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CULTURAL PROCESSES LIMITING DIVERSITY IN NEW ZEALAND PREHISTORY

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Introduction

We have long recognised that at about 1800 A.D. there was a distinctive culture which can be called New Zealand Maori, and that it was to a large extent, homogeneous, having internal cultural variety which is but minor when compared with the external differences. These external differences are in part a result of environment but also occur in cultural elements which are relatively environment-free. In 1800 A.D. Maori New Zealand and, say, Rarotonga, had been effectively separated for at least 600 years. The differences of social organisation, and particularly language and art styles applied in carving wood, reflect this separation. The same statement can be made of the arts and language of the Chatham Islands, although the time depth of this separation is not as clear.

In a large land mass it is possible for cultures to become effectively separated and display diversity reflecting the time depth of the occupation in the area. New Zealand is an archipelago which extends over 1600 km in length. This distance, in many parts of the prehistoric world, could cover several diverse cultures and some aspects of the cultural differences between New Zealand and Rarotonga or New Zealand and the Chatham Islands illustrate the degree of cultural separation which could have been reached within New Zealand had the available time depth been utilised. Yet it is clear that despite certain regional differences, these cannot be attributed to persistent and isolated regional traditions. This situation poses some interesting problems, because although archaeological explanations seem to concentrate upon explaining differences, processes which limit such diversity are as worthy of our attention as those which create it.

There are two broad alternative explanations possible for New Zealand's lack of wide diversity in A.D. 1800; that the low diversity does represent a short time depth, or that cultural isolation did not occur, to any marked degree, in any area of New Zealand. The first explanation requires a cultural replacement to have taken place relatively recently in New Zealand with a group originating from one confined area in the country coming physically to dominate all of it. While arguments have been developed (Duff 1956:7, Groube 1970: 153-155, Simmons 1971:95) for population movements from northern New Zealand these have not met wide acceptance, as the proposed movements are in part founded on Maori tradition and have little factual support from excavated evidence.

The second explanation; lack of isolation, takes New Zealand as a cultural whole. If culture is considered as commonly held ideas and models, then for

New Zealand to contain a more or less homogeneous culture those ideas and models must have been universally held and new ideas must have been transmitted through the whole region. That is, an information system effectively exchanged ideas on ways to behave. Effective communication of cultural information throughout New Zealand is, in fact, implicit in a lot of statements on Maori culture.

A third broad explanation might be that there was little cultural change through New Zealand prehistory. This is not supported by either internal archaeological evidence or external comparative evidence.

Some of the external differences are explicable by founder effect and an initial adaptation to a non-tropical environment, some internal regional differences (e.g. most of those described by Skinner 1926) are explicable through regional environmental differences, and some internal changes are ongoing adaptations to environmental modification and population pressure feedback. This does not, in my view, explain the totality of Maori culture. Cultures change as well because people are creative. The extent and nature of the response of Maori Society to the opportunities offered by European contact (Groube 1969:7-9) shows Maori Society of the 19th century as strongly creative, not merely adaptive.

In the rest of this paper I wish to review the processes operating in New Zealand at the time of European contact which were limiting diversity late in New Zealand prehistory, then review some archaeological evidence demonstrating effective interchange, and suggest some of the processes found ethnographically as potential models.

To some who perhaps do not know him, this may seem an unusual subject to raise in a volume offered to Ron Scarlett. Those more familiar with Ron will know of his eagerness to contribute to all facets of archaeology and will respect his dedication to issues of social change in our own society. My contacts with Ron over more than a decade have been a material contribution to my interests in archaeology.

Information Exchange—The Ethnographic Record

While a distinction was made above between homogeneity arising from replacement and that arising from interchange, the ethnographic record suggests that many of the population movements which took place were not commonly part of any process of replacement by newly dominant groups.

An important paper by Urlich (1972) has reviewed movements by North Island Maori groups in the period 1800 to 1840. She tabled some 46 movements in the period and estimated they involved about 20% of the population. The majority were clearly in response to stress resulting from warfare and their timing suggests many were occasioned by the inequitable introduction of guns into warfare. The majority are not conquests of new territory but rather groups in danger of complete defeat seeking a safer or more advantageous position. Relatively few were simple movements into a neighbouring territory, and many spanned a large part of the length of the North Island. This could be seen as an intensification of a prehistoric pattern. While warfare may at first sight

appear to be likely to induce a more defensive attitude, restricting movements, the reverse seems to be the case. The result of this process is that inter-regional diversity must decrease, but, conversely, where incoming and resident groups have little contact diversity within a region could well be increased. Sullivan's review of ethnographic material from the Auckland Isthmus (1976) has shown that such movements there were reciprocal between distantly related kin groups, and groups allowed to reside in an area would be obliged to allow the hosts use of part of their own territory in the future.

On a more local scale there are clear accounts of exchanges between neighbouring groups which constitute occasions for information exchange. Territorial boundaries between neighbouring groups do not appear to have been closely drawn. Thus a number of groups living in a region could have recognised rights to exploit resources which were spatially distributed in a pattern which did not reflect their usual residences. This is not very surprising when considered in relation to the structure of a basic Maori social group, the hapu. Being a descent group which could recruit members from anyone who could trace a lineage from a person acknowledged to have been a member, or to a pivotal ancestor, it allowed considerable flexibility (Webster 1975:124, 144).

There was no requirement that a hapu be a territorial group or even that all its members be co-resident (ibid.:126) and there appears to be no ethnographic evidence to allow any dogmatism on these points. Some seem to have had geographically widely spread exploitation rights. The historical origins of such rights to land and resources are readily understood in terms of flexible recruitment into hapu. Sullivan's study (1976) again shows territorial overlap in the use of harbour resources in the Auckland Isthmus. Other examples are groups resident in the Waikato having rights for fishing on the West Coast (Roberton 1965:40) and a group from the Hauraki Gulf encountered in temporary encampment in Mercury Bay in November 1769 (Banks 1962:427-428). Clearly this pattern of resource use made for much more frequent inter-group contact and required certain mutual understandings. Indeed, in fishing, it seems clear that large netting operations were carried out by agglomerations of widely spread groups especially brought together just for that purpose. (Yate 1835:71, 85). The huge nets of the Bay of Islands for example, must have required the services of large numbers of people to be of use (Roux in Kennedy 1969:219, Duperrey 1971:92, Banks 1962:444). Similar co-operative ventures occurred in pursuing warfare (Roberton 1965:40) but only rarely (Vayda 1960:32-33).

Re-location of one party upon marriage is an effective mode of distributing cultural knowledge. It is very difficult to judge the extent of inter-group marriage from the ethnography. Certainly well-recorded instances of marriage between highly ranked people occurred but it must be doubted if choice of spouses in lower ranks was as often made from groups as widely spread. Marriage was most commonly within hapu (Biggs 1960). This form of direct information exchange cannot then be held to be important. However, the kinship ties which could almost always be traced between groups often stemmed from high rank inter-marriage and re-cementing these ties by social exchanges was commonly recorded. Likewise, there are many accounts of lavish feasts and gift-giving which seemed excessive to the canny European observers (Yate 1835:139, Polack 1838:75, 79).

The control on this distribution seems to have been concentrated in the higher class ranks of Maori society. The exchanges of food mostly seem to be in the form of hospitality lavished on visiting parties with presents of food restricted to portable choice items. Gifts were more commonly in goods and made to higher ranked people in opposite parties. Social visits and accompanying gift-giving were not just a local process. For instance, the Ngai Tahu group in the northern South Island maintained contact with the south of the South Island, to the West Coast of the South Island and to Hawkes Bay (Stack n.d.:192). Social exchanges, then, appear to be an important element in providing models leading to greater dispersion of new varieties of items of material culture. There is on record quite a complex set of rules governing gift reciprocity (Sahlins 1974:149-168), and Mair's (1972) review of the ethnographic records of the Southern Wairarapa contains several examples of the sorts of interaction listed above and illustrates well the reciprocity of gifts of food, other consumable items and artefacts which went on.

In contrast to the frequent records of these sorts of exchange, there seem to be very few which record barter between individuals. One can suggest that the presence of Europeans would re-focus any barter exchange which might otherwise have occurred between Maoris. Orchiston (1975) has suggested that the readiness with which the Marlborough Sounds Maoris entered into barter with the first Europeans bartering goods and food, was an adaptation from the situation they were often in, acting as middlemen in exchange of goods between the North and South Islands. (But it is worth pointing out that although many navigators praised the Maoris for their fair trading not a few suffered blatant acts of theft during barter).

In the light of Orchiston's suggestion, the trading between Maoris visiting the Endeavour in 1770 near Cape Palliser is interesting: "... on having presents made them immediately made presents to us in return (an instance we have not before met with in this Island)." (Banks 1962:465). This observation supports the importance of exchange to residents of the middle of the country. There are also some accounts of barter between individuals of different Maori groups. Tuki, the Maori abducted to Norfolk Island in 1793, was reported by King as saying that in times of peace they "... visit and traffic for Flax and Green Talc Stone of which they make Axes and Ornaments" (McNab 1914 Vol. 1:542). It would be dangerous to read too much into this. Nicholas describes barter he observed between individuals in 1814, when the goods being exchanged were flax mats for gannet feather hair dressing pieces, "... prepared exclusively in the Bay of Islands whence they are carried to the other districts and form a staple article of trade." (Nicholas1817 Vol. 1:398). The occasion for this barter was a visit on a European vessel to another district. Europeans were involved in the trade, and the Maoris were also bartering for pieces of iron; facts which militate against regarding this as a representative occurance. Some support however, is offered by the high frequency of occasions when early Europeans were offered cloaks in barter and the ease with which trade in prepared flax was developed by the first traders, suggesting these were already recognised items of barter.

In the historical records and in traditional histories it is possible to find accounts of the sorts of materials moving from one place to another but

the social implication of these is obscure. Thus Taranaki seems to have been regarded as a source of fine cloaks (Skinner 1946:64), the west side of the Auckland peninsula produced Dentalium nanum shell used elsewhere (Hamilton 1899: 307), obsidian in core form was taken from Mayor Island to the north (Manning 1875:103), eels from Wairarapa to the Napier area (Mair 1972:210), slaves from Ureweras to Thames (bartered for muskets), (Best 1925:520), preserved birds from inland Hawkes Bay to Mahia in exchange for whale bone (Best 1925: 534), preserved kumara, "mats" and canoes were bartered between Cook Strait and areas further south in exchange for nephrite, white heron feathers, preserved birds, a scented vegetable oil and vegetable food product from Cordyline sp. (Shortland in McKay 1873:125), and from the west coast of the South Island nephrite (Heaphy in Taylor 1959:237) and a chewing pitch (Heaphy in Taylor 1959: 207) passed to other parts of New Zealand.

It cannot be held that these exchanges were solely on a barter basis and it is impossible to claim that barter was an important mechanism for the exchange of goods between Maori groups. In generating opportunities for cultural interchange and exchanging new models of material items other processes seem to have been more important.

In maintaining homogeneity of art forms in the male domain, travelling specialists appear to have been important. In 1820, Cruise observed a carver at work in the Bay of Islands and was told he had been brought there from Thames for the purpose (Cruise 1957:34), while Polack encountered a tattooist from Whakatiwai (in the Hauraki Gulf) whilst travelling between Hokianga and Kaipara. (Polack 1838: vol. 1:164). If such interchanges were common, skilled artisans must have been very familiar with the work of their fellow artists over a larger part of the country than solely the area in which they had relatives.

There is also some evidence that slaves with special skills were given a more respected place in society than their origin would normally allow. Thus the tattooist whom Earle came to know was well rewarded for his services in the Bay of Islands despite being a slave (Earle 1966:124-125), and Duperrey (1971:39) observed another slave in the Bay of Islands who had been given a wife and who acted as agent for his owner in dealings with Europeans. However, these cases might reflect the unusually large number of slaves owned by residents of the Bay of Islands in the 19th century. Historical accounts more commonly indicate that slaves, and other people of low rank, were usually allocated the load-bearing, food preparation and similar domestic tasks. If this was generally the case, and given that slaves were frequently captives from distant areas, then their allocation to domestic duties could have reduced their potential ability to introduce cultural diversity into the societies of their owners.

Turning now to information in a narrow sense, effective and rapid communication is recorded in the literature. On Cook's first voyage, Maoris at Thames knew of the Tahitian Tupaia, the information reaching them, no doubt from Mercury Bay, before the ship had travelled to Thames (Banks 1962:435). On the same voyage people near Cape Palliser asked for nails on first contact. Knowledge of these must have passed from the East Coast to Palliser in the period the ship was working around the North Island (Leach 1976:40; Cook 1951: 115). Both of these are instances of communication within tribal groups. It was not always effective beyond groups. For instance, the people at Queen

Charlotte Sound on Cook's second voyage had no knowledge of him despite his previous visit there.

An illustration which literally sets out an individual Maori's perception of the world, as it affected him, is the map of New Zealand drawn by Tuki while on Norfolk Island in the 18th century. (Milligan 1964) Figure 16.1 shows the North Island only, and the grid distortion shows the geographical interpretation advanced by Milligan. While Tuki's world was weighted to the territory in which he lived, this is certainly wider than the territory which he would need to know for subsistence. It could approximate to the area in which he had kin ties, or was involved in intergroup politics.

Summarising the ethnography, there seems to be good evidence that in the protohistoric period, cultural information was transmitted readily and widely in New Zealand and that differences, where they existed, could not have been maintained in ignorance of other ways of behaving or of other models to follow.

Prehistory

The sorts of data available from archaeology relate to the transmission of materials, particularly rock materials, through New Zealand and to the spread of new forms of behaviour. Neither can be viewed in isolation from the considerable diversity of human environments which New Zealand offers.

The similarity of the material culture of Archaic sites throughout New Zealand has been commonly cited (Golson 1959:44), Green considering that the low diversity was surprising given the differing economies which were adopted (1971:26). The rock shelter art of North Otago and South and North Canterbury also shows strong similarities (Trotter and McCulloch 1971:71-76, 1973). These, and the wide distribution of rock types (reviewed below), have lead to suggestions that the population was very mobile (Simmons 1969) and that the people were involved in long distance trading journeys (Keyes 1975:10). There is some evidence now that this was not the case. The people buried in the Wairarapa sites, particularly in the Washpool Midden Site (N168/22), differ in a number of respects from the people of Wairau Bar (S29/7). Their diet, as it has affected their teeth, appears to have differed; their general health appears to have differed also, and there are suggestions that while both groups were clearly Polynesian they belonged to separate Mendelian populations (Sutton 1974:67-70; 141; Houghton, 1975). In addition, the occupants of the Washpool sites appear to have lacked the adze-making skills necessary to work the met-asomatised rocks as well as these were worked at Wairau Bar. Taken together these facts suggest that populations were to some extent localised by the time Wairau and the Washpool Site were occupied.

These suggestions of insularity can be contrasted with the wide-ranging sources of raw material used in the early Palliser Bay sites, the imported rock material being numerically dominant (Prickett 1975:35, Leach 1976). In fact wide movment of a variety of materials is common in the Archaic of New Zealand. Scallop shells used for ornaments were imported to Wairau Bar (Duff 1956:134) to the Washpool Midden (Leach 1976) and the Weka Pass Timpendean Shelter (S61/4 C_{14}, NZ 892 Shell A.D. 1514 $\pm$ 53, Trotter 1972b:46).

Fig. 16.1 Tuki's map and reconstructed grid distortion.

Shellfish were moved inland to a variety of sites in the South Island (Weka Pass, Pentland Downs (S61/20), Glen Gynk (S61/24) (Trotter and McCulloch 1973), and Gooseneck Bend Shelter (S117/8, Ambrose 1970:407) and in the north as well, to Whakamoenga (N94/7, Leahy 1976:45). Some of these shells were doubtless for use as tools. Moa bone was also moved from the South Island to Palliser Bay (Leach 1976) and to Paremata (N160/50, Scarlett 1974: 11). In the South Island moa bone was moved into Fiordland (ibid:9). Turning to rocks, basalt from Tahanga quarry on the Coromandel Peninsula is present in the earliest sites throughout the north of the North Island (Best 1975, Moore 1975, 1976) from Taranaki to the Eastern Bay of Plenty. Siliceous sinter occurring near Tahanga was moved to Houhora (N6/4) in the far north along with Tahanga basalt and Mayor Island obsidian (Best and Merchant 1976: 108).

Some rock materials of lower quality were not transported far. The greywacke used on Motutapu is only dominant locally (Davidson 1972) and a rhyolite with small spheroidal obsidian inclusions used as an abrader on the Coromandel (Crosby 1977) does not occur elsewhere.

Most importantly obsidian from a variety of northern North Island sources (Ward 1973) was used throughout New Zealand. The earliest North Island sites all appear to have obsidian and the nearest source is not always dominant. At Houhora (Best 1975) and Tokoroa (N75/1, Law 1973) obsidian from Mayor Island is dominant while other sources are closer. Judged on transmitted light characteristics it is unusual for only one obsidian source to be represented in the early sites (Green 1964). The only determinations available for an early, northern site are from the Sunde Site (N38/24) on Motutapu. Here obsidian from Layer 2 and 4 (C14 a.d. 1330 ± 60 and later, NZ 1899) is sourced to Huruiki in Northland and Mayor Island (Davidson 1972:6).

The Palliser Bay sites provide the best data we have on sources. Here obsidian from seven different sources including Mayor Island, Coromandel, Northland, Rotorua and Taupo appears in the lowest level of the Washpool Midden and the source range here, and at two other sites, does not increase with time, but if anything becomes restricted (Prickett 1975, Leach 1976). What is interesting in the present context, is that the proportion of the different sources shows little variation between the different Palliser Bay assemblages. If the obsidian was obtained by direct voyages between Palliser Bay and the sources it is remarkable that this consistent variety should ensue. The observed pattern is more consistent with a model which has occasional small supplies of obsidian arriving at Palliser through intermediaries. Filtering supplies through a chain (or chains) would limit sudden changes in proportion.

Obsidian movement extends to Southland in the Archaic (Lockerbie 1959: 83). It has been claimed to be present in the earliest sites but published evidence is wanting for this. Obsidian reached Waitaki River Mouth (S128/1) in core from at some stage in the occupation of the site (C_{14} SUA 61 moa bone a.d. 1350 ± 80). It seems clear from the variety of colours in obsidian from South Island Archaic sites that a variety of sources are represented in assemblages. (Millar 1971:163; Trotter 1970:473; Trotter 1972a:145), although Heaphy River (S7/1) is in contrast (Wilkes and Scarlett 1967:207 C_{14} NZ 509 shell a.d. 1400 ± 70).

The only rivals to obsidian, in their extent of distribution, are the metasomatised rocks of the Nelson mineral belt. (Keyes 1975; Walls 1974). The precise sources of these are difficult to identify. One source, distinctive in hand specimen, is the Ohana quarry on D'Urville Island. (S10/56, S10/90). This material occurs in adze form throughout New Zealand although it is rare in the northern North Island, and it is found in the earliest layer at the Washpool site (Prickett 1975:145). It seems unlikely that this rock, or the other Nelson metasomatised rocks, were transported outside the source area other than as finished adzes.

Nephrite appears in Archaic sites in Cook Strait and the South Island but there is only site-association evidence for it in the northern North Island at Wheritoa (N53/4 Crosby 1977). In the South Island its use extends to Southland (Lockerbie 1959:83). A similar material, bowenite, from Fiordland is found at Wairau Bar, Papatowai (S184/5), Tiwai Point (S181/16 C $_{14}$ a.d. 1508 $\pm$ 53) (Coutts 1971:61), Kings Rock (S184/6) lower layer (Lockerbie 1940: 413), and at Shag Point (S146/5 C$_{14}$ shell a.d. 1516 $\pm$ 50), (Trotter 1970:478). Some South Island rock materials have more restricted distributions, for instance Gawler Downs silicified tuff (Orchiston 1976). Silcrete from a variety of Otago sources is predominantly found in Otago sites. Simmons and Wright (1967) argue for some movements of it within Otago.

While this review has demonstrated good evidence for the movement of materials in the Archaic, little serious work seems to have been put into models to account for the distributions. The interrelation of Archaic communities is deserving of more attention. At present it appears that communities were localised but that they had sufficient contact with each other to recognise each others needs and meet these through exchange relationships. There are, however, some problems with the Archaic evidence in the North Island. The first is simply that the evidence is spatially discontinuous. Archaic sites are well attested from the Coromandel and the Hauraki Gulf. Though the survey data is sparse it seems likely sites can be attested on most of the east coast southwards, but there is very little evidence of similar sites from Taranaki north until Aupouri and there is a similar gap in the evidence from Doubtless Bay south to Great Barrier on the east coast. The distribution map for adzes given by Golson (1959:68) reflects well the discontinuous distribution of known sites.

The second problem is the apparent persistence of the Archaic in various areas. On Motutapu a number of Archaic adze attributes apparently continued in use for long after the 14th century ash eruption of Rangitoto and in sites with the usual early mixture of food and artefactual remains. (Scott 1970, Golson 1959). On the Coromandel a similar site was occupied in the 18th century (Opito, Moores Bach Site N40/16 C$_{14}$ NZ 1992 a.d. 1770 $\pm$ 60, NZ 1993 a.d. 1760 $\pm$ 60), while the Hot Water Beach Site (N44/69) continuing to the 16th century, contains clear evidence of a large number of Archaic traits, again in a site with mixed food and artefactual deposits (Leahy 1974). It seems clear that Archaic portable artefacts persisted late in the Coromandel area as did an economy emphasising exploitation of marine birds and open sea, baited hook, and lure fishing. (However it should be noted that storage sites are dated to the early Archaic at Harataonga (Law 1975), Skippers Ridge (N40/7 Davidson 1975 C 14 NZ 1740 a.d. 1143 $\pm$ 57) and Sarahs Gully Pa (N40/10,

Birks and Birks 1970, 1973)). At Tahanga Quarry some Archaic adze attributes apparently persisted to the end of prehistory, although probably only the attributes well adapted to the use of free flaking rock (cf. Best 1976).

A third problem is that, sites with a conventional Classic orientation appear disconcertingly early and in areas where the usual Archaic evidence is non-existent. Thus Otakanini (N37/37) appears by the 14th or 15th century as a very large defended site with food storage evidence and in a location offering little opportunity for open ocean exploitation or for exploitation of the range of birds found in Archaic sites. (Bellwood 1971:71, 1972, 1973). There are no earlier Archaic sites in the area. Likewise, Kauri Point (N53/5) is in close proximity to good horticultural soils, and has sophisticated fortifications dating from the 15th century. The 15th century garden on Moturua (N12/6, Peters 1975) in the Bay of Islands is also in an area where no case can be made for any substantial presence of Archaic portable artefacts, yet occupation evidence is available from this coast in Wellman's sediment profiles which lie under 14th century pumice deposits (1962). Aileen Fox's pioneer work in Hawkes Bay established that a defended site there extends back to the 16th century and it has earlier storage facilities. Again there is no suggestion of a close relationship to any occupation of the area using Archaic portable artefacts. (Fox 1974, 1976). On the Auckland Isthmus there is an early date from Mt Wellington (N42/4 C_{14} a.d. 1430 $\pm$ 40)—a fortified site, and Archaic adzes from there and from the Mangere area (Best 1975, Copsey 1974) in association with rich garden soils used relatively early (Sullivan 1975), fortification sites and estuarine resources. Lastly, the slight Archaic evidence on the North Island's west coast, at Kaupokonui, and Manukau and Raglan Harbours, does not recommend this region as a starting point of a local transition to later Maori adaptation to New Zealand. Rather, it suggests a pattern of unintensive and coastal Archaic use of the area followed by the more populous settlement of fully adapted Classic groups. A similar case could be made for the Waikato.

It seems, therefore, that we have established an extraordinary antiquity for non-Archaic behaviour, and certainly one which overlaps with much of our excavated Archaic evidence in the northern North Island. In addition, by the mid point of the North Island's prehistory there were areas where exploitation and artefact manufacturing behaviour still looked back to the initial adaptation to New Zealand. In other words, a high degree of cultural diversity remained. When and why did it decline?

The Development of Cultural Uniformity

Groube, in an earlier review of New Zealand evidence wrote "it is very probable that some of the changes crucial to our understanding of the Classic Maori took place very rapidly and at an earlier date than suggested by South Island fish-hook evidence" (1969:10). This seems to be being reinforced by more recent evidence, which indicates that by the 15th century the basic pattern of a Classic economic adaptation had been established, that it was practised over a wide area in the North Island by people who built sophisticated fortifications, and had almost entirely replaced the tropical Polynesian portable artefacts. If this is correct, it must place a considerable time depth

on the first reaching of this adaptation. The possibility of New Zealand's low diversity at contact arising from a recent spread of a late horizon is thereby contradicted.

There is archaeological evidence to demonstrate that the adoption of the different elements of late patterns of culture was not simultaneous. The most important evidence is from Kauri Point. The development there of the round-topped combs known ethnographically is demonstrably later than the first occupation of the adjacent knoll (Shawcross 1963, 1964). The development of this form from a frame of rectangular shape can be argued to parallel the development of curvilinear late Maori art from a more typically Oceanic art form. The development of the late comb form, at least, is demonstrably not contemporary with the first exploitation of microenvironments typical of the Classic phase—such as the harbour-side location of Kauri Point. This suggests that processes other than ecological adaptation may have been occurring, in particular, trait diffusion.

Some varieties of fishing gear appear to have achieved a rapid, late distribution throughout New Zealand. Crosby has characterised the late fishing gear in New Zealand as a development of localised secondary adaptations, but there are exceptions. Kahawai lures appear to have been distributed throughout the North Island. Evidence for any prehistoric occurrence of the shell inlay in archaeological sites appears to be lacking. It could then be regarded as a late spread of a new form. Similarly, multiple barbed and serrated points of two-piece fishhooks make a late appearance throughout New Zealand, although, in this case, prehistoric provenances are known. (Lockerbie 1940; Simmons 1967:34; McKinlay 1971:89). A similar case can be developed for one-piece hooks with internal shank and point barbs (Hjarno 1967:35). The more frequent use of barbs in later South Island Archaic sites is among the evidence referred to by Groube above. Trotter (1965) makes a strong case for a progressive adoption of barbs together with a shift to two-piece hooks in North Otago sites. This is also suggested in other Otago sites (Simmons 1967:48; Hjarno 1967: 38; Trotter 1970:477), and the adoption of barbs and two-piece hooks seems to have been occurring over a wide area of New Zealand (Millar 1971, Leach 1976). A case has been made for a late 18th century conquest of Otago by a group bearing Classic Maori Culture (Simmons 1967:55), but the artefact forms supposedly introduced are not much more numerous than those which appeared in Otago and elsewhere earlier. The argument is weakened by the dates from a palisade at the important Classic site of Murdering Beach (S164/16 C_{14} a.d. 1640, 1617, 1610; errors of the order of $\pm$ 50). It would seem more likely from this evidence that Otago was actively contributing to Classic Maori in the 18th century rather than simply having it introduced from further north.

The economic evidence suggests that the exchange of goods, in the late period was more restricted than it had been earlier. Marine resources reached the inland Waikato, (Shawcross 1968:22; Bellwood 1971:87; Peters 1971:137), and Taupo (Leahy 1976:45), and the occurrence of toheroa (Paphies ventricosum) at Skippers Ridge (Davidson 1975:23) is outside the modern rangeof this species. This evidence is less impressive than that for the earlier period.

Of the adze materials, Tahanga basalt and the Nelson metasomatised rocks have much more limited distributions. Best (1976) produces a convincing rationale for this and demonstrated what is perhaps a more typical late distribution pattern, that for gabbro from the Tangihua massifs in Northland (1976:60). Obsidian however continued to move throughout New Zealand. It is found in late South Island sites such as Little Papanui upper layers (S164/1, Simmons 1967:43, and Pariwhakatau (S55/7, Trotter 1975:150). The only source determinations available are from late prehistoric Southland. Mayor Island obsidian occurs at Garden Island, Chalky Inlet (Coutts No. GI1) and at Sandhill Point (Coutts Nos. SHP/1,2 and 4), while Taupo and Huruiki obsidian occur at the latter (Ward 1974:53, 56).

So far as the North Island is concerned, obsidian at Otakanini (not necessarily all late) was obtained from Great Barrier, Huruiki and Mayor Island. At Mangakaware (N65/35) in the Waikato, obsidian came from Mayor Island and Taupo while in the later site at Skippers Ridge (II, N40/73 C 14 > a.d. 1818, > a.d. 1737) obsidian came from Whitianga and Mayor Island. (Armitage et al 1972:418). On Motutapu obsidian has been sourced from the Station Bay sites, and it originates from Mayor Island, Great Barrier and Whitianga (Davidson 1972:7).

Nephrite continued to be used throughout New Zealand late in prehistory with considerable quantities occurring in East Coast South Island sites such as Murdering Beach, and Houhou-Pounamou (S76/7). Finds of nephrite artefacts in late contexts are occasionally made in the northern North Island (McKinlay 1971:89) but it must be emphasised that they are rare.

This brief survey of archaeological evidence suggests that areal diversity decreased late in New Zealand prehistory. There is some evidence for information exchange in trait diffusion and evidence of exchange distributing at least a few raw materials. To that extent the ethnographic evidence suggesting there was information interchange throughout New Zealand seems to be confirmed in the archaeology of the later sites. On the other hand, there is no convincing evidence of a wave-like spread of Classic culture; rather a continuous process of change shared between groups spread over most of New Zealand, and New Zealand's prehistory, is suggested.

Ethnographic Models

The specific modes of information interchange recognised in the ethnographic evidence are worth reviewing as models for application to archaeological evidence. Group movement is a long established model in prehistory but the ethnography places it in a different light: not one of strophic wave-like replacement by newly dominant groups but rather a continuing adjustment process affecting the disadvantaged as well, and involving individual movements which are decidedly 'un-wavelike', and incoherent in direction.

Modes of information interchange other than group movements seem unsuited to overt use in building models beyond recognising that information interchange occurred. But there are some specific instances where they may be worthy of testing. Slavery seems to be a case point. The development of the institution of slavery in New Zealand could be linked with the institution-

alising of warfare. The greater spread of status within small groups may have lead to greater status separation of tasks. This is a linkage of some power in that it predicts the separation of food preparation from other industrial activities, a separation which is not characteristic in the Archaic. The ethnographic model of interior groups having coastal fishing rights finds application in the Waikato archaeological evidence and is of potential explanatory value for these areas, in suggesting specific modes of information interchange, for testing against other modes.

A Wider View

This subject leads repeatedly to comparisons outside New Zealand. It appears that intergroup contacts in prehistoric Australia, which ethnographically were perhaps less frequent than those of the Maori, have been sufficient to maintain a surprising degree of cultural (but not linguistic) uniformity over the entire continent (Mulvaney 1976). A contrast is found in Hutterer's discussion of Southeast Asia (1976), where he stresses the prehistoric and historic persistence of marked cultural differences between neighbouring groups despite their frequent contact in trading situations being a matter of historic record.

In the New Guinea Highlands quite marked diversity has persisted although there is, as well, a number of common elements which cannot have great time depth. Well-known movements of goods have occurred in the Highlands; moving salt, feathers, rock materials and sea shells, but these are often in contexts which minimise intergroup contact.

Elsewhere in Melanesia, there are well-known trading linkages and many of these social contacts extended well beyond barter, between groups covering the entire spectrum of the characteristic diversity of the area. This near-contradiction is a focus of current research (Terrell 1976). Contrasting this region with New Zealand, by applying Terrell's Solomon Island area-language relationship (1976:8) to half the land area of New Zealand's North Island (approximating to the area suitable for use by a horticultural people), results in a predicted 116 languages. Clearly evidence of some contact between neighbouring groups cannot generally be held to be sufficient to explain homogeneity, especially if the contact cannot be demonstrated to extend beyond bartering of goods.

Turning to island Oceania, Pawley and Green suggest that communities separated by more than 450 km of ocean, and which initially have the same language, will not be able to resist differentiation. (Pawley and Green 1973: 40). In Polynesia, linguistic diversification has been slight, with Samoa and Tonga each being outstanding examples. Yet these and others had, at least late in prehistory, rank systems which, at the top, gave authority over areas greater than single islands. In contrast, Fiji did not maintain a single language, but split into two broad groups (Pawley and Green 1973:46), but only after "all the Fijian languages underwent a long period of more or less unified development " (op. cit.). Even after this split a good deal of cultural unity was still maintained throughout Fiji.

The sorts of interchange which maintain cultural homogeneity in primitive societies are not obvious from a superficial review. It might seem that there is some vital difference between, on the one hand, Southeast Asia and Melanesia, and on the other, Australia and Polynesia. Until this is better understood, it would be as well to treat many of the sorts of interchange listed here for New Zealand as necessary to limit diversity but not a sufficient explanation of a lack of diversity.

The view of the Maori advanced here is that they were a stateless nation. Cook expected kings and was puzzled not to find them, but it is clear that the organisational infrastructure necessary to maintain the authority of a state was quite foreign to Maori Society. Observations of the King Movement in the 19th century underline this (Gorst 1864:245-285). What was the future direction of Maori Society when it was interrupted in the early 19th century? Movement towards a state or larger political units could only have been slow and development of stronger regional differences with eventual appearance of strong linguistic diversity seems more likely, using Fiji as a model. One can only suppose that the cultural momentum of Maori society would be weakened by such a development. But perhaps the way was open for the apolitical cultural unity to continue. If it was, it would seem that the second millennium of New Zealand prehistory might have been of unusual interest.

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