The Function, Design and Distribution of New Zealand Adzes

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ABSTRACT

The main objective of this thesis was to understand the function, design and distribution of New Zealand adzes, aspects little studied in Polynesia as a whole. Methodology involved functional and manufacturing replication experiments and comparisons of these results with statistics derived from the analysis of almost 12,000 archaeological adzes. Methodology was guided by technological organization theory which states that technological strategies reflect human behaviours and that artefacts like adzes are physical manifestations of the strategies employed by people to overcome problems posed by environmental and resource conditions.

Variability in adze morphology was discovered to be the outcome of ongoing technological adjustments to a range of conditions that were constrained by a set of functionally defined parameters. The nature of the raw material, both for the adzes themselves and to make them, had a major influence on adze technology and morphology within these functional parameters. Four basic functional adze types were identified from distinct and consistent combinations of design attributes not previously recognized explicitly in previous adze typologies. It was found that design attributes previously considered significant like cross-section shape and butt reduction were more heavily influenced by raw material quality than functional specifications.

It was also important to recognize that form and function changed over time with use, and because adzes were so valuable due to manufacturing costs, they were intensively curated. The majority of archaeological specimens studied for this thesis had seen major morphological and functional change. This dynamic was included in a typology based on 'adze state' as findings suggested (1) that extending adze use-life and optimizing reworking potential was incorporated in initial design strategies, (2) that intensive curation may have played a major role in changes in adze morphology over time, and (3). that it had a major influence on distribution and discard patterns in the archaeological record.

Having identified these influences on adze discard and distribution, two complex production and distribution networks were observed for the North Island based around Tahanga basalt and Nelson/Marlborough argillite. Each was complimentary to the other and involved other major and minor products and materials. Influential factors in the roles different settlements played in distribution included where people and raw materials were in relation to one another and the mode of transportation. The coastal location of early period settlements and important stone sources was an important aspect of these networks.

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