are thought to be caused by external factors, namely economic risk, and once again, we have to wait until the fully developed plateau of the mid-Holocene, when both social *and* technological strategies start to work in tandem in a less deterministic manner.

### 3.5. After origins

All of the work reviewed here can be characterised as classic origins research that seeks to make a division between times when our prehistoric past is thought to be analogous to the complexities of the present and a simpler time from which the former is thought to have originated. We have seen how this origins marker was moved up and down the chronological scale and further progressive stages added as new data came in. The fact that the 14,000–7000 cal. BP period was such a focus of origins research throughout the 1980s and 1990s is particularly interesting in light of what has happened since, and there is little doubt that the drop off in publication interest in the last fifteen or so years is a direct result of many of the innovations and revolutions that were being sought at the Pleistocene/Holocene transition, such as the invention of bow and arrow technology and the “explosion” of symbolic material culture, now being found in a much deeper past, at least 30,000 years earlier than the period under discussion here!

One could be cynical about this side of Palaeolithic research and claim that the origins industry had had its fill and just moved on to richer seams, yet this would be missing both the wealth of perspectives offered by such an intensive period of work, as well as the opportunities for fresh perspectives away from the spotlight of origins research. As a result of the former, there is now a significantly more complex understanding of all the key ‘moments’ during this 5000-year period. As Mitchell’s (2002) overview makes plain, each ‘breakpoint’ in the story has spatial and temporal transgressions and a range of competing theories. This is, indeed, a healthy place for any period of history to be in. Taken as a whole, the twenty odd years of research reviewed above made significant advances in complicating our understanding of the

terminal Pleistocene/early Holocene. What initially looked like cultural regression can now be appreciated as a period filled with multiple happenings and overlapping trajectories. Singular explanations often imported from the northern hemisphere such as climate change, faunal collapse or demographic expansion have been shown to have limited applicability in this environmentally diverse sub-continent. As a result of intensive research on the late Pleistocene MSA one no longer has to argue about levels of social and technological complexity and old debates contrasting Holocene and Pleistocene assemblages are now largely moot. No doubt, in due course, the same will happen for the 70,000–40,000 BP period, as these traits of modernity are found even further back in time. What this means for the terminal Pleistocene/early Holocene however, is that we can now begin to think and write about this period, not only in terms of the major events at its beginning and end or prime causes of change, but in terms of *how* people actually lived. This does not mean abandoning the big questions, but that we simply tackle them in a more appropriate manner without having to imply that certain essential traits of modernity were absent in a *beforetime*. Appropriateness means thinking about scale, and it is misunderstandings about scale that appear to be at the heart of the conceptual difficulties facing LSA studies.

### 3.6. A question of scale

J. Deacon's model was explicitly based on a separation of scales that were thought to have processual and temporal correlates. Her hierarchy placed long-term macro-evolutionary innovative change associated to new tool designs at the top, adaptive stylistic changes in the middle and short-term local responses at the base. Parkington's critique of her model also worked within this same framework and maintained the clear distinction between different levels of process. His perspective in the early-mid 1980s was that until we can rule out that changes in the archaeological record are *not* related to variations in scheduling opportunities available in particular places at particular times, then looking to higher level social phenomena is premature at best. Parkington's logic is, of course, still very much the mainstream in Palaeolithic archaeology, most explicitly adhered to by those following time-perspectivism and human behavioural ecology schools of thought (Sections 2.6–2.7).

As research progressed through the late 1980s and 1990s, the clear separation of different scales of process began to look increasingly unlikely as more diverse



datasets came in from previously unstudied regions. Both the disappearance of bladelet technologies at the end of the Pleistocene and the adoption of a variety of standardised retouched tools in the early to mid-Holocene – the two defining evolutionary ‘punctures’ bracketing the terminal Pleistocene/early Holocene – were eventually shown to be both sub-continental happenings *and* processes with their own local trajectories (cf. Mitchell 2002: 153). The more fundamental problem with separating out long-term evolutionary patterns from human action on the ground is that reduces material culture change solely to the abstractions of evolutionary selection and drift. The ramification of this is that it removes the potential for thinking about *how* change happens. It completely obscures the two-way connectedness of more slowly changing ways of making and doing things to creative acts of individuals or groups of individuals responding to a particular socio-material context. For it is at precisely this intersection that those past ways of acting can become apparent and open themselves up to resistance, modification or more-intentional reproduction and manipulation (See section 4.2.1). Moving in the other direction – from short to long-term – novel responses to particular circumstances may themselves become naturalised and reproduced in an unknowing ‘traditional’ manner over centuries and even millennia.

Another theme of all the approaches reviewed above is an emphasis on the stressful conditions associated with demographic expansion. Yet this narrative has never been commensurate with the multi-millennial timescales that were being written about. The direction of causation might have been reversed in the social perspectives of the 1980s and 1990s, but the narratives remained at a scale hard to reconcile with human lifetimes. Mazel (1989b), for example, suggested that during his “Pioneer Stage” in the early Holocene, societal stress brought about by migration lasted for almost 4000 years. Wadley (1987, 1989a) put forward a similar argument to explain migration stress over almost two millennia and Mitchell (2002: 155–160) suggests that either economic or social strategies of managing risk can remain dominant for even longer time-spans. Another prevalent theme, which, like the dominant pioneer narrative, was part of the well-established global formula for the early Holocene, is the concept of the ‘broad-spectrum revolution’ (Flannery 1968), with all its correlates from Near Eastern Neolithic research, including task specialisation and, of course, social ‘complexity’.

As Parkington (1993) later recognised, the failure of LSA archaeology to move beyond coarse-grained evolutionary and demographic interpretations was linked to the

long-standing dominance of the geological model based on the replacement of one technocomplex or adaptive stage by another. As noted earlier (Section 3.2.3), this mode remained unchallenged by the social archaeologies of the mid-1980s, held in place because of the requirement for high numbers of ‘formal tools’. Even as excavation and dating techniques became more refined, and questions switched to inter-site (e.g. Wadley 1987, Mazel 1989a) and regional (Mitchell 1996) comparisons, the basic method of contrasting frequencies of artefacts between two or more chronostratigraphic ‘blocks’ remained in place. This kind of comparative exercise typically revolves around a list of material traits thought to be indicative of more or less intensive social or economic activity. The relative frequencies of these different traits are then compared between two blocks or ‘layers’ thought to define a temporal or spatial boundary, a method that still features in a great deal of current work.<sup>2</sup>

Of course, it is not comparison between two entities *per se* that is the problem, and as Mitchell demonstrated with ostrich eggshell bead data from the Maloti-Drakensberg region, this sort of exercise can reveal striking differences worthy of further attention. But the convention of grouping things in coarse-grained spatial or temporal blocks for the purpose of modelling social regions or regional settlement histories, is less sound when each site only has a small number of radiocarbon dates and each region only contains one or two sites. This is most evident when the evidence on which the interpretation depends falls at one of the boundaries between the two blocks being compared. For example, in support of Mitchell’s (2000, 2002) interpretation that exchange was the dominant economic strategy in the Caledon Valley for the 14,000–10,300 cal. BP period, three marine shell beads in Unit 034 at Ha Makotoko, likely dating to *c.* 10,300–9900 cal. BP and thus overlapping only with the very end of this phase, are employed as key evidence for the whole of the preceding 3.7 millennia.

A closely related concern to this sub-division of time into two contrasting blocks is the way in which inter-site interpretations, such as Mazel’s (1989a, 1989b) work on the Thukela Basin, typically employ one or two rockshelter sequences to stand for the occupational record of an entire region. As Mitchell (1996: 68) puts it, there is a tendency to “treat all sites as equal”. Yet these pitfalls were only partially taken on

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<sup>2</sup> See Pargeter *et al.* (2016) for a critique of the use of cultural ‘blocks’ in MSA origins work and Arthur (2008) for a related discussion of the normative hunter/herder dichotomy model as applied to the post-2000 cal. BP LSA.

board in Mitchell's (1996) own model, which aside from a largely unpublished sequence from Bellevue, depends on Sehonghong as *the* record for the Lesotho Highlands, and Umhlatuzana, as *the* record for the coastal forelands of KwaZulu-Natal. Mitchell (1996: 56) does engage with the idea that at certain times and places rockshelters may have performed very different roles in hunter-gatherer life but this notion appears to come second to the overarching narrative of regional settlement "pulses". Wadley's (1987) concept of a social aggregation, for example, is employed by Mitchell (1996: 56–57) as a possible explanation for the particularly high densities of ostrich eggshell beads and Woodlot scrapers found at Sehonghong *c.* 8200–7700 cal. BP, yet the increase in evidence for bead production is, in the same paragraph, linked to a *region-wide* migration back into the highlands. Once again, the single site is portrayed as a regional record and the 'social' world of hunter-gatherers is reduced to economic risk management during 'stressful' demographic expansion (cf. Gamble 1982; Wadley 1987; Mazel 1989a, 1989b).

The strength of Wadley's (1989) and Mitchell's (2000, 2002) view that technological choices and exchange can be motivated by the need to downplay or emphasise identity boundaries was that material culture had been assigned an active role in the reproduction of society, thus helping to counter earlier passive views of material cultural change (J. Deacon 1984) and demographically driven economic intensification (Parkington 1980, 1987). The problem of scale, however, still haunted these more socially oriented archaeologies. In a passage weighing up the merits of a possible social boundary on either side of the Caledon River *c.* 10,800–10,400 cal. BP, Mitchell (2000: 166) specifically draws attention to the fact that different types of explanation require different data sets and approaches to excavation and, underpinning this, is a concern with appropriate scale. Thus, Mitchell (2000: 166) doubts whether the Caledon River pattern could be explainable in terms of different kinds of occupation, such as Wadley's (1987) aggregated or dispersed forms of habitation, because it would be hard to imagine particular activities being repeated in a particular place for "a period as long as 2500 *radiocarbon* years". He goes on to recommend larger excavations, more suitable for detecting activity areas, yet interestingly, the competing social region hypothesis does not appear subject to the same methodological considerations. The question that this then raises is whether the sort of "social relations" imagined in Mitchell's (2002: 159) model of prehistoric exchange are the sort that operate well above the level of place and practice. Though the discussion of competing explanations

may be more nuanced in Mitchell's account, this is the same separation of scales found in Deacon and Parkington's earlier work and only serves to further entrench the conventional mode of analysis based on comparing aggregated cultural blocks across a perceived breakpoint.

As described above (Section 3.3), what I have called the second wave of LSA social archaeology was directly concerned with trying to move beyond the use of coarse-grained aggregated 'layers' and eventually led to a focus on high-resolution open air sites. However, the *only* serious attempt to write about rockshelters at a scale below that of the aggregated 'layer' was Parkington's (1992) short report from Elands Bay Cave, which, in a radical break from tradition, included a full site matrix and descriptions of assemblages at the level of excavated units. Amongst the high-resolution observations, two superimposed contexts dated to a restricted period within the range of *c.* 11,200–10,700 cal. BP, produced 88% of the double pointed bone 'fish gorges' (Parkington 1992: 8–9). Interestingly, the same two units also produced the only two shellfish samples dominated by the intertidal whelk, *Burnapena* sp., matching comparable appearances of fish gorges at Byneskranskop at a very similar time *c.* 11,300–10,800 cal. BP, and an earlier, though still overlapping, spike in at Nelson Bay Cave *c.* 12,600–11,300 cal. BP, which was also accompanied by a similar surge in the proportions of whelk (Deacon 1984; Parkington 1992: 8–9). Even more unusual is the clustering of large crayfish remains, 78% of which originate from a single lens dating *c.* 11,800–11,200 cal. BP, which was almost certainly the result of a harvesting 'event' occurring over a number of days or even within a single depositional episode, one likely to have occurred following a mass stranding associated with low oxygen levels in coastal waters (Parkington 1992: 8–9).

The fact that such time-restricted patterns had been identified, some with broad geographical reach – the fish gorges and whelk pattern extends over some 1000 km of coastline – was a powerful case *against* both the unilinear modelling of technological and adaptive progress so dominant at this time *and* the established view of rockshelter archaeology as a blurred palimpsest, suitable for studying only long-term trends (e.g. J. Deacon 1972; Barham 1992). There was, however, very little interpretation of the actual sequence, with discussion focused instead on these events and the scale of process they represented. The picture that emerged was thus a series of disconnected individual "pulses" of activity. Only a year later Parkington (1993: 96) published his manifesto for a "historical narrative" approach to the excavated record, linked directly

to the search for “symbol, meaning and metaphor” in the study of LSA rock art (Lewis-Williams 1981). Parkington’s (1992a, 1992b) work at Eland’s Bay and Dunefield Midden began within this particular “intellectual atmosphere” when the symbolic and textual archaeologies of post-processualism (Hodder 1982; Tilley 1991) were *de rigueur* and the social was closely identified with the thought and action of individual people. For Parkington (1993: 96), historical *narrative* was about “resolving person” and explicitly meant isolating high-resolution events. An alternative non-textual reading of the word *narrative*, however, implies a more imbricated, ongoing process, in which “every line in a story, grows rhythmically out of the one before and lays the groundwork for the next” (Ingold 2000: 347), which appears much more appropriate for study of archaeological sediments than either the comparison of cultural blocks or the focus on individual events sealed off from one another. Rather than *reading* ‘events’ to construct narratives, perhaps what we should be looking for is the material narratives found in the stratigraphy itself, in which individual assemblages and the traces of human social practice found within them are always dynamically linked to underlying and overlying assemblages. It is the relations between them, rather than the events themselves, that thus become the focus of study.

### 3.7. Towards a ground-level perspective

Globally, the terminal Pleistocene/early Holocene is thought of as a time of dramatic changes, associated with the transition out of the Ice Age and the appearance of the ecosystems we now inhabit. It is thus not surprising that archaeologists have written the southern African human story within an overarching framework emphasising long-term change. Though a variety of origins narratives have been constructed, some emphasising a cultural downturn associated with environmentally induced stress and, in particular, the loss of key animal species, others emphasising a *beginning time* linked to climatic amelioration and expanding populations, their common thread is that they always portray the period as a singular transition, defined by *a single* trajectory, with the focus placed on identifying the breakpoints of diachronic change along the line. It is precisely this quality that has allowed it to remain subject to mono-causal explanations and coarse-grained dichotomous models to a much greater extent than later Holocene periods.

The discussion here has also identified the rigid hierarchy of explanatory scales as a major conceptual problem that operates alongside, and is, in part, mutually constitutive of, the other disciplinary obstacles facing LSA archaeology identified earlier in this chapter, namely the separation of functional from social aspects of hunter-gatherer life and the under-theorised use of ethnographic evidence. As noted earlier, the problem with this hierarchy is not that there are different processes operating at different tempos and spans. As Mitchell has emphasised, the remarkable congruence in the trajectory of ostrich eggshell bead sizes over many millennia between parts of southern Africa over 1000 km apart is a particularly interesting example of sub-continental processes of artefact change. The problem lies, rather, in *not* considering that even these slower tempo, longer term processes are *also* always a result of the actual things that humans do on the ground. It misses the important question of *how* these material traditions of stone, shell and bone working, and their spheres of geographical circulation, were reproduced over such extraordinary long time periods.

The answer lies, of course, at the bottom of the hierarchy of scale, at the level of individual and group practice and in their mutually constituting material contexts. It is in the largely unspoken, taken-for-granted ways that people inhabit their worlds and encounter its past material traces that the most enduring traditions are maintained and transformed. Without this *ground-level perspective* it is also difficult to see how the central aim of those who championed a social archaeology of the LSA through the 1980s and 1990s – to write histories in which the actors have the potential to change society from within – can ever be realised. It is to this more complicated relationship between people, practices and their material worlds that I now turn by taking a closer look at non-representational theories and by trying to reimagine the active role rockshelters and their material archives may have played in the making of hunter-gatherer society.

## Chapter 4.

### Materialising rockshelters

#### 4.1. Introduction

As previously outlined, the convenient use of our hunter-gatherer past as a foil for the development of societal, cognitive and even experiential complexity has meant that much theoretical work of the last 30 years has been conducted well outside the sphere of Palaeolithic archaeology, yet clearly there is no *a priori* reason to presume the hunter-gatherers of more distant pasts were any less engaged or ‘entangled’ (see Chapter 2) with the material and temporal unfolding of life than anyone else. I begin with the origins of these ideas in practice, temporality, and materiality theory before reviewing new perspectives on stratigraphy and memory work. The aim is to highlight ways of thinking about the active nature of past material residues and build the case that rockshelters were more than simply occupational sites and that their particular qualities of accumulation and preservation on the one hand and erosion and exposure on the other, were as important for past peoples as they are for present-day archaeologists.

#### 4.2. Tackling determinism

Although a ‘quiet revolution’ at first (Barrett 1988), a critique of the constructionist position adopted by the early post-processual movement, and the development of alternatives, eventually gained momentum in late twentieth-century British archaeology (e.g. Gosden 1994; Thomas 1996). A diverse *non-representational* archaeology emerged around the turn of the millennium that incorporated the most useful strands of existing thought, including a renewed and expanded emphasis on the active nature of material culture, which had much earlier roots in symbolic archaeology (Hodder 1982), but which now was implicated more explicitly in a co-constitutive relationship with humans (Miller 1987), alongside an ever-increasing incorporation of influences from philosophy and the wider social sciences (Preucel & Meskell 2004: 3–22). From this diverse array of ideas, three streams of thought – practice theories, perspectives that emphasise the intrinsic temporality of human-material engagements, and those from the various standpoints of materiality – form the foundations of non-representational theory in archaeology today. I begin by examining each of these ideas

in terms of their potential for rethinking LSA archaeology, before charting how in recent years these three perspectives have come together in recent years under the broad rubric of relational theory. As will become clear, however, there are some sharp differences in the way that relational approaches have been applied, all hinging on the debate on universality versus context.

#### 4.2.1. Practice theory

Although practice-based approaches within archaeology do not represent a unified school of thought, most derive inspiration from either Pierre Bourdieu's (1977) theory of practice or Anthony Giddens' (1984) structuration theory, who, along with many others (e.g. Ortner 2001), tried to move beyond the unilinear determinism of structuralist modelling to interrogate the mutuality of individual agency and social structures. Bourdieu offers a particularly attractive theoretical framework for archaeologists working on dwelling places with deep histories and active sedimentary floors like rockshelters due to his emphasis on the generative role of knowledge embodied in everyday life and material surroundings. As such I concentrate on his ideas here, whilst acknowledging that this is but one of many practice *theories*. Building on Mauss' work on the habits of the body – or ways of acting that we take for granted – and borrowing the term, *habitus*, Bourdieu built a vocabulary for the ways in which society recreates itself through human action, his aim being “to capture and encapsulate the dialectic of objectivism and subjectivism” (Bourdieu 1988: 782). For Bourdieu, the habitus is the way people, groups of people and even institutions, embody a less-than-conscious “*schemata of perception, thinking, feeling, evaluating, speaking and acting*” (Krais 1993: 169–170). *Doxa* replaces the under-theorised and static social structure of earlier frameworks, with largely taken-for-granted forms of knowledge found dispersed throughout social life within the habitus of individuals and groups of individuals, and in the various social and material contexts within which they move. These forms of knowledge have the potential to rise to consciousness and then, in a transformed state, they can be reasserted, or re-naturalisation to become *orthodoxy*, or they can be refashioned and become incorporated as alternative ways of being, a situation called *heterodoxy*.

Bourdieu's emphasis on the largely unconscious reproduction of society through the structures of the *doxa* has led many to argue that, despite its intentions to do exactly the opposite, it remains a top down deterministic model (e.g. Jones & Boivin



2010). Related to this is the charge that Bourdieu, like the structuralists before him, does not sufficiently allow for societal change, apart from processes of interaction, such as colonialism, when alternative *doxas* collide (Comaroff 1985: 5). Then there are the critics from the phenomenology school of anthropology for whom Bourdieu goes too far away from the subjective experience and conscious decisions of individuals (Throop & Murphy 2002: 198). More recently, critical voices have also appeared from the ranks of Actor Network theory-inspired symmetrical archaeology, for whom Bourdieu and other practice theory adherents, still occupy a theoretical position too far in the other direction, and accuse them of maintaining the Cartesian divide between mind and world, through the emphasis on mental frameworks of knowledge (Lucas 2012). There are, however, multiple ways in which Bourdieu's framework can be useful, with different emphases placed on the strength of social context, habitus, or doxa, as he himself employed throughout his writing, and when taken as a set of ideas, rather than a singular model that can be applied or tested on an archaeological assemblage, it remains a powerful tool for thinking and developing relational approaches suited to particular contexts (Pauketat 2001).

Before reviewing archaeological perspectives on temporality, materiality, and relationality, all of which arguably grew directly out of the broad foundations provided by practice theories (Miller 2005; Van Dyke 2015), I want to highlight three areas in which this idea of practice can help overcome some of the conceptual problems in LSA studies highlighted thus far. At its most basic, the co-constitutive understanding of cultural tradition and individual agency that practice theory encourages is vitally important – not just in southern Africa, but for *all* hunter-gatherer studies. The search for social structure, as a distinct conceptual horizon, has, as described in chapters two and three, led archaeologists to draw erroneous distinctions between the social and the non-social, and to look for evidence of abstract social institutions, thought to be recognisable parts of an organic whole. Embedding the social within practice, we can move beyond this and view the full spectrum of material residues of past action as having been active within processes of social formation and change. Jettisoning deterministic social structure also means that past material records such as the pre-2000 cal. BP Holocene LSA, where the sorts of archaeological entities conventionally linked to institutions and the emergence of inequality – such as burials, art, overtly ritual objects, monument construction, and evidence of food storage – are all but absent, become just as much the focus of a social archaeology, as those that tick these boxes.

Second, replacing an abstract notion of cultural rules with a more complex idea of embodied dispositions, represents another fundamental step for LSA archaeology. Within this framework, all action – not only that which is part of ritual or symbolic activity – is generated and limited by cultural understandings. Human action is, of course, never purely an original act guided by an ideal form or a pre-existing schemata, neither is it ever a naturalised unconscious act blindly following tradition. The important point about conscious action or its opposite, as I see it, is that they are never fully attained in their pure forms. Even though one may think that a particular thought, passage of speech, or action is entirely original, it is always bringing with it a whole range of previously encountered ways of thinking, talking or doing. And, even when it seems like we are acting entirely without conscious thought, it is always there, just below the surface ready to burst into full view and demand our attention, as it does when a particular word suddenly sounds unusual when it is repeated. In this reading, practice theory can be seen as a way of round the conceptual barrier of intentionality, allowing us to understand that an actor's choice is always partly dependent on “*less-than-conscious*” historical and situational forces (Jenkins 1992: 77–78, my emphasis), including the material, animal, and weather worlds it is part of. This offers us a different way to think about patterned sediments of habitation inside dwelling spaces such as rockshelters. Unlike planned architectural forms, or the monumentality of ritual and funerary deposits, such archaeological contexts have an ambiguous intentionality that I would argue is exactly what makes them powerful, as within them *residues* of organisational form and ideas be followed. Yet, the erosive nature of sedimentary contexts maintains the potential for transformation, a likely positive quality for such ‘anti-structural’ hunter-gatherers (cf. Guenther 1979), for whom continual reinvention was the only constant. Importantly, practice-based thinking allows this interplay between intentionality and the *other-than-conscious* to become something that can be written about. It can become a source of archaeological creativity rather than anxiety.

The third way in which Bourdieu's ideas are important for hunter-gatherer archaeology is that they allow for a rethinking of tradition as something that is dynamic and always in the process of becoming. As King (2000: 428) explains “...*each subsequent exchange builds on the entire series of exchanges and, thereby, subtly transforms the meaning of those past exchanges and, therefore, the relationship itself. Social relations can never be static for their mere maintenance necessarily involves a transformation of the relationship.*” Thus, traditions only get carried forward because

they are continually being reinvented (Joyce & Pollard 2010). All practice is thus social change and it is this way of thinking, which closely parallels Ingold's explanation of how trust built on knowledge of previous encounters, not external structure, holds hunter-gatherer society together (Section 2.11).

#### 4.2.2. Temporality

Instead of a unilinear sequential view of chronology associated with deterministic explanations, recent work on time in archaeology has been emphasised the multi-temporal nature of human experience, recognising that past and future action (memory and anticipation) are involved in any 'event' (Ingold 1993; Gosden 1994; Thomas 1996; Lucas 2005; Murray 1999). The durability of material deposits also means that matter has a life history of its own and plays an active role in maintaining these connections, making archaeology well placed to study these chains of action and meaning. This awareness of the temporality of all human life and its material dimensions provides space to examine the relationship of different scales of practice, such as that between habitual or discursive action on a daily or seasonal basis and longer-term traditions (Gosden 1994; Harding 2005). Whether these different aspects of time can truly be separated in a dialectical sense, or are again better thought of as more inseparable, and thus on a continuum, is a debate that merges with that on the independence of structure and agency outlined above, as events have been conventionally associated with individual action, and tradition is something typically associated with societal norms and structures that play out over longer time scales. I explore this below, when I review Lucas' (2012) notion of material memory residing in past residues. The important point here is that the emergence of the social dimensions of time as a field of archaeological discourse holds significance for rethinking hunter-gatherer archaeology in southern Africa, which has, as outlined above (Sections 3.3–3.7), found itself trapped in a state of inertia, caught between long-term evolutionary perspectives and the idea of the ethnographic snapshot. The idea that residues of material actions which make up a place at a particular time, including the memories of them, also structure further practices in that place – is clearly a useful tool for working with the complex long-term stratigraphies found in rockshelters. In particular, the role of material residues has been largely overlooked in terms of the transfer of skilled knowledge, and, as I demonstrate in this thesis, the reproduction and transformation of traditions over the longer term. The future potential of past material residues is a topic that has been recently taken up

by Hodder (2012) and Lucas (2012) in their relational models of the archaeological record, discussed in more detail below.

#### 4.2.3. Materiality

These new understandings of the inseparability of individual agency and social structure together with the multi-temporal nature of material culture, action and experience both encourage, and are encouraged by, a third area of archaeological theory that underpins the development of relational thinking: the questioning of the dualistic tendencies that structure modern Western thought. It is now widely appreciated, that to rigidly separate human experience into social or economic (Hodder 1982), symbolic or functional, or ritual and secular spheres (Brück 1999), and to project our industrialised nature/culture division onto other-than-western societies (Ingold 2000; Descola 2006), severely restricts our understanding of how life works in these contexts, and indeed in all human life. Twentieth-century anthropology and archaeology, were, however, founded on modernist concepts of society and culture, its internal compartmentalisation and external separation from nature. And it was these two themes – the function of societal structure and the workings of society in its environment – which dominated both disciplines and became entrenched as theoretical opposites in the processual and post-processual archaeologies from the late 1970s onwards, with the former emphasising ecological context, economy and function, the latter explicitly privileging the cultural constructions within political and ritual spheres of human life. As already mentioned, this legacy of division has had a limiting effect on hunter-gatherer archaeology worldwide, and on the southern African LSA in particular, where concerns with either an unpeopled ecology on the one hand or an abstract notion of symbolism and ritualised behaviour – rather than a lived-in world, in which meaning is enmeshed in daily life – has dominated.

#### 4.2.4. Animism and ontology

Another important stream of non-representational thought, touched on in Chapter 2, comes directly from the anthropology of hunter-gatherers and small-scale hunter-horticulturalists, where a revival of interest in the concept of animism initiated by Hallowell's (1960) study of the Ojibwa, has been developed by a more recent generation of writers, most notably Ingold (2000) and Viveiros de Castro (1998). In

general terms, animism is commonly understood to be the treatment of “other-than-human” (Hallowell 1960) members of society, be they animals, rocks, trees, and plants as persons with agency. Earlier humanist ideas about animism theorised hunter-gatherers as projecting a worldview *onto*, or constructing an epistemology *about*, the natural world (Bird-David 1999), and maintained too solid a distinction between how people think versus how they act. This has been superseded by reframing the anthropological study of animism as a question of *ontology* (Viveiros de Castro (1998; Ingold 2000, 2006: 10), which is essentially what a person, or group of persons, considers the world to be (Alberti & Marshall 2009), the details of which are not normally explainable as abstract forms of knowledge. In contrast, a concern with ontology is a concern with the very stuff of reality and asks not what meanings are attached to different kinds of entities but what different kinds of entities there are: what constitutes a person, object or an animal, or what makes a group of things, people or animals, as part of nature or culture in a particular time and place (Holbraad & Pederson 2017).

In the first instance, there is much to be gained in LSA archaeology by replacing the idea of San religion or cosmology as a structurally bounded concept founded on a self-conscious distinction between the supernatural shamanistic world and other aspects of life (e.g. Lewis-Williams & Challis 2011), with one that does not take this structural separation as a given. Indeed, recent work has shown is a strong case for thinking beyond these generalised notions of shamanism (Dowson 2007), animism, religion or even spirituality, to relook at San ethnography and rock art without such presuppositions (Low 2007; Guenther 2015).

In the last decade, ideas about practice, temporality and materiality have become increasingly interwoven with ontological perspectives from anthropology into what may, in a most general sense, be called a *relational* approach to past human-world interactions (Hodder 2012; Lucas 2012). Although many different perspectives exist, some more radical than others, an emphasis on networks (Latour 2005) or meshworks (Ingold 2008) of relations over time and space can be found throughout. For present purposes, that relational approaches have signalled a resurgence of interpretive interest in assemblages and stratigraphic sequence as more than just taxonomical categories offers a particularly productive platform for thinking about rockshelter archaeology. Before going on to review these new perspectives on relational stratigraphies, it is

important to take a brief look at some initial attempts at rethinking stratigraphic sequence, which emerged through the focus on memory studies in archaeology.

#### 4.3. Genealogies of practice and memory

In line with a broader memory studies trend in anthropology and archaeology, several researchers have identified the study of the social construction of memory through depositional practices as their main focus (Pauketat 2001; Jones 2001; Mills & Walker 2008; Pollard 2008; Joyce & Pollard 2010; Sassaman & Holly 2011). Their work builds directly on early post-processual work on the British Neolithic and Bronze Age that emphasised the social nature of ‘structured deposition’ (Richards & Thomas 1984), the recursive qualities and long-term landscape presence of monumental architecture, *the past in the past* (e.g. Barrett *et al.* 1991; Bradley 1991; Thomas 1991), and the phenomenological experience of place (Tilley 1994). However, an explicit desire to develop systematic approaches grounded in the material process of archaeological excavation distinguishes this new wave of memory studies from earlier research. For example, Pauketat and Alt (2005: 230) stress empirical detail in the study of variation over time and space as one of their “procedural fundamentals”. A specific interest in the interpretive potential found in the detail of stratigraphic sequences demonstrates a desire to play to the practical strengths of the archaeological process and is another sign that memory work, unlike work on structured deposition, no longer depends on tracing exotic ritual objects in unusual depositional contexts.

In their introduction Mills and Walker (2008) summarise key conceptual trends in anthropological understandings of memory and their influence on archaeology. Most importantly, they identify a move away from placing a rigid distinction between habitual, bodily ‘incorporating’ practices associated with the reproduction of tradition on the one hand and conscious transmission through ‘inscribing’ practices on the other; both these practices should, in fact, be viewed as working together (Mills and Walker 2008: 7). Pauketat and Alt’s (2005) paper on Cahokian settlements in the American Midwest is important in this regard and includes a clear articulation of interpretive technique for studying the relationship of different scales of analysis that involves “*the tacking back and forth between the specificities of agential moments and long-term historical effects*” (Pauketat & Alt 2005: 231). They achieve this through the study of a mundane and commonly occurring archaeological feature: the lowly post-hole. By

studying hundreds of post-hole arrangements and their micro-sequences (or *chaînes opératoires*) – the digging, placement, removal and replacement of individual posts – they recognised strong patterning thought to represent the work of different age groups and thus communal organisation, as well as the special treatment of certain houses rebuilt over longer periods. By comparing these “genealogies of practice” across the wider region and over time, the impact of urbanisation and its physical manifestation in rapid pre-fabricated trench dug replacements is made tangible through archaeological process, as well as local resistance to these macro-scale traditions in the form of acts of construction that did not conform to type. Alternative hunter-gatherer archaeologies in some North American contexts have also been reimagined within this practice-theory approach to memory. Randall (2011), for example, emphasises the inscriptive qualities of shell mound construction on the St John’s River in Florida and writes of hunter-gatherers constructing “depositional narratives” that included intentional acts and everyday habitual practice (see also Sassaman 2011).

To summarise, practice-based approaches to stratigraphy have made significant progress in bringing interpretation closer to the archaeological process, but metaphors for social practices such as *inscription*, *incorporation*, *citation*, *remembering* and *forgetting* used by researchers such as Mills, Walker and colleagues, remain abstract metaphorical concepts and there is limited connection to the formation of the archaeological record beyond obvious intentional acts of monument construction, destruction or burial. The extension of these theories into the hunter-gatherer archaeology of North America is promising, yet so far has only been applied in particular instances of monumental construction.

#### 4.4. A critical perspective on stratigraphic sequence

A more detailed critique of archaeological fieldwork that has been building over the last decade or so that offers a different avenue for tackling this problem (Lucas 2002; Berggren & Hodder 2003) and has recently focused on the potential for bridging the gap between long-standing traditions of artefactual and deposit formation processes and social interpretations (McAnany & Hodder 2009: 1–7; Joyce & Pollard 2010: 1–7; Lucas 2012: 1–123).

#### 4.4.1. Social stratigraphies

The clearest statement on the rethinking of archaeological deposits as interpretive objects of study in their own right comes from McAnany and Hodder (2009: 7) in their call for a “social stratigraphy”, defined as “*a physical medium for the performance of social practice*.” Importantly, they make an explicit attempt to codify stratigraphy-making processes, stressing, in line with other uses of practice theory (e.g. Pauketat 2001), that this is “a toolkit to think by”, rather than a mechanistic model (McAnany & Hodder 2009: 10). McAnany and Hodder’s argument for a social approach to stratigraphy is promising, but their emphasis on short time scales less helpful. Although framed as a response to Lucas’ (2005) challenge to archaeologists to go beyond the sequencing of stratigraphy and cross-calibrate episodic and durational time, their discussion does quite the opposite, declaring that a “*social approach stresses the decadal or generational time frame of most human-produced strata*” (McAnany & Hodder 2008: 8). Linked to this is their distinction between repetitive habitual action and commemorative events following Bourdieu (1979) and Connerton (1989). A single house sequence at Çatalhöyük, Turkey, is described as being made up of both habitual and commemorative stratigraphy-making practices. There is, however, no allowance that action can be both of these at the same time, and no discussion of the relationship or productive tension between them (cf. Gosden 1994), as exemplified by the “tacking back and forth” approach of Joyce and Pauketat and Alt (2005: 231) described above. Mills and Walker (2008: 7) point out that attempts to isolate spheres of unconscious habitual action or intentional inscribing practices has been questioned for some time now in the anthropological and archaeological literature (Thomas 1996: 43, Pollard 2001).

This debate about whether we can ever really separate original intentional thought and action from the other-than-conscious habitus of being merges with the arguments over the existence of ideal form, and the material culture versus materials touched on above. McAnany and Hodder (2009: 9), however, appear to be moving in the other direction towards further separation of these concepts with their distinction between meaningful and random sequences, identifying a third category of depositional relations that according to them has “no social significance”, for which, confusingly, they use the commonplace archaeological term, *palimpsest* defined as “*the overlaying of deposits in which there is no interest in creating links with underlying deposits and*



*cuts.*” This idea that citation can be traced in such a clear manner and that some contexts are social and laden with meaning, and others not, is reminiscent of the objectifying language of the ‘problematic palimpsest’ described earlier that has been so unhelpful in LSA archaeology (J. Deacon 1972; Barham 1992) and more broadly in mainstream North American and European Palaeolithic archaeology (Henry 2012; Black & Thoms 2014), where sites can be characterised as being ‘messy’, ‘disturbed’, or even ‘contaminated’ entities if clear linear sequences cannot be identified. Both Bailey (2007) and Lucas (2012), however, have developed alternative perspectives on palimpsests. Lucas, in particular, reminds us that we should concentrate on processes rather than fixating on end products or trying to develop more unhelpful binaries, such as whether we classify a sequence as stratigraphy *or* palimpsest. These two concepts are best thought of as two endpoints on a continuum, which are never truly attained. In reality, all archaeological entities are a mixture of both.

An important alteration of this understanding must, however, involve softening the distinction between anthropogenic *and* natural aspects of archaeological formations. Even built contexts such as wall and floor surfaces are encountered in the excavated record as part of a sedimentary context and, as Ingold (1993) reminded us, any object contains the effects of geological forces prior to its shaping by a human hand, during its use, and following burial. Most contexts are, of course, mixtures of artefactual residues and biological and geological processes and materials. Theoretical (Gosden 1994) and scientific advances in landscape archaeology and geoarchaeology (Goldberg & MacPhail 2008) have also been chipping away at the concept of ‘natural’ sediments and soils in which ‘cultural’ artefacts are contained, for some time. In general, however, and despite the broader recognition of ‘anthrosols’ and cultural sediments in fields such as historical ecology (e.g. Lehmann *et al.* 2006), appreciation that sedimentary processes are part of human life and *vice versa* has found surprisingly little purchase in archaeological thought.

In fairness to McAnany and Hodder, their conceptual tools are designed specifically for the built environment and they stress that this is simply a suggestion for a way of thinking that should be redesigned to suit different contexts. Their paper thus remains an important contribution and their breaking down of stratigraphy-making techniques into processes such as *raising*, *entombment*, *erasure*, *returning* and *avoiding*, with their connection to broader social practices of *memory*, *memorialization*,

*forgetting, renewal and subversion*, can be applied, albeit in modified form, to rockshelter contexts.

One way around the divide between intentional stratigraphy-making acts and non-social palimpsests is to think about processes of materialisation and dematerialisation and to assign important creative forces to both. Taking inspiration from Gavin Lucas' (2012) recent archaeological reworking of Deleuze and DeLanda's assemblage concept, it is possible to see how those permeable entities that make up the social world are as much dependent on the instability of things as they are on their stability.

#### 4.4.2. Materialisation

Rather than seeing the depositional layer as a container for artefacts, Lucas argues that both layer and artefact are residues of past materialising processes. Like Ingold (2007), Lucas wants us to think beyond the concept of *materiality*, which invokes the experience of the human made thing "as a singular entity held in suspension" and proposes the concept of materialisation: the "*process in which objects and people are made and unmade.*" The polarised opposites of event versus palimpsest, found in McAnany and Hodder's model, are overcome with the concept of *assemblage*. All objects (including stratigraphic layers) are *assemblages*, which are always in the process of coming into being through materialisation, *and* coming apart, through the opposing forces of de-materialisation.

Also underpinning Lucas' (2012) model is Alfred Whitehead's distinction between potential and actual qualities, both of which are thought to exist in all assemblages, and this provides Lucas both with a connection between past and future entities, and a way around the prior existence of a mental template. Material forms/assemblages are *not* the result of ideal templates that *pre-exist* in the mind, they are the result of a combination of potential qualities or properties that *pre-exist* in other assemblages. Lucas argues that the archaeological record and indeed "material reality" at any one time exists of actualised *present* entities which are themselves traces of *prior* assemblages, with qualities that have the potential to become part of new *future* assemblages (Lucas 2012: 167). This allows for change and the development of new forms over time: "*Entities (assemblages) always hold something back, hold more than we can see at any one time, and that is how novelty is possible*" (Lucas 2012: 259).

Lucas breaks assemblage formation down into the twinned materialisation processes of *containment* and *enchainment*. Enchainment is temporal, the association of objects, assemblages and actions to one another, through linked or repetitive iterations. Containment is spatial: “*the creation of fixed and circumscribed spaces which act as firewalls and centres of gravity for repelling and/or pulling objects together*” (Lucas 2012: 200). His term “firewall” referring to the separation of a particular assembling process from other materialising and dematerialising processes. Both operate on all scales, enchainment is the force behind a regional artefact form, as well the objects and sedimentary fills associated together with people and actions such as digging and praying during a burial ceremony. Similarly, containment operates through the binding forces and natural barriers created by entities as diverse as an island or a mountain range, or the sealing of a deposit between two floods or rockfalls, or even the gravitational pull of a group of people with similar ideas. These forces vary in intensity and it is the degree of materialisation that is important in terms of their *residual* quality.

As touched on earlier, residuality is a central concept in Lucas’ understanding of the archaeological record and “material reality” in general, and it is this that offers the most potential for interpretation of rockshelter stratigraphies, providing a framework for thinking about the effects of past assemblages on the emergence, reproduction and transformation of future social and material forms. For Lucas, all objects and materials encountered by archaeologists are assemblages in their own right as archaeological entities, which through the archaeological process, are also fragmented and rematerialized. They are, also, as should already be apparent from the burial example above, residues of past *social* assemblages, as well as being *archives* for reincorporation into future social assemblages. It is in this second pluritemporal notion of a social assemblage, that Lucas’ work stands out from other relational theories, which eschew the concept of *the social* altogether (e.g. Latour 2005, Ingold 2007). For Lucas, however, social entities are not abstract structures or institutions but real “*concrete, material assemblages, made of stone and earth, flesh and bone*” (Lucas 2012: 188).

Lucas’ theory of “material reality”, is envisaged as temporally fluid with humans, animals and materials living in a constant state of stabilising and destabilising flux, yet, importantly, it is not a relativist argument that all living and material things are related equally over space and time; there is both temporal unevenness built in to the degree of residuality and geographical variation in the strength of a firewall and

centripetal force of a contained space. The degree of residuality refers to how much material memory of a prior form is retained in a current assemblage, which is said to depend on the level of *reversibility* inherent in the process of enchainment (Lucas 2012: 212). Social change occurs through the tension between stabilising and destabilising forces. The residual qualities of assemblages determine the potential for new forms when they come into contact with other assemblages undergoing processes of materialisation and dematerialisation. Importantly, the dematerialising processes, including qualities of instability and ephemerality are *as* important in the creation of new entities. The example provided by Lucas to illustrate this is that of a church building and the church as a social entity. The various assemblages and assembling processes that *a church* can consist of at any one time, with the walls and floors of the building itself seen as both a stable and durable assemblage in its own right and a centre of gravity for more ephemeral assemblages such as the congregation, which it protects against other materialising and de-materialising forces, such as being part of other assemblages at that particular time. The broader social entity of *the church* is, however, formed *as much* by the spatial and temporal fluidity of the assembly of people, who disperse to their homes and other places, as it is by the stability of the building (Lucas 2012: 201–202).

It is in this conceptualisation of a social entity as simultaneously working on different scales that is the second theme of particular relevance for LSA studies. Arguing against the generalised view of event versus long-term structural process inherent in time-perspectivism that underpins Palaeolithic archaeology (Section 2.6), Lucas' encourages a more particularistic view of lower tempo long-term processes, suggesting that the material residues of these processes are "*usually right there in front of us (e.g. a building or structure that has endured centuries or even millennia)*" (Lucas 2012: 203). The example of the church shows that social entities such as religious traditions are not reproduced over such long time-spans through the strength of abstract ideologies or belief systems, and that a better idea of the processes of emergence, reproduction, and transformation could be gained by thinking through the intersection of different kinds of assemblage formation in particular contexts.

The potentiality residing in material residues – the aliveness of the archive, the intersection of assembly and disassembly as a creative force, and the move towards a single scale through the grounding of long-term social process in particular material assemblages, are three very powerful tools for rethinking rockshelter archaeology and

LSA studies in general. Importantly, however, when one tries to think solely with a model such as this, as if it represents “material reality” itself, that its limits become apparent. The first issue arises from Lucas’ opposition to practice and dispositions, which he views as over-emphasising memory stored in the mind, the second concerns the tendency to associate biological, meteorological and geological forces to dematerialising erasure and fragmentation, rather than something that can be central to the formation of new assemblages. In the case of the first limitation, the emphasis on *material memory*, unnecessarily reduces *all* memory to the process of citation. Although it is not explicated, the logic behind this appears to be that a particular cultural form such as a church service may well be held in a persons’ mind for some time and thereby travel between different places, yet it appears to only exist as a result of interactions with other material forms, or, presumably, from talking to another person about other prior examples. The transfer of form in Lucas’ model, is, therefore, more correctly described as a process dependent on enchainment through citation. Conneller (2011) has taken a more radical position against this blanket refusal of form as a transferable idea found in the positions of Lucas and others such as Ingold by providing clear examples of Upper Palaeolithic bone and ivory work in which particular forms were disassociated from one material chain and applied in another. The third limitation of Lucas’ work stems from what appears to be a contradiction. On the one hand, when discussing individual assemblages, he advocates for equal attention to be given to processes of materialisation *and* dematerialisation as creative forces. Yet, on the other hand, when writing about the meta-scale of *the* human story, there is a clear emphasis on materialisation as the driver of human history. Yet, from an African rockshelter and hunter-gatherer perspective, it seems that retaining the more complex interplay between these axes, such as that outlined in Lucas’ example of the church, offers a more robust framework, whatever the scale.

At the end of Chapter 2, I outlined a broad understanding of hunter-gatherer temporality inspired by Ingold’s (2000) concept of remembrance acts, which I have called *an archaeology of attention* (Section 2.11). In the following section I expand this framework by thinking through a scenario of a hunter-gatherer group returning to a familiar rockshelter. Combining aspects of Lucas’ materialisation theory together with a Bourdieu (1977) inspired understanding of *other-than-conscious* ways of thinking, feeling and acting, I attempt to develop a relational approach suited to the southern African LSA.

#### 4.5. The agency of rockshelters

Encouragingly, for LSA archaeology, by viewing sedimentary layers, themselves, as remains of real social entities that played an active role in the past then we may be able to chart the physical processes by which traditions – here defined in the broadest sense as a particular way of doing things that has persisted over time – were created, transformed and resisted. Seen in this light, the abundant deep rockshelter sequences of southern Africa are well placed to study the materialisation of tradition. Rockshelters and caves are of special interest to archaeologists because of their unparalleled ability to preserve evidence of previous occupation, a property that would undoubtedly also have been important for mobile hunter-gatherers during the LSA, and that they may have played an important role in the maintenance and transformation of persistent social entities. Fireplaces of previous generations or other contemporaneous groups who had used a particular shelter would often be visible on its surface and could have served as anchors in time and space. Grindstones, bone and stone, ochre and ostrich eggshell littering the surface (Figures 1–2) or cleared into certain areas may have been physically reassembled into new configurations or acted as triggers for the senses and memory recall, invoking and raising to consciousness (Bourdieu 1977) old ways of setting up camp, the correct way to treat certain materials, or particular techniques of knapping stone. We can also imagine that collective and individual tales of becoming – biographies – can reside in the sights, sounds and smells invoked by these residues that link them to other aggregating places and times, other people and animals. Importantly, the sedimentary processes – the accumulation and erosion of mineral and anthropogenic particles – would have played as important a role as the human activities in determining the degree of residuality that such archives contained and their potential to become part of novel assemblages (Lucas 2012).

In contrast to the emphasis on the referencing between one physical act and another stressed in McAnany and Hodder's (2008) account of house construction, the place itself, its landscape setting, the rockshelter walls, or the acoustics invoking the memory of another similar place, can be seen as a possible aggregating force that encouraged a particular group to engage with the shelter in a certain manner. Imagining the degrees of residuality inherent in the assemblages we work with and the materialising properties of rockshelters is important here, but so too is the recognition of their links with other assemblages of people, places and things in the past and future,



Figure 1. First encounters with contemporary and ancient inhabitants of Ntloana Tšoana during the initial site visit in March 2008. The steeply sloping truncated surface of the fluvial silt overburden that forms the contemporary surface of the rockshelter can be seen crumbling away under footprints to reveal the signs of ancient occupation visible as one enters the shelter. Bright orange scorched earths contrast sharply with the beige coloured silts.

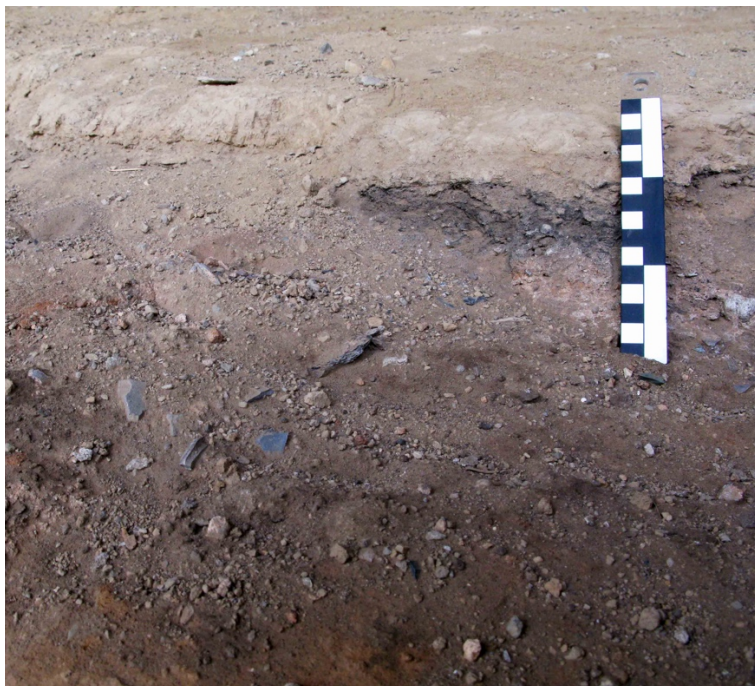


Figure 2. A closer look at the eroded surface deposits at Ntloana Tšoana reveals pink, white and black, ash rich layers and a floor littered with lithic artefacts and animal bones.

and in different locations; in other words, their temporal and spatial dimensions. In the depositional narratives of stratigraphic sequences and interpretation of technological chains from Ntloana Tšoana that follows (Chapter 7–9), I focus on the actual physical observation of social entities as observed in the archaeological record and elaborate this by foregrounding the role of experience and the effects of memory and anticipation of human actors. Before this, however, it is important to elucidate some of these qualities of place in the landscape and locations of the Caledon Valley and its rockshelters.



## **Chapter 5.**

### **Qualities of place**

#### **5.1. Introduction**

This chapter attempts to explain the contemporary physical, academic and social contexts within which the thesis emerged. The aim is not simply to produce a two-dimensional geographical background, but in line with the materialisation ideas explained above, to look also at how the particular qualities of a place are entwined in human lives and are part of the process in which cultural practice is reproduced and transformed over millennia. This chapter also aims to provide a more reflexive research context than normally found in archaeological texts, with a focus on the reasons for, and consequences of, the choices made concerning the production of this particular record.



Figure 3. Ntloana Tsoana rockshelter at the eastern end of the Phuthiatsana gorge. The plateau terraces and conical peaks of the ‘foothills’ rise above the outcropping sandstone, with Machache Mountain, an iconic part of Lesotho’s Front Range in the distance.

#### **5.2. The Metolong Dam (MCRM) Project**

There are five key elements to understanding the character of the Metolong Cultural Resource Management Project (MCRM). First, by the time the Lesotho Government

had proposed to build a reservoir half way up the Phuthiatsana gorge, a significant amount of survey and excavation work had already been carried out there and its hunter-gatherer archaeology was relatively well known. This prior knowledge meant that, unlike many other large salvage projects, this one had time built in for different stages of fieldwork (Arthur & Mitchell 2010), involving comprehensive survey of the landscape and identification of open-air lithic scatters and historical occupation of rockshelters; the full recording of 29 rock art sites, including tracing, pigment analysis, selective removal and dating (Arthur & Mitchell 2009a; Mallen 2011; Bonneau *et al.* 2017); excavation of four rockshelters; and survey and excavation of a nineteenth century settlement (King *et al.* 2014).

Second, previous large dam projects in Lesotho had failed to engage already marginalised local communities, leading to severe criticism of government agencies and international bodies for ignoring concerns residents had about the loss of their ancestral landscapes, a situation heightened by the sole focus of previous dam mitigation projects on the more ancient Stone Age past rather than the lived heritage of the present-day inhabitants (Arthur *et al.* 2011). Third, there was virtually no national heritage management infrastructure and despite a relatively well developed archaeological profession in neighbouring South Africa, and a history of internationally funded research within Lesotho itself, including previous dam projects, there had been limited attempts at training Basotho nationals or developing archaeological practice in the country (Arthur & Mitchell 2012).<sup>3</sup>

In response to these last two points, and facilitated by the first, a major effort was therefore made to engage local communities and to tackle the ingrained archaeologist-labourer relations identified as one of the barriers to the transformation of the discipline in southern Africa (Ndlovu 2009; Arthur *et al.* 2011; King & Arthur 2014). Long fieldwork seasons, including six months surveying and test excavating a 14 km stretch of river in 2008–2009, and eight months of continuous excavation in 2009–2010 at the two largest rockshelters (continued in four months of final excavation during 2011 and 2012), presented the opportunity to develop ways of working that were sensitive to the local context. Among other initiatives, described in full elsewhere

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<sup>3</sup> Arguably, the lack of an archaeological profession in Lesotho is more to do with its long history of political and economic marginalisation since the late nineteenth century. It remains a nation heavily dependent economically on its more powerful neighbour, with limited cultivatable land that is particularly prone to the effects of drought and flooding.

(Arthur *et al.* 2011; Arthur & Mitchell 2012; King & Arthur 2014), this included working with the same team, of between 10 and 20 local community and student trainees for long periods, and offering full time employment wherever possible. It also meant prioritising interpretation and public engagement processes during all aspects of excavation and survey fieldwork, as well as making sure that the trainees themselves were the ones leading these processes. All this was aimed at increasing the sense of creative involvement and ownership of the products of archaeological work.

The rockshelter sites next to, and in which we were often camped, became social and heritage centres, where we operated an open-site policy allowing villagers to visit at any time and conducted numerous open days, providing local residents with the opportunity to handle finds and experience mock excavations. Working in a country without heritage institutions and with a senior team of foreign professional archaeologists also placed more emphasis on the field than might have been the case otherwise. This approach, which upon our return for two two-month seasons in 2011 and 2012 had become fully developed, led to an immersion in the people and landscape that itself fed back into the way we were thinking about excavating. It is from this context that the current thesis' concern with the attachment between people and place began.

### 5.3. The Caledon Valley and foothills landscape, western Lesotho

The Caledon Valley, the foothill plateaux and the Maloti Mountains form a succession of northeast-southwest-aligned ecological zones dissected by a series of westward-flowing rivers (Figure 4). These rivers drain the highlands and feed into the Caledon River, which forms the border between western Lesotho and South Africa, and then joins the Senqu (Orange) River further south. As they leave the basalt geology of the highlands and foothill plateaux, the rivers cut deep into the older Clarens sandstone, forming steep-sided, narrow gorges (Schmitz *et al.* 1987). Prior to being inundated by the Metolong Dam, Ntloana Tšoana lay<sup>4</sup> at the eastern margins of one of these dramatic

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<sup>4</sup> Although Ntloana Tšoana, and the rest of the Phuthiatsana gorge is now fully submerged under the Metolong Dam reservoir, in the remainder of this chapter I refer to this landscape in the present tense. This is mainly for practical reasons as many of the particular characteristics of this sandstone and basalt landscape extend beyond the reservoir area.

ravine landscapes where the Phuthiatsana River begins to form a deeper valley into the underlying sandstone.<sup>5</sup>

Some 15 kilometres west and downstream of Ntloana Tšoana, the Phuthiatsana leaves the gorge where a prominent sandstone escarpment marks the true edge of the Lesotho lowlands (Figures 5 & 6) and the beginning of the interior grassland plateau that continues for hundreds of kilometres into South Africa (Schmitz & Rooyani 1987: 29). Today, the sand and clay soils of these grassland plains on the Lesotho side of the border are intensively farmed and largely treeless, apart from thick stands of montane shrubland found on the sheltered slopes of the flat-topped sandstone mesas and the dolerite dykes that punctuate the plains (Mucina & Rutherford 2006: 394–395). Historical accounts nevertheless suggest this *Cymbopogon-Themeda* grassland (Acocks 1975: 88) once included many more trees (Arbousset & Daumas 1968; Germond 1967; McCann 1999). Huge herds of large ungulates such as eland (*Taurotragus oryx*), red hartebeest (*Alcelaphus buselaphus caama*), black wildebeest (*Connochaetes gnou*) and plains zebra (*Equus quagga burchelli*) were also found here, and the rivers were described as being full of hippopotami (*Hippopotamus amphibious*) well into the 19<sup>th</sup> Century (Arbousset & Daumas 1968; Arbousset 1991).

Moving eastwards from this lower sandstone escarpment, upstream along the Phuthiatsana gorge, to the edge of the Front Range, is foothills country, where above 1800 m the sandstone is capped by a thick eroded basalt deposit forming a gently undulating plain. The foothills, which rise up towards the mountains in vast, gently undulating terrace-like plateaux, are well-watered with myriad springs and perennial streams and dominated by *Leucosidia sericea* shrubland vegetation, with patches of grassland (Mucina & Rutherford 2006), though today most of the flatter plateau tops and gentle slopes are also cultivated. Upstream of Ntloana Tšoana, the valley becomes more open with wider alluvial terraces on the insides of meanders. As the altitude of the channel floor rises, some 10 km east of Ntloana Tšoana, its sandstone geology gives way to basalt as the river approaches its source in the highlands. A further 20 km east, we reach the Front Range, where a further shift in altitude, marks the beginning of the highlands. Above 2000 m, the mountain landscape consists of steep basalt slopes and plateaux where *Themeda triandra* grassland and heathland vegetation dominates. A

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<sup>5</sup> In order to differentiate it from another channel with the same name, this river is often referred to as the South Phuthiatsana, the Little Caledon River or the Phuthiatsana ea Thaba Bosiu River. Here I prefer to simply use Phuthiatsana.

diverse birdlife and limited small mammal fauna, including small antelope such as klipspringer, can be found today even in the higher-lying areas of western Lesotho, yet previous archaeological work (e.g. Plug 1997) records a dramatically more diverse range of species across the region.

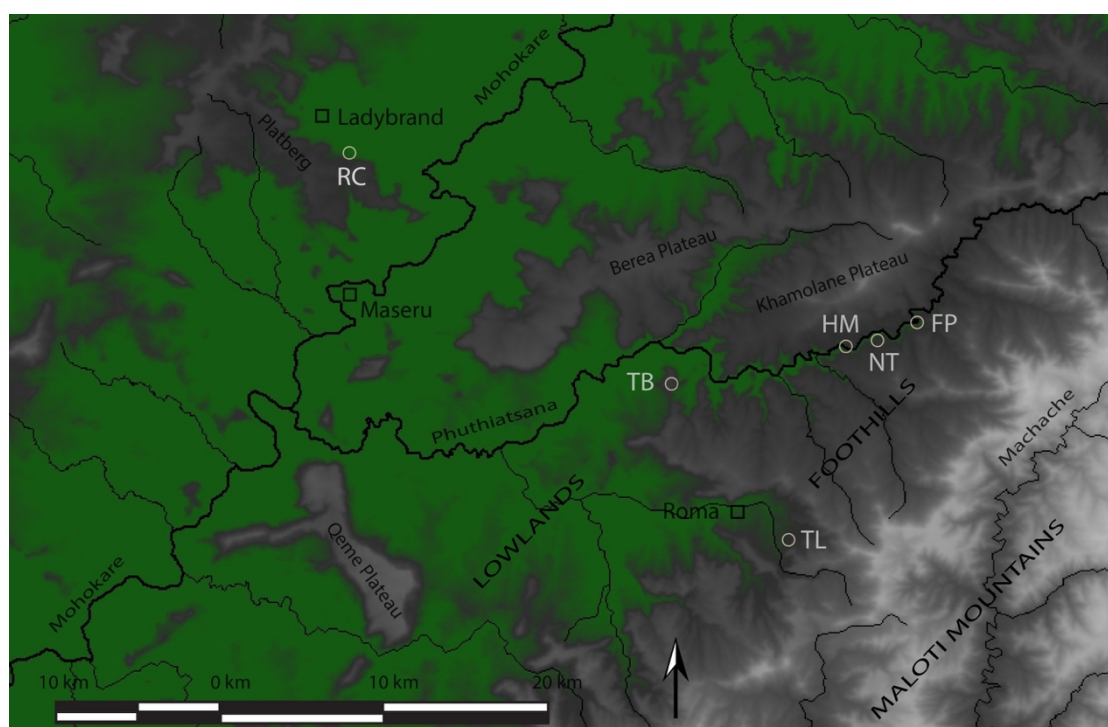


Figure 4: Topographic and fluvial map of the western foothills of the Maloti Mountains and Caledon Valley showing sites mentioned in the text. FP Fateng Tsa Pholo; HM Ha Makotoko; NT Ntloana Tsoana; RC Rose Cottage Cave; TB Thaba Bosiu; TL Tloutle. Land below 1750 m shaded in green; land above 2000 shaded in light grey.

This landscape diversity along the western edge of Lesotho is matched by extremes of weather. A continental climate with cold, dry winters and frequent frost, alternates with hot, humid and wet summers, in which 80% of the rain falls in torrential thunder storms during October and March, when flash-flooding is also common, as are dangerous lightning storms and damaging hail storms (Tyson 1986; Sene *et al.* 1998). The climate also varies geographically, with some northeastern parts of the mountains receiving as much as 1200 mm of annual rainfall, whereas lower lying regions fall in a rain shadow and record between just 500 and 800 mm a year (Sene *et al.* 1998; Nash & Grab 2009). Rainfall is also extremely variable year to year and the lowlands and foothills are especially prone to prolonged and recurrent droughts, with consecutive dry years occurring with sub-decadal frequency (Malebajoa 2010: 7), most recently in 2015–6.



Extremely wet years with catastrophic flooding are just as common (Nash & Grab 2010).



Figure 5. A ground level photograph of the mouth of the Phuthiatsana gorge and sandstone escarpment.



Figure 6. An oblique air photo of the mouth of the Phuthiatsana gorge and sandstone escarpment.

#### 5.4. The Phuthiatsana gorge environment

In the vicinity of Ntloana Tšoana, steep, often near-vertical sandstone cliffs rise up some ten metres from the river bed, above which gentler slopes are created by thick basalt-rich colluvium. Just three kilometres downstream the river cuts deeper into the sandstone making a notable gorge up to thirty metres high, often featuring two rows of



Figure 7. The Phuthiatsana gorge looking upstream towards Ntloana Tšoana during the 2009 excavations. The white fieldwork tent can be seen in front of the shelter. Here the gorge is some 20 meters deep.

overhang formations, one high up on the cliff, and the other one down close to the river, which can continue unbroken for tens of metres. However, the frequent twists and turns of the river and the numerous adjoining tributaries, mean that the cliff edges of the gorge are overlain in many places with thick valley in-fill sediments offering gentler slopes down to the water for both cattle and people, the loss of which was a key complaint of villagers prior to dam construction.

The sheltered nature of the valley bottom means a very particular range of plant resources are found there that are not encountered on the more exposed plateau top. Invasive species of grey poplar (*Populus canescens*), black wattle (*Acacia mearnsii* De Wild) and weeping willow (*Salix babylonica*)<sup>6</sup> line the river banks today along with

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<sup>6</sup> Missionary records also repeatedly mentioned the thick stands of *Salix Mucronata* (Wild Willow) that grew on the banks of the Caledon and the Phuthiatsana up until their near exhaustion in the late 19<sup>th</sup> Century (Germond 1967, Arbousset & Daumas 1968 [1848]).

small patches of indigenous woodland on the moisture-retaining south-facing banks, within which the larger species are White stinkwood (*Celtis africana*) and Olive (*Olea europaea*) (Mahlelebe 2008: 4–7). Tall, up to 2 m high stands of *Hyparrhenia hirta*, a valuable resource for thatching and basketry, are found on the river's warmer north-facing flanks. The erosion features at the valley bottom also provides rich habitats for animals and plants. Moisture-loving ferns and mosses, bats and small insectivorous birds such as swallows thrive in the overhangs, shelters, small cavities and pools provided by the sandstone geology. Larger distinctive birds, such as the bald-headed ibis (*Geronticus calvus*) that congregate on the grassy terraces of the valley floor, and the hammerkop (*Scopus umbretta*), whose extensive nests can often be seen on the cliff ledges, are also well-known residents of the gorge bottom.

For current Basotho inhabitants, the numerous rockshelters provide essential cover and security for shepherds and their stock during summer storms and offer respite on the journey to higher altitude summer pastures. The deep river pools in this steep-sided part of the Phuthiatsana Valley are also some of the best locations for catching smallmouth yellowfish (*Labeobarbus aeneus*) the most abundant edible fish found in the region. The sandstone gorges of the Lesotho foothills are thus important in many different ways for humans, plants and animals. On the one hand, they serve as vital lifelines in the all too frequent dry years, connecting the vastly different grasslands of the lowland plains to those higher alpine ridges and plateaux. They also break the landscape, providing welcome relief and protection, offering a sheltered water source and more nutrient-rich soils and vegetation than can be found on the more exposed plateaux. On the other hand, they are unstable, volatile places, with wildly fluctuating summer high-water levels creating real obstacles for daily life. This is an extremely active landscape, with frequent flash floods, rock falls<sup>7</sup>, and rapid collapse of terrace formations and erosion of low-lying fields.<sup>8</sup>

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<sup>7</sup> During the test excavation of Fateng-Tsa-Pholo rockshelter in November 2008, flash-flooding and rock falls were experienced first-hand by the MCRM team.

<sup>8</sup> All of Lesotho can be said to be a highly active sedimentary environment characterised by high rates of erosion and deposition, but these steep sided, bedrock-constrained channels move soil particularly rapidly. Jacobi (1977) found that on average the Phuthiatsana shifted 25% of its annual transported sediment in 2 to 4 days during the summer.



### 5.5. The river and gorge as cultural place

All these qualities of place are interwoven into present-day Basotho cultural practice, in which the gorge itself serves as both a ritualised routeway and a place of secrecy with positive and negative connotations. The gorge is an important hidden path to the mountains for initiation schools, which operate under traditional codes that forbid them from being viewed by outsiders. Within the gorge, the rockshelters provide even greater opportunities for concealment, a quality utilised by both female and male initiation schools which occupy the shelters at particular times of the year, the latter as part of the ritual preparation prior to the annual visit to the highlands (Arthur & Mitchell 2009a, 2009b; Mallen 2011). The shelters are also commonly described as dangerous places where malevolent ‘witches’ (*boloi*) are thought to practise their crafts. The deep pools,



Figure 8. A *koetsa* near Ha Mosotho village. Image courtesy of Larissa Snow.

known as *koetsa* play both a dangerous *and* a regenerative role, commonly thought to be the home of *Noha ea metsi*, the feared and dangerous water serpent<sup>9</sup>, whilst also

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<sup>9</sup> The supernatural associations of these *Noha ea Metsi* as recorded in recent ethnographic fieldwork by Larissa Snow (2011) in the Phuthiatsana gorge area includes ideas of transformation into other beings and control of weather. Supernatural snakes also feature prominently in San ethnography and feature

being used for baptism ceremonies by the local Zionist church (Figure 8; Snow 2011). Outside these specific practices, the sandstone gorges of the western Maloti have other qualities that make them distinctive and, at least on the South African side of the border, a major tourist attraction (Grab 2015). Various combinations of rounded and concave outcrops, stepped near-vertical cliff faces, and concave, wave-like rock formations can be found all along the gorge (Figure 9). At every turn, the valley takes on a different shape with its own aesthetic and acoustic properties. Villagers work with these landscape features in interesting ways. Some unusual geological features are ancestral shrines, as is the case at one of the cliff faces close to Ha Seeiso (Tesele 2008).

More prosaically, villagers living in parts of the valley that are particularly deep and steep-sided use its acoustic properties to project their voices from one side to the other. People can often be seen sitting down on either side of the gorge, hundreds of metres away, chatting by taking it in turns to call out and then patiently waiting for the echo of their voice to reach its recipient. The abundant rock art found throughout the river valley adds more layers to this lived landscape, and it is to this painted record that I now turn.

## 5.6. Powerful pigments and living walls: the rock arts of the Phuthiatsana gorge

In the 14 km stretch of river centred on Ntloana Tšoana, 29 different sites with 87 individual panels were recorded during the 2008–2009 survey ahead of dam construction. All these sites include paintings from the San fine-line tradition, yet many also include art associated with the recent and contemporary use of rockshelters. These recent rock art traditions have been completely overlooked in previous work in Lesotho, yet offer a vital window into the interlinked role that particular places, aspects of material culture, and ritualised practice play in contemporary culture.

### 5.6.1. Contemporary rock arts

This set of recent and contemporary rock arts includes abstract geometric imagery and ‘H’-shaped horse symbols painted in charcoal, as well as red ochre-smeared walls and ceilings (Arthur & Mitchell 2009a, 2009b; Mallen 2011). At least some of the ochre

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similar associations with water, weather control and transformation. As discussed below, they also appear widely in San rock art, including a number of examples in the Phuthiatsana Basin (Mallen 2011).

smear-shelters are directly associated with the use of the gorge and rockshelters as secluded passageway and temporary shelter by male initiates on their return from the mountains, at which time they are covered from head to toe in an ochre and fat mix



Figure 9. The imposing sheer cliffs, distinctive rock formations, and high line of shelters as seen from the rockshelter site, ARAL 172, looking into another painted shelter, on the opposite bank.

(Arthur & Mitchell 2009a).<sup>10</sup> At a general level this practice is thought to represent and provide the visual and bodily experience of the final phase of transformation associated with the journey back to the village as a new man (Riep 2013), yet recent work on similar use of red ochre by male initiates just across the Lesotho's southern border into South Africa, suggests that the ochre itself may also have had a more active role protecting the initiates from malevolent spirits (Zulu 2016)<sup>11</sup>. The relation of the

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<sup>10</sup> During the course of the fieldwork conducted as part of the MCRM Project, a male initiation instructor confirmed that at least some of the ochre in the shelters between the villages of Thotapeli and Ha Mosotho is likely to have been applied by initiates. However, female initiation schools, who also use red ochre body paint in addition to white clays (Matoba et. al 2009: 110; Riep 2013), are known to use shelters in this area (Mallen 2011) and thus could be the authors of some of the red smears and patches. There is also likely to be a considerable time-depth to both initiation and the application of ochre on the walls and ceilings of shelters with potential for variations in the meanings and practices associated to them.

<sup>11</sup> Zulu's (2016) study was amongst the Hlubi of the Matatiele District of the northern part of the Eastern Cape. It should be noted that they are an Nguni-speaking group with a distinct set of initiation practices not necessarily found amongst Sotho-speaking groups across the border. Note also that male and female initiation practices are also known to vary significantly between the different parts of Lesotho (Riep 2013).

practice of body painting to the application of ochre to ceilings and walls of the rockshelters during this journey requires more ethnographic research, yet its presence suggests that these secluded locations and the rock walls and ceilings themselves are closely linked to ideas of transformation and protection.

There may be no direct connection between the meanings associated with ochre painting by Basotho initiates and the more ancient fine-line rock art of the San/LSA, yet as I explore below there may be many commonalities in practice, including ideas concerning paint and rockshelter walls. We can also say with more certainty that contemporary initiates must be aware of this earlier tradition, as all current inhabitants are, and that though in terms of image type or placement there does not appear to be any specific reference to the older images, care is taken to ensure that the application of ochre does not obscure or damage the earlier images. More compelling evidence for a direct reference comes from the purposeful removal of pigment from San paintings for use by both initiation schools (Wright 1971: 9; Lewis-Williams 1981) and practitioners of traditional medicine (How 1962: 34; Challis pers. comm.). This is well-known across the wider Maloti-Drakensberg region and very likely to be the reason behind the almost complete removal of the paint from a single image at ARAL 174 (Arthur & Mitchell 2009a, 2009b).

#### 5.6.2. San rock arts

Comprehensive analysis of the dense corpus of San fine line paintings from the Phuthiatsana awaits full publication, yet preliminary assessments (Mallen 2011) have outlined important avenues for interpretation, a number of which converge with the ideas developed in this thesis about the long-term reproduction of cultural traditions in hunter-gatherer societies and its association with particular places. The 29 painted shelters recorded in the MCRM Project (Figure 10) fit well at a broad level within the southern African fine-line rock art tradition. This includes imagery dominated by antelope, of which eland are the most common, followed by human figures, many of which are painted in postures interpreted as representing the experience of a shaman in trance. Many of the paintings in the Phuthiatsana include those in-between, part-human, part- antelope beings known in southern African archaeology as therianthropes, thought to represent shamans taking on the power of animals during their journey to the spiritworld (e.g. Lewis-Williams & Challis 2011).

Another attribute of the Phuthiatsana paintings that is a common feature of the



broader sub-continental tradition of hunter-gatherer fine-line rock art, yet also tied more specifically to particular places and rock features, is the practice of incorporating the rock shelter wall itself into the image (Lewis-Williams 1981). The paintings at ARAL

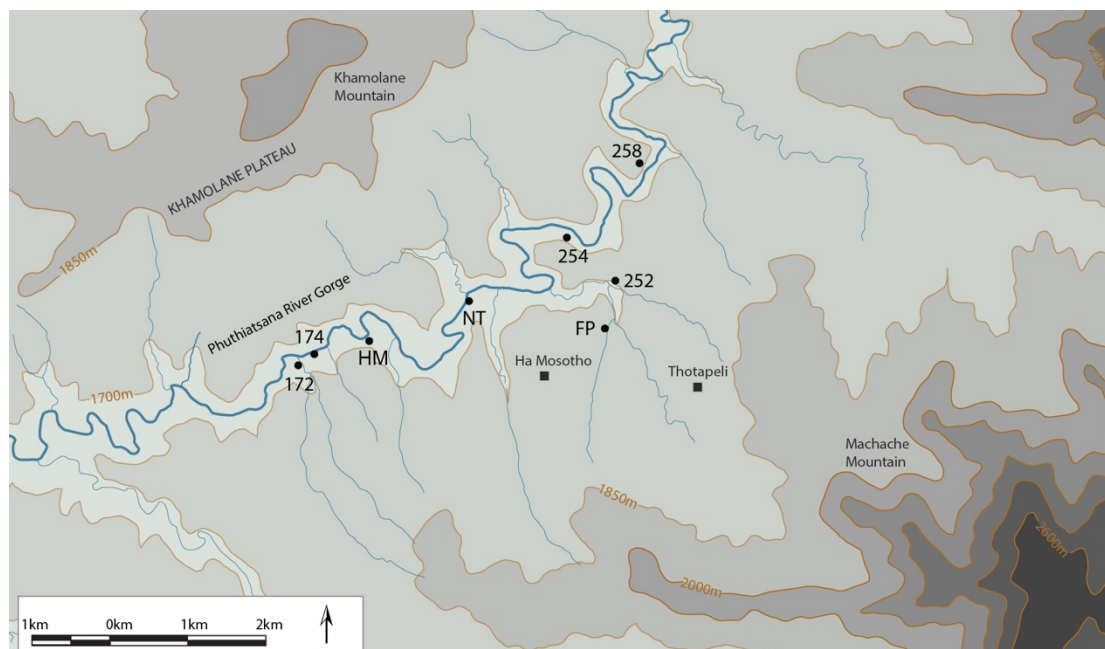


Figure 10. Map of the Phuthiatsana gorge showing rock art sites and place names mentioned in the text. Numbered sites refer to the ARAL designations. Lettered sites are as follows: FP Fateng Tsa Pholo; HM Ha Makotoko; NT Ntloana Tsoana.

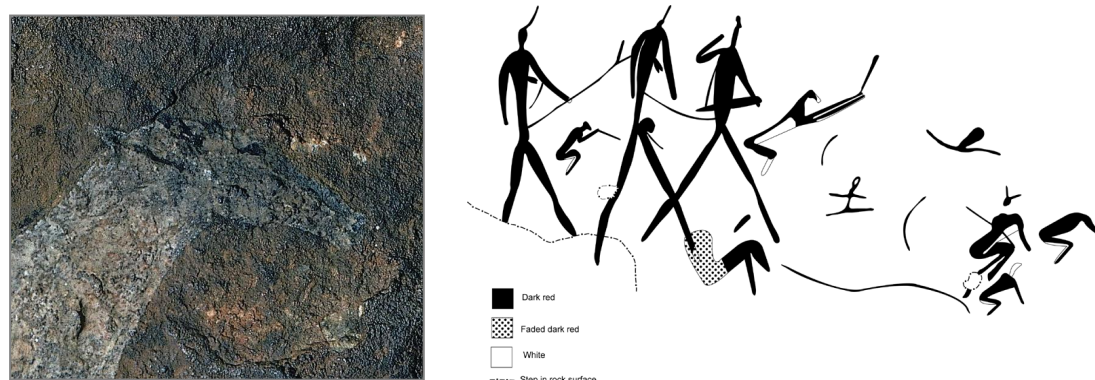


Figure 11. Rock art at ARAL 172. Left: 'Fine-line' detail on the head and neck of an eland at ARAL 172. Right: a tracing of a different panel in the same rockshelter, showing human figures, therianthropes and 'thin red lines' going into or out of cracks and steps in the rock surface (Mallen 2011: 22, Figure 5).

172 (Figure 11, right) and ARAL 254 provide the clearest examples of this with thin lines that come out of, or disappear into, cracks and irregularities in the rock surface, as well as linking therianthropes and trance-related imagery (cf. Lewis-Williams & Dowson 1990). Another way in which rock art reveals that the rockshelter would have been considered as more than simply a backdrop to the art is the way animals are

sometimes painted from the rear or the front as if going into or coming out of the rock. This is a well-known feature of the rock art of the Maloti-Drakensberg and though not itself found in the Phuthiatsana gorge sample, at ARAL 258 a polychrome eland is shown with its head turned outwards providing a real sense of depth to the rockshelter wall. On top of these eland images, a large number of ostrich tracks were painted, a unique feature of the Phuthiatsana gorge art, and reminiscent of other animal spoor images elsewhere in the region (Mallen 2011).

The rock face is undeniably more than a neutral canvas for the art. Rather, it is a dynamic surface full of life into and out of which animals and other powerful things can turn, move, and even run across. Existing theories of how the rockshelter wall may have been a kind of membrane to the spirit world offer one explanation for how these painted shelter walls may have played a crucial role in the way that rock art functioned. It has also long been argued that the paintings themselves were powerful things in their own right, serving as a spiritual resource long after the execution of the actual image (Lewis-Williams & Dowson 1990).

### 5.7. Discussion

The sandstone landscapes of the Caledon Valley are clearly more than a backdrop for human history. The recent ethnographies and understandings from rock art in the Phuthiatsana gorge demonstrate this well. The gorge itself is a landscape of incredible diversity, where every turn in the river opens up a different rock architecture, with its own qualities of light, sound, and vision creating a unique sense of place, affording its human residents protection from the elements in various forms and, as the cross-gorge echo communication demonstrates, also providing opportunities for landscape-specific cultural practices.

We can say with some conviction that some forms of contemporary practice associated with the erosion features of the gorge bottom and sides have deep, millennia-long histories that transcend the cultural transformations of the last 500 years. This is not to claim a direct connection in terms of exactly what these practices meant, or to argue for cultural transfer from one historically fixed ethnic group to another (cf. Hammond-Tooke 1998; Jolly 2005). However, what we can trace are broad ideas concerning the forces contained in the rock features themselves and in the practices, such as painting, associated with them.

In many ways, these are not cultural traditions whose origins can be sought via ethnography or archaeology, but more likely to be the sorts of concepts about the aliveness of the physical world that were shared by farmers, pastoralists and hunter-gatherers alike. When any of these groups moved into a new area, it seems reasonable to assume there would be some understanding of the sorts of places that had special qualities, as well as an understanding that it would also be wise to understand the previous inhabitants' ideas about these matters so as not to unsettle ancient forces residing in rock features, bodies of water and ancient paintings. Once the very specific qualities of place described above are added to this baseline of shared understandings then the processes by which cultural reproduction can cross the generations even in rapidly moving populations and can even bridge ethnic and language divides and reconstitutions, become easier to envisage. It is by thinking within this animistic framework, rather than a model of contact across a frontier between originator and receiver, that the plurality inherent in the processes of creolisation (cf. Challis 2012) seem more plausible.

Looking beyond this shared landscape of the recent past, what is interesting from a deeper time perspective, with a view to patterns potentially traceable in the earlier Holocene, is the extent to which these places acted as anchors for memory and cultural reproduction. One further idea, already sketched out at the end of Chapter 4, is necessary to bring back into the fold at this point concerning the relationship between a place and its sedimentary history, meaning its physical location and character, its relationship with the elements, and its ability to preserve or remove past residues. This is best achieved by getting up close to the main focus of this thesis, the rockshelter Ntloana Tšoana.

## **Chapter 6.**

### **Introducing Ntloana Tšoana**

#### **6.1. The small dark house**

Ntloana Tšoana is a narrow but deep rockshelter. It is a place intimately associated with water, being just a few metres above the present height of the Phuthiatsana River (Figure 12), and, although its 280 m<sup>2</sup> interior remains largely dry all year round, the river has risen to flood the platform at the front of the shelter in living memory (Mitchell 1993a). Water also seeps through the rear and eastern wall of the shelter, allowing fern and moss species to flourish with some minor pooling on its edges. The sharp lip at the top of the shelter mouth produces dramatic waterfalls that seal off its front on an almost daily basis during the summer rains (Figure 13). Ntloana Tšoana also remains cool all year round and is largely protected from the strong winds that funnel down the gorge. Its name (“Small dark house” in SeSotho) likely reflects the fact that the rear of the shelter never receives direct sunlight, plus the view of the site from afar, from where it appears as a perfect black tunnel in the cliff wall (Figure 12).

This darkness is, however, balanced by the fact that due to its north-easterly aspect and the low-lying ground opposite, in late morning and early afternoon the whole interior of the shelter is easily visible from the opposite bank. Visibility is, however, much better from inside the shelter itself (Figure 13). The shelter is also not as cold as one might expect and the presence of a vegetated platform at the front of the shelter and grass and shrub covered terrace extending upstream for some 50 metres receives ample solar warmth.

Both these sides of Ntloana Tšoana’s character appear in local oral history. Two villages, Ha Khotso and Ha Makhale, trace their founders’ arrival in the area to an initial period of living at this shelter during phases of conflict in the 19<sup>th</sup> century. Ntloana Tšoana offered a relatively well-hidden location with easily defensible access routes down the steep slopes and across the river, yet was also eminently habitable and could support a significant number of people and cattle on its flat, riverside terrace. The current traditional leader of the village on the opposite side of the river, Ha Makhale, still uses Ntloana Tšoana for the production of powerful magic, a practice which involves grinding various ingredients in the cupules at the front of the site, something she traced back to her great-grandfather’s initial occupation and the casting of



protective spells (King & Nic Eoin 2014). Other supernatural associations relate to the *koetsa* just twenty metres upstream, thought by some to be the home of a *Noha-ea-metsi*, yet also used by the Zionist church today for baptism ceremonies.



Figure 12. Ntloana Tšoana in its riverine setting.

Both the experience of being in this shelter and its sedimentary processes are closely associated with water. A massive fluvial slackwater deposit, some two metres thick, overlies the *in situ* archaeology, but has been truncated at a steep angle as a result of the river undercutting at the front of the site, as well as the powerful cascades of water that hammer its surface (Figure 13). The terrace and platform in front and to the side of the shelter remain prone to flooding, yet as described in detail below, more substantial inundation in the early and mid-Holocene repeatedly reclaimed the entire site as part of the river. All of Ntloana Tšoana's sediments are rich in clay and silt and relatively well-compacted due to frequent fluvial input, the effects of standing water through seepage, and very fine sediments being blown in from the riverbanks. These water-related processes have had varying impacts on the preservation of deposits over time and the character of the shelter floor, as encountered by past inhabitants and archaeologists alike. The clay content means that there has been remarkable preservation at times, with hearths and artefact clusters preserved under conditions of slackwater deposition, yet

at others the same process of truncation seen today on the surface means that some habitation residues have been completely removed by river action.



Figure 13. The view from inside Ntloana Tšoana during a torrential summer storm.

The clay content is also a mixed blessing in terms of the way it fires on contact with heat, creating brightly coloured red and yellow sediments that would undoubtedly have been recognised by past inhabitants (Figures 1 & 2), as well as providing easy to follow horizons for the archaeologist, yet at the same time also obscuring earlier features and crucial stratigraphic boundaries. Erosion hollows along the dripline, today full of thousands of lithic artefacts, similarly would have provided a valuable resource for Holocene hunter-gatherers looking for an old tool to turn into a scraper (Chapter 9), yet these same erosional forces make the landscape notoriously unstable and strip away resources for present-day archaeologists.

The distinctiveness of these particular types of sediments and more generally the experience of being at Ntloana Tšoana becomes even more pronounced when viewed in relation to its sister shelter, Ha Makotoko. Although just 45 minutes' walk downstream, Ha Makotoko experiences dry and sometimes uncomfortably hot conditions in summer (Figure 14). Located some 10 m above the river, it is a larger shelter at 820 m<sup>2</sup>, but with its sides quite open much of the site is exposed to the prevailing winds of the Phuthiatsana gorge. Like at Ntloana Tšoana, contemporary experiences of the site are linked to its sedimentary process. In SeSotho it is known as *Lepoqonq*, “the place of dust”. Favourable organic preservation due to the dry



microclimate at Ha Makotoko is balanced by the increased difficulty in separating loose aeolian silts. The nature of the archaeological deposits and excavation experience at both sites can thus be generalised along this axis and described as a distinctive ‘quality of place’.



Figure 14. Ha Makotoko shelter, 21st July 2010, photographed from the north side of the Phuthiatsana.

The potential for investigating two overlapping sequences at nearby yet strikingly different sites, and thus possibly explore hunter-gatherer use of space at a resolution not normally possible, was one of the key motivations in Mitchell’s (1993) initial test excavations in 1989. His preliminary findings suggested there were indeed differences, yet the areas investigated were not large enough to gain a satisfactory understanding of what people were actually doing at the two sites, a question the more extensive excavations of 2009–2012 season attempted to answer.

## 6.2. Previous research and the 2009–2012 season at Ntloana Tšoana

In 1989, Peter Mitchell and John Steinberg opened 5 m<sup>2</sup> in three test excavations (Figure 15). Aligned down the centre of the shelter, they identified thick MSA (Mitchell & Steinberg 1992; Jacobs *et al.* 2008), terminal Pleistocene, and early Holocene stratigraphy (Mitchell 1993a). Hearth deposits and specific clusters of artefacts were identified in both the terminal Pleistocene and early Holocene sequences, suggesting

that there was potential for refining this picture across a larger horizontal area and with greater chronological precision.

Between 2009 and 2010, as part of the MCRM Project, a further 13 m<sup>2</sup> was excavated in a single open area (Figure 15–16). The trench was aligned from the centre of the shelter to the western wall to avoid water seepage on the eastern and southern walls of the shelter and the partially truncated sequence closer to the northern deposit edge identified in the 1989 season. As described in Chapter 1, the potential for a greater level of interpretation was immediately apparent upon peeling back the last layers of non-anthropogenic silt and exposing the uppermost *in situ* features.

Whilst the excavations were more limited in the horizontal dimension than initially planned – a decision made in response to the better than expected preservation, and the prior knowledge of the deposit depth, as well as the real constraints imposed by impending dam construction – they were still significantly larger than most rockshelter trenches. These sorts of choices are important in any field project as they dictate the assemblage scale recovered and the kinds of archaeological texts that can be written. As described in Chapter 1, the stratigraphic preservation immediately recognisable at Ntloana Tšoana meant that there was an opportunity to excavate in a different manner to that typically undertaken in rockshelter archaeology. Individual contexts could be exposed across the whole excavation area before moving to the stratigraphically succeeding context, a way of working which has ultimately led to the rich interpretive accounts from which the current thesis emerged. Some 575 contexts were removed during one continuous eight-month season using a single team, with an additional 175 contexts excavated over four months in 2011 and 2012. Since 2011, an extensive post-excavation project has been underway including palaeoenvironmental, geoarchaeological and faunal analyses.<sup>12</sup> An additional 20 radiocarbon (Table 1) and 21 OSL dates (Table 2) have been obtained for the Ntloana Tšoana sequence bringing the total number to 54, one of the largest suites of absolute dates for any Stone Age site in southern Africa (Table 1). The recent excavations at both major rockshelter sites have dramatically revised the regional occupation sequence and provide clear justification for sampling larger spatial areas. However, a truism of any academic

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<sup>12</sup> Palaeoenvironmental analyses conducted include stable carbon analysis of soil organic matter (SOM) (Roberts *et al.* 2011) and tooth enamel of grazing antelopes (Sandys 2016), as well as phytoliths retrieved from sediment samples. Geoarchaeological research, including sedimentological techniques such as particle size analysis, loss on ignition and geochemical characterisation, as well as thin-section micromorphological analysis of targeted sedimentary units, is ongoing (Mitchell & Arthur 2012).

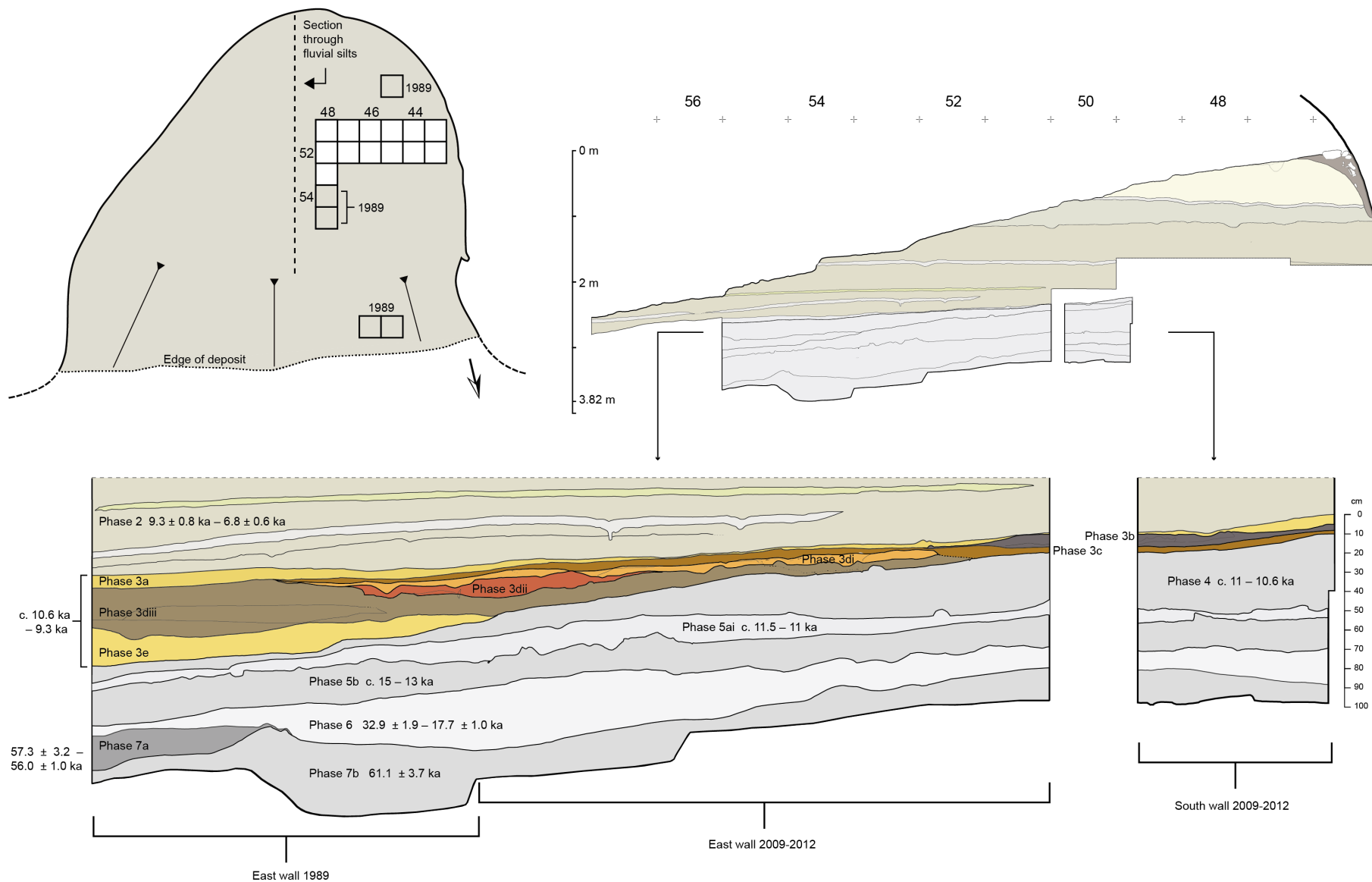


Figure 15. Ntloana Tšoana: plan and section with Phase 3 highlighted.



Figure 16. Looking southeast towards the shelter rear after removal of the Phase 2 fluvial silts at Ntloana Tšoana on 30 October 2009. The 13 m<sup>2</sup> excavation grid has just been pegged out and the top of the *in situ* deposits revealed in two areas.

endeavour is that an increase in the scale and depth of understanding is usually accompanied by a similar increase in the level of uncertainty, as the inter-relations between the factors under study are revealed. Ntloana Tšoana is no exception: exposing a wider area and obtaining more chronometric dates has offered the chance to attempt to work at a finer resolution but has also revealed the variation in occupational build up and erosion across space and the essentially porous nature of the sedimentary interfaces under study.

As should be clear by now, this thesis is interested in building an archaeological practice that is more accepting of these multi-temporal aspects of complex stratigraphies. It should also be as clear, however, that a good understanding of both sequence and chronology remains fundamental in order to explore these *more-than-linear* perspectives. Thus, the following section outlines the basic stratigraphic sequence, bearing in mind, however, that such an account can only ever be the first step in the process and represents simply the coarsest largest scale of writing about an archaeological site. As soon as we zoom in and adjust to a finer chronological scale on the thousand or so years (see section 6.7) that form the subject of this thesis' empirical work, the sequential properties remain, but it becomes apparent just how crucial it is to

also have an understanding of the potential for other less linear relationships. For example, a good understanding of exactly which layers were in physical contact with each other, and which surfaces may have been exposed for longer time-spans, is essential for interpreting radiocarbon and OSL dating results that do not always match the stratigraphic sequence.

### 6.3. Pleistocene stratigraphy and chronology

The earliest trace of human habitation at Ntloana Tšoana comes from a layer with a decidedly geological character, consisting of a coarse grey sand with frequent degraded bedrock clasts and only with occasional stone artefacts at and near its surface. These Phase 7 deposits are securely dated by two rounds of OSL to *c.* 61 ka, with an additional two dates for the overlying dark grey indurated sediment, Phase 7a, of  $56.0 \pm 1.8$  ka and  $57.8 \pm 3.2$  ka, (Jacobs *et al.* 2008). Flaked stone assemblages associated with what has come to be known as the Howieson's Poort technocomplex (Lombard *et al.* 2012) were recovered from these basal units. Above this is a series of locally diverse grey sands, defined as Phase 6 in the recent excavations, some of which contain organic content and remains of hearths, although context boundaries were too diffuse to remove these features separately. In comparison to Phase 7, artefacts were notably more frequent in these units, but bone finds were rare and limited to occasional small fragments. Previously undated, nine new OSL ages have dramatically revised the chronology for Phase 6, with newly identified occupations now known to span much of the latter part of MIS 2 and the LGM, from  $32.9 \pm 1.9$  ka to  $17.7 \pm 1.0$  ka.

A significant sedimentary break separates the coarse sand deposits of Phases 7 and 6 from the generally much darker, more organic rich layers that overlie them. Well-dated by three AMS readings providing a calibrated range of 14462–13414 cal. BP, these Phase 5b sediments are well preserved and contain multiple sequences of microstratified hearths consisting of alternating thin charcoal and ash rich layers with abundant flaked stone artefacts and animal bone fragments. Substantial root action has, however, impacted the surfaces of these occupation layers producing sharply undulating surfaces and making it difficult to remove individual features. The hearth sequences themselves alternate with thicker units that contain frequent small rounded sandstone pellet inclusions indicative of phases of increased attrition of the shelter wall and significant temperature or moisture fluctuations. More intensive and abrupt



Laboratory sample number	Context	Phase	$\delta^{13}\text{C}$	Age BP	Uncertainty	Calibrated age cal. BP p = 95.4%	Material
Pta-5238	<i>004</i>	3a	-24.5	8780	30	9888-9560	Unidentified charcoal
OxA-32161	40	3a	-23.84	8820	40	10,119-9562	<i>Leucosidea sericea</i>
UGAMS-8974	60	3a	-25.54	8690	30	9683-9538	Unidentified charcoal
OxA-X-2460-48	42	3a	-25.7	8905	70	10,191-9697	Euphorbiaceae
OxA-32160	66	3b	-25.08	8945	45	10,198-9791	<i>Leucosidea sericea</i>
OxA-32159	67/54	3c	-23.3	9560	45	11,089-10,607	<i>Leucosidea sericea</i>
OxA-32158	79	3di	-25.69	8802	39	9915-9558	<i>Leucosidea sericea</i>
UGAMS-8975	102	3diii	-24.48	9420	30	10,700-10,509	Unidentified charcoal
UGAMS-8976	109	3diii	-24.12	9150	30	10,379-10,199	Unidentified charcoal
UGAMS-8977	111	3e	-23.73	8790	30	9895-9564	Unidentified charcoal
OxA-32157	140	4a	-23.5	9570	45	11,091-10,678	<i>Leucosidea sericea</i>
UGAMS-8978	125	4a	-25.87	9530	30	11,069-10,590	Unidentified charcoal
OxA-26230	160	4	-24.1	9335	50	10,651-10,284	<i>Xymalos monospora</i>
Pta-5207	<i>024</i>	4	-24	9690	120	11,257-10,605	Unidentified charcoal
UGAMS-8979	319	4	-24.99	9650	30	11,149-10,771	Unidentified charcoal
UGAMS-8980	523	5a	-24.8	9570	30	11,080-10,695	Unidentified charcoal
OxA-26231	386	5a	-23.5	9505	55	11,074-10,559	<i>Erica</i> sp.
Pta-5237	<i>025</i>	5a	-22.7	9420	110	11,075-10,260	Unidentified charcoal
Pta-5208	<i>106</i>	5b	-24.4	10200	100	12,367-11,317	Unidentified charcoal
Pta-5236	<i>032</i>	5c	-24.3	12110	120	14,252-13,579	Unidentified charcoal
OxA-X-2460-49	521	5c	-23.9	11830	90	13,783-13,436	Euphorbiaceae
UGAMS-8981	538	5c	-24.41	12280	30	14,280-14,000	Unidentified charcoal
UGAMS-8982	540	5c	-23.64	12330	30	14,462-14,053	Unidentified charcoal

Table 1. Radiocarbon ages and calibrated ranges from Ntloana Tsoana. Context numbers in italics were assigned during 1989 excavations. Calibration with SHCal13 curve (Hogg *et al.* 2013).



Sample code	Phase	Method	Water content (%)	Dose rate			Total dose rate (Gy/ka)	Number of grains (discs)	D <sub>e</sub> (Gy)	Over-dispersion (%)	Age model	Optical Age (ka)
				Beta (Gy/ka)	Gamma (Gy/ka)	Cosmic (Gy/ka)						
NT06-7	1	SG	10 ± 3	0.51 ± 0.03	0.28 ± 0.01	0.13 ± 0.02	0.94 ± 0.04	99/1000	-	194 ± 18*	-	-
		SA						(20/20)	1.6 ± 0.1	86 ± 14	MAM	1.7 ± 0.2
NT11-20	1	SA	10 ± 3	0.62 ± 0.03	0.44 ± 0.04	0.12 ± 0.02	1.21 ± 0.05	(23/24)	8.3 ± 0.6	31 ± 5	CAM	6.8 ± 0.6
NT11-19	1	SA	10 ± 3	0.54 ± 0.03	0.43 ± 0.04	0.12 ± 0.02	1.12 ± 0.06	(23/24)	8.6 ± 0.3	13 ± 2	CAM	7.7 ± 0.5
NT11-05	2	SA	10 ± 3	0.48 ± 0.03	0.45 ± 0.04	0.12 ± 0.02	1.01 ± 0.05	(26/32)	9.1 ± 1.7	33 ± 5	CAM	8.4 ± 0.7
NT11-04	2	SA	10 ± 3	0.48 ± 0.04	0.50 ± 0.04	0.12 ± 0.02	1.12 ± 0.06	(9/12)	10.4 ± 0.6	17 ± 4	CAM	9.3 ± 0.8
NT11-15	3a	SG	30 ± 8	0.52 ± 0.04	0.40 ± 0.03	0.12 ± 0.02	1.07 ± 0.05	154/1000	10.2 ± 0.3	39 ± 2	CAM	9.5 ± 0.5
NT11-18	3b-3d	SG	39 ± 6	0.66 ± 0.04	0.40 ± 0.03	0.12 ± 0.02	1.21 ± 0.05	150/1000	11.3 ± 0.3	31 ± 2	CAM	9.3 ± 0.5
NT11-16	3b-3d	SG	30 ± 6	0.76 ± 0.05	0.43 ± 0.03	0.12 ± 0.02	1.34 ± 0.06	184/900	15.1 ± 0.4	31 ± 2	CAM	11.2 ± 0.6
NT11-11	3e	SA	30 ± 6	0.44 ± 0.03	0.50 ± 0.03	0.11 ± 0.02	1.09 ± 0.05	(24/30)	11.5 ± 0.2	9 ± 1	CAM	10.6 ± 0.5
NT11-17	4	SG	30 ± 6	0.73 ± 0.05	0.45 ± 0.03	0.12 ± 0.02	1.33 ± 0.06	227/1000	16.4 ± 0.4	28 ± 1	CAM	12.4 ± 0.6
NT11-21	4	SG	30 ± 6	0.74 ± 0.05	0.45 ± 0.03	0.12 ± 0.02	1.35 ± 0.06	198/1000	18.1 ± 0.5	31 ± 2	CAM	13.4 ± 0.7
NT06-5	4	SG	30 ± 6	0.76 ± 0.05	0.43 ± 0.03	0.13 ± 0.02	1.35 ± 0.06	278/1000	15.7 ± 0.4	31 ± 1	CAM	11.6 ± 0.6
NT11-22	5	SG	25 ± 5	0.84 ± 0.05	0.49 ± 0.03	0.12 ± 0.02	1.48 ± 0.06	172/1000	18.0 ± 0.5	34 ± 2	CAM	12.2 ± 0.6
NT11-23	5	SG	30 ± 6	0.86 ± 0.05	0.50 ± 0.03	0.12 ± 0.02	1.50 ± 0.07	74/1000	17.5 ± 1.0	46 ± 4	CAM	11.7 ± 0.8
NT11-24	6	SG	20 ± 5	1.05 ± 0.06	0.55 ± 0.04	0.11 ± 0.02	1.74 ± 0.07	62/3000	30.9 ± 1.2	62 ± 6	CAM	17.7 ± 1.0
NT11-25	6	SG	8 ± 2	1.32 ± 0.05	0.63 ± 0.03	0.11 ± 0.02	2.09 ± 0.06	67/3000	42.7 ± 1.6	36 ± 4	CAM	20.4 ± 1.0
NT11-27	6	SG	12 ± 3	1.27 ± 0.06	0.62 ± 0.03	0.11 ± 0.02	2.03 ± 0.07	112/4900	55.6 ± 1.7	50 ± 4	CAM	27.4 ± 1.2
NT11-10	6	SG	8 ± 2	1.26 ± 0.05	0.61 ± 0.03	0.11 ± 0.02	2.00 ± 0.06	96/3000	54.7 ± 2.2	66 ± 5	CAM	27.3 ± 1.3
NT11-26	6	SG	8 ± 2	1.29 ± 0.05	0.67 ± 0.03	0.11 ± 0.02	2.11 ± 0.06	76/3000	45.3 ± 1.4	30 ± 3	CAM	21.5 ± 0.9
NT11-12	6	SG	8 ± 2	1.21 ± 0.05	0.66 ± 0.03	0.11 ± 0.02	2.07 ± 0.06	75/2400	55.1 ± 2.1	44 ± 4	CAM	27.5 ± 1.3
NT11-13	6	SG	8 ± 2	1.26 ± 0.05	0.64 ± 0.03	0.11 ± 0.02	2.04 ± 0.06	59/3000	61.0 ± 2.4	58 ± 5	CAM	29.9 ± 1.5
NT06-4	6	SG	8 ± 2	1.31 ± 0.05	0.66 ± 0.03	0.12 ± 0.02	2.13 ± 0.06	36/1800	70.0 ± 3.6	29 ± 4	CAM	32.9 ± 1.9
NT06-3	6	SG	8 ± 2	1.36 ± 0.05	0.76 ± 0.03	0.12 ± 0.02	2.28 ± 0.07	28/1000	74.7 ± 3.1	25 ± 4	CAM	32.8 ± 1.7
NT06-2	6b	SG	20 ± 5	1.12 ± 0.08	0.54 ± 0.03	0.11 ± 0.02	1.80 ± 0.09	167/1000	96.0 ± 2.1	20 ± 2	CAM	53.4 ± 3.0
NT11-09	6b	SG	15 ± 4	1.18 ± 0.06	0.66 ± 0.03	0.11 ± 0.02	1.98 ± 0.07	74/1000	114.1 ± 4.7	33 ± 4	CAM	57.8 ± 3.2
NT06-1	7	SG	10 ± 3	1.30 ± 0.07	0.59 ± 0.03	0.11 ± 0.02	2.03 ± 0.07	33/1000	121.4 ± 4.0	0	CAM	59.8 ± 3.2
NT11-14	7	SG	8 ± 2	1.17 ± 0.05	0.64 ± 0.03	0.11 ± 0.02	1.95 ± 0.06	39/3800	119.1 ± 6.2	68 ± 8	CAM	61.1 ± 3.7

Table 2. OSL ages from Ntloana Tšoana



Figure 17. Oblique section photograph looking southeast at the eastern and southern walls of the 2009-2012 excavation area at Ntloana Tšoana with Phase boundaries shown. Scale is 1.20 m.

changes in conditions and exposure of the shelter floor for substantial periods of time are evidenced by larger fragments of sandstone detached from the shelter roof in some Phase 5b contexts. Flaked stone assemblages from Phase 5b fit well within the terminal Pleistocene bladelet dominated microlithic traditions of the region (Mitchell 1988), although a marked tendency for bipolar production and the use of small crystal quartz cores sets them apart from other assemblages (Pargeter 2016, 2017). Faunal assemblages from Phase 5b are marginally better preserved than those from the earlier Pleistocene levels, but remain too fragmentary and low density to interpret in any detail.

#### 6.4. Holocene stratigraphy

On top of Phase 5b, a series of black, charcoal-rich silts with frequent decayed sandstone patches and thick extensive fired earth hearth deposits have been grouped together as Phase 5a<sup>13</sup>. These are distinguishable as a sedimentary break from the underlying Phase 5b deposits by their more friable nature and the absence of both the

<sup>13</sup> Phase 5a has been provisionally divided into an upper and lower component based on fieldwork conducted in 2011 and 2012. It is not described here as basic post-excavation work has not yet been carried out on it.

extensive white ash layers and the sandstone pellet-rich layers. In common with Phase 5b, the undulating surfaces of its characteristic black silt layers indicates significant root action and likely exposure of the shelter floor during periods of limited sedimentation. Faunal remains are, however, much better preserved here than in the Pleistocene deposits, or indeed those of Phase 4 above. Field observations from the 2011–2012 season in which Phase 5a was first defined indicate that its lithic assemblages include a greater variation of technological signatures alongside the same key elements of bladelet and bipolar core reduction strategies identified in Phase 5b, but they await comprehensive analysis. The stratigraphic boundary with the overlying Phase 4 sediments is diffuse with little evidence of a significant break in human habitation.

Phase 4 sediments are characterised by frequent small fragments of reworked charcoal and fired earth found evenly distributed throughout the matrix, creating a ‘mottled’ appearance, together with the presence of a notable coarse sand component producing a ‘gritty’ feel during excavation. *In situ* charcoal-rich sediments, so prevalent in overlying and underlying Phases, were occasionally encountered during the excavation of Phase 4, although much less frequently. Geoarchaeological observations indicate that this breakdown of hearth deposits is a result of standing water, and the almost uniform occurrence of this mottling throughout suggests a relatively consistent presence of water within the shelter, most likely originating from the same source of seepage as seen today at the rear and eastern edge of the shelter. Extensive yet very thin layers of sterile silt and sand punctuate the mottled Phase 4 units, indicating of more intensive phases of water permeation through the shelter wall and brief submersion of its floor during periods of increased precipitation (M. Morley pers. comm).

Despite this, human occupation remained relatively consistent throughout the time it took for these sediments to accumulate, most likely – judging from the evidence for surface water – in an episodic, perhaps seasonal, manner, presumably when drier conditions allowed. Well-defined, regular-shaped, deep fired-earth deposits were, in fact, common throughout Phase 4. Some of these features were – as was the norm in overlying Phase 3 – more than simply the heat-affected sediment below where a hearth used to be and contain unusual concentrations of finds produced by repetitive hearth building in single locations, often in shallow hollows or pits. Unlike in any of the preceding or succeeding Phases, a small number of large pits were also dug into the shelter floor at this time. In general, find densities were considerably lower in Phase 4

in comparison with immediately over and underlying Phases, as was the degree of faunal preservation, although specific clusters of lithics and some features with well-preserved bone were recorded. Flaked stone assemblages from Phase 4, which are broadly assignable to the Oakhurst technocomplex (Lombard *et al.* 2012) continue the trend of increasing technological diversity – in terms of the different core reduction strategies – noted in Phase 5a, though ‘formal tools’ are rare in Phase 4 assemblages, with only occasional medium and large convex scrapers. A small number of delicate bone points were, however, recovered from the upper part of Phase 4.

The upper part of Ntloana Tšoana’s early Holocene archaeological sequence, assigned to layer MCS in the 1989 excavations and Phase 3 in the 2009–2012 season, was quite distinct from the underlying Phase 4 sediments, containing a greater proportion of fine-grained silt, virtually no grit, and better preservation of charcoal. It is this part of the sequence that forms the subject of the remainder of the thesis. Defined by two major episodes of fluvial silt deposition at its lower and upper boundaries, the very fine, compacted nature of the Phase 3 sediments afforded an easier excavation process and contained notably higher find densities than the two underlying Holocene Phases. The internal structure of hearth features remained intact and in many instances upper charcoal and ash-rich sediments could be removed independently. As mentioned earlier, fine-grained clay-rich sediments such as these are particularly prone to the effects of colour and texture change when exposed to heat and thus present challenges for excavation, as this thermal alteration can penetrate to a much greater depth below the level of the hearth activity, a matter complicated by the fact that hearths were often rebuilt in the same location. This difficulty is, however, not as acute in Phase 3 as it is in underlying phases due to the presence of thin charcoal lenses, making it possible to distinguish multi-use hearths (Figure 18) from other heat-transformed sediments, something that was not possible for Phase 4 or Phase 5a. This greater degree of preservation meant that it was sometimes possible to follow thin layers across the entire excavation area.

One of the main reasons for the increased stratigraphic integrity in Phase 3 is the capping of hearths and occupation layers with the massive body of silt mentioned earlier. Owing to their similarity with deposits at Ha Makotoko, these Phase 2 silts were originally thought to be aeolian in origin and found to be completely devoid of any sign of human occupation (Mitchell 1993). The recent excavations have, however, confirmed their fluvial origin and both a more restricted *and* earlier time-frame for the



Figure 18. Oblique close-up of view of Ntloana Tsoana's Phase 3dii deposits in section, showing preservation of horizontal and vertical structure within a multi-use hearth feature consisting of Contexts (094–092–088–086).

Phase 2 sediments (Figure 19), bracketed by OSL dates of  $9.3 \pm 0.8$  ka and  $6.8 \pm 0.6$  ka at their lower and upper margins respectively. The extension of a large archaeological section up to the rear of the shelter has also revealed an enigmatic trace of mid/late Holocene occupation in the upper part of the Phase 2 silts, which had survived in a void against the wall (Mitchell & Arthur 2012, Figures 15 & 19). Presumably, erosive action at the front of the site and subsequent collapse have removed all other evidence of the horizon to which these artefacts belonged, as well as creating the steeply sloping surface of the shelter floor that exists today (Figures 15 & 19). A small hearth with associated stakeholes and small lithic assemblage was identified in the southeastern end of the shelter sitting directly on this truncated surface, which provided a date of 664–550 cal. BP ( $650 \pm 20$ , + 20 BP, UGAMS-8973). In addition to confirming a late precolonial hunter-gatherer occupation of the shelter, this date also suggests that the truncation of the silt began at least 500 years ago. A small stone stock pen was also recorded and excavated on the western edge of the site from which late 19<sup>th</sup> century beads and pottery were recovered, providing a tentative link to the oral histories described earlier, when the shelter served as a temporary refuge during colonial era conflicts.





Figure 19. Section photos through the Phase 2 silts at Ntloana Tsoana. Top: west facing section of the central baulk. Bottom left: thin bands of grey clay and ripple-bed formations clearly visible identifying in-channel and slackwater processes respectively. Bottom right: The east facing section of the central baulk at the rear of the shelter showing the void filled with loose dark brown charcoal flecked and mid/late Holocene artefacts Scale is 1 m.

### 6.5. Discussion: scale and temporal anxiety

Obtaining a finer scale in any human story is in many ways an uncomfortable exercise and competing narratives can emerge. On the one hand, once we get down to the level of centuries and decades, and even that of the action of human individuals represented by the placement of individual features on the shelter floor, interesting and socially informative structure can be seen. Thus it is with the upper early Holocene Phase 3 sediments, where clear patterning involving large combustion features combined and specific clusters of certain types of stone tools is apparent. There is clearly a sequential story to tell. On the other hand, the inherent non-sequential character of sedimentary and erosional processes, as well as the durability and physicality of material residues, becomes more apparent at this scale. Both these physical realities involve the incorporation of particles and larger objects into adjoining sedimentary bodies. Put simply, stratigraphic integrity does not translate in a straightforward manner to a full or complete sequence of events and neither does it lead directly to chronological integrity.

All this can cause severe anxiety for archaeological dating projects based on the foundation of linear time, yet it is important not to resort to the sorts of temporal censorship implicit in the work of time-averaging (Section 2.6) or coarse-grained aggregation of stratigraphic levels (Section 3.2.3). There are, as I demonstrate in the chapters that follow, ways to work with non-sequential patterning in rockshelter stratigraphy.

As if this were not enough to make even the most hardened chronologists head spin, much of the terminal Pleistocene and early Holocene remains difficult to date through radiocarbon alone due to the poor resolution of the calibration curve at this time associated with the uneven production of atmospheric carbon at the end of the last Ice Age and the period of warming that followed. Fortunately, recent developments in chronological modelling offer a framework for dealing with both the inaccuracies of the calibration curve and the non-sequential nature of fine-grained rockshelter stratigraphy, and it is to these Bayesian models that I now turn.

## 6.6. Early Holocene chronology

Globally, archaeologists studying the Pleistocene–Holocene transition or the early Holocene have struggled with obtaining accurate radiocarbon ages due to significant radiocarbon plateaux<sup>14</sup> centred on *c.* 10,000, 9600 and 8900 BP lasting up to several hundred calendar years in each case (Mellars 1990; Becker & Kromer 1993: 69; Day & Mellars 1994; Dark 2000; Bamforth & Grund 2012: 3). This poses a major obstacle for separating out the dates from Phase 5a and Phase 4 at Ntloana Tšoana where seven out of eight dates cluster around 9600 BP. The situation for Phase 3 is little better, with six out of eight available dates impacted by the 8900 BP plateau (Figure 20). Radiocarbon plateaux can have the effect of producing exactly the same, or even out of sequence, <sup>14</sup>C values from well-stratified samples that could be hundreds of years apart. Fortunately, by factoring in stratigraphic information, such as above/below relationships, Bayesian modelling can suggest alternative probability distributions for these overlapping calibrated ranges, as well as offering ways of dealing with out-of-sequence dates more generally.

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<sup>14</sup> Radiocarbon plateaux and wiggles are caused by past variations in the production of atmospheric <sup>14</sup>C, thought to be related to solar radiation and ocean ventilation (Stuiver *et al.* 1991).

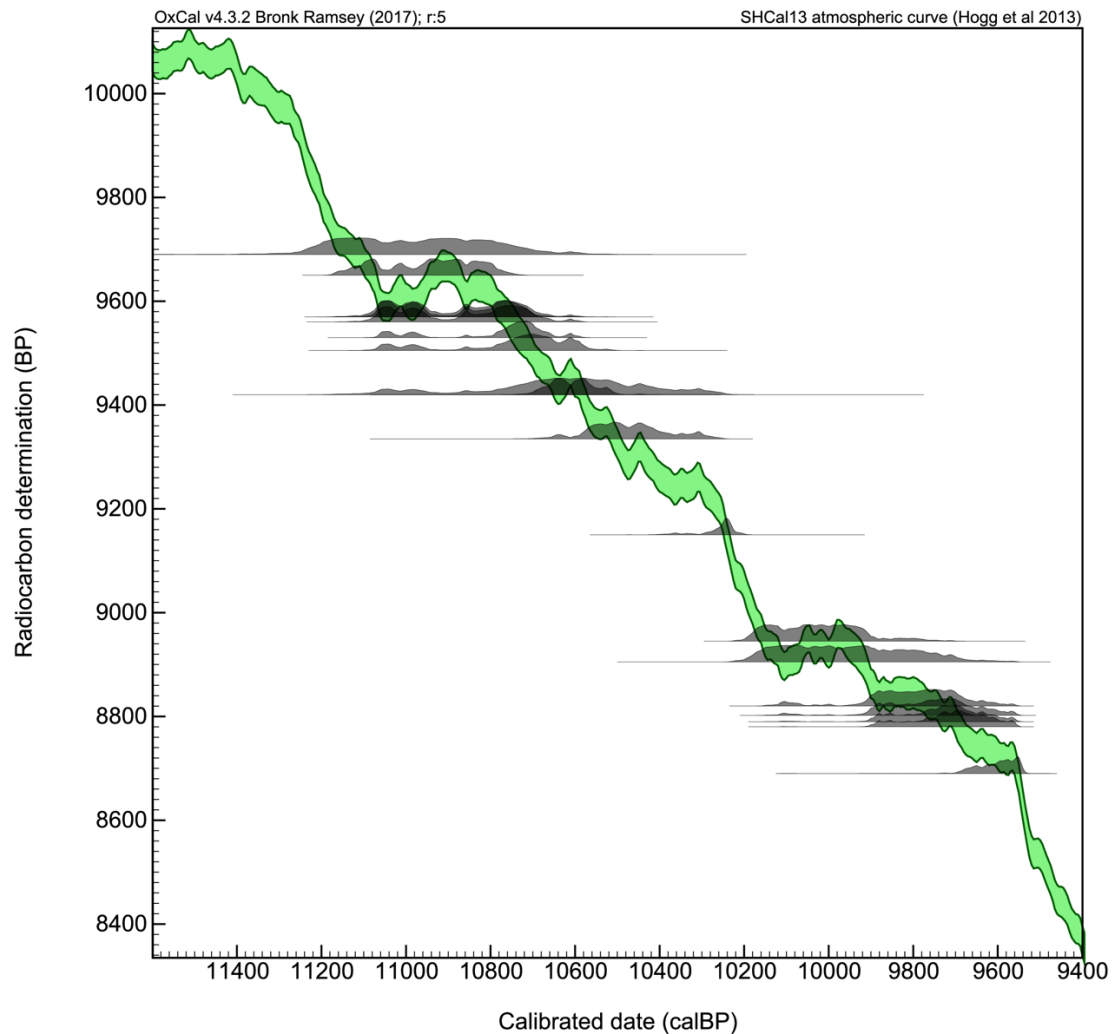


Figure 20. Early Holocene ages from Ntloana Tšoana plotted on the southern hemisphere calibration curve, SHCal13 (Hogg *et al.* 2013), showing the clustering of dates at the 9600 and 8900  $^{14}\text{C}$  BP radiocarbon plateau. Although referred to as ‘plateau’ in the literature, these irregularities also consist of numerous peaks and troughs or ‘wiggles’. Note that due to large error margins in the  $^{14}\text{C}$  age that increase the intercept range the plateau effect impacts even those ages some way from the main irregularities, as demonstrated by the bimodal distribution of the date close to 9400  $^{14}\text{C}$  BP.

Bayesian models can never quite capture all the uncertainty created by a depositional and erosional environment like a rockshelter, yet they have three major strengths. First, they can help identify samples that do not necessarily fit neatly in line with all the others (whether we go on to classify these as ‘outliers’ in our interpretations that follow is another question, addressed below). Second, by running models using different assumptions about the degree of sequential relations between contexts from which individual dates and groups of dates were retrieved, we can arrive at a more realistic approximation of when a depositional episode began and ended, or when the transition from one occupational phase to another occurred. Third, they are very useful for estimating duration, i.e. how long a particular period of sedimentation or activity may



have lasted. For a full explanation of how these models work see Bronk Ramsey (2009b).

#### 6.7. Two Bayesian models for Ntloana Tšoana

Several models were run for the twenty-three AMS dates and eight OSL dates from Ntloana Tšoana, two of which are presented here. Basic parameters and general outcomes are explained in the accompanying caption (Figure 21). Both models assume a sequential relationship between the Phases, i.e. that one follows the other, yet they model the stratigraphic relations between the dates within Phases differently. Model A adjusts the probability ranges according to stratigraphic position as far as possible. Yet even in this model, some dates, such as those in Phase 3diii and Phase 3a, have been grouped together as a *nested-phase* (synchronous relationship within a sequence). This allows the model to incorporate parts of a sequence that yielded  $^{14}\text{C}$  ages that are only slightly out of sequence by assuming that they were deposited at the same time, as if there is no stratigraphic relationship between them. This is essential for high-resolution dating of rockshelter sites attempting to get at a sub-millennial scale, which, for reasons already made clear, will rarely produce a complete set of consecutive ages neatly ordered by depth or stratigraphic position. This is particularly the case in Phase 3, which is bounded at its upper and lower limits by inundation events, meaning that the sediments in both Phase 3diii and Phase 3a are part fluvial-slackwater in origin and therefore prone to gentle reworking of sedimentary surfaces and movement of charcoal across context boundaries.

The real strength of allowing a degree of contemporaneity within a sequence is that it reduces the need to identify dates as outliers and thus remove them from the models' calculations. Instead, a broader approximation is provided by the model for the age of the sub-phase in question, using all the dates entered in as a *nested-phase*. In this way Bayesian models can be said to be multi-temporal, allowing sequence and non-sequence to co-exist. Model B removes all the stratigraphic structure from Phases 4 and 3d–3a and assumes that all the dates found in these parts of the sequence are contemporaneous. The main effect of removing this structure in Phase 3di–3a, is that it increases the calibrated ranges to make all the ages overlap within a broad period spanning 10,200–9250 cal. BP.

Importantly, for establishing the limits of patterned habitation practices described in this thesis, despite the different models' effect on individual dates the timing for the end of Phase 3 and beginning of non-anthropogenic silt deposition remains roughly the same between the two models, indicating that the ranges provided here *do* provide a robust estimation for when early Holocene activity ceased at Ntloana Tšoana (Table 3). There is less agreement between the two models when it comes to the timing of when Phase 4 ends and Phase 3 begins. This is because Model B accommodates all the  $^{14}\text{C}$  ages from Phase 4, including OxA-26230 which is left out of Model A's calculations to maintain sequential structure. As a consequence, the end of Phase 4 and beginning of Phase 3 is 200–300 years earlier in Model A. Again, because of the omission of outliers, the duration of Phase 4 is shorter in Model A. Perhaps the most crucial of all these intervals in terms of the interpretive work presented in Chapters 7 & 8, is the duration of Phase 3. Though the estimates for this do not provide much accuracy due to large ranges (Table 3), both models are in broad agreement and provide important maximum and minimum time-spans. We can thus be confident that Phase 3 lasted at least 600, but no more than 1700, years. Model A provides a slightly more restricted estimate, suggesting that the most likely duration is somewhere in the middle of this range.

In terms of the radiocarbon plateau at 8800 BP described above, individual age ranges have been reduced and tidied up by the two models, although because of its assumption of sequence rather than contemporaneity, Model A fairs better in separating out dates from the upper (3a) and middle (3di–3b) parts of Phase 3 (Figure 21). The probability distribution for OxA-32161 (8820, 40), for example, is significantly reduced by almost 200 years in Model A. Model A was even more effective at tackling the 9600 BP plateau (Figure 22), successfully recalibrating the older limits of the three ages in the stratigraphically overlying Phase 4 to provide a younger estimate by some 200 years, whilst adjusting the minimum end of the stratigraphically underlying age in Phase 5ai by a similar time-span, to provide an older estimate.

In many respects Model A offers a more parsimonious reading of the suite of radiocarbon and OSL dates available for Ntloana Tšoana, and as a broad framework for the remainder of the thesis, its chronology, as outlined in Table 3, will be employed here. Of course, any chronology is an “interpretive construction” (Bayliss 2015: 680), and this is just one reading of the available dates, and, importantly, as outlined above, it requires the omission of a significant number of ages from its calculation. Yet as

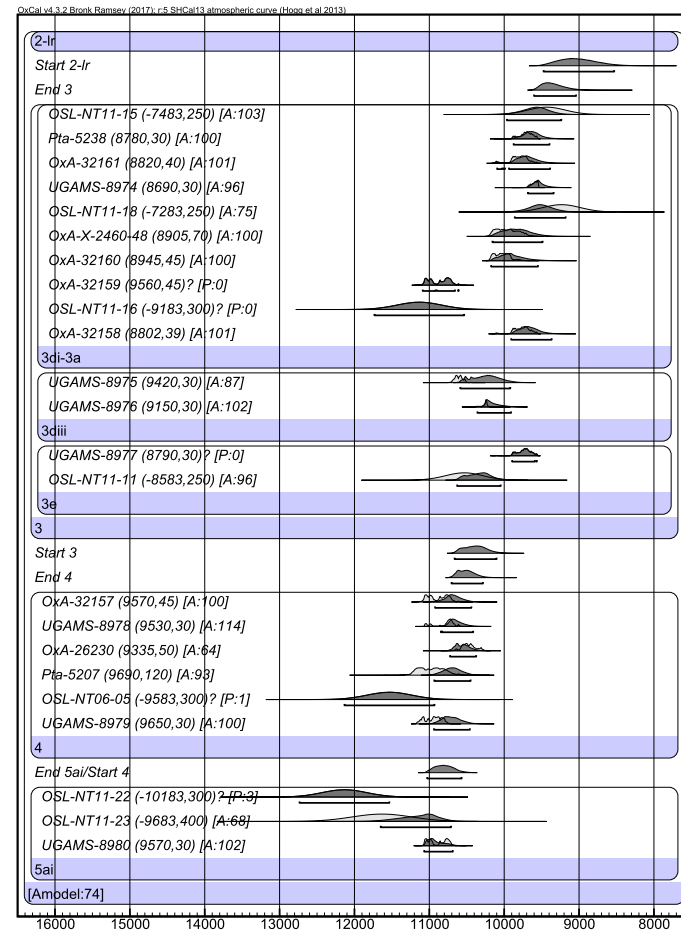
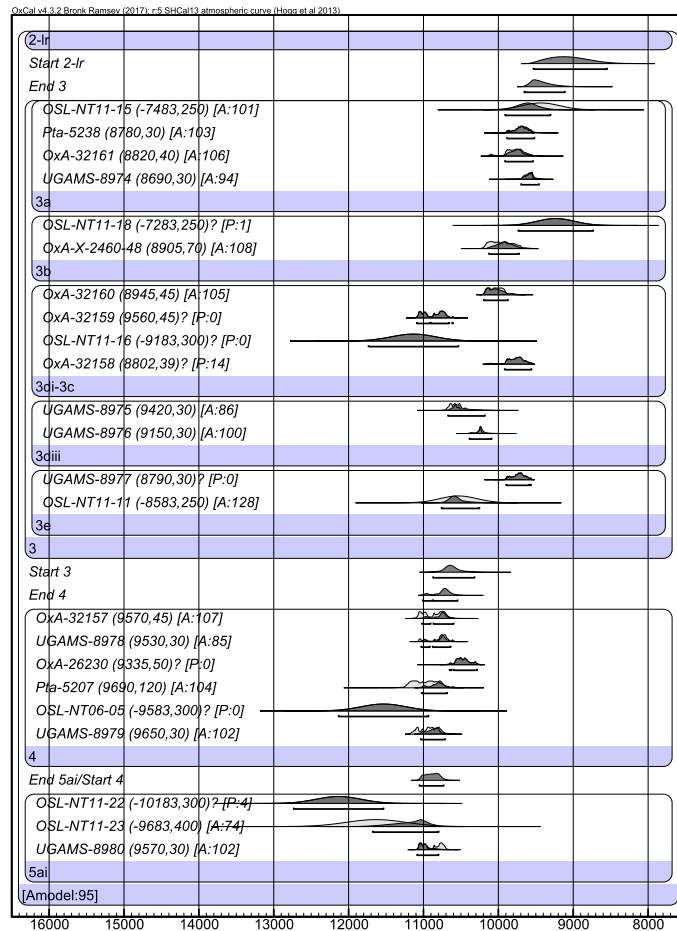


Figure 21. Bayesian models for the early Holocene at Ntloana Tsoana. Model A (left) aims at retaining as much sequential structure as possible. Twenty AMS and OSL dates are included in the calculations, with ten outliers omitted. Note that outliers are still shown on the plot, identified by the question mark after the laboratory number. Model B (right) attempts to include as many dates as possible. This is achieved by removing some of the stratigraphic structure from Phase 3di–3a and Phase 4. The model assumes that there are no stratigraphic relationships between the dates in these parts of the sequence. This accommodates 24 AMS and OSL dates and only six outliers. The models were run, and plots produced using OxCal v4.3.2 (Bronk Ramsey 2013). Both models used the SHCal13 calibration curve (Hogg *et al.* 2013). To adjust for inbuilt age in charcoal samples a Charcoal Outlier Model was applied to each sample before running the models (Dee & Bronk Ramsey 2014: 85).

Event/ Period	Occupation	Model A		Model B		Comments
		95.4%	68.2%	95.4%	68.2%	
Start Phase 2	Flood/No occupation	9530– 8548	9374– 8838	9474– 8530	9309– 8810	Similar in both models
End Phase 3	Cessation of habitation	9654– 9111	9591– 9345	9601– 9040	9530– 9253	Similar in both models
Duration Phase 3	Occupational continuity	834– 1618	1004– 1341	624– 1674	824– 1230	Model A more restricted
Start Phase 3	Flood/ occupation begins again	10872– 10319	10735– 10539	10663– 10101	10574– 10255	Model A <i>c.</i> 200 years earlier
End Phase 4	Cessation of habitation	11010– 10544	10964– 10618	10704– 10283	10644– 10420	Model A 261– 306 years earlier
Duration Phase 4	Occupational continuity	-2– 345	2– 200	-2– 575	115– 455	Model A <i>c.</i> 230 years shorter
End Phase 5ai/Start 4	Transitional period	11054– 10731	10980– 10784	11209– 10568	10946– 10691	Model A more restricted

Table 3. Summary results of Bayesian models A & B. Durations in years, all other figures in cal. BP

I discuss below, when specific contextual details of each of these ‘outliers’ are considered their presence becomes less of a ‘problem’ and more an integral part of the sites’ temporal character. The challenge of accepting conflicting chronologies is discussed further in Chapters 7 and 8; for now, it is important to sketch out a broad linear chronological outline using Model A with additional corroboration from Model B, which can be simplified along the lines of the boundaries shown in Figure 23. This tells us that Phase 4 likely began around 11,000 cal. BP and lasted between 200 and 350 years; Phase 3 began around 10,600 cal. BP<sup>15</sup> with a major flood event and lasted for a little over 1000 years; and finally, that Phase 3 ended between 9600–9300 cal. BP, during which time the rockshelter was inundated again and the shelter abandoned.

<sup>15</sup> This is based on a range of 10742–10516 cal. BP at 68.2% confidence. This range increases to 10868–10274 BP at 95% confidence limits.

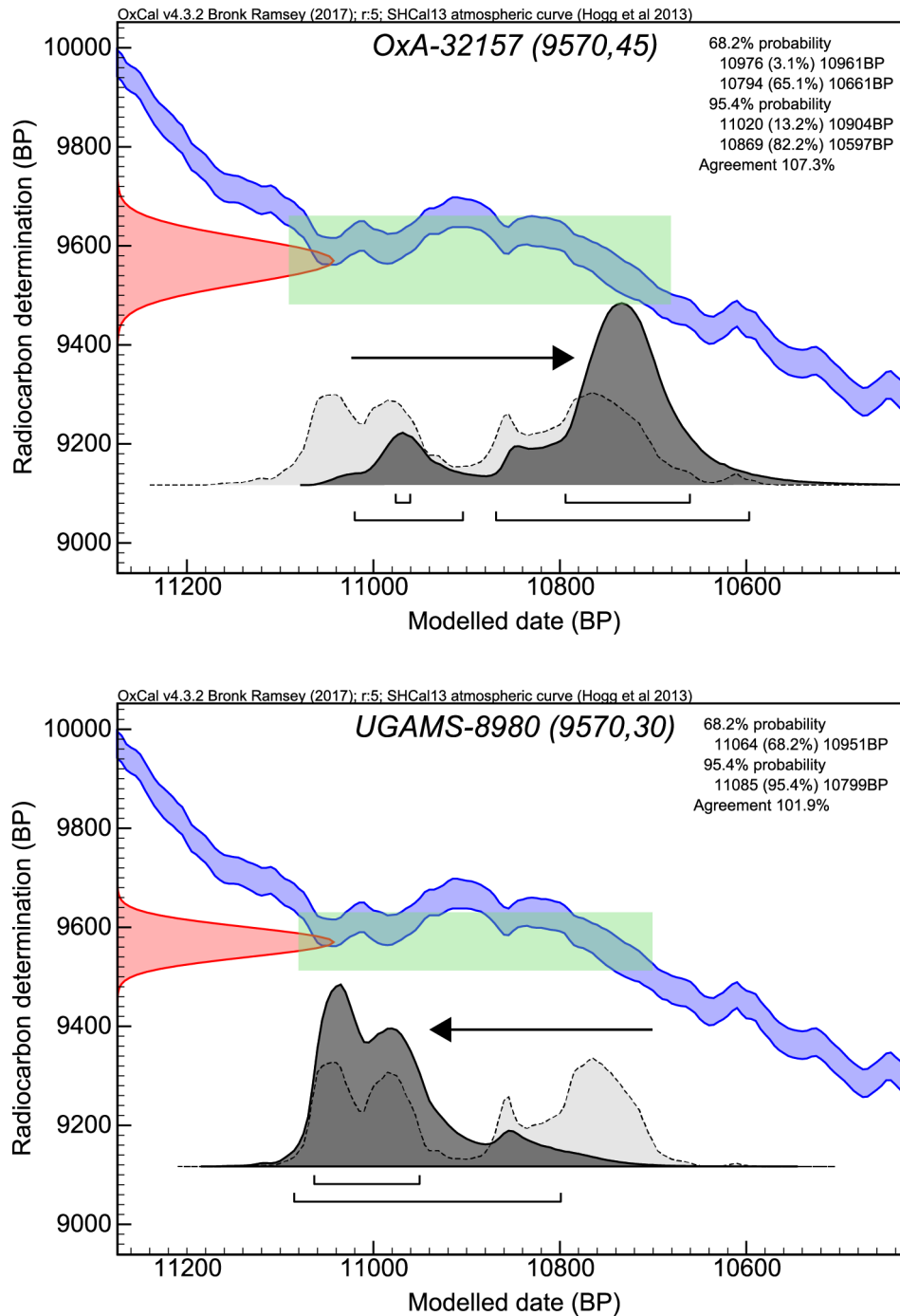


Figure 22. The 9600 BP plateau effect at Ntloana Tsoana and the attempt by Model A using stratigraphic information to provide a more accurate age estimate. The upper date is from the top of Phase 4 and the lower is from the older underlying Phase 5ai, yet they produced exactly the same  $^{14}\text{C}$  result. The flatness and unevenness of the calibration curve between 11080 and 10700 cal. BP means that any  $^{14}\text{C}$  age between 9500 and 9700 BP is likely to intercept at least two or three parts of the curve (shown here by the green rectangle) and therefore produce large bimodal or multi-modal distributions like the ones shown here inside the dashed lines, meaning different aged samples will produce  $^{14}\text{C}$  results of similar ages. The model uses the existing stratigraphic information termed a 'prior', in this case the fact that OxA-32157 was from a context at the top of Phase 4 and UGAMS-8980 one from a context at the bottom of Phase 4, to recalibrate the probability distribution, shown by the dark shaded area inside the solid line distribution. The results of the Bayesian model in this case are pronounced, with the upper OxA-32157 date, now modelled towards the younger end of the range at 10869-10597 cal. BP (82.2% confidence) and the lower UGAMS-8980 date towards the older end at 11085-10799 cal. BP (95.4% confidence).

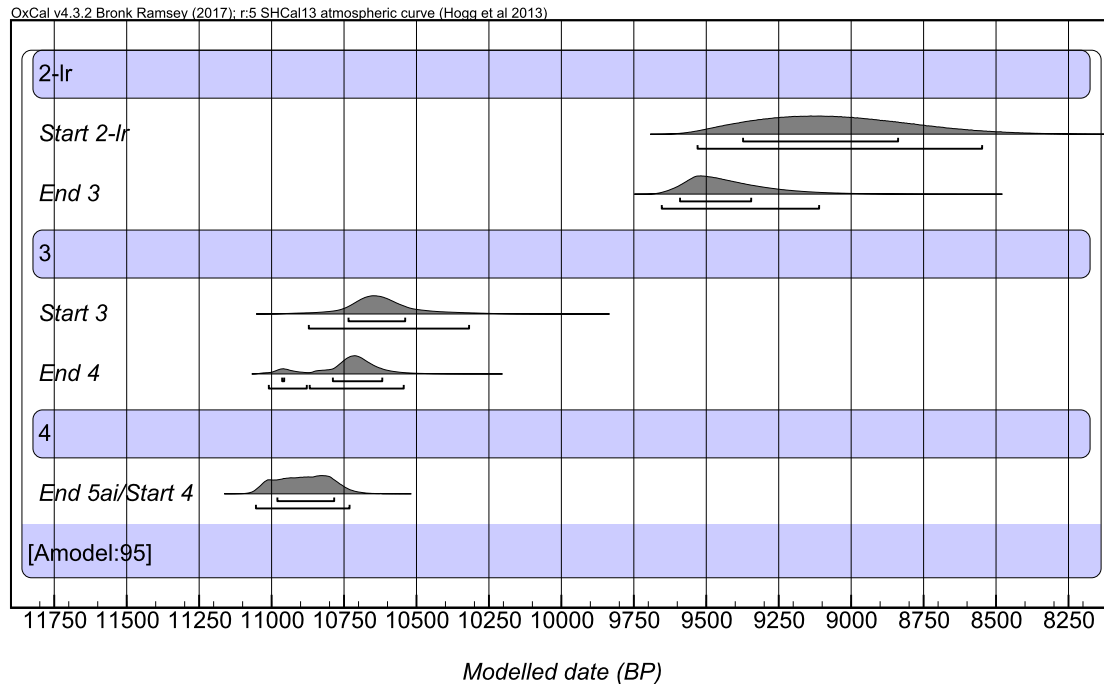


Figure 23. Phase boundaries for the early Holocene at Ntloana Tsoana as estimated by Model A.

#### 6.8. Discussion: the paradox of resolution and the acceptance of outliers

Bayesian models clearly have some limits in terms of their ability to accept the reality of complex stratigraphy such as that found at Ntloana Tsoana, where at least some vertical translocation of particles between sub-phases is to be expected. In an ideal scenario, sedimentary layers would extend across an entire site, thereby minimising any residuality or intrusiveness. Dating samples could then be selected from parts of the sequence where there is no physical contact with substantially earlier or substantially younger layers. The irony, however, is that on the rare occasions when these conditions are met, one could safely presume that the forces that had laid down this succession of continuous layers would have been devoid of human agency, or that the traces of such activity had been subsumed completely by geological process. The less-talked about reality of rockshelter stratigraphy is that when well-preserved anthropogenic features are identified, they are extremely restricted in horizontal extent, such that neat spatial separation of the different parts of the sequence above and below them is simply not possible.

In any case, if we understand the physical, i.e. durational, character of the stratigraphy well enough, on a case by case basis the presence of many supposed outliers can be explained. For example, though the date Ox-A-32159, is

*stratigraphically* from the middle of Phase 3 (3di–3c), it comes from a part of the site where the Phase 3c sediments were in direct *physical* contact with underlying Phase 4 sediments and the  $9560 \pm 30$  date retrieved fits exactly with the two dates from the upper-part of Phase 4. We can, therefore, say that despite being ‘out of sequence’ the date is accurate in the sense that it shows the contact of these Phase 3 layers with earlier, Phase 4 deposits. The reverse situation is true of another significant outlier in Model A, Ox-A-23230 (9335, 50), which is *stratigraphically* in the middle of Phase 4, yet from a layer not completely buried by subsequent upper-Phase 4 deposition, and on top of which Phase 3 hearths were constructed. Both these two dates were identified as ‘outliers’ in terms of the models as they did not fit using any combination of phases and sequences. However, once we know their physical contexts and the nature of discontinuous deposition across the site, dates like these *can* be interpreted and viewed, not as outliers, but as an integral part of the history. They simply reflect the basic rockshelter’s durational quality of habitation layers and features and which are rarely completely covered and hermetically sealed off from the next thing that is about to happen.

Before claiming, however, that these models cannot account for real life messiness, it should be remembered that what they are attempting to do when an outlier is identified, i.e. when it fails the model, is to provide more realistic ages for the human activity represented by the layer in which it is found, not a realistic age for any translocated particles themselves. Looked at in this way, Model B better reflects the actual composition and age of the sediments, Model A the sequence of human habitation events.

The disjuncture between the actual materials that make up and assemblages and the human occupation, action or behaviour that is the objective of a dating programme is an interesting one and something to which I return in Chapters 8 and 9 when looking at similar conceptual problems with Harris matrix diagrams. The more widespread use of Bayesian models in archaeology is, however, only to be encouraged, principally because it allows for different versions of the past to be constructed from the same data.

## 6.9. Summary

Advances in calibration and modelling of dates are part of a broader movement towards thinking about time in more complex ways, both in terms of revealing the false notion

of discrete sequences based on uncalibrated dates, and of their ability to include overlapping temporal phenomena. The acceptance of so-called ‘outliers’ and the convention that encourages us to keep these visible in reporting is also an important sign of this. There are real limits to radiocarbon dating in terms of the accuracy of the measurements, the atmospheric calibration techniques, and the degree to which mathematical models can accommodate the multifaceted range of subjective information that make up basic stratigraphic interpretations. Models can accept multiple nested synchronous and sequential stratigraphies, yet they are unable to accept that a single relation between two entities can be sequential, overlapping *and* contemporaneous all at the same time. As suggested above the use of multiple models, offering competing versions of the past offers one way around this. In any case, there will always be a significant degree of interpretation required after the models have been run. In conclusion, there appears to be a real radiocarbon threshold, beyond which there is only more interpretation.



## **Chapter 7.**

### **Sedimentary histories. Part 1**

#### **7.1. Introduction**

This and the following chapter consist of an interpretation of eighty sedimentary contexts, including twenty-two individual hearths excavated as Phase 4a and Phase 3. A detailed study of the relations within and between sedimentary contexts and their respective lithic and bone assemblages reveals key shifts in depositional processes. At times these can be unequivocally associated with rapid and dramatic environmental change, and at others, they can appear largely independent of these phenomena. Some of the most interesting depositional narratives, however, emerge from a more complex interplay of natural and anthropogenic processes, not necessarily one operating in response to the other. Even in periods of relative environmental stability in the central part of Phase 3, when sporadic occupation patterns dominate, processes of erosion and siltation are inextricable from the human story. This sedimentary account is punctuated by three notable episodes of hearth-making activities. The close association of these features with the intentional deposition of a certain kind of end-scraper points towards longer-term inter-generational memory transfer. It provokes discussion about the role of rockshelters in the reproduction of tradition and sets up a series of more detailed questions to be tackled through the metrical and attribute analyses of scrapers presented in Chapter 9.

These sedimentary accounts also help to illustrate perhaps the main difficulty and irony of any stratigraphic work, that, despite our best efforts, it remains impossible to separate episodic action(s) represented in depositional events from longer-term accumulation. Rather than viewing this as a problem, however, I argue that its acceptance leads us to a closer approximation of how the human world is embedded within continual flows of environmental breakdown and build-up. Throughout this chapter, the central proposition is that the temporal dimensions and experience of sedimentation and erosion are fundamental to understanding how these rockshelters were entwined in hunter-gatherer life. By acknowledging this we can thus considerably enrich our understandings of the past.

## 7.2. Before the flood (Phase 4a)

We pick up the story at the upper surface of Phase 4, when a sequence of structured domestic space was brought to an end with a dramatic flood event, followed by the emergence of a new long-term habitation pattern. The final part of Phase 4, however, is worth describing in detail for it includes some striking contrasts with what came afterwards. For most of Phase 4 we can generalise that the deposits at Ntloana Tšoana reflect low density, episodic, though relatively consistent occupations of the shelter throughout their accumulation over approximately 200–350 years (Table 3, Section 6.6). The intensely mottled nature of the Phase 4 sediments reflects accelerated breakdown of anthropogenic material indicative of alternating wet and dry episodes. Punctuation of these mottled silts by thin bands of very fine clay ‘wash’ indicates frequent pooling of water likely to be a result of water seepage at the rear of the site, which would have increased at times of high precipitation (M. Morley, pers. comm.). This fairly hostile picture is supported by palaeoenvironmental records which suggest that the few centuries leading up to the beginning of Phase 3 (~10,600 cal. BP) were both cold and wet (Roberts *et al.* 2013).

At the very end of Phase 4 (Sub-Phase 4a), however, the superimposition of three large, repeatedly used features (115–103), on the west side of the excavation, indicates that people were beginning to use the shelter in a different way and suggests a concern with maintaining spatial structure over time (Figure 24). All three contained a surprisingly low number of finds, even compared to underlying Phase 4 deposits. Bone was very rare ( $D=28.2^{16}$ ), heavily burnt (33.7%), and extremely fragmentary (11.3 NSP/g). Post-depositional effects, such as the pooling of water, for example, or exposure and erosion, also fail to explain this anomaly, as the charcoal- and ash-rich contexts (115) and (118) would not have survived if either of these processes had been prominent at the time. Moreover, a low density of stone artefacts ( $D=49.0$ ), more akin to the frequencies found in non-anthropogenic silts (in Phase 3a for example), suggests this was not solely a post-depositional phenomenon. The obvious interpretation that follows is that these hearths were constructed during a period of low-density occupation. However, it is perhaps more instructive to look closely at the exact sequence of events within (115–103) and an adjacent series of hearth deposits, where

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<sup>16</sup> All lithic and faunal densities are expressed as ( $D=$ ) refers to grams per 10 litres to afford easy comparisons with the wider LSA literature, which commonly uses 10 litre buckets as the volume standard.

we find that a specific combination of practices was introduced, including the digging out of older hearths and the careful placement of new hearths in pits. The silt, fired-earth and charcoal fills of the small, regular, oval-shaped pit [119]<sup>17</sup> (Figure 24c), revealed that this feature was used at least three times and that the last two episodes followed a re-cutting event, most likely associated with clearing out ash, charcoal and other debris after the initial use of the hearth. This sequence of three to four episodes of hearth construction in exactly the same location, including the placement of the initial hearth in a pit, and its subsequent removal suggests a degree of care was employed during its construction. Indeed, a very similar micro-sequence is found in (115–103), involving the placement of an initial hearth (115), which was then cut by a



Figure 24a. Phase 4a hearths from Ntloana Tšoana: close-up of large circular feature (104) showing clearance pit [197] dug into its surface. The fired earth substrate of a much later Phase 3cii hearth (087) can be seen at the top of the photo. Scale is 1.20 m.

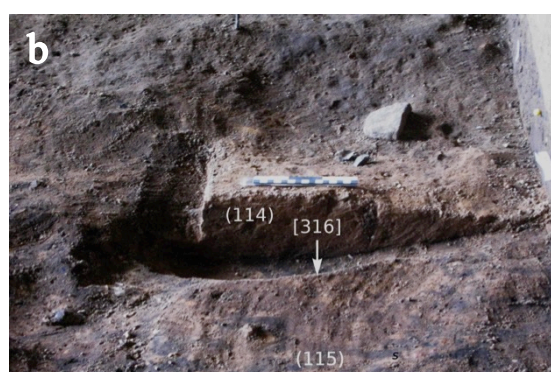


Figure 24b. Phase 4a hearths from Ntloana Tšoana: oblique photo of half section through circular pit [316] filled by hearth deposit (114), part of the (115–103) sequence. Scale is 0.15 m. Figure 24c. Phase 4a hearths from Ntloana Tšoana: pre-ex plan photo of small oval pit [119] filled by charcoal rich and fired earth inner (083). Scale is 0.50 m.

<sup>17</sup> In line with British field archaeology conventions, cut features are designated with square brackets and sedimentary contexts with round brackets.

pit [316], filled by hearth (114), (Figure 24b), and finally, another hearth (104), (Figure 24a). Though these two sequences have no direct stratigraphic connection, both lie on or are cut into the surface of the uppermost Phase 4 mottled deposit (125), and their similar depositional sequences makes it likely that they were closely related, if not contemporary (Figure 25).

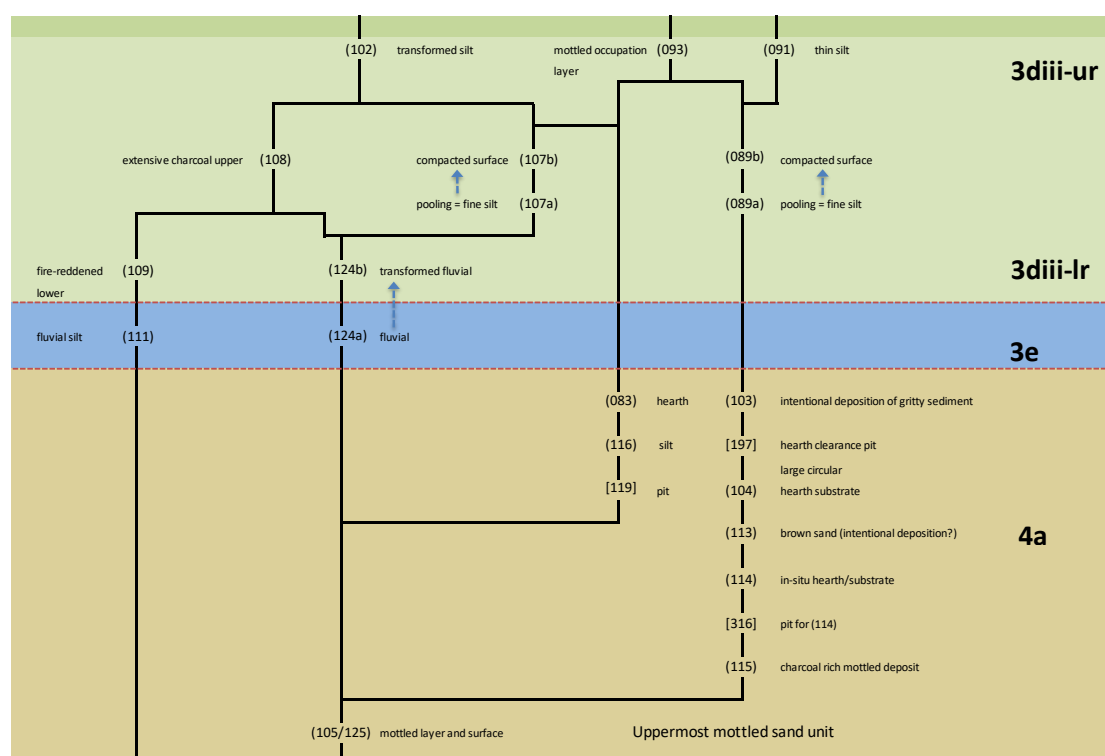


Figure 25. Annotated sequence diagram of Phase 4a, 3e and 3diii at Ntloana Tšoana.

As inferred by the re-cutting of [119] described above, a regular-shaped pit dug into the surface of (104) provides additional and convincing evidence that the intentional removal of hearth debris was practised at this time. Interestingly, in this case, a gritty body of sediment, Context (103), consisting of more than 20% small gravel (<10 mm diameter) that presumably originated from the river channel in front of the site, was intentionally deposited in the pit after the hearth was cleared out. Whatever the specific reason for this depositional act – whether to cover, conceal or level the floor surface – considered together with the repetitive construction of regular-shaped hearths in two specific locations, it strongly suggests that the curation of space and the management of domestic debris was a priority.

Both hearth sequences also include evidence of discontinuous use: Context (116), interpreted as silt build up in the base of the pit [119], after its first phase of use-

and-clear-out, and Context (113), a layer of silt, which accumulated between hearth-building episodes, (114) and (104). Though the amount of time represented by these silt accumulations is a question that takes us beyond what we can glean from excavation or available dating techniques (Section 6.6), the fact that such sediments were recognisable in both sequences reflects a pattern of broader relevance, most likely a short period – perhaps a number of months – when the shelter was not occupied. The implication of this, beyond it being a result of episodic occupation and demonstrating a degree of mobility, is that the particular way of organising domestic space at Ntloana Tšoana was maintained between visits. It should now be clear that a simple explanation equating densities of finds to intensity of occupation is inadequate; instead, by paying close attention to two contemporaneous sequences of hearth construction, we allow a much richer picture to emerge.

A closer look at the small number of bone and lithic finds in these two adjacent sequences adds more colour to this interpretation of episodic but carefully structured shelter use. In particular, although similar in a number of ways, these two pit-and-hearth sequences may also have involved a different set of practices. In Contexts (115–103), the proportions of calcined bone (11.0%, N=494) were the highest for any hearths in the entire Phase 4a–3a sequence, suggesting that bone was deliberately thrown into the fire whilst it was still very hot. Interestingly, the only part of the fire where traces of larger bone survived, in the form of five long bone shaft fragments, is the aforementioned gravel deposit, Context (103), hinting that this unusual act of hearth clearance was associated specifically with the treatment of bones. What we may have here then is a staged deposition of animal remains involving burning, pit digging and the deposition of sediments from the river. In contrast, Contexts (119–083), registered a relatively high density (D=123.8), unburnt (4.38%, N=30), and intact (4.52 NSP/g), faunal assemblage. Both pit-and-hearth sequences featured low density lithic assemblages, yet both also included enigmatic small collections of finds – three rare ochre-covered quartzite flakes from (115) and three Woodlot scrapers from Context (083).

These sequences of hearths carefully situated one on top of the other, neatly placed in small pits and cleaned of certain kinds of remains appear to have been more than simply a result of practical advantages offered by reusing the same fireplace or

<b>Artefact Class</b>	<b>3a</b>	<b>3bi</b>	<b>3bii</b>	<b>3ci</b>	<b>3cii</b>	<b>3di</b>	<b>3dii</b>	<b>3e–diii</b>	<b>4a</b>	<b>Total</b>
<10 mm	5901	2674	3008	853	3602	1563	2419	5925	804	<b>26748</b>
Flaked pieces	2	0	4	5	0	2	2	1	0	<b>16</b>
Cores	18	44	39	16	31	10	24	22	1	<b>204</b>
Freehand	9	11	10	5	8	5	12	17	0	<b>77</b>
Bipolar	9	33	29	11	23	5	12	4	1	<b>127</b>
Broken flakes	879	709	451	358	645	251	356	889	153	<b>4685</b>
Whole flakes	958	628	357	269	617	248	633	733	113	4571
Bladelets	61	46	46	31	86	54	87	36	2	<b>449</b>
Bipolar flakes and pieces	107	77	46	25	41	54	77	16	4	<b>447</b>
Sheered flakes	37	23	34	17	22	18	7	25	3	<b>186</b>
Heat shattered pieces	253	384	148	113	155	164	732	195	64	<b>2208</b>
<i>Total Unmodified</i>	<i>8216</i>	<i>4585</i>	<i>4133</i>	<i>1687</i>	<i>5199</i>	<i>2364</i>	<i>4337</i>	<i>7863</i>	<i>1144</i>	<b><i>39528</i></b>
Edge-damaged flakes	22	9	15	8	7	5	17	28	3	<b>114</b>
Edge-damaged bladelets	3	1	2	0	1	0	1	3	0	<b>11</b>
<i>Total Edge-damaged</i>	<i>25</i>	<i>10</i>	<i>17</i>	<i>8</i>	<i>8</i>	<i>5</i>	<i>18</i>	<i>31</i>	<i>3</i>	<b><i>125</i></b>
End-scrapers	25	53	15	17	29	19	35	8	3	<b>204</b>
Other scrapers	12	18	7	12	14	9	5	27	1	<b>105</b>
Knives	1	15	4	5	0	0	4	2	0	<b>31</b>
Piercers	5	4	4	0	3	5	1	4	1	<b>27</b>
Adzes	0	0	0	1	1	0	0	1	1	<b>4</b>
Denticulates	0	1	1	0	0	0	0	2	0	<b>4</b>
Retouched bladelets	1	3	0	2	0	0	0	2	0	<b>8</b>
Notched flakes	0	7	2	7	1	3	4	4	0	<b>28</b>
Heavy notched pieces	2	1	0	2	0	1	0	2	0	<b>8</b>
Miscellaneous retouch	34	33	16	15	29	10	11	39	4	<b>189</b>
Broken retouch	23	37	14	7	14	11	7	11	3	<b>127</b>
<i>Total Retouched</i>	<i>103</i>	<i>172</i>	<i>63</i>	<i>68</i>	<i>91</i>	<i>58</i>	<i>67</i>	<i>102</i>	<i>13</i>	<b><i>737</i></b>
Hammerstones	1	0	1	0	0	2	2	1	0	<b>7</b>
Grindstones	0	0	1	0	0	0	1	0	0	<b>2</b>
Anvils	0	0	0	0	0	0	1	0	0	<b>1</b>
Nodules	13	10	6	3	2	1	9	6	1	<b>51</b>
<i>Total non-flaked lithics</i>	<i>14</i>	<i>10</i>	<i>8</i>	<i>3</i>	<i>2</i>	<i>3</i>	<i>13</i>	<i>7</i>	<i>1</i>	<b><i>60</i></b>
<b>Total lithics</b>	<b>8370</b>	<b>4795</b>	<b>4228</b>	<b>1778</b>	<b>5314</b>	<b>2439</b>	<b>4440</b>	<b>8003</b>	<b>1162</b>	<b>40539</b>

Table 4. Lithic artefacts from Phase 4a–3a at Ntloana Tšoana

protecting the fire from wind. I would suggest that when this sort of care and attention can be recognised it is just as likely to reflect an ontology of respect for non-human others, in which remains of particular animals or materials may be charged with significant power to effect goings on and are treated according. An important part of *!nanna-se* ‘respect’ practices described by nineteenth century |Xam hunter-gatherers from South Africa’s Northern Cape Province involved the correct treatment of animal bones during their disposal (Bleek & Lloyd 1911: 274–283). This included careful transportation to a specific “heap of meat bones” so as to avoid animals such as the springbok causing illness or future hunting failure (Bleek & Lloyd 1911: 275).<sup>18</sup> Of course, this is not to infer that the re-cutting of early Holocene hearths described above held any of the same specific meanings found in bone disposal practices of nineteenth century |Xam. Even at these time depths, however, when the repeated appearance of chains of action imbued with a high degree of regularity and carefulness *can* be identified, it seems entirely reasonable to think more generally that such practices were likely to have been informed by an ontology of respect between human and non-human entities, undertaken to ensure the continuation of the world as it is (Ingold 2000; see above, Section 2.11). Before exploring this idea further, however, it is important to take in more of the stratigraphic sequence, beginning with the catastrophic flooding of the shelter that followed in Phase 3e.

### 7.3. The flood and its aftermath (Phases 3e–3diii)

As mentioned above, the thick mottled layers that characterise much of Phase 4 have been interpreted as reflecting wet and inhospitable conditions at the beginning of the Holocene. A 26 cm-thick layer of fluvial silt (111) traced by the excavations for over 2.36 m and separating Phase 4 from Phase 3, is, however, unlike anything else lower down in the sequence, suggesting that the rising water levels correlate to a major shift in precipitation intensity or hydrological structure *c.* 10,600 cal. BP (Figure 26).

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<sup>18</sup> A key part of the text in question is as follows “...*the springbok is inside of us and we become ill on account of it. Therefore, we do not play tricks with springbok’s bones; for we put the springbok’s bones nicely away*” (Bleek & Lloyd 1911: 277–279). The account goes on to describe treatments for particular springbok body parts, noting that shoulder blades were not eaten by women and that they were disposed of carefully inside the hut to prevent dogs from gnawing them. If these respect practices were not carried out correctly the hunters could expect that during a future hunt an injury to the first finger of the right hand would appear preventing them from taking aim with a bow and arrow (Bleek & Lloyd 1911: 277–283). See McGranaghan (2012) for a detailed consideration of *!nanna-se*.





Figure 26. Micromorphology samples taken at Ntloana Tšoana in September 2011 through the upper and lower interfaces of fluvial silt deposit (111) at the boundary between Phase 4 and Phase 3 deposits.

Ongoing micromorphological analysis of these fluvial silts will provide a more detailed understanding of the frequency, tempo, and duration of the multiple inundation events that appear to have followed one another in quick succession. Only rare, small fragments of anthropogenic material were present in Context (111), most likely derived from erosion of older *in situ* layers rather than contemporary occupation and some period of shelter abandonment is likely (M. Morley, pers. comm.). Judging by the rise in water levels required to flood Ntloana Tšoana, other riparian shelters and alluvial terraces along the Phuthiatsana Valley would also now have been difficult to access and the region's hunter-gatherers would likely have had to reconfigure their habitation cycles accordingly. Whilst we cannot be certain exactly how long Ntloana Tšoana was unoccupied during this time of high river levels, we do know that shortly after the silts finished accumulating people moved into the shelter again. These lowermost Phase 3 assemblages suggest that the site continued to be occupied in an episodic fashion, but in a notably different manner to that prevailing at the end of Phase 4.

The earliest traces of this comes from a series of particularly well-preserved micro-stratified hearths, Context (109), built directly onto the compacted surface of the flood silts (111) (Figure 27). Closely related to this hearth sequence and extending along its southern edge was a localised silt layer (124) that included an extremely high-density lithic assemblage (D=1362.3) characterised by unusually large cores and flakes. The sheer size of Context (109), which measured over 1.5 m in length, the spatial continuity suggested by its micro-stratification, and a high density of bone and lithic finds all point towards an intensive period of human activity. Yet this assemblage also



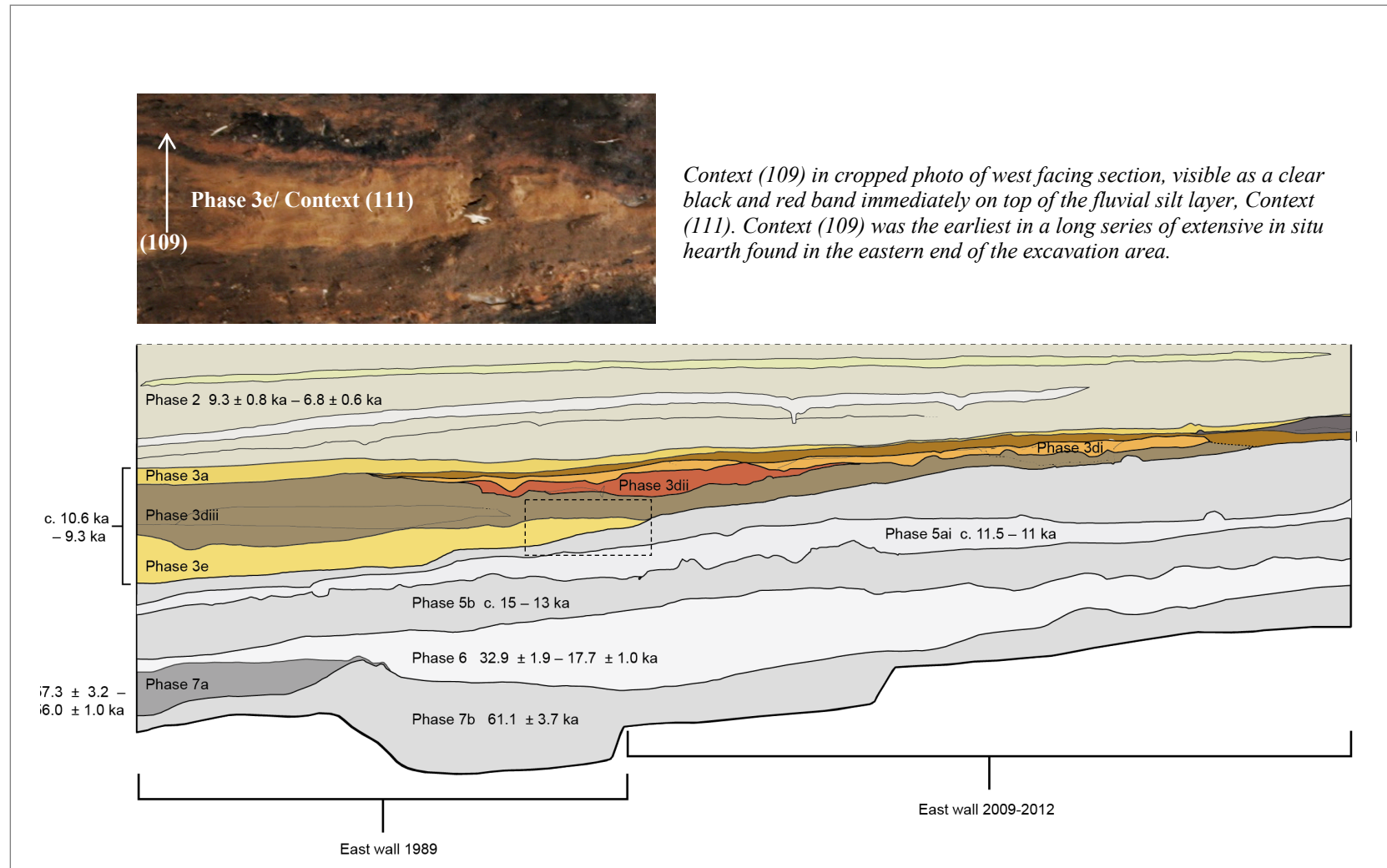


Figure 27. The west facing section at Ntloana Tsoana. Fluvial silts in Phase 3a and Phase 3a shown in yellow and location of insert in black rectangle. Insert: section photo close up of Context (111) and Context (109) on its surface. Insert width is 0.5 m.

features a cluster of large, still usable, cores and nodules in Context (124) seemingly abandoned alongside equally large and mostly unburnt bone fragments – both extremely rare features in any part of Ntloana Tšoana's sequence (Figure 28). Comparing this surface littered with objects to the two sets of carefully maintained hearths and pits from Phase 4a, strongly suggests that two contrasting modes of episodic habitation were in operation before and after the ~10.6 ka flood event.



Figure 28. Group of large lithic and bone artefacts on the surface of, and embedded within, Context (124) in Phase 3diii at Ntloana Tšoana. This is the immediate post-flood deposit and lowermost part of Phase 3 at Ntloana Tšoana. Excavation area on the right side of image from top to bottom measures 1 m.

It would be simple enough to link the spread of barely used large stone blocks to an interpretation of economic expediency during temporary low water occupations. Yet, to emphasise such simple cause and effect would be to miss the important story here – that the site remained important at this time *despite* dramatic environmental change. Indeed, preliminary geoarchaeological examination of the interface between (111) and (109) indicates that reoccupation of the shelter occurred almost immediately after the water receded (M. Morley, pers. comm.). Even the fine silt and clayey Context (124) is very likely to have originally been a fluvial silt. What we may be looking at here then is inhabitation of the shelter whilst the river silts that covered its floor were still soft and possibly even still wet.

Rather than seeing this transition from Phase 4a to Phase 3e–3dii as an economic shift across a curated versus expedient binary, which has frequently been employed as an explanatory device in early Holocene LSA archaeology (Section 3.6), we can, instead, begin to think of changing sets of relations between people and place. No doubt the flooding and then covering of the shelter floor with soft river silts – partially burying what was likely to be a surface alive with all manner of material memories – would have affected the manner in which local inhabitants perceived the shelter. Yet, importantly, it now seems that local hunter-gatherer groups may not have abandoned the landscape at all during high water levels and that they may have adjusted their habitation patterns to fit a less stable valley system. Most likely this involved occupying more elevated parts of the valley for longer periods and a rethinking of Ntloana Tšoana as a different kind of living space. Importantly, however there are also clues in the immediately subsequent sedimentary history that the shelter did not simply become a marginal stopover point of little significance to its residents, but rather that a long tradition of reusing large communal hearths may have begun at this time.

Rockshelter deposits are not always so easy to assign to a particular formation or transformation process, yet these more ambiguous assemblages are no less interesting, as evidenced by a series of similar and contemporaneous silt layers that immediately overlie those that were more obviously fluvial in character. These *transformed silts* found in the upper part of Phase 3diii include Contexts (107) and (102) in the eastern part of the excavation, as well as (089), (093) and (091) in the centre and west. Whilst these silts *may* be the result of later episodes of inundation or pooling of surface water from seepage at the rear of the shelter, they have also been substantially reworked by human activity. Generally speaking, these assemblages demonstrate a continuation of the patterns of occupation represented by (109) and (124) and, considered as a whole, find densities remained low throughout Phase 3diii, despite the large volumes of sediment removed (Figure 29 & 31). Flaked stone was only occasionally modified through retouch (Figure 29). End-scrapers are very rare and do not cluster in hearths, and a much wider variety of scraper forms are present, perhaps suggesting a less particular range of activities compared with later Sub-Phases (Table 4). Though raw material proportions fluctuate significantly between individual layers and across space (see below), proportions of quartzite, a coarser-grained material found

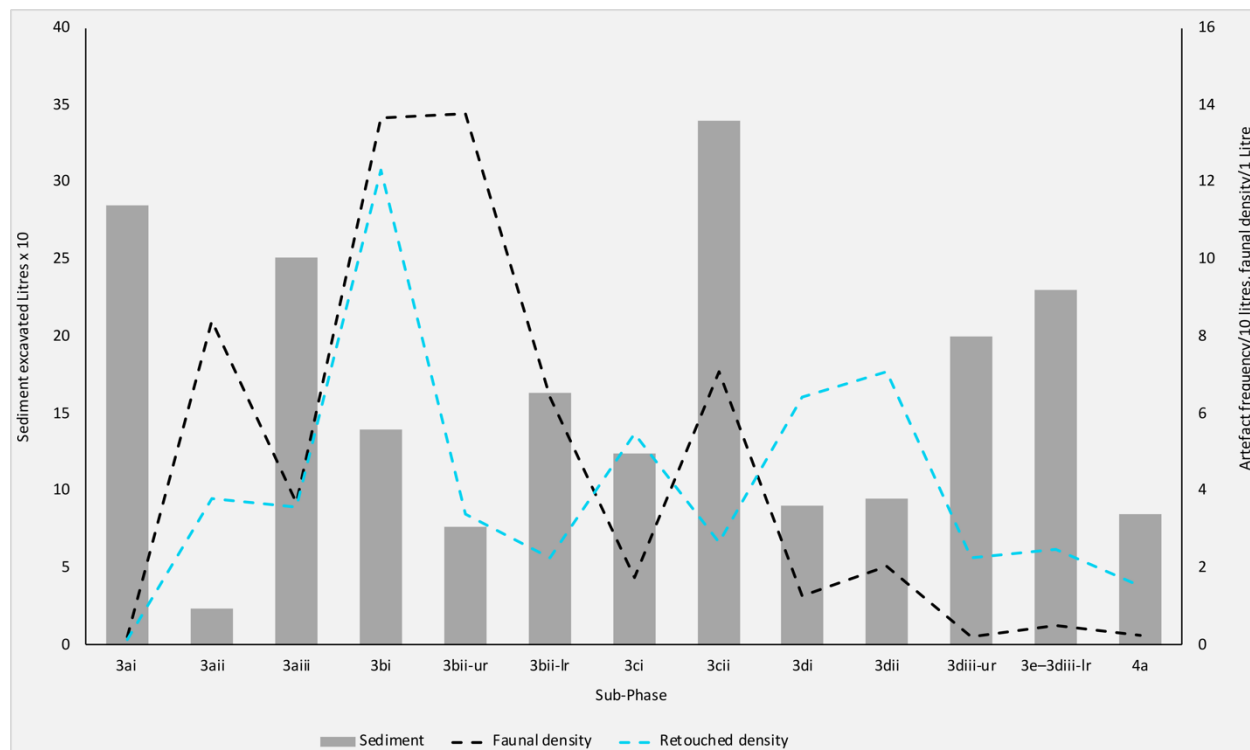


Figure 29. Volume excavated, faunal density and retouched density in Phase 4a–3a at Ntloana Tšoana.

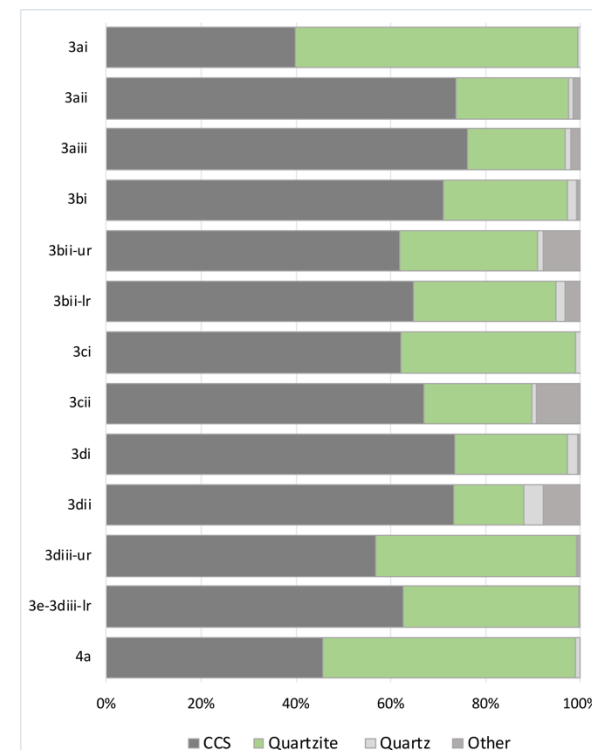
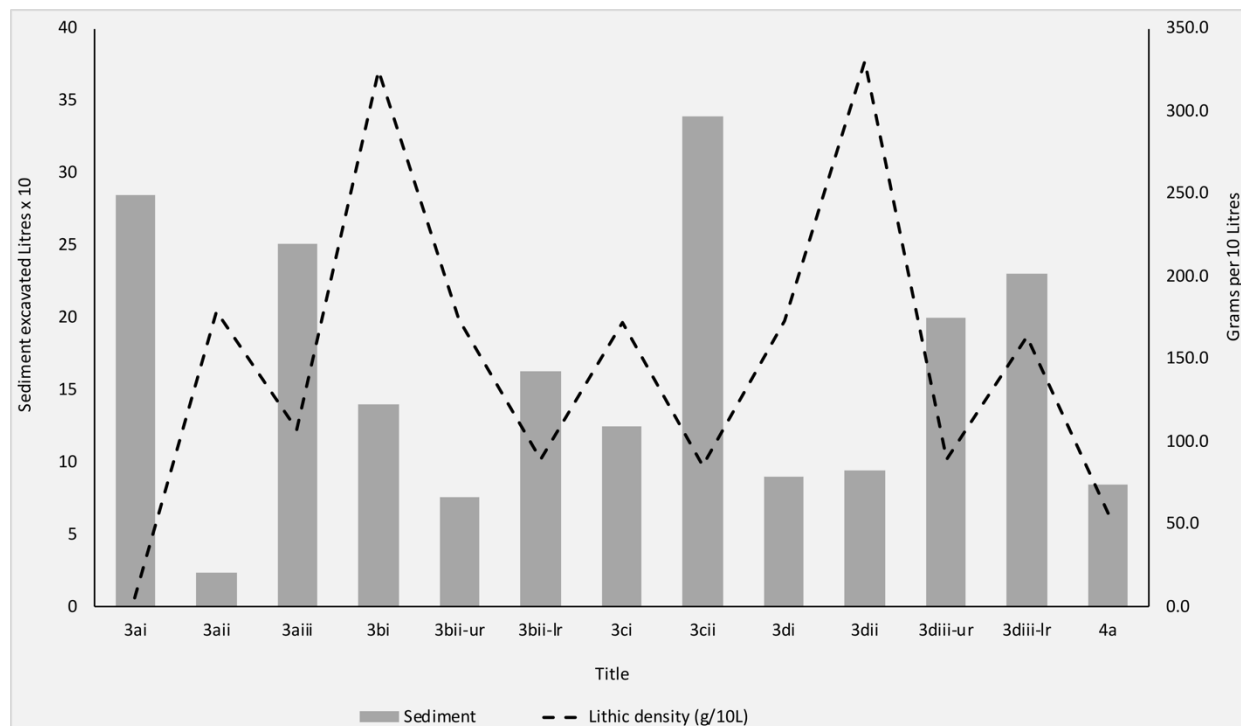


Figure 30. Proportions of lithic raw materials in Phase 4a–3a at Ntloana Tšoana.



*At a broad level the inverse relationship between sediment volume and lithic density shown here by gaps between the dashed line and the density bar in Phase 3diii, 3cii, 3bii-lr, 3aiii and 3ai represents periods of high sediment accumulation and lower intensity occupation.*

Figure 31. Volume excavated and lithic density in Phase 4a–3a at Ntloana Tšoana.



Figure 32. Lower Phase 3diii at Ntloana Tšoana showing *transformed silt* Context (107) and contemporaneous hearth (108). Scale is 1.4 m in 0.2 m increments.

in abundance within the immediate vicinity of Ntloana Tšoana,<sup>19</sup> remain high throughout, accounting for 36.9% and 42.4% of the lithic material employed in the lower and upper parts of Phase 3diii respectively (Figure 30).

Another extensive hearth deposit (108) (Figure 32), which accumulated directly on top of (109), was inter-stratified with the later silt deposit (107) yet matched the spatial extent of underlying (109) almost exactly, providing firm evidence of spatial continuity between these two episodes of hearth construction. Again, these large spreads of hearth material show no signs of being treated with the same kind of care and attention afforded to the Phase 4a features, encouraging a more prosaic interpretation of why these fireplaces were made one on top of the other. Perhaps this was simply the best location for a fire (it is roughly in the centre of the shelter), or perhaps the availability of partially combusted organic material from the previous fire encouraged further hearth construction. However, we must again be wary of explaining archaeological assemblages as either functional *or* socially meaningful. The simple fact that a large fireplace may have remained visible between visits may have been vital for maintaining a sense of place and time in what was presumably still a volatile riverine landscape. Throughout the build-up and transformation of all these silt layers we can imagine a rapidly changing, soft,

<sup>19</sup> Note that Cryptocrystalline silicate (CCS) sources, in the form of coarse-grained and fine-grained cherts as well as chalcedonies and agates, occur at a distance of only 1.25 km from Ntloana Tšoana. Crystal quartz can be found at a distance of 4.6 km.



muddy floor at this time, only compacting or drying out for short periods, a very different experience of being in this space compared to the end of Phase 4a, when the shelter was presumably comparatively dry and afforded the careful crafting of fire-places in small pits. In general, the upper Phase 3diii silts, Contexts (107), (102), (089), (093) and (091), may themselves represent a longer period of accumulation and multiple phases of transformation compared to the seemingly short time-span represented by deposition of the post-flood silts (124) and (109). Context (107), together with an almost identical layer, (102), which partially overlies the hearth (108), represents quite a thick build-up of silt in places, measuring over 100 mm in lower-lying parts.

However, despite the longer duration involved, within these transformed silts, and inside the roughly contemporaneous charcoal rich hearth, Context (108), there are still notable variations in raw material frequencies and lithic densities. In (102) for instance, lithic densities vary dramatically with some adjacent quadrats recording almost ten times the mass of lithics relative to each other ( $D=43.2-426.2$ ) and quartzite proportions ranging between 28.2 and 55.6% within the same stratigraphic spit and square. A number of clusters of large, well preserved and unburnt long bone fragments in (108) are suggestive of individual butchery events, an interpretation supported by the identification of ten percussion notched bones – the highest frequency in any part of the early Holocene sequence discussed here. Amongst the recognisable faunal remains, two small-medium sized antelope mandibles were recovered from two successive layers, Contexts (108) and (102), in adjacent squares indicating whole carcasses were likely brought into the shelter for butchery (G. Dewar, pers. comm.). The repetition of this pattern suggests a degree of continuity within this continuous phase of siltation, and perhaps importantly, in view of the earlier discussion of the careful treatment of animals remains, that they were processed in the same part of the shelter.

On the surface<sup>20</sup> and within the upper 25 mm of Context (107), an assemblage of enigmatic objects stands out as a depositional ‘event’ in the form of three perfectly round small sandstone balls found within a metre of each other. All have been intentionally ground into this shape and measure between 2.5 and 3.5 cm in diameter and, as far as I am aware, are unlike anything else previously recorded in the early Holocene of southern Africa.<sup>21</sup> How these

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<sup>20</sup> One of these balls was recovered from Context (094), though right at the contact with underlying Context (107) so factoring in a few millimetres of vertical displacement, it seems very likely that these were part of the same depositional event.

<sup>21</sup> Interestingly, Mitchell (1993) also noted the presence of numerous naturally polished round opaline pebbles in the early Holocene levels at Ha Makotoko, but these smaller items (generally <10 mm) showed no signs of being worked and were not found in one distinct cluster.

carefully made objects ended up lying on the surface of the shelter at this time, and how they relate to what appeared to be a period of shelter use with comparatively little investment of time or care, is likely to remain unknown. Exactly what they were is also beyond our reach at this stage. They appear too light to have served as bird-hunting slingshots, for which the heavier and ubiquitous rounded quartzite and basalt rocks of the area would have been well-suited. Their rarity, and restriction to a single horizon, does, however, suggest that they may have been the valued possessions of an individual resident, perhaps a set of toys belonging to a child. A rare group of 12 ochre fragments in (102) all within 1.5 m of each other, is again likely to relate to a specific depositional event or series of episodes and reminds us that Ntloana Tšoana's inhabitants were likely to have been engaged in much more than simply seeking shelter.

At a general level, however, the pattern of habitation that began after the flood event with Context (124), which involved a relative absence of attention given to the disposal of animal or stone materials, appears to have continued throughout these silt depositions. We have also seen how this generalisation fits rather well with the narrative of climatic instability, yet I have tried to resist the determinism that might link these two sedimentary observations in a cause and effect chain. Instead, I have attempted to build a more temporally complex account to allow a different set of interpretations concerning the inhabitants' changing relationship with the shelter. This includes, for example, the tempo of relations – how quickly did one thing follow another? The exposure and encounter of older residues – which features may be visible to a returning group? Finally, by introducing the experiential qualities of the sedimentary context – how, for example, did the shelter floor change during times of flooding or pooling following heavy rains and how might this effect the perception of place and, indeed, time?

Moreover, if this depositional sequence is followed a little further, we find that some seemingly 'unstructured' activities had effects on, and were affected by, later actions far beyond their initial deposition. A dominant theme emerges in what follows concerning this question of duration, and how by focussing on relations between our stratigraphic units in multiple directions rather than attempting to draw firm lines between them, we may approach a more realistic understanding of how rockshelters and their assemblages worked together with their human occupants.

#### 7.4. After the silt: continuity and change at the microscale (Phase 3dii)

Although only partially captured in the excavation area, a bright red and black hearth, Context (090), placed in a depression on the top of silt layer (102), marks the end of Phase 3diii and the



beginning of Phase 3dii. It does not, however, provide a neat switch from one phase of activity to another, but instead demonstrates well the principle I have been developing/just developed of *durational history*. On the one hand, this hearth fits well within the range of actions already described for Phase 3diii, its finds characterised by large well-preserved fragments of bone, evidence for primary lithic reduction, a relatively high proportion of locally available quartzite, and few retouched flakes or end-scrapers. Other aspects of this assemblage, such as the neat black charcoal perimeter enclosing a bright red fired-earth centre, however, accord more strongly with overlying phases of hearth construction, we have yet to explore. Moreover, its sedimentary matrix contained a greater concentration of ash, and none of the fine, compact silt of underlying layers, all of which suggests that a change in formation processes may have occurred at this time. Applying conventional archaeological reasoning, these contradictory observations leave us with the choice of calling the artefactual assemblage ‘residual’ (Harris 1989; Barker 2002), and thus originating from the underlying silts, or ‘transitional’, and thus a genuinely late expression of the distinctive, Phase 3diii-way-of-doing-things that I explored in the previous section.

The alternative proposed here would be not to worry about which of these it is, but to emphasise the *durational* qualities of these material traces instead. It is entirely reasonable to expect that material remains played an active role after discard, and not in some incidental manner that the term ‘residual’ implies, as if they were not meant to be there. I would even suggest that knapping floors would have been sometimes intentionally left (cf. Warren 2006), or at the very least, not cleared away, especially if their authors had an idea that they may be returning (Section 9.11). Thinking about mobile peoples’ use of ‘persistent places’ (Barton *et al.* 1995) in this way, helps us to understand the way that skilled practice – such as particular ways in which certain types of stone could be flaked – was enabled by mobile peoples through repeated interactions between material residues of past actions and the people who encounter them, themselves full of memory *and* anticipatory ideas. Not only would any useable lithics, bone, and other organic materials on the surface of the underlying silts have been attractive to the makers of hearth (090) in a functional sense, but techniques, the movements and successes of previous hunts, and the places in which certain materials, people, and animals resided would also have been readable and capable of being triggered in their own memory. This reclaiming of terms such as ‘residual’ and the broader move to begin to see these durational qualities of archaeological contexts as a positive attribute, is an important topic to which I return towards the end of this chapter.

The next wave of hearth building on the surface of Context (102), beginning with Contexts (094) and (092) (Figures 17 & 33), and continuing with (088) and (086), makes an even greater claim to originality, with more extensive spreads of alternating red and black hearth deposits, dramatic spikes in lithic density, and a notably different suite of lithic artefacts to anything that has come before (Table 4). Yet, even this marked break in depositional history references the earlier succession of hearths (109) and (108) in terms of its location. The fact that these underlying hearths would have been completely concealed by the subsequent build-up of the fine silts (102) prior to the construction of hearths (094–086) makes this observation



Figure 33. Black and red hearth layers (092) and (088), the two middle contexts in Phase 3dii at Ntloana Tšoana. This hearth feature extended for over two metres in the east of the excavation area. Scale is 1m.

all the more interesting. This continuity is, in my view, significant because, and not despite, the fact that there was also a whole range of different things happening at this time. Indeed, the thick sequence of hearths is different to anything that came before, both in terms of its own internal durational qualities and of its assemblage make-up. Though the intensity of fire-making activities may have obscured traces of intervening silt accumulation related to episodes

Context	Lithic density (g/10L)	End-scraper frequency	End-scraper density (per 10L)	Retouched frequency	Retouched density (per 10L)
086	440.9	4	4.4	13	14.4
088	398.0	23	4.6	39	7.8
092	684.3	1	3.3	3	10.0
094	163.5	7	2.1	12	3.6
<b>Totals</b>	<b>329.7</b>	<b>35</b>	<b>3.7</b>	<b>67</b>	<b>7.1</b>

Table 5. Lithic density, end-scraper and total retouched frequencies and densities in the sequence of four hearth deposits that make up Phase 3dii at Ntloana Tšoana

of hearth abandonment, the close spatial relationship between each part of the (094–086) sequence strongly suggests more continuous occupation when compared to the low density post flood silt layers in Phase 3diii or the succession of hearths and silt in the pre-flood Phase 4a. The consistently high densities of finds (Table 5), the thicker, more uniform successive hearth deposits in one location, and the even larger spreads of hearth material (>2 m long) all add to this picture that something new was happening at the time these hearths were constructed. Lithic and bone assemblages within this sequence were also markedly different compared to those recorded in earlier parts of the sequence. The proportion of different types of stone in these high-density lithic assemblages changed at this time, now being dominated almost entirely by CCS (Figure 30). Large quartzite cores and flakes were also rare in these hearth deposits and faunal assemblages were extremely fragmented compared to the clusters of large and moderately sized bone found in the underlying Sub-Phases. Perhaps the most important feature of the (094–086) assemblages that tells us something new was happening at this time, however, is the appearance of very high concentrations of a particular type of end-scraper, a characteristic that I will describe in more detail below.

#### 7.5. The temporal dimension

It certainly appears that Ntloana Tšoana was becoming less of a temporary location during Phase 3dii and we can also suggest that it was likely to have taken on new values associated with this change. Yet, as we have seen, there are also important continuities with the past. Questions of duration are again crucial for adding more depth to this account. Could, for instance, the absence of silt deposition in the (094–086) sequence, a characteristic found in all other parts of Phase 4 and Phase 3, together with the presence of ash, reflect a single concentrated season of occupation spanning a number of months? A notably high proportion (7.21%, N=26) of weathered bone in Context (088), indicates that these sediments were exposed to sunlight for long periods of time, and more so, in fact, than any other faunal assemblage in the entirety of Phase 3. This is important as it is not what might be expected from a part of the sequence with excellent spatial integrity, an attribute often directly associated with short time-scales. This, in turn, suggests that spatial structure may have been purposefully maintained for long periods of time. Again, a closer look at the patterning within this sequence of hearths can help us to explore this further.

As the spikes in total lithic (Figure 31) and end-scraper densities (Figure 34) make clear, these Phase 3dii hearths are quite remarkable layers by any standards. Of course, high

densities of finds could simply reflect the use of a fireplace as a refuse location, and if they were large communally used features in operation continuously for long-periods of time then one would expect nothing less. The concentration of 23 Woodlot end-scrapers in just one Context (088) (Table 5), however, tells us that there is much more going on here than casual discard.

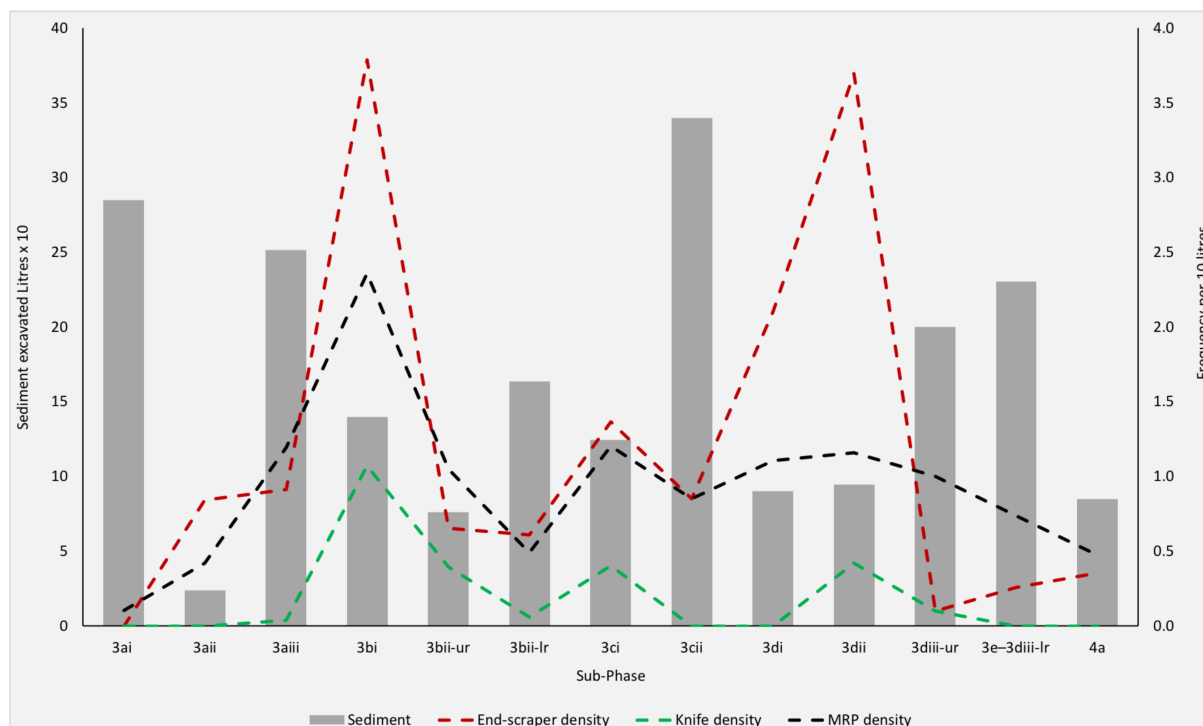


Figure 34. Volume excavated and selected tool class densities in Phase 4a–3a at Ntloana Tšoana.



Figure 35. A Woodlot Scraper from early Holocene levels at Ntloana Tšoana made from an opaque banded chert, part of the broad CCS raw material category. The photograph is of the dorsal surface with proximal end at the bottom. Scale is 5cm.

Once again, as we saw with the ochre lumps and enigmatic round balls, it is clear that to attempt to designate stratigraphic units as longer-term overprinted palimpsests of action *or* high-integrity snapshots in time is to miss the connection between these scales. Indeed, as I endeavour to show below, it is precisely by occupying the mid-scale that we can draw out the much more interesting story of how specific practices and places were endowed with the qualities of bundling time – gathering together event and process – and think about how even larger regional happenings may have endured over even longer time-frames.

#### 7.6. Scrapers and hearths as bundles of time

These small, end-scrapers, typically between 2 and 4 cm in length (Figures 35 & 49, Chapter 9) and known in the Maloti-Drakensberg region as Woodlot scrapers, are the most recognisable feature of the later Oakhurst technocomplex in this part of southern Africa (Mitchell & Arthur 2014). One of the most interesting aspects of this phenomenon is its rapid and widespread appearance at around 10,800 cal. BP–10,400 cal. BP. Woodlot scrapers appear to be part of a sub-continental shift at this time to standardised small scraper forms across the southern African interior and southward into the Fynbos and Forest Biomes, where similar tools have long been recognised and described as ‘Duckbill scrapers’, referring to a plan form created by a steeply retouched convex distal end and intensively retouched and tapered lateral margins (Goodwin & Van Riet Lowe 1929; J. Deacon 1984). This stone-tool-making tradition endured as the most prominent retouched form for some two and a half millennia in the Maloti-Drakensberg region as a whole, continuing alongside the introduction of backed segments after 8000 cal. BP. Both the rapid and widespread uptake and long-term prominence of this particular form of scraper make its very distinctive depositional patterns at Ntloana Tsoana even more intriguing.

Woodlot scrapers have been interpreted as hafted hide-working scrapers (Opperman 1997: 65–70; Mitchell 1993: 50, 2000: 157) as well as more generalised tools (Bousman 2005: 205), but little microscopic analysis of tool edges has been conducted. However, a preliminary phase of microwear study recently conducted by Leiden University on 38 scrapers from the current assemblage with traces of wear found that almost half (44.7%, N=17) included patterns diagnostic of hide working (Langejans 2016). Only two registered any trace of plant materials, strongly indicating that these tools were unlikely to have also functioned as wood-working adzes. Many of the other wear traces were a result of working minerals, something that could

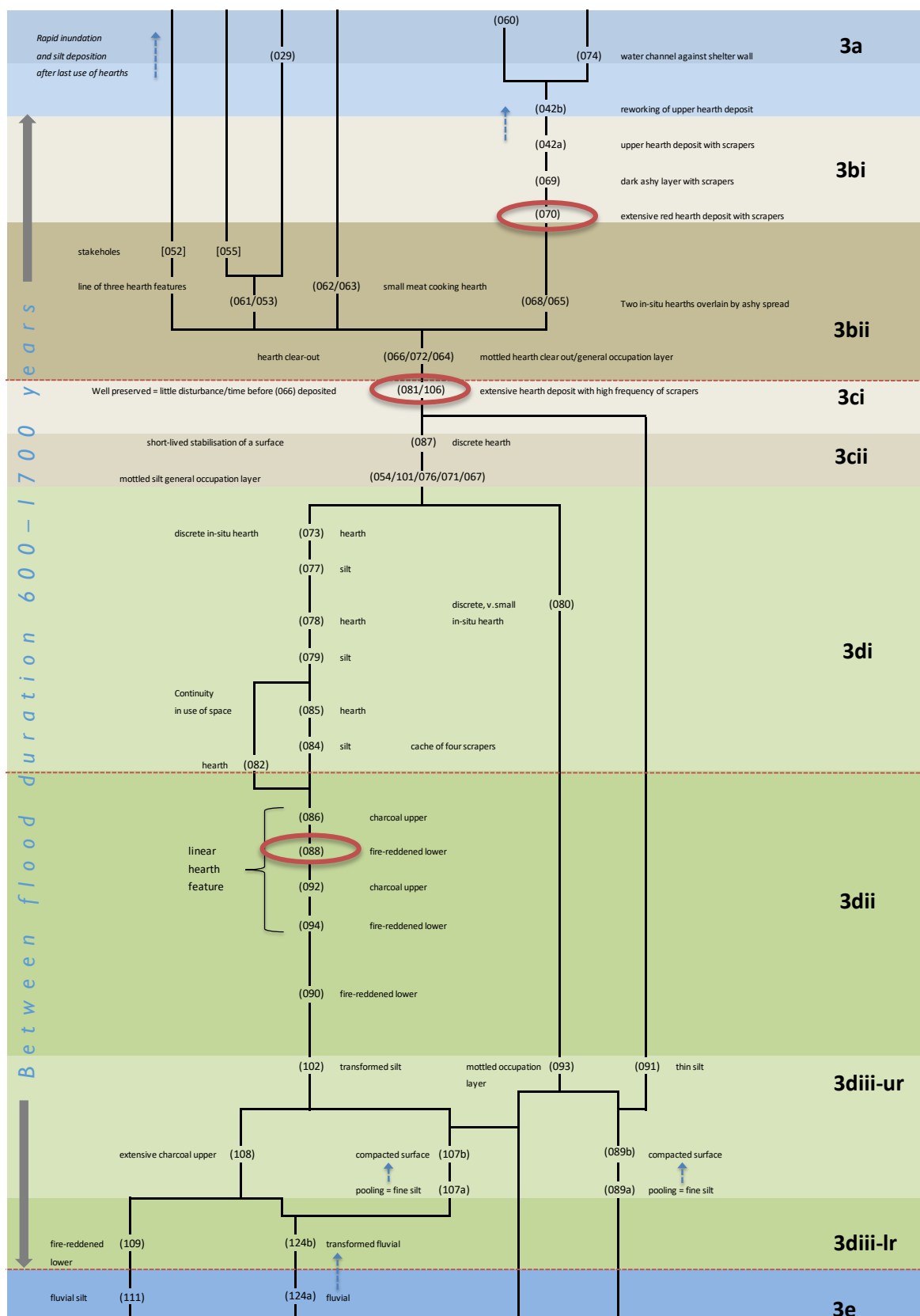


Figure 36. Sequence diagram of Phase 3 at Ntloana Tšoana with scraper concentrations circled.

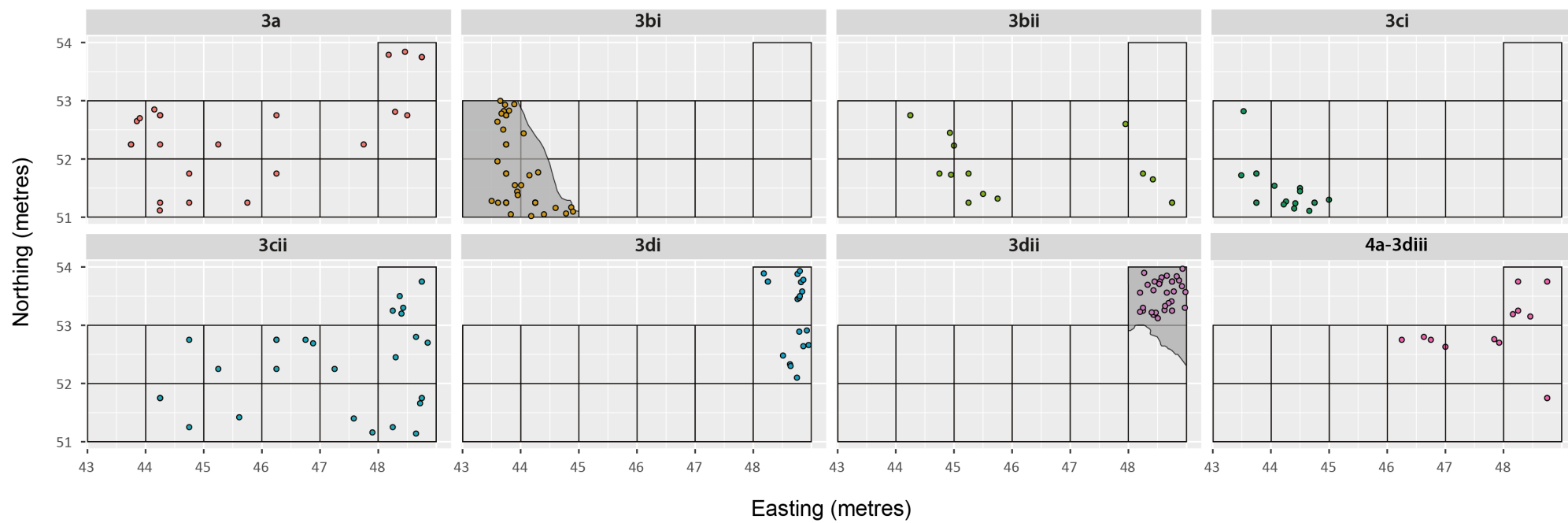


Figure 37. Horizontal distribution of end-scrapers at Ntloana Tšoana. Shaded areas show the large hearth features that make up Phases 3dii and 3bi.

be associated with hide-working, and “*in four cases traces of hide scraping with a mineral, possibly ochre, addition was visible.*” The report’s conclusion that “*the majority of the tools were hafted and used for hide scraping activities*” (Langejans 2016: 1) correlates well with the clustered spatial and chronological patterning reported here.

Remarkably, at Ntloana Tšoana, more than half (55.6%) of the Woodlot scrapers were recovered from the three hearth features that make up Phase 3dii, 3ci and 3bi, and one-third (33.7%, N=69) from just three spatially restricted Contexts within these features: (088), (081) and (070) (highlighted by red circles in Figure 36). Even within these single layers this particular type of scraper tends to cluster horizontally (Figure 37). In (088) and (070), 14 and 11 Woodlot scrapers, respectively, were retrieved from within just 50 cm of each other. In (081), ten were concentrated along one half of a single metre square. Closer scrutiny of the three hearth features indicates that they are also similar in other ways and, though widely distributed in time, suggests a remarkable continuity in practice. All are part of exceptionally large hearths – the only three combustion features that exceed 1.6 m<sup>2</sup> in area. Woodlot end-scrapers are not the only tool class to cluster in these features. The three highest concentrations of laterally retouched, low angled (<45°) blades, known in LSA studies as ‘knives’ (Deacon 1984) were even more concentrated within the three large hearths, with some 77.4% (N=24) of all such tools found in these features that make up Phase 3dii, Phase 3ci, and Phase 3bi (Table 4). The most striking concentration is a group of ten knives found within Context (070).

Importantly, the hearths-with-scrapers shift in location – from the far north-eastern end of the site in Phase 3dii to the far western end, up against the shelter wall with the latest of the three features in Phase 3bi (Section 8.7) – demonstrating that this repetition over time reflects more than a mere functional preference for making large fires in the centre of the shelter. Similarities between the earliest and latest of these two features, represented by (094–086) in Phase 3dii and (070–042) in Phase 3bi, are particularly striking. Though not fully exposed by the excavation, both extend for over two metres. Both also feature unusually sharp sedimentary boundaries with surrounding deposits, possibly indicative of the use of an aboveground structure for holding up and stretching out the hide or for serving as a windbreak, that might have also prevented the hearth sediments from spreading and interlensing with the surrounding deposits and may also have been responsible for the scrapers accumulating in clusters. The exact



nature of the relationship between these hearths and the scrapers, and indeed important differences between the Sub-Phases in which they occur, is tackled in detail below (Section 9.10). For now, the important points are twofold. First, the stratigraphic evidence presented above strongly suggests that rather than representing casual discard around a hearth, the end-scrapers were an integral component of these large combustion features and therefore that a specific set of hide-working activities is likely to have been responsible for these sedimentary and artefactual assemblages. Second, that this repetition of relatively specialised hide-work was occurring in the same rockshelter for at least 600 years.

Not only is the long time-frame remarkable considering the striking repetition of events, when we look at what happens between these events we see variable patterns of habitation, including a number of periods of episodic low-density occupation, absences of occupation, and instances of substantial silt deposition burying the earlier examples of these features (Figure 41). All of this makes the continuation of this particular set of practices even more interesting. We can now say with some confidence that over the 600–1700-year long period covered here, Ntloana Tšoana became associated with a specific set of practices involving hide-making. Thinking about what processes may have been involved – how the repeated performance of relatively large-scale craft operations in one place for a number of years endowed this shelter with certain qualities that outlived both its own material traces and its human participants – is a line of enquiry which forms the basis of much of the discussion below.

### 7.7. Reconciling duration and event

In the first part of Ntloana Tšoana's sedimentary history presented above I have emphasised hearth sequences. Yet taking these features in isolation would be misleading. Indeed, their distinctiveness and potential significance can only be understood in relation to the deposits on, and in, which they were formed. The earliest of the three major hearths-with-scrapers just discussed, (094–086), illustrates this nicely and also highlights the limitations of relying solely on linear sequencing of archaeological deposits, which, in turn, brings us directly to the issue of duration. Placed within a conventional Harris Matrix sequence, this deep hearth feature finds itself isolated as an alternating series of black and red hearth layers with strong evidence of continuity between the different series of episodes, yet this representation does not

consider that the rest of the shelter – including many of the underlying layers – would have been exposed during this sequence’s formation.

The more extensive silt layers, such as (089) and (102), demonstrate the importance of paying attention to duration, as both appear to have gone through multiple transformations, beginning as slackwater silts, then experiencing significant anthropogenic reworking, most likely through trampling, and finally, episodes of firing through major hearth activity long after these deposits had finished accumulating. I touched on the durational qualities of these deposits earlier and labelled them ‘transformed silts.’ They are represented in Figure 38 by showing each context twice and with arrows indicating this process. The larger blue arrow represents this third stage in their formation, when these silts were oxidised and hardened through fire on their surfaces, but this time the effects travel in the reverse direction. The artefact assemblages also represent this non-linear quality and can be just as much a product of later activity as of those processes involved in their original deposition. Context (089), for instance, was found to have a number of Woodlot scrapers on its surface, but its direct physical connection with hearths containing high numbers of these from much later levels suggests that it was still in use as a surface at that time.

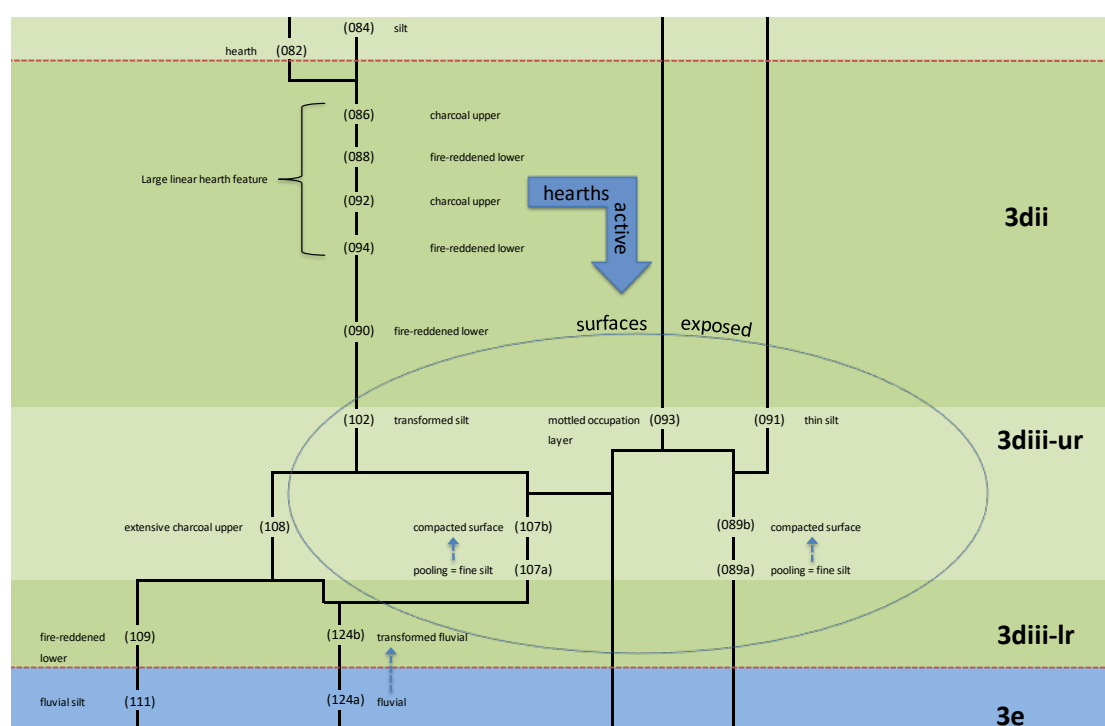


Figure 38. Sequence diagram highlighting non-linear processes in Phase 3 deposits at Ntloana Tsoana.

Of course, and bringing us back to the original aim of this chapter, to untangle all this requires interpretation. Unfortunately, instead of interpretation this kind of multi-temporality is exactly what is normally viewed as a problem (e.g. Henry 2012), and one that encouraged the previous generation of LSA researchers to engage in objectifying processes such as lumping stratigraphic units together in larger ‘layers’ and defining these sorts of deposits as ‘time-averaged.’ In this thesis I am making the case for working with, rather than against, palimpsests like this sequence at Ntloana Tšoana by appreciating their non-linear temporalities as a productive space for archaeological interpretation.

## **Chapter 8.**

### **Sedimentary histories. Part 2**

#### **8.1. Introduction**

This chapter continues the trajectory through the upper part of the Phase 3 stratigraphy. I explore the complex interplay between sequential and non-linear processes in a number of different contexts. The duration of past-residues remains a central theme alongside issues of contemporaneity and interstratification. The two high-density hearths-with-scrapers close to the top of the sequence are also explored further, and a strong case is made for a more direct connection between them in the form of pit digging and possible salvage of tools from the underlying feature. I also describe what appears to be a short-lived example of a hide-working station, reminding us of the need to pay as much attention to ephemeral traces and smaller groupings of finds. The chapter closes with the river entering the shelter once more and depositing thick layers of fine silt across the entire site, yet remarkably between these fluvial sediments it is possible to trace clear evidence that Ntloana Tsoana's residents did not abandon the area, at least for the initial period of flooding, and seized the first opportunity to remake home and shelter as soon as the water receded.

#### **8.2. Continuous fragmentation: Phase 3di**

Returning back to the top of the prominent hearth-with-scrapers sequences, Contexts (094–086), we find that hearth building continued in roughly the same location – the eastern end of the excavation area – but with a notably different character in the form of four discrete, well-preserved small hearths, Contexts (082), (085), (078), and (073). Finds frequencies are moderate to high, with the two upper hearth features, (078) and (073), recording relatively high lithic densities of D=262 and D=298, respectively. A large core recovered from the centre of (078) and a dense cluster of stone working debris in the central rubified part of (073) (Figure 39) suggest that knapping and the disposal of its products were important activities. Bone also clusters on the edge of these features just outside the rubified upper central portions within (078) and (073) (Figure 39). A significant proportion of the larger sized pieces of bone in these two clusters showed no evidence of burning, suggesting that they were associated to

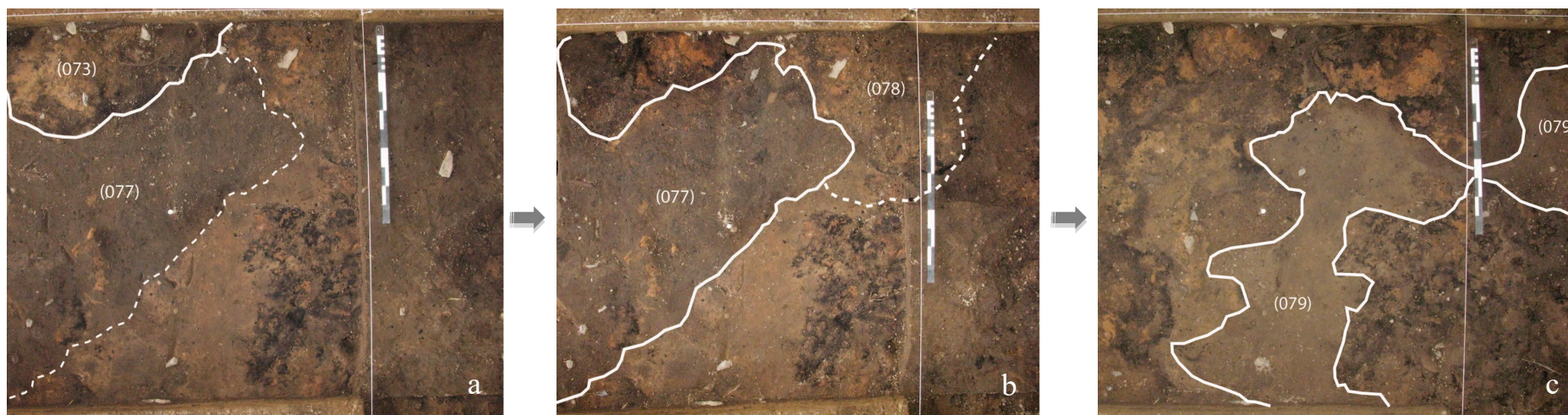


Figure 39 (a–c). Successive plan photographs of the upper part of Phase 3di at Ntloana Tsoana. Photographs show square 48,53 in the north-east of the excavation area, beginning with (073) on top of silt layer (077), which in turn overlay hearth (078), and finally ‘clean’ silt layer (079). Scale is 0.5 m in each photograph. Image (d) below shows close-up of hearth (073). Photographs are aligned with site north on the left side of each frame.



*Note the rubified central upper portion but with charcoal rich lenses underneath and around the exterior. This is indicative of rapid re-use of the same fireplace – the charcoal-rich material being the remains of a previous combustion episode that has subsequently been re-fired to form the rubified centre. The fact that lenses of charcoal survived around the edges and bottom of the feature suggests that the latest use of the hearth followed this initial phase in relatively quick succession. In contrast, the oxidised upper and central part presumably also once included a charcoal- and ash-rich deposit that was later lost through exposure to the elements.*

disposal or *in situ* butchery after the heat from the fire had cooled down.

In contrast to the (094–086) sequence, all four of these hearths were separated by distinct episodes of silt deposition. The silts themselves, Contexts (084), (079) and (077), were all thin (<30 mm), relatively homogenous layers, and in the case of Contexts (084) and (079), virtually devoid of stone inclusions (Figure 39c). These characteristics strongly suggest that natural siltation was largely responsible for at least their initial formation. In contrast to earlier extensive silt layers and those that follow in Phase 3cii, these sedimentary units were discontinuous and localised in extent, indicative perhaps of shorter phases of deposition.

The fact that large hearths no longer featured in Phase 3di could simply reflect their relocation to another part of the shelter. The rarity of anthropogenic inclusions in both (084) and (079), however, strongly suggests that the silts do reflect a genuine absence of human presence during these between-hearth episodes. The survival of unusual intra-context patterning noted above in hearths (078) and (073) also suggests minimal disturbance following their last phase of use, an observation that in turn implies episodic rather than continuous occupation. As described earlier in this chapter for other Phase boundaries, change is also accompanied by notable continuity with what came before.

Context/ Phase	Type	Lithic density (g/10L)	End- scraper frequency	End- scraper density (per 10L)	Retouched frequency	Retouched density (per 10L)
073	Hearth	289.8	4	4.4	9	10.0
077	Silt	143.9	4	3.1	8	6.2
078	Hearth	247.8	3	3.3	8	8.9
079	Silt	172.9	1	1.0	4	4.0
085	Hearth	83.7	1	3.3	1	3.3
084	Silt	138.5	4	1.3	16	5.3
080	Hearth	174	0	0.0	0	0.0
082	Hearth	161.0	2	1.3	12	7.5
<b>Phase 3di</b>		<b>171.4</b>	<b>19</b>	<b>2.1</b>	<b>58</b>	<b>6.4</b>

Table 6. Lithic density, end-scraper and total retouched in the sequence of eight hearth and silt deposits that make up Phase 3di at Ntloana Tšoana

In this case it takes the form of the same part of the shelter being used despite the shift to what appears to be episodic habitation. We also see the continuation of end-scraper deposition within Phase 3di (Table 6), although it is generally at a lower density to that found in underlying Phase 3dii, with the exception of Context (073), which contained

a very high frequency of four Woodlot scrapers from under 9 litres of sediment ( $D=4.4$ ). The lack of any silt build-up between Phase 3dii and Phase 3di indicates that there was little chronological distance between these two Sub-Phases – the hearth feature (082) being built directly onto the surface of the upper large charcoal spread (086). Neither does there appear to have been a significant time lapse before the first silt accumulation, Context (084), began to form, judging by the good preservation of charcoal rich silts beneath it.

Interestingly, close attention to some of these thin spreads of silt reveals a very similar clustered distribution of finds to that already described for the Phase 3diii silt Contexts (107) and (102) (Section 7.3). In (084) lithic densities diverge by more than 400% ( $D=48.7-407.2$ ) between quadrants in adjacent squares. The nature of (084)'s concentrated artefact distributions is, in a similar vein to that described in Phase 3diii, also suggestive of specific depositional episodes. In this case, we have four Woodlot scrapers found very close together, none of which appear to have reached the end of their potential use-life, and two of which are exceptionally long. Alongside them were two rare hammerstones and a number of other retouched pieces, all of which may be indicative of intentional storage in anticipation of a return visit.

All of this contributes to an increasingly complex picture and it should now be clear that separating any of this Phase 4a–3a sequence into pulses of distinct activity is, in any case, laden with difficulties, as is labelling them 'structured' or 'unstructured' or delineating them based solely on artefact type or spatial patterning. Neither is it easy to separate phases of communal aggregations from more episodic occupation, for as we have just seen one can follow the other in quick succession and many of the activities practised continued across these boundaries. Strong patterns *are* present within the sequence, but the clearest one of all is the fact that any combination of traits appears to be just as likely to appear alongside any other. Unsettling as this may be for conventional structuralist or functionalist thinking, which seeks to attribute a particular 'aggregation' or 'dispersal' label to a site or layer, what emerges is something closer to the way in which rockshelters likely functioned in the lives of highly mobile people. The lack of a clear boundary between the large thick hearth layers of Phase 3dii and the punctuated hearth-silt-hearth sequence of Phase 3di are, for example, more likely to be an accurate reflection of the fluid manner (cf. Guenther 1999) in which hunter-gatherers and their material assemblages would come together and disperse again, slipping seamlessly between larger and smaller groups.



### 8.3. Return of the silt: Phase 3cii

Directly above the (082–073) sequence, a more extensive clay-rich silt layer (054) contains two thin hearth features interstratified in its surface. This was a much more substantial deposit than those described thus far, being found across almost the entire excavation area (Figure 40) and providing the largest excavated volume of any single Context at the site, consisting of 323.5 litres of sediment. Recalling the low find densities of some of the ‘transformed silts’ from Phase 3diii that were either directly associated with major flood events or immediate post-inundation occupation, lithic frequencies dropped off at this time (Table 7), recording an overall D ratio of 84.0, but dipping to <30 in a number of squares.



Figure 40. Looking west across the excavation area at Ntloana Tšoana during the excavation of extensive silt layer (054), the sedimentary body that makes up almost the entirety of Phase 3cii. Underlying deposits are exposed in the three part-excavated squares where (054) has already been removed, including the uppermost Phase 3di hearth (073) in the half-sectioned square in the bottom right hand corner. Scale is 1 m.

As was the case for these earlier silts, the exact formation processes at work are difficult to ascertain. Geoarchaeological analysis in the east of the excavation area also



described this continuous layer as primarily the result of natural siltation (M. Morley, pers. comm.) and a relatively high density of fish vertebrae in the eastern edge of the site, a faunal signature otherwise only found in the unambiguously fluvial silts of Phase 3a (G. Dewar, pers. comm.), does suggest that these may also be highly transformed sediments of originally fluvial origin. The same analysis, however, also recorded a high proportion of fine charcoal powder in its matrix, suggesting that hearths and hearth-related features were present during its formation, though perhaps eroded from former – rather than contemporaneous – hearth features. The picture thus emerging is one of ongoing erosion, natural siltation, and human activity as a simultaneous process.

A reasonably high count of retouched artefacts also strongly suggests that this silt layer does not represent even a partial hiatus in the site's occupation. In total, some 88 retouched tools were recovered from Context (054), including 29 Woodlot end-scrapers (Tables 4 & 7). Relative to sediment removed, however, tool densities remain low at this time (Table 7, Figures 29 & 30). Interestingly, faunal densities increase during the accumulation of Context (054), and in Phase 3cii generally, and are even higher than preceding and succeeding major hearth Phases (Figure 29). As I explore in more detail in Chapter 9, the Phase 3cii end-scrapers assemblage is also notably distinct from all the others and shows a strong tendency for the use of salvaged broken edged blanks. Considered together, the large uniform deposition of silt, the small numbers of lithic artefacts, high faunal frequencies and, the unusual end-scrapers assemblage all suggest a markedly different habitation signature to that described previously.

Two small hearth deposits in the upper part of Phase 3cii, (076) and (101), were also notably different to anything that had come before in the Ntloana Tsoana sequence as they were found to be interstratified *within* the silt matrix of (054). Both, however, included lithic components that reflect very short depositional events. Context (076), a black silty deposit measuring only 42 cm across and less than 3 mm thick, yielded an exceptionally high lithic density (D=492.0, Table 7) and, in particular, a very high frequency of <10 mm CCS flakes (N=102), alongside nine heat-spalled flakes from the same piece of stone. The lack of any vertical structure and a slightly patchy distribution suggests (076) originated from hearth clearance rather than *in situ* burning. The integrity of the lithic assemblage, however, shows us that this hearth material was rapidly moved as one unit shortly after the burning event and provides a clear example of domestic maintenance, including food and knapping debris, at this time. Context (101), on the other hand, was unambiguously *in situ* and consisted of a clear bright

orange substrate as well as a black carbonised upper portion. It too included a markedly different lithic assemblage to the surrounding and underlying silt (054), amongst which were four bipolar cores.

The important methodological point here is that although we cannot identify the surface on top of which these hearth features were created, we must be careful not to write them off as unstratified. The seemingly contradictory situation of finding interlensing sediments yet discrete finds patterning can, in this case, be seen as an accurate reflection of the manner in which these hearths were constructed and of the nature of shelter habitation at the time, i.e. people were present and active at the same time that the silt was building up, at least towards the end of its formation. The fact that the upper part of the silt is inter-stratified with charcoal-rich hearth deposits that contained discrete components also indicates that all this happened at a fairly rapid tempo with little time for stabilisation and erosion.

Context	Phase/ Sub- Phase	Type	Lithic density (g/10L)	End- scraper frequency	End- scraper density (per 10L)	Retouched frequency	Retouched density (per 10L)
053	3bii	Hearth	212.1	4	1.5	11	4.2
061	3bii	Hearth	70.6	0	0.0	1	1.1
062	3bii	Hearth	675.0	0	0.0	5	25.0
068	3bii	Hearth	150.6	1	0.3	9	2.4
064	3bii	Silt	89.3	10	0.6	37	2.3
081	3ci	Hearth/silt	171.3	17	1.4	68	5.4
087	3cii	Hearth	69.2	0	0.0	0	0.0
101	3cii	Hearth	127.5	0	0	3	2.7
076	3cii	Hearth	492.0	0	0	0	0
054	3cii	Silt	84.0	28	0.9	88	2.7
<b>3cii–3bii</b>			<b>110.7</b>	<b>60</b>	<b>0.9</b>	<b>219</b>	<b>3.2</b>

Table 7. Lithic density, end-scraper and total retouched in Phase 3cii, 3ci and 3bii at Ntloana Tšoana

As we shall see shortly, this more complex stratigraphic relationship – or lack thereof – between hearths and silt accumulations dominates the remainder of Ntloana Tšoana's stratigraphic sequence. Obviously, accepting a more imbricated process of sedimentation also raises further questions about the unilinear presentation of artefactual and faunal data. On the other hand, as we have just seen, a rapidly forming silt-rich environment can provide ideal conditions for the preservation of discrete artefactual assemblages.

#### 8.4. A stabilising surface: Context (087)

Eventually, the aggradational, erosional and human-initiated forces that led to the accumulation of (054) slightly reconfigured themselves to afford sufficient stabilisation of a temporary surface and the construction of a deeply fired circular hearth (Figure 41). Its regular shape, complete lack of larger bone, and near absence of lithic finds (D=69.2), together with the occurrence of a concentration of tiny burnt bone fragments in its centre, are all reminiscent of that much earlier sequence of hearths from Phase 4a (Section 7.2) and suggest that a greater degree of care was invested in its construction and maintenance than in all the intervening Phase 3 hearths.



Figure 41. A mid-excavation photograph of hearth (087) in the upper part of the Phase 3cii deposits at Ntloana Tšoana. Context (087) sits directly on top of the extensive silt layer (054). Scale is 0.5 m.

The highly burnt remains of a series of sandstone blocks amongst the charcoal and ash in its centre is a unique feature of this hearth and suggests a greater concern with the spatial control of heat. Indeed, the sheer depth of its scorched earth substrate is another unusual feature of (087), which continued down well below the level from which the hearth was constructed, known to us from the ashy sediment on its surface. Unlike other fired-earth sediments of a similar depth within earlier Phase 3 hearths (e.g. (109) and (088)), this deep area of brightly coloured sediment contained no trace of the thin lenses that are indicative of a build-up of micro-stratified hearth material re-fired *in situ*. All this suggests that Context (087) appears to have been caused by a single very

high temperature fire or a short series thereof. The burnt stone slabs in its centre, the absence of scrapers – so common in most other Phase 3 hearths of this size – and the presence of frequent charred bone strongly suggests that (087) was built specifically for cooking, as opposed to a fire used for other heating, smoking, or drying activities.

The survival of a number of ash and charcoal rich sediments on, or partially on, the surface of Context (054) (including (101), (076) and (087)) indicates that the period of surface stabilisation and exposure associated with this cooking hearth may have been very short-lived. Indeed, as I describe in more detail below, the sedimentary matrix of overlying Context (081) and the similarly extensive (064) suggest a continuation of a very similar silt accumulation to that which created Context (054). This lack of evidence for a significant hiatus during the formation of Context (054), between it and (087), and between this hearth and the overlying major-hearth-with-scraper Context (081), raises the possibility that Ntloana Tšoana may have been continuously inhabited throughout the seemingly rapid Phase 3c sedimentary sequence. This, in turn, suggests that rather than a series of distinct occupations, the lower density signatures of the silt layer (054) and hearth (087), may genuinely reflect a resident group whose numbers had dropped, and that the higher density major-hearth-with-scrapers feature that makes up the immediately overlying Phase 3ci, was the result of the group coming together again. Within this extended sedimentary history, an individual event – or limited series of events – like that represented by the hearth (087) can be better contextualised and although we cannot know the timeframes involved, there is nothing to suggest that these Sub-Phases are not part of a more intimate chain of action, the cooking of a particular meat food in preparation for the return of other group members, for instance, could be one such interpretation.

Of equal importance is the link between this chain of events and those that characterised the pre-flood, Phase 4a levels. Can the connections between these ‘genealogies of practice’ (cf. Pauketat & Alt 2005; Section 4.3) be coincidental? The use of exactly the same, western part of the shelter for the construction of remarkably similar hearth features is striking, as shown in Figure 24 (Chapter 7). Indeed, the care and attention evidenced in the control of these fireplaces within these two chronologically distant episodes is unparalleled elsewhere in the whole of Phases 3 and 4. Could this be another case of a transfer of cultural memory – a way of doing certain things in a particular place – as seems likely for the much larger hearths-with-scrapers?

### 8.5. A shelter for all seasons: Phase 3ci

As we have seen all the way through this depositional account, as soon as a pattern of habitation traits seems to be emerging, then a new configuration appears that complicates it. So it is with Context (081), one of the three ‘major hearths-with-scrappers’ highlighted at the end of the last chapter (Sections 7.5 & 7.6). Unlike the other two such features, however, this large hearth *was* inter-stratified with the surrounding silt. Importantly, as I have just described for the series of small hearth deposits within the surface of Context (054) (Section 8.3), this blurring of silt and hearth does not appear to be a result of post-depositional mixing of stratigraphically separate events. In fact, and despite the presence of significant amounts of bioturbation (Figure 42, bottom), the hearth deposit itself was remarkably well-preserved, suggesting that the interlensing represents contemporaneous depositional processes, rather than truncation of the feature’s edges.

Taken as a whole, Context (081), which makes up the entirety of Phase 3ci, measured over 2.75 m from east to west and extended across the full 2 m width of the excavation area. Some 124.5 litres of sediment were removed from it and a moderate–high density of finds retrieved throughout ( $D=171.3$ ). Within the southern two-thirds of Square 44,51 and the eastern half of Square 43,51, a clearly defined hearth area of alternating black, charcoal-rich silts and orange and yellow fire-hardened units was located (Figure 42, bottom).

Though these layers were too thin to excavate separately, at least four pairs of black and yellow layers were visible in parts of the section. At its deepest point close to the section face shown above, this micro-sequence was up to 10 cm thick, and filled a shallow depression, which had been scraped into the surface of the underlying (054), presumably to build the initial series of fires. This coincided with the densest concentration of bone and lithic finds and the centre of a cluster of ten Woodlot scrapers found in this Context. Lithic densities within the hearth were up to ten times those found in the silt part of the context ( $D=478.9$  versus  $D=40.2$ ) just 1.5 metres away against the opposite section wall.

As already noted, the rare concentration of knives ( $N=5$ ) from the (081) hearth matches similar knife-and-scaper combinations in the other two major hearth features in Phase 3dii and Phase 3bi. Though in terms of the overall Phase 4a–3a sequence





Figure 42. Context (081) in plan and section. Top: Plan photograph of Square 43,51 and 44,51 at Ntloana Tšoana showing Context (081), the hearth-in-silt feature in Phase 3cii. Note the black charcoal-rich silt on top of bright yellow heat-affected substrate. Scale is 0.50 m.

Bottom: Context (081) in the north-facing section consisting of many lenses and micro-layers of carbonised and fired-earth material, interpreted here as the result of continuous and repeated use of the same hearth. Note the vertical insect burrows visible that have drawn charcoal rich material into an underlying substrate. Horizontal scale is 0.5 m, vertical scale is 0.15 m.



retouched lithic artefacts were relatively common (N=68) in Context (081)/Phase 3ci, they were still considerably fewer than in the other two scraper-rich features (Figure 29). A rare concentration of notched flakes within the (081) hearth also marks it out as a slightly different form of assemblage, as does the exceptionally high proportions of burnt bone (Figure 43). Considered with the radically different sedimentary character of the two other large-hearth-with-scraper features in Phase 3dii and 3bi, it may be that Context (081) was associated with a similar yet slightly different set of practices. A closer look at the Woodlot end-scrapers themselves does, in fact, suggest that a very specific stage of tool maintenance may have been carried out around the (081) hearth (Sections 9.10 & 9.12).

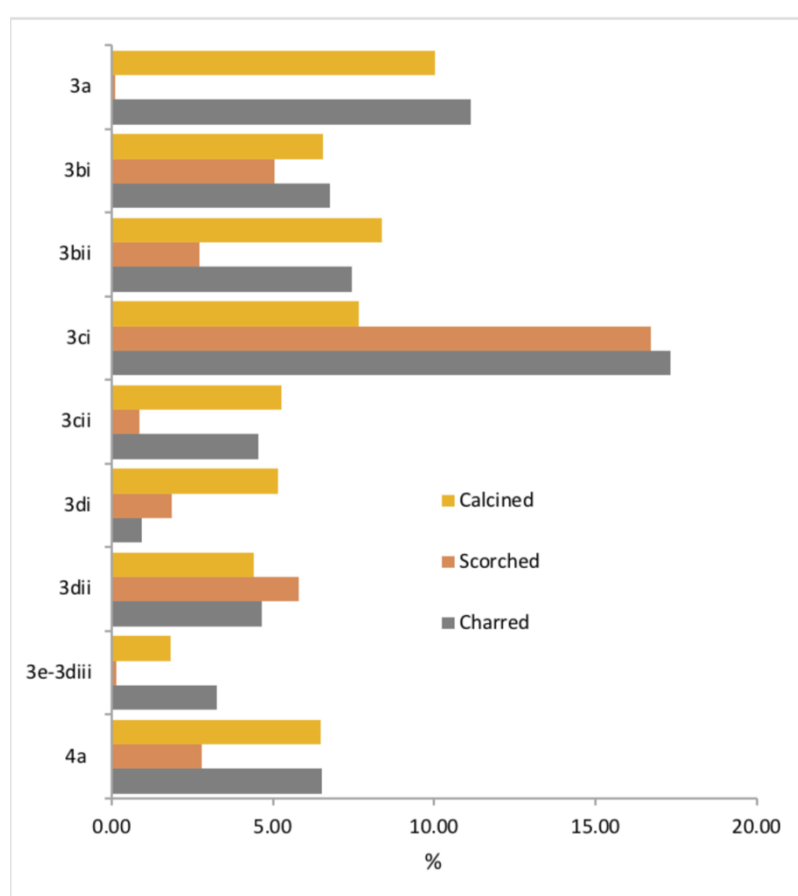


Figure 43. Proportions of calcined, scorched and charred fauna in Phases 4a–3a at Ntloana Tsoana (Data provided by Genevieve Dewar, graphic prepared by the author).

In general terms, (081) indicates a continuation of the same siltation processes that formed underlying Context (054) and then carried on throughout most of Phase 3b. Up until this point in the shelter's history, major siltation, whether fluvial, aeolian, or a combination of both, has been linked with either low-density or pulsed patterns of residence, but this association seems very unlikely for the period of accumulation represented by Context (081), which was clearly

the result of a relatively intense and continuous occupation, with a number of hearth-rebuilding episodes that likely finished with a phase of tool maintenance.

#### 8.6. Inside the palimpsest: Phase 3bii

Judging by the well-preserved charcoal-rich silts on the surface of (081), it must have been buried soon after it went out of use, suggesting again that Ntloana Tšoana may have been inhabited throughout the end of Phase 3ci and the beginning of Phase 3bii. The most extensive silt deposit in Phase 3bii was Context (064), which measured some 4.60 m in length and was up to 50 mm thick. Like the similar silt layer from Phase 3cii, (054), Context (064) had a low frequency of lithic finds ( $D=89.3$ ) yet also contained a series of small high density inter-stratified hearths within its upper surface. Again, the preservation of hearth structures strongly indicates that coeval deposition rather than post-depositional disturbance is responsible for this interlensing. Taken as a whole, this group of hearths recorded the equal highest frequency of fauna ( $D=13.8$  g/l) in the entire 4a–3a sequence (Figure 29).

The largest of these features was (053/061), which consisted of a distinct 20 mm-thick upper charcoal layer, (053), on top of a series of well-defined fired-earth substrates, recorded as Context (061) (Figure 44). The charcoal upper Context (053) was linear but irregular in plan, spreading out from the southeastern corner of the excavation area for 2 m and varying in width along its length from 0.70 to 0.22 m (Figure 45). This silty degraded charcoal hearth upper overlay, but was slightly inter-stratified with, its fired-earth substrate, (061), which was much more restricted in extent and located the original position of four distinct but inter-connected hearths (Figure 44, left). Context (061) contained lenses of charcoal-rich material, which appeared identical to the charred material in Context (053), suggesting that it may have been in operation more than once, although its restricted extent and shallow depth indicates that this reuse was likely in quick succession and probably part of a linked series of actions within a single episode. In general, only a moderate density of lithic and bone fragments was recovered from (053/061) (Table 7). However, in its southeast corner within the charcoal-derived Context (053), and above the larger of the three inter-connected hearth substrates, a spatially restricted, dense concentration of lithic artefacts ( $D=567.3$ ) stands out, as does an unusually high concentration of CCS knapping debris (160 <10 mm flakes from just 6 litres of sediment). Alongside a relatively high count of Woodlot scrapers ( $N=4$ ) for such a thin and restricted





Figure 44. Hearth feature (053/061) from Phase 3bii at Ntloana Tsoana. Left: Looking west across the upper surface of Context (064) with the shallow but well-defined *in situ* fired-earth substrate (061) extending out from the corner of the excavation area. The charcoal-rich upper layer (053) has already been removed. Scale is 1.00 m. Top: the same *in situ* hearth captured in section, this time showing both the charcoal-rich upper, Context (053), and Context (061) sealed by the thick layer of fluvial silts.

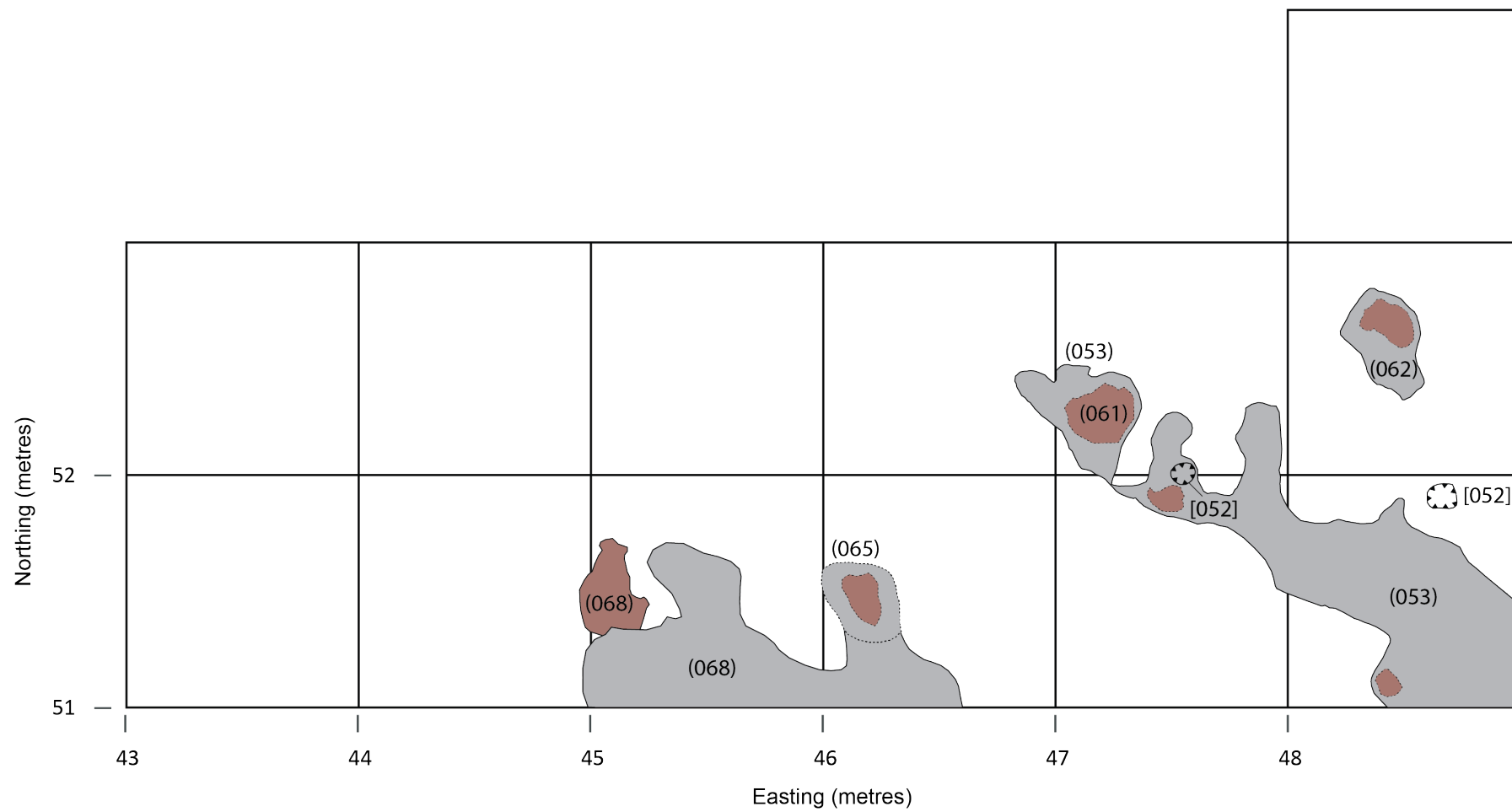


Figure 45. Plan of the excavation area at Ntloana Tšoana showing Phase 3bii.

context, Context (053) also contained a very high frequency of cores (N=7), five of which were produced by bipolar flaking techniques.

Three other very small, well-defined and almost identical *in situ* hearths, (062), (065), and (068), were orientated in a line roughly perpendicular to the linear feature (053/061) (Figure 45). As found in (053/061), all three consisted of a charcoal rich silt upper that was partially inter-stratified with a compact, orange coloured, fired earth substrate. These were very thin (<30 mm) and restricted (<55 cm maximum dimension) features and contained extremely variable quantities of artefactual material (Table 7),<sup>22</sup> yet all recorded very high bone densities,<sup>23</sup> suggesting that they may have been closely associated with meat preparation, cooking, and consumption. Context (065), an even smaller feature, measuring just 0.34 m across, was as equally packed full of bone and lithic artefacts. In contrast to the series of similar-sized small hearths reported earlier in this chapter from Phase 3di, no retouched artefacts were recovered from these three features.

The four interconnected *in situ* hearths in a line represented by Context (061) and overlying charcoal spread (053) are unlike any other arrangement in the entire early Holocene sequence. Another aspect that stands out is that despite its large surface area, the shallow depth of rubified sediment within Context (061) suggests that this hearth generated a relatively low intensity heat. One interpretation that may explain these attributes is that the unusual linear arrangement was used to provide a large surface area of heat for the drying and/or tanning of hide, with perhaps the cleaning and final preparation of the skin responsible for the concentrated stone debris. Two stake-holes, [052] and [055], shown on Figure 45 add another dimension to this interpretation and perhaps mark the location of the uprights of a smoking frame. One of them, [055], is cut through the charcoal-rich silts so we know that it, and probably both of them, post-date the last combustion episode, and while it remains possible that they relate to a separate later activity, the fact that they both closely respect the edge of the underlying fired-earth (061), which presumably denotes the original edge of the hearth, is unlikely to be coincidental. One of these uprights, [055], was positioned some 0.30 m from the edge of the hearth and the other, Context [052], was situated slightly closer at 0.20 m,

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<sup>22</sup> 100% of Context (065) was sampled for archaeobotanical analysis so density values are not available

<sup>23</sup> At the time of writing faunal data for individual 3bii-ur hearths was not available, but field measurements recorded that as much as 11% of the total volume of these hearths consisted of animal bone.

which would have provided enough distance from the hottest part of the fire. Indeed, their stratigraphic position, coming after the charcoal-rich layer (053), makes sense if the hot embers were raked out to spread a low heat evenly and then a wooden frame staked in on top of it, an interpretation supported by the fact that a number of tiny small fire-scorched patches were noted in the area around the stakeholes, which suggests that hot coals were transferred out of the main hearth area onto the surface of the silt. Though there is no ethnographic or archaeological evidence for such practices amongst southern African hunter-gatherers, Binford (1967) cites numerous North American ethnographic accounts of a smoking process that involved the suspension of a hide over a shallow slow burning fire. This interpretation also helps to explain the spatial mismatch between the upper and lower parts of this feature. Neither scorch marks nor spatial divergence of this kind occur in any other early Holocene hearths at Ntloana Tšoana.

The spatial arrangement of (053/061) together with the four smaller hearths, (062), (065) and (068), and the notable lack of overprinting between them, suggests that some component parts were likely to be contemporaneous, or at least respected the space of recently used features (Figure 45). Judging by their size and well-preserved structures, each of these features could have been built and used by no more than three or four people – perhaps a small family group or even a single person – and employed for a few days at most. No doubt they would have provided warmth and light as well as a place in which to dispose of food waste. The most parsimonious explanation, then, is that the shelter was now being used by a smallish group for the specific purpose of processing a type of material – possibly the curing of animal products linked with the use and maintenance of a particular type of scraper – and that this was also associated with, and most likely followed by, a phase of meat cooking, all of which happened in rapid succession at the very end of, and immediately after, the period of silt accumulation represented by Context (064).

Whilst the exact chronological order of this sequence eludes us slightly, this type of temporal detail is important as it helps us to get an idea of what a few days of life in the shelter may have actually consisted of, with its inhabitants rapidly switching between different tasks. It also provides a picture of the embedded nature of skilled, possibly seasonal activities, involving technical control of a fire, within a chain of everyday practices involving the preparation and consumption of food. Other ways-of-dwelling in this shelter, seen in earlier parts of the Phase 4a and Phase 3 sequence, are

again apparent here, namely the continuing importance of the arrangement of domestic space despite the small size of the group, something evidenced in this case by the small hearths placed a suitable distance apart and the careful disposal of food waste in these areas.

Of course, all this becomes much richer, as we have seen repeatedly in this chapter, when these short-term chains of practice are linked to even larger processes in space and time, allowing us to think beyond a series of events inside the shelter to movements within landscapes and to the structure of a hunter-gatherer group over a number of months. Thinking back to the earlier phase of siltation and short-lived hearth construction in Phase 3cii interpreted as a time of social fragmentation with only a small resident group remaining in the shelter, and the subsequent major hearth feature (081), thought to represent the coming back together of the group, helps us to pick out an even longer-term, possibly cyclical, occupation pattern, albeit one with some significant variation through time. Indeed, regardless of whether this was, in fact, a single group across this longer period, a scaling-down of group size and more-or-less continuous habitation, rather than hiatus and punctuated occupation pulses, appears to also be the most likely explanation for Phase 3bii. And all this was once again followed by a switch back to what appears to be another coming together of people and the repeated construction of large hearths on top of the other in Phase 3bi, something that I now go on to describe.

### 8.7. Remaking the past: Phase 3bi

One even more direct link between these sets of Sub-Phases makes this interpretation of continuous waxing and waning occupation all the more convincing. The final major-hearth-with-scrapers feature built before the site was flooded for the last time, (070–069–042), and directly on top of the silt layer (064), involved re-use of the same location in the western end of the site and partial digging out of the old hearth (081) that was the centre of activity during the previous period of social cohesion (Figure 47, bottom right). Interestingly, the portion of (070) from where this small shallow pit was dug included a concentration of end-scrapers with clear evidence of being either re-fashioned from an earlier tool or having been remade into a new one, a feature explored in more detail in Chapter 9 (Section 9.11). This conscious re-making of the same fire which was partly obscured by the silt accumulation (064), together with the retrieval



and re-making of previously used tools, may well have been an important gesture of reconstruction in a deeper mnemonic sense bringing with it thoughts, or even actual recollections, of previous gatherings around the fireplace.



Figure 46. Plan and section photos of Phase 3bi hearth features at Ntloana Tšoana. Left: Looking west across the western end of the excavation area showing Context (070) aligned with the western shelter wall. Note the sloping mark on the wall showing the former ground level and truncated surface of the overlying fluvial sediments. Top right: Looking south along the western wall over Context (070) prior to excavation. The red and black ‘marbled’ part of the deposit can be seen in the upper right of the photo, and the yellow compact sediments along the left of the feature forming a sharp boundary with the underlying grey silts (064). Bottom right: close up of the north facing section showing hearth deposit (070–069) cut into the older underlying hearth (081). Note also the overlying laminated silts, fine sands and clays of fluvial origin.

In contrast to the hearth-in-silt (081), however, Context (070) had a very clear relationship with the underlying silt (064), defined by a particularly sharp edge in plan aligned parallel to the shelter wall (Figure 46, top right). As noted earlier, the linear arrangement of this feature, its straightness, and the clear definition of its edge against the underlying silt surface, is reminiscent of the earlier major-hearth-with-scrappers feature, (094–086) (Figure 34), and suggests that hearth-side activities were organised along it. Context (070) was a feature of very large proportions – extending for 2.0 m and continuing outside of the excavation area to the north and south, and 1.75 m on its

east west axis, out from the shelter wall. For most of its extent, where it underlay the dark ash-rich sediment (069), Context (070) consisted of a compact bright red fired-earth mixed with black charcoal rich silts – giving a black and red ‘marbled’ appearance (Figure 46, top right). Along its eastern side, where it would have been exposed beyond the edge of the narrower, overlying Context (069), and impacted directly by water, Context (070) was more uniform in composition, harder and more compacted and a duller brownish-yellow colour. Context (069) itself was a dark mottled silt of varying colours, and despite being in direct contact with the flood-derived silts, contained a moderate amount of small charcoal fragments and a significant ash component within its matrix. The absence of any clearly identifiable charcoal-rich silt deposits or fired-earths within this upper hearth layer is likely to reflect the greater extent to which the shelter edge was affected by increased moisture levels rather than it being a true indication of Context (069) being an *ex situ* hearth or a midden deposit.

The relatedness of hearth deposits (070) and (069) is reflected in the distribution of lithics and bone, and notably in the exceptionally high densities of both across each of their extents. Retouched artefacts cluster in the same areas between the two layers, indicating the repetition of specific activities in the same locations. However, as was the case when comparing the individual red and black layers within the (094–086) sequence, there are enough clear differences to suggest that they represent two episodes of hearth construction rather than a single event. I have already noted how similar the clusters of retouched tools in these Phase 3bi features also strongly resemble the other two earlier major-hearths-with scrapers in Phases 3dii and 3ci (Table 4, Figure 34). Here it is important to note a number of clear differences. First, the overall densities of both retouched tools, and fauna is far higher in Phase 3bi (Figure 29) suggestive of perhaps a wider range of tasks. Interestingly, however, and despite the similarities with the high-density deposits of Phase 3dii, a low incidence of faunal weathering (0.69%, N=81), strongly suggests the timeframe over which this occurred may have been considerably shorter. Whilst the more varied character of the lithic component and large bulk of the fauna is indicative of a number of different overprinted hearth-side activities, judging by the incredibly dense concentrations of end-scrapers, at least a substantial part of what was happening during Phase 3bii is likely to have involved hide-working and I would suggest this remained one of, if not the main, set of tasks that pulled people together at this time. Unlike the Phase 3dii hearths, the high density of finds does not reflect a long period of occupation. Instead, what this likely represents

is a particularly large gathering of people, perhaps the largest such grouping in the six centuries plus of Ntloana Tšoana's history described here. Whether this coming together was a response to the dramatic landscape changes that may have already been underway outside of the shelter, or whether indeed, the gathering itself was cut short, is beyond the reach of archaeological enquiry. What is clear, however, both from the remarkable preservation of hearth structures in the east of the site, and preliminary micromorphological work at the Phase 3b/Phase 3a contact (M. Morley, pers. comm.), is that when the waters did rise and inundate the shelter once more, they did so in a particularly rapid fashion.

Once again, however, it appears that the local hunter-gatherer population did not simply abandon the area with the onset of dramatically higher river levels. They adjusted, introduced some new ways of living and, quite remarkably, considering the radical changes in the shelter and its environs, there is clear evidence that they carried some of the old traditions forward as well.

#### 8.8. Waters rising: Phase 3a

Unlike the eastern part of the excavation area, where the contact between flood-derived sediments and underlying hearth deposits was exceptionally clear and a gentle succession is evident, in the western end of the excavation area, Context (069) appears to have been re-worked as the shelter floor began to hold more water. A 25 mm thick homogenous mid-greyish brown clay rich silt (042) that closely matches the extent of the underlying hearth (069) appears to be a true 'interface' in the sense that it was, in sedimentary terms, a slackwater silt deposit and almost certainly formed by the pooling of flood water on the surface of the Phase 3bi hearths. However, it was also clear that it derived a significant proportion of its sedimentary, and most likely *all* of its artefactual and faunal components from the reworking of the underlying deposits.<sup>24</sup> The different character of the western Phase 3bi/3a contact appears to have been a result to the water lapping up and pooling against the concaved shelter wall. A feature that also led to a more localised dramatic truncation and collapse of deposits along the far western edge of the shelter where flood waters carved out a v-shaped channel filled by Context (074) alongside the rock wall (Figure 47).<sup>25</sup>

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<sup>24</sup> For this reason, Context (042)'s artefactual assemblages were treated as part of Phase 3bi.

<sup>25</sup> The character of Context (074)'s sedimentary fill suggested extensive mixing and for this reason it was excluded from the current analysis.





Figure 47. The water channel (074). Top: oblique photo of re-worked hearth deposit along western shelter wall, here shown in plan (grey-brown sediment parallel to the exposed rock in the left of photo) on the surface of Context (070) and in the south facing section. Scale is 0.15m.

In general, however, the part-fluvial, part-anthropogenic silts that characterise Phase 3a<sub>ii</sub> and 3a<sub>iii</sub> appear to have been deposited by slow-moving shallow waters, and importantly for the continuation of the human presence at Ntloana Tšoana, this was punctuated by two episodes where the river receded, providing short windows for the formation of temporary surfaces within the shelter. Indeed, patchy but extensive ferruginous minerals on the surface of the two extensive Contexts that make up Phase 3a<sub>iii</sub>, (029/060) and (028), indicate that, at least for a certain amount of time, the shelter floor dried up completely. During the excavation of Phase 3a, the working assumption was that the anthropogenic component must have largely originated from the *in situ* levels below, in a similar fashion to that described for Context (042). However, it soon became apparent that (028) and (029) were separated by thin layers and lenses of cleaner material (Figure 48), rendering this interpretation unlikely.

Taphonomic analysis of fauna revealed virtually no evidence of water rounding (0.01%, N=3) whereas the assemblages from mid-late Holocene fluvial silts in Phase 2 included 20.6% (N=15) water rolled bone. Even more telling is that the proportions of burnt bone is notably higher (21.16%, N=4767) during Phase 3a than it is in any of the immediately underlying layers, and, indeed, for all of Phase 3, apart from Context (081). Neither is there any size sorting of lithics in any of these sediments, which one might expect if these assemblages had been moved around the site at all. Lithic densities remain relatively high in all but Context (023) (Table 8), and retouched frequencies are again higher in (029) and (060) than they are in many more obviously *in situ* contexts lower down in Phase 3. The Phase 3a end-scraper assemblage is also quite large (N=25) suggesting that even during these between-flood visits to Ntloana Tšoana, people

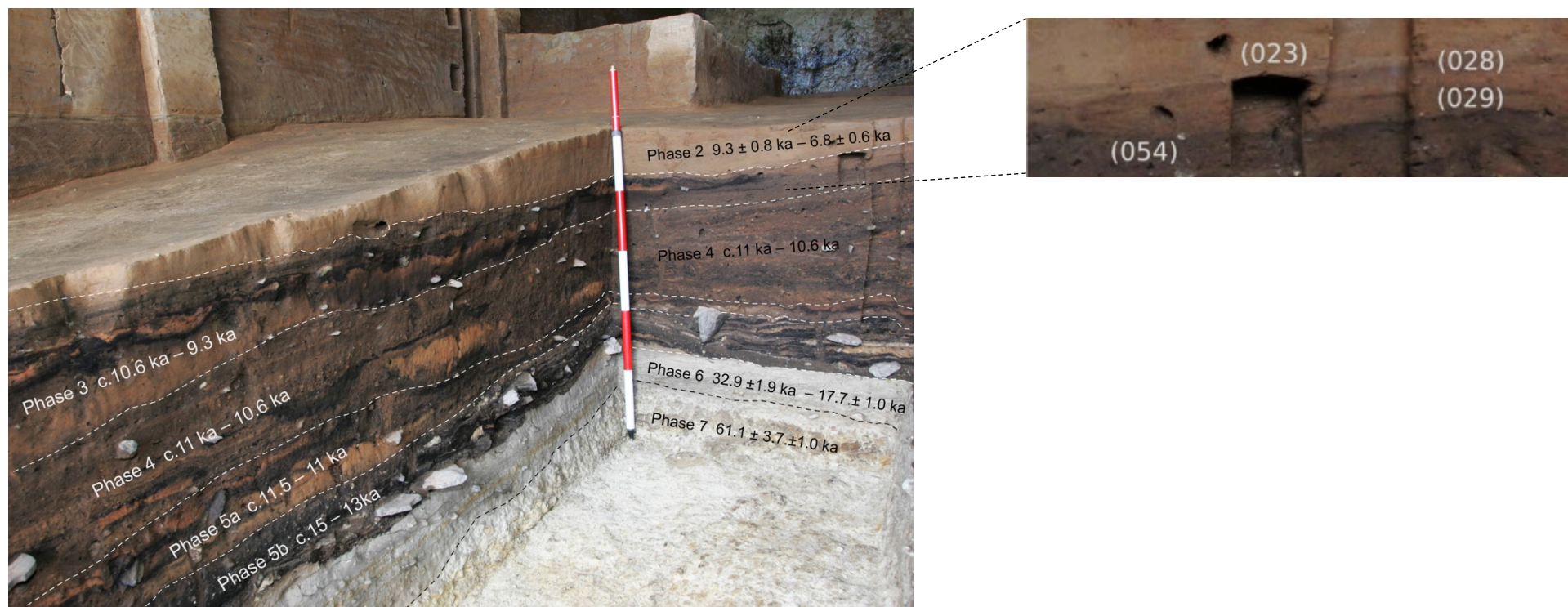


Figure 48. Section photo looking south-eastwards into the corner of the excavation area showing the full sequence at Ntloana Tšoana. Insert shows close up of part-anthropogenic, part-fluvial Contexts (028) and (029).

carried on with many of the same tasks. The absence of notable spatial patterning or survival of features within these part-fluvial silts limits direct comparisons to earlier Phases yet these sedimentary assemblages tell a vital story of rapid local adjustments in the face of a rapidly changing landscape. It is clear from the data presented above that the human presence in the immediate environs must have remained relatively constant, for the shelter was reinhabited every time the flood waters receded enough to do so. The fact that part of this seems to have involved the same hide-working practices that had long been closely associated with Ntloana Tšoana may also be a key aspect of this resilient attachment to place.

Context/ Phase	Type	Lithic density (g/10L)	End-scraper frequency	End-scraper density (per 10L)	Retouched frequency	Retouched density (per 10L)
023	Silt	1.5	0.0	0.0	4.0	0.1
040	Silt	176.6	2.0	0.8	9.0	3.8
028	Silt	105.1	21.0	0.9	72.0	3.2
029	Silt	199.7	0.0	0.0	2.0	6.7
060	Silt	116.3	2.0	0.8	16.0	6.4
<b>Phase 3a</b>		<b>56.4</b>	<b>25.0</b>	<b>0.4</b>	<b>103.0</b>	<b>1.8</b>

Table 8. Lithic density, end-scraper and total retouched in Phase 3a at Ntloana Tšoana

Of course, these now temporary residents would not have known that the water was to continue rising, or that these between-flood gatherings were the last enactments of what must have been for them an association between place and practice that stretched back into deep ancestral time. Despite this apparent resilience shown by the continued inhabitation of Ntloana Tšoana and the performance of particular tasks there, its dramatic transformation from protected dwelling place of time immemorial to becoming an active part of the constantly changing river bed, must also have been a time of significant upheaval. In an instant, following the first of these inundation episodes, centuries of visible, partly eroded material archives would have vanished under a thick body of wet sticky silt and clay.

## 8.9. Sedimentary reflections

The 600–1700 years of history just presented in the above two chapters could well have been presented as a purely cultural sequence of features and distributions of artefacts with the stratigraphic data dislocated from this in a preceding geo-chronological outline, as has been the norm in LSA archaeology for many decades. Here I have attempted to sketch out a different way of writing rockshelter archaeology. One that emphasises duration over chronology and

aims to chart the shifting character of natural processes that contain, punctuate and flow through archaeological levels and phases, as well as providing surfaces for humans to occupy. In this way of thinking about stratigraphy, accumulation and erosion are as important to the human story as the human-made features themselves and provide much of the movement and depth to the history-writing process. Contra, McNany & Hodder (2009), these social *sedimentologies* are important whether or not the episodes of creation or erasure are intentional or explicitly acknowledged by the human participants. I have also emphasised the combination of linear sequence and multi-directionality in all stratigraphic phenomena, attempting to follow connections and processes across Context and Phase boundaries. Part of this has involved reclaiming terms such as ‘residual’ often used to ‘clean’ away problematic non-linear processes. Interestingly, there are parallels between the conceptual shifts required to reinvigorate our sedimentary accounts and the way we think about hunter-gatherers. By simultaneously loosening of our pre-conceived ideas concerning our Phase, Sub-Phase and Context unit boundaries *and* the overly simple oppositions we use to describe hunter-gatherer social life, we can follow flows of phenomena as they appear and reappear throughout the course of time in new configurations. In this way I have been able to trace histories of hearth building, tool-making and hide-working and try to understand the multiple combinations of patterned behaviour within these practices. In so doing it may be possible to move past the simple classification of rockshelter deposits into structured or unstructured forms that only serve to alienate hunter-gatherers from their otherwise material realities.

By paying close attention to patterning in residues over a number of centuries I have been able to trace a number of longer-term processes that connect the traces in this single rockshelter to a much wider set of material networks and importantly, suggest that such places may have acted as key memory anchors for mobile and frequently fragmenting hunter-gatherer groups. The most prominent of which is the repetition of a distinct clustering of end-scrapers in association with large hearth features. In the next chapter, I take a much more empirical approach to these end-scrapers assemblages. Many of the central themes raised here such as the need to contextualise intentionality and the relationship between sequential and non-sequential processes remain apparent even at the level of a single artefact class.

## Chapter 9.

### Form in practice: the case of the Woodlot scraper

#### 9.1. Introduction

Terms such as ‘duckbill scraper’, ‘splayed scraper’, ‘divergent scraper’, ‘frontal scraper’, and ‘scraper-adze’ have all been used to group early Holocene end-scrapers (Figure 49). More formally, they have been gathered under broad hierarchical schemes, the most commonly used of which is J. Deacon’s (1984) scraper artefact class based on the presence of an edge angle greater than 45°, with sub-classes based on either position of retouch, i.e. end, end and side, or simply maximum length grades of large (>30 mm), medium (20–30 mm) and small (<20 mm). More recently, following work in the south eastern interior, which recorded the common occurrence of heavily modified side margins, the type of lateral modification, whether scalar ‘shaping’ or ‘trimming’ retouch or step-terminated retouch (also referred to as ‘adze-retouch’ and ‘adze-wear’, amongst other variants), or both, is present, has become a method for subdividing end-scraper data in the literature. Mitchell *et al.* (1998: 108), have – as used so far in this thesis – proposed the term ‘Woodlot scraper’, which they note is a regional variant of the wider and chronologically more extensive ‘duckbill scraper’ phenomenon, first described by Goodwin and Riet Lowe (1929). For Mitchell *et al.* (1998: 108), Woodlot scrapers are “*relatively high scrapers with steep adze-like retouch along one or both lateral sides.*” Here I use this term but prefer not to define the class by the type or height of retouch. Instead, I view it simply as another name for early Holocene end-scrapers. An end-scraper for me is defined simply as an elongated tool with a clear working edge on the shorter side of the implement that is distinct from the lateral margins. As will become clear in the presentation of results below, it is more useful to free up the other attributes conventionally said to define a type of scraper, such as size, shape, edge angle, presence, position and type of lateral retouch, as variables for studying change in space and time.

To structure this chapter, I work through the data in a three-staged fashion. The first part tackles procurement, selection and the degree of uniformity of the assemblage and variation over time, asking questions about blank type, dorsal scar patterns, overall dimensions and shape, and primary reduction sequence. The second assesses the evidence for hafting and lateral and distal edge characteristics, including the nature and phasing of retouch and edge angle. Finally, I focus on use-life, reduction, retooling and recycling. However, it must be noted



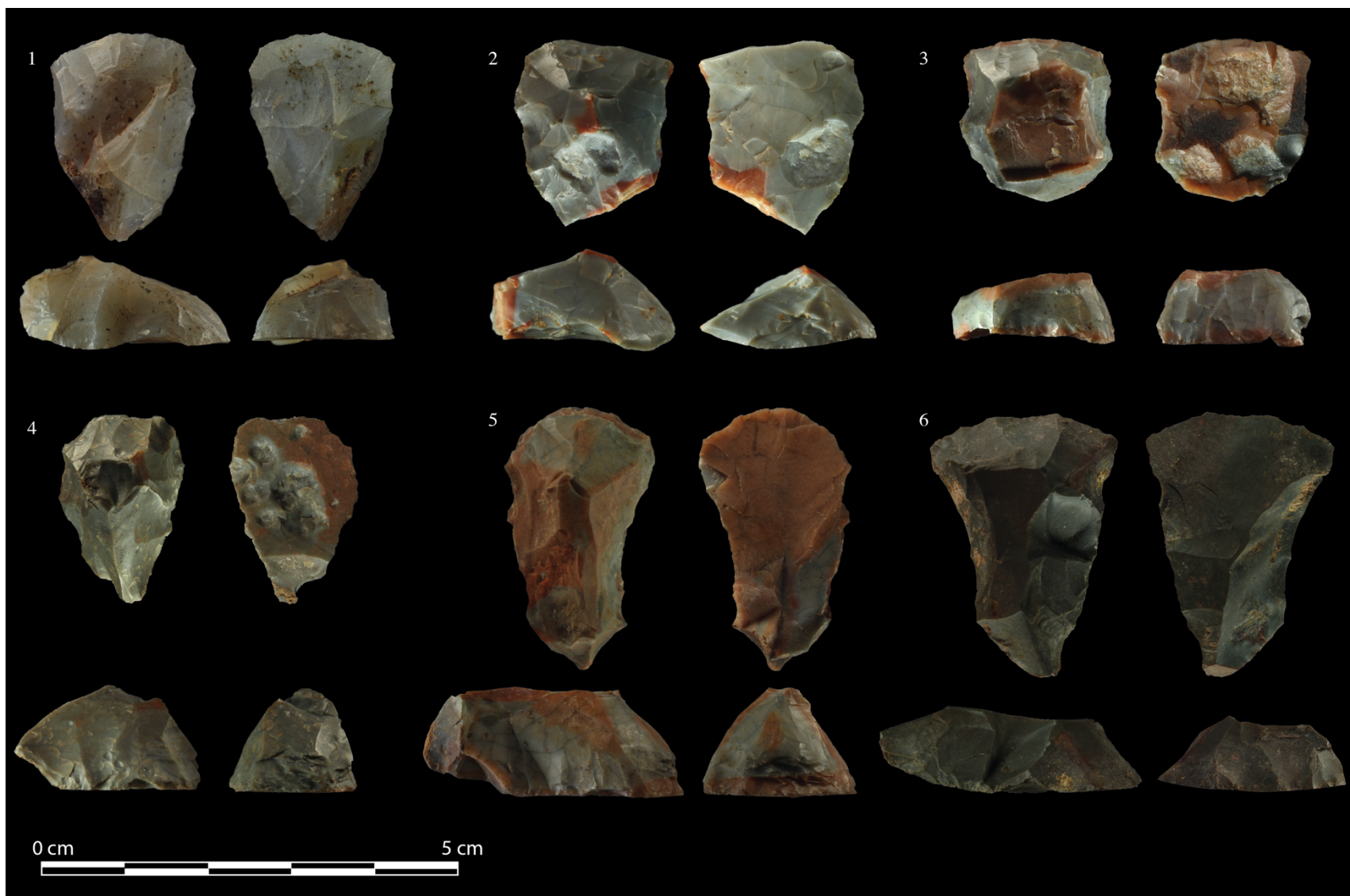


Figure 49. End-scrapers from Context (088) in Phase 3dii at Ntloana Tšoana.

that although I employ what is a broadly linear framework based on a production sequence, I am not implying that this reflects the totality of stone tool assemblages. Indeed, one of the key themes in this chapter is that the salvage and selection of natural edges and broken flake blanks was just as likely to be as ‘formal’ a practice as the intensive shaping of tools through retouch.

## 9.2. Blank type

Interestingly, more than 40% of the end-scrapers at Ntloana Tšoana were produced on non-freehand blanks, the most common of which were shallow nodules (Figure 50).<sup>26</sup> A strong preference for the use of broken flakes is also evident, whose right-angled break facets were commonly employed as the steep lateral margins that characterise these end-scrapers. Little evidence was found for intentional truncation suggesting many of these broken edged pieces were selected from existing lithic debris on the shelter floor. Whether any significant time passed between flake breakage and subsequent retouch into a scraper form is difficult to tell in most cases. A small number of end-scrapers, however, provide firm evidence of a prior life

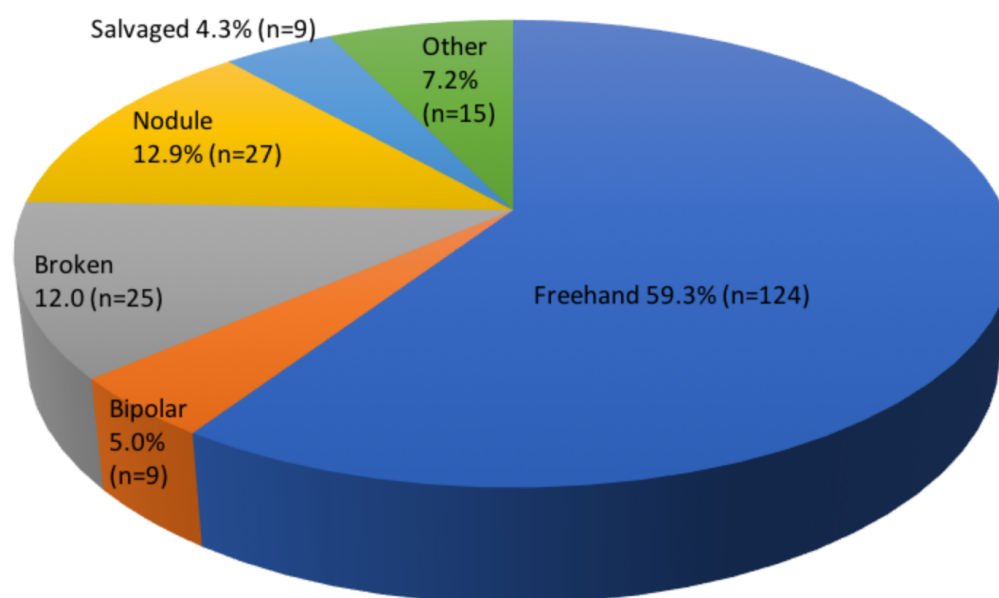


Figure 50. The proportions of blank types in the Phase 4a–3a assemblage from Ntloana Tšoana.

<sup>26</sup> Blank type in this study is defined in relation to the last use of the piece prior to it being a scraper. Class denotes its original form, i.e. if a flake used as a bipolar core was then turned into a scraper, its class would be a flake, its blank type would be a bipolar core and its typology would be a scraper

history, recognisable when retouch exposes a fresh interior under prior surface alteration either as a result of burning or oxidation. Though only 4.3% (N=9) of the assemblage can confidently be said to have been salvaged from older assemblages, this figure is likely to substantially under-represent the true amount of salvage activity carried out, as patination and burning are not uniform processes and depend on specific depositional conditions. Bipolar flaking techniques are also very likely to be under-represented in an assemblage like this one in which technological features can be obscured by intense modification, burning and breakage.

The fact that the proportions of freehand flakes relative to alternative blank types used for end-scraper production change gently over time is unexpected and suggests that the practice of procuring a blank was an integral part of a slowly changing technological strategy over the 600–1500 or so years represented here (Figure 51, top). In terms of its relation to the stratigraphic data described in Chapter 7, the marked drop in the proportions of freehand produced flakes in Phase 3di and 3cii may link to the more episodic and less continuous habitation patterns evidenced during these times. Perhaps what it reflects is that a smaller group had less potential for expanded forays to procure larger nodules, so blanks were obtained from the resources closer to hand – the remains of previous occupations and small natural flakes from the surrounding landscape. The sharp reversal in this trend during Phase 3ci, when the

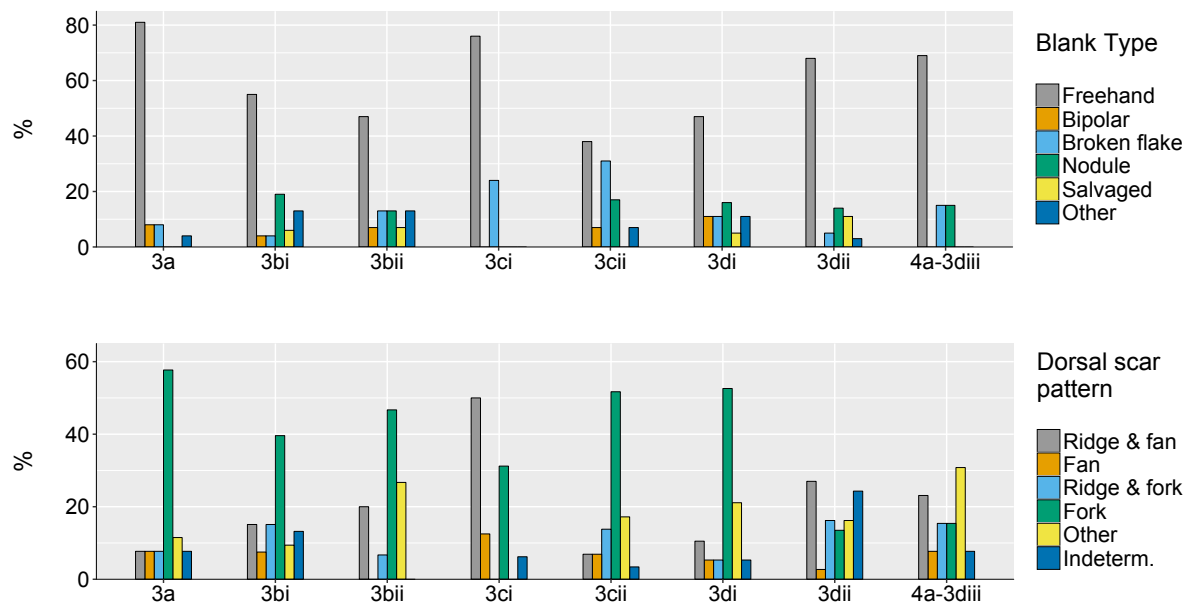


Figure 51. End-scraper blank types and dorsal scar patterns in the Phase 4a-3a assemblage from Ntloana Tšoana.

large hearth features return, fits this interpretation. Yet, there is not likely to be a simple one-to-one relation between the use of selected blank types and episodic occupation as



demonstrated by looking at the blank type data for Phase 3a, when Ntloana Tšoana's residents likely switched to a more pulsed habitation pattern between major flood events yet produced more end-scrapers on freehand flake blanks than at any other time. Moreover, there is a danger here of slipping into a dichotomy of informal versus formal blank types, and, as explored in more detail below, the choice to select unretouched natural and broken edges appears to have been much more than an *ad hoc* or opportunistic strategy.

### 9.3. Profile and dorsal scar pattern

Of the 187 end-scrapers with intact dorsal and lateral margins, triangular, trapezoidal and wedge-shaped cross-sections dominate, making up 34.2% (N=64), 28.3% (N=53), and 18.7% (N=35) respectively. Most (62.9%, N=22) of those with an asymmetrical wedge-shaped profile employed either a broken or natural cortical edge as the upright lateral margin, opposite a less steeply sloping edge and demonstrating a clear link between the selection of these right-angled blanks and the final form of the tool. A more symmetrical profile enabled by the presence of a central dorsal ridge was recorded on 34.4% (N=64) of the 186 end-scrapers with intact dorsal portions. The majority (59.4%, N=38) of these ridged or 'keeled' end-scrapers were associated with centripetal retouch, creating a 'fanned' appearance when looking directly down on the distal end. This association suggests that the ridge provided a technological advantage for orientating narrow, elongated retouch from the full width of the distal margin towards the centre of the scraper. Dorsal ridges and non-centripetal retouch patterns spread across the top of the dorsal surface, here termed 'ridge and fork' are also relatively well represented (N=24). Clearly, the use of such a ridge was one pathway for making an end-scraper, yet it was only one amongst many. Diachronic variation in dorsal scar patterning is marked, with notable fluctuations in the proportion of end-scrapers with and without ridges and convergent distal retouch (Figure 51, bottom). The notable spike in the proportion of 'ridge and fan' type patterning in Phase 3ci is of particular interest. As I explore below, the Phase 3ci end-scraper assemblage is unusual in being the most size-constrained of all. It is also one of the three most spatially concentrated assemblages and has yielded the most convincing evidence for haft modification, indicating that this may reflect a more specific set of practices over a shorter span of time, as discussed further below.

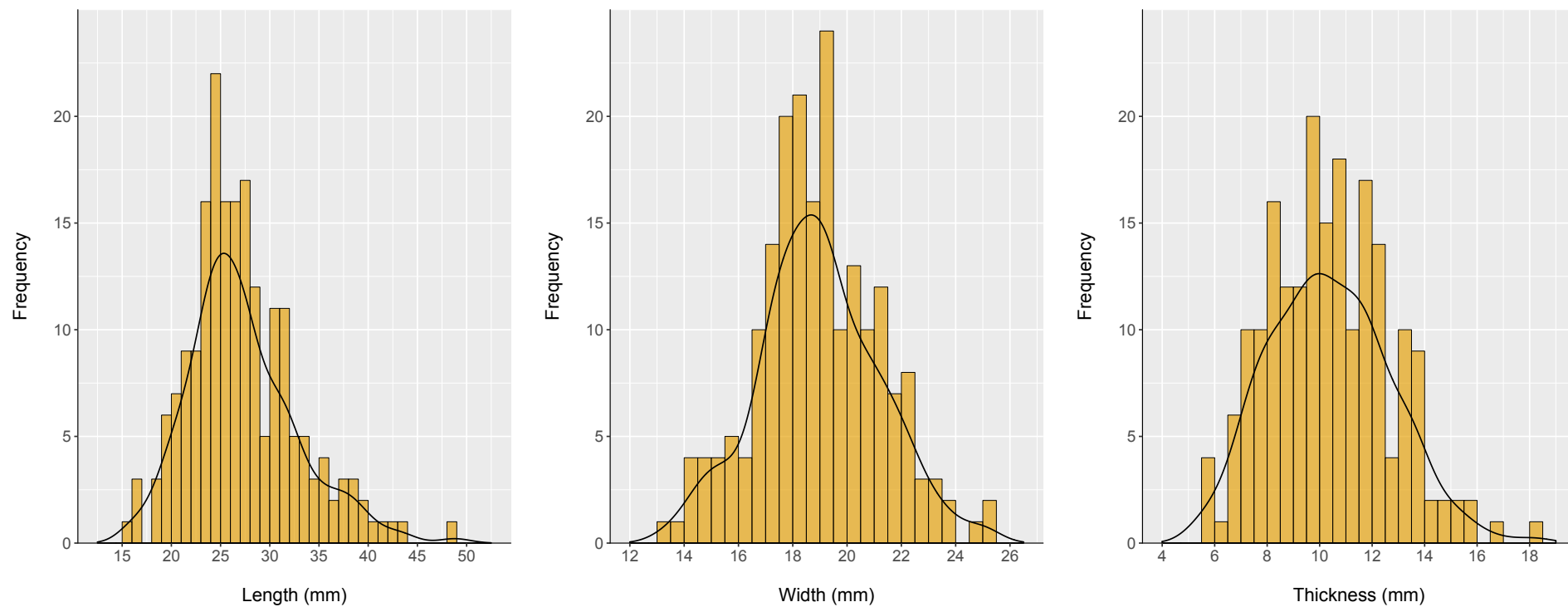


Figure 52. Histograms showing the frequency of end-scrapers at different length, width and thickness intervals in the Phase 4a–3a assemblage from Ntloana Tšoana.

#### 9.4. End-scrapers size

Mitchell's (1993: 56) earlier work identified the notable size uniformity evident in early Holocene end-scrapers from Ntloana Tšoana and Ha Makotoko. The new data presented here offer a fuller description of this pattern from a larger sample. They also allow additional features relevant to discussions of hafting practices, reduction and change over time to be more fully discussed. The mean length of the entire assemblage is 27.23 mm (SD = 5.56), yet this value is not entirely representative, as the data are positively skewed (Figure 52, left). Plotted as a whole assemblage, the distribution of length measurements is, however, strongly unimodal, with the vast majority (N=157, 80.1%) of measurable tools (N=199) falling in just 13 mm (39.6%) of the range, i.e. 19–32 mm, and almost half (N=95, 48.5%) varying over just 5 mm, between 23 and 28 mm. The third key attribute note here is the sharp drop-off in the number of end-scrapers under this central mode at 23 mm. There does not, however, appear to be a comprehensive single cut off-point but rather a staggered series of resharpening 'thresholds' (Grimes & Grimes 1985: 41; Blades 2003: 146; Comstock 2011: 47). The left decline of the smoothed distribution curve is steep, yet there remain some 38 (19.4%) examples shorter than 23 mm. Nonetheless, this distribution does suggest that these thresholds were the result of a real physical limit imposed by a handle or hafting materials. The steep drop-off in frequency of longer end-scrapers is also notable, with only 54 (27.6%) examples measuring over 32 mm. The pattern in this upper part of the range is, however, quite different with a steady decrease in frequency as length values increases, suggesting that the linear reduction model may at least be appropriate for tools in the early part of their 'use-life'. Whether the 32 mm mark represents the first of these 'thresholds' – the points at which the physical limits of the handle begins to impede resharpening, is a question explored below (Section 9.10.1).

The width histogram (Figure 52, centre) is again strongly unimodal, with 82.9% (N=165) of the measurable assemblage (N=199) within the central half (50.4%, 6 mm) of the range 16.5–22.5 mm; even more remarkably, 38.7% are within just 1.5 mm of each other, between 17.5 and 19.0 mm. The distribution of width measurements is notably less skewed, indicating that the mean is a good indicator of the assemblage with a value of 19.24 mm (SD=2.67). The more even distribution of width measurements indicates that reduction through resharpening and use on this dimension was minimal and thus strongly supports the interpretation that the largely heavily retouched lateral margins of early Holocene end-scrapers were generally not employed as working edges, as would be expected in an end-mounted hafted assemblage (cf. Parkington 1984; Mitchell 2000). Considering that the vast majority of these

end-scrapers feature intensive lateral retouch, the lack of variation in maximum width measurements gains even further significance, adding weight to the argument that the width of these tools was controlled by reasons other than the degree of use and resharpening and was most likely a result of intentional shaping to a specific size for performance related purposes. The one aspect of the width plot that is slightly irregular is the sharp decline in frequency under 16.5 mm – the low step on the left of the distribution – which probably represents a minimum width threshold, beyond which the tool body was no longer secure in its haft. The fact that there are still a significant number of scrapers under this is interesting and suggests that this may be related to haft maintenance at the end of a particular ‘use-life’ stage (see Section 9.10).

End-scraper thickness, thought to be the dimension least susceptible to reduction and therefore most indicative of original blank size (Blades 2003: 147), is restricted to an overall range of 12.65 mm between 5.5 and 18.8 mm (mean=10.4 mm, SD=2.15). It is both unimodally and normally distributed (Figure 52, right), with a relatively wide central mode between 6.5 mm and 13.5 mm, accounting for 87.4% (N=174) of the 198 with intact vertical dimensions. Whilst nineteen end-scrapers (9.5%), were thicker than 13.5 mm, just five (2.2%) were thinner than 5.5 mm, indicating there was a real minimum thickness, again likely to reflect a functional limit imposed by hafting materials or, indeed, the task at hand.

#### 9.4.1. Tool size in relation to blank type

Research elsewhere in the world on end-scrapers of similar size and shape has identified blank type as having a significant impact on end-scraper size, and has cited this in explanation of failures to find direct evidence of reduction stages in their datasets (e.g. Morrow 1997; Comstock 2011). In the current assemblage, however, there is little evidence that the choice of blank type affected the size of the tool. Interestingly the use of broken flake blanks did not appear to affect the size of end-scrapers, but, if anything, led to a greater uniformity in size.

#### 9.4.2. End-scraper size over time

The minimum length thresholds noted above are also clearly visible when the data is divided into Phases (Figure 53, top left), reflected in the left-aligned shape of the interquartile range (coloured boxes representing the central 50% of the data spread in each Phase group). Five of the eight Phases are perfectly aligned on the 24 mm mark, and generally show a similar spread of length measurements. Phase 3di appears to have a slightly different range and records the

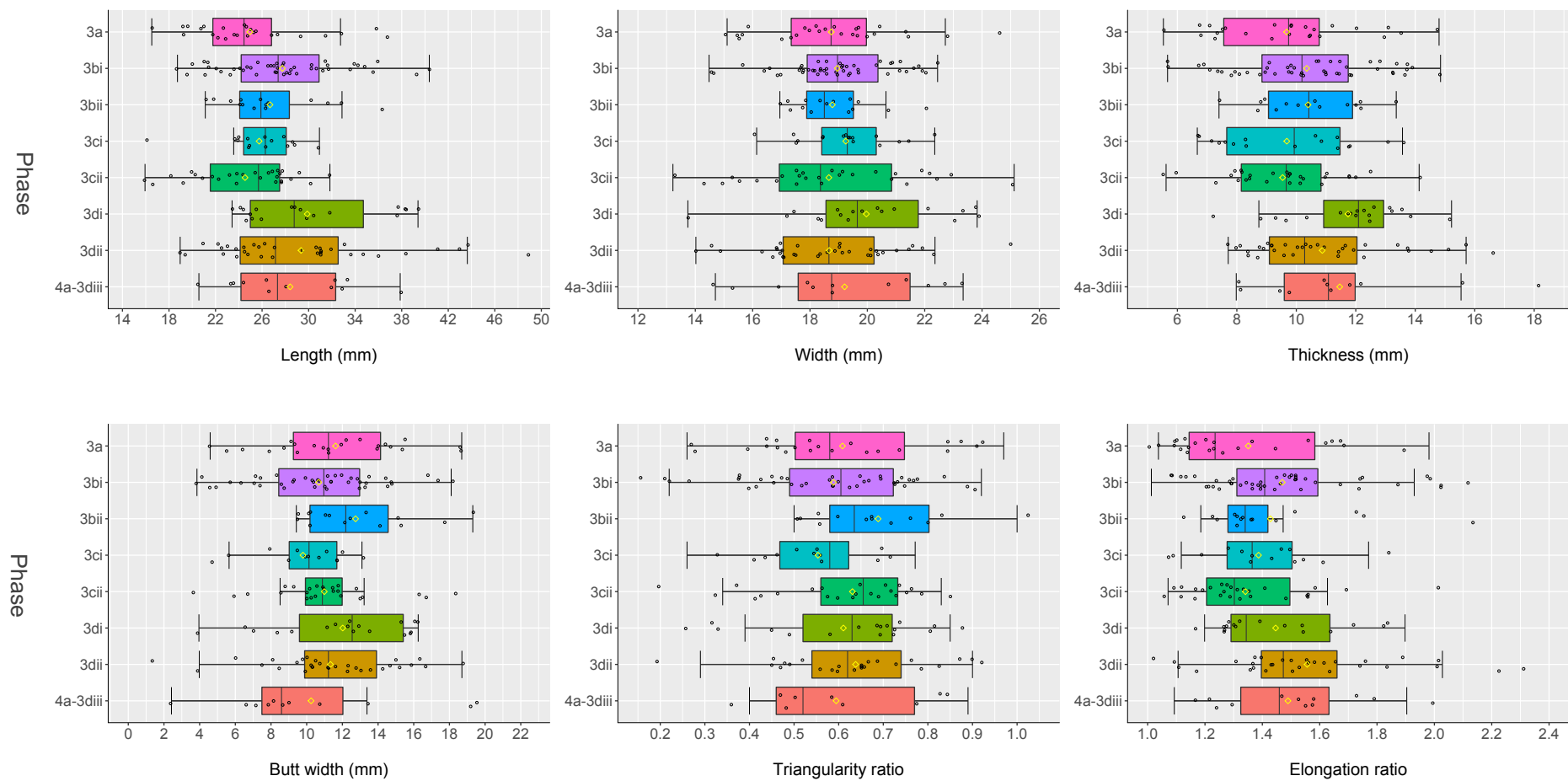


Figure 53. End-scraper size and shape over time in the Phase 4a–3a assemblage from Ntloana Tšoana.

highest mean value at 29.9 mm, yet its statistics are misleading as they are skewed by a small group of four particular long end-scrapers all between 37.5 and 38.5 mm and likely represent a particular depositional episode, as I described in more detail below (Section 9.11). Interestingly, it is the two Phases in which end-scrapers assemblages are *not* associated with restricted high-density hearth deposits but rather with extensive silt deposits across most of the excavation area (Phases 3a and 3cii) that are notably out of alignment with the rest of the Phases yet perfectly in accordance with each other. Both register a far greater proportion of end-scrapers falling below the 23–24 mm threshold than is seen in other phases, some 40.0% (N=10) in the case of Phase 3a and 32.1% (N=9) in the case of Phase 3cii, and both have virtually no examples in the longer end of the range over 30 mm – just four (16.0%) and one (3.6%) in Phases 3a and 3cii respectively. In direct contrast to these two Phases of extensive silt deposition, are the two large hearth features that make up Phase 3dii and Phase 3bi (Contexts (092–086) and (070–069)) in which 45.7% (N=16) and 31.3% (N=10) of end-scrapers are over 30 mm long. On one level this is a surprising pattern as one might expect such dense feature-associated clusters of scrapers to be the result of discard activities associated with tools at the end of their use-life. The story is obviously more complicated than this and is explored further below. For now, the important point is that the key diachronic patterning that is emerging is *not* one of slow incremental change over time, but instead one of variation associated with depositional context.

In contrast to length metrics there remains a remarkable consistency in width throughout all the Phases (Figure 53, centre top), with mean values varying no more than 1.3 mm (18.7–20 mm) across all eight Phases! This is entirely consistent with an assemblage of proximally mounted end-scrapers, with the distal edge forming the main working margin and thus the longitudinal dimension being the focus of most re-sharpening, use and breakage-related reduction. Hafting techniques suggested for morphologically similar tools in Palaeoindian assemblages from North America suggest that hafting materials (whether bindings or mastic) extended up to at least the limit of distal retouch and thus covered all but the working end, largely protecting the tool from lateral reduction.

Thickness also shows a similar consistency between the eight Phases, with median and mean values restricted to between 9.5 and 11.7 mm (Figure 53, top right), yet looking at the broader ranges there does appear to be a gradual increase in the proportions of thinner end-scrapers over time. In particular, there are more under 7.5 mm in the later five Phases, which not only increase steadily over time, but are entirely absent from the lower three Phases.

### 9.5. End-scraper shape

Shape in plan has been used as a defining feature, with ‘splayed’ and ‘divergent’ key terms in the literature to describe the tapered forms of LSA end-scrapers. Here, I use ratios of continuous variables to chart shifts in elongation ( $ER = \text{length}/\text{width}$ ) and triangularity ( $TR = \text{bit width}/\text{butt width}$ ) over time (Figure 53, centre bottom and centre right). Overall, there is a good degree of consistency, with mean values in all eight Phases between 1.3 and 1.6 (note higher ratios equal greater elongation), while in six Phases over 75% of all end-scrapers were elongated above a ratio of 1.27, demonstrating that maintaining this characteristic was important to the tool-makers and users. Rarely in these six Phases ( $N=13$ ) did end-scrapers fall below a length to width ratio threshold of 1.2. Unsurprisingly, considering the consistency in width measurements throughout the sequence, the two assemblages with a higher frequency of shorter end-scrapers, Phases 3a and 3cii, also register a greater proportion of less elongated tool forms – in Phase 3a alone there were 11 end-scrapers (44.0%) under this lower threshold of 1.2 – further adding to this emerging picture of a greater degree of scraper reduction during these times of extensive silt deposition.

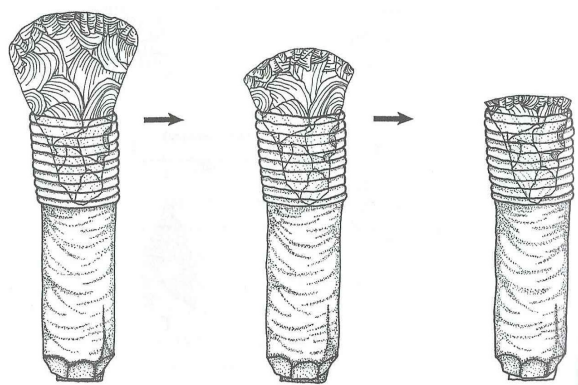


Figure 54. The hypothesised loss of triangularity (Andrefsky 2005: 36, Fig 2.17).

A look at the changing  $TR^{27}$  over time provides another measure for tracking differences in scraper form and may be a useful indicator of socket hafting (Comstock 2011: 26–27). In the current assemblage, however, there is very little change over time in terms of means, medians and interquartile ranges. In terms of the duration of individual tool use, a general assumption

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<sup>27</sup> The scrapers in the current assemblage are overwhelming tapered from the distal end towards the butt of the tool: in only 16 cases was the distal bit not the widest dimension of the tool. Ratios of 0.5 or below means the distal bit width is at least twice as wide as the proximal margin, so more tapered in plan, whilst a ratio closer to 1.0 means the distal bit width is equal to its proximal width, thus more-square, and less tapered in plan.

that can be tested is that the reduction of tapered end-scrapers length through retouch would lower the TR value. Following this logic, as the tools became shorter, they would lose the widest part of their distal ends and thus becoming increasingly square-shaped, as shown in the illustration of a Palaeoindian end-scrapers life-cycle in Figure 54. However, when TR values for the Ntloana Tšoana early Holocene assemblage are plotted directly against length (Figure 55) the picture that emerges is far from simple. If reduction in length was directly tied to reduced triangularity (as the scrapers became square-shaped through retouch), this plot would cluster in the top left part of the distribution. This is clearly not the case and there is no overriding correlation between these two measures, although there are some interesting patterns. First, at the small end of the scale, the 12 end-scrapers with the greatest proximal taper ( $<0.35$ ) are all over the 22 mm length threshold, and as the scrapers get shorter than this, right back to the minimum length recorded of 15.94, they do become increasingly square-shaped in plan. At the other end, only six scrapers are  $>30$  mm long with a high ( $<0.35$ ) triangularity ratio, suggesting that there may also be maximum thresholds for this measure.

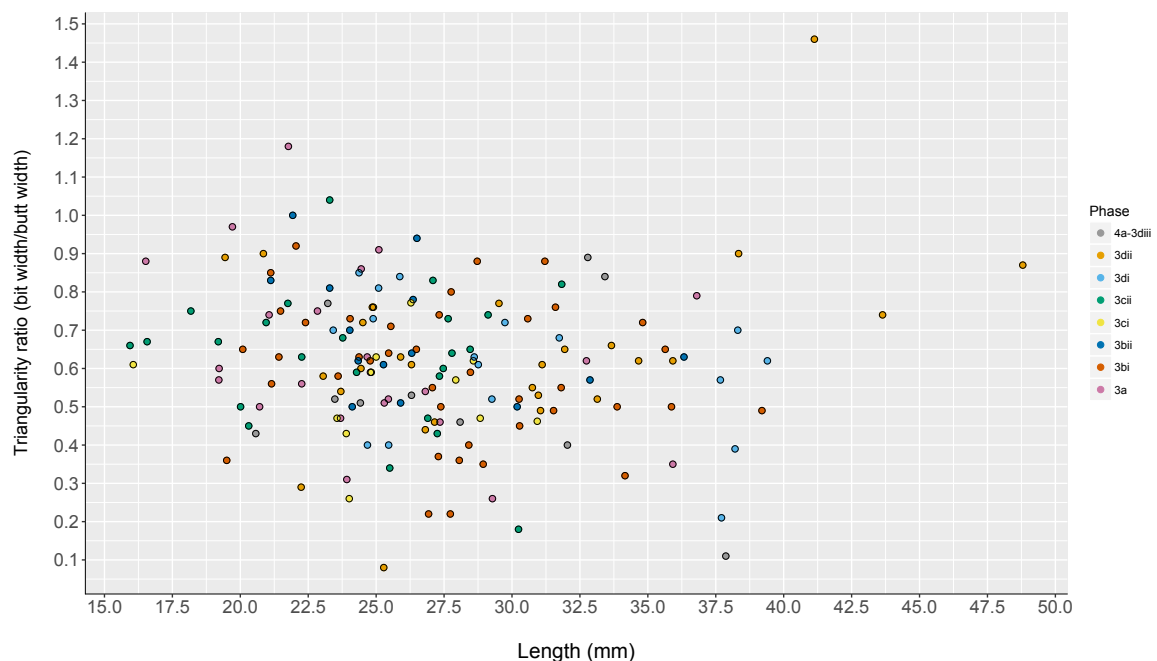


Figure 55. End-scrafer length and triangularity in the Phase 4a–3a assemblage from Ntloana Tšoana.

## 9.6. Hafting

The uniformity found in end-scrafer width, plus the lack of a direct correlation between triangularity and length, allows us to make some general assumptions about the loss of volume



during the use-life cycle of a tool and implies that most of the scraper, including its widest distal part, was protected from resharpening and use-related reduction by the method of hafting employed. From this basic starting point, we can begin to rule out some potential methods and construct some initial interpretations regarding the manner in which these stone tool elements were fixed to their handles. First, it seems extremely unlikely that the Ntloana Tsoana end-scrapers were hafted in the manner shown above (Figure 54). A more enclosed type of hafting, in which only the distal bit was exposed, is more probable. This would mean inserting most of the stone part of the tool either inside a wooden, bone or horn socket, or, as suggested by the small number of mounted scrapers preserved in the LSA record (Figure 56), surrounding it with resin (H. J. Deacon 1966; H. J & J. Deacon 1980; Binneman 1983; Jerardino 2001).



Figure 56. Photograph of a resin mounted scraper from Boomplaas Cave (H.J. Deacon & J. Deacon 1980: 32, Fig. 1).

This interpretation is further supported by the low proportion of transverse breaks with dorsal hinges – known as ‘direct bending fractures’ – associated with the tool snapping right across the middle between the handle and the working end whilst the stone element was in the haft. End-scrapers within Upper Palaeolithic blade assemblages commonly found on French Late Glacial sites frequently feature this type of break (Allard 2013: 16, Fig 8; Jacquier and Naudinot 2015: 277, Fig. 8). The risk of a stone insert snapping in this manner can be reduced with a more enclosed method of hafting that prevents the tool from flexing in its centre. It is also likely that the fairly uniform elongation ratio throughout the sequence and the rarity of end-scrapers with lengths more than twice as long as their widths reflects this concern with maintaining longitudinal torsion and resisting this type of breakage. Working out exactly how the stone element of a tool was fixed to its handle is always restricted by the degree to which organic substances are preserved and experimental work may thus offer the most promise for

testing some of these initial interpretations. The artefacts themselves, however, also provide further clues in the form of types of retouch at the proximal portion of the tool that may correlate directly to techniques of hafting.

Six attributes recorded modification of the proximal portion of the tool: lateral narrowing, proximal thinning of the dorsal surface, proximal thinning of the ventral surface, intentional removal of platform and bulb, part removal of platform and/or bulb, and, proximal retouch. The majority (67.6%) of the 185 end-scrapers with intact or partially intact proximal portions recorded modification of one form or another. The intentional removal of the entirety or part of the striking platform is also a common feature of early Holocene end-scrapers (Opperman 1987: 52; Mitchell 1993) and is recorded on 40.0% (N=48) of the 120 tools in the current assemblage for which this was a relevant attribute (i.e. those not missing this portion through breakage or because they were non-flake blanks). Considered as a whole, these results strongly support the interpretation that the majority of the Ntloana Tšoana early Holocene end-scrapers would have been hafted in an “end-mounted fashion” (Opperman 1987: 65–70; Mitchell 2000: 157).

When the different types of proximal modification are disaggregated and plotted against one another (Figure 57), four clear patterns stand out. The most obvious is the prevalence of lateral narrowing, recorded on almost half (>46%) of all Phase assemblages bar Phase 3cii and Phase 3dii. Second, is the distinct non-linear quality in relative proportions of the different methods of proximal modification fluctuating over time. The sharp fluctuations in the middle of the sequence, centered on Phase 3cii are particularly notable. Third, there is a partial negative correlation between different forms of modification, where one kind is most prominent, while another drops off in significance. Here it is important to note that the different techniques are by no means mutually exclusive – of those 48 scrapers with their platforms wholly or partly removed, for example, some 62.5% (N=30) also feature lateral narrowing and 45.8% (N=22) proximal retouch. The fourth pattern of broader significance is defined by the notable spikes in proximal retouch during Phases 3cii and 3a, the two non-hearth assemblages that also recorded higher proportions of shorter and less elongated end-scrapers.

The sharp dips in the frequency of lateral narrowing and prominence of proximal retouch in Phase 3cii are also worth exploring in terms of how they link to other assemblage characteristics. Whilst there is no notable difference in terms of dorsal scar pattern between Phase 3cii and the rest of the sequence, in terms of the blank types used this is the most varied of all the Phases, with only 37.9% (N=11) of its end-scrapers produced on fresh flake blanks; this Phase also includes by far the highest proportion of end-scrapers on broken blanks.

Tellingly, across the whole assemblage less than one in five (N=17, 17.7%) of this blank type featured lateral narrowing. The vast majority (N=34 of 44) of broken blank end-scrapers employ the break facet itself as the long side of the tool and Phase 3cii has the highest

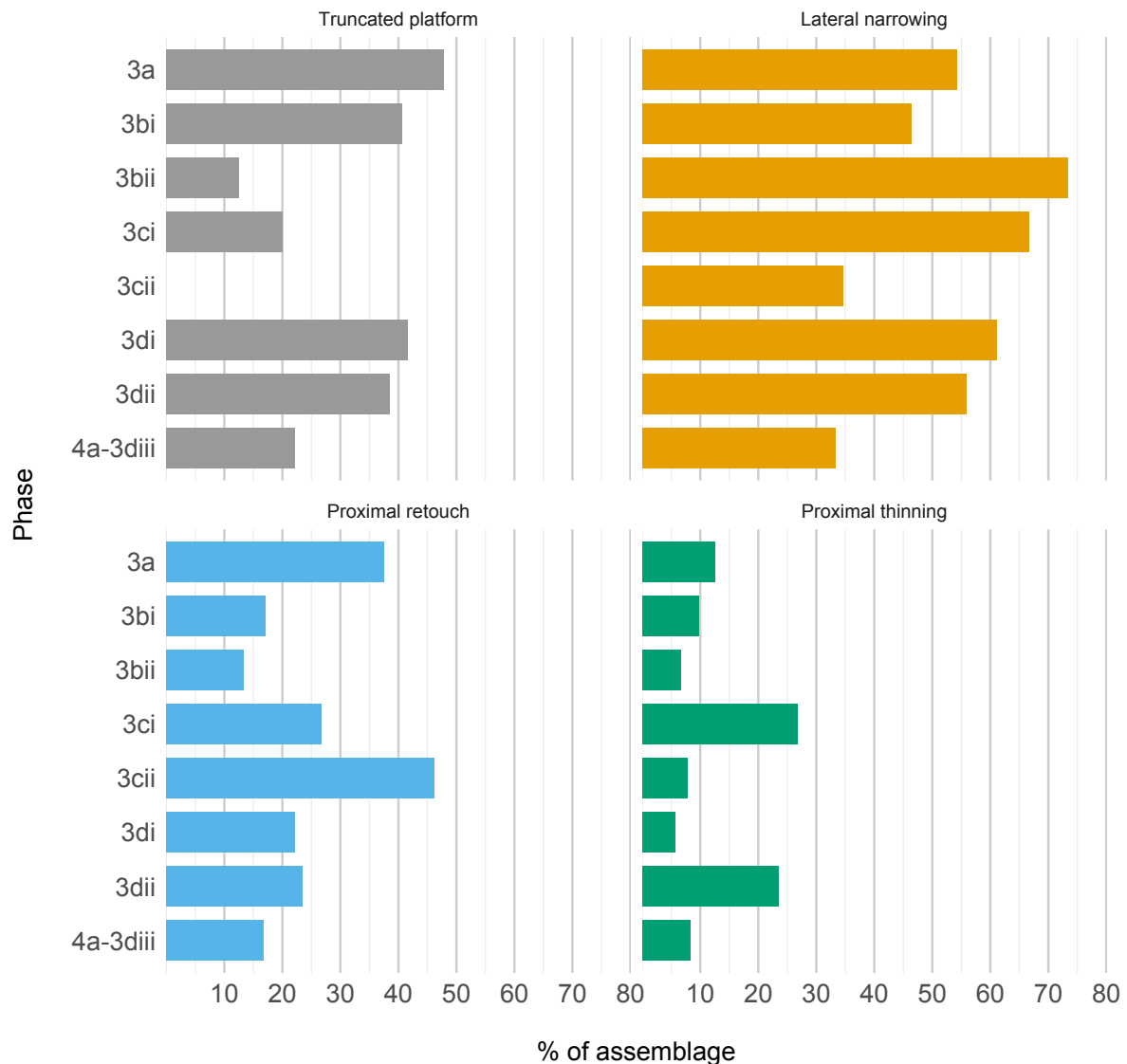


Figure 57. Variation in end-scrapers proximal modification and truncation over time in the Phase 4a–3a assemblage from Ntloana Tšoana.

concentration of broken edged laterals, some 34.5% (N=10) of the total, and only two of which have narrowed laterals, so there does indeed seem to be a relationship between the particular use of this blank type and the choice not to taper the proximal end of the tool. A link between proximal retouch and the reuse of broken flakes is also possible as half of the broken edged scrapers featured retouch on this part of the tool.

In summary, there are a number of potentially significant variations in proximal modification and it seems likely that at different times the relative importance of one technique

outweighed that of others. Thinking about how far these changes in practice are intimately linked to other pathways in the broader *chaîne opératoire* such as the choice of mastic, handle, binding material and application technique leads to a much richer interpretation and immediately implicates a range of materials, places, people and skilled knowledge. What also becomes clear is the need to look more closely at types of proximal modification, which at their simplest could be read solely as a proxy for hafting. However, when cross-correlated to other key end-scraper attributes it is possible to see the inter-relation with different chains of action, such as those within spheres of practice traditionally described as procurement like blank type selection, the wider implications of which I explore below. For now, there is more empirical work to cover. In the following section I take a closer look at the nature and extent of retouch on the lateral margins and provide more detail on this previously unreported practice of salvage and selection as an alternative to fresh flake production.

#### 9.7. Lateral margins

Two distinctive types of lateral edge modification have been recognised on early Holocene end-scrapers: ‘marginal trimming’ and ‘adze-like retouch’ (Mitchell 1993: 50). In Lesotho at least, the latter is so prevalent that it has come to define the regional sub-type of the ‘Woodlot scraper’ (Mitchell 2000). However, only Mitchell (1993), in his previous study of the Phuthiatsana sites, has provided any data on the proportions of these characteristics. Parkington *et al.* (1987) report on a large open-air scatter (from which the term ‘Woodlot scraper’ derives) dominated by end-scrapers with layers of step-terminated lateral retouch, and suggest, based on qualitative assessment, that this modification was a result of shaping rather than use, an interpretation supported by experimental work with adzes by Binneman and Deacon (1986). Similar observations, based on microwear analysis have been proposed by Seeman *et al.* (2013) for Palaeoindian end-scrapers from Nobles Pond, in Stark County, Ohio, which also show intense step-terminated retouch on their laterals. Despite this and the absence of any experimental results demonstrating that this type of modification results from use, there remains a tendency in the southern African literature to refer to the superimposed step terminations and crushing so often seen on the lateral margins as ‘wear’ (Wadley (2000b), ‘utilization’ (Wadley & McLaren 1998) and/or ‘damage’. There is also the suggestion, supported by a single 19th-century ethnographic account, that these tools were in fact hand-held dual-edged implements, with the side margins employed in wood as well as leatherworking (Bousman 2005), and elsewhere terms such as ‘scraper-adze’ (Cable *et al.*

1980) or ‘end-scraper with adze-wear’ (Wadley 2000: 20) are sometimes used, also implying a dual-purpose tool. Even when this intense lateral modification is described as retouch rather than wear, however, adjectives suggestive of utilisation such as ‘battered’ have added to the confusion (Mitchell 1993: 49).

Any definitive answer to these questions must await further experimental, microwear and residue studies. In lieu of this, and as a useful way to guide such research, I report here on a detailed study of retouch sequence, coverage, form, angle and superimposition in the Ntloana Tsoana assemblage. Rather ironically perhaps, once again the answer appears to lie in paying attention to unmodified parts of the assemblage and practices of salvage and selection as much as it does to the retouch itself.

#### 9.7.1. Extent and form

Considering that steep, heavily retouched lateral margins are said to be the defining feature of these tools (Mitchell 2000), it is perhaps surprising that only 57.8% (N=103) of end-scrapers in the current assemblage with intact margins (N=178) were modified along the full length of both edges, a figure that remains relatively constant over time. Interestingly, the second most common pathway followed by knappers at Ntloana Tsoana was to extensively retouch one side of the scraper leaving the opposite margin relatively untouched, a strategy that accounts for nearly a quarter (24.7%, N=44) of the entire assemblage and which during Phase 3cii became the dominant mode of edge modification, with 42.3% (N=11) featuring it. The picture is certainly more complicated than previously thought. Yet, before jumping to any further interpretations of hafting, function or use, we must consider the close correlation of minimal lateral retouch with the already mentioned high frequency of broken, natural and other non-flake edges such as core and nodule facets serving as tool margins in this assemblage. Almost all unretouched laterals employed non-flake edges (N=31 of 33, 93.9%), and more than three-quarters of broken edged laterals (N=28 of 34, 82.4%) featured minimal retouch. Edge selection rather than intensive retouch was also a strategy for the production of steep laterals in the struck flake portion of the assemblage, with 19 end-scrapers on freehand blanks and three on bipolar blanks featuring a cortical or other ‘natural’ steep edge, ten of which were either minimally retouched or left without modification. Four freehand blank end-scrapers employed an old platform in the same way. We can, therefore, identify two alternatives to retouch – the selection of broken edges and the targeting by knappers of suitable angles provided by natural surfaces or prior striking platforms.

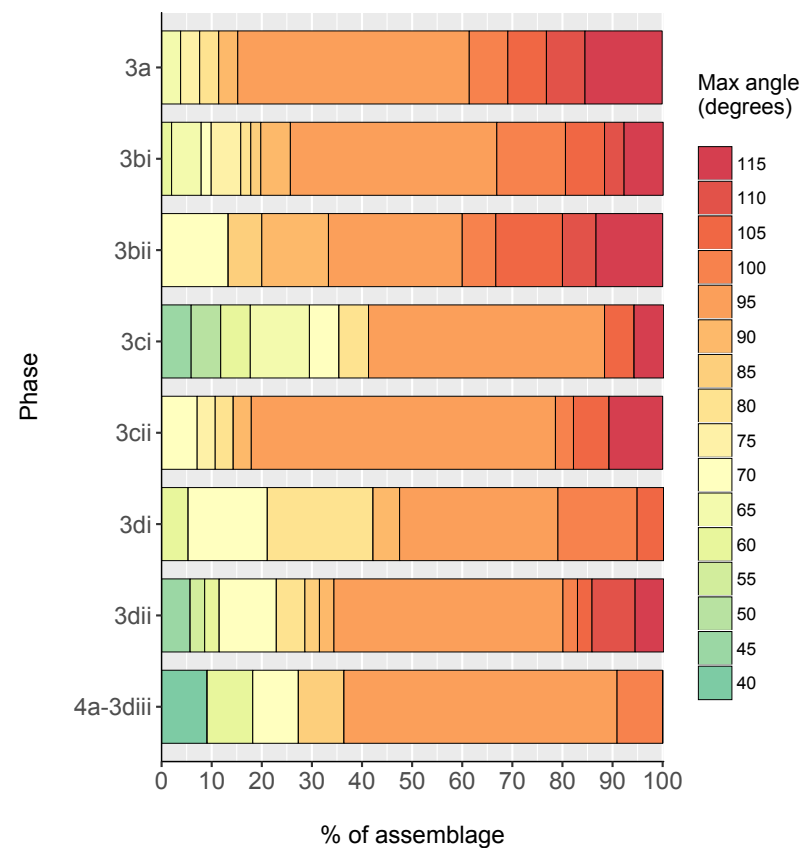
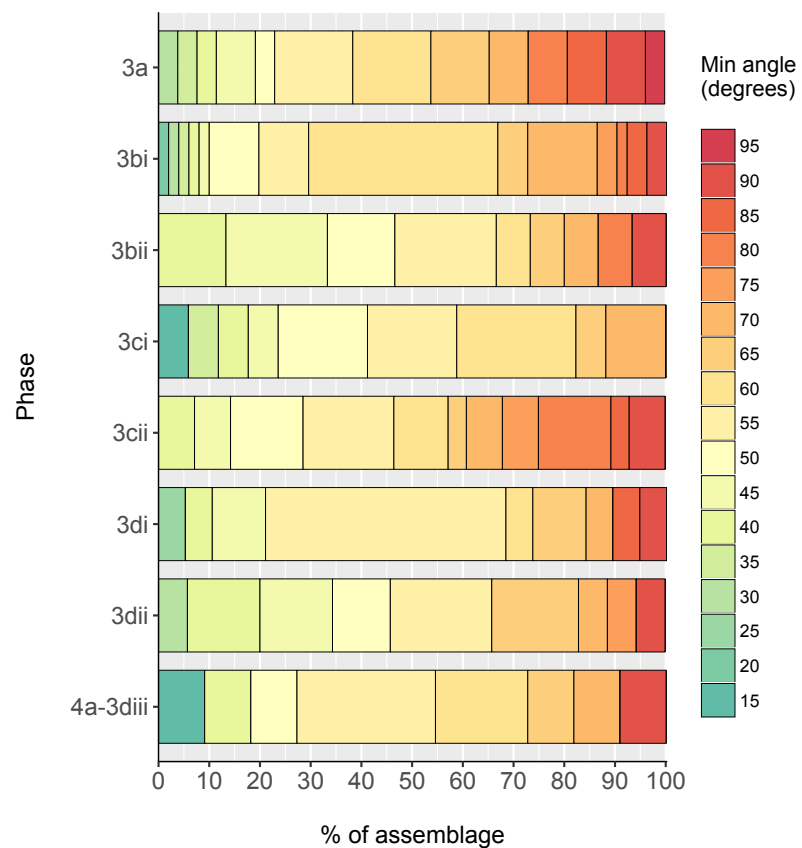


Figure 58. Maximum and minimum end-scraper edge angles in the Phase 4a–3a assemblage from Ntloana Tšoana. Note that the chart on the left uses the lowest measurement on either the right or left margin; the chart on the right uses the highest measurement on either the right or left margin.

Yet was this practice of using unretouched edges a sort of ‘natural backing’ (Parkington 1984) to facilitate the use of the opposing side *pace* Bousman (2005), or is it more likely to be a concern with shape and size for hafting purposes? A closer look at retouch form and angle can help resolve this question. In terms of the manner and sequence in which these scrapers were retouched, one of the most common features is the occurrence of a lower layer of large broad scalar removals that usually took the form of two or three removals per side, extended the full height of the tool edge, and were clearly intended to trim and shape the lateral margins. Some 88.0% of the entire assemblage (N=183) featured this form of initial tool shaping, a figure that remained fairly constant in each of the eight Phases (>84%). Bilateral shaping was more common than unilateral (N=98 of 193, 50.8% compared to 85 of 208, 40.9%), and in the four Phases from 3dii to 3ci, more than half feature this form of lateral trimming on both sides of the tool, with a notable peak in Phase 3ci, when their frequency reached a maximum of 75.0%. Layered, step-terminated lateral retouch was also found on the vast majority of end-scrapers in the assemblage (88.5%, N=185). Bilateral application is more common overall, with one notable dip in its occurrence during Phase 3a, where it was recorded on just 24.0% of end-scrapers (N=6), adding further to the conclusion that something different was happening at this time. Two other less common retouch types were recorded, ‘narrow’ elongated flake removals were present on 59 scrapers (28.3%), and ‘small scalar’ on 104 scrapers (50.0%).

#### 9.7.2. Angle

The vast majority of end-scrapers have consistently steep lateral margins from butt to bit with 87.6% (N=177) of both left and right lateral margins recording minimum edge angles of >45°. Considering the intensive, multi-layered nature of most lateral retouch, edge angles on individual scrapers are surprisingly uniform; with more than half of the total assemblage (57.3% of right lateral, N=110; 60.7% of left lateral, N=119) recorded uniform edge angles from butt to bit (minimum and maximum angles within 10°). There is also an assemblage-wide tendency for steep angles way beyond what was presumably useful in terms of a scraping edge, with the vast majority, some 75.2% (N=152), having at least one maximum edge angle >90°. Plotted against the different Phases (Figure 58), there is a broad, if staggered, linear trend for increasing edge angles over time, although the real pattern is the higher angles recorded in the youngest three Phases. Again, there is also a decidedly non-linear quality to these data, with the two non-hearth, extensive silt deposition phases (Phases 3a and 3cii) recording similar high

<i>Phase</i>	<i>Total number of scrapers</i>	<i>Number with broken edged laterals</i>	<i>% with broken edged laterals</i>
<i>3a</i>	26	2	7.7%
<i>3b(i)</i>	53	5	9.4%
<i>3b(ii)</i>	15	3	20.0%
<i>3c(i)</i>	17	4	23.0%
<i>3c(ii)</i>	29	10	34.5%
<i>3d(i)</i>	19	3	15.8%
<i>3d(ii)</i>	37	5	13.5%
<i>4a-3d(iii)</i>	13	2	15.4%

Table 9. Broken-edged laterals per Phase

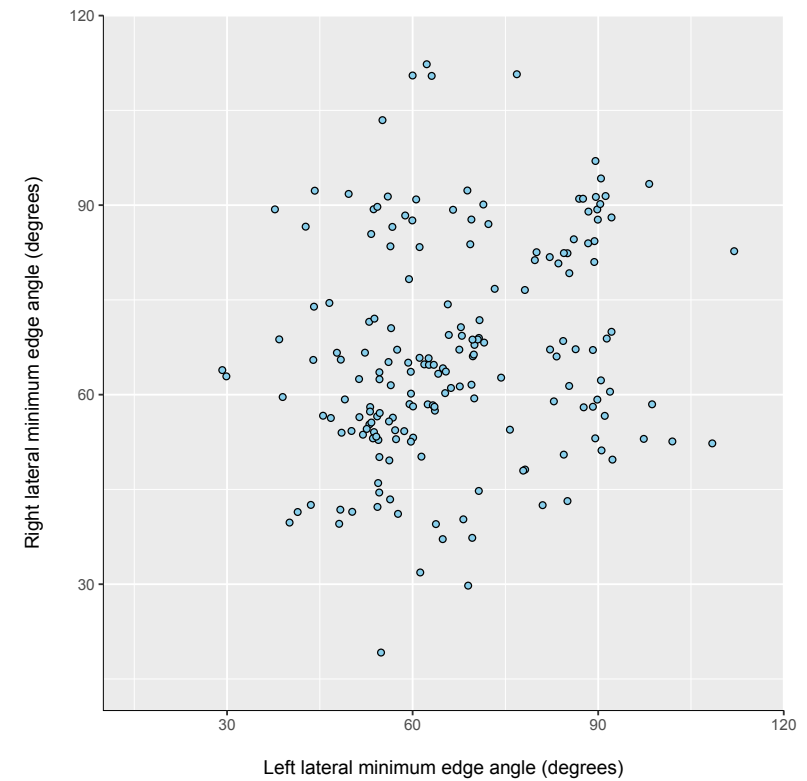


Figure 59. Left lateral minimum edge angle plotted against right lateral minimum edge angle in the Phase 4a–3a assemblage from Ntloana Tšoana



minimum angles. Interestingly, whilst the high angles in Phase 3cii are explicable in an immediate sense by the correlation with blank selection, with 10 of 11 end-scrapers with minimum angles  $>90^\circ$  achieving this by featuring broken or cortex covered edges, this is *not* the case with Phase 3a, so we may be seeing evidence here of two different pathways towards the same end. The two Phases in the central part of the sequence, Phase 3cii and 3i, feature exceptionally high and low angles respectively, a pattern of clear divergence as was also apparent in length and proximal modification.

The high frequency of end-scrapers with shaping or step-terminated retouch on only one lateral margin, and the substantial proportion with intensive retouch opposite a largely unretouched edge, suggested that there may be a tendency for asymmetry in edge angle, yet when left and right margins are plotted against one another (Figure 59) this is not the case. Left and right margins are generally positively correlated and tend to cluster with paired values for either side. The regularity of the lateral margins is, on the one hand, surprising considering the diverse range of blank types employed. Yet this is exactly what we would expect to find if lateral modification and selection was a result of shaping rather than use and thus fits well with the general impression emerging from this study that lateral margins were, in most cases, *not* employed as working edges.

### 9.7.3. Sequence

The case against the use of lateral margins as either an ‘adze-like’ tool is strengthened by the low number of end-scrapers (16.5%, N=20 of 121 measurable instances) in which lateral retouch superseded that found on the distal margin compared to 88 (66.9%) with a clear final phase of distal retouch. While the timing of these episodes of lateral over distal flaking is beyond our reach, we can identify a favoured chain of action moving from lateral retouch – presumably for shaping the tool – to the crafting of the distal end, only occasionally succeeded by additional phases of lateral modification. The idea that the lateral margins may have been equally important as a working edge on the majority of these tools thus looks increasingly unlikely. Counting the number of clear phases of lateral modification also provides us with a measure of retouch intensity and, while there is little chronological patterning with three or more distinct layers of retouch visible on 41.1–66.6% of lateral margins in all stratigraphic Phases, when plotted against edge angle a clear pattern emerges (Figure 60). End-scrapers with three or four layers of retouch are significantly more likely to have high edge angles compared to those with two layers. However, the sharp reversal in this trend seen at the bottom of the two

charts also shows that those minimally modified or unmodified edges are just as likely to feature high edge angles, which, as we have seen, are closely related to the types of blanks selected. This pattern helps to show that the selection of steep often broken or cortical edges may have been a technological choice based on desired qualities rather than simply an expedient use of materials to hand.

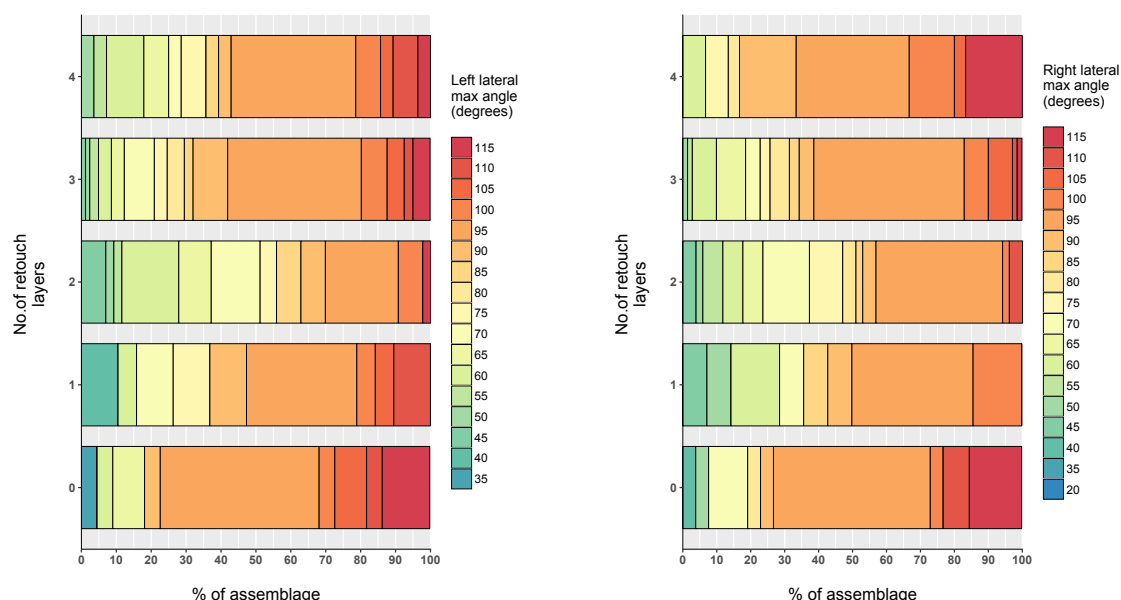


Figure 60. End-scraper retouch layers and edge angles in the Phase 4a–3a assemblage from Ntloana Tšoana.

## 9.8. The distal margin and tool life-history

As is to be expected in an end-scraper assemblage, the overwhelming majority, some 94.0% (N=188 of 200 with intact distal portions) were retouched along the entirety of their distal margin. Elongated narrow removals recorded on 86.0% (N=172) of the assemblage provide the characteristic convex tool end that makes end-scrapers so recognisable. As described earlier they are either centripetally orientated towards a centre point of the dorsal surface to make a ‘fan’ pattern or form a parallel, non-convergent, ‘fork’ alignment. Nearly all these tools (92.5%, N=185) feature layers of step-terminated retouch, and there are often consecutive sequences involving multiple phases of narrow and step-terminated retouch indicative of a sequence of resharpening events.

Minimum and maximum edge angles also differ markedly between lateral and distal margins, with notably steeper and more uniform edge angles recorded on the former. Less than half (44.6%, N=87) recorded maximum angles  $>90^\circ$ , well short of the 75.2% of lateral margins featuring the same. Surprisingly, considering the shorter length of the distal margins, edge

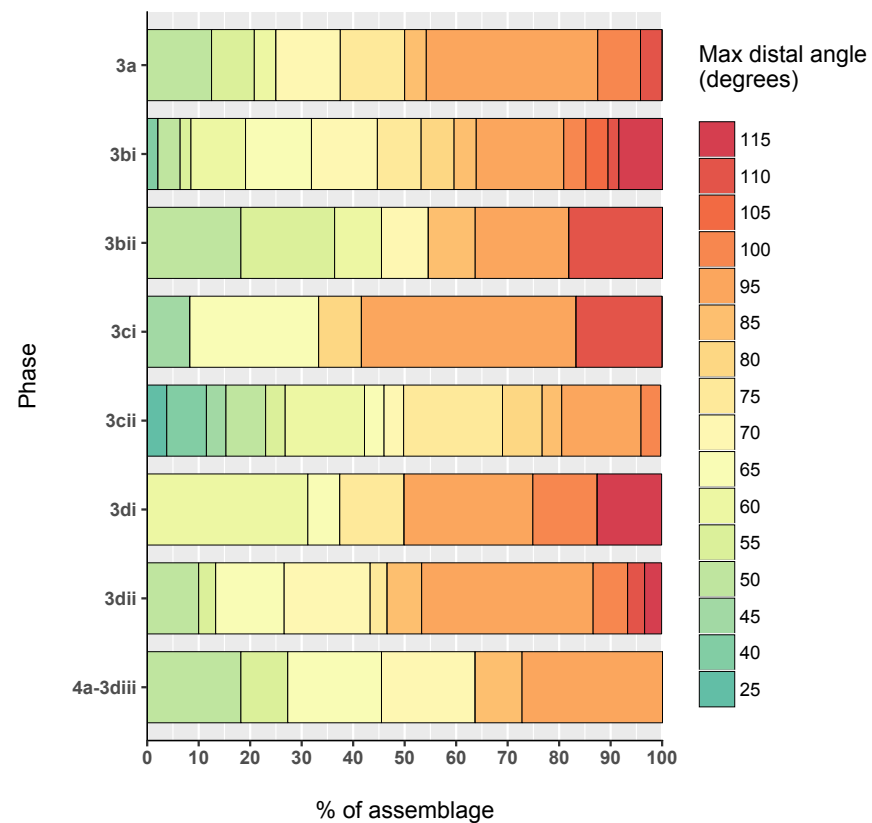
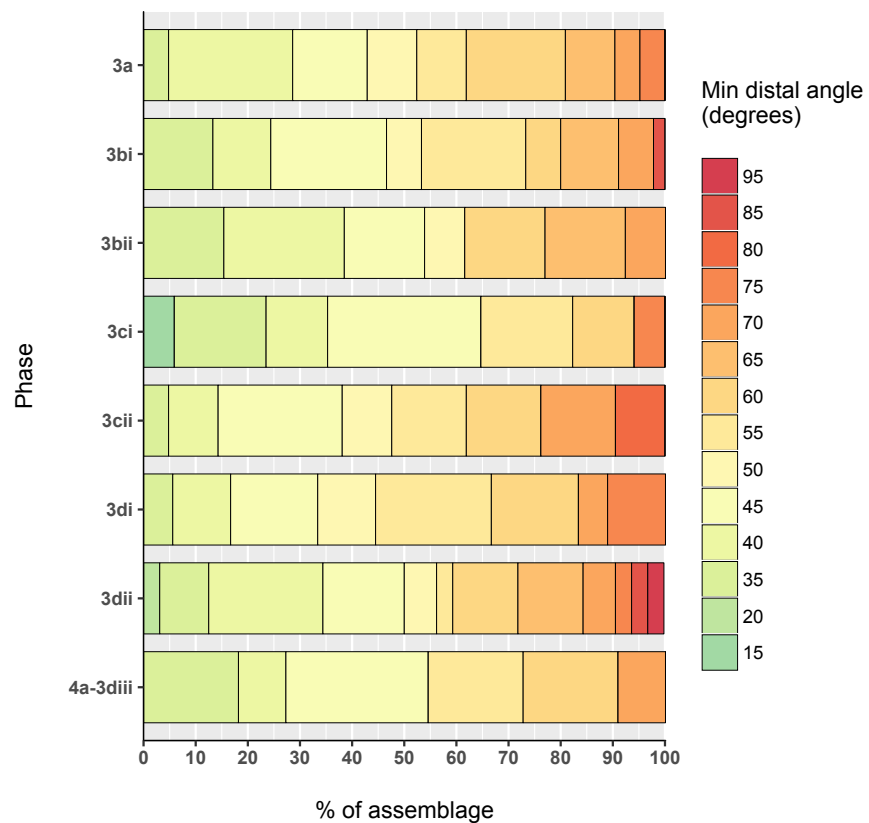


Figure 61. Minimum and maximum distal edge angles over time in the Phase 4a–3a end-scraper assemblage from Ntloana Tšoana.

angles were also more varied on individual tools, with uniform (within  $10^\circ$ ) values recorded on just 41.8% (N=82) of end-scrapers, compared to 57–62% of lateral margins.

As noted for lateral edges (Figure 58), the proportion of maximum distal angles  $>90^\circ$  also provides a notable peak and trough in the centre of the sequence (Figure 61), yet in this case the direction of change is reversed, from low to high edge angles between Phase 3cii and Phase 3ci. That one of the most heavily reduced assemblages, Phase 3cii (Section 9.4.2), recorded the lowest distal angles suggests that these two variables may not be as closely correlated as is generally assumed (Section 9.9). The high frequency of  $>90^\circ$  edges in Phase 3ci does, however, match the frequent occurrence of ventral notches, a correspondence that may be associated with the replacement of some blunted tools (Section 9.10.2).

Retouch layers also provide another window on the life-history of these tools. Not forgetting the methodological caveats involved in macroscopic layer counting, it is nonetheless interesting to trace a clear, albeit subtle, linear trend in this attribute (Figure 62), with the proportion of scrapers including more than three layers of retouch increasing by almost a third over time from Phase 3dii to Phase 3bi (from 54.3%, N=19 of 35, to 86.0%, N=43 of 50).

Unlike the correlation between maximum lateral edge angle and number of lateral retouch layers, there is no such relation between these two attributes on the distal portion of the tool, indicating there is more to consider in this case. The greater variation of angles found on individual edges may be the key to explaining this disjuncture and suggests that the layering of distal retouch was perhaps more often associated with ongoing maintenance of a working edge, with the opposite being true of the lateral margin, where layering of retouch was most likely part of initial tool-shaping and aimed at forming steep, blunt edges for hafting purposes. Indeed, when looked at in profile, multiple relic facets are often clearly visible on the distal ends of the tool marking the various cycles and stages of resharpening that the scraper has experienced. This idea of cycles of tool use and resharpening rather than a singular history of reduction has already been noted in respect to the uneven distribution of length measurement frequencies interpreted as thresholds related to the physical limits of the handle and is explored further below (Section 9.10).

### 9.9. Edge angle and length

A high-angle threshold for tool use at or around  $90^\circ$  has long been equated with scrapers close to the end of their use-life, with a number of studies correlating decreasing length directly with increasing distal edge angle (Brooks 1979, 1982; Morrow 1997). However, more recent

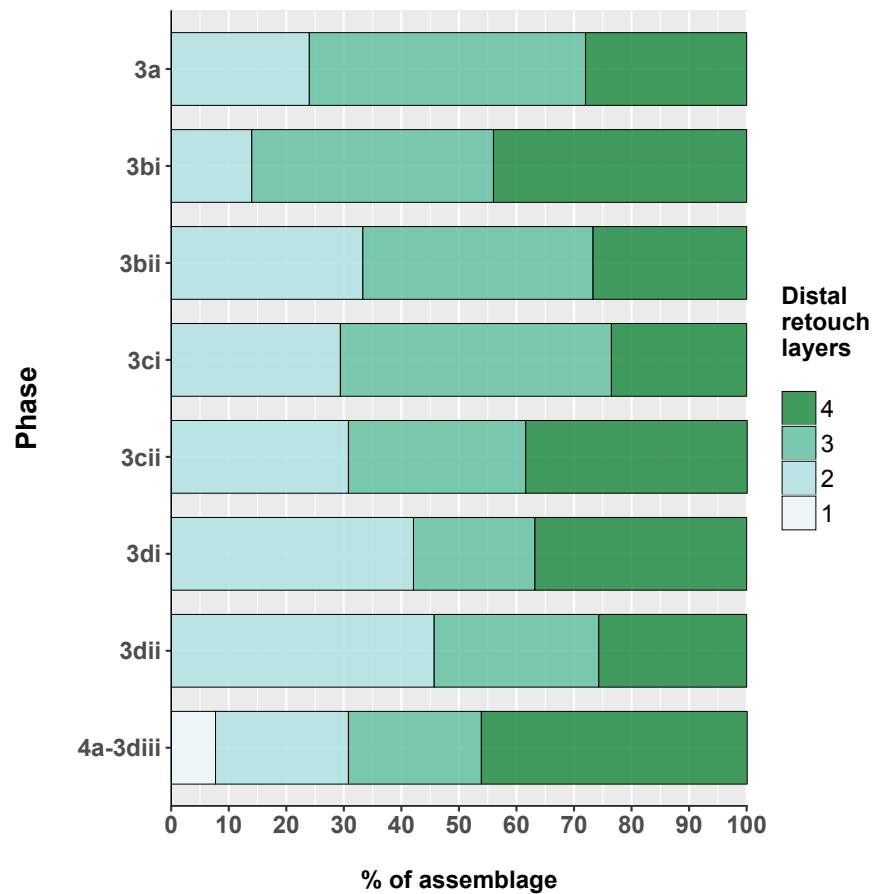
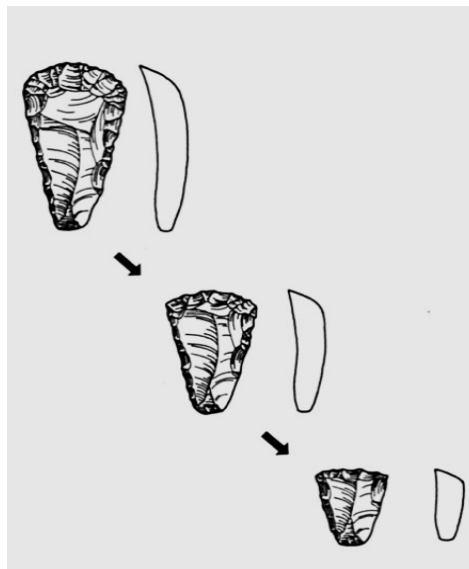


Figure 62. The number of distal retouch layers on the Phase 4a–3a end-scraper assemblage from Ntloana Tšoana.

Maximum angle	2 layers		3 layers		4+ layers	
	N	%	N	%	N	%
45–90°	30	56.6%	44	63.8%	29	43.9%
90–115°	23	43.4%	25	36.2%	37	56.1%
Totals	53	100%	69	100%	66	100%

Table 10. Distal maximum edge angle and number of retouch layers.

metrical studies on both Upper Palaeolithic and Palaeoindian assemblages have found this relationship to be weak at best (Blades 2003; Comstock 2011; Seeman *et al.* 2013: 423). Experimental work (using tools of similar proportions and dimensions to the current assemblage) has also demonstrated that it is entirely possible to resharpen hafted end-scrapers



*The reduction model assumes that as end-scraper length and widths decrease, distal bits are shortened and flattened, and edge angle increases*

Figure 63. The reduction model (Morrow 1997: 77, Fig.10).

with 90° working bits (Bohush 2013: 47). The range of factors affecting both edge angle and length therefore likely involves a complex array of variables that may not be directly related to use-life stage, such as the type of skin being worked (Seeman *et al.* 2013: 428–429) or the skill and experience of the people involved (Bohush 2013: 76). Based on the results already presented in this chapter we can add considerations such as varied blank types and the limitations imposed by hafting techniques. Indeed, we have just seen that one of most heavily reduced end-scraper assemblages, Phase 3cii, recorded the lowest distal angles indicating the relationship between edge angle and length is unlikely to be straightforward. A closer look at these two variables together reveals even more complexity and further demonstrates the lack of fit between the Ntloana Tšoana assemblage and the unilinear reduction model (Figure 63).

When minimum or maximum distal edge angles are plotted against length for the current assemblage (Figure 64), we can be confident that there is no overarching correlation between length and distal edge angle. On the one hand, while we can say that this likely reflects the ‘too many variables’ scenario presented by Bohush (2013) and Seeman *et al.* (2013), some

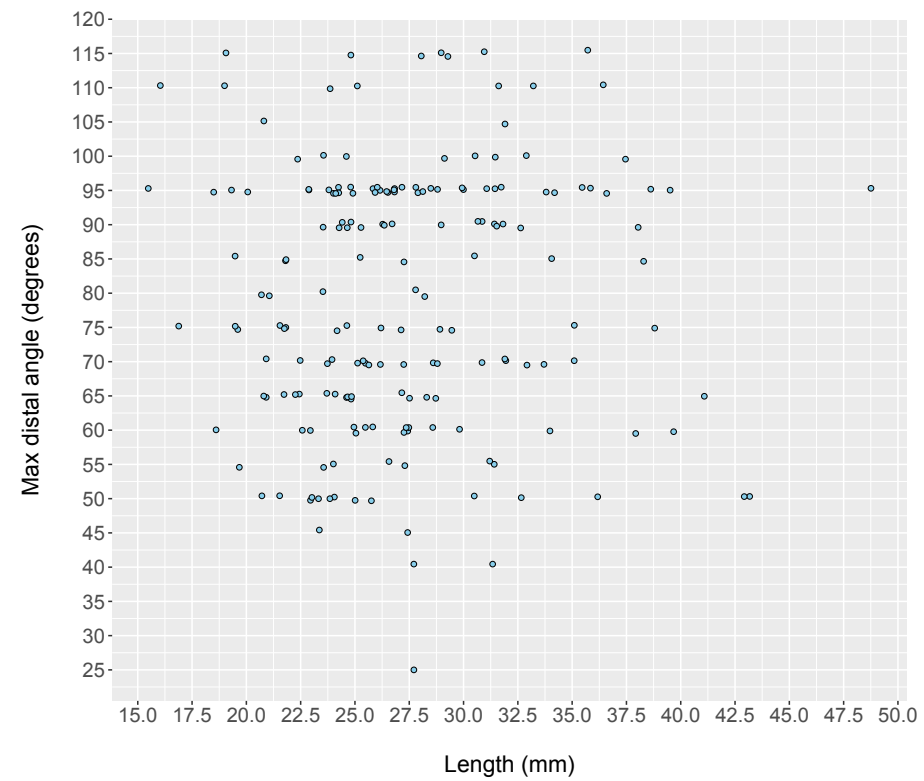
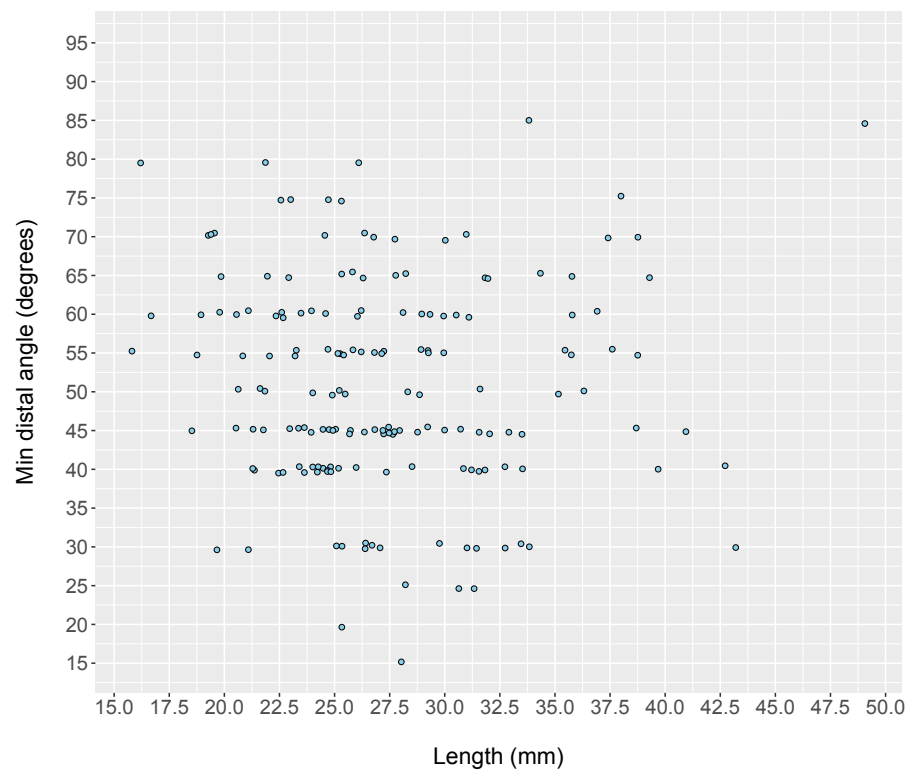


Figure 64. End-scraper length and distal edge angles on the Phase 4a–3a assemblage from Ntloana Tšoana.

patterning remains evident. First, there is a distinct clustering of end-scrapers with high maximum angles and low length measurements (90–95° and 22.5–29.5 mm) that appears to represent a convergence threshold for these two variables. Second, there is a sizeable proportion of longer end-scrapers >32 mm with edge angles >90° and, indeed, plenty of shorter end-scrapers with edge angles <45°. This is important as it lends support to the results of the knapping experiments reported by Bohush (2013) and suggests that researchers should be wary of placing too much emphasis on edge angle as a proxy for use-life. It does, however, indicate that tool life history is not a simple unilinear process and that typically an end-scrapers would lose and regain its working angle a number of times during a particular ‘lifetime’.

#### 9.10. Tool use-life stages and the question of discard

Despite its limitations the reduction model remains useful as a tool with which to think and most analysts agree that end-scrapers length in particular will, to some degree, provide an indication of reduction over time. Here I explore this further by looking at the interrelation of scraper length with bit depth, width and thickness, discussing whether we can identify different stages, and even reversals, in the use-life of a tool.

##### 9.10.1. A closer look at reduction

Bit depth is another attribute that should, according to the reduction model, decline as scraper use-life proceeds and a clustering of low bit depth values close to the minimum length threshold might be expected. As the scatterplot below (Figure 65, top) shows, these two variables are weakly correlated at least in the lower half of the length range, and there is a clear tendency for scrapers just under 28 mm (left of the dashed line) to have short bit depths under 5.5 mm. Interestingly, this is a few millimetres longer than the minimum length threshold of 23–24 mm proposed earlier, indicating that there may also be an additional length limit beyond which bit depth can no longer be rejuvenated and only becomes shorter. Another important pattern to note, highlighted by the flattening out of the regression line above 29 mm, is that the reverse of this pattern is not true – longer scrapers are just as likely to have short working bits. This supports the interpretation of multi-staged reduction outlined above, with scrapers becoming blunted without losing much of the length yet possessing the potential to be rejuvenated a number of times during use. The two histograms (Figure 66) show that bit convexity follows the same general pattern of a multi-staged reduction process, with flatter, non-convex distal bits almost as likely to feature on longer scrapers as they are on smaller tools, yet the longer



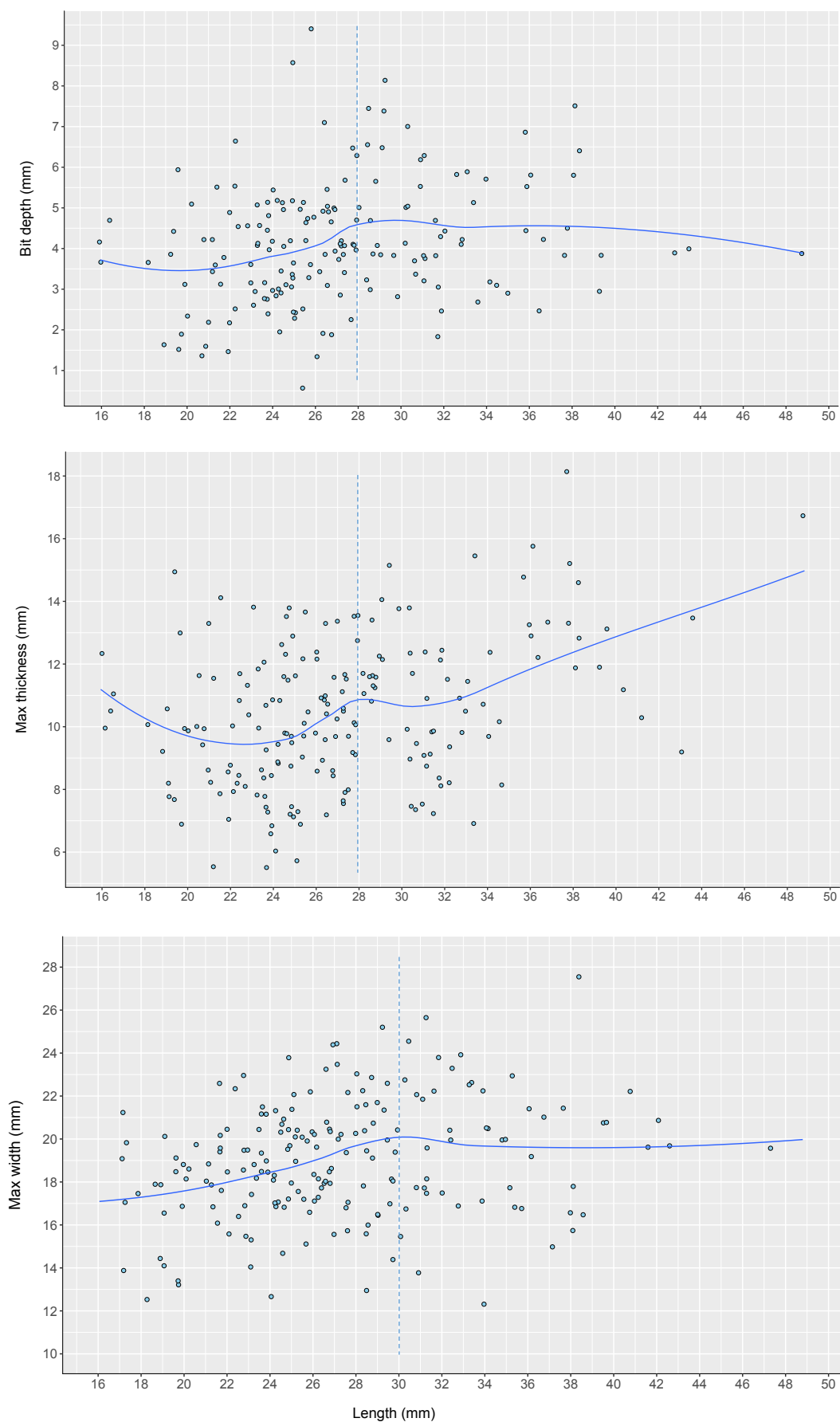


Figure 65. End-scraper length plotted against bit depth, thickness and width on the Phase 4a–3a assemblage from Ntloana Tšoana.

left 'tail' on the lower histogram shows that convex bits are almost never present when a scraper has been reduced beyond a certain threshold. In this case, the limit beyond which it was difficult to maintain even moderate convexity matches exactly the minimum length threshold of 24 mm.

In studies of unifacially retouched stone tools thickness is generally assumed to be the dimension least affected by volume loss through resharpening and, along with platform area, is thus thought to be a useful indicator of original blank size (Shott 1993; Blades 2003). If this were true of the current assemblage, and a standardised blank size was used for the production of end-scrapers, we would expect no correlation between length and maximum thickness, i.e., the shortest tools should be as thick as the longest ones. In fact, a scatterplot of these two variables in the current assemblage shows a moderate positive correlation (Figure 65, middle), though a notable stepped trend line is also apparent, suggesting that the relationship is far from consistent and, importantly for the current discussion, that different stages of tool use-life may be discernable. Any attempt to explain the overall positive trend must remember the particular character of Woodlot scraper assemblages. In contrast to Upper Palaeolithic end-scraper on blade assemblages, where thickness is thought to reflect blank size quite accurately (Blades 2003), the current assemblage is not a product of laminar blade production. Instead, the scrapers are made on wide variety of blank types, with a strong tendency for thick-ended pieces that taper from bit to butt. Thus, the distal bit is nearly always (in 98% of incidences) the thickest part of the tool. With this in mind, the correlation between these two variables can be explained, since loss of length through resharpening of the distal end would necessarily make the scraper thinner. The most interesting aspect of this thickness reduction process is, however, the stepped nature of the plot trend.

Accepting, of course, that assemblage-wide plots are not an accurate reflection of the complex life-history of an individual tool, it is nonetheless possible to sketch out the broad outline of the stages and suggest that tools >32 mm in length were more prone to heavier distal retouch and thus greater thickness loss. A middle-stage of reduction, between 32 and 28 mm, can also be identified, where thickness shows no notable decrease as the scrapers become shorter. Finally, the same secondary threshold described above for end-scraper bit depth can also be identified in this plot, with a steep decline of thickness values between 28 and 24 mm, suggesting a final stage of resharpening as the bit became too short due to the physical limits imposed by a handle and its fixtures.

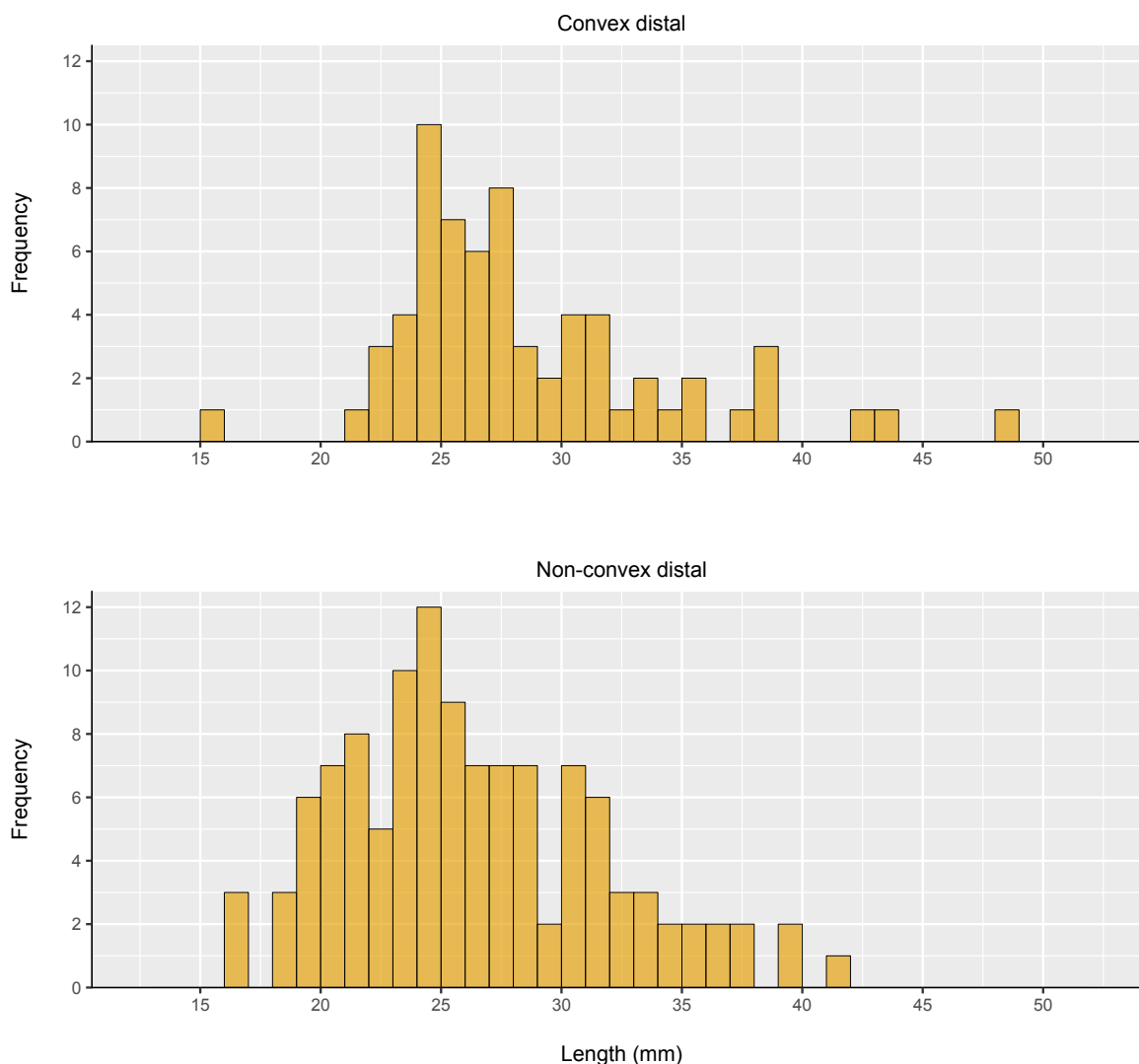


Figure 66. End-scraper length and distal convexity on the Phase 4a–3a assemblage from Ntloana Tšoana

Interestingly, there is a reversal in this trend after the 24 mm limit, at which point we see fewer and fewer of the thinner examples below 7.5 mm, and even begin to see more >10 mm. This is probably because the sort of removals required to remove thickness as well as length, i.e. long enough to rejuvenate the entire profile of the tool end – not just the lower edge – became increasingly difficult.

Somewhat surprisingly, considering the remarkable consistencies in width values throughout the different Phases, when plotted against length (Figure 65, bottom), a similar threshold can still be identified, though in this case it occurs at 30 mm. This is particularly interesting as earlier the standardisation of width values was interpreted as evidence that most of the stone part of the tool would not have been exposed to retouch due to it being inserted inside the haft itself, either in a wad of mastic or because it was socketed directly into the handle and wrapped with bindings. This explanation remains likely, particularly for scrapers in the early stage of reduction as shown by the lack of any relationship between width and

length for the first 20 mm or so of the plot range, yet a clear break with this trajectory in line with thickness, bit depth and bit convexity strongly suggests that something changed for the majority of these tools once they reached 30 mm in length. What this seems to have involved, judging by the sharp drop in width values under this limit, is additional exposure of the stone bit. Whether this was full detachment from the handle and rehafting is difficult to ascertain, but it seems more likely that it may have involved a peeling back of resin or bindings to enable further resharpening and use. Indeed, there is a convincing case to be made for just such a process, evidenced by the frequent occurrence of ventral notches typically located just below or at the juncture of the lateral and distal margins.

#### 9.10.2. Ventral notches

Ventral notching is a common feature of the Ntloana Tšoana assemblage, occurring on almost half (48.1%, N=99) of the 206 end-scrapers with intact undersides, yet aside from Bousman (2005: 205) noting its presence “*on some Blydefontein specimens*” it has not previously been described. Most notches are located on the distal half of the tool and usually just below the intersection of the lateral margin and tool bit. Ranging from 2.5–10.0 mm in diameter and up to 2.5 mm deep, they are formed by targeted hard hammer percussion to the lateral margin at its intersection with the ventral surface, though occasionally they can also be initiated from the dorsal surface truncating the entire thickness of the lateral margin as well as the ventral. Typically consisting of a deep semi-circular shaped notch on the ventral surface which also forms a distinct arch when the lateral is viewed side on. Nearly all of these notches post-date all other modification on the margins, indicating that they are the final adjustment to the tool after shaping and initial sharpening. Notches on the lateral margins are typically interpreted as anchor points for binding the stone tool onto its handle, but if this was the case we would expect to see these features on either side of the tool as opposed pairs, yet in the current assemblage only seven end-scrapers featured bilateral notching, with only one arranged in a form that reflects this sort of hafting technique. Their rough character, which appears to be the result of repeated striking in the same location, suggests, instead, that their purpose was the manipulation and/or removal of binding materials. The fact that there are no notched scrapers >38 mm, but otherwise no notable clustering of length measurements in the notched portion of the assemblage, is important and fits with the interpretation that these features were associated with mid-late stage tool maintenance.

As noted above, a growing body of evidence suggests that at least mid-to-late Holocene scrapers and adzes were hafted using a thick wad of mastic (H.J. Deacon 1966; H.J. & J. Deacon 1980; Binneman 1983; Jerardino 2001) and this certainly seems likely for the current assemblage based on the uniformity of width measurements and paucity of medial fractures. There is, judging by the tapered form and heavily proximal portions, every likelihood that the scrapers in this assemblage were also socketed, perhaps before being covered in resin and/or bindings. It is suggested here that it was this tight seal between the stone bit and the haft materials that the repetitive, yet targeted, ventral retouch was trying to break. Perhaps the aim would have been to create enough room with a notch in order to lever underneath the binding materials and expose more of the stone bit for further resharpening and use. In this way the resin would serve both as a protective buffer and quick release device for the handle, ensuring the body could be replaced easily without damaging the shaft of bone, wood or horn to which it was fixed.

Another aspect to this practice of notching the tool underside adds further depth to this interpretation as more than one-third of these notches (N=39) partly truncated the distal working bit (Figures 67 & 68), providing convincing evidence that at least in these particular cases it had been decided that the stone part *had* reached the end of its use-life and was *not* going to be resharpened any further. The stone tool body could thus be broken or levered out of its handle. These *terminal notches* are closely correlated with the shorter, smaller more-reduced tools, only featuring on those <34.8 mm and with the vast majority (75%) falling below the mid-length threshold of 28 mm. At the same time, however, terminal notches do not occur any more frequently on the shortest examples, under the 24 mm limit, telling us, in the first instance, that this was not the only way for the stone component to be detached from its handle, and secondly that end-scrapers may have often needed replacing long before reaching the general length limits identified here.

The proportions of ventrally-notched end-scrapers remains relatively consistent throughout the sequence (Figure 67), occurring on 33.3–56.8% of end-scrapers in (seven of the eight Phases and suggesting that haft maintenance was generally performed as and when required. A dramatic spike in Phase 3ci is, when ventral notching features on 83.4%, N=14) of the assemblage, also, however, strongly suggests that there were times when Ntloana Tšoana's residents may have concentrated their efforts to get their tools in order. The highest proportions

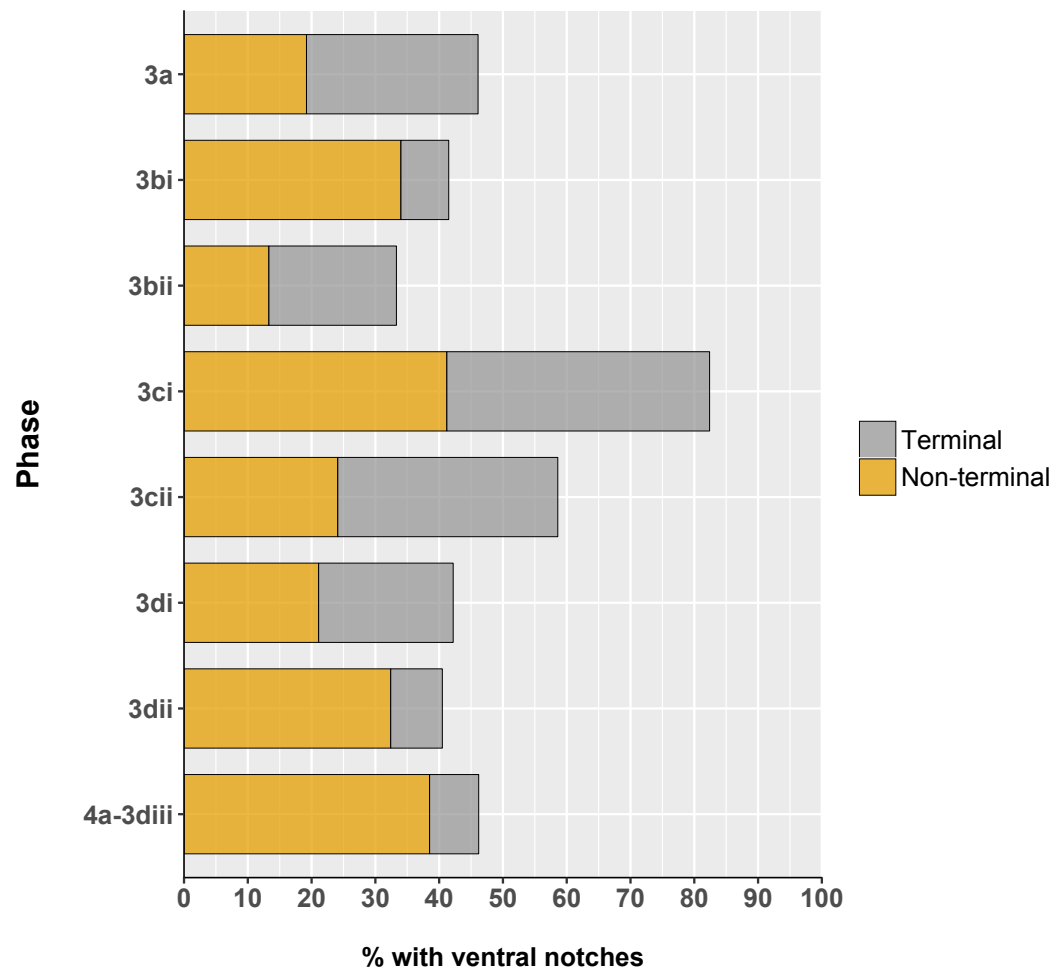


Figure 67. The proportions of terminal and non-terminal notches in the Phase 4a–3a end-scraper assemblage from Ntloana Tšoana.

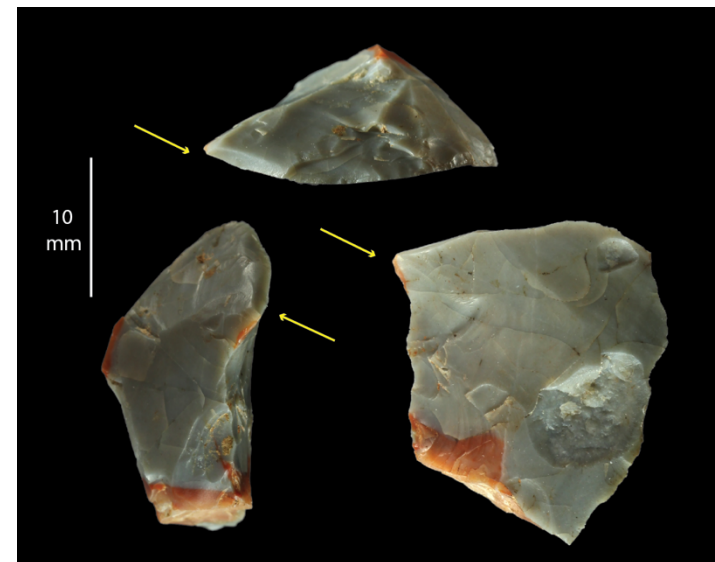


Figure 68. An example of a terminal notch shown from three sides on Small Find 177 from Context (088), Phase 3dii. Yellow arrows show the direction of strike. In this case there are also multiple notches along the right lateral margin

of terminal notching are also recorded here at 41.2% (N=7). Interestingly, the underlying Phase 3cii assemblage, which stood out as being distinct to Phase 3ci in many of the attributes explored above, also features a high frequency of ventral notching (58.6%, N=17), more than half of which (N=10) are terminal. Using length as the most reliable indicator of use-life, however, this pattern works, as both the Phase 3cii and 3ci assemblages were devoid of larger end-scrapers.

Phase	Total end-scrapers	Heat-shattered	
		n	%
3a	26	2	7.7%
3bi	53	14	26.0%
3bii	15	0	0%
3ci	17	2	11.8%
3cii	29	3	10.3%
3di	19	1	5.3%
3dii	37	13	35.1%
4a-3diii	13	2	15.4%
Totals	209	37	—

Table. 11. Heat-shattered end-scrapers in the Phase 4a–3a assemblage from Ntloana Tšoana

One additional unexpected pattern is that terminal notching is lowest in the two largest and highest density assemblages Phase 3dii (Contexts 094–086) and Phase 3bi (Contexts 070–042). This is an interesting observation as it is these two assemblages and that from Phase 3ci (Context 081) – i.e. those with the lowest and highest frequencies of terminal notching – which are associated with large hearth features and are the most spatially concentrated of all the assemblages described here (Figure 37). What we may be seeing here is two distinct sets of practices, one involving hide-working, the other, tool maintenance in preparation for future hide-working. If the large sharp-edged features in Phase 3dii and 3bi were indeed, as suggested in earlier chapters, semi-permanent leather-making stations that remained in place within the rockshelter for at least some months, then the virtual absence of terminal notching is particularly poignant as it suggests a clear separation – spatially, temporally, or perhaps both – between these different kinds of work.

Looking at one of the other clear indicators that an end-scrapers had reached the point of no return – heat fracture due to disposal in a hot fire<sup>28</sup> – the two large sharp-edged hearth features that make up Phase 3dii and 3bi feature far higher proportions than any other Phases (Table 11). This, plus the fact that there are plenty of end-scrapers at, or below, the reduction thresholds identified above within these features, tells us that tools were certainly reaching the ends of their use-lives at these hide-working features and were also being discarded there, raising the possibility that they may have become detached through use. It thus seems likely that these really are distinct sets of scraper-rich hearth features, one kind where end-scrapers use was so intensive that tools were breaking out of their handles and being disposed of in the fire, and another where careful replacement of the stone body to allow the maker to reuse the handle was the main imperative.

The identification of use-life stages and ‘end-of-life’ indicators does, however, need to be qualified. We cannot assume that either longer examples, those without terminal notches, or those without heat-shattered surfaces, were full of potential for future use, and therefore must have accidentally entered the archaeological record, or conversely that the smallest ones were totally exhausted and entered the archaeological record as intentional ‘discard’. In the following section I explore these two ends of the use-life spectrum in more detail, revealing a range of practices that join end-scrapers life-histories within broader chains beyond production-use-and-discard. Though the numbers for these less obvious practices are often low, by situating these small groups of tools within their specific depositional contexts, a broader understanding becomes possible.

#### 9.11. Other life-histories

Based on a general qualitative assessment, 27 end-scrapers appeared to have clear potential for further use and/or rejuvenation, while seven retained convincing evidence of being recycled into either a different tool or a core, and a further nine began life as a recycled tool. We have already seen that end-scrapers themselves were often made on salvaged broken pieces, even becoming – together with nodule collection – the favoured beginning point for end-scrapers production during the middle of the Ntloana Tsoana sequence. However, in most cases involving broken-edged blanks, we do not know the time-frame between the break and the moment of blank selection, meaning that they could well be selected from contemporary

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<sup>28</sup> Heat-shatter is defined here as the fracture of more than 25% of any surface or margin through exposure to high temperatures.



knapping and occupation debris. The nine end-scrapers that preserved evidence for retouch over patinated or previously burnt scars provide more concrete evidence that an understanding of the remains from previous occupations was important to the makers of these tools. Interestingly, three of the nine examples of old tool blanks come from the large linear hearth deposits that make up Phase 3bi, where there was convincing evidence that shallow pits were dug into the Phase 3ci hearth, Context (081), below (Section 8.7, Figure 46). Turning to the other end of a tool's life-history, these same Phase 3bi hearths also contained five of the seven end-scrapers that were recycled into other artefact types. The emerging picture then is that recycling may have been a more intentional act rather than a simple collection of old tools just because they happened to be there. These patterns also suggest that there were certain times when salvage and recycling increased in importance.

Of those twenty-seven end-scrapers deemed during the current analysis to have use-life potential remaining, four were from one small silt deposit, Context (084), that was sandwiched between two hearths. All were over 24 mm in length, but two were exceptionally long and almost exactly the same length (38–39 mm). Two unusual pock-marked hammerstones were also retrieved from the same thin body of silt, raising the possibility that these artefacts formed a set of tools, placed aside ready for further use and perhaps stored for a subsequent visit. As noted in Chapter 7, this was a very particular type of aeolian silt deposit, almost devoid of the frequent anthropogenic inclusions found in other more extensive layers of this kind and interpreted as a rare phase of non-habitation with fairly rapid silt accumulation, suggesting that this possible cache was quickly buried and never found again.

#### 9.12. Discussion: tracing form in practice

The work presented in this chapter is in its early stages and many lines of thought could have been explored further. It is clear, however, that combining such detailed metrical work with theoretical perspectives that seek to challenge conventional production sequence studies has great potential for enriching our interpretive framework. In addition to clearing up the confusion surrounding whether or not these tools were indeed end-mounted scrapers, the metric work presented here has shown how steep angles and straight longitudinal edges were the likely aims of the characteristic intensive lateral modification. Just as importantly, it has also shown that unretouched edges appear to have been selected and salvaged for just these qualities rather than out of expediency – a clear instance when form was as much a product of the material context, as it was a template in the mind of the knapper. Importantly, neither the intensive

shaping of end-scrapers to a predetermined form, nor its alternative – the search and selection involving an encounter with previous occupation debris or a secondary gravel source – was a more ‘formal’ practice than the other. Indeed, the use of natural edges was a key characteristic of the wider stone tool making at this time that included implements as diverse as large naturally baked knives and even crystal quartz pieces.

The variety of blanks is matched by a diversity of approaches in end-scraper production, yet the remarkable stability in certain dimensions over time is telling and suggests that some notion of final form did remain important. These tools were carefully shaped, but there was more than one way to achieve this. Two clear chains of action can, however, be identified. In the case of freshly struck freehand blanks this often involved two longitudinal prior removals to create a central dorsal ridge, targeted to remove a thick sloping dorsal. Conversely, for broken edged and nodule blanks a right-angled edge was chosen to create the desired wedge-shaped or rectangular profile. These were both then typically followed by at least some lateral shaping and blunting, on one or both sides as necessary, and then the long careful narrow removals from the distal margin. This is where the form of the tool, specifically in terms of distal width and convexity, appears to have been paramount and some generalised concept of what was required would have been important. In the case of the freehand blanks, the maker would most often target the central ridge, while in the case of the wedge-shaped broken or nodule blank retouch would be aimed at the high point on the unretouched break facet. The proximal portion of the tool would then be shaped, thinned and narrowed. The greater variation in tool-butt widths and proximal modification suggests that there was less standardisation of form on this end of the tool and perhaps that the stone body may have been tailored to individual hafts depending perhaps on its origin – another instance when the ideal form to material trajectory is likely to have been less linear and predetermined.

Despite the variety of technological pathways involved in this tool class – bearing in mind that those just sketched are but two among many – and the dense clusters found in particular places at Ntloana Tšoana, the care invested in their production and the creation of a standardised form suggests that it is unlikely these tools were just casual throw-away pieces. The identification of a possible cache certainly tells us that at least some of these tools would have been stored for later use and that they may even have become valued items. There is, however, also evidence that the organic components of the tool would have been valued above the stone attachment. Indeed, it seems very likely that the targeted terminal strikes on the underside of the stone body were aimed specifically at preserving the handle and/or the other mineral and organic components on the other end of the implement.

Perhaps the most important aspect of this single-artefact-type study is the level of detail it can provide when combined with high-resolution stratigraphic understandings, in particular at Ntloana Tšoana the distinction between different sorts of large hearths-with-scrapers. It now seems that clusters of scrapers can be associated here with specific tool refurbishment practices *or* with the debris of hide-working itself. Importantly, too, the practice of salvage and recycling also appears to be a key aspect of this end-scrapers tradition and has been shown to be closely associated to these larger features.

In Chapters 7 and 8, we saw how sequences of hearth and pit-making were embedded within non-linear processes operating on larger and smaller scales than the sequence itself. This chapter has tackled the same problems at the level of the single artefact type. Again, the realisation that a concept of form can never really be extracted from its context of inception (Section 4.2.1) and all the non-linear encounters that this entails has been shown to be paramount, even within what may appear to be a relatively bounded chain of production-use-discard. This chapter has shown that there was unlikely to have ever been a time when either the task at hand and its attendant materials – the hide itself or the bone handle into which it must be fitted for example, or the actual debris structures and spaces of past tool mending, making and use – were not actively guiding the maker in what needed to be done.

This understanding that intentionality always works in tandem with an *other-than-conscious* awareness of the world forms one of the central themes of the final chapter, where I further outline the approach which I have named, *an archaeology of attention* (See also sections 2.11 & 4.5). The aim being to use this perspective to sketch out a new understanding of how these sedimentary and artefactual traditions may have worked together over the long term.

## Chapter 10.

### Remaking the past in early Holocene Lesotho

#### 10.1. Introduction

The aim of this chapter is to bring some of the broader ideas about place, time and the nature of hunter-gatherer society outlined in the first half of this thesis closer together with the stratigraphic and artefactual work presented in the second half. I begin by revisiting the problem of hunter-gatherer temporality and the alternative ideas explored in Chapter 2 along the lines of an *archaeology of attention*. Here I expand this framework in two directions. First, by emphasising the inseparability of conscious *intention* from other-than-conscious *attention*. Second, by turning this awareness back towards archaeological practice, recommending that we take the material archives that we work with seriously and accept their inherent more-than-sequential qualities. I highlight the interpretive potential for thinking about human habitation as fully enmeshed within a sedimentary world where forces of accumulation and erosion are a constant and vital part of the anthropogenic story. I then return to the problematic separation of scales and, using examples from this thesis, argue for an inter-scalar approach founded on the intersection of time, place and practice. Weaving all these ideas together, I outline a fuller interpretation of early Holocene hide-work at Ntloana Tšoana and develop a theory of how traditions may have worked over longer time-scales. Finally, I propose a number of paths forward for the revitalisation of LSA rockshelter archaeology, emphasising the potential of these new directions to counter the global master narrative of ever-increasing complexity.

#### 10.2. Temporality, attention and sedimentary effects

The underlying problem raised in the beginning of this thesis was the long-standing tradition of using deep time hunter-gatherers as the baseline for the grand human story of progress. Despite attempts in southern Africa (Mazel 1989a, 1989b) and elsewhere (Bender 1985a) to move beyond the conventional idea of hunting and gathering as an adaptive stage, and to reposition Stone Age archaeology as the study of social relations communicated through symbolism in artefact form, the majority of hunter-gatherer pasts failed to register sufficient evidence for these new themes. Of course, the use of the symbolic realm as a proxy for the social on a scale of increasing complexity that ultimately leads to our own western society, was never going to offer much for the study of societies with seemingly ‘simple’ material culture repertoires (Gamble & Gittens 2004). Moreover, a focus on the demarcation of fixed

boundaries between the symbolic and otherwise was simply incompatible with the growing body of anthropological work that had revealed these divisions to be unhelpful modern constructs (Ingold 2000; Descola 2006). Even the recent post-constructivist archaeological literature, aimed at breaking down these dualisms and directing interest towards the study of actual human-thing relations rather than a focus on their representations, has ended up emphasising human-made things and, in so doing, has once again relegated hunter-gatherer pasts to a ‘time before’ (Hodder 2012, 2016; Olsen 2010). These models contend that during the course of human history there has been an increased dependency on things due to a replacement of tasks carried out by humans with complex technologies. Dependency is also linked to the western concept of delayed returns on property – hunter-gatherers are said to be the blank slate who either lacked, or had very little of, these temporal relations with the world of things. Inspired by Ingold’s critique, both of this material culture bias (Ingold 2007, 2012), and his call to search for hunter-gatherer temporality, not in the accumulation and ownership of things, but in practices of remembrance (Ingold 2000, 2005), I outlined a way of working that I have called an *archaeology of attention* (Section 2.12).

An archaeology of attention works on three levels. In the first instance, it helps emphasise a way of thinking about hunter-gatherer relations with the world and with time. It concerns the more reciprocal, co-constitutive relations found between people and the non-human world, along the lines of the animist ontologies that ethnographies of many small-scale hunter-gatherers, herders and horticulturalists have revealed (Hallowell 1960; Ingold 1996; Bird-David 1999; Viveiros de Castro 1998). Paying attention is about respecting and being responsive to encounters with all aspects of the world, not just those entangled relations with human-authored ‘things.’ It is about treating animals and materials in the proper manner; it is about investment of trust (Ingold 2000, 2005). Such a perspective offers huge potential for rethinking the residues of everyday life found in rockshelters, including stone tools, animal bones and hearth remains. An archaeology of attention can, for example, trace chains of action with strong similarities to ethnographically attested ‘respect practices’ involving the particular treatment of certain remains, as demonstrated by the Phase 4b hearth sequences at Ntloana Tšoana (Section 7.2). It also helps us add a deeper level of interpretation, encouraging us to see more than simply linear chains of action. Seemingly mundane acts of cooking and disposal become temporal gathering processes, simultaneously reflective and generative of the sorts of relations of trust that bind past, present and future together.

The second way that this notion of *attention* can reveal interpretive potential is by questioning simplistic understandings of *intention*. By this I do not mean that the study of

intentionality needs to be abandoned. On the contrary, I have described hearth and artefact-making practices in this thesis (Sections 7.2 & 9.12) that included clear instances of intentional design, and I have argued, following Conneller (2012) and, in opposition to many contemporary theorists (e.g. Ingold 2012; Lucas 2012), that such intentionality is a recognisable phenomenon worthy of our attention. At the same time, however, I also find agreement with these writers that one can never truly isolate an original design concept in the mind of a human being, nor is it possible to identify a clear beginning and end to such a process. Every action, every thought, always brings something along that pre-exists. And it is in this way that attention should be seen as the other side of intention that is constantly in motion, even when we think we may be operating solely with personal intent. We are always paying *attention* to what is around us, and to what we have already seen and experienced, even if we are not entirely conscious of the fact. Furthermore, as Lucas (2012) very powerfully explains, the residues of all social practice (which for me include the memories of them), always themselves hold something back for reformulation into new assemblages.

The third way that I have thought about an archaeology of attention is concerned with developing a practicable way of writing about past hunter-gatherer relationality from rockshelter records. As demonstrated by the detailed stratigraphic and artefactual accounts that make up Chapters 7 and 8, this involves taking the complications and contradictions of the archaeological record seriously. This means accepting outliers and respecting the intrusional (Chapter 5). It means paying close attention to often overlooked relations between things, such as: the likely tempo between the deposition of one context and another, the durational qualities of a layer of silt, for instance, or, the survival of charred remains on the top of a hearth (Chapters 7–8). It is also about being reflexive during the process of constructing the archaeological record, and it is for this reason that I have frequently moved back and forth between empirical description, interpretive text, and methodological discussion in this thesis.

Related to this is a more general move towards greater recognition of the embeddedness of human lives within active processes of sedimentation and erosion. The conceptual barrier that prevents us from achieving this in archaeological writing appears to stem from the requirement to always assign specific authorship either to humans *or* to natural phenomena, whereas the reality is that both people and non-anthropogenic forces are often acting in tandem. As noted many times in Chapters 7 and 8, more often than not it is impossible to distinguish one from the other, but rather than view this either as a blight on the record's integrity or a flaw in archaeological procedure, I have argued that it is likely to reflect the more complicated scenario of life as lived. In Chapter 8, for example, instead of assuming that an absence of

stratification is the result of a problematic mixing of distinct units, interstratification between otherwise horizontally intact hearths and surrounding silt deposits was viewed as the result of simultaneous formation processes, i.e. that humans were making the fires whilst the silt was accumulating. Neither, however, is it often as simple as claiming contemporaneity – rockshelter contexts are often over- or under-lying one another whilst simultaneously being interstratified. Indeed, such relations can be said to have characterised the entirety of Phase 3cii–3bii at Ntloana Tšoana (Section 8.3–8.6).

The important point here is that such relations should not be seen as a problem. If there are signs that, for the most part, finds patterning and sedimentary structure appears relatively intact, and one can accept a degree of movement between contexts at their boundaries, then these interlensing sediments can be rethought as interpretive tools, a *more than* rather than *less than* sequential relation. In Phase 3bii at Ntloana Tšoana, for example, it was the recognition of partial interlensing between a set of ordered combustion features (Figure 45) and the underling silt layer that provided the crucial temporal detail – that there was little or no time for stabilisation of the silt or erosion of the hearths. This, in turn, indicated that the whole series of likely hide-working and domestic practices associated with these features would have taken place over a very short period – perhaps no longer than a few weeks. When one accepts these more imbricated, merging, yet also partially sequential, relations between archaeological entities, the limits of chronological and stratigraphic models (Sections 6.5, 6.8 & 7.7), and the need to augment them with qualitative description, becomes increasingly apparent.

Thinking about sedimentary bodies as active forces that would have impacted directly on the humans they shared a site with, rather than simply containers for artefacts, or proxies for other processes, also allows the often missing experiential component of stratigraphic accounts to emerge. The impact of the catastrophic flooding events in Phase 3e–3diii and Phase 3a at Ntloana Tšoana (Sections 7.3 & 8.8) are perhaps the most compelling example of this, when the inundation of the entire area and the deposition of thick layers of silt that followed, would no doubt have had a dramatic effect on how the shelter and its surroundings were perceived. The sensation underfoot of walking into a place like Ntloana Tšoana with its eroded surfaces, exposed hearths and hollows full of ancient artefacts (Section 4.5 & 6.1; Figures 1–2); the smells of old fires and the sounds of stone fragments crunching, would have all vanished in an instant. The sensory disorder that would have followed such an episode must have been a transformation of place without parallel for Ntloana Tšoana’s early Holocene residents.

A sense of loss, however, was only one part of the story. Resilience, adjustment, and the importance of carrying the old ways forward in spite of the floods, are all responses revealed

through the stratigraphic analysis presented in this thesis. Excavation of the Phase 3e–3diii and Phase 3a fluvial silts suggests that rapid re-occupation followed inundation in both cases. The nature of this reoccupation, however, differed between these two flood events. The Phase 3diii post-flood occupations were markedly different to anything that came before or after, suggesting a period of rapid adjustment followed the flood in this case. In contrast, the between-flood deposits in Phase 3a contained surprisingly high end-scraper frequencies, indicative of the strength of association between Ntloana Tsoana and its hide-working traditions (Section 10.4), that appear to have been maintained despite the dramatic changes.

### 10.3. Practice and scale

The argument that archaeologists should be working at a scale commensurable with human experience rather than the multi-millennial timeframes of evolutionary process was one of the key positions that polarised theoretical archaeology in the 1990s (Section 2.6). Though there is now a welcome softening of such polemical statements, the issues raised about what is a relevant scale are still very much with us. The review of southern African LSA research presented in Chapter 3 found one of the key barriers to the formation of new perspectives was this separation of different scales of analysis thought to be suitable for particular sorts of questions (Section 3.6). I argued that it was for this reason that the study of the early Holocene remained largely concerned with defining a unilinear trajectory out of the Pleistocene. I also linked this hierarchy of scales to the persistent use of what Parkington (1993: 95) referred to as the “geological model” of archaeological production that was interested in comparing increasing or decreasing material culture frequencies between two or more chrono-stratigraphic blocks. The alternative high-resolution archaeology advocated by Parkington (1992, 1993) and Mitchell *et al.* (2006), which arose in response to their dissatisfaction with these coarse-grained approaches, offered a range of insights yet, ultimately, only further entrenched the separation of scales. Whilst not denying the existence of different processes operating at varying temporal and geographical ranges, it seems to me that the southern African LSA requires an approach aimed at connecting longer-term, slower processes with the actual things humans do at ‘ground-level’ (Section 3.7). For example, the stratigraphic narrative presented in Section 8.4 showed that by paying attention to microscale details such as the interstratification of hearths with silt layers, and variations in the survival of charcoal and ash, alongside broader observations of patterning in finds density, it was possible to link a seemingly disconnected hearth on top of a body of silt to longer-term cycles of social coalescence and fragmentation.



The linking up of individual features with longer term process is one of the vital elements of a sedimentary history and it is only by situating assemblages within their full depositional context that it becomes possible to raise broader questions about place and tradition to which I now turn.

#### 10.4. Rockshelters and the remaking of tradition

Another central theme of this thesis that may have the potential to offer a future direction for LSA archaeology involves a rethinking of the concept of place. In Chapter 5 I outlined some of the enduring contemporary associations between people and place in the Phuthiatsana gorge. I highlighted particular qualities such as the availability and volatility of water, meteorological and sedimentological forces, as well as more experiential properties, such as the visual and auditory experiences of being in a place. This is what makes a gorge environment or a rockshelter a place and, importantly, provides such locales with their potential to act as creative forces in long-term processes of cultural reproduction and change. Rock art research has paved the way for many of the interpretive ideas that follow on from this notion of place by stressing the agentive properties of the rock face itself (Lewis-Williams & Dowson 1990). I have made the case that we can extend the concept of redolent forces within the rock walls to the floors and indeed all material assemblages within rockshelters. Importantly though, my understanding of these forces is not dependent on a specific symbolic grammar as is found in the rock art model of shamanism; it takes its creative force as much from the repetition of meaningful everyday practices in a particular location, as it does any form of abstract spiritual belief.

As stressed above, the sedimentary histories presented in Chapters 7 and 8 were written specifically in order to draw out connections between different temporal scales. One of the key achievements of this approach has been the recognition that for a duration of many centuries Ntloana Tšoana had become strongly associated with hide-working. It seems to me apparent in the way the shelter was used, and the manner in which the hearth features and distributions of tools closely match each other over these long time-spans, that there was a form of citation or referencing happening at an inter-generational level. I must be clear here, however, that what I mean by citation or reference is not the same as the understanding of those working with concepts of ‘social stratigraphy’ (McAnany & Hodder 2009). I do not mean *only* entirely deliberate physical connections between one intentional act and another (Section 4.4.1), although as we have seen in the careful re-digging of hearths (Section 7.2) and salvaging of

old tools (Section 9.11), *more* conscious acts certainly played their part. What I am referring to here, though, more specifically, is an other-than-conscious understanding about a place. One that is generated as to a large extent by sensory experience and encounters with previous remains during everyday life and may have been carried forward across the generations in a largely unknowing manner. In this way, we can imagine how, over time, a shelter such as Ntloana Tšoana, could become deeply entwined with a particular tradition such as hide-work. The distinctiveness of this pattern is further highlighted by noting that the partly contemporaneous and equally well-preserved early Holocene levels at Ha Makotoko, excavated in 2010, included only 12 Woodlot end-scrapers in total (Mitchell & Arthur 2014: 218). Moreover, a whole suite of different habitation patterns found there, including evidence of ostrich eggshell bead manufacture, that do not feature at all at Ntloana Tšoana, indicates that Ha Makotoko, with its equally distinctive qualities of place (Section 6.1), may also have become associated with a particular set of practices over time.

One of the ways in which I have thought about how Ntloana Tšoana's hearth-with-scraper features may play a role in the reproduction of tradition over the longer-term (Sections 7.5–7.6) is the concept of 'bundling' or gathering of time (*sensu* Pauketat 2013). And, importantly, some particular places, kinds of things and practices, appear to be better suited to bringing together different scales of process. Composite tool making, hide-work and the construction of large combustion features are three kinds of assemblages that have this quality in abundance. Yet such a generalised concept is of limited utility unless we can build up an understanding of some of the specific chains of practice that would have been involved. How might people have actually encountered the remains of past action and what might the effects of this have been?

### 10.5. Hide-making at Ntloana Tšoana

What began as a very general, but important nonetheless, observation that there were some very large hearth features with high frequencies of one type of tool, and that these are repeated over time, can now, as a result of the combination of stratigraphic interpretation and detailed lithic work presented in this thesis, be expanded into a multi-dimensional interpretation. We now know, for instance, that the three major-hearth-with-scraper features likely had slightly different sets of practices associated with them. The earliest of which, in Phase 3dii, appears to have been fixed in place for a substantial amount of time and may have been associated with a superstructure of some kind (Sections 7.4–7.6). Its more homogenous lithic assemblage and

low-density faunal signature suggests that it may have remained largely a sole function feature, perhaps built for a particular stage of large-scale hide-work. In contrast, though the Phase 3bi feature contained similar evidence for intensive hide-work, it also included a remarkably different high-density faunal assemblage and a retouched tool assemblage that was just as indicative of knifework as it was the use of scraping tools (Section 8.7). Perhaps here, then, we have a signature of a greater part of the hide-working chain of practice involving the earlier stages of animal processing. Interestingly, this extended chain appears to have occurred over a shorter time-frame than the earlier Phase 3dii example. The third large feature, in Phase 3ci (Section 8.5), again recorded an even more specific form of assemblage associated with very high levels of burnt bone and a very particular set of tool maintenance practices, likely involving the renewal of end-scraper hafts (Sections 9.10 & 9.12). Finally, there is the most distinctive of all these features in Phase 3bii, consisting of a thin linear spread of charcoal over the top of the neat series of hearths with associated stakeholes, interpreted as a possible frame for smoke-treating hide (Section 8.6).

From these specific empirical observations and initial inferences, we can think beyond the material chains we encounter in the archaeological record and expand the framework to include a much wider set of relations between people, places and animals. Most obviously perhaps, we can imagine the daily routines of clothes making and maintenance, including the working of outer and under garments, hats, and bags. Further equipment would have included anvils and hammer stones, bags to catch the resharpening flakes, tools to chop the wood, firestones, brushes, firesticks to control the heat, and containers to help mix the resin with fat, blood and ochre. All of which would have had to be ready to hand simply to maintain a working edge and secure the haft. Prior to scraping, the stretching out of the hide would have required either a wooden frame or a cleared and pegged area involving additional chains of materials and actions to construct and maintain. We also begin to see how almost the entire community together with the shelter floor and walls would have been drawn into this process. Such an operation might well take place in a designated area as seems to have been the case with the large repeatedly used features described above that appear to have been maintained over many months. Further depth is added to this account when we consider that such practices likely involved a whole set of ideas about the correct way to deal with materials and how to act with respect and modesty (cf. McGranaghan 2012) when, for example, animal parts are brought into the shelter, or indeed, the additional chains set in motion once a cured hide is handed over to those members of the group charged with shaping, stitching and decorating the garment. The number of people within the group of all ages and gender combinations swells when we begin

to build up this expanded chain of composite tool construction together with a skilled craft activity such as skin preparation. We begin to see that such operations intersected with numerous other spheres and were valuable parts of the fabric of early Holocene life.

Yet the purpose of thinking this out on paper is not simply to humanise the narrative, neither is it to make the statement that things were more complicated and ‘entangled’ (*sensu* Hodder 2012) than might have been assumed. Instead, I would like to suggest that thinking through these interlocking processes allows us to envisage how a place such as Ntloana Tšoana may have played a crucial mitigating role in the fluid ‘anti-structural’ (Guenther 1979, 1999) socio-material worlds of mobile hunter-gatherers as centres of memory creation. The thought experiment sketched out above does, indeed, suggest that a rockshelter may have served as a kind of node to anchor socially fragmented hunter-gatherer groups by providing specific places to do certain things. Yet this is only part of the answer. In order to understand exactly how such a place may have worked in combination with craft traditions such as the hide- and tool-making practices described above, it is necessary to remind ourselves of the other-than-conscious practices of *attention* operating at the microscale in everyday action.

Interestingly, the artefact-level analysis presented in Chapter 9 was as informative in this regard as the stratigraphy itself. Close observations of the sorts of blank types employed and the way steep edges were produced showed that even in this most-formalised part of the early Holocene lithic repertoire, linear chains of intentional action always existed alongside material encounters with the stone itself, the handle, and the residues of past episodes of tool making and use on the shelter floor. Indeed, the same mutually constitutive relationship between intentional citation and those material encounters associated with other-than-conscious *attention* has already been mentioned in relation to the longer-term repetitive construction of the large-hearth-with-scraper features. In my opinion, rockshelters became special places for particular sets of practices because their preservation and exposure of past residues greatly facilitated and even exaggerated this sort of mutuality. Taking this a little further, I would argue that this was so effective precisely because of the social fluidity that likely existed in the early Holocene of Lesotho, and the importance of constant reinvention of cultural practice.

Indeed, Widlock’s (2001) ethnographic research amongst the *Hai om* in northern Namibia has focussed on exactly this aspect of form in relation to contemporary trance dance practices and found that it is precisely the fact that it does not have fixed physical or symbolic form that it has become such an institution. Indeed, this is how I imagine the stone- and hide-working traditions of deeper time to have worked with participants over the generations,

constantly transforming and reshaping the form that practices took, with either the actual material dimension or even the meanings associated to a practice open to reinvention at every turn.

## 10.6. Conclusions

In this concluding section, I briefly outline the four key principles of the approach used in this thesis, which I have called an *archaeology of attention*. I then summarise how this way of working has helped me tackle some of conceptual and methodological barriers impeding the study of southern African LSA hunter-gatherers. More broadly, I describe how it can also contribute an alternative way of viewing relationality to counter the progressivist narratives of ever-increasing human-thing mixing over time.

First and foremost, an archaeology of attention rejects the notion that temporal relations are dependent on the ownership of things and disputes that any past or present human group had more or less human-to-human *or* human-to-world relations than any other. Second, it recognises that past hunter-gatherers would have had a looser understanding of intentional human authorship than the concept of things-as-material culture implies and argues that archaeologists should also strive to think in this way. Third, in contrast to some relational perspectives, the framework employed here retains the concept of intention whilst maintaining that it is never possible to separate this out from a broader other-than-conscious and, always in motion, process of paying *attention*. Fourth, it views linear sequence as always being related to more-than-sequential processes from which it can never be separated.

I have employed this framework to interpret the residues of hunter-gatherer occupation from Ntloana Tšoana and shown a number of ways of thinking around the conceptual barriers facing LSA studies. In particular, the anxiety expressed about the non-sequential properties of rockshelter deposits has been turned into a positive attribute. Similarly, I have been able to draw out the more-than-sequential aspects of encounter and salvage to add more depth and understanding to a seemingly very formalised tool-making tradition. I have also used the extra level of interpretation gained from accepting these more-than-sequential properties to tackle the ‘small sample problem’ and find ways of writing about very ephemeral material traces. This looser understanding of sequence and intentionality has also afforded the construction of extended depositional histories that connect short- and longer-term stratigraphy making processes, helping to break down the problematic hierarchy of scales that has long held back LSA archaeology. More specifically, I have shown, using this close up yet long-term

perspective, that it is possible to trace subtle habitation processes, including phases of social fragmentation of more or less permanently resident groups. In this way it was possible to better contextualise the episodic pattern of major-hearths-with scraper features within the longer-term history of the shelter.

The recognition that Ntloana Tšoana and Ha Makotoko may have both been associated with different craft traditions over many centuries and, that at the former, occupation appears to have continued whilst the numbers of residents waxed and waned, has been interpreted here as testament to the role of place within early Holocene hunter-gatherer social life. I have argued that particular places, including their sedimentary forces, material archives, and sensory properties, would have acted as a stabilising force within the fluid socio-material world of hunter-gatherer groups. This interpretation has broader regional significance and adds to the growing body of southern African research challenging the generalised understanding, based largely on Kalahari San ethnography, that the pre-2000 cal. BP southern African LSA should be characterised solely as a time of high residential mobility (e.g. Jerardino 1996; Sealy 2006).

By focussing on such a relatively thin slice of occupational history as I have done here, and employing the theoretical framework outlined above, it has also been possible to add much needed depth to the equally generalised model of social aggregation and dispersal that sought to classify whole sites as fitting into one or the other of these modes of social life (Wadley 1987). In the first instance, we can now be sure that over the millennium or so analysed in this thesis, Ntloana Tšoana experienced numerous phases of social fragmentation and coalescence. Furthermore, the identification of just as much, if not more, form and structure within the lower density and sometimes episodic occupations described in Chapters 7 and 8, also strongly suggests that the *less* symbolic dispersal, and *more* symbolic aggregation phase dichotomy, on which the model relies, simply does not work. Of course, the whole notion of there being times within a hunter-gatherer's life, or even certain activities, that would be aimed at meeting solely utilitarian ends, and others that were particularly imbued with social meaning, is no longer tenable on a theoretical level.

The portrayal of human society as a network based on symbolically represented forms of social meaning has now been widely criticised across the social sciences within what can broadly be called post-constructivist or non-representational theory. Yet, the archaeological version of these ideas has, in my opinion, been limited by the largely taken-for-granted understanding that our discipline is only concerned with the study of human-made things. It is this material culture bias, together with the assumption that dependency on the other-than-

human world is intensified by ownership, which have underpinned the grand narratives of a singular, ever increasing, relationality (Olsen 2010; Hodder 2012).

However, even during the thousand or so years covered in this thesis it has been possible to identify different *kinds* of relations between Ntloana Tšoana's residents and important non-human entities. At times, they appear to have taken the form of practices of respect carried out to ensure future relations with certain animals; at others, a heightened awareness of old occupations on the shelter floor appears to have taken prominence, as evidenced by the placement of hearths, and the frequent use of broken or salvaged tools. The point here is that both these very different examples are indicative of a mutually creative relationship between humans (full of intention *and* attention) and the other-than-human world. Neither provides evidence of a greater or lesser degree of human-world mixing. They are just different ways of relating.

In the scaled up grand narratives of Hodder, Olsen and others, human-thing mixing has necessarily had to be portrayed as a singular relation as this enables directionality to be traced, but for this same reason the potential for seeing and comparing different kinds of relationality is lost. At best this new trend for writing 'big histories' works well for following the trajectory of contemporary phenomena that have reached their peak in post-modernity such as global warming and plastic pollution. At worst they end up simply charting the exponential "growth story" (Gellner 1964:12–13) that we already know and actively silence all the 'between times' and 'before times' along the way. Moreover, if we accept that archaeology can, in fact, do more than trace the story of *how we became like we are*, and offer equally compelling stories of *how we could be*, then the archaeologies of seemingly 'simple' small scale societies, whose ways of relating with the world may not be as dominated by ownership and consumption, become just as important as the more glamorous origin times that have dominated our discipline thus far.

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