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ABSTRACTS FROM THESES AND DISSERTATIONS ANTHROPOLOGY DEPARTMENT UNIVERSITY OF OTAGO 1994-1997

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Abstracts of nine MA theses and 16 BA (Hons) dissertations completed between 1994 and early 1997 are presented below. Copies of theses are held in both the University of Otago Central Library and the Anthropology Department Library, while dissertations are held only in the latter. Requests for copies of theses should be directed to the Central Library, and for dissertations to the Anthropology Department.

Bilton, Matthew. 1995. **A Multivariate Discriminant Function Analysis of Maori and Caucasian crania**. BA (Hons) dissertation, Anthropology Department, University of Otago. 46 pp, 1 figure, 7 tables, 2 appendices.

The racial identification of skeletal remains from forensic contexts in New Zealand requires the ability, among other things, to accurately assess if they are Polynesian or Caucasian. To date, methods that facilitate this assessment are severely lacking. The aim of this dissertation is to investigate the production of a tool that can be used by forensic anthropologists and pathologists to estimate racial affiliation in New Zealand forensic contexts. It reviews the current state of knowledge and techniques available for racial determination and develops a multivariate discriminant function that can be applied to the racial estimation of New Zealand crania. When applied to two samples of 29 prehistoric Maori and 31 Caucasian crania complete separation of the samples is achieved.

Chiles, Leanne. 1996. **Aitape in Context. A Re-Analysis of the Evidence and a Discussion of its Place in Pacific Prehistory**. BA (Hons) dissertation, Anthropology Department, University of Otago. 66 pp, 17 figures, 28 tables, 1 appendix.

In 1929 a five thousand year old skull fragment was found by a mining expedition in Aitape, Papua New Guinea. It was examined in 1941 by Fenner in an attempt to determine its biological affinities. The present investigation is an attempt to re-examine the results Fenner obtained using multivariate statistics and place it in the context of Pacific Prehistory. The Aitape fragment is found to be from a male. Although the biological affinities are not clear, there is an indication that the fragments are ancestral to both the Australian and the Papua New Guinea samples used in the analyses. The implications of the Aitape cranium to Pacific prehistory are discussed along with the problems encountered in this analysis and possible future directions for research.

Clark, Geoffrey R. 1995. **The Kuri in Prehistory: a Skeletal Analysis of the Extinct Maori Dog**. MA thesis, Anthropology Department, University of Otago. XX pp, 43 figures, 101 tables, 8 appendices.

Skeletal remains of the prehistoric New Zealand dog, the kuri, are frequently recovered from archaeological sites. Despite their relative ubiquity only one major study, and the last for twenty five years, has been conducted. That work provided limited anatomical and osteometric information and concluded that the kuri population was homogenous through space and across time. This study set out to provide a more detailed skeletal description and to investigate the question of population homogeneity by examining kuri skeletal material from five museums and two university anthropology departments. Metric and non-metric data was collected from a total of thirty seven archaeological sites from throughout New Zealand.

Variation within the population was established by comparing coefficients of variation across a number of variables. A program of univariate and multivariate analysis was carried out to examine spatial and temporal variation.

Results showed that the appendicular skeleton of the kuri has the highest levels of variation. Smaller limb shaft dimensions of late prehistoric kuri are thought to be due to a reliance on insufficient quantities of marine foods. Tooth wear analysis of late prehistoric dogs showed that they had severe tooth wear compared to 'Archaic' dogs.

Dickson, Joanna. 1996. **The Visual Representation of the Maori in the School Journal 1907-95**. MA thesis, Anthropology Department, University of Otago. 235 pp, 76 figures, 25 tables, 1 appendix.

This thesis concerns the visual representation of the Maori in illustrations featured in the School Journal, Bulletins, Maori Language Readers, and Remedial Readers published by the New Zealand Department of Education from 1907-96. The main focus is to examine how the prehistory of Aotearoa has been presented to the public. For this reason School Journals were chosen as they have been a resource available to all school children for almost a century, and reflect changing theories on prehistory from colonisation to subsistence strategies. I consider that these theories can be incorporated into illustrations which can be just as significant, or even more powerful, than text in transmitting information (and sometimes culture-bound values) to the public about past Maori lifeways.

I examined specific areas such as the representation of Maori physiognomy, representation of gender and ethnicity, material culture, and activities in illustrations and photographs to create an overview of how the Maori have been depicted and question how closely these representations adhere to reality.

Edgar, Philip. G. 1995. **Ideological Choice in the Gravestones of Dunedin's Southern Cemetery**. MA thesis, Anthropology Department, University of Otago. 96 pp, 27 figures, 26 tables, 2 appendices.

Gravestones occupying the Presbyterian portion of Dunedin's Southern cemetery were interpreted within their archaeological context as the outcome of the influence of both social relations between the living and relations between the living and the dead in Dunedin's history. Two hundred and nine gravestones erected between 1858 and 1959 were recorded, their attributes analysed and associations between these attributes and value of family burial plots offered. The cemetery is seen as partaking in the ideology of Social Darwinism in the late 19th century while the visual reduction in social stratification which takes place in the cemetery in the early 20th century reinforced the egalitarian ethos espoused by the Liberal government and the community at this time.

Flexen, Gaye A. 1994. **Standing Tall? Military Records as Indicators of Environmental Influences on New Zealand Male Stature 1914 and 1939**. BA(Hons) dissertation, Anthropology Department, University of Otago. 60 pp, 5 figures, 11 tables, 3 appendices.

This dissertation uses military records as a source of information on human

physical characteristics. Its primary objective is to investigate whether dietary deprivations in the period between the two world wars led to a deterioration in health, and subsequently the stature of the individuals. It also assesses potential differences between people from rural and urban areas, and those from different occupational groups. No significant differences were found between the heights and weights of Otago/Southland military recruits of World War I and World War II, nor between those from rural and urban areas.

Fraser, Karen. 1996. **An Analysis of Faunal Material from Anatoloa, Niue.** BA (Hons) dissertation, Anthropology Department, University of Otago. 38 pp, 7 figures, 8 tables, 1 appendix.

Faunal remains from excavations at Anatoloa, Niue, in 1994 are analysed to determine patterns of dietary resource use and the subsistence behaviour associated with shellfishing. This shows a broad spectrum exploitation of available resources with a focus on the marine environment, especially reef flat invertebrates and inshore fish. Size frequencies of shellfish indicate a collection strategy with no preference for individuals of a particular size. Shell breakage patterns suggest intentional breakage to enable meat extraction, and the differential incidence of burning may indicate roasting of *Turbo* shells.

Habberfield-Short, Jeremy, 1996. **Chronology and Rim Form: a Seriation of the Ceramic Rims from Ban Bon Noen, South East Thailand.** BA (Hons) dissertation, Anthropology Department, University of Otago. 43 pp, 8 figures, 3 appendices.

This research essay discusses the results of rim form analysis of the ceramics from Ban Bon Noen, in South Eastern Thailand. It is a site thought to have been occupied for over a millennium - from the termination of the Bronze Age into the early protohistoric period. A dislocation in artefact and in pottery form between the lower and upper layers, suggests the culture of Ban Bon Noen underwent a process of change in the early Iron Age. Such a dislocation in material culture and increasing social complexity has been extensively documented within Iron Age contexts of South East Asia. It is within this context of developing regional complexity that Ban Bon Noen existed, and for a short period of time exploited the inter-regional trade networks and access they provided to new forms of wealth procurement. This has lead Pilditch (1995) to describe the upper layers of Ban Bon Noen as a

market place due to the presence of a wide range of artefact forms, tin, bronze, metal, and most importantly, beads. Although only a small area was excavated, no burials were encountered at this site, thus Pilditch's suggestion seems plausible. Artefacts in the lowest layers have been interpreted as having similarity to those of the upper undated layers of Nok Phanom Di, while the upper layers display contemporaneity with Muang Phra Rot, south of Ban Bon Noen. The results of this research support the argument for chronological change, this is seen empirically in the complexity of rim forms in the upper layers.

Hood, David. 1994. **A Social History of Archaeology in New Zealand**. MA thesis, Anthropology Department, University of Otago. 289 pp, 2 tables, 2 appendices.

Consideration of the degree to which social factors have influenced the development of archaeology has become a recent focus of interest among archaeologists; however little work has been done on determining the relationship of social factors to archaeology in New Zealand. The aim of this thesis is to consider whether archaeologists were influenced by the surrounding New Zealand society between the years 1840 and 1954 and if so, in what manner were they influenced. In particular, consideration is given to how the social background of New Zealand archaeology compared with the social influences of British archaeology of the time.

For the purposes of the study the term archaeologist applies to all those who investigated or recovered *in situ* archaeological material. Lists of archaeologists of the day were compiled from journals, newspaper articles, and unpublished sources. From these lists the social background of those engaging in archaeology was reconstructed.

Developments in archaeological theory and methodology were also examined, not only to determine the manner in which they effected the practise of archaeology, but also to determine the source of those developments, and the reasons for their adoption.

The wider social context was also examined to determine the degree to which archaeology reflected certain factors in New Zealand society, not simply in the manner in which archaeology was carried out, but also in the reasons for which research was conducted.

This study demonstrates that though the discipline, and in particular the power, was concentrated among urban professionals, the social spread of those engaging in archaeology was wide. This was particularly the case between the turn of the century and the Second World War, when archaeologists with a tertiary background were in a minority. Archaeologists were influenced both from inside and outside the field, the degree of influence being determined by individual factors. As archaeologists were a part of society, so too was society part of archaeological practice. In the manner in which archaeology was conducted the influence of societal attitudes towards women and Maori can be seen.

Martin, David R. 1994. **Experiments in Archaeology in Aotearoa/ New Zealand: a Critical Appraisal**. BA(Hons) dissertation, Anthropology Department, University of Otago. 57 pp.

Several researchers in archaeology have expounded the basic premises for the relevance of experiments in archaeology. Coles [1973:13] declares that 'By definition the words [experimental archaeology] suggest a trial, a test, a means of judging a theory or an idea and this is exactly so...'.

In most experiments the aim is to resolve problems inherent in the archaeological aspects of material culture such as incomplete survival and doubts about the presumed function of artefacts [Coles 1973:14]. Reynolds [1979] more precisely states that the rationale for experiments is to test the detailed theories on which explanations are made. Such explanations must be made critically. This more scientific approach to experimentation is one in which material from excavations is used to formulate hypotheses which the experiment is designed to test. Binford [1983] clearly states the relevance of experimental situations for archaeological research. Experimental archaeology is an area of research in which the present is used to serve the past '...providing insights into the accurate interpretation of the archaeological record' [Binford 1983:24].

The methodology used is the creation of experimental situations where the causes are controlled, in order to study the effects, these being compared to the effects of past action that remain in the archaeological record [ibid:26]. This summary of the thoughts of some major researchers made above as an introduction to the role of experiments in archaeology, a more critical and more specific examination of the scientific method as now applied in experiments in archaeology in Aotearoa/ New Zealand, and the validity of the

inferences that flow from them, will form a substantial and important part of this essay.

Martin, David R. 1996. **The Maori Whare After Contact**. MA thesis, Anthropology Department, University of Otago. 171 pp, 45 figures, 4 appendices.

This study explores post-contact changes to the ordinary Maori whare. The main physical characteristics of the ordinary whare at contact are identified by accessing archaeological and written 18th century ethnographic data. Changes in the ordinary whare in the period from contact to 1940 are discussed. Evidence from historical archaeology, written 19th century ethnographic accounts and from previous academic research is considered. In addition, changes in the ordinary whare are highlighted, based on evidence from an empirical survey of whare depicted in sketches, paintings, engravings and photographs. Rigorous statistical analysis was beyond the scope of a Master's thesis, however trends in the data are presented. A range of these are reproduced illustrating the text. After changing gradually for 130 years, the ordinary Maori whare appears to have been widely replaced by European-style houses in the early decades of the 20th century.

In Aotearoa/New Zealand in the 1990s, it is apparent that Maori culture has survived the 220 or so years since contact. These years entailed increasing contact between Maori and European. In mid 20th century academic studies of Maori communities, European-style houses were found to have been used in line with continuing Maori conceptions. This evidence indicates that traditional ideas were transferred to European-style houses. The gradual changes in the whare prior to the 20th century indicate that it as a conservative social construction of space conforming to expectations about vernacular architecture generally. But the process by which Maori culture was maintained and reproduced was complicated by the widespread change to houses of European style. It is concluded that further study of Maori conceptions of space within the home is required.

Mitchell, Janet. 1995. **Changing Food Habits of New Zealanders of European Descent 1870-1970: an Anthropological Examination of the Mechanisms of Cultural Change**. MA thesis, Anthropology Department, University of Otago. 137 pp, 22 figures, 4 appendices.

Between 1870 and 1970 both the culture and food habits of New Zealand European society underwent change. In the past food habits have been

examined using either an historical approach or consumption and nutritional data. These approaches however have not explained how change has occurred. Anthropologists working in other countries have approached this problem in several different ways. A structural approach to meals and the meal system gives answers to why food habits are slow to change. But this approach does not address change. A sociological approach which takes account of changes in the society explains how the interplay of societal factors can cause change but it does not account for the stability of food habits over long periods. This study combines these approaches to give an answer to the phenomenon of stability and change which characterised European New Zealanders' food habits from 1870-1970.

Evidence of change in food habits and in the culture was linked to changing social conditions, ideas about food and changes in technology. Material on the topic was collected from written sources - in particular recipe books were found to be a valuable tool.

In this study the evidence established that while all of the factors mentioned above played a role in the transformation of food habits in European New Zealand society, substantive change at any one time was linked to the social conditions that influenced women's role in the household.

Nelson, Kirsten M. 1996. **Enamel Hypoplasia in Prehistoric Maori and Moriori**. BA (Hons) dissertation, Anthropology Department, University of Otago. 65 pp, 10 figures, 10 tables, 1 appendix.

A study of the prevalence of enamel hypoplasia was conducted. Two prehistoric populations were examined, one from the North Island of New Zealand and the other from the Chatham Islands. These two populations had different subsistence patterns, with the Maori being essentially horticultural, and the Moriori being hunter-gatherers. An investigation was made into the prevalence of enamel hypoplasia between these two populations, and statistical tests indicated that there was no significant difference between these two populations. The age of onset of enamel hypoplasia was also investigated. Results showed that the majority of lesions occurred after the age of three years, which may be consistent with the documented age of weaning for these two populations.

Palmer, Rachel S. 1994. **Archaeology of the Taieri Mouth District**. BA (Hons) dissertation, Anthropology Department, University of Otago. 112 pp,

24 figures, 3 tables, 3 appendices.

This is a study in local archaeology focusing on the Taieri Mouth district, 34km south of Dunedin. It is an area that was known to the Wai Taha, Kati Mamoe, and Kai Tahu, especially for mahika kai. This coastal strip was later settled intensively by Europeans, when other land on the Taieri and Tokomairiro Plains was less accessible. The Taieri River provided a route inland, and coastal trade was vital to existence. Through archaeology we can document past lifeways in this locality, by tracing marks on the land.

Palmer, Rachel S. 1996. **Archaeology and Ethnicity of Settlement in Nineteenth Century South Otago**. MA thesis, Anthropology Department, University of Otago. 206 pp, 63 figures, 9 tables, 3 appendices.

This thesis looks at the expression of ethnicity in the archaeological record, through an analysis of domestic architecture in South Otago, an area settled predominantly by Scottish immigrants. At one level this study is concerned with broad anthropological questions about the nature of ethnicity and the extent to which it can be recognized through the archaeological record. At another it is concerned with details of the history of a specific region of New Zealand, as part of the increasing interest in material evidence for European colonization.

Based on a sample of 269 dwellings and 43 other buildings collected from historical sources and field surveys throughout South Otago, it compares the differences between Scottish and non-Scottish dwellings. It shows that over the period from 1840 to the end of the 1920s immigrants built and lived in the same types of dwellings, and used the same construction materials, despite their nationality. If immigrants carried mental constructs about how a house should be built, they were not able to translate it into the physical product. Local factors were a stronger selection pressure than cultural background, as ethnicity was suppressed in the domestic architecture of South Otago. Nevertheless a strong Scottish local flavour developed in most other areas of daily life, through their relationship to the land, religion, education, literature, music and recreation. The pattern of domestic architecture in South Otago instead mirrored development throughout the colony, to form part of the vernacular architecture of New Zealand.

Petchey, Peter G. 1996. **Otago Water Wheels. The Industrial Archaeology of Water Wheels in Otago**. MA thesis, Anthropology Department,

University of Otago. 201 pp, 18 figures, 4 appendices.

This thesis is an investigation into the industrial archaeology of water power, specifically water wheels, in Otago, New Zealand. An archaeological site survey of some thirty-seven nineteenth and early twentieth century water-powered industrial sites is used as the basis of an investigation of the technology adopted in Otago, the origins of that technology and the mechanisms by which it came to be found here.

What at first appears to be a British technology directly transplanted to Colonial New Zealand, on closer examination proves to be the product of local and international influences and developments on a technology that can be traced directly back to the Hellenistic world of the first century BC. While the British influence was strong, what appears in Otago is a unique adaptation of an international technology to a new environment.

Pierson, Melanie. 1994. **A Review of Micronesian Biological Anthropology**. BA (Hons) dissertation, Anthropology Department, University of Otago. 70 pp, 7 figures, 5 tables.

This dissertation reviews biological studies of Micronesians and considers how currently available data relate to models of Micronesian settlement and origins. Material examined includes studies of skeletal human material, morphological and anthropometric studies on living people, biochemical studies and also some of the more recent general Pacific and Asian studies which have included Micronesian individuals, and provide suggestions of affiliations outside Micronesia. These provide no more than tentative support for the prevailing model of Micronesian settlement, and some studies yield conflicting evidence. Further research is proposed, using molecular analysis of human mtDNA.

Smellie, Carol E. 1994. **Cribra Orbitalia in Papua New Guinea**. BA (Hons) dissertation, Anthropology Department, University of Otago. 50 pp, 3 figures, 6 tables.

The prevalence of cribra orbitalia in Papua New Guinea was examined with regard to the endemicity of malaria. Differences in the expression of cribra orbitalia between the sexes was also explored.

Statistical analyses were conducted on a number of regional samples from Papua New Guinea. The aim was to assess the relationship between the regional expression of cribra orbitalia and the endemicity of malaria. The results indicate that there is no link between the incidence of cribra orbitalia and malaria. There appears to be differences in the expression of cribra orbitalia between Austronesian and non-Austronesian language speakers. Sex based differences in the expression of cribra orbitalia occur only in the Austronesian speaking populations.

These results have implications for the etiology of cribra orbitalia and the population history of Papua New Guinea.

Somerville-Ryan, Graeme. 1995. **The Geoarchaeological Analysis of Sediment from Henderson Island**. BA (Hons) dissertation, Anthropology Department, University of Otago. 45 pp, 2 figures, 4 tables, 3 appendices.

The basic goals of this project are to see the site formation processes and to try to reconstruct the environment on prehistoric Henderson Island, using the tool of geoarchaeology. The approaches to these problems form two main hypotheses. The first is the role of the various methodologies that were utilised in the analysis of the sedimentary material. Did these procedures supply the information that was required to form an overall picture of the prehistoric situation? The second hypotheses covered was in regard to the natural and cultural impacts on site formation and the environment in general. What effect did the people have on Henderson, and how did their occupation alter over time? The extent to which these questions can be answered by geoarchaeological analysis is covered throughout this essay.

Stone, Jenny. 1996. **The Archaeology and History of Chamouni**. BA (Hons) dissertation, Anthropology Department, University of Otago. 57 pp, 25 figures.

This dissertation is an investigation of Chamouni, a short-lived packer's town established in 1863 near the beginning of the Otago goldrushes. Its principal objectives are to determine the dates of occupation, location, and historical significance of the town through the analysis of historical sources, local information, and archaeological observations. Several potential sites were investigated and the probable location identified.

Thomas, Tim D. 1997. **The Practice of Colonization in East Polynesia**.

MA thesis, Anthropology Department, University of Otago. 151 pp, 9 figures, 9 tables, 3 appendices.

This thesis takes a critical look at recent archaeological conceptions of colonization of East Polynesia. Firstly, the main conceptual models of colonization that are prominent in the literature today, are examined. The models themselves are critically discussed, followed by an investigation into their theoretical underpinnings. Problems with these approaches lead to the suggestion of a different strategy towards developing an understanding of the way in which prehistoric Polynesians situated themselves spatially through the process of colonization. This involves viewing colonization as a practice that is situated in a historical and material context - it is seen to be bound up in structures of power and ideology, and is a reflection and a result of a society's desires, cares, and perceptions. Central to the thesis is an exploration of the role of the landscape in the colonization of Polynesia. The rather ambiguous term 'landscape' is understood here to refer to a social construction of space, involving a collection of practices, meanings, attitudes and values. As such it is the basis for a humanistic understanding of the environment and its role in the spatial distribution of people. The above approach is worked through in practice in the interpretation of various archaeological, ethnographic, and statistical data relevant to Polynesian colonization is a making of place, a process by which the landscape is imbued with meaning and significance. Throughout the process of colonization social identity was bound to and associated with specific locations at an increasingly local level - it represents a 'settling down', a domestication. This was achieved through the interplay of various and conflicting ideological arguments. In the tensions created through the struggles for control over mobility, access and land we see these ideologies play out.

Wadsworth, Angela. 1995. **A Functional Analysis of Pumice Artefacts from Anapaluki, Niue.** BA (Hons) dissertation, Anthropology Department, University of Otago. 56 pp, 7 figures, 31 tables.

Pumice artefacts are relatively uncommon throughout the Pacific and little research has been undertaken on them. This dissertation presents a functional analysis of an assemblage of thirteen pumice artefacts from Anapaluki, a cave site on Niue. A classification is developed to standardise the description of use-wear on the pumice artefacts, and use-wear experiments conducted to determine function. These indicate that the Anapaluki tools were used primarily for finishing off the already shaped surfaces of wooden and bone

artefacts.

Wealthall, Rosamund. 1996. **Cranial Base Flexure and Facial Form in Polynesians**. BA (Hons) dissertation, Anthropology Department, University of Otago. XX pp, 5 figure, 10 tables.

Cranial base flexure, describing the shape of the cranial base in the midline, is an important influence on the form of the face. The aim of this study is to determine whether the hypothesised anterior displacement of the face with increased cranial base flexure actually takes place. To test this, measurements of antero-posterior positioning were developed and applied to radiographs of the Maori and Chatham Islands collection held in the Department of Anatomy and Structural Biology, University of Otago. It was found that this hypothesis was not supported, but that the composition of the sample may be responsible for confounding variation.

Widdicombe, Helen. 1995. **The Meaning of Junk: an Economic Comparison of Two Hotel Sites**. BA (Hons) dissertation, Anthropology Department, University of Otago. 50 pp, 6 figures, 3 tables, 3 appendices.

Published descriptions of the artefact assemblages from two nineteenth century hotels, one in the remote goldmining settlement of Nokomai and the other in urban Auckland, are compared to assess the social status of their patrons, and whether remoteness of location influenced assemblage composition. Differences in function and status were identified, but there were few differences reflecting location.

Wilson, Amanda. 1996. **Reworking Debitage: an Analysis of Polished Basalt Flakes from Pitcairn Island**. BA (Hons) dissertation, Anthropology Department, University of Otago. 71 pp, 8 figures, 3 tables, 2 appendices.

An assemblage of polished basalt flakes have been examined from Water Valley site on Pitcairn Island. It is believed that the flakes are a result of the reworking of adzes and the analysis was performed to determine if reworking was the manufacturing process of the flakes.

A discussion of previousdebitage analyses was used to set the scene for the analysis in which metric and non-metric attributes of complete and incomplete flakes were examined. A refitting exercise was conducted to determine if the flakes could be placed in the original position on the adze. An estimation of

skill was calculated, and a discussion follows on the suitability of this technique.

It was determined that the flakes are the result of reworking. The results are examined with respect to the composition of the assemblage, possible theoretical reasons for the reworking of the adzes (including the concept of curation) and the implications of the results are discussed with respect to the use of Pitcairn Island in prehistory.