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BOOK REVIEW

Barbara Lass, *Hawaiian Adze Production and Distribution: Implications for the Development of Chiefdoms*. Institute of Archaeology, University of California, Los Angeles, Monograph 37, 1994. 90pp.

Readers of the journal *Asian Perspectives* may be familiar with a paper published by the author of this monograph (under her maiden name Barbara Withrow) in 1991, dealing with adze distribution on Hawai'i (A.P. 29 : 235 - 250). This was one of the first studies in Hawaii petrographically linking artefacts from occupation sites with discrete sources of adze stone (known or yet to be located). This sourcing study was a component of Barbara Withrow's doctoral dissertation of 1991 from which this monograph is also derived.

Its structure is typical of a dissertation, commencing with a review of the theories of the rise of chiefdoms as they have been applied to the Hawaiian Islands, the identification of archaeologically testable phenomena that can be correlated with particular theories, the analysis of the archaeological data, and the re-evaluation of the theories in the light of the results. Such a structure brings a degree of artificiality to the underlying issues, encouraging the setting up of 'straw men', and of analyses that 'go through the motions', though the data may be inadequate or the assumptions known to be flawed. In a dissertation this is a common consequence of the need to critique earlier approaches and to demonstrate analytical rigour. In a monograph it can leave readers wondering why they should work through pages of detailed analysis when they have been told the results may have no bearing on the hypothesis under investigation.

In this case stone adzes have been chosen to test several of the competing theories of the rise of chiefdoms, especially Service's (1962) hypothesis that in ecologically differentiated areas with sedentary populations, uneven availability of resources led to regional specialization, centralised redistribution, and the rise of powerful chiefs who controlled the distribution system. Lass also evaluates later contributions to this debate, such as Earle's (1978) hypothesis that political competition arising from pre-existing aspects of Polynesian social organization led to resource control in order to enhance chiefly power, together with the views of Cordy, Kirch, Hommon and Spriggs. Lass's summary of this literature is concise and will be useful for students.

Two concepts built into Service's hypothesis provide the point of articulation between the theory and the archaeological data : redistribution and specialization. If Service is right, prehistoric Hawai'i should have experienced increasingly centralized distribution of materials over time, with a decline in the variety of sources and a change in the distribution patterns. After reviewing some of the classic studies of artefact distribution beyond Hawaii, Lass concludes that in general "there is no simple, straightforward correlation between spatial or archaeological patterning in the occurrence of various raw materials

and the complex economic or social processes that produced the patterns" (p.15).

Despite this conclusion, she perseveres with testing the models. With a sample of only 155 partial adzes or fragments petrographically analysed, and 102 of these from the huge geographically central Mauna Kea quarry, the other five sources are represented by only 33 samples. Distributed among 38 sites covering four time periods, the very low numbers of these non-Mauna Kea artefacts inevitably raise the question whether a presence/absence study such as this can pick up the types of shifting patterns of material distribution that increasing centralization would produce. If the changes took the form of varying proportions of supply rather than complete quarry abandonment, then this sort of study will fail to identify them. Although Lass acknowledges that small sample size is a problem, she still concludes that there was no apparent change over time in materials used nor in their spatial distribution, and hence that centralized redistribution of stone adzes probably did not take place (p.28). Given the sample sizes, many readers will find this assertion unproven.

Turning to the issue of specialization in adze production, Lass assesses the likely archaeological indicators of craft specialization, finding that it is difficult to distinguish between independent specialization and that where specialists work for a particular chief, known as attached craft specialization. Wisely, she warns that constraints imposed by raw materials and cultural norms can lead to standardised production methods and a uniform product without specialization being present. Measures of skill and efficiency and volume of production "mean little in absolute terms but must be compared to known standards from comparable industries" (p.31).

Once again she appears to ignore her own reservations and proceeds to her analysis of the small assemblage of adze manufacturing debris from Pololu which she compares with Cleghorn's results from three workshops on Mauna Kea using procedures derived from some of his replication experiments. The Pololu study involved 29 preforms and only 142 flakes from an original assemblage of approximately 3500. From these she attempts to determine the stages of manufacture carried out at the site and the level of skill. One of the criteria which Cleghorn used to judge flaking skill at Mauna Kea was the ratio between flake length and thickness of striking platform, an index which is subject to several alternative explanations pointed out by Lass and others before her. Nevertheless she applies it to the flakes from Pololu. If the 'platform thickness' shown on her Fig. 4.3 is what she measured, then her results will not be comparable with Cleghorn's since the measurement line on the diagram is actually maximum flake thickness not platform thickness. There is also a problem with the calculation of production and success rates at Pololu, which are built on the assumption that "most of the site assemblage was recovered during excavation" (p.45). The site description indicates, however, that probably

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no more than eight square metres were examined from a site at least 10 x 25 metres in size (p.33). The case for differential skill levels between Pololu and Mauna Kea cannot be assessed on such flawed calculations.

Analytical exercises aside, there are many sound observations in this monograph, especially those which canvass alternative explanations for the features that theoreticians propose as evidence for specialization. For example, Lass has flagged the dangers of using apparent homogeneity in bevel angle and length as evidence of adze manufacture by specialists, when resharpening alters both parameters during the course of tool 'life'. Readers interested in Oceanic adzes will find frequent comparisons with New Guinea (though these sometimes confuse axes and adzes), but surprisingly none with other Polynesian adze studies. Publication time lag has meant that only papers published up to 1993 could be cited in the bibliography.

Typographically, the monograph is accurate and well produced, with the exception of Table 3.4 which has several rows and columns misaligned. The graphics showing flakes and adze terminology are of poor quality compared to the maps, while the cover illustration shows a blunt adze blade lashed to a poorly shaped haft. No craft-specialist-made piece this one, perhaps it was designed to convey the extent of the gulf between commoners' tools and the craft items which were used to display chiefly power? Sadly it does not do justice to the fine examples of the adze maker's craft which inspired the admiration of William Brigham in 1902 and which he figured in *Ancient Hawaiian Stone Implements*, a work which Lass has curiously omitted to cite.

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