

INTRODUCTION

Since the beginnings of archaeological research on the continent in the latter half of the 19th century, there have been debates about the best way to classify Indigenous Australian stone artefacts (Mulvaney 1977). The same terminology is widely used across Australia, but with different meanings depending on the archaeologist who is using it. This slippery use of terminology impairs our ability to extrapolate meaningful information from studies and limits our ability to perform comparative analyses. This can be seen most clearly with how the term "core" has been defined.

ISN'T THIS JUST PEDANTRY?

Given the importance of lithic analysis to the archaeology of Indigenous Australia societies (Holdaway and Stern 2004) and its position as an identified essential skill for Australian archaeological graduates (ANCATL et al. 2021), the reluctance to be clear about how artefacts are classified impedes how we interpret the research being carried out on lithic assemblages.

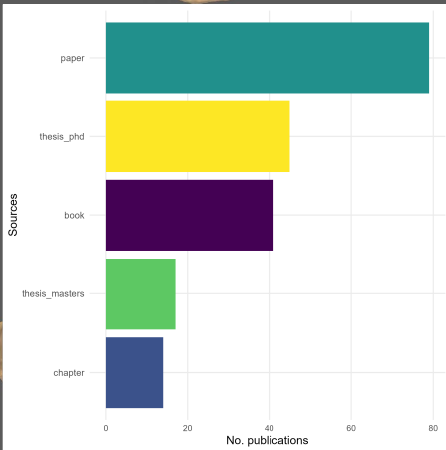


Figure 1. Number of source types with definitions. Figure produced with ggplot package.

EXAMPLES OF CONTRASTING DEFINITIONS

"...artefacts that exhibit negative flake scars, marking the places from which previous flakes were struck. This definition, however, does not distinguish cores from retouched flakes or flake fragments. Moreover an unretouched flake or flake fragment can also exhibit negative flake scars (representing earlier flake removals from the core from which the flake was struck). But flakes and flake fragments, and tools made from flakes, have a ventral surface, whereas most cores do not. So this criterion may be added to the definition of a core. However large flakes are sometimes used as cores, and these, of course, have a ventral surface."
Holdaway and Stern, 2004: 179

"Cores have one or more negative flake scars but do not have a positive scar (i.e. ventral surface)"
Hiscock, 2007: 2003

"source of flakes"
Cane, 1988: 91

"The core or nucleus is the source of all the knapped or struck-off blocks, slices, flakes and blades."
McCarthy, 1967: 15

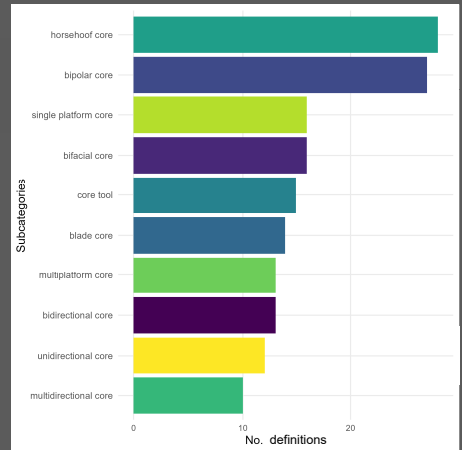


Figure 2. Top 10 subcategories by number of times defined. Terms were slightly standardised to ensure consistent spellings and punctuation (e.g. "multipatform" and "multipatform"). Figure produced with ggplot package.

METHODS

Sources were identified using the academic databases Google Scholar, Scopus, and Web of Science. For each identified source, terms defined were recorded. A total of 588 sources were identified that referred to Indigenous Australian cores, however only 196 sources contained definitions of cores (see Figure 1). No definitions were identified prior to the 20th century (see Figure 3a).

Definitions were divided into category definitions (n=108) (see Figure 3a.) and subcategory definitions (n=445) (see Figures 2 and 3b.). Category definitions were for key artefact terms that were semantically equivalent to the term "core". Subcategory definitions were for different classes of cores (see Figure 2.). Each definition was assessed to see if it had a functional, morphological, technological and/or raw material component (see Figure 4.).

Analysis of the dataset was carried out in R using the package tidyverse.

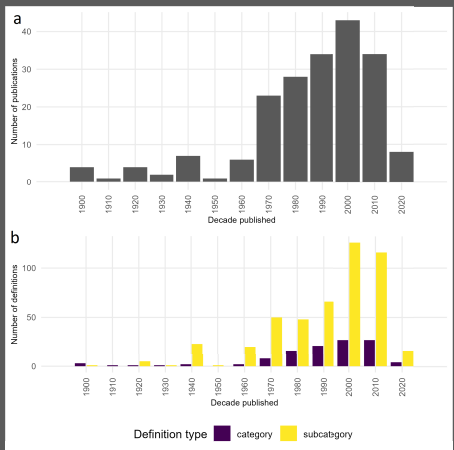


Figure 3. a). Number of sources published per decade on Indigenous Australian lithic technology, with either a "core" category and subcategory definition. b). Number of definitions published per decade. Definitions were classified as either a category or a subcategory. Figure produced with ggplot package.

EXAMPLE OF A HYBRID DEFINITION

"A piece of stone off which flakes have been struck intentionally in order to obtain flakes to be used as stone tools [FUNCTIONAL]. A core must have one (or more) complete negative or bulbar flake scars – the concave surface left after a flake has been removed [TECHNOLOGICAL]... Many cores were cobbles or pebbles as well as block of quarried bedrock [RAW MATERIAL], though large flakes [MORPHOLOGICAL], flaked pieces or heat-shattered pieces were also used as cores."
Attenbrow, 2010: 204

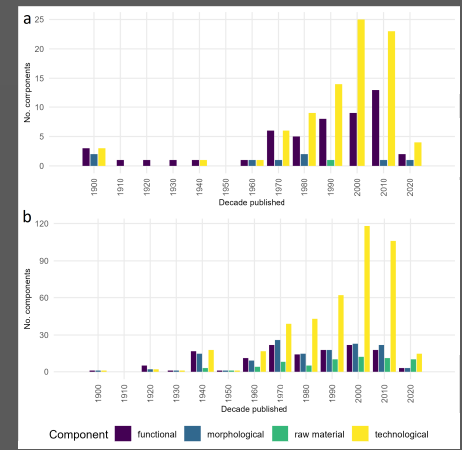


Figure 4. a). Core category definition components per decade. Only explicit components were included. No category definitions contained a raw material component. b). Core subcategory definition components per decade. Note that definitions could contain multiple components.

KEY RESULTS

For categories, purely technological definitions are the most common and have seen strong growth since the 1990s. Hybrid definitions remain most common for subcategories, primarily combining technological and functional components. However, a significant minority of definitions contain implicit components – almost always functional – that are only apparent. The most common examples of this are studies where cores are defined in purely technological terms, but which include a subcategory such as "core-on-flake", implying a functional criteria.

HOW CAN WE IMPROVE?

More explicit definitions consistently given in-text, or even in supplementary material, would deliver a clearer picture of what is being analysed and how it is being interpreted. At a bare minimum, more consistent citing of where definitions have been sourced from would help, although instances where multiple – sometimes contradictory – definitions are cited should be avoided. Given the importance of lithic analysis in shaping archaeologists' understanding of past Indigenous Australian societies, clearly defining a core concept should be a given.

REFERENCES

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Code and full dataset can be downloaded from GitHub