The way of doing things: what Lapita pottery can tell us about the stories of Austronesian expansion

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ABSTRACT

This paper examines the roles Lapita pottery might have played during the expansions of Austronesian-speaking populations from Island Southeast Asia into the Pacific. It is argued that the importance and the roles Lapita pottery had in the local communities, in each of these contexts, are quite different from one another, and should be represented as such. Judging from the different production scales and exchange and transfer patterns, the meanings of Lapita pottery also changed depending on the social and economic contexts it was situated in. It has been argued that Lapita pottery might have been employed as a materialized symbol by people coming from different genetic, ethnic, linguistic, and cultural backgrounds, to show their intention to become part of the local community they had just moved into.

Key words: Lapita pottery, production, exchange pattern, social identity

INTRODUCTION

This paper aims to provide a general introduction and reviews of current theories and hypotheses regarding the complex nature of the expansion of the Lapita cultural complex. It first emphasizes that the Lapita cultural complex should not be conceived of as a product of one single social group migrating out of southeast Asia into the Pacific at any point in time. Multiple scholars have already proposed that while interpreting the past, one should be aware of the material signatures that reflect interactions among various cultural groups. Next it provides four case studies that illustrate the varied nature of the development of the Lapita cultural complex in different island groups. Thirdly, it discusses what needs to be done in terms of ceramics data before further interpretation or discussion on the nature of this particular aspect of the Lapita cultural complex can be conducted in the future.

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Although initially, the term “Lapita” was conceived by Pacific archaeologists as a term representing the dentate-stamped pottery component of an archaeological cultural complex that spread widely from the Bismarck Archipelago to Samoa, it is now used to refer to a cluster of material remains (e.g., artifacts, settlement patterns, architectures, plants, and animals) associated with this distinctive type of pottery tradition which first occurred in this part of the world (Green 1979; Green 1982; Kirch 1997b; Spriggs 1991). The Lapita cultural complex (Figure 1) has been proposed to become Lapita in the Bismarck Archipelago (Anson 1983:272; Green 1979:45; White and Allen 1980:733), where the Austronesian-speaking populations encountered the local non-Austronesian-speaking populations in various locations (Kirch 1997b). It represents the integration of newly introduced techniques and concepts with the local traditional ones, the innovation when mixed populations sailed out from different islands toward uninhabited islands, and the intrusion of the Austronesians into the non-Austronesian-speaking populations, according to the Triple-I model first proposed by Green (Green 1991a; Green 2000; Green 2003).

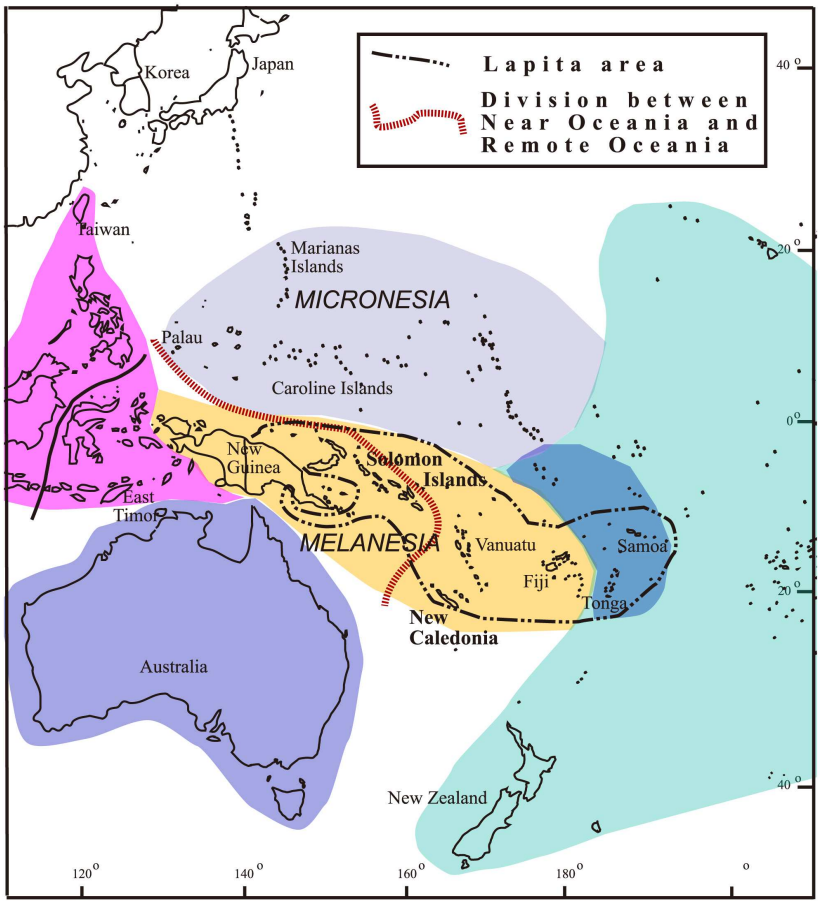

Fig.1：Map showing the distribution of Lapita Culture Complex in the Pacific, in relation to traditional separation of the Oceanic world into Island Southeast Asia, Australia, Melanesia, Polynesia, and Micronesia.

As multi-dimensional migration of varying scale had occurred through the processes of forming such a cultural complex (Green 2003:102-103; Kirch 1997b:116), the Lapita Cultural Complex is proposed to be "culturally heterogeneous, not just because it is differentiated regionally as in Remote Oceania, but also because of the differential effects in Near Oceania of continuing contacts with culturally diverse, long resident, unrelated populations" (Green 1991a:297). Doherty has also pointed out that this long and complex prehistory cannot be presented by a “neat phylogenetic development from a core Oceanic heritage”, nor by an abrupt population intrusion or replacement, “but rather suggests complex networks of borrowing and influence over varying time periods” (Doherty 2007:185). That is, the Lapita Culture Complex should be conceived, in the regional context, as multiple overlapping networks in which certain cultural characteristics are shared in various degrees, by participants of these networks (Doherty 2007:466).

While looking at the migration routes of Lapita peoples, therefore, some scholars prefers a hypothesis that suggests that the initial colonization of the Pacific involves numerous groups of people from various backgrounds, heading toward the vast Remote Oceania from different departure points within Near Oceania during the Lapita era. Each boat may have carried quite different sets of materials and food items to start their new lives on the newly colonized islands, and such progress may have lasted for quite a long period of time, for at least 200 years (Sand 2010a:27).

According to these scholars, the Lapita expansion should be viewed as multiple phases of a colonization process being carried out by people with various backgrounds within a certain period of time. It seems, therefore, an oversimplification to suggest that “vessels decorated in this fashion were everywhere made to be used in similar ways in similar social contexts for similar reasons” (Terrell and Schechter 2009:52), or to propose that “Lapita decoration in the east had at its most complex a religious aspect associated with some kind of centralized social system, and with a cosmology that changed little since the initial start from the homeland in the west is certain” (Best 2002:63). Such statements neglect the complex processes of colonization and various cultural manipulations of materialized symbols.

ECONOMIC ISSUES

Since there is no evidence so far suggesting a population pressure on those islands that might cause people to continue their journey towards the east, Groube (1971) has suggested that ecological or economic needs might have been the driving force of migration. He proposed that these Lapita people were "strandloopers" who tended to exploit marine resources intensively, and the abundant marine resources found on uninhabited islands had attracted these people to come out from Island Southeast Asia into the Melanesian and western Polynesian islands. Following this argument, Anderson (1996) has suggested that expansion into the uninhabited islands of southeast Polynesia was "fueled by competition to reach anticipated reserves of unowned and prestigious commodities." Chang and Goodenough also proposed that the dispersal of Austronesian speakers was driven by commercial rather than agricultural considerations, and proposed that these early explorers circled among uninhabited

islands, aiming for the abundant marine resources, while keeping rather close contacts with their homelands, possibly through exchange of exotic foods (Chang and Goodenough 1996).

Tackling this issue from another angle, Bellwood has pointed out that although possession of agricultural technology and rapid population growth may have been important factors in Austronesian expansions, a “founder-focused ideology" shared by Austronesian societies may have been the underlying social desire that urged them to expand farther away from their homelands while ample under-populated islands were still available in sight during the Oceanic expansion (Bellwood 1996:19-20; 2007:211, 311).

STRATEGIES FOR SURVIVAL

However complex, the study of the processes of Lapita colonization usually starts from examining the environmental constraints a typical island puts on migrating populations. The size of the island, the range of natural resources, distances to other islands (Kirch 2000), introduced plants and animals, local weather and current conditions (Anderson et al. 2006), will all have serious impacts on whether the attempts to colonize an island are successful or not (e.g., Anderson 2001; Anderson 2002; Kirch 1997a; Kirch 1997b; Kirch and Ellison 1994). As the Lapita peoples progressed toward the east, the distance they needed to travel from one island to the next became greater and greater (Irwin 1992), while the natural resources available on the targeted islands, such as the variety of fish and shellfish species in the nearby coral reefs, along with terrestrial animals, land birds, and seed-plants, all became less and less abundant (Green 1991b). To be able to survive under such limited resources, Lapita explorers might have visited a new island acting as foragers for a short term (Anderson 2003), establishing temporary fishing camps along the coast where a wind-break or shelter can be found (Kirch 1997b:110-113; Sand 2007a:216; Spriggs 1997:120), while planting crops that required a minimum amount of human attention to prepare for their next, longer visit. It is highly likely that several of these contemporary small gardens may have spread out on a few nearby islands, and were used to exchange local products with those who lived on the larger volcanic islands.

A good review on how these smaller, offshore islands might have sustained themselves by relying on larger neighboring islands for foods and materials, “either by direct access or through exchange relationships” has recently been summarized by Specht (2007:62). He has proposed that the small offshore islands might have been used not only as suitable and preferred locations to build stilt houses over the flat reef with plenty of marine resources (Kirch 1997b:163-165), or to provide a safe harbor away from aggressive neighboring groups (Spriggs 1997:88) and diseases (Kirch 1997b:110-113; Spriggs 1997:120), but also for particular ceremonial or ritual functions (Specht 2007:60). This pattern has shown up in numerous locations, for example, Mussau (Hunt 1989:213; Kirch et al. 1991:159), Arawes (Summerhayes 2000b: 225-229), Duke of Yorks (Thomson and White 2000), Boduna (Specht and Summerhayes 2007), Watom (Dickinson 2000), Nissan (Spriggs 1991:239); Tanga (Dickinson 2006), Reef/Santa Cruz sites (Doherty 2007:361; Green 1974:256), Teouma (Bedford et al. 2010:147-155), and New Caledonia (Chiu et al. 2011a; Dickinson 2002; Galipaud 1990; Sand et al. 2002), and is certainly worth further investigation.

Structured exchange networks for goods and marriage partners between relatives (e.g., Green 1987) and inherited friends (e.g., Welsch and Terrell 1998), have long been viewed as a primary strategy for these colonizers to ensure their survival in the vast oceanic environment. Green (1982:15) emphasized that "the social dimension was as important in keeping the system going as was any economic necessity of importing to survive", and that these Lapita communities "wished to maintain 'ties' with their relatives...by importing a luxury and status-maintaining item with social and ideological significance" (Green 1987:246).

Based on dentate-stamp decorative styles and related vessel forms, a trend from complex motifs and elaborate vessel forms from the earliest Lapita sites located in the Bismarck Archipelago in the west, to more simplified motifs and vessel forms in the later eastern Fiji-Tonga-Samoa region have dominated our understanding of the nature of Lapita pottery (Green 1979; Summerhayes 2000a). The plain or non-dentate-stamped pottery, arguably used as daily utilitarian wares, on the other hand, remained almost unchanged for more than a thousand years, and they lasted much longer after the disappearance of dentate-stamped pottery from the Lapita ceramic assemblages (e.g., Green 2003:104-108; Summerhayes 2000c:302). The contrast between dentate decorated and non-dentate decorated pots, both in terms of form and possible functions, has led archaeologists to suggest that they had served different purposes in the life of Lapita communities (e.g., Chiu 2005; Chiu 2007; Kirch 1997b:142-144; Spriggs 1990:119).

Combined with the migration model, the similarities observed in Lapita dentate-stamped pottery assemblages are proposed to represent an effort made by Lapita peoples to maintain lifelines, or strong identities with the homeland community by the daughter colonies, in order to survive in a newly settled area. Kirch has stated that by employing highly similar materialized symbols in complex exchange networks, Lapita peoples were "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'" (cited from Green and Kirch 1997:29; Kirch 1988a). Summerhayes has suggested that the shared new dentate motifs occurring in various archaeological sites in the Bismarck Archipelago at around the same period of time only indicates "some level of communication over many generations", but not complex exchange networks, nor frequent interactions among these islanders (Summerhayes 2007:25).

Generated from linguistic reconstructions of Austronesian languages and ethnographic analogies gathered from contemporary traditional Austronesian societies, recently it has been suggested that the social/political organization of the Lapita period may have been something similar to a "house-based group", or a "House Society" in its relatively primitive form (Chiu 2005; Green 2003; Kirch and Green 2001). In a house society, identities and allegiances are not tied to blood, and can be rather fluid through one's life span. Differentiation of social status are created through the competition of houses to gain control over knowledge of the past and the right to reproduce symbols that represent the origin-houses to other houses in the existing social network (Gillespie 2000). Therefore this House Society model promotes a rather fluent social structure that allows integration of people with various backgrounds to become members of the same house, for example by marriage or adoption. Once a member, they gained the rights to inherit both land and intangible properties, and the importance of demonstrating this social link is argued to be the reason for creating and maintaining particular

social markers such as particular decorative motifs on displayable items such as pottery. Members of a House and its junior Houses may have formed alliances in exchange networks, such members may have shared identical or highly similar materialized symbols, such as decorative crafts --Lapita ceramics, shell ornaments, tattoos, or wood carvings. The limited numbers of major motif themes executed onto Lapita pots may represent an effort to generate a social group's identity. The fact that most pots were made locally with a certain set of shared motifs and alloforms may indicate a social transformation process of both integrating and differentiating members of a local community, and the widespread and ultimately regionalized Lapita decorative styles may be viewed as material symbols created to signal local histories (Chiu 2005; Chiu 2007).

DIFFERENTIATION AND REGIONALIZATION

The decline of the complexity observed in both dentate-stamp decorative motifs and vessel forms over time has been viewed as evidence of a change in the social desire to keep the art going. Once Lapita peoples moved out of the homeland area, the need to invest time and energy to produce complex motifs and vessel forms no longer existed after they had successfully established themselves in the new colonies. Thus less and less effort was been put into maintaining this link back to their homeland, and eventually, even the entire pottery-making technique was dropped out (Green and Kirch 1997). Stylistic variations observed in Lapita pottery assemblages excavated from various islands can therefore be seen as a marker of "differentiation, both linguistically and culturally, of more localized ethnic identities", and reflected "the declining frequency of exchanges across these boundaries" through time (Green and Kirch 1997:30).

Yet, as Summerhayes rightly points out, the discussion or modeling of inter- and intra-island interaction will only be meaningful if one first establishes firm evidence to show that the existence of similarities between assemblages are indeed the result of exchange of material goods, not some other mechanisms such as the movement of potters who shared "a common history or ancestry" (Summerhayes 2000b:235). What is needed to test these hypotheses, is detailed investigations of Lapita pottery assemblages through morphological, stylistic, and compositional aspects, as well as defining the learning processes of potters whenever possible. With this combined evidence and a better understanding of the production of these pots under particular social and economic circumstances, may one start to understand what particular functions these pots might have served in the past (Chiu 2011a).

GENERAL PATTERNS OBSERVED FROM SOME LAPITA POTTERY ASSEMBLAGES

This section reviews four cases of Lapita pottery and its usage, in Talepakemalai of Mussau, Bismarck Archipelago of Papua New Guinea, Reef/Santa Cruz sites of the Solomon Islands, Teouma of central Vanuatu, and Lapita Site 13A of New Caledonia. The possible roles that Lapita pottery had played in each of the above cases are examined, in order to

demonstrate what these materialized symbols might have been created for, and how they might have functioned in social terms.

1. Talepakemalai, Mussau Islands, Papua New Guinea

Excavated by Patrick Kirch and his team back in 1985-8, Talepakemalai has become one of the most important early Lapita sites in the Bismarck Archipelago. The waterlogged site is known for the pristine preservation of plant materials, highly similar to those consumed by contemporary island Southeast Asian populations (Gosden 1992; Kirch 1989). Forms of stone tools, shell fishhooks, shell tools and ornaments are also identical to island Southeast Asian ones (Kirch 1997b).

A shell beads production area was also identified, full of shell debitage, yet with only a handful of fishhooks and shell arm-rings excavated from the site itself. Such an imbalance between waste products and final products indicates that it is highly possible finished shell-arm-rings or fishhooks were made by local specialists, and used as exchange items to obtain exotic Lapita pottery, obsidian from Talasea and Lou of the Admiralty islands, and possibly food items as well (Kirch 1988b; Kirch 1989; Kirch 1990).

At this site, the red-slipped plain wares were mostly found on the beach, while the decorated pots were buried close to the offshore stilt houses (Kirch 1997b:147). The earliest part of the site, Zone C deposits at Area B of Talepakemalai, contains open bowls supported by pedestals/ring-feet, and cylinder stands. Microprobe analysis of the clays indicate at least 12 out of 21 different possible sources (or at least different recipes) in other locations; at least part of these exotic pots came from the Manus Islands, and were then transported into clay-impoverished Mussau (Hunt 1989; Kirch 1997b:154; Kirch et al. 1991).

As at Lapita sites found in Duke of Yorks, Ambitle, Nissan and Buka, the use of Admiralties obsidian at Talepakemalai also increased during the Lapita period, and obsidian from further west, Talasea of the New Britain, was also present at the site. It was not until much later in time, during the post-Lapita period, that the nearby Admiralties obsidian became predominant in Talepakemalai's archaeological record (Kirch 1997b).

This consistent preference for certain obsidian sources has led archaeologists to ponder what, other than the quality of obsidian as a raw material, and the cost of and risk factors in traveling far away from home communities, there must be something else that kept Lapita populations of various islands coming back to the same obsidian source over and over again for many hundreds of years. For example, during the Lapita period, while Talepakemalai were getting obsidian from both Talasea and the Admiralties, people of Watom island, and Lapita peoples from southern New Britain even, insisted on importing obsidian from the Admiralties, disregarding the fact that the nearby Talasea obsidian was within their reach (Green 1991a; White et al. 1991; White and Harris 1997).

Green and Kirch have therefore suggested that creating and maintaining social relationships among exchange partners was probably one of the main reasons for the consistent use of certain obsidian sources, and it is through establishing firm relationships that a group of Lapita people obtained what they needed for expanding to a new island—raw

materials, food items, marriage partners, etc.—to ensure their survival in the unfamiliar environment. This type of social relationship had to be maintained and reproduced over and over again through generations, thus creating the consistencies observed in archaeological records (Green and Kirch 1997).

Between 1200-800BC, however, changes can be observed in vessel forms and decorative styles, and the number of possible local and non-local pottery production sites were decreased to around 8. From 800-500BC., the dentate-stamped technique was rarely used, while the whole pottery-making technique seems to have improved over time. After 500BC, almost all pottery was locally made, with a little coming from the Manus islands, where pottery continued to be made during the early European contact period. Yet in Mussau, local pottery ceased to be manufactured before the European contact period (Kirch 1997b:155).

With lines of evidence showing the local specialized production of shell tools and ornaments, and imports of obsidian and pottery from various sources, it has thus been suggested that early Far Western Lapita pots were "an essential part of a complex, multi-nodal exchange network that linked many Lapita communities" (Kirch 1997b:145). Kirch further suggested that "If such elaborated decorated cylinder stands and pedestalled bowls were iconic representations of house or lineage ancestors, they may well have been given as prestige gifts in marriage exchanges, or other kinds of social interactions. …among the Lapita peoples, pottery was intimately bound up in their web of social relations, a key component of the material culture through which they constructed their daily life" (Kirch 1997b:145-6).

2. Nanggu and Nenumbo, Reefs/Santa Cruz, Solomon Islands

Once they traveled out from the last island of the main Solomon island chain, after 330km of sailing on open sea, the Reef/Santa Cruz islands were probably the first stop for the Lapita peoples in Remote Oceania as they moved toward the east. In this island group, Nendö is the largest old volcanic island, while the Main Reef islands consist of raised coral terraces. Lapita sites in the Reef/Santa Cruz islands were excavated by the late Roger Green in 1970s. Nanggu (SE-SZ-8) is dated to around 3100-2825BP. Nenumbo (SE-RL-2) around 3050-2900BP, and Ngamanie (SE-RL-6) at around 2900-2800BP (Green and Jones 2008; Green et al. 2008; Green 2009; Jones et al. 2007).

Other than turtles, these Lapita communities regularly consumed pigs and chickens, along with other land- and sea-birds, flying foxes, and small lagoon fishes and shellfishes (Green 1974:255). Yet judging from the midden remains, these marine resources alone were never enough to support the local population, so perishable food items, either cultivated locally or imported from other islands, must have played a much more important part of the diet than is observed from archaeological data.

With an areal excavation, Green was able to demonstrate that most obsidian was imported from Talasea of the Willaumez Peninsula of New Britain, while small quantities of obsidian were derived from Lou in the Admiralty Islands; both sources are located over 2000 km away from the Reef/Santa Cruz islands. Just one single piece was supposedly imported from West Fergusson Island in the D'Entrecasteaux Group (Green and Bird 1989). Only a handful of obsidian came from the much closer Vanua Lava source in the Banks Islands (around 400 km

from the Reef/Santa Cruz group), probably due to its inferior quality (Green 1987). Yet later during the plainware period, Talasea obsidian was replaced by the Banks Islands source(s), indicating a decrease in the long-distance exchange system over time (Doherty 2007:307).

For other types of stone tools, chert was known to be imported from Ulawa/Malaita of the Solomons into Reef/Santa Cruz Lapita sites (Green 1974; Green 1976; Green 1979; Green 1985; Green 1987; Green 1996; Sheppard 1993; Sheppard and Green 1991; Sheppard and Pavlish 1992), the coralline chalcedony probably originated from the Duff Islands (Doherty 2007:308), and several pieces of Muscovite garnet-schist (glitter) stone adzes found in both Nenumbo and Nanggu are probably also from the D'Entrecasteaux islands (Green 1979). At least half of the oven stones must have been brought in from other volcanic islands as well.

Green thus suggested that these imports indicate that there existed "an adaptation to a high continental island situation which was maintained in an impoverished environment by importing over great distance" (Green 1974:256). This exchange network transported materials 150km from nearby islands, to about 2000km away in the northwest, and this complex exchange system lasted for about 600 years. Given the fact that so far only a handful of Talasea obsidian was found elsewhere in New Caledonia, and Fiji (some 3700km away from Talasea), while Reef/Santa Cruz sites have more than 80kg of this particular material (Sheppard 1993), it has been suggested that most likely the Reef/Santa Cruz Islands might have been the immediate source for all these islanders obtaining Talasea obsidian (Best 1987:31).

Pottery excavated from the oldest Nanggu Lapita site has the greatest variety in terms of vessel forms and motifs. One exotic sherd contains a pyroxene-quartz temper, and is highly similar to a tan paste sherd from the Nukuleka Lapita site in Tonga (Burley and Dickinson 2001:11830). The source of this tan paste temper is probably somewhere in Vanuatu (Dickinson 2006:63). There are another four tan paste shards that may have come from the main Solomon Islands or even the Bismarck Archipelago (Dickinson 2006:63).

Petrographic analyses have shown that "sherds from both Santa Cruz and Reef Islands sites contain manually added, variably placered temper sands of beach origin, that are petrographically indistinguishable and are indigenous to Santa Cruz…. that either pots or raw materials have been transported from Santa Cruz to the Reef Islands, on a massive scale" (Doherty 2007:361).

The evidence collected so far also suggested a rather complex regional exchange system that might have involved both obsidian and pottery transportation. A close relationship with the Bismarcks was expected as Lapita communities headed out from there to sail to unknown waters, and they seemed to possess also knowledge and access to Ulawa/Malaita chert sources and locations for obtaining water from nearby streams or rivers. The migration pattern observed in the Solomons suggested these Lapita colonizers leaped over the main Solomon chain, probably to avoid conflicts with local populations, and headed toward Reef/Santa Cruz (Sheppard 2010:111).

Although processing the whole motif inventory of the Reef/Santa Cruz sites is still under its way, it is evident that, like the amount of Talasea obsidian found in this region, Nenumbo

also contains the highest number of complex face motifs compared to the rest of the Remote Oceania (see Table 1), a phenomenon already identified in a previous comparison of the face motifs found at Reef/Santa Cruz sites and Lapita Site 13A (Chiu 2007). Whether this high number of face motifs represented high social status gained by withholding valuable obsidian sources still needs further investigation.

Table 1：Distribution of face motif types in various island groups

Face Motif / Area	Indeterminate	Simple face	Triangular face	Long-nose face	Odd face	Double-faces	Total
Papua New Guinea	2	5	6	11	2	-	26
Solomon Island	2	4	13	31	2	1	52
New Caledonia	2	79	11	12	2	1	106
Vanuatu	3	2	-	13	3	1	21
Fiji	-	1	1	1	-	-	3
Tonga	1	-	-	-	-	-	1
Samoa	-	-	-	-	-	-	-
Total	10	91	31	65	9	3	209

3. Teouma, Vanuatu

Recently Lapita pottery has been found in association with burials at Teouma, Vanuatu. After five excavation seasons, 59 burial features have been identified, and a maximum of 80 individuals were represented. It thus provides the largest Lapita cemetery known to this date. Analyses of the burial practices indicate that skulls and other bones might be placed inside Lapita pots, after a series of reburial activities. Such practices are similar to those found in earlier or contemporary Neolithic Island Southeast Asian sites as well (Bedford et al. 2010:159; Bellwood 2007).

At least a total of 73 vessels are unearthed from this location: flat dishes, carinated pots, double-rim vessels, and cylinder stands, a number of them also containing face motifs. The amazing finds from this site are 5 whole pots containing human skeletal remains, including a flat-bottom dish with face motifs used as lid to cover a carinated vessel which contains a human skull that was placed on top of a broken shell (Conus sp.) ring (Bedford et al. 2007:225). Two of the carinated pots have flat bases, and one has clay birds applied to the inner rim (Bedford et al. 2010:145-7).

Petrographic analysis on these 73 pots indicates that two of them were imported from the Grande Terre of New Caledonia, and another one probably came in from Malakula of northern Vanuatu, or even possibly from the Solomon-Bismarcks region. The two New Caledonian pots include a flat dish with simple design, and a carinated pot with complex face motifs (Bedford et al. 2010:147-155). The variation observed from the buried pots indicates household production of Lapita pottery, instead of any standardized mass production solely for ritual or mortuary practices (Bedford et al. 2010:161).

Decorations executed on the stepped lip and at the base of the flat dishes are found in early Lapita pottery assemblages of Mussau and the Arawes, in Nanguu of the Reef/Santa Cruz, and also in New Caledonia, but not in Eastern Lapita province. While almost all motifs found at Teouma can be found in the Reef/Santa Cruz motif inventory, none of them have direct parallels with those of New Caledonia. Bedford et al. thus suggest that Teouma had maintained a much closer relationship with Reef/Santa Cruz, at least during the early phase of expansion (Bedford et al. 2010:155).

Bismarcks obsidian is also present at this site (Bedford et al. 2004), and along with other northern and central Vanuatu sites, it has been suggested that maybe the New Britain obsidian exchange networks extended further south from Reef/Santa Cruz to Teouma as well (Bedford et al. 2010:161).

4. Lapita (Site 13A), Grande Terre, New Caledonia

Lapita Site 13A was first excavated and dated by archaeologists Gifford and Shutler in 1952 (Gifford and Shutler 1956:1-3). The site was settled around 3100-3000 BP, and the production of Lapita pottery ceased at around 2800-2700 BP (Sand 1997). It is located at the northwestern coast of Grande Terre, and has long been one of the most famous sites in New Caledonia. In 1995, two almost complete pots and the partial remains of 13 others were unearthed in a pit along the seashore at the site. The pit was dated to 2820 ± 50 BP, around the beginning of the Koné ceramic period, the first half of the prehistoric chronology of New Caledonia (Galipaud 1992; Sand 1995; Sand 1996c). The fifteen pots reconstructed from this single pit structure show a high level of diversity in terms of motifs and temper types, suggesting that they were imported from various unidentified places (Sand 1998; Sand et al. 1998:40-41).

Obsidian flakes from both the Lapita site (WKO013A) and Saint-Maurice-Vatcha (WKO003) located on the island of Ile des Pins, south of Grande Terre, were examined by Sand and Sheppard. They concluded that the small quantity of Talasea obsidian in New Caledonia probably represented "items brought in small amounts by the first Austronesian discoverers of these archipelagos from their homeland further north in the Melanesian chain", rather than a direct exchange contact with the New Britain area by local Lapita populations (Sand and Sheppard 2000:240). As within the case of Reef/Santa Cruz Lapita sites, the nearby obsidian sources from the Bank Islands were absent from any of the New Caledonian Lapita sites, although these are present, however scarce, in early contexts in the Reef-Santa Cruz sites.

Decoration wise, it has been demonstrated that although Site 13A employed a lot of “traditional motifs” shared with other island groups, particularly with the Solomons and the

Tongan islands, it nonetheless also, not long after the initial colonization period, started to create motifs of its own (Chiu 2003). Although a comparison of motifs found at 20 Lapita sites show that Site 13A shared a lot of similar motifs with Nenumbo of Reef/Santa Cruz Islands, further examination of face motifs collected from the Nenumbo of the Reef/Santa Cruz and 13A of New Caledonia clearly demonstrates that these Lapita communities had deliberately chosen to manufacture different face motifs to amplify their social identities. It has been shown that, while the Lapita peoples in the Reef/Santa Cruz preferred complex triangular face motifs with elaborated earplugs and headdresses on the sides, and the long-nose face motifs, the occupants of 13A preferred the simplified face motifs that put more emphasis on the various expressions of the eyes (Chiu 2007). Variations seen within each site examined also show minor modifications of a general face motif, arguably by various members of a house-based group (Chiu 2005).

In her previous work, Chiu has demonstrated that at Site 13A, there is no restricted selection of clay bodies, tempers, in relation to vessel forms and motifs. What was important is to execute Lapita face motifs onto certain vessels, while inventing new motifs to represent local identities (Chiu 2003). Through detailed petrographic and chemical compositional analyses of Lapita pottery from six New Caledonian Lapita sites, Chiu and her colleagues have been able to demonstrate that the exchange networks are far more complex than previously thought (Chiu et al. 2010; Chiu et al. 2009). For example, their studies show that pottery excavated from 13A was actually produced with tempers collected locally near the river mouth, from the area of Paoute, northeast of Koné, from another river valley up north near the north Vavouto valley, from areas close to granitic rocks further down south, and from a northeast amphibolite area (Chiu et al. 2011a).

Therefore it seems that during the Lapita period, at 13A, local communities had been exploring the surrounding environment for quite some time, and they had either collecting various tempers in various nearby locations, such as upstream areas of several local rivers, or imported pots from the northeast or further southern part of Grande Terre. With no clear indication what had been exchanged out of this region, as none of the other 5 sites contain pots manufactured from this area, 13A should probably be seen as one of the permanent settlements for Lapita communities, but not a production center as previously suggested by Sand (1996a). The pit containing 15 pots may well be another burial site, as suggested from the Teouma site, but as no human remains were found, at present one may only infer that they might have been used in some type of ritual.

RELATEDNESS OF LAPITA PEOPLES

It can be demonstrated from the above cases that determining what roles Lapita pottery played in prehistory is not an easy goal to achieve. As Doherty suggested for the Reef/Santa Cruz Lapita sites, "…(they) were never a closed system, and processes of diversification continued (to different degrees) over time". She argues for a case of long-term continuity in some of the cultural traits, with additional inputs over time from diverse sources, but not cultural replacement (Doherty 2007:473). The same observation may be made for almost all Lapita sites examined so far.

Other than a few cases, most Lapita pottery was made locally, with a combination of coiling technique finished with paddle and anvil impress. Shell-tempered pottery tends to appear early on in the archaeological record, while terrestrial tempers are also often added into the clay bodies (Dickinson 2006). The rather limited (less than 20) major motif themes identified throughout the Lapita Cultural complex (Sand 2007b) is another line of evidence suggesting that creation of new motifs might have been rather restricted, and this restriction was again shared. It is evident that each island group seems to have selected several themes of motif from the larger inventory to construct their identities, especially in the case of face motifs (Figure 2). This indicates that Lapita potters knew about the existence of other motifs, as similar or even identical motifs were found made of local clay, yet they chose to emphasize only a handful in each of their island groups. The fact that out of the 209 types of face motif collected from publications of 60 Lapita sites, 201 of them only occurred once, and merely 8 of these face motifs appeared in two or more sites also indicates a strong desire to show individualized face motifs throughout the Lapita sphere (Chiu et al. 2011b). Similar patterns of unevenly distributed major motif themes have been identified as well (Chiu in prep.).

In general, Lapita communities were intended to carry on a shared tradition at various island groups. Once settled down, they started to reshape that tradition with their own hands. Employing old design elements, constructing ceramic vessels suitable to be displayed in situations encountered, and using raw materials available in the nearby environment, these potters established themselves firmly in the newly colonized landscapes. In some situations, such as in Mussau or in the Reef/Santa Cruz, dedicated Lapita pots were probably manufactured on the larger volcanic islands for exchange with smaller offshore coral islands. In Teouma, some of them were probably made or re-used as grave goods, or for containing sacred human burials. At 13A and other New Caledonian sites, Lapita pottery was used as both an identity marker and an exchanged item when local clays were not available.

It has been suggested that by making a pot that carries a set of well-perceived symbols, members of a Lapita house-based group may have marked their status in the social networks, participated in the established exchange networks, and eventually become more influential in their communities that may very well have been distributed across several island groups. This process can also be understood in terms of “communities of practice” (Lave and Wenger 1991; Wenger 1998), e.g., how knowledge, skills, and decorative styles may be learned through repeated practices within a potting community, and how social relations, identities, and standards may be constructed during the learning process. Through making highly similar motifs preferred by local community members, new immigrants may have soon gained social status by adapting this particular set of symbols to mask the difference between their homeland and the present one, while retaining subtle variations within the motif structure may have still given them some degree of freedom to state who they were.

Lapita motifs may have also served to establish social hierarchy among exchange partners, to confirm and maintain social relationships that may have lasted for generations among multiple ethnic/linguistic groups, in what Terrell and Welsch have termed the “inherited friendship” (Terrell and Welsch 1997; Welsch and Terrell 1998). As demonstrated by Weiner in her study of the Trobriand islands, “…where exchange is the basic framework around which formal patterns of social interaction are organized, objects become highly significant because in their manner of presentation - quality, quantity, and the like - they can be read as an objectification of desire and intent” (Weiner 1976:212). Specialization of producing exchange

goods, such as in the case of Talepakemalai, and social competition among exchange partners, especially the need to separate oneself from one's exchange partners in order to retain one's own identity, may have contributed to the conscious choices of using different motifs to create social differentiation and even hierarchy within a group. What was at stake was not only the value of exchanged goods, but also fame and reputation and social status acquired through successful conduct.

It has been demonstrated that although in general, from early to late, and from west to east, Lapita pottery vessel forms and motifs both underwent a process of simplification, for some categories of motifs such as the face motif, this general trend does not apply (Chiu 2007). As every exchange action is a way of establishing or reinforcing existing social relationships, including relationships among members of a house, among kinsmen, and among friends that shared the "inherited friendships", the meanings of Lapita pottery may be found not only in terms of material goods being exchanged, but also in the realms of maintaining and creating certain social relationships and boundaries.

It will be very interesting to see if this community of practice, in terms of making Lapita pottery in local communities, was carried out in a House Society or house-based group social setting. Learning how this may have influenced the way pots were made and circulated among smaller offshore islands and nearby larger volcanic ones, and among local and long-distance communities, will eventually deepen our understanding of the social structures of Lapita peoples. What we are looking for archaeologically, then, is evidence either showing a combination of different house symbols, or suggesting a continuity of motif usage over time. At this stage, a database for identifying and comparing all the existing Lapita motifs is under construction, and it will no doubt provide us more insights into this issue once the task is finished (Chiu 2011a; Chiu 2011b; Chiu et al. 2011b). Only through more detailed analysis of the contexts and environmental constraints in which Lapita pottery was used may we one day be able to illustrate with more accuracy what Lapita may have meant to the migrating Austronesians and non-Austronesians, as they strived to make histories in the Pacific some three thousand years ago.

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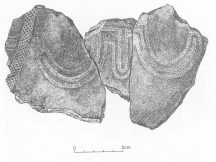
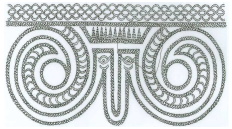
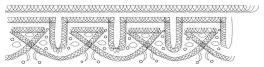
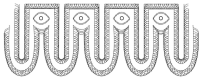
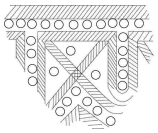
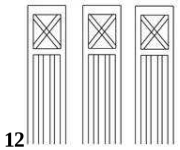
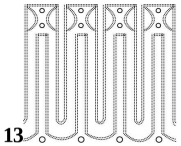
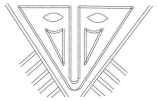
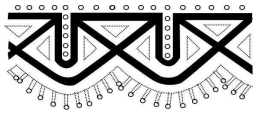
Motif / Site	Simplified face motif	Triangular face motif	Double-face motif	Long-nose face motif	Odd face motif
ECA		 1		 2	
RL2+ SZ8	 3	 4	 5	 6	 7
Teouma	 8		 9	 10	 11
13A	 12  13	 14  15	 16	 17	 18

Fig.2 : Graphs showing various face motif types found in the four sites mentioned. 1 and 2: from Talepakemalai (ECA), Papua New Guinea (cited from Kirch 1997b:137-8); 3-7: from Nenumbo (RF2) and Nanggu (SZ8) sites, Solomon Islands (after Anson 1983:249; Donovan 1973:133; Spriggs 1990:90, 105, 114); 8-11: from Teouma, Vanuatu (after Bedford and Spriggs 2007:13; Bedford et al. 2010:152; Bedford et al. 2007:234); 12-18: from Lapita (13A), New Caledonia (after Anson 1983:236; Chiu 2007:248; Sand 1996b:113, 129; Sand 2010b:152)

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行事風格:
從 Lapita 陶器來看南島語族群體的擴散過程

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本文從幾個不同的 Lapita 遺址脈絡來探討 Lapita 陶器在西南大洋洲人群擴散史上所扮演的角色。本文將探究最早期出現典型 Lapita 陶器的巴布亞新幾內亞 Talepakemalai 遺址，擴散到遠大洋洲之後的第一站 (索羅門群島東南的 Nanggu 和 Nenumbo 遺址)，及中期在萬納度 Teouma 遺址以及新喀里多尼亞 Lapita 13A 遺址所呈現出來的不同擴張模式。從各地不同的陶器生產與流傳模式，可以看出 Lapita 陶器本身的社會經濟意義在不同的情境下會隨之流轉變動。Lapita 陶器很可能被來自不同背景的製陶者，當作是融入不同社群認同感的方法之一。

關鍵字： Lapita 陶器、生產、交換模式、社群認同感