

Significantly, as the Epilogue states, places that may be ‘ephemeral’ to archaeologists were not necessarily ephemeral to those who made and lived in them. Chapter 4 goes further to demonstrate that “Ephemeral places have complex and multifaceted life histories” (p. 59)—the same can be said for mobile peoples: they have complex and multifaceted lifeways, despite an occasional lack of robust, permanent structures. Such places have long been entangled with ideas of the Neolithic Revolution and been seen as a hallmark of civilisation (p. 42), and a long-standing emphasis on mobility in hunter-gatherer studies has served to deemphasise the built environment (p. 4). Therefore, from both within and outside of hunter-gatherer studies, the built environment has been downplayed, long deemed to be essential to what foragers *are not*: permanent, invested, complex occupants of certain places. This volume effectively problematises these long-held assumptions and, instead, shows us that foragers’ homes were used for place-marking (reminiscent of early cemeteries establishing territory), structuring the landscape, reifying social memory, blurring the lines between domestic and ritual space, and can be investigated archaeologically.

The Epilogue states that the real strength of the volume is its use of comparison (p. 265), and I agree. I would also add that this volume fits within a growing collection of works that aim to document hunter-gatherers for what they are, not what we would make them, and reveals how complex not just their homes, but also their social lives were.

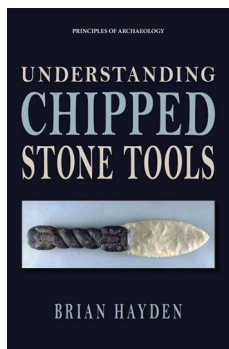
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BRIAN HAYDEN. 2022. *Understanding chipped stone tools*. New York: Eliot Werner; 978-1-7342818-6-6 paperback \$37.72.



This is a book for those who are just beginning to explore stone tools and their manufacture and use. It is written for students and other general readers, and is designed to arouse interest, rather than to provide an in-depth analysis of lithic technology. Hayden presents a conceptual approach, focusing on reading the design decisions of the maker in the finished stone tool. With nine chapters and a six-page glossary, Hayden aims to offer the reader “a good grounding in understanding how stone tools were made, why certain techniques were used for flaking, and how stone could be modified to solve specific problems” (page vii).

In the first chapter, Hayden sets the tone for the book. Here, he highlights the basis for his studies—experimental and experiential archaeology, as well as lithic technology studies in combination with ethnoarchaeology: “In order to understand the strategies

employed in the past, it is above all important to indulge in what I refer to as experimental and experiential archaeology. This consists of learning how to knap flint or stone and how to use a variety of stone tools [...] understanding how to make *and use* stone tools is pivotal to understanding how to analyze stone tools” (p. 3).

Chapter 2 provides a brief introduction to Design Theory, including what it is and how it can be used. This theory is then applied to lithic analysis in Chapter 3. In clear prose that nicely illustrates the complexities involved in hide working, Hayden uses the example of end scrapers as a case study, taking the reader through the steps required to transform a raw hide into a buckskin. He demonstrates that individual stone tools were often part of a larger set of tools that also included some made from organic materials. It is a pedagogic way to illustrate that typological sorting of stone artefacts rarely provides explanations of what tools might have been used for when considered in terms of the varied prehistoric industries in operation at a site. I would have liked to read in these chapters Hayden’s views on the work of researchers who have discussed the limitations of a Design Theory approach (e.g. Malafouris 2020).

Chapter 4 initiates the reader into the basics of analysing stone tools from a lithic technology perspective. We learn how to identify culturally modified stones and distinguish those from naturally occurring pieces. We are also taught how to identify various methods of flake modification and edge reshaping. While this information has been more extensively and elaborately provided by others (e.g. Inizan *et al.* 1992; Holdaway & Stern 2004), the strength of this chapter lies in its focus on the various types of flake modification and debitage frequently misinterpreted by archaeologists. This is important for students to learn.

In Chapter 5, the reader is introduced to basic reduction strategies; this is followed by a discussion of specialised tools. As in the previous chapter, most of what is offered here has been published in detail elsewhere (e.g. Inizan *et al.* 1992; Holdaway & Stern 2004). Furthermore, the focus on North America and Australia makes the chapter slightly less useful for archaeologists working in other parts of the world. For example, the advantages and disadvantages of using a bow and arrow are discussed, but archaeological and ethnographic examples from Sub-Saharan Africa are not acknowledged, resulting in a discussion that ignores some aspects of lithic technology, such as the use of stone tips and poison as a proxy for studying tool use and cognitive evolution. And ethnoarchaeological examples from America and Australia are not ideal comparanda for archaeologists working with, for example, North European Neolithic stone tools.

Hayden uses Chapter 6 to take us through aspects of design considerations. The focus here is on reliability, maintainability, versatility, flexibility, diversity, time constraints and aspects of typology. This is followed by a chapter (7) on changes made to tools by resharpening. In Chapter 8, an analysis of the assemblage from the Keatley Creek site in British Columbia, Canada, is presented. This serves as an illustration of how insights from previous chapters can be applied to archaeological practice. This neatly closes the volume by rounding up the various skills and demonstrating their practical application. Chapter 9 offers advice to students who would like to develop their knowledge further and take up lithic analysis.

Each chapter provides suggestions for additional reading. In all, 63 texts are listed, many of which are written or edited by the author. While the bibliography reflects the author’s

lifelong research career in studying stone tools, it is notable that 50 of the 63 texts were published before 2000. For a book aiming to introduce students to the latest research in the field, a bibliography with 80 per cent of the references older than 20 years is inadequate. The references are relevant, but do not properly reflect the developments in lithic analysis and stone tool studies over the past 20 years. A final frustration for me was the abbreviating and misspelling of Danish researcher Christian Jürgensen Thomsen's name, which appears as Christian Thomson in the text; perhaps closer editorial scrutiny would have been useful.

Brian Hayden's book is informative and serves its purpose well. As a reader, I was offered enjoyable insights into his work on stone tools and provided with a good introduction to Design Theory and its application in lithic analysis. The volume is a fine text for those who have just begun their journey in studying the complexities of lithic analysis and will complement their further reading.

## References

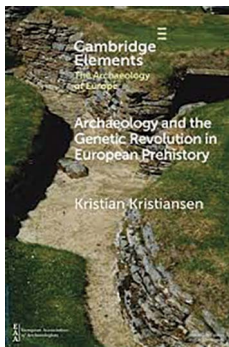
- HOLDAWAY, S. & N. STERN. 2004. *A record in stone: the study of Australia's flaked stone artefacts*. Melbourne & Victoria: Aboriginal Studies Press.
- INIZAN, M.-L., H. ROCHE & J. TIXIER. 1992. *Technology of knapped stone* (Préhistoire de la Pierre Taillée 3). Meudon: C.R.E.P.
- MALAFOURIS, L. 2020. Thinking as "thinging": psychology with things. *Current Directions in Psychological Science* 29: 3–8.  
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KRISTIAN KRISTIANSEN. 2022. *Archaeology and the genetic revolution in European prehistory*. Cambridge: Cambridge University Press; 978-10-09-22868-8 paperback £15.00.



There is little doubt that the last few years have seen spectacular successes for the application of ancient DNA (aDNA) analysis in studies of European prehistory. Questions that have occupied archaeologists for more than a century now have definitive answers. From a British perspective alone, we now know beyond doubt that agriculture was introduced by people arriving from continental Europe, and that the Mesolithic inhabitants of the islands had a minimal genetic legacy (Brace *et al.* 2019). Likewise, it is now clear that the advent of the Beaker phenomenon in Britain was accompanied by significant migration from the Continent, with genetic turnover exceeding 90 per cent in the last few centuries of the third millennium BC (Armit & Reich 2021).

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