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TRANSFER OF PLANTS, ANIMALS AND ADZES IN THE TONGAN MARITIME CHIEFDOM

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Introduction

This paper details evidence, derived from the 1793 observations of French explorers d'Entrecasteaux and Labillardière, of long-distance interaction between the peoples of Fiji and Tonga. In Melanesia the longevity of complex social networks well into the historic period, and the presence of artefacts made in materials able to be identified to a source or production area allows the examination of interaction systems as they developed from the past to the ethnographic present. For example, stone adzes were exchanged in the *kula* (Malinowski 1961: 358, 481) and in the Highlands of New Guinea (Hughes 1977, White and Modjeska 1978), and pottery was an integral component of several western Melanesian social networks (Lilly 1988, Irwin and Holdaway 1996). This is in notable contrast to Polynesia, where ongoing European contact appears to have precipitated a rapid collapse of indigenous interaction spheres.

Consequently the relative absence of detailed accounts describing functioning inter-archipelagic networks in Polynesia limits the ability to interpret archaeological assemblages of exotic artefacts (see Irwin 1978: 414). A case in point is the widespread distribution of Samoan adzes in prehistoric Oceania (Best *et al.* 1992), which, despite increasing archaeological evidence, has resisted definitive cultural explanation (see Geraghty 1993, Leach 1993, Clark 2002). For instance, were stone adzes and other exotic items in the archaeological record exchange valuables or utilitarian items? And who transferred them between island groups? Ethnohistoric accounts of long-distance voyaging in Polynesia are potentially significant for understanding the interaction context, and the best-known example in Polynesia is the Tongan Maritime Chieftdom and its contacts with other islands such as those of Fiji and Samoa.

This paper reports further instances of long-distance interaction beyond those already reported, particularly records of flora, fauna and stone tools moving between Tonga and Fiji noted by d'Entrecasteaux and Labillardière who visited

Tongatapu in 1793. The interplay between prehistory and ethnohistory/ethnography, when suitably employed, transforms the synchronic representations of culture embedded in the latter (Kirch 1988), and has the potential to improve the historical realism of archaeological interpretation (Groube 1977, Lightfoot 1995).

Records of Tongan Interaction

As it is generally conceived, Tonga was the centre of a voyaging network focused on Fiji and to a lesser extent Samoa, which transported goods—material items and intangible products of culture—and people between archipelagos. Transport of prestige goods, according to Kaepler (1978), grew out of inter-archipelagic spouse exchange which had the function of resolving inconsistencies in the hierarchy of the Tongan social system. Kirch (1984) offers a structural perspective in which the control and redistribution of exotic status goods allowed the paramount chiefs of Tonga to secure power over core and outlying islands.

Turning to the record of exotic items, which to a substantial degree underpin conceptions about the role of long-distance interaction, attention has been drawn to the lack of chronological control in compilations of transported materials found in archaeological, ethnohistoric and ethnographic records (Clark 2002). Objects such as whales' teeth, a commonly mentioned item in lists of transferred goods, were not noted in the earliest ethnohistoric records, while Fijian spears (*gadregadre*) and clubs collected from Tonga in the 1770s (see Forster 1982: Fig. 33, Beaglehole 1967: 958–959) have frequently been overlooked. The lumping together of observations on Tongan interaction extending from the 1770s through to the early 20th century makes it difficult to separate structural from contingent impacts on inter-archipelagic networks.

It is also clear that the record of interaction is incomplete and requires updating in the face of accumulating archaeological and ethnohistoric research. More accurate ethnohistoric information concerning the timing, number and type of material objects transported between Tonga and Fiji provides useful data for evaluating the role of long-distance interaction in prehistoric and protohistoric periods. Although beyond the scope of the current study the intangible social products accompanying inter-archipelagic voyaging, such as dances, religious concepts, ideas about warfare and material culture, need to be more fully considered in an archaeological consideration of indigenous cross-cultural contact in Fiji–West Polynesia (see Kaepler 1978, Clunie 1985, Pepa 1997).

The French Visit to Tongatapu in 1793

By the end of 1789 it was clear that the two ships under the command of La Pérouse had suffered a serious mishap in the Pacific Ocean. In 1791 Bruny d'Entrecasteaux, in command of the *Espérance* and *Recherche*, left Brest to determine the fate of La Pérouse, and to carry out scientific and geographic studies and manifest French power abroad. Unfortunately, a proposed visit to Pitt Island, later to be known as Vanikoro, was cancelled to take advantage of favourable sailing winds. This was a crucial decision because the La Pérouse expedition had been wrecked on the reefs of Vanikoro, and information collected by Peter Dillon (1972) some years later suggests that several survivors were on the island at the time of d'Entrecasteaux's voyage.

From 23 March to 9 April 1793 the French expedition had uneasy and occasionally violent encounters with Tongan people, which resulted in the decision to abandon a shore camp constructed on a small islet near Tongatapu. Nonetheless, a key task was to learn enough of the language to establish whether La Pérouse had visited the islands and to obtain information about the Tongan government, social systems and resources. In this the French were aided by a vocabulary obtained during Captain Cook's visit, although they found it necessary to repeatedly question informants to establish effective communication. Thus, it appears that information regarding interaction between Tonga and Fiji recorded during the French visit might well be reliable, notwithstanding the fact that Peter Dillon claimed there was poor understanding between Tongans and the French (Dillon 1972: lvii).

The records of long-distance interaction recorded by d'Entrecasteaux are from a recent translation of his journal (d'Entrecasteaux 2001), and in the case of the naturalist Labillardière, from the two volume English edition of his account of the voyage published in 1800. Both sources are relatively well known to researchers, but several significant details regarding the items recorded as being transferred between Fiji and Tonga have been overlooked. There is little doubt that further information about long-distance interaction will be found in a systematic examination of other 18th century accounts of visits to Fiji–West Polynesia.

Animals and Plants

Before d'Entrecasteaux's arrival Anderson (Beaglehole 1967: 955) recorded that Fijians came to Tonga to "carry off their hogs and other things", while King made it clear that the few dogs seen in the possession of Tongan chiefs at Tongatapu were not descended from those introduced by Cook, but had been imported from Fiji (Beaglehole 1967: 1364).

One of the main reasons for Tongan travel to Fiji mentioned in early ethnohistoric sources was to obtain red parrot feathers, as d'Entrecasteaux also noted (2001: 189). In Labillardière's account Tongans are also recorded as having the parrot itself:

They sold us several birds, and among others a beautiful species of lory, which they informed us had been brought to them from Feejee. (Labillardière 1800: 109)

The species is probably the Collared lory (*Phigys solitarius*), which is widespread in Fiji, and both males and females have a dark red plumage on the collar and breast. The Fijian name for the Collared lory is *kula*, *kuladrusi*, or *kulakula* in Vanualevu and north-eastern Fiji (Clunie and Morse 1984). Interestingly Labillardière (1800: Appendix), in his "Vocabulary of the Tonga (Friendly Islands)", has *koulou koulou* as the name of the red-headed turtle dove (cf. Crimson-crowned fruit dove, *Ptilinopus porphyraceus*), suggesting that several species of avifauna used to supply red feathers were given the same name as a result (e.g. the Red-headed parrot finch (*Erythrura cyanovirens*) is also called *kulakula* in parts of Fiji).

Sandalwood (*Santalum yasi*) was also esteemed by Tongans and was relatively plentiful in parts of Fiji, particularly in Vanualevu and parts of the Lau Group. d'Entrecasteaux noted that Tongans had actively tried to transplant Fijian sandalwood:

An attempt to transplant sandalwood, at Tongatabou has been made several times; but either because of ignorance in the art of cultivation, or because the soil of the island is not suitable for growing this tree, all attempts have failed. (d'Entrecasteaux 2001: 189)

Further details are mentioned by Labillardière, who was shown small pieces of sandalwood and a sting-ray-skin rasp used to obtain the sweet smelling wood powder (1800: Plate XXXII, Fig. 24):

They told us, that they procured it from the Feejee Islands, whence they call it haï-feejee: and they said that they had frequently endeavoured to transport some of the trees to their own island, but they could not succeed. (Labillardière 1800: 177)

Sandalwood is a slow-growing root-parasite that thrives in association with other dry area trees and is difficult, therefore, to transplant. However, the repeated attempts to try and establish the plant on Tongatapu reflect the importance of the material in Tongan society and the transport costs associated with inter-archipelagic travel.

Stone Tools

A perplexing contrast exists between the archaeological evidence for prehistoric interaction in Fiji–West Polynesia, documenting the movement of stone tools, especially adzes, and the ethnohistoric and ethnographic records which fail to mention the transfer of stone artefacts between archipelagos. There are several plausible reasons for this, including the possibilities that stone tools were directly obtained for utilitarian purposes and were not valued exchange commodities likely to be noted by European visitors, or the inclusion of stone items in long-distance networks was of limited duration. If the latter is correct then their absence in ethnohistoric and ethnographic accounts might reflect a dynamic interaction system, in which materials and items changed rapidly. Such a pattern contrasts with several Melanesian exchange systems characterised by a series of interlocking exchanges, whose very complexity conferred comparative stability because change in any of the components had the potential to threaten the entire exchange system.

On this issue the archaeological evidence for the transport of stone tools is relevant. The prehistoric movement of adzes in the Central Pacific includes specimens with a plano-lateral cross-section made in a green altered tuff/meta-sediment which have been reported from Samoa, Tonga and Fiji (Green *et al.* 1988), and which might derive from north-eastern Viti Levu (Green 1996: 122–123). On stylistic grounds these adzes are associated with the early Lapita settlement phase in Tonga and Fiji, and a similar item from Mulifanua in Samoa is in a material consistent with an origin in Tonga (Green *et al.* 1988). Two adzes in hawaiite from late-ceramic deposits on Tonga are probably from ‘Uvea (Green 1996: 123). As is well known, Samoan adzes occur in late-prehistoric contexts in Tonga and Fiji (Clark 2002), and have a much wider distribution in the Pacific (Best *et al.* 1992, Clark 2002).

These brief data might be taken as exhibiting two general trends. The first is that adzes appear to have been moved within the Central Pacific throughout prehistory. The second and more tentative possibility is that adzes made in Fijian stone had their widest distribution during the initial settlement phase beginning at 2900 BP, while the late prehistoric period saw a shift to adzes made in Samoa and ‘Uvea in the east. This reasonable conclusion is challenged by a statement by d’Entrecasteaux, which, if reliable, represents possibly the sole ethnohistoric account of inter-archipelagic adze movement yet known for the Central Pacific and Polynesia:

Fedgi [Fiji] also supplies stones that the inhabitants [of Tonga] use to replace iron in the fabrication of axes and other sharp instruments. I do not know what is given in exchange to the inhabitants of Fedgi. (d’Entrecasteaux 2001: 189)

The information is not mentioned by Labillardière, who was a trained naturalist and careful observer, and there must be some doubt as to its veracity, given abundant archaeological results indicating that adzes from Samoa were taken to eastern Fiji. However, chemical and petrographic study of Tongan adzes is limited in comparison with Fiji and Samoa, and it is plausible that Tongan adze collections might conceal examples made in Fijian stone. One possible archaeological example is an adze fragment made in a coarse-grained blue-green rock from Ha'apai in Tonga (Dye 1987: 130), which Green (1996: 122) has tentatively identified as an import from Fiji. The specimen was poorly provenanced and while it might be associated with Lapita-age materials a late-prehistoric age is possible considering the adze's quadrangular cross-section.

Conclusion

The accounts of d'Entrecasteaux and Labillardière extend the range of plants and animals now known to have been moved between Tonga and Fiji in the proto-historic era (Lessin and Lessin 1970, Kaeppler 1978, Kirch 1984, Weisler 1996, Clark 2002). Stone tools, red feathers, sandalwood and dogs were valued commodities, as might be expected given the transport costs involved in travelling to the Fiji Islands some 275 km northwest of Tonga. It appears that Tongans were attempting, in the case of Fijian sandalwood, to alleviate the supply costs by developing the plant in Tonga. This aggressive approach to the control of prestige goods is also evident in the procurement of the superior Fijian double-hulled canoe (*drua*). The view gleaned from ethnohistoric 19th century sources is that Tongans travelled to eastern Fiji and either built canoes themselves or paid Fijian chiefs for them, but Labillardière reports that he was shown a large Fijian canoe taken by the warrior chief Feenou (Finau):

...soon after we went to see a very lofty shed, which served as a shelter to a war canoe, eighty-feet long ... [Finou] informed us, that he had taken it in an engagement, which he had fought with the people of the Feejee Islands. (Labillardière 1800: 138)

Finou also showed Labillardière spear wounds on his chest that he said had been received in different battles against the people of Fiji, and the portrait of Finou shows a large scar below his right clavicle (Labillardière 1800: 99, Plate VIII, Fig.2).

The possibility that Fijians were exchanging stone tools with Tongans is significant because of the paucity of evidence regarding the status of stone adzes in long-distance interaction networks in West and East Polynesia. More importantly, the ethnohistoric record of d'Entrecasteaux opens up new avenues

of archaeological investigation concerning the source of Tongan adzes, and the nature of indigenous interaction between Fijians and Tongans.

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