Deciphering the Lapita Code: the Aitape Ceramic Sequence and Late Survival of the 'Lapita Face'

John Edward Terrell & Esther M. Schechter

Archaeological and ethnographic evidence from the Sepik coast of Papua New Guinea documents the survival in the western Pacific of a stylized symbol or motif — the so-called 'Lapita face' — on pottery and possibly other kinds of material items (such as wooden bowls and serving platters) for at least 3300 years. A plausible reason for the persistence of this iconography is that it has referred to ideas about the living and the dead, the human and the divine, and the individual and society that remained socially and spiritually profound and worth expressing long after the demise of Lapita as a distinct ceramic style. We detail evidence for saying that the 'faces' on Lapita vessels from thousands of years ago and certain stylized designs on historic and modern carved wooden bowls and platters from this coast are historically linked ways of alluding to sea turtles, creatures figuring prominently in the lore and cosmology of Pacific Islanders. Here we describe four prehistoric wares (or 'phases' or 'periods') in the Aitape ceramic sequence on the Sepik coast that, considered in series, fill the temporal gap between practices and beliefs in Lapita times and present-day realities in this part of the world.

It is obvious that people do not create their ways of life anew each passing day. Instead, they build on how they have previously behaved and on what both they and others have already learned and achieved. When talking about individuals, this basic fact of human social life is variously described as acquiring habits good or bad, having a life style, social learning, and the like, depending on the context and purpose of the conversation. Seen in broader perspective, however, the re-creation and re-enactment of social conventions, customs, religious beliefs, and the like, are commonly and more imposingly referred to variously as having a 'culture', an ethnic 'legacy' or 'identity', a 'cultural tradition', and so on.

Less obvious is why some practices and conventions appear to survive not only for a few years, decades, or generations but for hundreds and possibly thousands of years (Hodgen 1931). It is not known how rare or commonplace such cases may be but, whatever the statistics, it would seem unlikely that long-term persistence is purely accidental. While it could be that such staying power is merely the outcome of rote repetition of the same old thing one generation after another, such an elementary explanation may not always be good enough. At least in the case of recognizable and enduring iconography, such as religious symbols, it would seem reasonable to think that observed continuities of form may entail continuities as well of practice and meaning. Furthermore, in the case of religious symbolism, the persistence of forms (e.g. certain identifiable symbols) would seem to be fair evidence of enduring human motivations that are socially important and perhaps deeply felt.

Even in these latter instances, however, it would surely be naive to conclude without strong evidence that continuities necessarily indicate unwavering sameness of associated practices, meanings and beliefs regardless of time or place. It would also be simplistic to think that change in form — say, in how some symbol is drawn — necessarily signals that meanings and intentions have changed accordingly. *Plus çà change, plus c'est la même chose*. So too, as Agatha Christie showed in *At*

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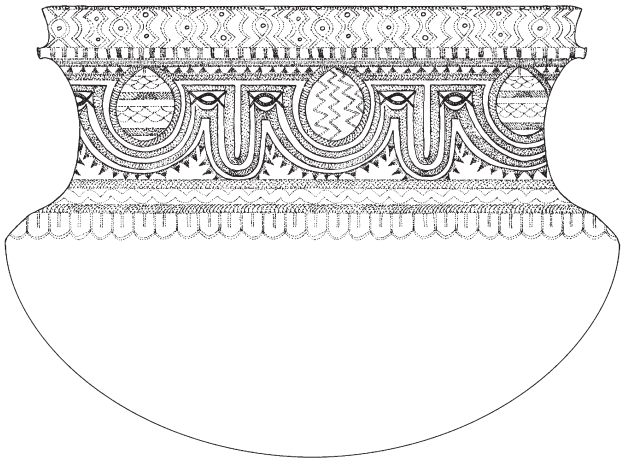


Figure 1. *Reconstructed vessel from the eponymous Lapita site on the Foué Peninsula of New Caledonia (from site WKO013A; approximate diameter 45 cm; reprinted, courtesy of Christophe Sand).*

Bertram's Hotel, the more things appear to remain the same, the more they have been changing.

Here we describe archaeological and ethnographic evidence from the Sepik coast of Papua New Guinea documenting the evident survival in one form or another in the western Pacific of a stylized symbol or motif, the so-called 'Lapita face' (Fig. 1), on pottery and possibly other items, such as wooden bowls and serving platters, for at least 3300 years. We will not go as far as others (e.g. Best 2002; Chiu 2005; Kirch 1997; Spriggs 2002), in offering motivational or sociological explanations for the endurance of this symbol based on presumed meanings and socio-political significance (inferences that can be difficult for archaeologists to examine successfully). However, we will suggest, as others have, that a plausible reason for persistence in this instance is that this symbol expressed ideas about the living and the dead, the human and the divine, and the individual and society, that remained socially and spiritually profound and worthy of expression however much they may have been reinterpreted and variously configured depending on time and place. We think it probable (but perhaps impossible to prove) that this graphic device referred to (or 'indexed': see Gell 1998) a popular legend, origin myth, or culture-hero tale that lived on long after the demise of Lapita as a distinct pottery style and, by so doing, kept alive its symbols and perhaps associated paraphernalia and practices.

Background

In 1987, Robert L. Welsch and John Edward Terrell began using the vast Pacific anthropological collections at the Field Museum in Chicago — in particular those assembled by Curator Albert B. Lewis on the 1909–13 Joseph N. Field South Pacific Expedition (Terrell & Welsch 1990; Welsch 1998) — as a benchmark for exploring the history and diversity of people on the Sepik coast (Fig. 2). In 1990, they visited this coast to explore fieldwork opportunities (Welsch & Terrell 1991). In 1993–4, they conducted far-reaching fieldwork (Terrell & Welsch 1997; Welsch & Terrell 1998). In addition to their ethnological research, they completed archaeological surveys between the Serra Hills west of Aitape and the town of Wewak east of Aitape (Fig. 2). In 1996, they carried out the first archaeological excavations done at Aitape and on Tumleo Island just off the Aitape coast (Terrell & Schechter n.d.; Terrell & Welsch 1997).

While on this coast in 1996, certain stylistic similarities noted between what we have named 'Sumalo Ware' (*c.* AD 650–800) at Aitape and Lapita pottery led to the working hypothesis that Sumalo pottery might be ancestral to the Lapita ceramic tradition elsewhere in the Pacific. However, subsequent radiocarbon determinations and laboratory analyses of the ceramic materials recovered in 1993 and 1996 established a sequence for the Aitape district beginning around 1500–2000 years ago with Nyapin Ware (see below), which, on stylistic and stratigraphic grounds, was apparently ancestral to Sumalo Ware and, as we shall describe here, has even more determined affinities with the Lapita ceramic series popular in the Bismarck Archipelago and elsewhere around 3300 to 2700 years ago (Spriggs 2004, 141). Hence we would now derive both Nyapin and Sumalo pottery (as well as the subsequent manifestations of this local tradition) from the preceding Lapita series.

We propose that a key design element or symbol found in the Lapita series — popularly known as the 'Lapita face', although this motif might also be called the 'Lapita eye' — as well as certain basic design rules structuring how this motif should be applied to pottery (and conceivably other objects such as wooden bowls) remained in force in the Aitape district and elsewhere on the Sepik coast well into the current era and may still be known to some locally. That versions or 'transformations' of Lapita iconography are perhaps still being expressed in the Pacific region has been suggested before (Best 2002; Craig 1995; 2005; Green 1979; Newton 1988). Spriggs has written that looking for historically recent and currently surviving expressions of this ancient cultural notation 'might give useful clues to the meaning of the Lapita examples' (Spriggs 1990a, 120). We think this remark was prescient.

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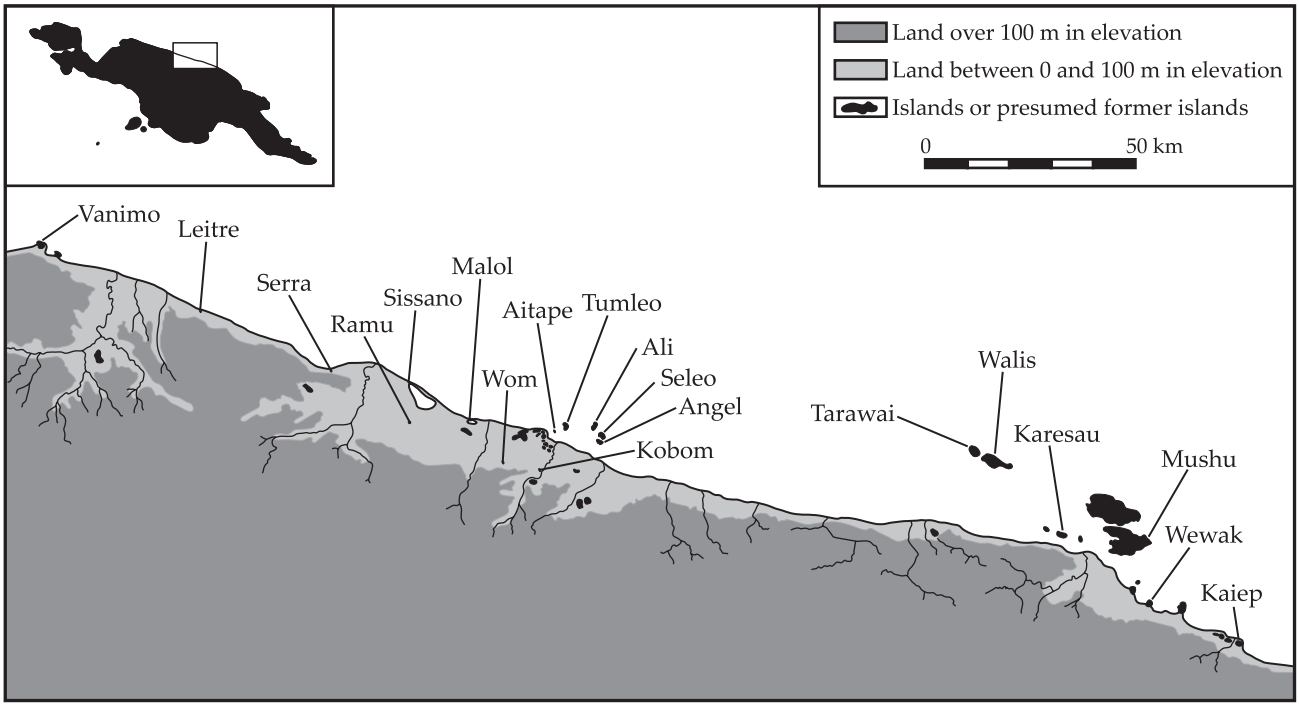


Figure 2. *The Sepik coast of Papua New Guinea.*

Lapita as a cultural expression

'Lapita' is the name given to a kind of pottery ware found at more than 180 archaeological sites from Aitape all the way east to Fiji, Tonga and Samoa (Chiu 2005). This designation is a garbled transliteration of the place-name 'Xapetaa' in the Haveke language of New Caledonia (Sand 1999a, 33).

While most Lapita pottery is a plain ware decorated perhaps only with an attractive red surface wash or slip, this is not always the case. Spriggs (1993, 13) has argued that many of the elaborate designs impressed on the surface of a small number of pottery items — using, most famously (but not exclusively), finely-notched or 'dentate' tools made of some sturdy but perishable material (possibly turtle shell: see Ambrose 1997) — may be transforms or variants of face designs (Fig. 1). It has generally been assumed that the faces are human or, at any rate, anthropomorphic. As we shall explain, Spriggs is probably right on the first point but Lapita potters were not necessarily portraying human or human-like faces on their pots.

Another historical question about this pottery, much debated, is how quickly and how directly the skills and reasons for making this ware were carried from the Bismarck Archipelago — where the oldest known Lapita pottery dates to around the middle of the second millennium BC — to other islands as far east as the Samoan archipelago. There now appears to be growing consensus that it may have taken about 400 to 450 years (Chiu 2005, 8). Common sense suggests that the more time it took for this ware to reach Samoa, the more involved and nuanced the whole story of this pottery may be.

A related historical issue is how standardized or unified this craft was and whether it was the exclusive product of a single 'people' or 'ethnic group' (a question we shall return to). Here again there would now seem to be general agreement that the Lapita phenomenon was not as homogeneous as some may previously have thought (Sand 2000, 31), although just how singular or ethnically constrained the so-called 'Lapita people' or 'Lapita peoples' were remains uncertain (Spriggs 2004).

It now seems likely that while many potters in the Pacific had stopped decorating their wares using dentate-edged tools by the middle of the first half of the first millennium BC, the precise timing of the demise of this decorative procedure varied from place to place. It has been suggested, for example, that the use of such tools to produce motifs characteristic of the Lapita style may have lasted in the New Britain area into the first centuries of the current era (Anson *et al*. 2005; Spriggs 2004, 14). We shall note here that a large-toothed variant of Lapita tools was evidently still used in the Aitape district well into the first millennium AD.

What we report here has broader significance than might at first be apparent. It has long been said

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that Pacific Islanders may be sorted out into a number of different races, population stocks or (currently in some academic circles) phylogenetic lineages. It has often been claimed that each of these supposedly distinct races or peoples has had its own more or less unique settlement history (Clark 2003). Furthermore, it is still commonly asserted that however mixed the descendants of these collective players on the stage of Pacific prehistory may now be, socially, culturally, and genetically, it should be possible to unravel their stories (or, as some now say, their phylogenetic signals), given diligence and perhaps the right computer program (e.g. Hurles *et al*. 2003). In its most familiar form, this view posits the former existence of at least two ancient races in the Pacific, previously labelled 'Polynesians' and 'Melanesians' but now more often referred to (using labels from historical linguistics) as 'Austronesians' and 'Papuans' (Terrell *et al*. 2001). This wisdom is more or less as old as foreign adventurism in the Pacific (e.g. Prichard 1973).

Sites yielding Lapita pottery have been found on islands where the people today are genetically diverse (Oppenheimer 2004) and have widely dissimilar cultural practices. In spite of their impressive biological and cultural diversity, these are all places where the islanders speak languages belonging to the Oceanic branch of the Austronesian family. It has seemed obvious for years, therefore, that there must be some historical connection between this pottery and this group of languages, although no one can say for sure what was the historical character of this association.

However the connection is to be explained, experts agree today that the 'Lapita phenomenon' was not an unvarying or homogeneous cultural 'package' of elements carried into the Pacific by Austronesian-speaking migrants from Southeast Asia, Taiwan, or the Philippines (Green 1991; 1994, 35–6; Kirch 1997, 46–7, 93; 2000, 93). That is, many now say that only some of the archaeological traits exhibited by what has been labelled as the 'Lapita cultural complex' were entirely new to Oceania three or four thousand years ago. Some 'Lapita traits' undoubtedly originated in Melanesia long before people there began making such distinctive pottery. Yet other traits — notably, as now seems likely, Lapita itself as a pottery style — were local innovations fashioned by people in Melanesia more or less at the same time as the creation there of Lapita as a recognizable style.

What we report here does not resolve the mystery of Lapita as an historical phenomenon but, as we shall discuss at the close of this report, our findings pertain not only to Pacific historiography but also to current debate on how cultural traits are distributed across human societies (Mulder *et al*. 2006). Do such traits usually persist over time primarily because they are handed down from one generation to the next by people who would all be said by most observers to 'belong to' the same tribe, ethnic group, society or population or are they transferred by people belonging to different contemporary tribes, groups, societies or populations?

This debate may well be more semantic than substantial. Nevertheless, based on the findings reported here, we will suggest not only that Lapita began as a distinctively Pacific blend of diverse elements of differing age and origin but also, in so far as it can be said that Lapita survives today in a greatly changed and presumably diminished form on the north coast of Papua New Guinea, its legacy there is shared by Austronesian-speaking and Papuan-speaking communities alike. Equally important, this ancient legacy is only one of many cultural threads of diverse origin and age that comprise the fabric of social life in this part of the world at the present time. Hence what to make of the Lapita roots of this expressive iconography is not self-evident.

Documenting continuities in form together with systematic transformations in the appearance of things (commonly glossed as studying 'cultural stability and change') has long been at the heart of archaeological research, especially as an aid in framing local and regional chronologies and mapping cultural relationships. We think there is sufficient archaeological and ethnological evidence from the Sepik coast and elsewhere in the Pacific to hypothesize that, despite fairly radical transformations in the appearance of the Lapita face across time and space, the root connotations of this motif — both in its numerous coterminous variants and in how it changed stylistically from place to place during the heyday of Lapita — survived long after putting this symbol on pottery using dentate tools had ceased. We will argue here that transforms of this motif continued to make the same root allusions even if the larger meanings or significance of these enduring references evolved to meet changing circumstances. While this working hypothesis has immediate bearing on how archaeologists understand stability and change in the southwest Pacific both during and after Lapita times, the proposition also has relevance for how archaeologists working anywhere in the world seek to model and then try to document the formation and modulation of human social affiliations and alliances.

Methods and cultural sequence

The observations and conclusions reported here derive from surveys and excavations on the Sepik coast,

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laboratory analyses, and research on the renowned Pacific ethnographic collections at the Field Museum. We consider the weight of the evidence to be cumulative. While some of what we will detail is more central to our inferences and conclusions, the plausibility of our thesis derives principally from the congruence of several different and seemingly disconnected lines of archaeological and ethnographic evidence—congruence that came as much of a surprise to us as we suspect it will to you. A monograph is in preparation but we feel that our findings are interesting enough to warrant publication as well in this more widely accessible journal format.

Surveys, excavation and analysis

In 1993–94, Terrell and Welsch studied how exchanges between families in different villages on the Sepik coast integrate communities in social fields larger than 'face-to-face' communities (Terrell 1993; Welsch & Terrell 1998). They also carried out archaeological surveys in and around the villages, and identified 121 areas and find spots, where they recovered, in all, 10,644 potsherds, 1472 obsidian flakes, 75 chert flakes, 23 pieces of worked shell, ten whole or fragmentary stone or shell adzes or axes, and a smaller number of other materials (beads, modern glass and ceramics, metal, etc.). Most of these finds come from Tendanye (Tarawai) and Walifu (Walis) islands off the coast near Wewak, from Tumleo, Ali, Seleo, and Angel islands off the coast at Aitape, and from the Serra district (Fig. 2).

In 1996, 14 test pits ranging from 50 × 50 cm to 300 × 300 cm were excavated on the crests of the foothills southeast of Aitape (Fig. 2). Evidently owing to the shallowness of the cultural deposits and the destructiveness of tropical weather, only two of these mainland excavations (NGRP-16 and NGRP-23) recovered well-preserved ceramics as well as shell (mostly brackish and fresh water lagoon species) and bone (both human and animal). Three 100 × 100 cm test pits 10 m apart reaching a maximum depth of 150 cm were excavated on Tumleo Island (Fig. 2). All three of these excavations (Table 1) produced abundant stratified cultural and faunal materials. We observed little disturbance or mixing of the finds.

The ceramic materials from all of the excavations on the mainland in 1996 lead to the same observation: apparently the crests of these hills were only used in ways leading to the observable accumulation of cultural debris when Sumalo Ware (see below) was popular. In contrast, the excavations on Tumleo Island recovered sufficient evidence in stratigraphic position to reconstruct a fairly definitive ceramic sequence for the last 1500–2000 years. However, only one of these three excavations (NGRP-46, Test Pit 2) produced Nyapin Ware in any abundance at the base of the deposit removed.

Table 1. *Primary archaeological materials examined: NGRP-16 and NGRP-23 are shallow largely single-component Sumalo Ware sites on the mainland at Aitape; the rest are multi-component stratified units on Tumleo Island.*

Excavation area	Total no. of sherds	No. decorated	%
NGRP-46, Test Pit 1	12,920	1708	13.2
NGRP-46, Test Pit 2	3832	639	16.7
NGRP-46, Test Pit 3	1609	409	25.4
NGRP-16	960	27	2.8
NGRP-23	1863	54	2.9

Starting in 2002, we systematically examined all of the decorated ceramic finds three times. The first run through this material, previously unknown to archaeology, led to an initial sense of the variability as well as a provisional descriptive code. This code was significantly refined during our second and third assays. This notation served as the basis for the brief descriptions of the following four ceramic wares now recognized in the Aitape ceramic sequence.

Aitape ceramic sequence

The ceramic sequence we have reconstructed for the Aitape district is rich in its variable characteristics. However, the most conspicuous traits of the four ceramic wares that we have differentiated may be summed up in a few words.

Nyapin Ware: The exterior surface (as well as some or all of the interior) of Nyapin bowls and platters was usually covered with a red slip. Some were decorated using fine-line incising, fine-line linear or wavy scoring, stick punctations or shell-edge impressions (Fig. 3). The outer surface was apparently seen by potters as divided into contiguous bands or zones. The evidence is limited but it seems that at least sometimes potters marked these zones with finely incised lines (Fig. 3a, b, g). Naturalistic 'eyes' were applied to both Nyapin bowls (Fig. 3b) and platters (Fig. 3g). What appear to be more abstract 'eyes' formed by deep punctations (Fig. 3h) occur on platters. In both instances, the 'eyes' are complemented by an upper decorative zone of diagonal shell-edge impressions or short incisions.

Sumalo Ware: Most if not all Sumalo Ware appears to have been washed with red slip. A very small number (less than 3 per cent) were also decorated by scoring or impressing at least part of the exterior surface with

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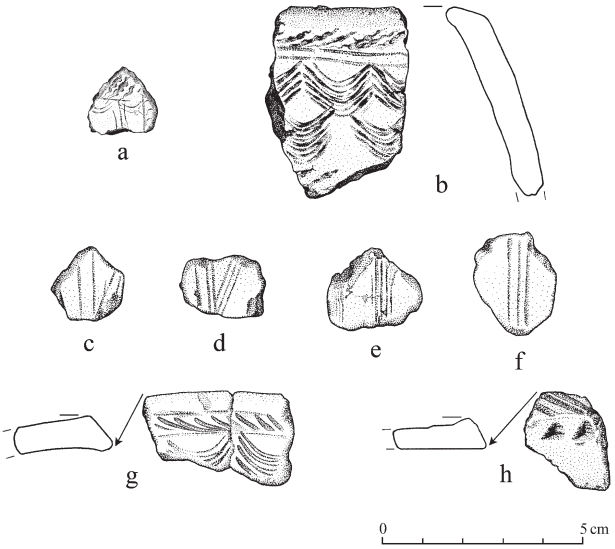


Figure 3. *Nyapin Ware decorated sherds.*

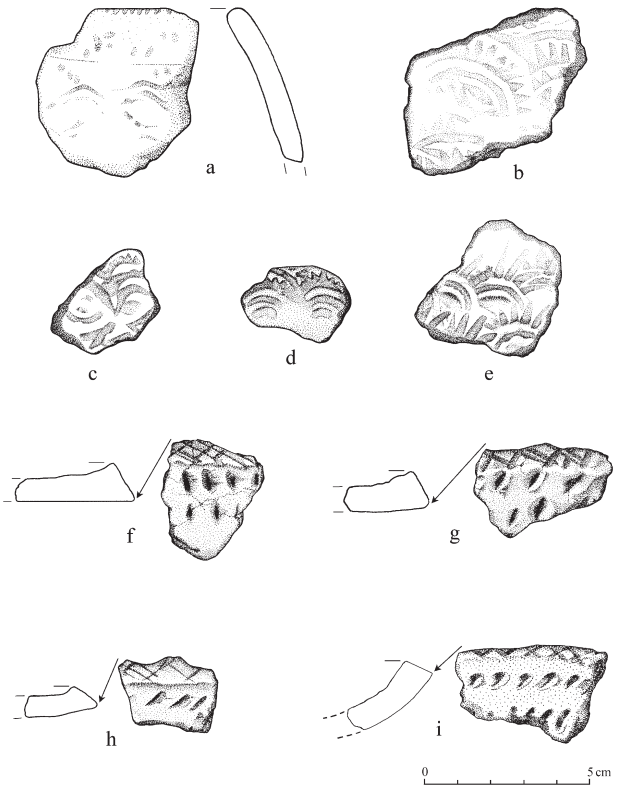


Figure 4. *Sumalo Ware decorated sherds.*

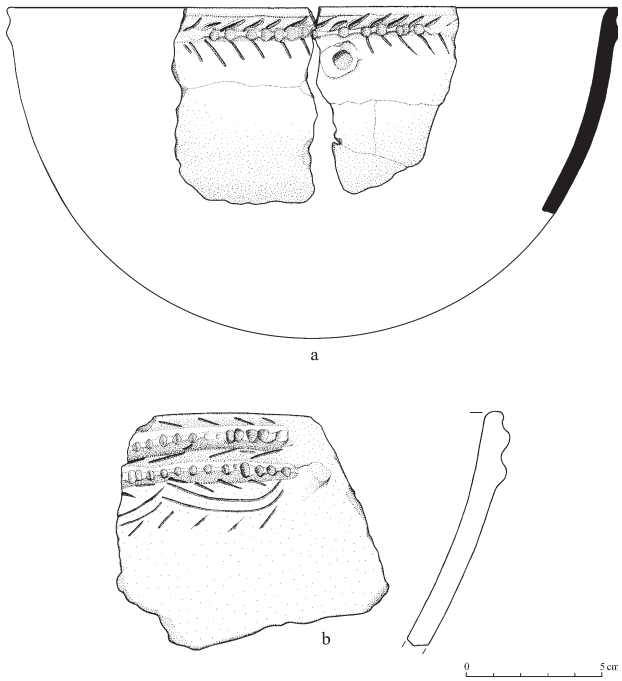


Figure 5. *Aiser Ware bowls.*

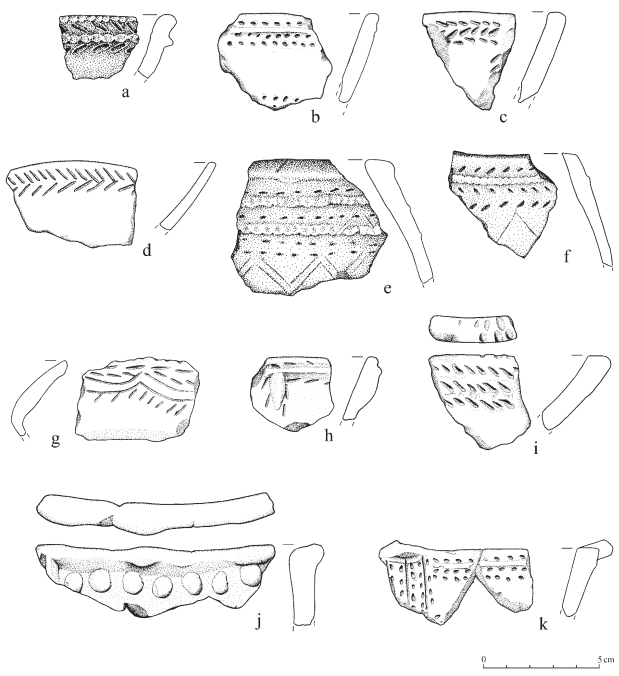


Figure 6. *Aiser Ware decorated sherds.*

what may have been the flat or slightly cupped end of a stick-like tool or with a dentate tool having several broad 'teeth' that may have been homologous to Lapita dentate tools. The impression is often of 'wavy' or 'random' scoring and possibly also over-scoring. Naturalistic 'eyes' done in broader strokes than on Nyapin vessels occur on bowls (Fig. 4a–e); the 'eyes' on platters were evidently done only as punctations (Fig. 4f–i). Once again, there is some evidence showing that this 'eye' motif is usually complemented by an upper decorative zone of impressions, punctations or incisions (Fig. 4a–i).

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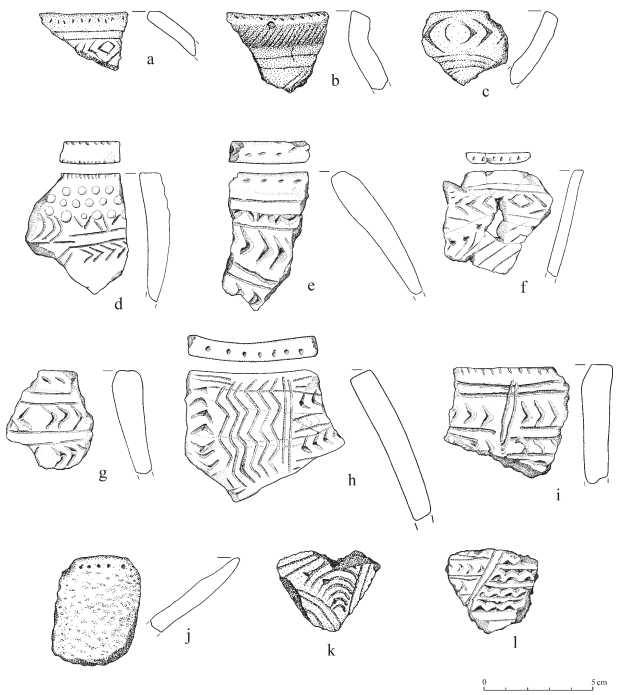


Figure 7. *Wain Ware decorated sherds.*

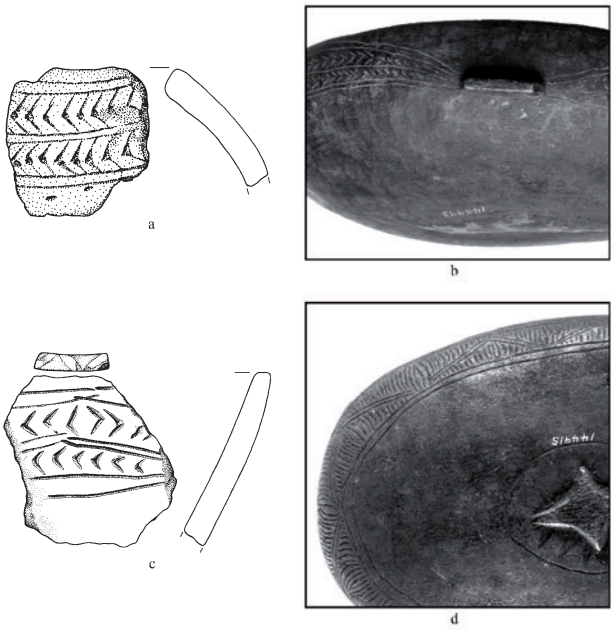


Figure 8. *Wain Ware rim sherds from Tumleo Island compared with carved wooden platters (not to scale): b) from Angel Island (catalogue no. 148993, George A. Dorsey Collection, 1908; photograph A114376, John Weinstein, photographer, © 2004 The Field Museum); d) from Seleo Island (no. 144915, Umlauff [Voogdt] Collection, 1908–12; A114369, John Weinstein, © 2004 The Field Museum).*

Aiser Ware: Aiser Ware bowls were also commonly washed with a red slip. Many Aiser vessels were decorated using one or more of several techniques, including diagonally scored lines and punctations, appliqué nubbins, appliqué bands, and punctate-appliqué bands. Incised hanging lines were frequently used on lower areas of the vessels (Figs. 5–6). While the evidence is not definitive, some Aiser Ware vessels may have had small lugs on the outer vessel lip (Fig. 6h, j, k).

Wain Ware: The practice of washing the surface with red slip had evidently been abandoned by potters making Wain pots and bowls. They did, however, continue to embellish their vessels with punctations, linear incisions, punctate or incised herringbone designs, rare small appliqué nubbins and the like (Fig. 7). The design field was commonly divided in separate zones frequently set off from one another by double incised lines. Vessel rims were often rather thick and notably flat; the vessel lip was often marked with punctations either on or below the lip edge (Fig. 7a–b, d–j).

Our study of ceramics and wooden platters collected by Lewis in 1909–10, Voogdt and Dorsey in 1908 (Welsch 2000), and Welsch and Terrell since 1990 shows that the design traits characteristic of Wain Ware do not occur on historic and modern pottery made on the Sepik coast, although some of these features are commonly seen on carved wooden platters (Fig. 8). While a few of the incised or punctate design elements used by Tumleo artisans today to decorate their pots are somewhat reminiscent of prehistoric examples, contemporary potters do not seem to be following the same design rules favoured by their predecessors. Instead of being glazed with a red inorganic slip, modern pots at the end of the manufacturing process are blackened over a fire and then coated with a wash of sago palm starch (May & Tuckson 1982).

Chronology

Only two Lapita potsherds have so far been found on the New Guinea mainland. Both were recovered in the Aitape area. One was picked up somewhere around Aitape (i.e. presumably on the mainland) during World War II. We picked up the second in 1993, a surface find from Ali Island. Needless to say, the antiquity of both specimens is uncertain. Using laser ablation inductively coupled plasma mass spectrometry (LA-ICP-MS) at the Field Museum, Mark Golito (pers. comm.) has characterized the elemental composition of the Ali Island sherd and a representative sample

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Table 2. *Currently available radiocarbon determinations for the Aitape district (* same field sample as 3652 and 3656); a local marine ΔR of 1005±80 can be estimated for this location (Jones n.d.). CRA = conventional radiocarbon age before 1950.*

Lab	ID	CRA	Error	Reservoir	Ware	Site	sq.	Layer/Spit	Location
ISGS	3652	1370	70	terrestrial	Sumalo	NGRP-23	2D	B	Aitape
ISGS	3656	1320	70	terrestrial	Sumalo	NGRP-23	2D	B	Aitape
Beta	105671*	1260	50	terrestrial	Sumalo	NGRP-23	2D	B	Aitape
ISGS	3667	1300	70	terrestrial	Sumalo	NGRP-23	2E	B	Aitape
ISGS	3668	1330	70	terrestrial	Sumalo	NGRP-23	2A	C	Aitape
ISGS	5329	2660	70	Marine	Sumalo	NGRP-46	1A	4/2	Tumleo
ISGS	5330	3130	70	Marine	Nyapin	NGRP-46	2	2/5	Tumleo
ISGS	5331	3250	70	Marine	Nyapin	NGRP-46	2	2/4	Tumleo
ISGS	5332	2540	70	Marine	Sumalo/Aiser	NGRP-46	1A	2/2	Tumleo
ISGS	3654	1380	90	terrestrial	Sumalo	NGRP-46	1A	4/1	Tumleo
ISGS	3671	1320	90	terrestrial	Sumalo	NGRP-46	1A	3/3	Tumleo
ISGS	5550	2110	70	marine	Aiser	NGRP-46	1B	2/1	Tumleo
ISGS	5551	2180	70	marine	Aiser	NGRP-46	3	2/3	Tumleo

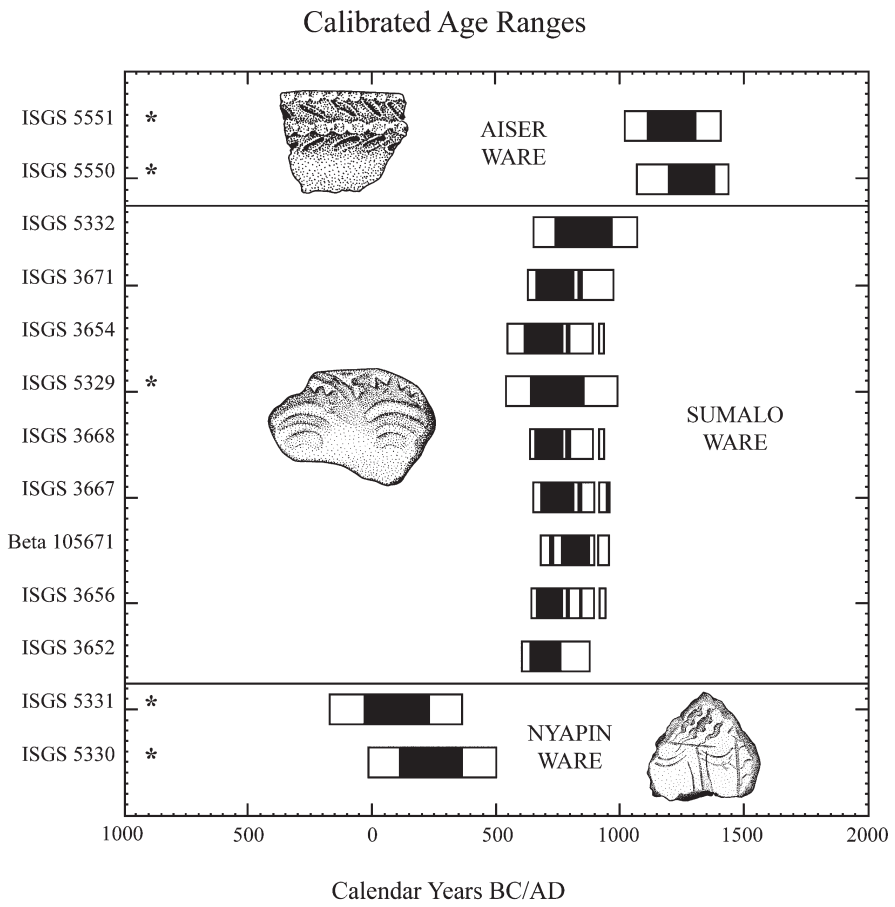


Figure 9. *Radiocarbon determinations for the Aitape district with their ceramic associations. Laboratory numbers marked [*] are shell; a local marine ΔR of 1005±80 can be estimated for this location (Jones n.d.).*

of the sherds recovered from Tumleo Island in 1996. He has determined that all the sherds are chemically indistinguishable regardless of age or particular ware characteristics. Furthermore, based on analyses of clay samples and ethnographic ceramics made on Tumleo in the twentieth century, Golitko's preliminary conclusion is that — with a few notable exceptions — all of the sherds he has analysed from sites on Tumleo and on the mainland from sites around Aitape were locally made. While the analytical evidence is limited (only the Ali Island sherd is available for analysis), it now seems possible that pottery decorated with Lapita designs was once made locally somewhere in the Aitape district. If so, then the ceramic sequence at Aitape may be significantly older than the 2000 years now documented archaeologically.

Statistical analysis of radiocarbon determinations now available for the Aitape district (Jones n.d.; Table 2) shows that Nyapin Ware most probably dates to 1500–2000 BP at 95% highest probability density (HPD) or 1755–2320 BP (0.686 HPD). A more precise statement can be made for Sumalo Ware. This pottery probably dates to an interval between 5 and 270 years long (95% HPD) starting 1200 to 1400 years ago (95% HPD). Only two dates are currently available for Aiser Ware, which is stratigraphically later than Nyapin and Sumalo wares on Tumleo Island. Our current estimate is that this ware was popular locally *c.* AD 1000–1500. No determi-

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nations are yet available for Wain Ware, which is stratigraphically the most recent prehistoric ceramic ware found in our excavations. Historic and modern pottery made on Tumleo displays affinities with Wain Ware (and the other wares in the Aitape sequence) but this ware is stylistically distinct from earlier wares in this part of New Guinea. Given the evidence of chronology (Fig. 9), the red slip on Nyapin, Sumalo and Aiser wares, vessel shape (Fig. 10), and decoration (e.g. Figs. 3, 19–21), the most likely precursor for the Aitape ceramic tradition is the Lapita series as generally defined (Kirch 1997).

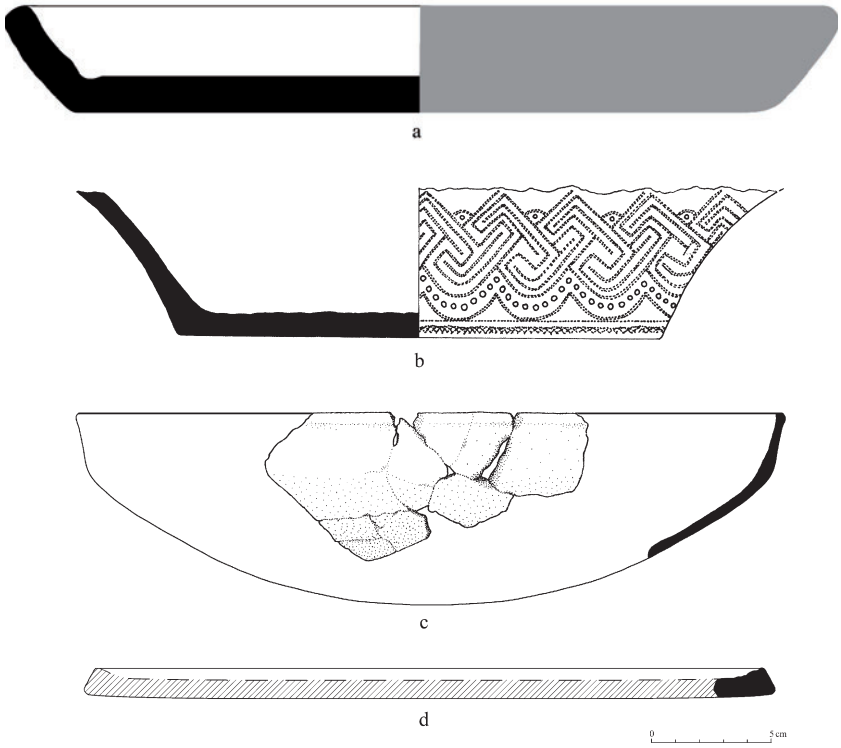


Figure 10. *Reconstructed Sumalo Ware ceramic platters and a shallow open bowl compared with a flat-bottomed Lapita dish or platter: a) reconstructed platter from Tumleo Island (NGRP-46, test pit 1A, layer 3, spit 1); b) reconstructed Lapita flat-bottomed vessel (reprinted by permission, courtesy of Christophe Sand); c) reconstructed open bowl from Aitape (NGRP-23, test pit 2A, layer C, spit 1); d) reconstructed flat ceramic platter from Tumleo Island (NGRP-46, test pit 2, layer 2, spit 1).*

Museum research

The A.B. Lewis Pacific Collection at The Field Museum in Chicago was assembled by Curator Lewis (1867–1940) during the Museum's 1909–13 Joseph N. Field South Pacific Expedition. This is the largest (over 14,000 objects) and best documented ethnographic collection ever assembled in the southwest Pacific by a single researcher. It also has better archival and photographic documentation than most collections made in Oceania before the First World War (Welsch 1998). Other important ethnographic collections from New Guinea now at the Museum were assembled by Curator George A. Dorsey in 1908, by the plantation manager and field ethnologist Richard Parkinson between 1900 and 1908, and by Capt. H. Voogdt, of the Neu Guinea Companie, in 1906–8. The Museum also purchased a collection from a curio dealer in Hamburg, a large part of which had been collected by Capt. Voogdt between 1906 and 1911 (Welsch 2000).

During our laboratory studies of the 1993 and 1996 ceramic finds, we realized that some of the sherds we were examining come from flat dishes, plates or platters (e.g. Fig. 10d). Sherds from flat-bottomed bowls or dishes also occur in Lapita assemblages (Kirch 2000, 102, 104). Additionally, there are oval wooden platters and shallow round wooden bowls from the Sepik coast in the collections at the Museum. We found that these platters and bowls often have designs carved on them that closely resemble designs on prehistoric Wain Ware in the Aitape district (Fig. 8). Having discovered these similarities, we extended our investigations to include a broader study of wooden platters and bowls from the Pacific and Madagascar (the latter because of its linguistic ties to the Pacific as an Austronesian-speaking country) to determine whether these stylistic similarities might have a common origin in Lapita pottery.

Platters and small bowls in the Nyapin and Sumalo wares are attested in the Aitape ceramic sequence (Figs. 3, 4 & 10a, d). Analogous bowls and flat-bottomed dishes, trays or platters, with or without pedestals, also occur in Lapita pottery assemblages (Fig. 10b; Best 2002, 73; Sand 1996, fig. 157; Spriggs 2002). We studied the Pacific ethnographic collections at the Field Museum for evidence supporting the inference that ceramic platters and shallow bowls on the Sepik coast and similar Lapita vessels are homologous, not just analogous, traits.

We found no flat ceramic platters. We did find that, while wooden bowls of many sizes, shapes, and

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Table 3. *Number of wooden bowls and platters in the ethnographic collections at the Field Museum from the Pacific Islands and Madagascar.*

Location	Total no. of objects	Objects coded as platters
Total sample	1065	107
Papua New Guinea	716	84
Vanuatu	26	11
Other Pacific & Madagascar	323	12

Table 4. *Correlations between geography, paired side lugs, and border decoration on wooden bowls and platters from the Sepik coast at the Field Museum.*

Papua New Guinea wooden platters, bowls, etc.	Platters	Other
Total sample from Papua New Guinea	84	632
Total number with carved side lugs	70	187
With both lugs and border decoration	50	57
With lugs and border decoration from Sepik area	50	53

Table 5. *Villages where the wooden bowls and platters from the Sepik coast in the collections at the Field Museum were obtained (see Fig. 11); place names given are contemporary, not necessarily those used now.*

Location	Platters	Bowls
Warapu	0	1
Ali	7	3
Angel	6	3
Tumleo	2	0
Seleo	3	0
Tarawai	17	12
Walis	9	4
Sowam	1	0
Smain	3	1
Wewak	0	4
Murik	0	1

Location	Platters	Bowls
Kirau	0	7
Simar	0	1
Watam	0	3
Bure	0	3
Potsdamhafen	0	2
Tobenam	0	1
Malala	0	1
Moro	0	1
Karkar	0	5
Siar	0	2

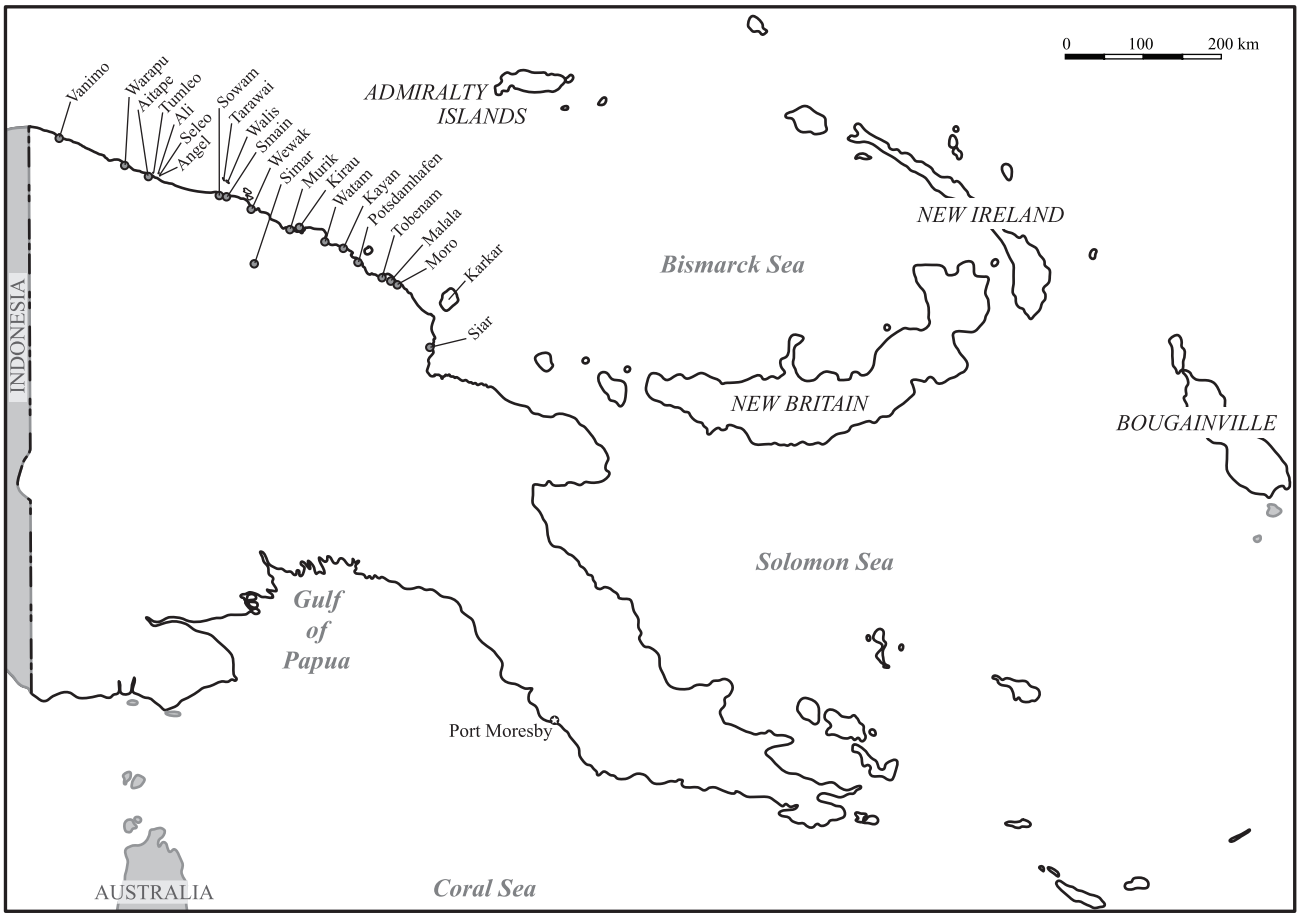


Figure 11. *The distribution of wooden platters and bowls with lugs and border decoration (see Table 5) in the Pacific collections at the Field Museum.*

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varieties are common in the Pacific (as they are elsewhere), flat or nearly flat wooden platters are highly restricted in geographic distribution (Tables 3–5; Fig. 11). Only about 10 per cent (N = 107) of the items examined would be conventionally described as 'platters'. Almost 80 per cent of these come from Papua New Guinea, and most of them (93 per cent) were collected along the north coast and on the nearby small offshore islands. Thus, while common sense might lead one to think that an item as seemingly mundane as a wooden platter must be far too common for its geographic distribution to be historically meaningful, the limited occurrence of wooden platters in the Museum's Pacific collections suggests the opposite conclusion. It is not far-fetched to conclude that flat-bottomed Lapita dishes, Nyapin and Sumalo pottery trays, and recent and contemporary wooden platters in northern New Guinea may comprise a historically derived set of forms.

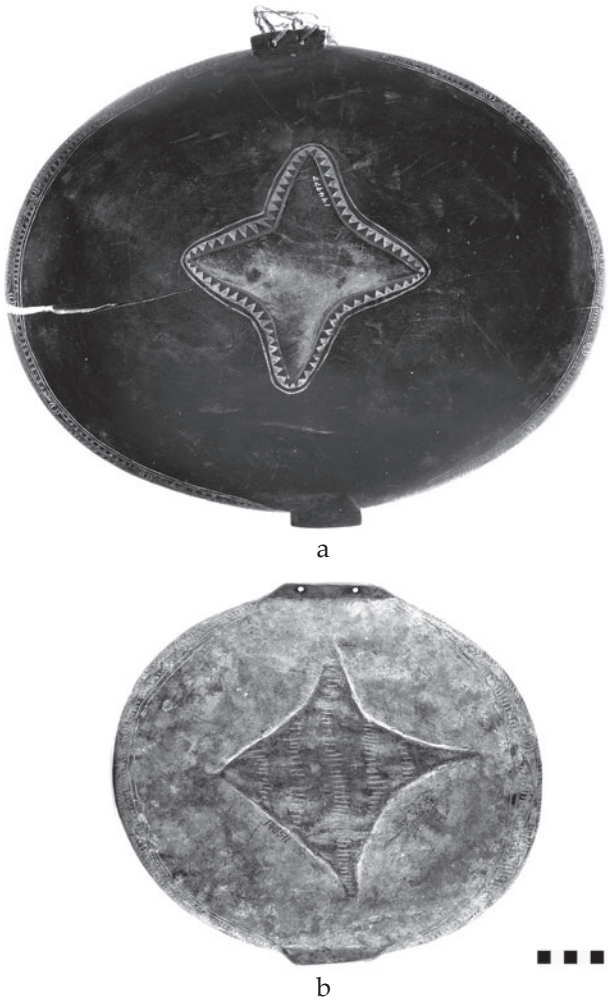
This inference is supported by other information gleaned from our study of the Museum's collections. Recall that, early in our laboratory analyses, we learned that certain designs carved on wooden platters and bowls from villages on the Sepik coast are identical, or nearly so, to designs on late prehistoric pottery in the Aitape district (Figs. 8 & 12). Further museum research disclosed that another seemingly mundane trait — the presence of small handles, or ledge-like narrow lugs, on the sides of wooden bowls and platters — is also characteristic not only of platters from the Sepik coast and nearby islands but also of open bowls from this same restricted locality (Table 4; Fig. 13).



Figure 12. *Common border designs on wooden platters from the Sepik coast in the collections at the Field Museum: a) platter (detail) from Sissano Village (no. 144977, Umlauff [Voogdt] Collection; photograph A114370); b) platter (detail) from Seleo Island (no. 144915, Umlauff [Voogdt] Collection; photograph A114369); c–d) platter (detail) from Angel Island (no. 148993, Dorsey Collection; photograph A114376); e) platter (detail) from Angel Island (no. 249772, Welsch-Oltomo-Terrell Collection, 1993–94; photograph A114378); f) platter (detail) from Smain Village (no. 148708, Dorsey Collection; photograph A114433); g) platter (detail) from Walis Island (no. 148511, Dorsey Collection; photograph A114431); h) platter (detail) from Tandanye (Tarawai; no. 148585, Dorsey Collection; photograph A114432; John Weinstein, photographer, © 2004, 2006 The Field Museum).*

These apparently vestigial (non-functional) lugs usually occur directly opposite one another below the outer rim or edge, sometimes well below the edge. On platters, which are almost always oval in shape, they are positioned in the middle of the two longer sides. One of the lugs almost invariably has two perforations adjacent to one another; the other lug in the pair is almost always unperforated. In most cases, too, these bowls and platters with lugs also have one or more bands of decoration carved around the outer rim below the edge and, if such carving is absent, the band or zone where it would normally be carved is usually indicated in some fashion (e.g. Figs. 14 & 22). All of the platters displaying both traits (lugs and a carved border design) are from the Sepik coast; 53 out of 57 of the bowls similarly adorned are also identified in

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a

b

Figure 13. *a) wooden platter with lugs and border decoration from Sissano (catalogue no. 144977, Umlauff [Voogdt] Collection, 1910–12; photograph A114370, John Weinstein, photographer, © 2004 The Field Museum); b) wooden bowl with lugs and border decoration from Walis Island (catalogue no. 148511, George A. Dorsey Collection, 1908; photograph A114431, John Weinstein, photographer, © 2006 The Field Museum).*

the Museum's records as from this area.

These small lugs cannot serve as handles. While it might be argued that the one lug in each pair with perforations could have served with a length of twine as a way to hang up the object, this explanation cannot account for why anyone would have bothered to carve so fastidiously the second seemingly useless lug. We are of the opinion, therefore, that these diligently carved pairs of narrow lugs were chiefly symbolic rather than practical. We suspect that the lugs with perforations stand for the 'eyes' of some creature (human or otherwise) while the opposing (unperforated) lugs are 'noses'. If this interpretation sounds too fanciful, consider the testimony of two wooden bowls from the Sepik coast (Fig. 14); such bowls evidently portray two faces, one more human-like than the other, which may also be the case in more abstract representations (e.g. Fig. 12a–b, d–h).

There is no fully convincing evidence that comparable lugs, with or without perforations, were ever put on prehistoric pottery bowls or platters on the Sepik coast (although see the possible lugs shown in Fig. 6). This attribute is found on some Lapita ceramic vessels (Matthew Spriggs pers. comm.) but it may be a comparatively recent innovation, perhaps arising on the coast sometime within the last 1000 years or so since the popularity of Aiser Ware (see below). Even so, the co-occurrence of these distinctive paired lugs and carved border designs (e.g. Fig. 12) on both platters and bowls from different localities on the Sepik coast lends weight to the conclusion that these objects may have been expressing more or less the same historically derived symbolic and communicative intentions.

If so, then the resemblances we have noted between Lapita 'faces' (including the lower and more triangular faces found in 'double-face' Lapita designs: see Fig. 28d) and the faces sometimes (although rarely) carved on wooden bowls from the Sepik coast (Fig. 28a, b) are characteristics that, taken together, add weight to the claim that at least some of the ideas symbolized or expressed by Lapita potters lived on in the minds of people on the Sepik coast for years — indeed, millennia — after the demise of Lapita ware as a readily discernible art form elsewhere in the Pacific.

We concede that some of the similarities between Lapita faces and faces carved on Sepik bowls may be due to little more than the likelihood that, regardless of time or place, Pacific artisans have been similarly inspired by the same prototype, a sea turtle (see below). However, considered together with the other lines of evidence presented here, it seems less probable that artistic convergence alone would account for the resemblances.

Analysis of forms

It is notoriously difficult sometimes to make sense of designs when all that one has to work with are potsherds. Spriggs has noted how difficult it was for Pacific archaeologists to pick out face designs on Lapita pottery for this simple reason. As he observed in 1990, 'Without well-preserved examples of complete designs, which are only coming to light now

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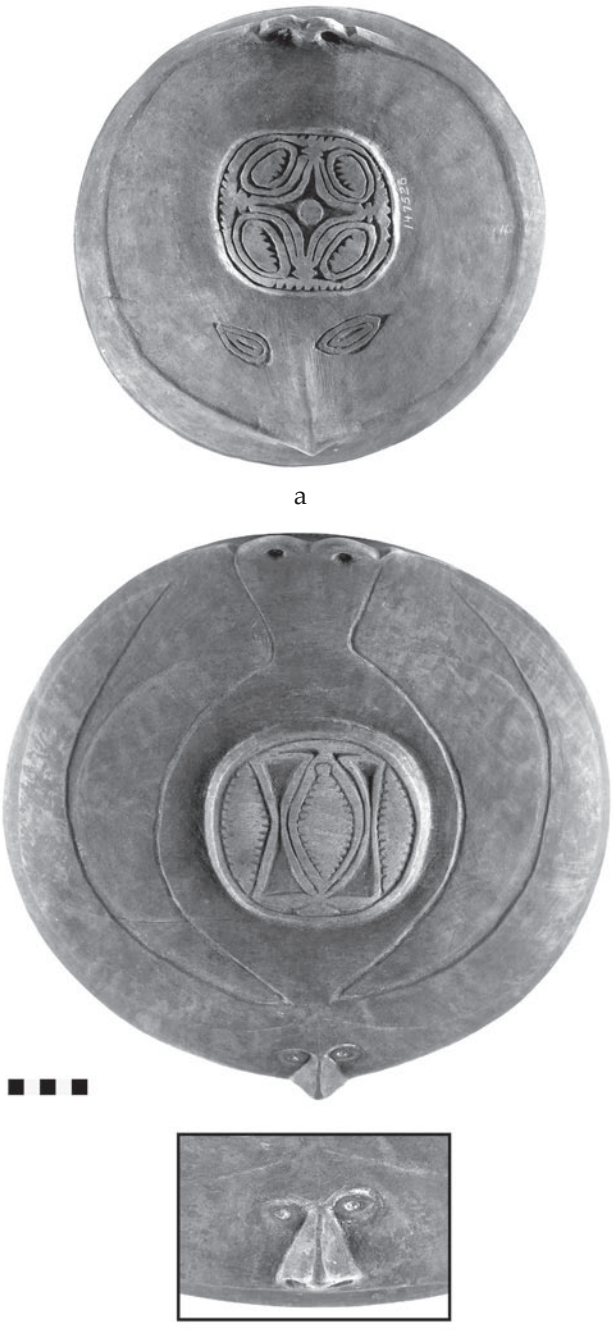


Figure 14. *a) wooden bowl from Walis Island (catalogue no. 147526, George A. Dorsey Collection, 1908; photograph A114376, John Weinstein, photographer, © 2004 The Field Museum); b) wooden bowl from Kirau (catalogue no. 140722, A.B. Lewis Collection, 1909–13; photograph A114430, John Weinstein, photographer, © 2006 The Field Museum). Two creatures are represented on such bowls, one human or human-like, the other presumably a sea turtle.*



Figure 15. *Nyapin 'face' from Tumleo Island (NGRP-46, test pit 2, layer 2, spit 4; dimensions: 2.11 × 2.22 cm).*

from excavations in any quantity, many sherds with parts of face designs on them have remained unrecognized in collections' (Spriggs 1990a, 83). The same difficulty hampered our own laboratory analyses of ceramics from the Aitape district. It was only when Micah Urban, a volunteer in our laboratory, had glued together the two fragments shown in Figure 15 that we realized many of the apparently insignificant curvilinear markings found on some potsherds were, so to speak, actually looking back at us (Figs. 3–4). We were then able to integrate our previous detailed analytical descriptions of ceramic designs and pottery styles based on formal codings of design elements (attributes), attribute themes, and simple motifs into a more comprehensive picture, a 'rhetoric of forms', showing the evolution of ceramic styles in the Aitape district.

We have found four rhetorical distinctions to be helpful in piecing together a material culture sequence for the Aitape district. These distinctions are as follows.

Symbolism: using one thing to stand for another: for example, a national flag, skull & crossbones, Star of David. When we began constructing a sequence for the Aitape district, our working assumption was that painting, incising, impressing or applying designs to pottery there in the past had been largely or solely stylistic or decorative. It was only after we had begun to see that some of the earliest designs possibly represented eyes and faces that we had reason to think what had been done, at least in some instances, may have been symbolic, as well as decorative or ornamental.

Evocative: something is evocative when becoming aware of it brings to mind vivid thoughts, narratives, memories, or images. All symbols are evocative but some more than others. Religious symbols are prob-

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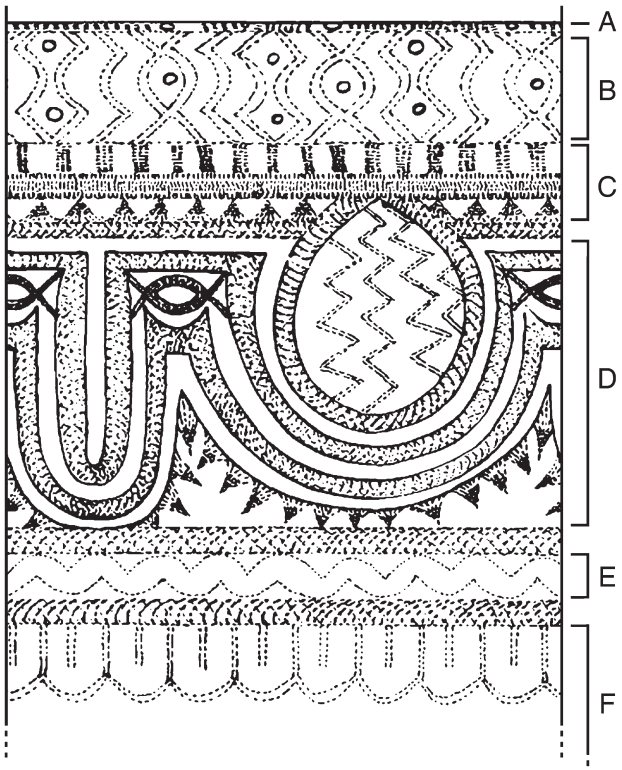


Figure 16. *Decorative zones on Lapita vessels used in our design analyses.*

ably more evocative of particular narratives, images, emotions, hopes and the like than corporate symbols, although owners of certain brands of powerful motorcycles, for instance, might contest this claim. The plausibility of our argument for the late survival of the Lapita face or eye rests in part on the commonplace observation that there is no necessary correlation between how elaborate, realistic or complete a symbolic design or motif happens to be and its effectiveness at evoking vivid and detailed images, memories and so on.

Redundant: having the same meaning. It is proposed here that Lapita designs are frequently redundant in what they are 'saying' since it often seems that potters used differing but related ways, commonly together and in varying combinations, to express the same thought or symbolic idea. Judging by appearances, different elements in the total design field evidently repeat or reiterate more or less the same symbolic theme or concept. For example, the design attributes in zone B in Figure 16 include abstract eye-like elements that complement the more naturalistic faces portrayed in zone D. Similarly, the design in zone F repeats the faces in D in a more abstract or figurative manner. Furthermore, the composite design formed by B, C and D is repeated in simplified or more abstract form in E and F. Finally, while saying so might seem to be going too far, the design in B is possibly a highly abstract restatement, rotated by 90 degrees, of B, C and D and E and F (Fig. 17). The recent proposals made by Scarlett Chiu & Christophe Sand (2005) for properly describing Lapita designs and entering them into computer data bases stress the apparent differences between the varying designs occurring in 'supplementary friezes' and 'central bands'. Thus their methodology fails to take into account the evocativeness of Lapita iconography, its apparent redundancy, and what might even perhaps be called the playfulness with which Lapita potters expressed what they wanted to say in both esoteric (abstract) and naturalistic ways.

Synecdoche: a figure of speech in which part of something is used to represent the whole or *vice versa*, as in 'be careful, there are eyes everywhere' or 'the United States fosters democracy around the world' (see Gell 1998, 161, 165–8). If symbolic redundancy is characteristic of Lapita designs, then there is reason to infer that it may have been unnecessary for potters to use all the available elements or a particular subset in the Lapita repertoire to get their message or concept across to those knowledgeable enough to 'read' or understand what is being conveyed. Variations on the eye-like design in zone B in Figure 16 occur on their own on decorated Lapita sherds (Sand 1996, fig. 62). In short, in Lapita designs as well as designs historically derived from these prototypes, the whole is less than the sum of its parts, and a part recognizable as such by those making or using this pottery in the past may stand for or express the whole.

Structure of the design field

For several decades, archaeologists working in the Pacific have tried to fathom the logic and rules of design that Lapita artisans may have followed when decorating their pottery and conceivably other more fleeting sorts of material culture (e.g. Best 2002; Chiu & Sand 2005; Green 1979; Mead *et al*. 1975; Sharp 1988; Siorat 1990; Spriggs 1990a). Anthony Forge wrote briefly about how it is possible for people to convey complex symbolic meanings to those similarly in the know, culturally speaking, through (what we would usually see as just) art, using simple graphic forms or 'elements' and being sure to follow carefully the right (culturally interpretable) rules of composition — there is a grammar of forms (Forge 1990, 28). Such grammar is revealed not just by the elements employed

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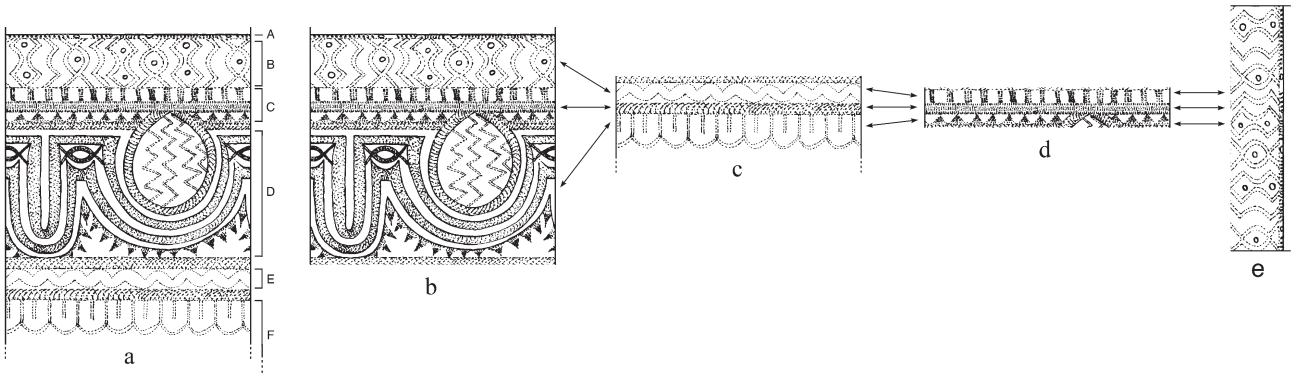


Figure 17. *Redundancy in Lapita motifs: c, d, and possibly e are increasingly more abstract transforms of the more naturalistic or representational b.*

but also by their systematic application or placement with respect to one another. In the example he offered (paintings by the people of East Sepik Province, usually called the Abelam), it seemed clear to him that there is a culturally defined but largely implicit set of rules about what forms may be juxtaposed to others, and about how a selection of one element constrains the selection and placement of subsequent elements.

One rule we have identified as evidently informing Lapita designs as well as those on comparable materials on the Sepik coast is the principle of complementarity (for background discussion, see Hanson 1983; Hanson & Hanson 1983; Hardin 1993, 154–6). A pair of contrasting colours, for example, are said to be complementary when, combined in suitable proportions, they produce a neutral colour. Something complements something else when it completes or fills out what the other lacks. In a more formal and restricted sense, something is said to be a complement when it is one of two mutually completing parts (similar to some of the uses of the word, counterpart). Lapita designs often appear to be complementary in this sense, as shown repeatedly in the subcomponents b through e of the design in Figure 17.

We think it likely that when the components of a Lapita design complement one another within the same band or zone of decoration, these elements apparently do not need to be divided from one another by lines or zone markers (Fig. 17e). Alternatively, when the design elements are applied one above the other in separate rows or bands, commonly there is a dividing line or marker (Fig. 17b–d). In simple notation, these two forms of complementarity may be coded as [a: b] and [a|b].

The archaeological evidence now available is enough to suggest that people in the Aitape district over the last 2000 years or so have generally favoured decorating objects such as bowls, pots and platters in a small number of fairly consistent ways — consistent enough, in fact, to be generalized as design 'rules' for analytical purposes (for other examples, see Washburn 1983). These rules also appear to inform the structural patterning of Lapita designs which appear to be similarly complementary both in symbolic notation and design structure.

1. Designs applied to ceramic bowls with direct or incurving sides are placed on the outside surface just below the edge, or 'lip' of the bowl (Fig. 5a, b).
2. If the flaring rim of a ceramic pot is decorated, the decoration is applied on the inside (upper) surface, again starting just below the edge, which is frequently notched rather than left plain (Fig. 6g).
3. Generally, designs are applied in horizontal zones, or 'design bands' (Fig. 19) that frequently may be indicated as such by single or double incised boundary markers (Fig. 3a, b, g).
4. While a design may sometimes amount to nothing more than just the simple or 'singular' (Fig. 18) repetition of one design element or 'attribute' (e.g. Fig. 7j), composite designs formed by two or more horizontal bands or zones of decoration are common (Fig. 4f–i, Fig. 6a–i).
5. Designs often occur as complementary pairs of singular bands of decoration (Fig. 6d).
6. Two bands of complementary decoration are commonly subdivided visually by an incised line or lines (e.g. Figs. 8a, c, 5b & 6e), by an appliqué band (Fig. 6a, b, e, f), by a spacing of the bands of decoration leading to their visual separation (Fig. 6f), or by reversal of the direction of the design attributes (Fig. 6c, d). For analytical purposes, we call such pairing of design bands 'exclusive complementarity' (Fig. 18).
7. While a given row, band or zone of decoration may contain only a single design element or attribute repeated in unvarying manner (e.g. Figs. 4f–i & 6a–i), rows, bands or zones of decoration may also contain

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two attributes that alternate as serial or 'inclusive' complements (Fig. 18) of one another (e.g. the punctate appliqué bands shown in Figs. 5a–b & 6e–f), or as 'nested' complements (Figs. 7a, c–d, f–h & 8c–d) in which one design element can be described as contained within the other. A graphic example would be the alteration of 'faces' and 'ear spools' in zone D (Fig. 19) on the Lapita vessel shown in Figure 1.

8. Adjacent rows, bands or zones of inclusive, nested or exclusive complements can be viewed together as a composite binary design element serving as one of the two complementary (compound) elements of an even larger complementary design. That is, complementary designs are commonly nested or hierarchical (Fig. 1).

Evolution of the 'Lapita face' on the Sepik coast

We have found that the prehistoric ceramic materials in the Aitape district, and also wooden bowls and platters from Aitape and elsewhere along the Sepik coast, show continuities not only in attributes, attribute themes, and motifs but also in the ways in which these design 'ingredients' were used in conjunction. The artisans evidently had particular rules of composition in mind, and the stylistic evolution of material culture in this part of New Guinea has been constrained by this underlying 'grammar of forms'.

singular	a···a···a···a or b···b···b···b
inclusive	a : b : a : b : a : b
nested	a (b) a (b) a (b) a (b) a

Figure 18. *Varieties of design complementarity: inclusive, nested, and exclusive.*

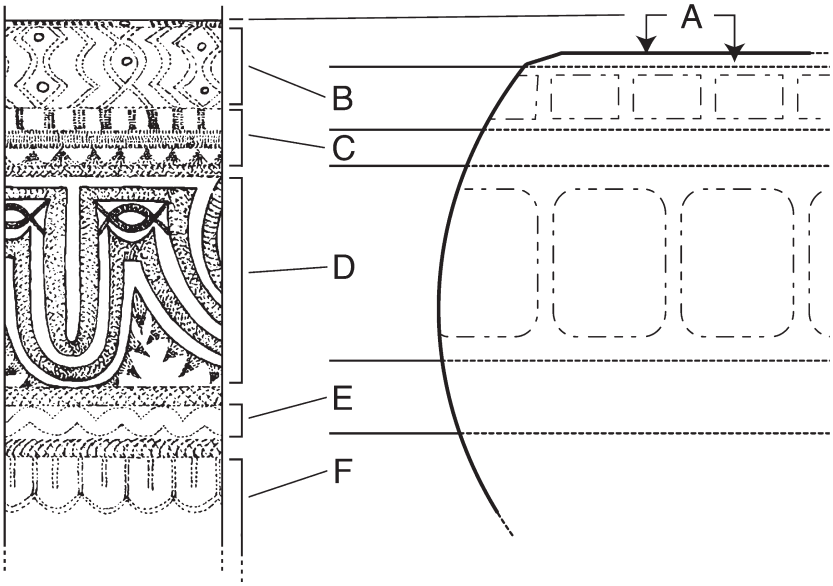


Figure 19. *Zonation of the Lapita design field (left) and the decorative zones (right) used in our studies of vessels from the Sepik coast.*

Symbolic

Our laboratory analyses of the ceramic evidence from the excavations at Aitape and on Tumleo Island began with the elementary hypothesis that, if we were looking at the products of a single tradition, then it ought to be possible to catalogue the design attributes, attribute themes and composite design motifs and subsequently to show statistically or otherwise how changes in the frequency and co-variation of these formal elements unfolded. Our aim initially was to conclude with a statistical picture, not a semiotic analysis. Elsewhere (Terrell & Schechter n.d.), we will present our statistical results; here we offer instead a graphic synopsis of our findings in which we emphasize what we consider to be the symbolic continuity evidenced in the Aitape sequence.

Evocative

We now think that the design motifs both on pottery and other items of material culture at Aitape and on Lapita vessels found elsewhere in the southwestern Pacific symbolically allude to a complex of ideas focused strongly but not exclusively on the sea, sea turtles, and culturally (and emotionally) significant interpretations of such animal life.

Redundant

As already noted, we have concluded that Lapita designs, particularly to begin with (Fig. 1), were often redundant in their coding. Artisans then had alternative ways — some naturalistic, others quite abstract or stylized — to express the same symbolic intent. They appear to have been willing to combine these communicative strategies on the same vessel. Symbolic redundancy is less evident on ceramics and other items of material culture in the Aitape sequence; potters and woodcarvers on the Sepik coast have generally favoured 'just saying it once', rather than repeating

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the same message in alternative ways at the same time. While not labelled as such by the investigators commenting on it, comparable loss of redundancy has also been noted within the Lapita ceramic sequence as its elements and motifs changed with the passage of time (e.g. Best 2002, 40–46; Ishimura 2002; Sand 1996, 119–38).

Synecdochical

Simon Best (2002, 44) has remarked that there is good evidence for simplification of Lapita designs over time (e.g. Fig. 20). We agree, although we think he has underestimated the likelihood that the elements he refers to as 'repetitive motifs', 'borders', and 'intervening fillers' may in some instances in themselves be highly stylized face motifs. Furthermore, what others have described as the 'simplification' of Lapita faces may indicate instead (or as well) that potters after a while began to favour more cryptic ways of getting their point across. In any case, our argument not only for continuity within the Aitape ceramic sequence but also for the survival of the symbolic intent of Lapita 'faces' on the Sepik coast, long after the demise of Lapita dentate-impressed pottery elsewhere in the Pacific, critically relies on these last two semantic or rhetorical claims: the expressive redundancy of Lapita designs, and the figurative power of any one of these alternative and component ways to 'say the same thing' and thus express (or repeat) 'the whole message'.

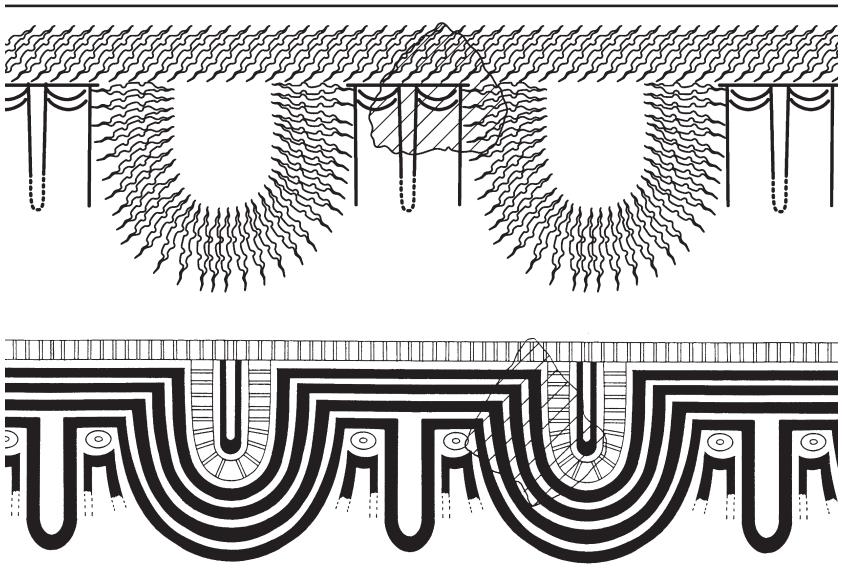


Figure 20. *Reconstruction of the Nyapin 'face' based on a Lapita prototype (bottom figure reproduced by courtesy of Matthew Spriggs).*

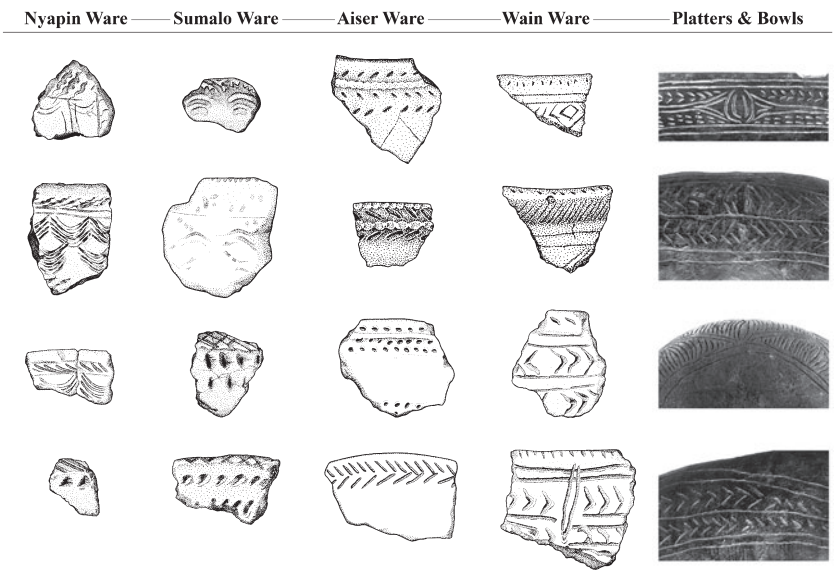


Figure 21. *Synopsis of the Aitape design sequence.*

While it would be unsuitable in this context to offer a detailed analysis of ceramic variation and change in the Aitape district, some summary observations are germane to the hypothesis explored here. First, the items shown in Figure 21 are not put forward as literal transforms of one another, although basically they are in numerous instances. This illustration is only intended to show that the Aitape sequence displays conspicuous design stability and formal continuity over an unusually long period of time, about 1500 to 2000 years. Note, for example, that what we have termed here 'exclusive complementarity' is seen in all of the ceramic wares and wooden bowls figured. Second, we have found faces on both Nyapin and Sumalo bowls and flat ceramic platters (so far we have no definitive evidence that ceramic platters were still being produced when the styles we have called Aiser and Wain wares became popular). Applied to Nyapin platters, faces (more specifically, eyes) sometimes resembled those applied to bowls (Fig. 3g); sometimes instead they were drawn in a far more abstract manner, by punctation (Fig. 3h).

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Figure 22. *Wooden bowl from Tarawai Island (catalogue no. 148556, George A. Dorsey Collection, 1908; photograph A114374, John Weinstein, photographer, ©2004 The Field Museum).*



Figure 24. *Reconstruction of a Lapita 'double-face' design (reprinted by courtesy of Matthew Spriggs).*

Apparently in contrast, judging by the available evidence, realistic faces (eyes) were applied only to Sumalo bowls (Fig. 4a–e); faces (eyes) put on platters were only done abstractly as punctations (Fig. 4f–i). Realistic faces are so far not attested for Aiser and Wain wares, although they occur again on wooden bowls, along with or instead of border designs that we interpret as symbols with continuing reference to faces or, at any rate, to whatever it was that faces, as synecdoches, represented (Figs. 22–3).



Figure 23. *Wooden bowl from Walis Island (catalogue no. 145913, Umlauff (Voogdt) Collection, 1910–12; photograph A114371, John Weinstein, photographer, © 2004 The Field Museum).*

Discussion

Several years ago, Matthew Spriggs (2002, 55) concluded that archaeologists need to develop ways of looking at Lapita that free us from the tyranny of our own ethnographic experiences. We need at least the possibility of producing an unfamiliar Lapita.

The evidence and analyses reported here amplify, and are also somewhat at variance with, earlier interpretations of Lapita design motifs and compositions. Additionally, the Aitape ceramic sequence provides more compelling material (rather than linguistic) evidence for the long-term survival of cultural elements from Lapita times than has hitherto been available.

Apparently, faces, anthropomorphic or otherwise, were applied to Lapita ceramic vessels chiefly in two ways (Chiu 2005, 8–9): as three-dimensional moulded clay representations (Torrence & White 2001), and as stylized two-dimensional drawings in

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a variety of configurations. It is now fairly certain as well that faces were only applied to particular types of forms to the exclusion of others, although what types were selected for such adornment may have differed with time and place (Chiu 2005, 10; Spriggs 2002, 53). It was once also generally assumed that naturalistic or life-like facial representations on pottery are older than more abstract depictions, but it is now known that both sorts of representations were once contemporary at some Lapita sites and, as we have also shown, they may even occur on the same vessels (Best 2002, 43–4; Chiu 2005, 11; Spriggs 2002, 53).

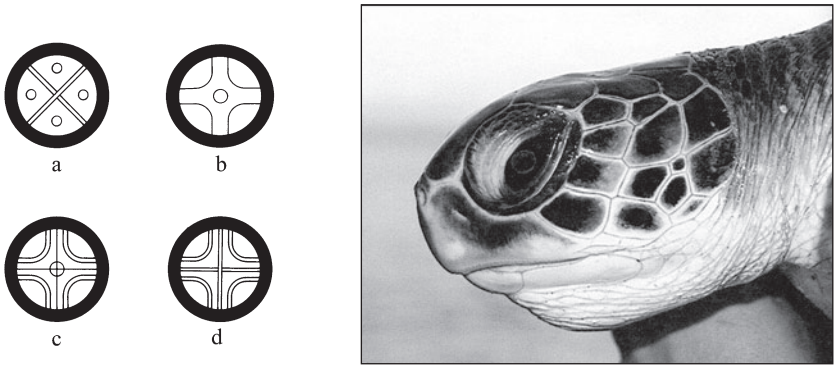


Figure 25. *Apparent similarities between stylized Lapita medallions (or 'earplug emblems') from various archaeological sites and markings behind the eye of* Chelonia mydas*, the Green sea turtle (a–d redrawn from Spriggs 1990a, fig. 32; photograph on right, courtesy of Paula Baldassin, from http://www.seaturtle.org).*

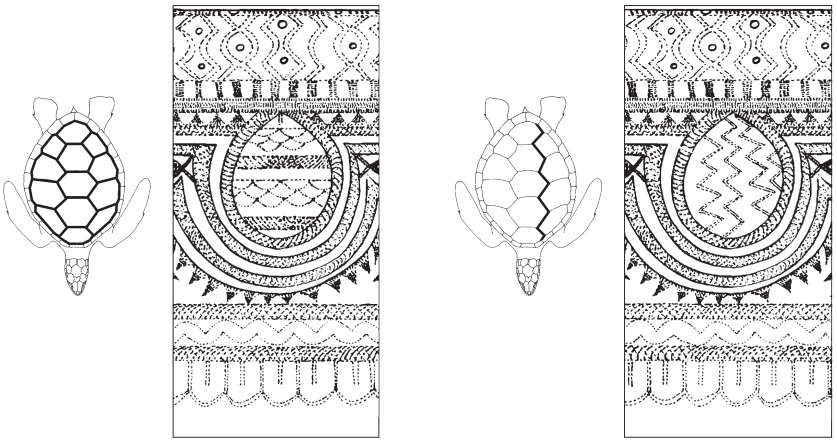


Figure 26. *Comparisons between Lapita design medallions and a turtle's carapace.*

It has apparently always been assumed that Lapita faces, however applied, are 'human face icons' or, at any rate, that they are anthropomorphic (e.g. Best 2002, 73, 100; Chiu 2005, 8; Green 1979; Ishimura 2002, 79; Kirch 1997, 132–40; 2000, 104–5; Spriggs 1990a, 119; Spriggs 2002, 53). For years, this interpretation was understandable, given how limited and fragmentary the evidence was (e.g. Anson 1983; Mead *et al*. 1975; Sharp 1988; Siorat 1990). To paraphrase in colloquial terms and expand somewhat on something Ishimura (2002, 79) has already said, until Spriggs's influential study (Spriggs 1990a), the evidence at hand made it hard to see faces amongst all the countless 'motifs' and 'design elements' then being proposed to describe and classify the fragments under examination (Spriggs 1990b, 4). In retrospect, however, it is more difficult to understand why archaeologists have been so confident that all Lapita faces are human or human-like. Given, for instance, the full-face design actually flanked by two small turtle-like (or lizard-like) creatures in full profile witnessed by large potsherds from Talepakemalai in the Bismarck Archipelago (Fig. 30), we think it more probable that what is often portrayed is a turtle.

We do not think all of the faces on Lapita sherds represent turtles. We might concede that perhaps none of them do, although we ourselves find the evidence favouring such an interpretation to be compelling. Yet, given how visually distinct the two different faces seem to be on Lapita sherds described by Spriggs as bearing 'double-faced' representations (Fig. 24), we wonder why the interpretation of both faces in such designs as unquestionably anthropomorphic would seem likely. An equally plausible alternative would be that the upper and more human-like face in such designs may be that of a human being (or human-like creature) riding on the shoulders or back of something other than human — specifically, we suspect, a sea turtle (Fig. 28).

It is not difficult to see how knowing certain details of a sea turtle's morphology and appearance could account for some of the notable characteristics of Lapita face designs. Instead of being wholly a stylistic choice, for example, how the bands of decoration curve away from the faces (Figs. 1 & 30) can be viewed as a rather life-like portrayal of a turtle's paddle-like frontal flippers (Fig. 29). Similarly, Figure 25 shows

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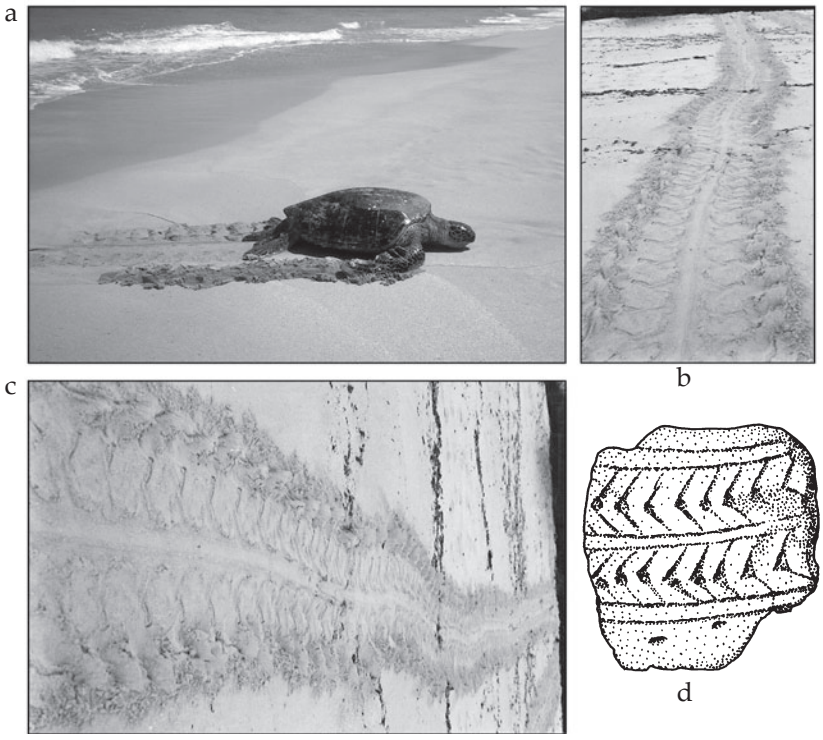


Figure 27. *a) Green sea turtle on her way to a nesting site (photograph courtesy of Regina Woodrom Luna); b) track of a Green sea turtle,* Chelonia mydas, *at Atol das Rocas; c) track rotated to emphasize similarity with design motif occurring on Wain Ware and modern wooden bowls and platters made on the Sepik coast (first noted by Regina Woodrom Luna). (Photograph courtesy of Paula Baldassin; source: http://www.seaturtle.org.) d) Wain sherd (see Fig. 3).*

that what others have previously identified (tentatively) as 'earplugs' or 'ear spools' (Spriggs 2002, 52) with enigmatic designs on them can be identified instead, in at least some instances, as depictions of the scales on the sides of a sea turtle's head. Additionally, Figure 26 shows how the two kinds of stylistically different 'earplugs' shown in Figure 1 are interpretable in this instance as realistic portrayals of a turtle's carapace rather than its head scales.

While admittedly more speculative, we wonder whether it might not be possible to identify the species depicted at least sometimes on Lapita vessels as *Chelonia mydas*, the Green sea turtle. There are several reasons for raising this possibility.

Judging by the attribute of Lapita face designs that appears to be the 'nose' of the individual or creature being figured, two likely species would be *Eretmochelys imbricata*, the Hawksbill turtle, and *C. mydas* (see Márquez 1990). As one of its defining taxonomic characters, the former species has two pairs of prefrontal scales on the dorsal side of the head; the latter has only two elongate prefrontal scales. This difference is prominent enough that it seems likely that, had Lapita potters had *E. imbricate* in mind, they would have registered the cross-like four frontal plates of the creature when drawing what archaeologists have hitherto called the 'long nose' of the Lapita face.

Additionally, the beak of *E. imbricata* is hawklike (hence its common name), and the cutting edges of the beak are unserrated. In contrast, the *tomium* (biting surface) of the lower jaw of *C. mydas* has a sharply serrated rim that corresponds with strong ridges on the inner surface of the upper tomium; and the beak is blunt rather than pointed. It could be that the tomium serrations of *C. mydas* may be what is represented by the triangular 'teeth' around the head and arms/flippers of the creatures on the vessel shown in Figure 1. However, it should be added that there is mythological evidence that could be cited instead to suggest that these triangular tooth-like elements refer to the teeth of the primordial turtle alluded to in an origin account collected on the Sepik coast (see Appendix). Finally, the tracks that Green and Hawksbill sea turtles make in the sand to and from their nesting sites are also distinctive. That of the Green sea turtle (Fig. 27) has deep symmetrical markings made by the front flippers as well as a prominent central tail drag. In contrast, the track of a Hawksbill turtle is asymmetrical (the front flippers form alternating diagonal marks) and there is no tail mark (Pritchard & Mortimer 1999).

In what is now a classic paper, Barry Rolett, twenty years ago, alerted archaeologists working in the Pacific to the deep cultural significance of sea turtles in this region. He proposed that the religious significance of turtles in the Marquesas, and in Polynesian cultures generally, is due at least in part to the association often heard in the islands between turtles and the 'transcendence of boundaries between worlds' marked as complementary contrasts between 'above and below' and 'inland and seaward' that are common themes chanted during turtle ceremonies. He surmised that turtles are prominent in Oceanic lore and religions because, like priests who are their human counterpart, sea turtles can transcend the bound-

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ary between the worlds of land and sea (Rolett 1986, 87).

Given what we have suggested here, we are prepared to argue that Spriggs's double-faced design type symbolically alludes to a fabled culture hero, say, riding on the back of a legendary sea turtle, such as in the tale from Vanimo (Fig. 2; Appendix). On a more speculative note, we wonder whether the complementarity we find in Lapita iconography may reflect the 'above and below' theme noted by Rolett.

At the Field Museum, we identified only two other places in the Pacific where we felt an argument might reasonably be made that what we were looking at might also be derived historically from Lapita antecedents: so-called 'Tami Island bowls' from the Huon Gulf region of Papua New Guinea, and wooden platters from Vanuatu. Simon Best (2002) has made a similar claim in favour of the Fiji Islands, but we are not convinced by his evidence. In neither of our two possibilities is there yet sufficient archaeological evidence for continuity to make any claim for seeing affinities with Lapita more than plausible. Eric Coote (pers. comm.) has long championed the first possibility, and there is little doubt that there are resemblances between Lapita double-face designs (Fig. 24) and the elaborately carved side-lugs on Huon Gulf bowls (Fig. 31). Similarly, Vanuatu stands out in the Pacific as the one other locale where platters are common in our museum's collections. Perhaps the distinctive 'eyed' lugs or handles (Figs. 32–3) on such platters are more than just reminiscent of both Lapita faces and the lugs on bowls and platters from the Sepik coast.



Figure 28. *Similarities among carved faces on wooden bowls (Figs. 22–3) from the Sepik coast, a sea turtle (*Chelonia mydas*; courtesy of Regina Woodrom Luna), and the triangular lower face of a 'double-face' Lapita design (reprinted courtesy of Matthew Spriggs).*

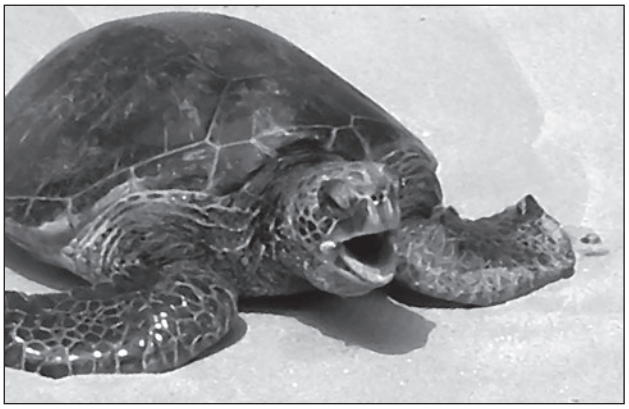


Figure 29. Chelonia mydas*, the Green sea turtle (adapted from Regina Woodrom Luna).*

Conclusions

It is said that a straight line is the shortest distance between two points. We have put forward evidence for saying that 'faces' on Lapita vessels from thousands of years ago and certain designs on historic and modern carved wooden bowls and platters from

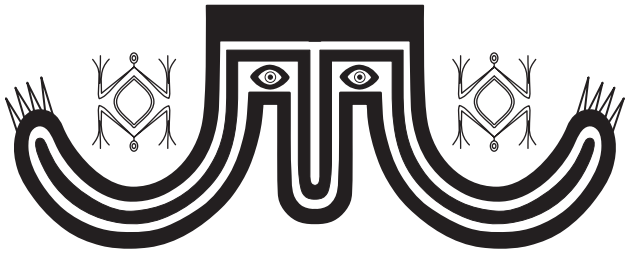


Figure 30. *'Face' design on three potsherds excavated at the Talepakemalai archaeological site in the Mussau Islands, Papua New Guinea (redrawn by Jill Seagard from Kirch 1997, fig. 5.6).*

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a

b

Figure 31. *a) Wooden bowl (detail) from Cape Merkus, West New Britain (catalogue no. 137332, A.B. Lewis Collection, 1909–13; photograph A114428; John Weinstein, photographer, ©2006 The Field Museum); b) wooden bowl (detail) from Moewehafen (Manua), West New Britain (catalogue no. 137339; A.B. Lewis Collection, 1909–13; photograph A114429; John Weinstein, photographer, ©2006 The Field Museum).*



Figure 32. *Wooden platter from Espiritu Santo, Vanuatu (catalogue no. 133359, A.B. Lewis Collection, 1909–13; photograph A114363, John Weinstein, photographer, ©2004 The Field Museum).*

the Sepik coast of Papua New Guinea are two ways of representing the same thing: sea turtles and certain traditional ideas such creatures evidently have evoked (Fig. 28). We have presented evidence for saying that the distance between these two points in time is traversed historically by the four ceramic wares (some would call them 'phases' or 'periods') that we have identified in the Aitape ceramic sequence. Finally, we have offered a plausible reason for why this symbolism has endured for so long. Sea turtles are reported to figure prominently in the lore and cosmology of Pacific Islanders (Kirch & Green 2001, 260). There is even at least one traditional account (see Appendix) supporting the view that this ancient symbolism may be not just about sea turtles as creatures but about one renowned sea turtle in particular: a primordial creator who contributed to the rise of humankind.

We think that finding this historical connection between Lapita and modern times adds unexpected depth and meaning to our research and to the value of what archaeologists working elsewhere in the Pacific are learning about the past. But what about the rest of the world? Are our findings only of local interest, or do they have broader significance?

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We started our laboratory work on ceramics from the Aitape district with two conventional archaeological questions in mind. Were we looking at pottery finds from a single unbroken tradition, or instead at different traditions? In either case, could we pin down where this tradition or traditions had come from? After Micah Urban had pieced together the Nyapin face (Fig. 15), other questions were added to our research agenda. Could we link this face to Lapita iconography, since there appeared to be clear resemblances in that historical direction? If so, could we learn why this iconography had survived on the Sepik coast long after its apparent demise elsewhere in the southwestern Pacific?

While we have not reviewed the evidence here, the LA-ICP-MS spectrometric profiles of stratigraphic samples of sherds from the excavations at NGRP-16, NGRP-23 and NGRP-46, representing all of the wares now defined for the Aitape sequence, show that almost all are from the same production area, as expected given their stylistic resemblances. The geographic source (or sources) of the raw materials used is under investigation, but we now have profiles on sherds from surface collections made at all of the localities on the coast between Vanimo and Wewak visited in 1993 (Fig. 2). Given this broad geographic coverage, the most probable source (or sources) of the excavated materials examined is the Aitape district and its small offshore islands (Mark Golitko pers. comm.).

What about the other questions we had in mind when we began our laboratory work? We never expected we might ultimately discover the probable symbolic meaning of Lapita iconography. In this regard, the various strands of evidence we now have in hand add up to more than just another illustration showing how an art motif has evolved into a seemingly different yet historically related motif (e.g. Karl von den Steinen's treatise on Marquesan art: see Gell 1998, 165–220). While the designs used in the Aitape district to refer to ideas, lore, and rituals about turtles have changed, the favoured way of making such references has also changed. At first, fairly naturalistic faces were sometimes used; at the end of the sequence, the preferred motif seems instead to be a turtle's track in the sand, although even in these instances there is commonly a design element interpretable as an 'eye'.

We are convinced that this unexpected dimension of our work and its results is of more than antiquarian interest. Our findings have bearing both on one of the oldest controversies in anthropology as a recognizable discipline and on a current one. The first is the debate surrounding E.B. Tylor's 'doctrine of survivals' (Hodgen 1931). The second is the revival

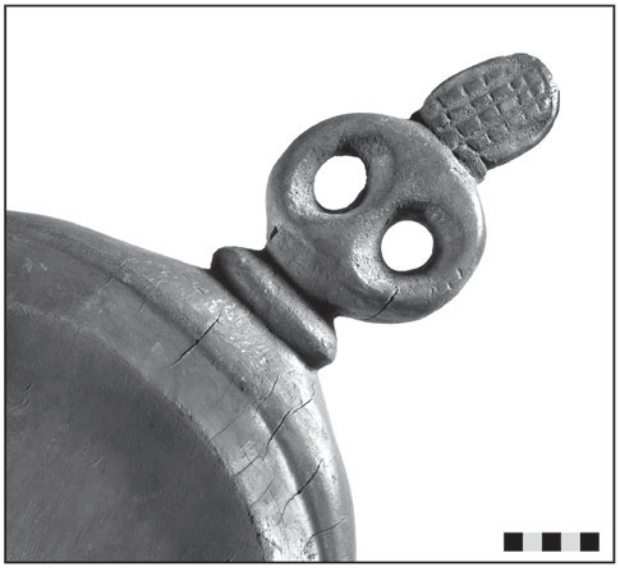


Figure 33. *Detail of a wooden platter from Espiritu Santo, Vanuatu (catalogue no. 37136, J.G. Peace Collection, 1893; photograph A114362, John Weinstein, photographer, ©2004 The Field Museum).*

of this old debate today under the new rubric of 'cultural phylogenetics' (Mace & Holden 2005; Mulder *et al*. 2006).

This is not the place to discuss the substance of these two debates at any depth. The first was mostly about whether progress or degradation best characterize human history, and whether anything cultural can survive for long if it becomes just a foolish and irrational relic from times past. It is less certain what the current debate about cultural phylogenetics is all about, although there is no question that some who favour this approach to mapping and explaining cultural diversity see this research tactic as a major advance over previous methodologies and philosophies (Grandcolas & Pellens 2005; Mulder *et al*. 2006).

While we would disagree with so enthusiastic an evaluation of the promise of cultural phylogenetics as a way of sorting out human diversity (Terrell 2004), the essence of this modern dispute about the inheritance of things seems to turn on how worthwhile it may or may not be to chart the history of particular culture traits and cultural objects. And there is no real agreement today on how to interpret phylogenies of things as human history. Experts in modern biological phylogenetics recognize that gene trees are not the same as population trees (Maddison 1997). It is not altogether clear that experts in cultural phylogenetics (for discussion, see Shennan & Collard 2005) are equally aware that genealogies of things are not neces-

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sarily proxies of what most people would see as the history of people, not just of things.

With this caution in mind, we feel safe in observing once again that there is at least a strong coincidental correlation between the geographic distribution of Lapita archaeological sites in the Pacific and the modern distribution of the Austronesian languages spoken there (Terrell *et al*. 2002). Although, so far, only two Lapita potsherds have been found on New Guinea — at Aitape and on Ali Island — Austronesian languages are spoken here and there along the Sepik coast as far west of Aitape as Serra village (Fig. 2). Thus we think it is not altogether surprising that we have found a ceramic tradition on this coast that would appear to be historically derived from the ancient Lapita tradition.

It is surprising, on the other hand, that we have additionally found evidence for late survivals of the Lapita 'face' on this coastline of New Guinea. The Aitape tradition may be at least 2000 years old. Lapita as a ceramic style appears to have died out hundreds of years before then elsewhere. It is perhaps most surprising that we also have found evidence that lets us apparently see behind or beyond these faces to glimpse what they meant to people in both the ancient and not so ancient Pacific. It is rare in the archaeology of non-literate societies to find such interpretable evidence.

Having now sketched, however tentatively, the phylogenetic history of this trait — the Lapita 'face' and its descendants —we would say to our colleagues working elsewhere in the world that here is new proof that the phylogeny of cultural things can help archaeologists write human history. Yet we insist on a caveat. This is a special and onerous kind of history. The survival of Lapita iconography at Aitape may show that people on this coast have been open to the arrival of new ideas, new practices and presumably new people too, from far-off places; but it will not do to misconstrue the phylogeny of such foreign influences with the experienced history of people on this coast.

Roland B. Dixon observed in 1928 that the 'cultural fabric' of any society is an intermingling of what is locally inspired or inherited with what is acquired from farther afield through contacts, trade, individual and group resettlement, political alliances and the like. It is out of both dimensions of social life that 'the fabric of a people's culture is woven' (Dixon 1928, 271). Tracing the phylogeny of the Lapita 'face' on the Sepik coast may give meaning to what is found there but this evidence only reveals a single thread in the complex tapestry of life as it has been lived there. What is being witnessed is not the descent with modification of people and culture in the Aitape district from other places but, rather, the material as well as social ties that link people in this place on the Sepik coast with other people and places in the Pacific.

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Appendix

The Turtle and the Island
collected by Joseph Abi, Vanimo and
Donald S. Stokes (Stokes & Wilson 1978).

Long, long ago, in the days when turtles had teeth, there lived a great sea-turtle, the mother of all sea-turtles, who spent her time swimming about the wide sea that now men call the Pacific Ocean. Slowly she swam, feeding on the fishes that lived in the sea and the plants that grew there, and snapping up the shellfishes that lurked in the rocks where the sea bordered the land. She swam from one side of the sea to the other, to and fro between the lands that bordered that vast ocean. She lived in the sea, but she swam both above

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and below the surface of the water; above the surface she breathed the clear, fresh air and felt the warmth of the sun. She looked up to the sky and saw the sun by day and the moon by night, and the birds that flew across the ocean from land to land. She looked down into the sea and saw its dark, cold depths.

Sometimes the turtle grew tired of swimming, and rested just below the surface of the sea, but she often longed to rest in the warmth and sunshine. She thought how pleasant it would be if only there were a piece of land in the middle of the great ocean where she lived. In a dark, secret cave far below the sea where the turtle swam there lived a man. His skin was black, and in all that great ocean he was the only man. He had no wife, no children, no tribespeople. The man was lonely, in that cave beneath the sea. His heart was heavy as a stone on the seashore. He was weary of being alone.

One day, as the turtle swam about, she came to a place in the middle of the ocean where a great hill of sand was raised up from the bottom of the sea. The hill was so high that the top of it almost reached above the surface of the ocean.

'If I were to bring more sand to add to this big hill, soon it would rise clear above the water', thought the turtle. 'The sun would shine down upon it by day, and it would be a place where I could rest and enjoy the warmth and the clear air when I grow tired of swimming.'

So the turtle went to another part of the ocean floor, where she dug up rocks and more sand, and these she brought back to the hill, so that it grew higher and higher. She did this more times than anyone could count. The sun rose and set, the moon waxed and waned day after day, and still the hill grew higher. And at last it became a huge island in the middle of the sea, and the turtle saw that her work was finished.

Then the birds that flew across the ocean from land to land brought seeds of plants and trees and dropped them on the island. Grasses and flowering plants and tall trees sprang up, covering the rocks and sand. It was a beautiful, fertile island, surrounded by the sea which teemed with fishes large and small.

The turtle rested on the sun-warmed ground of the island she had made. No longer did she have to spend her whole life swimming through the wide ocean and resting just below its surface. And although she still swam about as before, she never strayed very far from the island she had made.

One day, she swam down, down into the ocean, much deeper and farther than she had ever swum before. How dark and cold it was down there, far from the light and warmth of the sun! Suddenly the turtle swam into the dark, secret cave where the man with the black skin had lived alone for such a long time. The man was overjoyed when the turtle came to him; he begged her to find him a wife who would be his companion and bear children. The turtle felt pity for the man's loneliness. She took him, riding on her strong shell, to the island she had made. Then she swam across the sea to the nearest land, to a place where a woman stood on the shore, a beautiful woman with black skin. She was weeping; like the man, she was lonely. She desired a husband and longed to bear children. So the turtle took the woman back across the sea to the island, and brought her as a wife for the man.

The man and the woman lived together on the island in happiness and peace. They laughed, they played in the sea, sometimes they quarreled, but they never lost the joy in their hearts. They made children together, beautiful black-skinned children, and those children had more children, and in this way the island became filled with people, who grew crops and built houses and fished along the seashore. And in time the island that the great sea-turtle had made became known as New Guinea.

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