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Detailed analysis of Lapita Face Motifs: Case Studies from Reef/Santa Cruz Lapita Sites and New Caledonia Lapita Site 13A

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Introduction

The complex, often elaborate and very distinctive dentate-stamped Lapita designs were first identified at a site on Watom Island, in the northern coastal islands of Papua New Guinea, almost 100 years ago (Meyer 1909, 1910). It was not recognised until much later that this particular way of decorating pots was associated with a cultural complex that occurred throughout the Southwest Pacific (Golson 1961, 1971). Encompassing such a large region (Figure 1), from Island New Guinea across to Samoa, both temporal and spatial variation in terms of decorative style was to be expected. Lapita pottery was mostly manufactured by a uniform method of slab-building, strengthened with paddles and anvils, smoothed and decorated with various techniques, then fired at low temperatures (Bellwood 1978:258; Golson 1971; Green 1974; Green 1991; Hunt 1988). Chemical and petrographic studies from a number of Lapita sites indicate that there was no strict control over raw materials used to produce these pots and there is a lack of restricted correlation between tempers and motifs ([Arawes] Summerhayes 2000a:234; [Reber-Rakival] Anson 2000; [Site 13A] Chiu 2003a). With the exception of Mussau Island, (Kirch 1988a; Kirch 1991; Kirch *et al.* 1991), most Lapita pottery has been identified as having been locally made, and exchanged only among nearby local communities (Dickinson *et al.* 1996; Galipaud 1990; Summerhayes 2000a).

Regional “communication boundaries” have been proposed and the area encompassing the Lapita Cultural Complex has been divided into a number of regions based on stylistic analyses of motif and vessel forms (Green and Kirch 1997:30). These include Western and Eastern Lapita (Anson 1983; Green 1978), Western Fijian and Lau-West Polynesian (Best 1984; Geraghty 1996), Southern and Northern West Polynesian (Kirch

Figure 1. Distribution of the Lapita cultural complex.

1988b), and New Caledonia and Vanuatu Lapita (Anson 1983; Green 1978). It has been suggested that variations observed in pottery decorative style and technique can be interpreted “as the differentiation, both linguistically and culturally, of more localised ethnic identities”, and they reflect “the declining frequency of exchanges across these boundaries” through time (Green and Kirch 1997:30). The Lapita pottery repertoire generally changed from complex and naturalistic depictions on elaborate vessel forms in the earliest and most westerly-located Lapita sites in the Bismarck Archipelago, to more simplified and geometric designs on simple vessel forms in the eastern Fiji-Tonga-Samoa region. This contention of progressive stylistic variation across the Lapita spectrum has dominated much of our understanding and interpretations of the nature of Lapita pottery.

Combined with the migration model, this trend has further been interpreted as an effort to maintain lifelines, or strong connections with the homeland community by daughter colonies. The maintenance of exchange systems has been argued as representing an effort in “maintaining community viability, particularly through such critical problems as acquiring suitable marriage partners, in a previously unoccupied, occasionally hazardous and still sparsely-populated region at some distance from ‘home’” (Kirch 1988a). Once Lapita peoples moved out of their homeland regions, the incentive to invest time and energy in producing a range of vessel forms with complex motifs in an effort to maintain their identity with their homeland was short-lived, particularly after successful new colonies had been established. As exchange networks began to break down, and less and less effort was made in maintaining links to the homeland, the decorative pottery style too began to significantly change and ultimately in some regions the pottery-making tradition itself disappeared altogether.

This paper aims to challenge the validity of the previously assumed trends of motif transformation through a detailed re-analysis of Lapita face motifs found at Nenumbo-Reefs (SE-RF-2), Gnamanie-Reefs (SE-RF-6), and Nanggu-Santa Cruz (SE-SZ-8) of the eastern Solomon Islands, and those identified from Site 13A (WKO013A), Koné, New Caledonia. It attempts to establish a model for constructing possible motif transformation rules, in order to provide a more complex interpretation of these face designs and their possible meanings within the ancient Lapita tradition.

Lapita face motifs

One of the more distinctive motifs found on Lapita pottery are the human face motifs. Produced with a combination of an introduced dentate-stamped technique and locally innovated design motifs, these face motifs represent a new way of presenting social identities in this region more than 3000 years ago. There are at least two kinds of human representation. The first category contains the three-dimensional face motifs, usually found as moulded ceramic heads (Best 1981:11; Frimigacci 1981; Sand 1996:122, Fig. 162; Summerhayes 1998; Torrence and White 2001:135), but also represented by a carved bone figurine from Talepakemalai site (ECA) (Kirch 1997: frontispiece). Ceramic heads from Babase and Boduna are “decorated in the manner of tattoos” on the cheeks (Torrence and White 2001:138) and are similar in appearance to the second dominant form of presentation, the two-dimensional faces dentate-stamped on pottery surfaces (e.g., Green 1979:23, Figs. 1-3, 1-4 middle right; Kirch 1997:135, Pl. 5.5, 137, Fig.5.5; Sand 1999:53-55; Spriggs 1990:83-84).

Different types of face motifs were employed to decorate different forms of vessel. In the Far Western Lapita Province, the double-face motifs from ceramic assemblages are usually found on vessel forms “best suited for display or serving, not for storage or cooking,” such as “cylinder stands” and “open bowls supported by pedestal feet or rings” (Kirch 1997:139-140). A similar practice may also be found in central Vanuatu Lapita sites (Bedford 2007; Bedford *et al.* 2006). Later in the archaeological sequence of the Far West, single-face motifs appear on flat-bottomed dishes with flaring sides (Kirch 1997:139-140), and possibly on lids as well (Spriggs 2002:53). No face motif has ever been found on smaller bowls or on globular carinated pots in the Far West. A similar pattern was found in the Arawe Islands (Summerhayes 2000a). This restriction was relaxed in the Southern Lapita Province, where the majority of face motifs occurred on carinated pots, although they were still applied to flat-bottom dishes and dishes supported by pedestal feet or rings (Sand 2000, 2001:Fig. 7).

What is in a Lapita face?

Many attempts have been made to comprehend the social characteristics inherent in these Lapita face motifs (Best 2002; Chiu 2005; Ishimura 2002; Kirch 1997; Newton 1988; Noury 2005; Sand 1999:53-55, 2000; Spriggs 1990, 1993, 2002). Spriggs recognised two trends of transformation in the face designs within the Lapita decorative inventories based on the then available chronological information of various sites. As “the designs would follow a progression from complex to simple over time”, so can there be seen “a parallel progression from more naturalistic to more abstract designs” during a period of “at least 1000 years scope” (Spriggs 1993:9). He further suggested that “a considerable proportion of the entire Lapita design corpus” should be viewed as transformed face designs (Spriggs 1993:13). Based on information available at the time, Spriggs classified the face motifs according to temporal and spatial aspects, thus he demonstrated not only that Lapita faces have chronological values, but they also signal rapid social transformation, presumably due to local innovations, after initial settlement. A “logical sequence” was proposed, with “double-face” motifs occurring in the early part of the sequence (before about 2800 BP), “single-face” motifs generally appearing in later contexts, and they were ultimately transformed into simplified geometric forms (Spriggs 1993:13-14).

Assuming this progress of complex to simple is irrevocable in nature, Ishimura identified fourteen types of faces and arranged them in a family-tree structure that indicated the “irreversible” evolution of these motifs (Ishimura 2002:79). He further argued that these face motifs were typical of each Lapita region, indicating that each motif represented a particular transformational stage in the wider process. Unfortunately, factors such as the occupational span or the duration of production of these face motifs at each site, and *in situ* variation and alteration of these “typical” faces were ignored in his analysis.

In situ variation and the possible use of both complex and Simplified face motifs during the same time period can be inferred from Fijian assemblages. Although Best states that “examples of quite complex anthropomorphic designs are not uncommon in Eastern Lapita... These occur in the lowest levels of the sites,

and the process of stylisation can be shown to have taken place" (Best 2002:43), he admits that during the short occupation of the Naigani site, it is evident that both elaborate and highly simplified anthropomorphic designs were employed simultaneously (Best 2002:44). The same phenomenon has been recognised at Makekur (FOH) in the Arawe Islands (Phelan 1997:139; cited from Best 2002:44), at Teouma in Central Vanuatu (Bedford 2007), at the "pot-burial pit" and other parts of Site 13A in New Caledonia (Chiu 2005; Sand 2000:26), and at the Nenumbo site on the Reef Islands.

Thus the proposed "sequence of increasing abstraction of the face design over time" (Spriggs 2002:52-3) should be reassessed, as the coexistence of both elaborate naturalistic and very abstract face motifs at single sites contradicts this assertion. Both Best and Spriggs tend to question the precision of the radiocarbon dates of some of the sites listed above (Spriggs 2002:53), but at the same time insisting that such a process of simplification over time is unquestionable (Best 2002:44). This paper proposes an alternative working hypothesis for examining and trying to explain why the "logical sequence" is likely to be much more complex than currently assumed. It argues that a simple, uniform trend did not exist in prehistory, as social factors need also be taken into account when one investigates the meanings that these Lapita faces might have contained some three thousand years ago. The complexity of these colonising societies has to be taken into account. They

Figure 2. Dendrogram showing the grouping of sites based on motif similarity using Ward's method (after Chiu 2003b:229, Table 6-1).

Table 1. Number of face motifs identified at 4 Lapita sites with Chi-square test result.

			type					Total

			T	AI	L	HD	S	
site	SZ8	Count	1	0	8	4	2	15
		Expected Count	1.1	.0	2.4	1.7	9.8	15.0
		% within site	6.7%	.0%	53.3%	26.7%	13.3%	100.0%
	RF6	Count	3	0	0	2	0	5
		Expected Count	.4	.0	.8	.6	3.3	5.0
		% within site	60.0%	.0%	.0%	40.0%	.0%	100.0%
	RF2	Count	12	0	43	25	2	82
		Expected Count	6.0	.2	13.3	9.1	53.3	82.0
		% within site	14.6%	.0%	52.4%	30.5%	2.4%	100.0%
	13A	Count	11	1	9	10	236	267
		Expected Count	19.5	.7	43.4	29.7	173.7	267.0
		% within site	4.1%	.4%	3.4%	3.7%	88.4%	100.0%
Total	Count	27	1	60	41	240	369	
		Expected Count	27.0	1.0	60.0	41.0	240.0	369.0
		% within site	7.3%	.3%	16.3%	11.1%	65.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	264.842 ^a	12	.000
Likelihood Ratio	274.623	12	.000
Linear-by-Linear Association	94.657	1	.000
N of Valid Cases	369		

Symmetric Measures

	Value	Approx. Sig.
Nominal by Nominal Contingency Coefficient	.646	.000
N of Valid Cases	369	

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.

a. 11 cells (55.0%) have expected count less than 5. The minimum expected count is .01.

may well have been organised along the lines of “house-based” social groups, where various social hierarchies were likely to have existed both within and outside a “house” amongst the local community itself, and often supplemented with external exchange partners, which may all have contributed to the complexity of motifs that we have seen on the Lapita pots.

In my previous study of the Site 13A Lapita pottery assemblages, where 117 face motif sherds were identified, it was demonstrated that the social forces of both differentiation and unification were at play. Potters created, modified and altered several face motif forms, adding certain “operators” (“friezes” or complex “zone markers”) to the same motif designs to highlight social differences (Chiu 2005). In this study I hope to demonstrate that the same social forces are at play in the Reef/Santa Cruz Lapita and Site 13A assemblages which have previously been shown to share the highest degree of similarity in terms of motif inventories among all island groups (Chiu 2003b; see Figure 2). The study tackles the issue of diversity observed between Lapita face motifs excavated from four Lapita sites (Table 1), with the aim of determining whether Lapita potters and consumers preferred using this particular materialised symbol to signify their group identity, to differentiate and to unify certain groups in various conditions. It also tests whether we may, as long-distant outside observers, use the identification of subtle changes in motif construction patterns, as a means to help us infer the underlying social, economic, spiritual, and political forces that moulded the pots into being.

Face motifs from Site 13A came from one unit excavated in 1992, four units in 1994, and the 56 units in 1996, plus surface collections of both the 1995 and 1996 field seasons. Sherds excavated and documented by Gifford and Shutler (1956), and the Phoebe A. Hearst Museum of Anthropology at UC Berkeley collection, hand-drawn by Peter White and his students in 1976, were also included in this study. During a visit to the University of Auckland in 2005, I was able to examine all the Reef/Santa Cruz decorated sherds that had been

excavated in 1976 along with some of the larger sherds collected during the 1971 field season. The face motifs included in this study include those motifs identified by myself in 2005, plus those published by Donovan (1973), Parker (1981) and Spriggs (1990) in previous studies. Motifs without a clear indication of being part of a face, i.e., with a noticeable “eye-to-nose” structure intact, or could not be determined as being part of the complex headdress, were not included in the study.

Face motifs identified

In our paper, “Recording of the Lapita motifs: Proposal for a complete recording method” (Chiu and Sand 2005), Christophe Sand and I have suggested that concentrating on the use of space, instead of dissecting face motifs into various design elements in complex motifs, may be a profitable method for the analysis of the design motifs. We argue that while the design elements may be interchangeable from case to case, the underlying construction rules for each of these complex motifs might have remained the same. I have followed this concept in establishing the classification of face motifs recorded for this study. Examples for each subcategory of face motif types are shown in Figures 3-8. Developed out of the major categories established by Spriggs (1990), I have classified the face motifs into five general categories. There are two categories of Triangular face motifs (Triangular face [T]; Alternating inverse [AI]) (Figures 3-5), two categories of single face motifs (Long-nose [L]; Simplified [S]) (Figures 6, 7) and a headdress motif (HD) (Figure 8). Within each category of face motif, there are several sub-categories identified according to changes in certain design units within the whole structure. At this stage, the classification system is still under construction, and rules governing the classification of face motifs are still under investigation.

Figure 3. Triangular (T) face motif sub-categories identified.

Triangular face motifs (T)

The Triangular face motifs (T) parallel those labeled by Spriggs as “double face” motifs. Face motifs of this category always have the lower triangular face part present in the design, while the upper, more naturalistic face motif may be replaced by various other designs (Figure 3). Among the Reef/Santa Cruz sites, the Triangular face motifs were highly elaborated. Therefore in an effort to distinguish them according to the possible construction rules, I have classified these face motifs according to several parts of the motif: 1) the appearance of the naturalistic face on the top of the triangular face; 2) the presence/absence of a semi-circle on the top of the triangular face; 3) the position of “pendants” in the entire motif layout, i.e., whether it is located above the triangular face or on the sides of it; 4) the shape of lines encircling the “pendants” on the sides of the triangular face; 5) the design elements used to fill in these horn-like or fern-shoot-like spaces; 6) the friezes attached either above or under the face motif; 7) the shape of the eye inside the Triangular face motif; and lastly, 8) the presence/absence of division motifs in between face motifs.

Based on these rules, I have identified 7 sub-types of triangular faces (see Figure 3). Table 2 shows the presence/absence data of each Triangular face motif sub-type identified from sites studied. The first one is the original “double face” (Figure 3.1), where a naturalistic human face appears on top of a triangular face, with rounded “pendant” designs appear right next to the Triangular face motif. There are two faces in this first sub-type recognized so far: one is from SE-RF-2, the other from SE-SZ-8.

The faces in the second group may be seen as transformation of the first, as the upper human face is being replaced by just an empty circle (Figure 3.2), retaining only the outline of a human face. It is rather hard to tell from the fragmented sherds whether the “pendant” designs are placed right next to the Triangular face motif at this moment, but it is very likely the structure of the entire motif did not change too radically at this moment.

The third sub-category of Triangular face motifs has a semi-circle filled with elaborated designs, replacing the upper naturalistic human face motif (Figure 3.3). There are horn-like structures encircling a round space on the sides of the Triangular face motif. The round circles are usually filled with different “pendant” designs. In some cases, eyes within the triangular face were replaced with triangle “pendants”, while the basic structure of the face motif remained the same.

The fourth sub-category of Triangular face motifs (Figure 3.4) comes also with a semi-circle on the top of the triangular face, with the use of an upraising fern-shoot-like design to push the “pendant” designs farther away from the face itself.

In the fifth sub-category of Triangular face motifs, while the semi-circle is still intact, the eye inside the triangular face is replaced by pendant-like symbols (Figure 3.5). Face motifs belong to this category have been separated out from the rest Triangular face motifs due to its special treatment of the eye inside the triangular space. A similar motif has been found on Vao Island in Vanuatu (Chiu 2005:28, Fig. 11).

The sixth sub-category shows a triangular face in which the semi-circle part of the face disappeared totally from the design, while the horn-like structure encircling a round space on the sides of the Triangular face motif remained the same (Figure 3.6). There are at least 3 different alloforms within this particular sub-category (Figure 4), each containing subtle differences in the design elements employed to generate the overall structure of the face motif.

Table 2. Presence/absence data of Triangular face motif sub-categories at 4 sites and Spriggs 1990 data.

Triangular	T1	T2	T3	T4	T5	T6	T7
Spriggs 1990	fig. 2	fig. 4	fig. 7 & 9	fig. 5 & 6	fig. 10	fig. 12	
SZ8	P						
RF6	P						
RF2	P	P	P	P	P	P	
13A			P			P	P

Figure 4. Examples showing the subtle modification of face motif elements from T6 (Figure 3).

The seventh sub-category comes from fragmented sherds collected at Site 13A, each showing the outline of a triangular shape, with the eyes now decorated with pendants directly underneath (Figure 3.7). Based on the similar treatment around the eyes of the Triangular face motif, it seems that this group of face motifs may be closely related to the original Triangular face motif.

Alternating inversed face motif (AI)

The second set of triangular faces which I have labeled “alternating inverted double face” motifs (AI), have only just been recognised recently from Teouma in Vanuatu (Bedford *et al* 2006:819, Fig. 5), and from Site 13A 1995 surface collection (Figure 5). The upside down Triangular face motif, the most characteristic feature of this motif category, may be viewed as part of the earplug design that fills the space between Long-nose face motifs, and such a particular arrangement of two different face motifs in vertically opposite positions is quite intriguing, and deserves more detailed comparison among various ethnographic cases if one wishes to understand its possible meanings.

Figure 5. Alternating inversed (AI) face motif sub-category.

Long-nose face motifs (L)

Two categories of single face motifs have been developed from Spriggs' original "single face motif" category. The first is the Long-nose with earplugs (L) that still contains the more complex structure of a face (Figure 6 and Table 3); and secondly, the Simplified face motif (S), where earplugs disappeared from the design and geometric eye designs replaced the more naturalistic Long-nose design (Figure 7). The Long-nose face category motifs from the Reef/Santa Cruz clearly shared the same design structure as the triangular ones found at the same sites. Others share the same design structure with the New Caledonian Long-nose face motifs, with only slight differences in terms of design elements that have been used to fill up the "pendants" (Figure 6). Division of the Long-nose face motifs into subcategories was based on the following rules: 1) the position of "pendants" in the motif layout; 2) the shape of the "pendants" on the sides of the Long-nose face; 3) the design elements used to fill in the "pendants" and spaces around the face itself; 4) the friezes attached either above or under the face motif; 5) the shape of the eye; and lastly, 6) the presence/absence of division motifs in between face motifs. Based on these rules, 5 different subcategories of Long-nose face motifs have been identified. Table 3 shows the presence/absence data of each Long-nose face motif sub-type identified from sites studied.

From the examples shown in Figure 6, it is clear that while some rare Long-nose face motifs are separated by headdress and "pendants" as also seen with the Triangular face motif category (subcategory L1 and L2 [Figures 6.1 and 6.2]), most motifs have two faces sharing a single "pendant" (sub-category L3 [Figure 6.3]).

Figure 6. Long-nose (L) face motif sub-categories identified.

Table 3. Presence/absence data of Long-nose face motif sub-categories at 4 sites and Spriggs 1990 data.

Long-nose	L1	L2	L3	L4	L5
Spriggs 1990	fig. 18	fig. 19	fig. 23 & 24	fig. 26	
SZ8	P				
RF6					
RF2	P	P	P	P	P
13A			P		

Simplified face motifs (S)

Classification of the Simplified face motifs is primarily based on 1) the friezes attached either above or under the face motif, and 2) the shape of the eye. The general construction rule for this type of face motif, as Spriggs has pointed out, is the loss of “pendants”, the replacement of the original naturalistic eyes with all sorts of symbols, and the ultimate loss of eyes from the design. There are 25 sub-categories of this type of face motif that have been identified to date (see Figure 7). S1 to S11 (Figure 7.1-7.11) presumably represent different face motifs, while S12 to S21 (Figure 7.12-7.21) represent instances of altered or merged face motifs. S22 to S25 (Figure 7.22-7.25) are rare

Figure 7. Simplified (S) face motif sub-categories identified.

types that may represent another method of simplifying complex motifs in this category. Some of them are more popular than others, such as the “X-shaped” or “J(-shaped” ones. Site 13A has a large number of Simplified face motifs. In contrast, there are only two clear cases of Simplified face motifs identified from SE-RF-2. One of which (S9) was recovered from the upper black layer of the site, the other (S23, reconstructed from three pieces) was found inside an oven pit used at the later period at this site, indicating that both were either a later innovation by local potters, or an introduction from other places. Table 4 shows the presence/absence data of each Simplified face sub-type identified from sites studied.

Table 4. Presence/absence data of Simplified face motif sub-categories at 4 sites and Spriggs 1990 data.

Simplified	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17	S18	S19	S20	S21	S22	S23	S24	S25
Spriggs 1990																									
SZ8																									
RF6																									
RF2									P															P	
13A	P	P	P	P	P	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P		P	P

fig.28 fig.27

Anomalous Simplified face motifs

Rare variants of the Simplified face motif (Figure 7.22-7.25) deserve further attention. The first one (S22) from SE-SZ-8 appears to be a direct transformation from the Long-nose face motif. The eyes of the face have been enlarged into circles, with no indication of a “pendant” on the sides of the face. Another rare motif (S23) comes from SE-RF-2, with the Long-nose clearly laid out in the design, but the eyes are enclosed by triangular spaces. The set grammar of constructing a face is being challenged here, as half of the motif retains the usual form, while other elements of it have been altered (Figure 7.23). The third case (S24) is from Site 13A, where the nose is still present, but the eyes have totally disappeared, and the pendants are emphasised. The last case (S25) is a sherd with an intriguing design. On the left part of the motif, it seems to carry part of the design commonly seen in the Long-nose face (see Figure 6.2). However, on the right and center of the motif there are two simplified “X-shape” eye motifs (Figure 7.25). What is usually a recognisable Long-nose face is now being replaced with a geometric face design, the most dominant type of Simplified face motifs found at Site 13A. This particular motif shows signs of transforming from the more complex Long-nose face directly to a simplified one, while retaining the headdress/pendant part of the original. This further strengthens the argument for the analysis of these face motifs and their simplification using structural rules, not simply the designs used in the image. This particular replacement of the oval eye motif with the x-shape simplified eye motif within a formal structure demonstrates both the importance of retaining the major structural forms of the motif, and the significance that these interchangeable eye motifs might have had in Lapita culture.

Headdress motifs (HD)

In this presentation, a fifth category, the Headdress motif (HD), is also included, for motifs of this category are usually associated with the Triangular face motifs, but sometimes with the Long-nose motifs as well. Without clear indication of a face layout, I have at this stage just listed them as a separate category that may well ultimately be part of the face motifs. There are 9 different headdress motifs identified from the assemblages (Figure 8). Some can easily be associated with Triangular face motifs, while others are from Long-nose face motifs. In Figure 8 I have listed all the different forms of headdress motifs that lack clear indication of whether they belong to a Triangular or Long-nose face motif. Table 5 shows the presence/absence data of each headdress motif sub-type identified from the sites studied.

Figure 8. Headdress (HD) motif sub-categories identified.

Table 5. Presence/absence data of Headdress motif sub-categories at 4 sites and Spriggs 1990 data.

Headdress	HD1	HD2	HD3	HD4	HD5	HD6	HD7	HD8	HD9
Spriggs 1990	fig. 32		fig. 21				fig. 8	fig. 11	fig. 7
SZ8									
RF6	P			P					
RF2		P	P		P	P	P	P	P
13A									

Face motifs in summary

A total number of 15 face and “headdress” motifs were identified from SE-SZ-8, 5 from SE-RF-6, 82 from SE-RF-2, and 267 from Site 13A. The raw number of face motifs identified from each site is listed in Table 1, and it is clear that these sites contain different types of face motifs. The percentage of face types found at each site are as follows; Triangular face motifs make up 14.6 % at SE-RF-2, 60 % at SE-RF-6, 6.7 % at SE-SZ-8 and 4.1 % at Site 13A. As Headdress motifs are usually associated with the Triangular face motifs, we can combine the number of triangular and headdress motifs and arrive at figures of 45.1 % for SE-RF-2, 33.4 % for SE-SZ-8, and 100 % for SE-RF-6. In striking contrast, at Site 13A, only 7.8 % of face motifs belong to the combined Triangular and Headdress motifs. The Long-nose face motif category shows the same tendency. At SE-RF-2, 52.4 % of the face motifs belong to this category, and at SE-SZ-8, 53.3 %. While at Site 13A, only 3.4 % of the face motifs are from this category. The tendency of employing more complex Triangular and Headdress motifs and the Long-nose face motifs in the Solomons is apparent.

In terms of Simplified face motifs, only 2.4 % at SE-RF-2 and 13.3 % of SZ-8 face motifs belong to the simplified category, while at SE-RF-6, there is none so far reported. In contrast, at Site 13A, 88.4 % of face motifs found are simplified ones. Due to the fact that there are only 5 face motifs found at RF-6, and all of them belong to the most complex Triangular face motifs, it is hard to tell at this stage whether it may also show a similar pattern of preferring the Long-nose face motifs as the other two Reef/Santa Cruz sites.

Another design element that separates the Reef/Santa Cruz sites from Site13A is the extensive use of small impressed round circles. Most of the face motifs, including the triangular ones found in the Reef/Santa Cruz contain these circles in the design, yet at Site 13A, while they are found in various motif designs, they are rarely used in face motifs. Designs infilling the “pendants” on the sides of the face motif, as seen in the Triangular face motifs, also vary dramatically from one to the other.

In order to determine whether the differences observed are statistically significant or not, I use the chi-square tests for homogeneity to see if these face motifs come from the same cultural population. It is assumed that if the face motifs are from the same distribution, the proportions of each category from each site should be about the same ¹. The result suggests that the proportion of 5 face motif types does show significant difference among them, thus they show quite different patterns in terms of preferred face motif types. This test suggests that there is a sharp difference in terms of variation of face types between the Reef/Santa Cruz and New Caledonia, and this observation cannot be explained solely by the difference of sample size alone.

In summary, in the Reef/Santa Cruz assemblages, there appears to be a preference for Long-nose type face motifs both at SE-SZ-8 and SE-RF-2, while at Site 13A, 88 % of the face motifs are the more geometric, simplified forms. The extremely low number of Simplified face motifs and the emphasis on elaborated Triangular face motifs found at SE-RF-2 forms a sharp contrast with what has been found at 13A. This statistically meaningful difference in terms of preferred face motifs at each site must be assessed in terms of cultural selection of signifiers rather than simply explaining it as merely a result of different sampling strategies.

Face motif construction rules

Different rules were employed and options available in governing the change of face motifs. In the case of the Triangular face motif category, everything but the outline of the triangular face could be modified: the naturalistic face and the semi-circle above it, the location of the “pendants”, the shape of the horn-like structure that encircles the “pendants”, the shape of the eye inside the triangular face outline, and the shape of the entire headdress. Modification of the Long-nose face motifs, is seen with the location of “pendants”, the shape of the entire design, the shape of the eye, and the number of faces sharing a single “pendant”. In the Simplified face motif category, only the friezes and the shape of the eyes could be changed.

Thus it is clear that what was not changed was the basic face outline, whether it be the Triangular, Long-nose, or the Simplified forms. In most cases, the basic outline remained the same while modification and alteration occurred on various parts of the full design. Therefore it may be argued that, whether or not the face motifs were transformed through time and space, the ideas of how to express social identity or difference were shared by potters who produced these seemingly very different face motifs. The rules governing the production of the face motifs were very restricted in most cases.

I will now use materials at hand to further discuss whether a sequence of motif transformation may be found within a site, within an island group, and within the Lapita Cultural Complex. Site SE-RF-2 serves as the example of what face motifs were employed during a short occupation period, while at 13A we may be looking at a 200 to 400 year time span. Will we find the transformation from complex to Simplified face motifs as time progressed at both sites? The general pattern of spatial distribution of face motifs for both sites will also be discussed.

Figure 9. Spatial distribution of 4 face motif types at SE-RF-2.

Face motifs employed within a single site

Spatial and temporal distribution of face motifs at Nenumbo-Reefs (SE-RF-2), Solomon Islands

Six out of the 7 sub-categories of Triangular and all 5 sub-categories of Long-nose face motifs are found in SE-RF-2. Seven out of 9 Headdress motif sub-categories are found there as well, while only 2 Simplified face motifs were identified. Preference for the more complex face motifs is clearly demonstrated. In general, Triangular type face motifs from SE-RF-2 show signs of replacement and alteration of several parts of the entire design, a process very similar to what was identified from the Simplified face motifs collected from Site 13A of New Caledonia (Chiu 2005).

Figure 9 shows the spatial distribution of 4 types of face motifs (T, L, S and HD) at SE-RF-2, with features and activity areas identified by Green and Pawley (1999). From the spatial distribution of different types of motifs at this site, it can be argued that most pots bearing face motifs are clustered either in the area of the main house structure in the north, or the southern kitchen area in the south. The area between the main structure and the cooking area contains fewer materials, however, all of the so far identified Simplified face motifs were also found in this part of the site. No clear pattern can be generated at this stage in distinguishing varying use of the face motifs from different parts of the site. As vessel forms are still being reconstructed, it is difficult to say whether vessels carrying face motifs were used solely for food consumption or presentation at SE-RF-2. With the recent evidence from Vanuatu of face motif vessels being used as burial urns (Bedford and Spriggs 2007), the task of identifying possible multi-functions of a given vessel form clearly deserves further attention.

There is no sharp difference in the distribution of face motifs between the upper black, weathered tephra layer and the lower sandy charcoal-stained grey layer. This is probably due to the fact that both layers are seen as belonging to the same cultural period that lasted for about 50-100 years (Jones *et al.* 2007). We can therefore assume that all the face motifs found were utilised during a short period of time, suggesting a high degree of social desire for differentiation.

An example of motif differentiation may be seen in Figure 4. All three Triangular face motifs illustrated are from SE-RF-2, but by adding or removing a particular design element from the total layout, we may be seeing evidence of an expression of social differentiation within the social group, where all had the right to use the same basic image. It might be argued that while the basic pattern of such a face is an expression of group identity, the subtle alteration of certain elements may represent sub-groups within a group or community. The interchangeable elements may have been used to maintain social hierarchy within such a group.

Spatial and temporal distribution of face motifs at Lapita (Site 13A), New Caledonia

Most face motifs were located in the earlier eastern part of Site 13A (Figure 10). It also seems highly likely that face motifs found in the western part of the site (Zone 3-6) are associated with post-depositional disturbance (Figure 11). As in the case of SE-RF-2, all types of face motifs were present throughout the mostly undisturbed eastern part of Site 13A, indicating that both elaborate and simplified anthropomorphic designs were employed simultaneously. However, it is clear that at Site 13A the most frequently occurring motif was the Simplified face motifs. Twenty-three out of the 25 sub-categories of Simplified face motifs were found there. Variation in the Simplified face motif category is generated by altering various elements and the shapes of the eye, or by merging different eye shapes to form a new image (Figures 7.12-7.21). Though rare in the face motif assemblage, these merging face motifs illustrate the integration of two individual motifs into a

Figure 10. Spatial distribution of 4 face motif types at Site 13A.

new one. This might indicate that materialised symbols representing both the desire for social differentiation and integration are evident here (Chiu 2005). In contrast to SE-RF-2, only three forms of Triangular Face and one form of Long-nose face motif with a different infill pattern of the “pendants” occurred at Site 13A. This indicates yet again the tendency for a sharing of the same general face design while at the same time there is the signaling of subtle differences.

Forces of social integration can be inferred from face motifs that combine different eye forms. The integrating symbols may also indicate the successful acquirement of the right to use face motifs inherited from two different house-based groups through marriage, adoption, or even conquest. New Caledonian sherds have been found in the Loyalty Islands (Galipaud 1990, Sand 1995), and Vanuatu (Dickinson 1971; Spriggs and Wickler 1989), a pattern that indicates some degree of local or even long-distance exchange along with the specialisation of pottery production (Dickinson *et al.* 1996). The integration of face motifs may represent the achievement of a local community leader or leaders enhancing their collaborative resources and thereby potentially gaining some advantage in relationships with other communities.

Figure 11. Temporal distribution of 4 face motif types at Site 13A.

Comparison of face motifs between SE-RF-2 and Site 13A

It has been argued that settlement at site SE-RF-2 began at around 3100 BP and was occupied for a limited period of some 50 years or so (Green 2006:35, Green and Pawley 1999:77, Jones *et al.* 2007). Site 13A on the other hand, while initially settled at around 3100 to 3000 BP was occupied for a period of several hundred years, to around 2800-2750 BP (Sand 1998). The differences, therefore, observed both in style and selective use of particular face motifs cannot be explained simply by the passage of time, or by diffusion of motifs from the Reef/Santa Cruz Islands to New Caledonia. As demonstrated, all three kinds of face motifs, the Triangular (assumed to occur very early in the sequence), the Long-nose face, and the Simplified face, previously assumed to be late in the sequence, are all found at these two sites. While settlement duration may contribute to the variation seen at Site 13A, the same interpretation is not valid in the case of Reef/Santa Cruz sites. As SE-RF-2 was only occupied for about 50-100 years, around 1 to 4 generations, the range of face motifs found at the site cannot be explained as a result of a lengthy period of evolution from complex, anthropomorphic designs to simplified, geometric face motifs.

From the chi-square test conducted, it has been shown that there is a significant difference between SE-RF-2 and Site 13A in terms of what types of face motifs were utilised. If we examine the presence and absence data of what motifs are shared by both Reef/Santa Cruz and New Caledonia (Chiu 2003b:229, Table 6-1), the sharp contrast in face motifs is even more striking. These two island groups share a high number of Lapita motifs, a similarity so high that it separates them out from Lapita sites from other island groups. What then could be the possible explanation for the sharp difference observed in the face motif category, which comprises only a small part of the overall Lapita motif inventory? What were the underlying social forces that created and maintained the tradition of producing these face motifs across widespread island groups? What were the functions of these motifs in a society that was constantly expanding into new territory? Was the preference of face motifs employed at these two sites a result of differing identities, or of other yet to be established reasons?

Symbols at work

Thus, stylistic behavior, like other forms of symbolic behavior, may be seen as part of a motivated social strategy. From this perspective, style is more than a way of doing, a set of rules, a simple choice among culturally constrained alternatives, or a means of communicating social identity. It is a set of rules to be manipulated, and a set of choices to be made, in the negotiation of social identity. The question then becomes: What are the motives and strategies of the actors? (Bowser 2000:242)

What were the causes of the differences observed so far? The transformational trend proposed by Green and others may well have been a factor, as a shift from the more naturalistic, complex motif inventories found in early Lapita sites to the more simplified, abstract motifs of the later period have been inferred from many cases. But as Summerhayes has demonstrated, “time” alone is unlikely to have been the sole factor behind this shift, as spatial separation also contributed to the local innovation of new motif inventories (Summerhayes 2000b). However, while factors of time and space may serve as a starting point, they are not sufficient on their own in explaining both the variation and continuity observed in assemblages across the Lapita spectrum. In certain cases Lapita designs remained largely unchanged, in others the basic overall structure was retained (as in the case of certain face motifs) while a range of design elements were altered and there are examples of motifs having been combined and others newly created.

In previous studies I have tried to demonstrate that in the case of face motifs we can see the ongoing construction of both social identity and hierarchy of the Lapita peoples (Chiu 2003b, Chiu 2005). It has been suggested that face motifs were acting like “signs of history” (Parmentier 1987) that linked the present to the

past, and that generally Lapita motifs were quite limited in terms of construction rules. The face motifs were employed to signal to outsiders the status and power a house-based group had in its local community, its inherited rights to economic resources, and its intention to manipulate and produce history as new face motifs and histories associated with certain images were being created. Various alloforms of a given face motif may have served as a means of demonstrating hierarchy within house-based groups themselves and in the wider community. If a house-based group became influential in its community, it may then have acquired the rights to generate new motifs through the integration of existing motifs, or created new and distinctive motifs in an effort to distinguish themselves from others. Thus, there are at least two forces at work here, one expressing differentiation within a social group, be it household, clan, or local community, and the other expressing integration, a means of signifying the economic and political strength of a local leader (Chiu 2005). Those who owned these “inalienable possessions” (Weiner 1992) would have had to successfully defend their rights of reproducing such signaling symbols not only within the local community, but also amongst their neighbours, as the images represented the status and identity of these groups. Motif construction rules were shared by Lapita peoples from the Bismarcks to Fiji-Tonga-Samoa over many generations. The limited use of face motifs thus suggests that the owners of motifs wielded strong social control over long distances, and over time.

As Lapita pottery was generally produced *in situ*, it can be argued that the technical knowledge required to produce pottery was an aspect that was shared by Lapita potters. Shared structural rules for producing face motifs can also be demonstrated. A Triangular face motif (T2) found at Vatcha in New Caledonia (Sand 1996: Fig.52) shares the structural rules of a Triangular face motif from SE-RF-2 (Figure 3.1) including the rarely used (in New Caledonia) small circles as decorative elements. In another case a sherd from SE-RF-6 with a Triangular face motif shares the exact motif layout as another sherd excavated from Vao Island, northern Vanuatu (Bedford 2003; Chiu 2005). The exact arrangement of design elements, with differences only in the number of lines impressed, the same size of the motif and vessel wall thickness, suggests that reproduction of this image was governed by restricted rules and use (Chiu 2005). They are the single examples of this face motif form amongst the entire motif inventory at both sites. The rarity of these two motifs from two different island groups suggests that not only was there a social desire to continue the reproduction of this particular motif, but that there was also a heavy social charge associated with these motifs that restricted its use. The newly identified and rare “Alternating inverted double face” motif (AI) from Teouma and Site 13A (Figure 5) further strengthens this argument, with its distinctive layout being retained at the two sites and only the infill inside the semi-circle above the inverted face motif showing any variation.

The use of highly similar construction rules is also evident in other categories of face motifs. All the Long-nose motifs and the Alternating inversed face motif found at Site 13A share the same design structure of Long-nose face motifs from the Solomons and other Lapita sites. In the context of a down-the-line exchange system that Green (1982; Summerhayes 2000b) has proposed, Lapita potters of the Reef/Santa Cruz would have kept in some contact with others in the region. If this was the case then the preference for using Simplified face motifs at Site 13A was not the result of being unaware of the existence of more complex motifs, but rather a conscious selection of a particular group of face motifs, in an effort to express particular group identity. In the same context, the preference for Triangular and Long-nose face motifs at SE-RF-2 and SE-SZ-8 was also due to cultural preference rather than a lack of knowledge of the Simplified face motifs.

Another hypothesis that demands our further attention is the possibility that these observed rather limited motif inventories are actually resulting from the fact that there were only limited number of professional artisans available at any given point in time. If Lapita pottery was produced mainly by a small group of skillful potters who traveled from village to village, producing pots locally in exchange for both marine and territorial resources such as food staples and stone quarries (Diamond 2005:349), then it may also explain the high degree of similarity of motif construction rules. In such a scenario, motifs would have been owned by migrating and traveling potters and not by land-owning house-based groups. These motifs could be seen as

the “trade markers” of those who produced them. In a sense, this is close to what Terrell has proposed when arguing that Lapita pottery was just a “tradeware” (Terrell 1989).

What is lacking in such an argument is any assessment of the underlying ideology that would have contributed to such high motif similarity amongst island groups across such a vast region. As Lemonnier and others have argued, whether a new technical element is accepted or rejected by a society depends on how the society classifies the newly introduced elements into its own existing symbolic system, rather than simply on aspects such as physical usefulness (Lemonnier 1993). If these motifs were reproduced by a small group of traveling potters who inherited such images, the decision as to whether such motifs were acceptable or valued was still in the hands of the local consumers. If we were to accept such a hypothesis, one has to identify the underlying social forces that encouraged Lapita peoples from different island groups, and different time spans, to use highly similar motifs in the decoration of pottery vessels. In other words, what made these motifs acceptable and meaningful to Lapita peoples?

I have previously stressed the importance of viewing these face motifs as symbols representing social identity of house-based groups within the Lapita Cultural Complex, and how the inherited rights of such images, linked ancestors, houses, territorial rights and other privileges to a given house (Chiu 2005). As the Lapita Cultural Complex was itself likely to have been a mixture of ethnic groups (albeit dominated by Austronesian-speaking populations), involving multi-dimensional scales of migration and integration, I suggest that particular motifs were employed not only to claim inherited rights, but they may also have served as unifying symbols for ethnic groups within an exchange network. As time passed these motifs might have further contributed to these different ethnic groups ultimately sharing similar cultural ideologies and values. As suggested by Linnekin and Poyer (1990:8), “in Oceanic societies identity is continually demonstrated, a matter of behavior and performance”, identities are constructed out of *practice*. By adopting the existing symbols at work (both material and linguistic), newcomers would have been able to participate in the established Lapita social framework, mark their worth in the network, and eventually gain influential status in a community that may well have been spread across different island groups. These people, along with their descendants, may have enjoyed the freedom of maintaining multiple identities, by conducting required “behavioral attributes - such as residence, language, dress and participation in exchanges” in acquiring a certain identity (Linnekin and Poyer 1990:9).

In the context of an exchange network face motifs may have served in establishing social hierarchy among exchange partners, confirming and maintaining social relationships that may have lasted for generations among multiple ethnic/linguistic groups, a relationship termed “inherited friendship” by Terrell and Welsch (1997; Welsch and Terrell 1998). While participants were not descendants of a common ancestor, or from the same house-based groups, they still actively participated in a symbolic system that may have facilitated the expression of their identities when traveling to other communities. Specific motifs may have served as an authentic item for identifying one’s exchange partners aboard, ensuring a safe and trustworthy environment. The preferred Triangular and Long-nose face motifs in the Solomons, in contrast to the Simplified face motifs at Site 13A, may have symbolised differentiation within a given community, but at the same time could also have acted as representative symbols of that community in relations with outsiders.

The transformation from complex to simple motifs did not generally occur because of a decreasing need to maintain links with an increasingly distant homeland; in contrast, they demonstrate a continuity of social identity that was shared among these colonisers. The image of a motif may have differed, but the message it contained remained the same. An example of this can be seen through the observations of Mead who noted that, “Yanuca potters have added a decorative dimension to these (boundary / zone) markers... In some cases, too, zone markers comprise the *only* decoration on a pot” (Mead 1975:21, emphasis added). Simplified motifs that had been used to decorate more complex central band motifs gradually gained their own rights of display after having a long history of association with high status symbols. Once geometric and simplified versions of the original motifs had gained the same social recognition and status, they too became powerful

symbols in their right. Thus by the time Lapita people had moved into New Caledonia and the Eastern Lapita region, some of these simplified motifs had begun to replace the more complex central bands. In terms of face motifs, the simplified ones had gained equal status with high status complex face motifs and were produced to symbolise or characterise local identities. Evidence of continuing high status being associated with different symbols might be seen in the case of Simplified face motif S25 (Figure 7.25) that includes the more complex headdress decoration usually associated with complex Long-nose face motifs.

Whether pottery was produced by members of a local house or by professional potters traveling among islands does not affect the argument that the rights to reproduce such motifs were highly charged with social meaning. What was produced was what had been desired. The fact that most Lapita pottery was locally produced indicates that there was no production centre that supplied communities near and far with similar products. The social control over what motifs could be reproduced was strongly controlled by local consumers, and the symbols at work were selected by local communities that shared the general ideology of the entire cultural complex.

Conclusion

Social hierarchy, constructed and based on the inequality of age, sex, wealth, or fame among members of a given group, is expected to be found in any type of society. I have argued that the Simplified face motifs found contemporaneously with highly elaborate ones at the Reef/Santa Cruz and Site 13A Lapita sites should not be interpreted merely as a late introduction or sharing of motifs among Western and Eastern Lapita peoples. Instead, they may be witness to the conscious selection of certain types of face motif through which Lapita people at Site 13A expressed their own identity, while at the same time being well aware of other types of face motifs in fashion in other island groups. The social desire amongst communities for segregating “us” from “them” can be seen at both SE-RF-2 and Site 13A.

In conclusion, it has been demonstrated that there is a significant difference in terms of what type of face motifs were present at the Reef/Santa Cruz and Site 13A Lapita sites. The differences observed are not the result of sample size effect, and instead suggest that they demonstrate people’s social preferences. As Simplified face motifs appeared contemporaneously with more elaborate ones at the same Lapita sites, the previously suggested “logical sequence” of abstraction over time is not applicable in these two cases. The range of face motifs found at the two sites, Triangular, Long-nose, and Simplified have been illustrated. It is proposed that using alloforms of certain face motifs, members of house-based groups differentiated membership and levels of access to inherited rights between themselves. Social groups may have expanded the range of motifs to encompass and integrate other social groups into their own symbolic systems, irrespective of ethnic background, in order to establish social relationships that may have lasted for generations. This entire process was ongoing as Lapita peoples expanded further into the Pacific. By using these highly regarded symbols, with firm control over image innovation and reproduction, Lapita peoples were generating social hierarchy across their social and economic networks, while at the same time transforming themselves and the symbolic system.

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Note

1. The null hypothesis states that 5 largest types of face motifs are distributed with same proportion at four different sites (see Table 2). The chi-squared test states that the set significance level is reached when degree of freedom is 12 (Asymptotic significance is 0.000, less than the set value of 0.05). There are 55 % of cases have expected counts less than 5, and the minimum expected count is less than 1. The chi-squared test value in this case is likely to be higher than real, causing a higher chance of rejecting the null hypothesis when it is actually true. This is known as the “Type I error” which means “a significant relationship or difference is being claimed when none really exists” (Shennan 1988:52). One way to avoid the “Type I error” is to set the level of significance at a more conservative level, in this case 0.01. When ($\infty = \nu, 0.01 = \alpha$), the tabulated t-distribution value is set at 2.576 in a 2-sided t-distribution table (Shennan 1988:Table C). It is clear that at significance level is still reached when degree of freedom is 12. As contingency coefficient that measures degree of association between the variables is at 0.639, a high degree of association is indicated in this case.

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