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THE ARCHAEOLOGICAL POTENTIAL OF INFORMAL LITHIC TECHNOLOGIES: A CASE STUDY OF ASSEMBLAGE VARIABILITY IN WESTERN NEW SOUTH WALES, AUSTRALIA

By

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A thesis submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy in Anthropology, The University of Auckland, 2010
Abstract

This thesis addresses the research potential of informal lithic technologies through a case study of surface deposits from western New South Wales (NSW), Australia. The defining characteristic of the lithic remains of the region is a dearth of formalized patterning. As a consequence, researchers have historically equated these remains with a casual approach to lithic technology where it is often assumed that artefacts were produced on an as needed basis.

This apparent simplicity is in marked contrast to the demanding environment of the region. Water and food resources are extremely limited and historic observations indicate that Aborigonal populations coped with these conditions by employing strategies of land use based on short-term occupations and high mobility. It is therefore an anomaly that populations living under such conditions would be so unconcerned with the organization of their technology.

An exploration of this anomaly guides the research presented in this thesis. Was the organization of Aboriginal lithic technology truly simple or instead is the perception of simplicity an artefact of previous interpretation? The goals of this thesis go beyond questioning the perception of simplicity to the larger question of how informal technologies can be used to understand past behavioural organization.

To investigate these questions, this thesis makes use of an abundance of assemblage data gathered by the Western NSW Archaeological Programme. The results of this research indicate that while the vast surface record of the region may present what appears to be a largely undifferentiated record, contextualization shows that Aboriginal occupation of the region was anything but uniform. Chronologies developed through extensive radiocarbon dating demonstrate that periods of increased
aridity are correlated with decreased evidence of Aboriginal occupation, thus suggesting territorial reorganization in the face of environmental deterioration.

The study of lithic technological organization and the curation concept provide a theoretical perspective with which to explore the possibility for similar dynamism in the largely informal lithic technologies of the study region. While current studies of stone artefact curation are largely based on retouched tools, the curation process may exist in the absence of retouch. A methodology based on the quantification of cortical surface area is presented as one means through which curation without retouch may be explored. This methodology is based on the principles of solid geometry and enables comparison between the quantities of cortex observed in lithic assemblages and that which should be present given the size and shape of the stone nodules from which artefacts were produced. Deviations between observed and expected values indicate the effects of artefact transport on assemblage formation.

Application of the cortex methodology indicates that cortex is extensively underrepresented in the NSW assemblages, meaning artefacts were transported away from their place of production. This result is in marked contrast to the perception of Aboriginal technological expedience. Further investigation of the cortex methodology, the development of refined techniques and the completion of additional fieldwork enabled a more in-depth test of the initial result. Viewed from a variety of perspectives, further study supports the initial interpretation.

Utilizing spatial patterning in assemblage cortex proportions, the data for this study are then used to investigate the scale of Aboriginal mobility. Interpretation of this patterning provides insights into the organization of land use at a landscape scale and thus demonstrates a greater appreciation of the potential for informal lithic technologies to inform on the organization of the past.
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Table of Contents

Abstract .......................................................................................................................... I
Acknowledgements ....................................................................................................... III

Chapter One
Introduction to the study .......................................................................................... 1
1.1 Introduction .......................................................................................................... 2
1.2 Thesis Organization ............................................................................................ 4

Chapter Two
Archaeology and Environment of Western New South Wales ......................... 9
2.1 Introduction .......................................................................................................... 10
2.2 Overview of the Study Region ............................................................................ 12
2.3 The Archaeological Record of Western New South Wales ........................... 12
   2.3.1 Australian Flaked Stone Artefacts ............................................................... 18
2.4 Environmental Overview .................................................................................. 24
2.5 Lithic Raw Material Availability ....................................................................... 31
2.6 Conclusion ........................................................................................................... 35

Chapter Three
Formation of the Archaeological Record ............................................................... 36
3.1 Introduction .......................................................................................................... 37
3.2 A Brief Overview of Archaeological Formation ............................................. 38
3.3 Geomorphic Context and Recent Landscape History of Western NSW ........... 41
   3.3.1 Recent Geomorphological History of the Study Region ........................... 44
3.4 The Surface Archaeological Record of Arid Australia .................................... 47
3.5 Summary ............................................................................................................. 48

Chapter Four
Contextualizing the Australian Surface Archaeological Record ....................... 49
4.1 Introduction .......................................................................................................... 50
   4.1.1 Developing a Chronology for Surface Archaeological Deposits .......... 51
   4.1.2 Flake stone Survey and Analysis ................................................................. 53
4.2 Study Areas and Assemblages ............................................................................ 56
   4.2.1 Sturt National Park ..................................................................................... 59
   4.2.2 Fowlers Gap .............................................................................................. 62
   4.2.3 Paroo-Darling National Park ................................................................... 69
4.2.4 Burkes Cave ........................................................................................................... 71
4.2.5 Pine Point and Langwell Stations .......................................................................... 73
4.3 Conclusion ................................................................................................................... 76

Chapter Five

**Time Averaged Assemblages and Technological Organization** ........................................ 77
5.1 Introduction .................................................................................................................... 78
5.2 Interpretive Potential of Time-Averaged Deposits ....................................................... 79
5.3 Western NSW Occupation Histories ........................................................................... 81
5.4 Summary ....................................................................................................................... 88
5.5 The Study of Lithic Technological Organization ........................................................... 90
5.6 Conclusion ..................................................................................................................... 97

Chapter Six

**Quantification of Cortical Surface Area as Curation Proxy** ........................................... 99
6.1 Introduction ................................................................................................................... 100
6.2 An Alternative Proxy Measure of the Curation Process .............................................. 100
   6.2.1 Background to the Methodology ......................................................................... 103
   6.2.2 Adaptation of the Cortex Method ......................................................................... 105
   6.2.3 Testing the Model .................................................................................................. 111
6.3 Results ........................................................................................................................ 112
6.4 Discussion ..................................................................................................................... 117
6.5 Conclusion ..................................................................................................................... 124

Chapter Seven

**Additional Methods** .................................................................................................... 127
7.1 Introduction ................................................................................................................... 128
7.2 Further Evaluation of Existing Cortex Methodology .................................................. 130
   7.2.1 Experimental Methods ....................................................................................... 131
   7.2.2 Assessing Infield Data Quality ............................................................................. 132
   7.2.3 Assessing Cortex Ratio Reliability ...................................................................... 140
7.3 Refinement of Estimates of Average Nodule Size ....................................................... 146
   7.3.1 Attributes Recorded ............................................................................................. 149
   7.3.2 Regression Analysis ............................................................................................. 169
7.4 An alternative Approach to the Measurement of Cortex ............................................ 180
   7.4.1 The Wolman Pebble Count ............................................................................... 183
7.5 Conclusion ..................................................................................................................... 186
Chapter Eight
Additional Fieldwork ........................................................................ 188

8.1 Introduction.................................................................................. 189
8.2 Field Methods................................................................................ 190
  8.2.1 The Identification of Cores ....................................................... 190
  8.2.2 Core Sampling ........................................................................ 192
  8.2.3 Minimum Analytical Nodule Analysis ....................................... 194
  8.2.4 Stone Raw Material Survey .................................................... 197
8.3 Field work at the WNSWAP study areas ........................................ 198
  8.3.1 Fowlers Gap .......................................................................... 198
  8.3.2 Paroo-Darling.......................................................................... 207
  8.3.3 Pine Point Langwell ................................................................. 211
8.4 Summary ....................................................................................... 217

Chapter Nine
Results of the Test of Cortex Patterning .............................................. 218

9.1 Introduction .................................................................................. 219
9.2 Results of Field Methodologies .................................................... 219
  9.2.1 Estimated Average Nodule Weight .......................................... 219
  9.2.2 Raw Material Size Variation .................................................. 222
  9.2.3 A Consideration of Cobble Selection ....................................... 227
9.3 Summary ....................................................................................... 230
9.4 Recalculated Cortex Ratios ............................................................ 230
9.5 Alternate Examination of Cortex Proportions .................................. 234
9.6 Summary and Conclusion .............................................................. 244

Chapter Ten
Implications and Conclusion ............................................................... 247

10.1 Introduction ................................................................................. 248
10.2 Western New South Wales Technological Organization ............... 249
  10.2.1 Is this Curation? ................................................................. 249
10.3 Cortex Patterning and Landscape Organization ................................ 256
  10.3.1 Spatial Patterning in Cortex Proportions ............................... 256
10.4 Implications of Cortex for Understanding Aboriginal Land Use ....... 265
10.5 Landscape Archaeology at Rutherfords Creek, NSW ..................... 270
  10.5.1 Rutherfords Creek Cortex Proportions ................................. 277
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.6 Conclusion</td>
<td>284</td>
</tr>
<tr>
<td>Bibliography</td>
<td>287</td>
</tr>
<tr>
<td>Appendix One: WNSWAP Artefact Definitions</td>
<td>312</td>
</tr>
<tr>
<td>Appendix Two: WNSWAP Artefact Attribute Definitions</td>
<td>314</td>
</tr>
</tbody>
</table>
List of Figures

Figure 2.1 Landscape View onto the Vast, Sparse and Arid Landscape of Western NSW, Australia ............................... 11
Figure 2.2 Heat Retainer hearths ........................................................................................................... 15
Figure 2.3 Typical Western NSW Examples of Tool Forms that Mark the Emergence of the Australian Small Tool Tradition ......................................................... 16
Figure 2.4 Lithic Scatter ......................................................................................................................... 17
Figure 2.5 Short-term Environmental Variability ................................................................................. 26
Figure 2.6 Ephemeral Water Features .................................................................................................. 27
Figure 2.7 Western NSW Raw Material Sources ................................................................................. 33
Figure 3.1 Examples of the Abundant Deflated Surface Scatters of Flaked Stone Found Throughout Western NSW, Australia ................................................................. 46
Figure 4.1 The Western NSW Study Region and Location of WNSWAP Study Areas Described in the Text ........................................................................................................................................................................... 55
Figure 4.2 Stud Creek, Sturt National Park ................................................................................................. 58
Figure 4.3 Assemblage Locations within Fowlers Gap Study Area ....................................................... 61
Figure 4.4 Paroo-Darling National Park and Study Assemblages ............................................................. 68
Figure 4.5 Pine Point Langwell Study Area and Study Assemblages ..................................................... 72
Figure 5.1 Example of Hearths Clustered Upon a Single Geomorphological Surface (Paroo-Darling National Park) .......................................................................................... 83
Figure 5.2: Calibrated Radiocarbon Determinations from Dated Hearths in Western NSW (Holdaway et al. 2005 Fig. 9) .................................................................................................................. 84
Figure 6.1 Scalene Ellipsoids ................................................................................................................. 107
Figure 6.2 Typical Relationship between WNSWAP Assemblage Location and Stone Raw Material Availability ........................................................................................................ 119
Figure 7.1 Comparison between Scanned and Fully Processed Models ............................................... 135
Figure 7.2 Difference between Mechanically Measured and Scanned Cortex Ratio Against the Number of Cores ........................................................................................................ 138
Figure 7.3 Histogram of Simulation Cortex Ratios .................................................................................. 142
Figure 7.4 Plot of Simulation Cortex Ratios against the Flake to Core Ratio ........................................ 142
Figure 7.5 Measurement of Cortex with Mylar Grid .............................................................................. 152
Figure 7.6 The Relationship between the Percentage of a Core’s Surface Without
Cortex and the Percentage of Nodule Mass Lost Amongst the Experimental Cores ................................................................. 154

Figure 7.7 The Relationship between the Square Root of Flake Scar Counts Divided By Core Area and the Percentage of Nodule Mass Lost Amongst the Experimental Silcrete Cores ........................................................................ 156

Figure 7.8 The Relationship Between the Square Root of Flake Scar Counts Divided By Core Area and the Percentage of Nodule Mass Lost Amongst the Experimental Quartz Cores ........................................................................ 157

Figure 7.9 Diagram of the Attribute Exploitation Surface ................................................................. 159

Figure 7.10 The Relationship Between the Log Natural Transformation of Exploitation Surfaces Divided by Core Area and the Percentage of Nodule Mass Lost Amongst the Experimental Silcrete Cores ................................. 162

Figure 7.11 The Relationship Between the Log Natural Transformation of Exploitation Surfaces Divided by Core Area and the Percentage of Nodule Mass Lost Amongst the Experimental Quartz Cores .............................................. 163

Figure 7.12 Exploitation Surface Interactions ......................................................................................... 165

Figure 7.13 The Relationship Between the Square Root of Exploitation Surface Interactions and the Percentage of Nodule Mass Lost Amongst the Experimental Silcrete Cores ........................................................................ 167

Figure 7.14 The Relationship Between the Square Root of Exploitation Surface Interactions and the Percentage of Nodule Mass Lost Amongst the Experimental Quartz Cores ........................................................................ 168

Figure 7.15 The Relationship Between the Residual Values of the Predicted Percentage Nodule Mass Removed and Non-cortical Proportion for the Experimental Cores .................................................................................. 171

Figure 7.16 The Relationship between the Studentized Residual Values of the Predicted Square Root of the Percentage of Nodule Mass Removed and the Predicted Square Root of the Percentage of Nodule Mass Removed for the Experimental Cores .................................................................................. 174

Figure 7.17 The Relationship Between the Studentized Residual Values of the Percentage of Nodule Mass Removed and the Predicted Percentage of Nodule Mass Removed for the Experimental Silcrete Cores .......................................................................... 177

Figure 7.18 The Relationship Between the Studentized Residual Values of the
List of Tables

Table 6.1 Experimental Silcrete and Quartz Data ......................................................... 111
Table 6.2 WNSWAP Assemblage Cortex Ratios (L) = local (N) = non-local ......... 113
Table 6.3 Cortex Values by Artefact Class (both Mean Cortex Percentage (Cortex %) and Proportion of Total Cortical Surface Area (%CSA) For the Sample of Assemblages With Both Silcrete and Quartz Presented in Douglass et al. (2008) ................................................................. 114
Table 6.4 Core Reduction Intensity (Core Mass/Total Assemblage Mass) .......... 116
Table 7.1 Summary of 3D scanning data ................................................................. 134
Table 7.2 Test of the Performance of the Experimental Regression Using Additional Data Not Used in the Development of the Regression Equations .......... 180
Table 7.3 Nodule Mass with Cortical Surface Area and Volume in Proportion to that Observe in the Lithic Assemblage ................................................................. 182
Table 9.1 Estimated Average Cobble Weight from Sampled Assemblages ........ 221
Table 9.2 Cortex Ratios for Reanalysed Study Assemblages ................................. 231
Table 9.3 Position of a Cobble Large Enough to Have Cortex and Volume in Proportion to that Measured Amongst Assemblage Artefacts within the Natural Size Distribution of Cobbles Found at each Study Area ............ 236
Table 9.4 Comparison Between the Frequency of Cobbles that should be Represented in an Assemblage if it is Assumed that Assemblages Had No Artefact Transport to the Number of Cores Measured in the Assemblage (Excluding Flake and Bipolar Cores) ................................................................. 236
Table 10.1 Estimated Average Cobble Weight from Rutherfords Creek .............. 274
Table 10.2 Howells Creek Cortex Ratios ................................................................. 281
Chapter One

Introduction to the Study