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“Cultural Change in Tongan Bark-cloth Manufacture”

The Scholarship and Legacy of Maxine J. Tamahori



Edited by

Phyllis S. Herda & Billie Lythberg

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Maxine J. Tamahori and the Study of *Ngatu*¹

Phyllis S. Herda

University of Auckland, New Zealand

Maxine Joan Te Arapokahou Hayward was born in Rotorua on 10 December 1917.² Her parents were Riripeti Te Kumete (nee Raureti-Mokonuiarangi) and Cecil Howard Hayward. She was of Rangiteaorere, Ngāti Uenukukopako and Ngāti Rangitihi heritage, and one of seven children.

She met her husband, Hone Tatana Te Rongotoa (John) Tamahori, when he was the pastor at St. Faith's Anglican Church in Ohinemutu, Rotorua. They married and had six children. It was John's appointment as vicar and headmaster at St. Andrew's School in Nuku'alofa in the early 1950s that took John and Maxine to Tongatapu (see figure 1). In the end, they spent a total of eight years in Tonga during which Maxine taught high school. They were there in 1953 when Queen Elizabeth II and the Duke of Edinburgh visited the Kingdom and were presented to Her Majesty at the official welcome in Nuku'alofa.³ The Tamahoris were stationed in Tonga until 1960 when they returned to New Zealand. By the 1970s they had moved to Auckland with John Tamahori serving the Anglican community at St. Johns in Meadowbank and helping to establish the Tongan congregation at St. Columba in Grey Lynn.

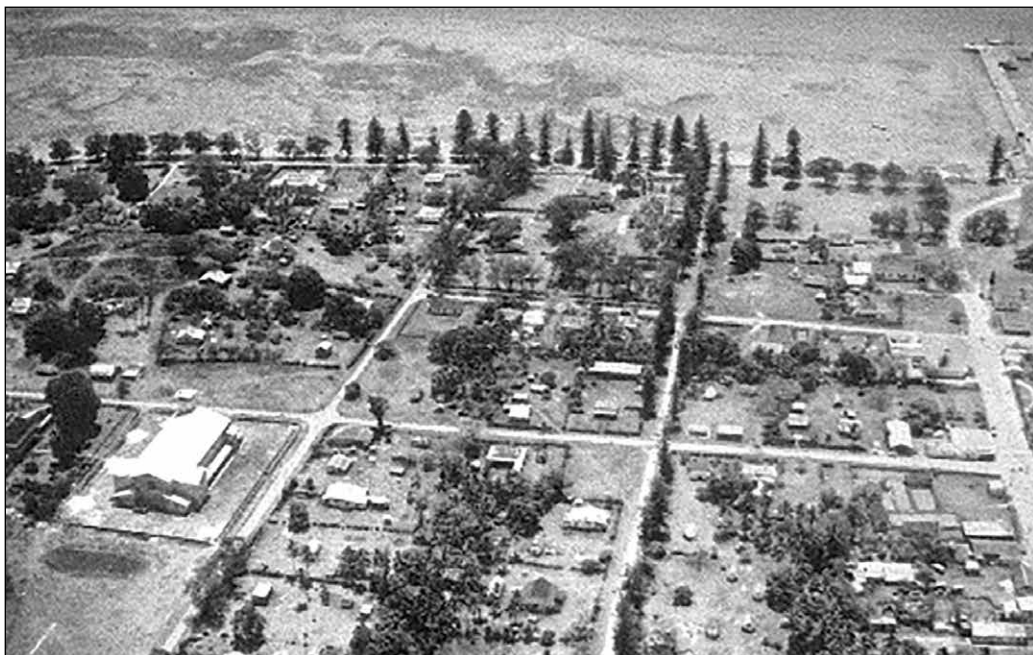


Figure 1: Nuku'alofa in the early 1950s; Bain, K. R., *The Official Record of the Royal Visit to Tonga 19th–20th December, 1953*, Pitkin, London, 1954.

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- 1 An earlier draft of a portion of this paper was presented at Weaving the World: Cloth in Oceania, Association of Social Anthropologists of Oceania Annual Meeting, Kailua-Kona, Hawai'i, 1996 and was published as part of Herda, Phyllis, "The Changing Texture of Textiles in Tonga", *Journal of the Polynesian Society*, Vol. 108, no.2, 1999, pp. 149-167.
 - 2 Biographical references for Maxine and John Tamahori include: www.myheritage.com/names/riripeti_raureti-mokonui-arangi (last accessed 15 November 2017); <http://www.radionz.co.nz/news/national/39986/te-arawa-mourns-inspiring-teacher> (last accessed 19 September 2017); Tamahori, p. i-iv (references to Maxine Tamahori's MA thesis are listed as 'Tamahori, p. # of her original thesis' which are presented in brackets, i.e. [i-iv] in the body of the thesis reproduced herein.
 - 3 Bain, K. R., *The Official Record of the Royal Visit to Tonga 19th–20th December, 1953*, Pitkin, London, 1954, p. 66.

Maxine Tamahori died on the 19th of June 2009 at home in Auckland. Her children took her remains to Tamatekapua marae in Ohinemutu and she was buried at St. Faith's Church next to her husband. The acclamatory obituary from the newsletter associated with Waatea Urban Maori Radio described her as "a kuia whose commitment to education was an inspiration to hundreds"⁴ and, indeed, it was as a dedicated and gifted teacher in the Bay of Plenty and the East Coast of New Zealand that she is best remembered.

In her thesis preface, Maxine described herself as "a Maori school teacher and vicar's wife".⁵ However, she was to become eminently esteemed for her research on barkcloth manufacture in Tonga. She undertook fieldwork in late 1958 and throughout 1959 in Tongatapu, regularly visiting four *kautaha* to better understand the making of *ngatu*. By the time she officially began her fieldwork for her MA, she had lived in Tonga for a number of years and was thoroughly acquainted with its people and culture. The Tamahoris had moved back to New Zealand and settled in the Hawke's Bay by time Maxine wrote up her research. Her MA thesis, completed in 1963, is a very detailed step by step study of how Tongan women produce *ngatu*—cloth made from the inner bark of the paper mulberry tree (*Broussonetia papyrifera*). It stands as a watershed in our understanding on that subject as she analysed the European historic texts that held descriptions of *ngatu* from the late 18th through the 19th century as well as diligently describing the practice of *ngatu* makers in the late 1950s. Her work is all the more remarkable as it preceded later analyses of barkcloth and other material culture holdings in major public museums and private collections.⁶

It is difficult to overestimate the influence the work of Maxine Tamahori has had on other scholars. Simon Kooijman, in his 1972, encyclopedic tome, *Tapa in Polynesia*, relied very heavily on the work of Tamahori in writing up his chapter on Tonga; describing her thesis as "the main source of our knowledge".⁷ In the 1980s Christine Ward Gailey and Cathy Small both accessed and referred to her detailed depictions of Tongan barkcloth manufacture in the late 1950s. More recently, the works of Jehanne Teilhet-Fisk, Jane Horan, Ping-Ann Addo and Wonu Veys (not to forget Billie Lythberg and myself) have all consulted and liberally referenced her thesis.

Cloth manufactured out of the processed inner bark of the paper mulberry tree (*hiapo*) has been produced in the Tongan archipelago for as long as anyone can remember. Indeed, cuttings of the plant were probably among the items brought by Austronesian voyagers when they settled in the region.⁸ Mentions of it are made by the first European visitors, Willem Schouten and Jacob Le Maire, to the islands in 1616.⁹ Its value as a form of wealth (*koloa*) is also longstanding. Descriptions, such as the following, made at 'Eua on James Cook's second Pacific voyage clearly indicate that it was an item of prestige at that time:

We were welcomed a shore by acclamations from an immense crowd of Men and Women... they crowded so thick round the boats with Cloth, Matting, etc. to exchange for Nails, that it

4 <http://www.radionz.co.nz/news/national/39986/te-arawa-mourns-inspiring-teacher> (last accessed 19 September 2017).

5 Tamahori, p. i.

6 See, for example, Kaeppler, Adrienne L., "*Artificial Curiosities*": *Being An Exposition of Native Manufactures Collected on the Three Voyages of Captain James Cook*... , Bishop Museum Press, Honolulu, 1978; Kaeppler, Adrienne L. (ed.), *Cook Voyage Artifacts in Leningrad, Berne, and Florence Museums*, Bishop Museum Press, Honolulu, 1978; Hooper, Steven, *Pacific Encounters: Art and Divinity in Polynesia 1760-1860*, British Museum Press, London, 2006; Kaeppler, Adrienne L., *Polynesia: The Mark and Carolyn Blackburn Collection*, University of Hawai'i Press, Honolulu, 2010; Nicholas, Thomas, Julie Adams, Billie Lythberg, Maia Nuku and Amiria Salmond (eds.), *Artefacts of Encounter: Cook's Voyages, Colonial Collecting and Museum Histories*, Otago University Press, Dunedin, 2016.

7 Kooijman, Simon, *Tapa in Polynesia*, Bernice P. Bishop Museum Bulletin 234, Honolulu, 1972, p. 300.

8 Kooijman, 1972, p. 1-3; Kirch, Patrick Vinton, *The Evolution of the Polynesian Chiefdoms*, Cambridge University Press, Cambridge, 1984, p. 29.

9 Veys, Fanny Wonu, *Unwrapping Tongan Barkcloth: Encounters, Creativity and Female Agency*, Bloomsbury Academic, London, 2017, pp. 14–15.

was some time before we could get room to land; they seemed to be more desirous to give than receive, for many who could not get near the Boats threw into them over the others heads, whole bales of Cloth.¹⁰

Four years later at Tongatapu, little had changed. Cook and his men were impressed by the amount of *ngatu* that was presented to them, which was precisely the effect the Tongans wished to impart:

In the after noon a party of us accompanied by Feenough [Finau] went to pay him [Maealiuaki] a visit: we found him amongst a great number of peop[l]e of both sex seated round a large piece of Cloth, not less than 40 yards in length, spread out on the ground . . . Before I took leave the piece of Cloth was rolled up and with a few Cocoanuts given to me.¹¹

Conspicuous display was and still is an important part of gifting ceremony especially where *koloa*, including *ngatu*, are amassed in large quantities and presented so as to impress the receiver as well as enhancing the prestige of the giver. Reciprocal gift exchange transformed events and laid the foundation for enduring social relationships. The relationship perpetuated through the giving and receiving as well as the display of objects – most definitely including textile *koloa* – manifested the *mana* of those involved, with the magnificence of the gift translated into the status and reputation of the giver (see figure 2).



Figure 2: Agricultural show, Vava'u, 1985. Photograph by Phyllis Herda.

10 Beaglehole, J. C., *The Journals of Captain Cook on His Voyages of Discovery. The Voyage of the 'Resolution' and 'Adventure'*, Hakluyt Society, London, 1959, p. 245.

11 Beaglehole, J. C., *The Journals of Captain Cook on His Voyages of Discovery. The Voyage of the 'Resolution' and 'Discovery'*, 1776 -1780, Hakluyt Society, London, 1967, vol. 1, pp.127–128.

In the late 1790s, London Missionary Society representatives attended funerary services where Tu'i Kanokupolu Tuku'aho was presented with 35 bales of *ngatu* as well as a quantity of mats.¹² Fifty years later, a Wesleyan missionary recounted how at one chiefly Christian marriage 10 cartloads of *ngatu* were presented.¹³ Women who made large amounts of *ngatu* for the 1953 visit of Queen Elizabeth recalled over twenty years later how they were proud that the Queen's feet never touched the ground in Tonga as she, instead, walked on their barkcloth everywhere she went (see figure 3). In 1976, at the marriage of Princess Pilolevu, a piece of *ngatu* purported to be the length of a rugby field was made and laid out for the newly married couple to walk upon. The immense size emphasised the deference to and the distinction of the couple. The importance of *ngatu* at significant presentations continues, with it occupying a prominent place at traditional events such as weddings, funerals and title installations as well as at modern functions such as graduations, prestigious promotions and 21st birthdays (see figure 4). A life changing celebration is often marked with the appearance or exchange of *ngatu*. This can include a blending of the new with the traditional. For example, a piece of *ngatu* is often attached to the roof of the car as a couple drive to the office to obtain their marriage license.



Figure 3: Their Majesties Queen Elizabeth and Queen Sālote, Tongatapu, 1953. Photography courtesy of the late Elizabeth Wood-Ellem.

In addition to being an important item in the Kingdom, *ngatu* is also significant in expressions of national identity for Tongan women living overseas. However, the raw material for producing *ngatu*, paper mulberry bark, is not generally available to those living abroad. Consequently, Tongan women of the

¹² Wilson, James, *A Missionary Voyage to the South Pacific Ocean, Performed in the Years 1796, 1797, 1798, in the Ship 'Duff', Commanded by Captain James Wilson*, T. Chapman, London, 1799, p. 244.

¹³ Lawry, Walter, *Diary*, ms, Mitchell Library, A1973 (Microfilm CY Pos Reel 123), Sydney, 1851.



Figure 4: Presentation at *pongipongi hingoa* (title installation), Nuku'alofa, 1993. Photograph by Phyllis Herda.

diaspora often invoke kin relations and obligations to obtain either the beaten *feta'aki* or the completed *ngatu*. Large bales of *ngatu* can often be seen being loaded on to planes heading overseas at Fu'amotu Airport. Many women of the diaspora have also begun making so-called *ngatu pepa* an innovation which substitutes a layer of commercially made sewing interfacing as one layer of *feta'aki*¹⁴ or by expanding their textile repertoire by sewing machine made patchwork and appliqué quilts and bed covers.¹⁵ These innovations represent a departure from practices of the past, while they also serve to complement rather than replace traditional notions of textiles and their meanings.

As Tamahori notes, little had changed in the manufacturing of *ngatu* from the time of Cook's visits (1770s) to the late 1950s. Late 18th- and early 19th-century technological descriptions of its manufacture could still apply to most modern procedures. The differences are relatively minor – instead of being sun-dried as it is today, the *hiapo* bark was baked before being soaked and beaten, and the resulting *feta'aki* (sheet) used to be 'glued' together with a vegetable dye instead of a vegetable starch or, sometimes, a wheat flour paste both of which are used today. In addition the width of *ngatu* pieces has increased as has the *papa koka'anga* used as a base to paste and begin decorating the barkcloth. In the late 18th-century 3 distinct layers were brought together to make up the *ngatu*; today it is two layers, however, the top layer can be made by felting two strips together before the pasting is done. Finally the method of decorating barkcloth now includes embroidered *kupesi* tablets which favour the present practice of blocking designs on the *ngatu*.

Not all innovations or novelties are well regarded. For example, the substitution of commercially chemical fabric dyes came and went several times in the 20th century. Tamahori¹⁶ recorded that younger people experimented with fabric dyes in the late 1950s and early 1960s, but only on small items made for sale

14 See Lythberg this volume and Addo, Ping-Ann, "Commoner Tongan Women Authenticate Ngatu Pepa in Auckland" *Pacific Arts*, N.S. Vol. 3–5, 2007, pp. 60–73; Addo, Ping-Ann, *Creating a Nation With Cloth: Women, Wealth and Tradition in the Tongan Diaspora*, Berghahn, New York, 2013.

15 Herda, Phyllis, "Creating a New Tradition: Quilting in Tonga", *Uncoverings*, vol. 21, 2000, pp. 22–35.

16 Tamahori, p. 51

to foreigners as souvenirs. I was told it was also a passing fashion in the 1970s. In addition I saw neon orange coloured *ngatu* in the 1990s and bright blue *ngatu* in 2015 for sale in the Nuku'alofa market; both were generally regarded with disdain. One woman, however, indicated that good results could be had by using high quality dye. Most women, however, regard the results as vulgar and, even today, express a preference for traditional vegetable and earth dyes.

Another recent invention for *ngatu* manufacture involved the conversion of a wringer washing machine by a former Peace Corps volunteer.¹⁷ The machine ran soaked *tutu* or bast through its wringers, spreading the fibres and thereby greatly reducing the amount of beating it needed. Although undoubtedly saving time in what is generally regarded as hard and tedious work, the invention was not generally adopted by women barkcloth makers. Teilhet-Fisk believed that this was because the makers wanted to keep intact the traditional values of gender, rank and status associated with *ngatu* making. This accords with Tamahori's view that the makers of Tongan barkcloth were, for the most part, conservative in their attitudes towards its manufacture.

There has, of course, been considerable innovation in the decoration of Tongan barkcloth. Late 18th- and early 19th-century designs tended to be geometrical patterns applied between borders. Donna Taylor attributes many of the geometrical designs on traditional pieces of *ngatu* to representations of the plaiting of mats.¹⁸ Andy Mills convincingly maintains an association between traditional *ngatu* designs and those incised on Tongan clubs ('*aku tau*').¹⁹ Single black dots, *fo'i hea*, are also employed as design features on barkcloth from the late 18th century. By the mid 19th century, three black dots in a triangular pattern had begun to be used. The design is known as *tukihea* and is said to represent the eyes of a coconut.

Abstract designs as well as written words and numbers were introduced in the later 1800s and became very popular after the turn of the 20th century.²⁰ Almost anything that took the fancy of the maker could appear on a *ngatu*: flowers, plants, garlands, *palā tavake* (feather headresses), birds, fish, flying fox, crowns, gramophones, automobiles, clocks, bicycles, Miss Galaxy pageants and even Halley's comet. Spitfire airplanes were a popular motif during and just after World War II.²¹ A spirited fundraising campaign in the Kingdom, headed by Queen Sālote, raised enough donations to commission four Spitfires for the British war effort. In the end, only two were built before the war ended. Pieces of barkcloth featuring the planes are held in New Zealand at Te Papa Tongarewa in Wellington and the Auckland War Memorial Museum and at the British Museum in London.

Some, such as *Hala Paine* ('Road of Pines') are now regarded as 'traditional' designs (see figure 5). It features an image of two trees usually with the moon, star and/or sun in the sky in one panel, the royal Tongan coat of arms in another, a lion in a third and an eagle in a fourth. These designs reference the Tongan monarchy in a variety of ways: the Norfolk pines planted along the roads around the Tongan palace in Nuku'alofa, the coats of arms that directly signifies Tongan royalty, and the lion and eagle are co-opted European symbols of monarchy and governance. The *Hala Paine* motifs are often used as expressions of national or ethnic identity. Indeed, one edition of Churchward's Tongan-English dictionary featured the pattern on its cover.²²

17 Teilhet-Fisk, Jehanne, "To Beat or Not to Beat, That is the Question: A Study on Acculturation and Change in an Art-Making Process and its Relation to Gender Structures", *Pacific Studies*, vol. 14, 1991, pp. 41–68.

18 Taylor, Donna, "Relation of Mat-Plaiting to Bark-Cloth Decoration in Polynesia", 43–53. *Journal of the Polynesian Society*, vol. 69, no. 1, pp. 43–53.

19 Andy Mills, personal communication October 2017.

20 Tamahori pp. 198–201; Koojiman 1972, pp. 330–340.

21 Kaeppler, Adrienne, "Airplanes and Saxophones: Post-War Images in the Visual and Performing Arts", in Scarr, Deryck, Niel Gunson and Jennifer Terrell, eds.), *Echoes of Pacific War*, Target Oceania, Canberra, 1998, pp. 38–63.

22 Churchward, C. Maxwell, *Dictionary: Tongan-English English-Tongan*, Government Printing Press, Nuku'alofa, 1959.



Figure 5: *Hala Painsi* design motif. Photograph by Hilary Scothorn.

There is considerable debate in the historical and academic literature about the communal or co-operative nature of barkcloth production in Tonga.²³ The pasting of the *feta'aki* into the finished piece and the concomitant rubbing over the *kupesi* (stencil) which imprints the desired design is performed by formal groups of women, known as *kautaha* or *tou langanga*, who come together for that expressed purpose. The process is known as *koka'anga*. The women gossip, joke, sing songs and generally have a good time while they work. Tamahori discusses the process of *koka'anga* at length.²⁴ Little has changed in the last 175 years of *koka'anga*, and E. J. Erskine's 1840s description could easily apply to contemporary Tonga:

In our walk through the village... we came to a house, in the front of which, inside the enclosure, a number of women were busied with the operation of 'kokanga', viz. the cementing the native cloth and colouring it with the juice of 'koka' bark, – an occupation which, from the good humour of those assembled, seemed to be a kind of industrious merry-making, resembling an American [quilting] bee.²⁵

The final decoration consists of freehand painting usually done with vegetable dye. Women often work alone at this or in much smaller groups than at the *koka'anga* (see figure 6). Again, Erskine's description of the procedure is very similar to modern day techniques:

We have seen this operation going on the on the public green (or malai) and was surprised by the steadiness of hand of the woman performing it, who makes use of a longish stick, resembling a large camel's hair pencil, and completes the pattern with great dexterity and quickness.²⁶

²³ Nayacakalou, R. R., "Land Tenure and Social Organization in Fiji, Tonga and Samoa", *Journal of the Polynesian Society*, Vol. 68, No. 2, 1959, pp. 93–114; Kooijman, 1972, p. 318; Small, Cathy, *Women's Organizations and Their Pursuit of Wealth in Tonga: A Study in Social Change*, PhD, Temple University, Philadelphia, 1987; Veys, 2017, pp. 45–47.

²⁴ Tamahori p. 137–53.

²⁵ Erskine, Elphinstone John, *Journal of a Cruise Among the Islands of the Western Pacific*, John Murray, London, 1853, p. 135.

²⁶ *Ibid.* p. 136.



Figure 6: Women undertaking final decorations on barkcloth. Photograph by Billie Lythberg.

Small, in her study of women's mutual aid associations or co-operatives in Tonga, argues that the *kautaha* was an institution designed "for the production of traditional wealth for commoners" and that it was born out of social and constitutional change.²⁷ Here she relies, in good part, on Tamahori's work. However, Small contends that it "died" after World War II and was replaced by the *tou langanga*, a *ngatu* production group organised around the expanding productive base of the archipelago and its full-scale entry into a cash economy. Understanding the changing institutions surrounding *koloa* production, accumulation and prestation has been a topic of debate for many researcher working in this area.

There has clearly been a general shift in the name of *koka'anga* groups. In the early 20th century and up to the 1950s, judging by Tamahori's research, the name *kautaha* was widely accepted. R. R. Nayacakalou, however, recorded that *tou langanga* was the word used to describe a "tapa-joining party" (i.e. a *koka'anga*) and that *kautaha* meant a work party in general, composed of either sex.²⁸ The name *kautaha* was supported by the late Queen Sālote who wished to inspire their members, and Tongans in general, to value Tongan handicrafts and to appreciate the work of the women as important labour for the nation. She saw this as vital for the well being of Tongan women and families and it was important in her establishment of the *Langa Fonua 'a e Fefine Tonga* (Nation Building by Tongan Women) in 1954. In the late 1980s and early 1990s, the *koka'anga* groups I attended in and around Nuku'alofa called their groups *kautaha*. Significantly, perhaps, this was because the groups were old, having been established in the 1950s. Similarly, Lythberg in the early 2000s visited one of the same *koka'anga* groups attended by Tamahori. She, too, heard it referred to as a *kautaha* (Kautaha Hamala). However, *tou langanga* was also used in the latter half of the 20th century and is more commonly used by newly formed groups today.

There is no question that *koka'anga* work organisations changed over time and that these changes reflect socio-economic as well as political, gender and spiritual/religious transformations within Tongan society and culture. Indeed, it would be surprising if change had not occurred. Since the early 19th century, Tongans have adopted Christianity; gradually were introduced to a cash economy; and witnessed a major

²⁷ Small, 1987, pp. 436–46.

²⁸ Nayacakalou, 1959, p. 109.

political and social transformation with the establishment of the monarchy in 1845, the 1872 Declaration of Rights, and the Constitution in 1875. Despite these and other major transformations to the Tongan way of life, women continue to *koka'anga* communally, although how that communality is organised has altered.

Orlebar clearly witnessed women's *koka'anga* work groups in action in 1830. He wrote: "it [the making of barkcloth] becomes nearly the sole occupation of women, who meet in parties and beat a sort of tune with their clubs that may be heard for miles".²⁹ At that time, rank imbued the organisation of work. Traditionally, chiefly women were in complete control of the labour of common women and the products of their labour. This meant that the making of all forms of textile *koloa*, including *ngatu*, was directed by them and was for them to present and exchange. Chiefly women would organise a work group of commoner women to manufacture barkcloth up to the stage of decoration. This included all of the labour involved in soaking and beating the bast as well as the work done at the *koka'anga*. Men, under chiefly direction, were the ones responsible for growing the paper mulberry.

While, like all agricultural labour in Tonga, the growing of the paper mulberry was and still is the work of men, the remainder of the production of barkcloth was and still is the business of women. Women take great pride in producing *ngatu* and, more generally, all *koloa*, and view their skill and industriousness in producing textiles as an essential part of being a 'good' Tongan woman. Tamahori recognised the importance of *ngatu* making for women and, I am certain, quite rightly identified the importance of her being a woman to the unqualified success of her fieldwork and the depth of knowledge the barkcloth makers shared with her. Ahead of her time in her analysis of gender she wrote:

After felling the small trees used in bark-cloth making, all the stages of manufacture are carried out by the women, and because in Tonga, men's work belongs to men, and women's to the women, the men evince little interest in the processes of manufacture. If they do visit the building where the women are working, they do so to drink kava in their own circle, quite apart from the women. For this reason, I did not rely upon any men informants, apart from gathering information from those who were growing and tending to their bark-cloth plantations. At best, I could have expected only second hand information, some of it of dubious value. As previous investigators describing this craft have all been male Europeans, and relied on male informants to varying degrees, for their information, there is an obvious bias to their descriptions, especially that of McKern's.³⁰

In Tamahori's time, and still today, the beating of the *tutu* (bast), a labourious task, is usually done in small groups or, more commonly, alone when a woman has time during the day. In the mid 19th century, female prisoners were forced to beat *tutu* as part of their punishment.³¹ This decree was reminiscent of the traditional treatment of female prisoners of war being forced to beat *tutu* for the victorious (presumably female) chiefs.³² In both cases, the sets of prisoners would have been non-chiefly women, it being unseemly for a woman of rank to be taken prisoner or sentenced to jail.

The chiefly women who organised the *koka'anga* also kept the *kupesi* or tablets used to impart the design motifs on the barkcloth. Indeed, it was their prerogative, and they may have been the ones to make them in the first place. Mariner describes the process indicating that the "embroidering" of *kupesi* was done by chiefly women:

29 Orlebar, J., *A Midshipman's Journal, Kept on Board the H.M.S. Seringapatam During the Year, 1830*, Tofua Press, San Diego, 1976, p. 23.

30 Tamahori, pp. i-ii.

31 Erskine, 1853, p. 136.

32 Martin, John, *An Account of the Tonga Islands, in the South Pacific Ocean. With an Original Grammar and Vocabulary of Their Language. Compiled and Arranged from the Extensive Communications of Mr. William Mariner, Several Years Resident in Those Islands*, 2 vols., Constable and Co, Edinburgh, 1827, vol. 1, p. 188.

The *cobéchi* [*kupesī*], or stamp is formed by the dried leaves of the *páoongo* [*paonga*] sewed together so as to be of a sufficient size, and afterwards embroidered, according to various devices, with the wiry fibre of the cocoa-nut husk; ... They are tied to the convex side of half cylinders of wood [*pap koka'anga*] ... The stamp being thus fixed, with the embroidered side uppermost, a piece of the prepared bark is laid on it, and smeared over with a folded piece of *gnatoo* [*ngatu*] dipped in one of the reddish brown liquids before mentioned, so that the whole surface of the prepared bark becomes stained, but particularly those parts raised by the design in the stamp.³³

Kupesī were the entitlement of chiefly women alone as was the final painted decoration on the piece of *ngatu*. The significance of this privilege is twofold. Firstly, the finished piece would be marked with the personal design of the particular chiefly woman who directed its manufacture. It would, therefore, be identifiable to her. Secondly, and more significantly, the prerogative of decorating the barkcloth meant that the chiefly woman was the one responsible for transforming it into a piece of *ngatu* – this term being used only to describe decorated and therefore completed barkcloth. Beaten bark became *ngatu* through her final process of it. In other words, it did not become *koloa* until she acted upon it as a person of rank. This encompassment of non-chiefly women's labour was, certainly, in keeping with Tongan notions of chieflikeness. It was the *mana* of the chiefly woman, not the labour of the non-chiefly workers, that imbued within the fabric itself and made it valuable (i.e. *koloa*). It was her presence, her skill, her rank (her *mana*) and her *kupesī* which transformed it into *ngatu*, established it as *koloa* and made it esteemed.

Small argued that a changing conception of how *ngatu* is valued can be understood best in the changing organisation of barkcloth producing work groups. She contends that as the presence of chiefly women fell away and an accompanying name change to *tou langanga* occurred, the essence of the group also changed. However, this masks the transformation occurring. There is no intrinsic value added to barkcloth because it is produced by a *group* of women. It was the rank of the women who organised the *koka'anga*, held and controlled the *kupesī*, and transformed the *feta'aki* into *ngatu* through the decorating process that made the significant difference. Tamahori understood this distinction and reported that the *kautaha* of her day still preferred to have a woman of rank as patronness even though she was very unlikely to be involved with the production or even decoration of the barkcloth. The leader of the *kautaha*, usually designated as the 'president', might also be a chiefly woman, but Tamahori noted that she could also be an older, skilled, practising member of the group.³⁴

Significantly, the plaiting of mats in Tonga is not now, and seemingly never has been, done within a formal organisation akin to the *kautaha* or *tou langanga*. Women do get together to plait and often will work on the same mat, but there is not that same sense of formality and organisation that is found in the co-operative nature of *ngatu* production.³⁵ Yet a fine, named mat (*kie hingo*) is seen as the epitome of Tongan wealth outranking even the finest *ngatu* 'uli (black *ngatu*). Rather than imbuing wealth due to the co-operative nature of *ngatu* manufacture, the presence of group work had and has more to do with the practical issues of pasting large pieces of barkcloth – it is simply not feasible to accomplish it alone. However, how *koka'anga* groups are organised does reflect changing social mores and practices.

Small contends that *kautaha* emerged in the early 20th century to produce *ngatu* in order to allow commoner women to produce barkcloth and gain prestige.³⁶ Small references Tamahori in this aspect.

³³ Martin, 1827, vol. 2, p. 204.

³⁴ Tamahori, p. 80, 147.

³⁵ Young Leslie, Heather, 1996, "Like a Mat Being Woven", paper presented at Weaving the World: Cloth in Oceania, Association of Social Anthropologists of Oceania Annual Meeting, Kailua-Kona, Hawai'i, 1996.

³⁶ Small, 1987.

On one level she is correct. Tamahori argues that named groups, called *kautaha*, appeared in the early 20th century and, as previously mentioned, chiefly women were asked to provide their patronage in a manner somewhat reminiscent of their control of *ngatu* production in pre-Constitutional Tonga.³⁷ The *kautaha* patroness guided the group and was honoured by the women with prestations, although not to the extent of the appropriation of the finished piece/s of barkcloth as was the case in pre-Constitutional Tonga. She still provided and controlled the *kupesi* tablet and, consequently, managed the aesthetic direction of the piece of barkcloth.

Edward Gifford makes it clear that when women did provide their labour in a directly unreciprocated way they were, at least by the 1920s, compensated in some other manner.³⁸ *Koloa* was, and still is, not simply the accumulation of goods or wealth. Who made the item, in what context, and how it ‘travelled’ during its ‘lifetime’ (i.e. to whom and when it presented or exchanged) was, and still is, significant. Not every form of barkcloth was deemed valuable, nor was every mat plaited considered *koloa*. Textile wealth (*koloa*) did, and still does, follow rank. However, Small’s focus on western models of independence and self-sufficiency, not to mention the accumulation of cash, masks the importance and understanding of “what Tongans value” (i.e. what *counts* as *koloa*) and how and why textiles, women and rank are important in this sphere.

This is not to suggest that the production of *ngatu* is not caught up in the shift to a cash economy in Tonga. *Launima* are sold in the Talamahu Market at Nuku’alofa for over a thousand *pa’anga* a bale. It would be foolish not to see this as significant in monetary terms, and women frequently sell *ngatu* in order to meet financial obligations such as church donations, school fees and other necessities. Indeed, women in Tonga like to accumulate textile *koloa* so that it is on hand if such a need arises. In consequence, *kautaha* or *tou langanga* have taken out development loans, since the 1990s, in order to purchase the necessary raw materials for the manufacture of *ngatu*. The *kautaha* or *tou langanga* apply for sufficient funds so that every member will make a piece of barkcloth. Upon completion of the group’s round of production the women fund raise in order to repay the loan; thereby keeping the *koloa* they produce. This was at odds with the original intention when the loans were first made as the practice was created so that the women would sell their cloth for more than the original loan and thus create a cash profit. By keeping the cloth (traditional Tongan women’s wealth), the women retain control of its value whereas money could easily be commandeered by husbands who might have differing financial needs. If the woman deems money is needed then the *ngatu* can be sold; although it may also be used in a more traditional Tongan prestation or exchange. It is up to the individual woman to decide.³⁹ In addition, in Tonga and the Tongan diaspora, bales of *ngatu* are now often taken to pawnshops as collateral when a woman or family is in need of money.⁴⁰

Tongan women also send barkcloth to New Zealand where it is sold on their behalf. This is arranged through kin living overseas, church groups or through the *Langa Fonua ‘a e Fefine Tonga*, the organisation founded by the late Queen Sālote for the betterment of women and the nation.⁴¹ Among its aims was to impart the skills of proper textile work – both *ngatu* making and mat plaiting – and a Langa Fonua shop established in Nuku’alofa to facilitate the sale of handicrafts of village women to tourists.

37 Tamahori, pp. 135–137.

38 Gifford, E.W., *Tongan Society*, Bernice P. Bishop Museum Bulletin 61, Honolulu, 1929, pp. 147–148.

39 Horan, Jane, “Indigenous Wealth and Development: Micro-Credit Schemes in Tonga”, *Asia Pacific Viewpoint*, vol. 43, no. 2, 2002, pp. 205–221.

40 Addo, Ping-Ann and Niko Besnier, “When Gifts Become Commodities: Pawnshops, Valuables and Shame in Tonga and the Tongan Diaspora”, *Journal of the Royal Anthropological Institute*, vol. 14, no. 1, 2008, pp. 35–59.

41 Wood-Ellem, Elizabeth, *Queen Sālote of Tonga: The Story of an Era*, Auckland University Press, Auckland, 1999, pp. 164–166.

Queen Sālote also encouraged the construction of buildings (*falekautaha*) for meetings and *koka'anga*. Tamahori was in Tonga at this time and mentions the *falekautaha* and their importance to the *kautaha*.⁴² Addo encountered a branch in Auckland, New Zealand, appropriately named '*Langa Fonua 'a e Fefine Tonga 'i Aotearoa*' (Nation Building by Tongan Women in New Zealand) who make or finish *koloa* with raw materials or *feta'aki* sent from Tonga, and then sell the completed items.⁴³ This process imitates the final transformation of *feta'aki* to *ngatu* that was traditionally done by chiefly women. Significantly, for the women of the diaspora it signifies their inclusion, at a critical stage, in the manufacturing process of *ngatu* – the point at which *feta'aki* becomes *ngatu*. The notion of *langa fonua*, therefore, is embraced as a positive designation that encapsulates the interdependent kin and wider community relationships and the responsibilities they engender, which works for the overall betterment of the group. It has been used to express the close and supportive connection of Tongan people within the diaspora as they seek out a life in a new land without losing the essence of their culture.⁴⁴

Imported *ngatu* may be sold to Tongan women living in the diaspora who will use it to meet traditional responsibilities or it may be cut up into smaller pieces which are sold as wall hangings to suit European (*pālangi*) tastes. The women often prefer to cut up the *ngatu* as the combined sales price is often greater than that of a single larger piece. These sales are arranged privately between individuals, at local markets, through groups like the *Langa Fonua 'a e Fefine Tonga 'i Aotearoa* or on Trade Me a New Zealand on-line sales site. Tongan women can also purchase *ngatu* at pawnshops where the barkcloth was used as collateral.⁴⁵ Despite the significance of these examples of *ngatu* entering the cash economy, it is important to remember that the intrinsic value of *koloa* is not in itself tied up in cash.

A striking example can be seen in the making of *ngatu 'uli* (black *ngatu*). It is the most valued of *ngatu* and is rarely made. This is said, offhandedly, to be because the intense black dye made from candlenut soot is difficult and time-consuming to make. Tamahori discusses at length the preparation of the candlenut soot used to make the black dye and identifies it as a chiefly item.⁴⁶ She outlines the special measures, procedures and restrictions the women underwent while the endeavour proceeded – working through the night, sleeping during the day, refraining from bathing and not cooking. In the past, Tamahori was told that the:

women who were designated to make the dye, as well as the chief's wife for whom it was to be made, were expected to abstain from sexual relations for two days before the commencement of the operation. If anything went wrong, they looked at one another or the chief's wife with suspicion.⁴⁷

These prohibitions are no longer maintained, but the process of creating the soot is a long one. However, as an explanation it is not helpful in gaining an understanding as to why *ngatu 'uli* is not frequently made especially in terms of the argument made that in contemporary Tonga, *ngatu* is made for economic – i.e. monetary – gain. If this were the whole story, then the investment of time and energy in making candlenut soot would be well recompensed, as *ngatu 'uli* is greatly prized. As Lythberg argues⁴⁸ non-chiefly women do make a kind of black barkcloth and it is occasionally for sale in the market, but instead of using dye

42 Tamahori pp. 218–219.

43 Addo, 2013, p. 2.

44 Addo, 2013, pp. 14–16; Tu'itahi, Sione, *Langa Fonua: In Search of Success. How a Tongan Kāinga Strived to be Socially and Economically Successful in New Zealand*, MA thesis, Massey University, Auckland, 2007.

45 Addo and Besnier, 2008.

46 Tamahori, pp. 64–68, 80.

47 *Ibid.* p. 65.

48 Lythberg, this volume.

made from candlenut soot, they use an inferior dye which is a very dark brown instead of black. The dye, however, fades within a matter of months. It is not clear whether the women use this dye because it is much less time consuming to prepare or whether the making of the traditional soot dye still carries with it connotations of rank. Overall, women are not entirely comfortable with non-chiefly women making *ngatu* 'uli especially for sale. It used to be *fie* 'eiki (acting uppity or above one's station – acting as a chief) for non-chiefly women to make *ngatu* 'uli. Tamahori records the making of *ngatu* 'uli by non-chiefly women, but only for presentation at certain events such as weddings and funerals or when it is involved with chiefly prestation. Even in modern, post-constitutional, cash economy Tonga it is not entirely acceptable for this most valued of barkcloth to be produced especially for financial gain, except at the expressed instruction of women of high rank and for a chiefly purpose.

Adrienne Kaeppler includes a photograph of an exquisite *ngatu* 'uli which was produced exclusively for and presented at the appointment of the present monarch, then Prince Lavaka Ata, to the title of 'Ulukālala.⁴⁹ Even in the photograph its fineness is evident in terms of design, colour intensity and the exceptional skill shown in every aspect of its execution. It is, without a doubt, *koloa* of the highest order. That it would be made for sale is absolutely inconceivable. Its value, based on its very chiefly associations, is greater than cash. The intrinsic feature of textile wealth – what is valued – is the grace of chiefly input. The care and skill that went into the making of this beautiful piece of barkcloth was due to the purpose and person it was created for. If the chiefly connection is not there, neither is the intent nor the value.

New contexts for *ngatu* have been embraced by Tongan artists based both in the Kingdom and in New Zealand who utilize barkcloth as their canvas. Connections with Tongan traditions, art and history are evoked through the medium of *ngatu*. After viewing a late 18th-century piece of *ngatu* at the Museo de América in Madrid, Tui Emma Gillies was inspired to produce a self-portrait. The *ngatu* was most likely gifted to members of the Malaspina expedition which visited Vava'u in 1793. Gillies included designs from the 18th-century *ngatu* in her work, thereby genealogically linking herself to the barkcloth makers. Barkcloth was also the canvas for Visessio Siasau's work that won the prestigious Paramount Award in the 2015 Wallace Art Awards in New Zealand.⁵⁰ Sio painted panels of iconic figures of Tonga's past interspersed with more contemporary images to facilitate a reexamination of what it means to be Tongan in the 21st century. A recent exhibition (*Mohe Ofi*) by Tanya Edwards and Lu'isa Veakovi Fonua Nau saw the artists exploring the relationship between mothers and their children.⁵¹ *Mohe ofi* means 'sleeping close' and refers to the maternal bond (see figure 7). The artists referenced their own relationships with their mothers and their children, and the wider notion of women mothering and teaching Tongan values and culture to a new generation.

* * *

Although many scholars have consulted and referenced Tamahori's thesis, they have, over the years, often found it difficult to obtain a clean copy of it. The thesis was typed and, as was the practice in the early 1960s, a carbon copy made of it. This has meant that photocopies made were very difficult to read; while scans of it were patchy and riddled with errors. Both Lythberg and I have been repeatedly asked by Tongan artists, *ngatu* makers, academics and others to help them secure a readable copy. For this reason, as well as the esteem in which we hold Tamahori and her research, we decided, with the permission of the Tamahori family, to publish a copy that is both readable and easily accessible. The RAL-e series provided a friendly format which is free to access from around the world.

49 Kaeppler, Adrienne, "Poetics and Politics of Tongan Barkcloth", in Smidt, D.A.M., P. ter Keurs and A. Trouwborst, (eds.), *Pacific Material Culture*, Rijksmuseum voor Volkenkunde, Leiden, 1995, pp.110–12; Plate 6.

50 www.wallaceartstrust.org.nz/wallace-art-awards/2015/ (last accessed 29 August 2017).

51 *Mohe Ofi* was at the Papakura Art Gallery August–September 2017 and the Fresh Gallery, Otara December 2017–January 2018. Both galleries are in Auckland, New Zealand.



Figure 7: Lu'isa Veakovi Fonua Nau, painting on barkcloth, 2017.

It seems fitting, at the 100th anniversary of Maxine Tamahori's birth, that we acknowledge and honour her work on *ngatu* manufacture in Tonga through the publication of her 1963 MA thesis. The thesis is here reproduced. We have kept to her format and wording except making silent changes to clear typographical errors, omissions or misspellings. We have marked the beginning of each of Tamahori's pages in square brackets, ie [p. 36] which will allow the reader to distinguish the original page number; therefore text which appears between [p. 36] and [p. 37] was on Tamahori's original p. 36. Her pages of figures and photographs have been reproduced and placed in their original positions. Tamahori's footnotes are positioned at the bottom of each page as they were in the original thesis. We have added endnotes of our own, updating and providing additional information or delineating questions we have of the thesis. We have included our citations as full references in the endnotes so that Tamahori's bibliography remains as it was presented in the original thesis.

Cultural Change in Tongan Barkcloth Manufacture

Being a Thesis Presented to the

Department of Anthropology

University of Auckland

IN

Completion of the Requirements of The Degree of Master of Arts

IN

The University of Auckland

BY

Maxine J. Tamahori

– 1963 –

PREFACE [p.i]

A Maori schoolteacher and vicar's wife, I spent eight years in Tonga and learned to speak the language well. While in Tonga I taught in the secondary schools for the entire eight years, and this experience provided an invaluable basis for the present investigation because bark-cloth manufacture was a part of the handicraft examination in which the female pupils were instructed. This meant that I was familiar with the stages of manufacture of bark-cloth and the finer points involved in the production of cloth of an excellent quality, long before I chose the topic as one for a thesis.

During the latter part of 1958 and all of 1959 I spent upwards of eighteen months supplementing this basic knowledge with a thorough investigation of all aspects of *ngatu* or bark-cloth production, especially those with which I was least familiar. During 1958 I also collected bark-cloth designs from as wide an area as possible and examined the cloth from many villages in Tongatapu itself in order to assess the frequency with which various designs and dyes were used in different areas of Tonga.

In the course of these investigations the majority of the information was gathered directly in Tongan. But at various times Tongan woman who spoke English fluently accompanied me in order that no confusion might arise from a linguistic misunderstanding of what was sometimes a very technical discussion.

After felling the small trees used in bark-cloth making, all the [p. ii] stages of the manufacture are carried out by the women, and because in Tonga, men's work belongs to the men, and women's to the women, the men evince little interest in the processes of manufacture. If they do visit the building where the women are working, they do so to drink kava in their own circle, quite apart from the women. For this reason, I did not rely upon any men informants, apart from gathering information from those who were growing and tending to their bark-cloth tree plantations. At best, I could have expected only second hand information, some of it of dubious value. As previous investigators describing this craft have all been male Europeans, and relied on male informants, to varying degrees, for their information, there is an

obvious bias to their descriptions, especially those of McKern's. For these reasons, it is hoped that the data compiled here will throw new light on the process of Tongan bark-cloth manufacture and serve to supplement and correct earlier accounts.

My role as a woman actively engaged in the manufacture of bark-cloth was also of considerable importance to this study because the stages of manufacture are sometimes drawn out over months, more exact recording results from direct observation of, and where possible, active participation in the various processes, both at the individual and the co-operative stages. Where women's work is concerned, it is not always possible for men to do this, however willing they might be. Apart from the actual processes of manufacture, I felt also that more reliable information would be supplied by woman who [p. iii] had had long and active association with the manufacture of the cloth.

The year 1959 was spent, therefore, in following the work cycle of the Fanamaka *kautaha* of Kolomotu'a, and the Tea Mata Vaka 'o Tungi *kautaha* of Fasi-moe-Afi, both in Nuku'alofa. The latter group included women from Vava'u and Ha'apai. I also spent some periods during the bark-cloth making process with the Hamala *kautaha* of Kolomotu'a and the Mofuika *kautaha* of Sopa. I was not able to leave Tongatapu during this year to visit any of the *kautaha* in the outer Tongan islands, but there were women from Vava'u, Ha'apai, Niuatoputapu and Niuafo'ou in the Tongatapu *kautaha*. As far as I could gather, there were no significant differences of fabrication technique among the various Tongan island groups, although there are preferences in the use of design tablets (*kupesi*) and dyes which distinguish the fabric from different areas. For instance, Tongatapu cloth more often shows traditional designs that are not produced by using an embroidered tablet, whereas cloth from the outer islands tends to be more often decorated by the attractive motifs of "sisi" designs, embroidered on unit *kupesi*. The people of Folaha village, which has easy access to large mangrove (*tongo*, *Rhizophora mangle* – *Linnaeus*) swamps, use dye from this tree almost exclusively, and as the dye has a glossy reddish tinge, Folaha bark-cloth is much admired. However, these differences are not the results of any variations in the techniques of manufacture.

The women of the Fanamaka and the Toa Mata Vaka 'o Tungi *kautaha* [p. iv] also made bark-cloth with design tablets not commonly used now, and although it would be unusual to see all the different kinds of *ngatu 'uli* (black bark-cloth) made in the same year, even over several *kautaha*, these women made lengths of all the *ngatu 'uli* known to them. A 100 piece bolt, which was intended for ceremonial exchange at a wedding was also made.

As bark-cloth making is a year-round activity in Tonga, and there are no set seasons for any stage of the manufacture, I was able to watch or take part in any of the steps at any time. All the preliminary preparations before the co-operative piecing together by the women of the *kautaha* were done by the women at their own homes.

ACKNOWLEDGEMENTS [p.v]

I was fortunate in having the willing co-operation of the women in Tongan *kautaha*, the women's organization which assembles and places the design on sheets of bark-cloth. In particular, I am indebted to Alisi Sipu from the Fanamaka *kautaha*. She is the recognized authority on bark-cloth manufacture in Tonga today, and I am grateful for the many hours she spent, going over with me and checking the early traditional designs. I am also indebted to Lupe Amini of the same *kautaha*, who made *ngatu 'uli* which she had not intended to do until the next year, and showed me how to prepare dyes, and her husband, who provided much of the information on planting and caring for bark-cloth plantations.

Of the women of the Toa Mata Vaka 'o Tungi *kautaha*, I owe special thanks to Lisia Soakai, Lasini Kula, Taiala Moa and Nusi Vi. I am also indebted to these women from other *kautaha*. Fele'unga Tu'itavake, Fifita Tupou, Sela Manase, Kaloafu Koloamatangi, Fonuku Tevi, Fepaki Vaka, Vaileti Fonua and Mele

Moa. All these women who make bark-cloth regularly, shared their knowledge with me and prepared special *kupesi*, dyes and samples that I needed. The women I have mentioned, are my authorities for any information on bark-cloth manufacture, specifically Tongan, not hitherto mentioned by previous observers, and not actually seen or known by myself. Finally, I acknowledge grateful thanks to my friend, Vaioleti Sandys, who accompanied me during many of my investigations. Her help was [p. vi] invaluable in seeing that I interpreted conversations correctly. Since returning to New Zealand, I have relied upon her to check again some of the material needed by me.

Finally, I must record my gratitude to two people without whose help, this thesis would not have eventuated. First to Jack Golson, formerly Senior Lecturer in Prehistory at the University of Auckland, and now at the Australian National University in Canberra who suggested the field of investigation and possible ways in which it might be carried out, together with tolerant and gentle prodding when the spirit grew reluctant. Secondly to Roger Green, present Senior Lecturer in Prehistory at the University of Auckland, who inherited me and my investigations upon his arrival at the university. The completion of this thesis is almost entirely due to his thorough and friendly supervision of every stage of its construction, and to no small degree his understanding that we Polynesian people need just that extra reassurance of kindly intention when we are being administered a resounding admonition. Moreover, by careful and patient teaching he has overcome my initial resistance to social anthropology by making it clear that ethnographic data increases greatly in value when related to the social setting in which the activities are carried out.

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CHAPTER I: [p. 1]

THE POSITION OF TONGAN BARK-CLOTH MANU-FACTURE IN POLYNESIA

INTRODUCTION

The preparation and use of bark-cloth were once common throughout the high islands of the Pacific, and on many of the atolls. However, since the introduction of European manufactured cloth into this area, activity in the craft has gradually declined until it has stopped altogether, as early as the latter part of the last century in Hawaii, and shortly afterwards in the rest of East Polynesia. Now it is practised with any significance only in some islands of West Polynesia and in the Polynesian outlier, Tikopia.

Early travellers in the Pacific however, and later ethnographers such as Buck were able either from direct observation or from reconstructed information, to record the details of bark-cloth manufacture for many of the islands from which it has now entirely disappeared. Brigham¹, in 1911, deplored the fact that except in Samoa, bark-cloth manufacture had ceased in Polynesia, and in his work on Hawaiian bark-cloth, he presented information on what was known of the craft throughout Polynesia at the time. His information was garnered from the published observations of early travellers in the [p. 2] Pacific. He quoted Capt. Cook, the journals of both Hawkesworth and Banks, Rheinhold Forster and the Rev. William Bills for Tahiti; Wilkes and the American Exploring Expedition for Samoa; Dr. Berthold Sleeman and the Rev. Thomas Williams for Fiji, Rev. William Ellis for Hawaii; and Rheinhold Forster for Rapanui. Although he was not quoted, Kramer² had also already published a description of Samoan bark-cloth manufacture.

In contrast to the fairly comprehensive descriptions of the processes of manufacture in these inlands, Brigham³ gave only fragmentary information on the Tongan method of bark-cloth manufacture. He attributes this lack of Tongan information to Cook's indifference.

He says that Cook did not speak with any praise of Tongan bark-cloth, although Brigham himself adds that Cook's Tongan specimens rival the best Hawaiian. However, it is difficult to understand why Brigham did not include Mariner's description, which was as full as any that he quotes. Mariner's "Account of the Tongan Islands" had been published since 1818. In view of the differences in the Tongan processes as described by Mariner, from those of East Polynesia, it is doubtful whether Cook actually observed much of the Tongan method apart from the beating.⁴ The only difference from what he already knew of bark-cloth manufacture that he records, was the [p. 3] beating of the bast strips by individual women as against beating by several women at once. In all other respects, Cook quotes the Tongan method as the same as the Tahitian.

1 Brigham 1911: Introduction

2 Kramer 1903: 300-12

3 Brigham 1911: 28

4 Beaglehole 1961: Vol. II, 272

Later publications have greatly augmented knowledge of bark-cloth manufacture in the Pacific. Among them, are Buck's descriptions of Samoan,⁵ Cook Islands,⁶ Mangarevan⁷ and Hawaiian,⁸ Linton's of Marquesas,⁹ Miles' of Niuean,¹⁰ Roth's of Fijian,¹¹ Dodge's of the Austral Islands¹² and Thompson's of the two methods practised in the Lau group of the Fiji Islands.¹³ In 1925, Hambruch¹⁴ published a review of Pacific bark-cloth generally. He quotes extensively from Kramer, for like Brigham, he made the observation that except in Samoa, manufacture of the fabric had died out in the Pacific. "Samoa ist heute die einzige polynesiische Inselgruppe welche noch Rindenstoffe in grosseren Mengen herstellt."¹⁵ However, in spite of this wealth of ethnographic information on bark-cloth in Polynesia, there is still, as in the earlier period, a noticeable paucity of Tongan material. Except for an unpublished M. S. by McKern in 1921,¹⁶ and a more recent work by Koch in 1955¹⁷ dealing primarily with acculturation surrounding the craft, ethnographers have been singularly silent on the subject of Tongan bark-cloth manufacture. This is all the more surprising, [p. 4] when one considers the strength of ethnographic activity in the Pacific, and the fact that the craft has always been, and is today an essential part of Tongan life. Considering the published material noted above, it would appear, that with the exception of Tongan, bark-cloth manufacture in the Pacific has been fairly well documented. Indeed, from the material available, Burrows¹⁸ has been able to isolate certain features of the manufacture that are characteristic of either Western or Eastern Polynesia, and to use these differences with other considerations to support a contention of cultural differentiation between West and the rest of Polynesia.

THE PROBLEM OF TONGAN BARK-CLOTH MANUFACTURE

The basis for this thesis arises out of the meagreness of information recorded by observers of Tongan bark-cloth manufacture, not excluding Mariner's description, which, although valuable as being the most comprehensive, still leaves much unexplained. Its purpose is to describe the manufacture of bark-cloth and the social context in which it is carried out in Tonga today. By this description, I hope to complete Mariner's account, by including processes in detail which he omitted or did not fully describe, and [p. 5] to show what changes may have taken place in the technological processes, the materials employed and the decorative style.

The social context in which these assumed changes take place is important and I propose to show that in spite of Brigham's observation in 1911 that bark-cloth manufacture was fast dying out in the Pacific,

5 Buck Samoan Material Culture: 1930

6 Buck 1944

7 Buck 1938

8 Buck 1957

9 Linton 1923

10 Miles 1938

11 Roth 1934

12 Dodge 1941

13 Thompson 1940

14 Hambruch 1925

15 Hambruch 1925: 28

16 McKern 1921

17 Koch 1955

18 Burrows 1938

it has, with relatively little adjustment, always been a vigorous craft in Tonga. In fact the time when Brigham prepared his review, was a period when changes in the social context in which the cloth was being manufactured were fostering a significantly wider spread throughout the female Tongan population of knowledge on all aspects of the manufacture. Even those processes hitherto confined to a certain strata of society were gradually coming within the compass of ordinary female activity.

Koch's work published in 1955 is a study in Tongan acculturation. As such, the sociological aspects of the manufacture have been competent-handled. For this reason, I hope to concentrate mainly on the technological and decorative processes which have not been dealt with in detail by any of the previous writers mentioned. Even Koch, who concludes that the technological processes have not changed since Mariner's day,¹⁹ describes the stripping of the outer layer of the bark in a way quite unlike that of Mariner,²⁰ although consistent with what is done today.

[p. 6] Because of the close ties and frequent inter-communication between Tonga and Samoa, and Tonga and the Lau Group of Fiji, it is reasonable to expect similarities in these areas, not only in the stages of manufacture, but also in the means of producing the decorative designs and the motifs employed. Laura Thompson for instance, distinguishes between the Tongan and Fijian methods of manufacture both of which exist in the Lau Group.²¹ Although in the main, technological differences have remained, influences of one upon the other are readily apparent in the decorative processes. In the same way, conclusions drawn by Kramer with regard to the origins of and symbolism involved in Samoan decorative motifs²² may be applied to analysis of these motifs when they occur in Tongan patterns.

To carry out the proposals already outlined for this thesis, the investigations of previous ethnographers on Tongan bark-cloth manufacture, both at the point of European contact, and in more modern times, will be considered in conjunction with my own. After describing the Tongan stages of manufacture, their social context and the decorative process as I have observed them today, I propose to compare them with the descriptions by Mariner, McKern and Koch where they have recorded the same processes, in order to assess the degree and nature of changes. The comparisons will be carried out where relevant during the outlining of the technological processes and summarised under the separate headings of changes in the [p. 7] technological order, the social context and the stylistic treatment to ascertain in which areas of culture these changes have been most marked and which areas have remained relatively stable. It will be necessary also to include the Samoan method as recorded by Kramer and Buck, as well as relevant references to what has been recorded for the main island groups of East Polynesia. These later comparisons are directed at a re-evaluation of the bark-cloth manufacture section of Burrow's "Western Polynesia: A study in cultural differentiation."

COMPARISONS WITH OTHER POLYNESIAN PRACTICES

Burrows has cited the various differences of technique employed in Polynesian bark-cloth manufacture as evidence of cultural differentiation between two broad areas of the Pacific, western and the rest of Polynesia. He says that methods of preparing bark-cloth are similar in the main throughout Polynesia.²³ The bast is separated from the outer bark, scraped clean, softened with water, laid on an anvil and beaten with a wooden beater. When differences of technique do occur, they do so after a manner characteristic of either one of these two defined areas. He adds that characteristics distinctive of Western

19 Koch 1955: 315

20 Koch 1955: 308

21 Thompson 1940: 194

22 Kramer 1903: 312

23 Burrows 1938: 17

Polynesia, come out most clearly in the techniques at three stages of the manufacture: (1) method of preparing bast for beating, [p. 8] (2) method of joining the beaten strips into large sheets, and (3) the method of indirect decoration by designs fixed beforehand in some other material and then transferred to the material. Comparisons of those methods of decoration also bring out broad differences of decorative style.

In itself, his first statement is broadly true, but it becomes an over-simplification if we are to accept the second statement without considering all the differences and examining these differences carefully. In the light of the material presented in this thesis, it will be evident that there are further differences that cannot reconcile both Samoan and Tongan manufacture as the Western “type”, and certain characteristics that make the differences between Western and the rest of Polynesia a little less distinct.

CHAPTER II: [p. 9]

TECHNOLOGY:

THE PROCESS OF BARK-CLOTH MANUFACTURE IN TONGA

INTRODUCTION

In this chapter it is intended to describe the various steps, from the planting and care of the plant to the final production of the printed bark-cloth, as a continuous technological process. In the description, the Tongan terms for the various processes, tools and materials will be indicated when first encountered. This step by step description of the production of bark-cloth will provide the framework for the following chapter in which there is a fuller account of the social context within which these various processes are carried out. Attention is focused primarily on the technological processes as they are carried out today, before comparing them with previous descriptions of Tongan practice to determine what recent innovations have occurred. Comparisons are also made with the practices recorded elsewhere in the Pacific, especially in other parts of Polynesia, in order to throw additional light on the historical relationship of the Tongan methods to other ethnographers' more comprehensive surveys.

It is necessary however, before beginning the more detailed discussions proposed, to examine briefly the general Tongan terms for the bark-cloth complex in relation to those of other island groups and to those in use by Europeans.

TONGAN BARK-CLOTH TERMS [p. 10]

Tapa and Ngatu

The printed bark-cloth, so commonly called *tapa*, is not known to the Tongans by this name. The general term used in Tonga, from before the time of European contact, has been *ngatu*. Tongan people use the term *tapa* in reference to the finished cloth, only when speaking to Europeans, who they believe, introduced the word into Tongan usage.²⁴ In Churchward's Tongan Dictionary, the noun, *tapa*, is not used as the Tongan equivalent for bark-cloth, but as “edge, rim, border, boundary”, or in several combinations having the central idea of “edge”. On the other hand, the word *ngatu* is defined as “tapa cloth”, the *tapa* cloth being the English equivalent.

24 Churchward 1919

In his introduction to *Ka Hana Kapa*, Brigham²⁵ says that the etymology of the word is simply *ka* = the, and *pa* = beaten or beaten thing. This may apply to the Hawaiian term, but it is difficult to construe the same meaning for the equivalent Tongan word. Tapa in Tongan is not a compound word. As a verb, there are several meanings: (1) to flash, to emit a bright flash of light; of lightening; of a mirror so manipulated to reflect the sun's rays. (2) to give help, render assistance, especially, though not only, in war. The combinations in which the word as a noun is used refer to side or edge, e. g. (1) *tapahina*, pandanus having a white edge. (2) *tapatolu*, triangular, three sided. (3) *tapamolemole*, smooth [p. 11] edged. (4) *tapatakai*, perimeter, circumference. Other words similar to tapa, but not the result of combining are: (1) *tapale*, to drub or thrash, do roughly without care, or in a slapdash way. (2) *tapasi*, to clasp and jump for joy.

Hambruch discusses the possibility of tapa having reference only to the border of the cloth, but then rejects this possibility in favour of Brigham's explanation. "Kapa benannten die Hawaier ihre Stoffe, wobei es dahingestellt bleibt, ob sie der Namen ähnlich wie auf Samoa, aus Kapa, Rand, Strand, Ufer ableiteten, oder wie es mir mit Brigham richtigen erscheint, aus ka pa, ka = Artikel, pa = geschlagen, kapa soviel wie das Geschlagene (Geklopfte, Gehammerte) bedeutet."²⁶

Kramer says that one of the principal occupations of the Samoan women is production of bark-cloth, *siapo*, also called tapa, but this word is applied more to the broad white borders; "siapo zuweilen, auch tapa genannt was sich aber mehr auf die breiten weissen Borten der roten Stucke und die unbemalten Stoffe bezieht."²⁷

Koch says, "Tapa is strictly speaking incorrect. In Tonga, only the undyed edge of the bast cloth is called tapa, while the dyed, patterned bast cloth is called ngatu."²⁸

Mariner records, "when gnatoos are not printed or stained, it is called tapa".²⁹ However, while in Tonga, I could find no one who could substantiate Mariner's statement, not even Alisi Sipu (see page v). [p.12] She said, and this seemed to be the general answer from all whom I asked, that the uncoloured borders of the *ngatu* are called *tapa*. The border at the beginning of the *ngatu* is *tapa mua* and the finishing border is *tapa ki vae*. The side borders are *tapa'i ngatu*. A *ngatu* which has a white background to the design is called *tapa 'ingatu*.

When the embroidered design tablets, (*kupesi*) are fixed onto the half-cylinder (*papa koka'anga*) on which the cloth is placed to be dyed, the part between the edge of the *kupesi* and the edge of the half-cylinder is called *fakatapa*. The material placed over this width, is not rubbed over with dye, consequently, the finished *ngatu* has these long uncoloured borders down its full length.

I would prefer to think that Mariner meant: "where gnatoos are not painted or stained it is called tapa". However, he refers again to tapa later in his book by saying, "tapa differs from gnatoos merely by it not being stamped or imprinted."³⁰ It is also possible that *ngatu* in general has gradually taken on the more general meaning and the use of tapa has been restricted.

Although the Hawaiian explanation for the etymology of the word *kapa* is not consistent with that of the Tongan word *tapa*, as used today, it is of interest to know that the Formosan terms for various articles of cloth (not necessarily of bark-cloth) are: (1) *tapalankos*, *Tapan*, [p. 13] *tapa*, *tapah* for blanket; (2) *tarp*,

²⁵ Brigham 1911: Introduction

²⁶ Hambruch 1925: 15

²⁷ Kramer 1903: 299

²⁸ Koch 1955: 307

²⁹ Mariner 1818: 280

³⁰ Mariner 1818: 280

tapes, for wrist-band; and (3) *tapir*, *tapal*, *tapach-a* for trousers.³¹ Man-Li Ling refers to a work to be published by Prof. Shun-Sheng-Ling, in which it is shown that the terms used for bark-cloth in ancient Chinese were *tapu*, and *kapu*, as recorded in works dated 2nd Century B. C. and 4th Century A. D.³²

All this would suggest that the word *tapa* for bark-cloth was used by the Polynesians in an Asiatic homeland, and brought with them into the Pacific, retaining either completely or in part its original meaning, wherever they settled. Whereas Tahiti, Hawaii and the Cooks kept the form and definition with little variation, it had a less stable significance in Western Polynesia. However, if we consider for instance, other Marquesan and Mangareva terms, we find a close similarity to those of Tonga and Samoa (e. g. *tutua*, *ike*, *'iapo*). The Marquesan term *katapa* means "straightening of the edges". This suggests that further research into the etymology of the whole complex of words, would not only reveal interesting information on the origin and development of bark-cloth culture, but also possible routes of the diffusion into the Polynesian area.

It is possible that the present widespread knowledge of the term through the Pacific, even where it is not the local equivalent for bark-cloth, is not due so much to a persistence of an imperfectly remembered word from an ancient past history, as to a diffusion of [p. 14] the term through the written works of early recorders who, when writing of bark-cloth, ignored the local terms. Having once learned the names for bark-cloth in Tahiti and Hawaii, early travellers like Cook, finding the same fabric in Samoa, Tonga and Fiji, and indeed, in other islands later visited by them, used the same terms when recording their observations on bark-cloth use and manufacture. Instead of being a universal Polynesian term for bark-cloth it is rather a European term existing alongside the local term. For this reason, I shall use the local Tongan term, *ngatu*, where called for in this thesis, and bark-cloth or *tapa* when speaking of the complex in more general terms.

The material from which the bark-cloth is made passes through several changes of name, coinciding with the various stages of its manufacture. The tree (*Broussonetia papyrifera*) from which the bark is taken is *hiapo*. The bark, (both outer bark and bast) when it has been stripped from the wood and prepared for beating, is *tutu*. The strips that have been beaten out, are called *feta'aki*. When the beaten sheets are laid out in two layers for joining together, the bottom layer is *laulalo* and the top is *lau'olunga*. Not until the beaten sheets have been joined together into a length and coloured are they called *ngatu*.

The Plural Form of Tongan Terms

In Tongan, the plural of nouns is indicated by the form of the [p. 15] article, qualitative pronoun, demonstrative adjective or separable prefix; except in a few restricted cases where the whole word changes, there is no change in the noun form itself. *He ngatu* is one bolt of *ngatu* and *ngaahi ngatu* refers to several bolts. Therefore, when speaking of *ngatu* in one or more than one bolt, the noun form remains the same. As the word "ngatus" would offend euphony and Tongan ears as much as *these ngatu* may offend the ears of some English-speaking people, I have avoided using either. Confusion could be avoided if I used the correct number form preceding the noun, but then the thesis would become a linguistic exercise as well.

I have followed the same principle, of not altering the noun form when using other nouns in the plural; e.g. *kautaha* (*ngatu* making guilds); *langaanga* (the numbered pieces that make up a complete *ngatu*); *papa koka'anga* (the half cylinder on which the *feta'aki* are pieced together for *ngatu*); *kupesi* (the embroidered tablets that are used to make the designs on the *ngatu*) and other words already mentioned, *feta'aki*, *tutu*, *laulalo*, and *lau'olunga*.

31 Ling 1960

32 Ling 1960

THE *HIAPO* (PAPER MULBERRY PLANT)

The Plant

Although the Tongan tree from whose bark the bast is obtained, has been identified as the Chinese paper mulberry, *Broussonetia* [p. 16] *papyrifera*, there are at least three varieties of the plant grown in Tonga, all of which differ one from the other in appearance.

One variety called *hiapo kula* grows almost as tall as a coconut tree but is not used for *ngatu*. The Tongan people use it for making medicine. The other two, both of which are cultivated for their bark are distinguished by the shape of leaf they bear. One has a deeply incut leaf, and is called *lau mahaehae*³³. The leaf is similar to that identified by Ling as *Broussonetia papyrifera* Vent³⁴. The other, called *lau ma'opo'opo* has a more rounded slightly serrate leaf and appears to be very similar to the species identified by the same writer as *Broussonetia kosinoki*³⁵. I have sent specimens of the two *hiapo* that are used for *ngatu* to Dr. R. Cooper of the Botany Section, Auckland Museum, and he has kindly sent me his opinion of the varieties, together with other relevant material on the paper mulberry generally. The specimens match most closely those of his labelled *Broussonetia papyrifera* Vent. and to a lesser degree the species *laciniata*. However he points out that some of Cheeseman's collection from Rarotonga show both entire and cut leaves on the same plant. In Tonga the two varieties are quite distinct, although young *lau ma'opo'opo* leaves when first bursting out on the young plant appear to be fairly deeply incut but change as the plant matures to three-lobed or heart shaped.

From both plants, bark is obtained that will produce sheets of [p. 17] bark-cloth, which, as far as I could judge, are indistinguishable one from the other. But as the *lau mahaehae* variety is slower to send out lateral shoots, it does not require as much attention as the *lau ma'opo'opo* variety. Despite this, there seem to be equal numbers of both kinds growing in most plantations, although I have seen plantations that are entirely *lau mahaehae*. When the two varieties are planted in the same plantation, it is not done according to any pre-set plan. However, in one plantation growing near Nuku'alofa, I saw the two kinds growing in alternate rows, in another they were growing at separate ends of the plantation.

Planting Paper Mulberry³⁶

The paper mulberry is generally planted in March, although it may be, and is planted at any time of the year; but that planted in March grows taller and more vigorously and is called *to'uhakoloa*. As March is still in the wet season, the young seedlings can get away to a good start. Long unused soil is best for planting, but if an allotment is restricted, an area that has previously been planted, perhaps for two or three years in a root crop, may be planted in paper mulberry. Whole plantations are not usually devoted to growing paper mulberry, but a certain portion within the yam or other vegetable gardens is set aside. The area varies from a small garden plot up to areas of an acre and a half.

A plantation may be started from cuttings taken from the root [p. 18] ends of already cut trees, or from young saplings, from 28 Inches to four feet, removed from an older plantation where innumerable suckers abound. The best trees come from saplings that have been left to reach a height of four feet before being transplanted. I watched one old man planting saplings of this height for his wife and daughters-in-law. The holes were dug for him by a boy, in rows about a foot square and nine inches deep, and 18 inches apart. The fibrous roots of the plant were crannied into the hole, covered with soil, and then

33 Fig. 1a, 1b, and Plate 1

34 Ling 1960

35 Fig. 1c, 1d, and Plate 2

36 Plate 3 and 4



Figure
1a. Lau mahaehae from young
plant.



Figure
1b. Lau mahaehae from
mature plant.

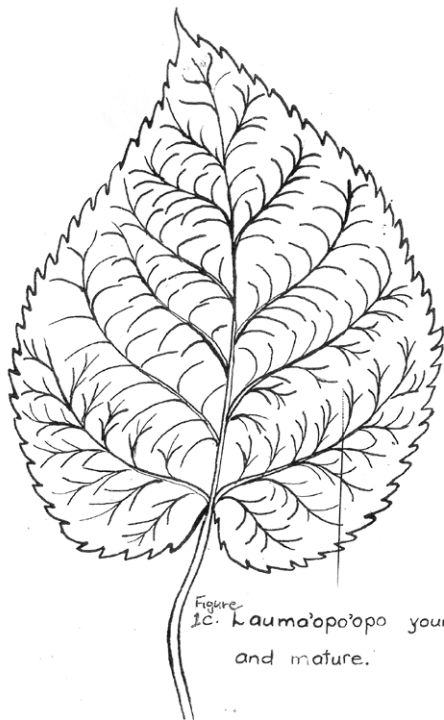


Figure
1c. Lau ma'opo'opo young
and mature.



Figure
1d. Lau ma'opo'opo mature.

Figure 1: The Paper Mulberry or *Hiapo*
a. Leaf of young *lau mahaehae* variety of *Broussonetia papyrifera*
b. Leaf of mature *lau mahaehae*
c. Leaf of *ma'opo'opo* variety of *Broussonetia papyrifera*
d. Secondary type of leaf also on *lau ma'opo'opo*



1



2



3



4

1. Tree of Broussonetia papyrifera, lau mahaehae variety
2. Tree of Broussonetia papyrifera, lau ma'opo'opo variety
3. Choosing young paper mulberry seedlings for planting
4. Paper mulberry seedlings placed in growing position



5. Paper mulberry or hiapo plantation near Nuku'alofa



6. Paper mulberry or hiapo that has been cut



7. Paper mulberry or hiapo sorted into bundles

Plates 5 – 7

the boy stamped firmly around the stem with his feet. The old man gave it a slight tug, to satisfy himself that it was firmly fixed, then with a knife, he cut the stem off about two inches from the ground.

Care of the Growing Plant

The paper mulberry grows slowly, taking from two to three years to reach maturity³⁷. The old man I had watched planting out saplings, had cut his main crop in April 1959, after having planted it in March 1956. The area planted, a little more than three quarters of an acre, had been used in the two years previous to 1956 for growing yams. However, if the *hiapo* had been planted in ground that had been fallow for at least ten years, it would probably have come to maturity about four to six months earlier.

The growing tree requires little attention to the ground around it. Throughout this period, the plantation might be weeded only twice [p. 19] a year. Frequent weeding would encourage the soil to dry out too quickly, so retarding the growth. The stems, however, require constant attention. As soon as lateral

³⁷ Plate 5

leaf-buds begin to appear along the stem, they are nipped off. Only a feathery crown of leaves is left to grow undisturbed at the top of the plant. The constant disbudding ensures straightness of stem, thickness of diameter, and no holes in the beaten-out bark. If the lateral stem shoots are allowed to grow until they are several inches in length before being broken off, a hole will show in the bark when it is beaten out. This will entail patching before the single sheets obtained are used for *ngatu*.

The paper mulberry is ready to cut, not according to length of growing period, height, or thickness of diameter, but when the green bark of the stem has turned a silvery white. This usually happens when the plants are over 12 feet in height, have a diameter of at least 2 inches and have been growing for from two and a half to three years. By this time, the roots have sent up a secondary growth, and several young saplings of quite considerable height might be growing alongside the parent plants. Some stems of primary growth, entered by the Prison Farm in the Agricultural Show at Nuku'alofa in 1959, reached more than 22 feet in length and over 3 inches in diameter.

After the main stems have been cut out, the secondary growth takes over and is usually ready for cutting in from one to one and a half year's time. At least two cuttings, one from a second and one from a third growth can be taken after the main cutting, before the [p. 20] plantation is abandoned and a new one opened up. It is usual for the new area to be planted after the initial cutting. This aftergrowth, the third cutting even less than the second, does not produce trees of as great height or diameter as the primary plants, but they do ensure that there is a constant supply of material on hand, if and when it is needed.

Stripping the Paper Mulberry Stems

When ready, the trees are cut about two to three inches from the root, and are laid out, according to their length and diameter, in bundles of 20, 40, 60 or 80 and are referred to in pairs as follows:

10 prs. (*tekau*)

20 prs. (*ua ngakau*)

30 prs. (*tolu ngakau*) and so on.

It is convenient to have the stems grouped in bundles according to the different sizes.³⁸ An experienced *ngatu* maker can assess after viewing the bundles, the length of *ngatu* she can expect from a certain quantity of stems.

The *tutu*, which comprises the inner bast and the outer bark, is not stripped away from the stem immediately after it has been cut. Instead the stems are left for several days, either under a building or under a tree, and covered over with coconut leaves. This period allows the wood to shrink a little as the vessels empty of sap, so facilitating the stripping of the loosened bark away. Mariner says: [p. 21] "They are left in the sun a couple of days to become partially dry, so that the inner and outer bark may be stripped off together."³⁹ McKern also says: "They are left lying in the sun for two or three days."⁴⁰ However, all stems that I have seen are covered over and left in the shade. If the stem is left for only two days, then it is probable that just enough moisture will have dried out to allow the bark to be pulled easily away from the stem, but not enough to dry out the bark so that separation of the outer bark from the bast is made difficult. I would think that the present practice is much more reliable. The slower drying out in the woody part of the stem, leaving the bark still fairly moist, makes the outer stripping easier and less likely to be interrupted by breaks.

38 Plates 6 and 7

39 Mariner 1818: 275

40 McKern 1921:631

A young woman I watched stripping bark from *hiapo* stems, was doing so eight days after they had been cut. She took the *hiapo* and at the lower end, tore the *tutu* away for about three inches with her teeth.⁴¹ When she had enough of the *tutu* to allow her a good grip, she pulled at it with her right hand, held the other end with her left hand, and pushed at the length between with her foot. The bast and outer bark came away quite easily.⁴² As she peeled from one stem after another, the *tutu* were rolled up from end to end, inner side out. It took her about fifteen minutes to strip fifty stems. The rolling was done by a companion.

[p. 22] The *tutu* is not always stripped from the lower end first, nor are the teeth always used. Some days later, I watched an older woman “making *tutu*”. She broke off a piece about six inches long from the top end of the stem, where it is thinner. The wooden stem snapped and was pulled away, leaving about six inches of *tutu* hanging loose. This she held with her right hand, the other end with her left, and with her big toe braced over the middle of the stem, she pulled the *tutu* away (Plates 10 and 11).

Mariner does not mention how the bark was taken from the stem, but McKern⁴³ wrote that the bark was split lengthwise down one side of each stalk by using a shell, and the bark peeled from it. Koch says: “The women notch the bark longitudinally with their teeth, and with their hands strongly pull off the whole layer surrounding the stem.”⁴⁴ The Cook Is. method as described by Buck appears to be the same as that practised by present day Tongan women. “The bark is cut longitudinally at the severed end of the thicker butt end and pulled away with the right hand, while the left hand holds the peeled. The bark splits naturally down the length of the sapling and comes off in one long strip.”⁴⁵ Laura Thompson also describes the Fijian method as used in the Lau Group as: “splitting the bark lengthwise after freeing the lower end with the teeth and pulling it off.”⁴⁶

[p. 23] Other Polynesian islands, principally Samoa,⁴⁷ Tahiti⁴⁸ and Hawaii⁴⁹ remove the bark in a manner similar to that described by McKern for Tonga. The bark is slit down its length and peeled off. Buck does not give his own observation for Hawaiian stripping but refers to Ellis’ description.

Since reading McKern’s manuscript, I have consulted several Tongan women again. Those who were making *ngatu* in 1921, the time of McKern’s study, say they have always freed the bark at one end, generally with the teeth and pulled it away. They had not seen paper mulberry slit down the length of the stem with a shell, and the bark peeled off. However, the method of taking the bark from the stem is not of great importance, but it does show that there were two principal methods of doing so. Samoan, Hawaiian and Tahitian women slit the bark down the length first (presumably by using some sharpened instrument) then peeled it off. Tongan, Fijian and Cook Island women pull it off first loosening one end.

From my own enquiries, I believe that the pulling of the *tutu* from the stem has been the practice in Tonga for a very long time and may have been the only method used. The bark of the paper mulberry is tough and thick, and even when using a very sharp knife, I found it difficult to keep a straight line down the stem

41 Fig. 2a and Plate 8

42 Fig. 2b, 2c, and Plate 9

43 McKern 1921: 631

44 Koch 1955: 308

45 Buck 1944: 70

46 Thompson 1940: 194

47 Buck 1930: 285

48 Beaglehole 1961, Vol. I: 132

49 Ellis 1826: 78

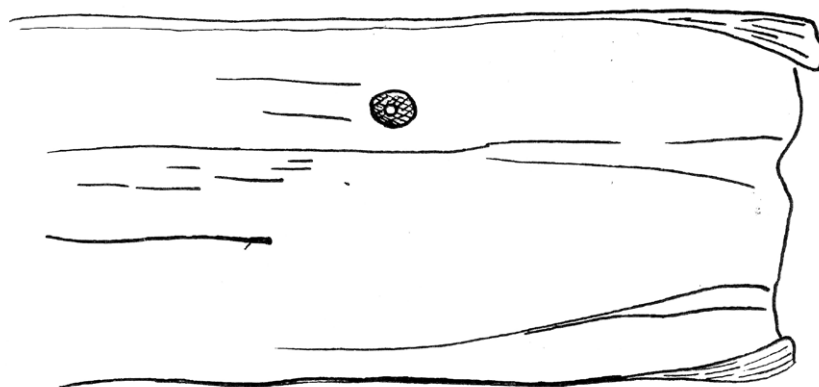
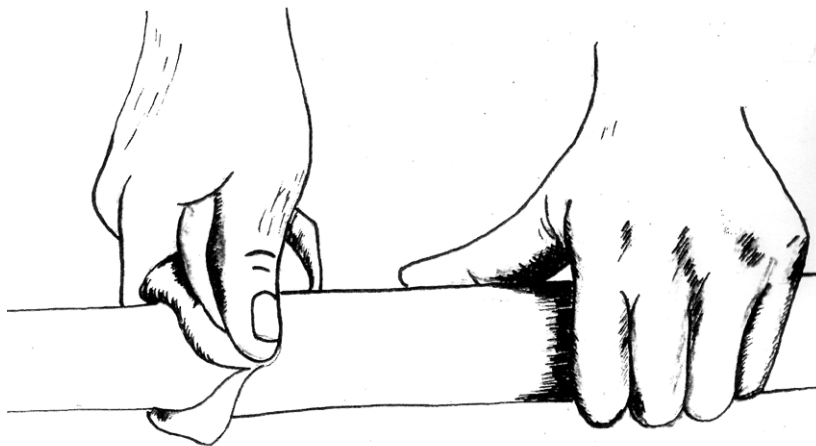
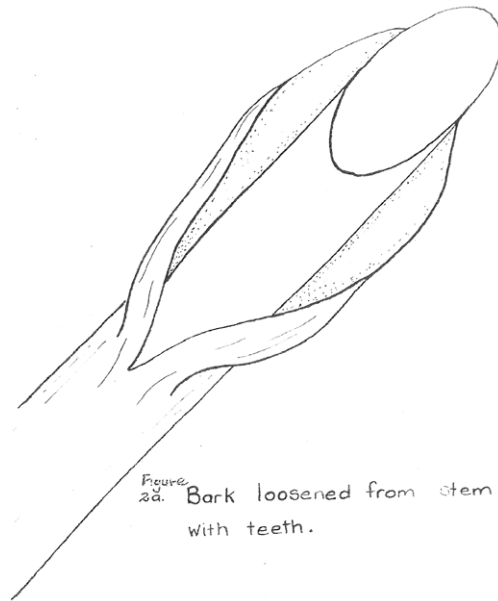


Figure 2: Stripping the bark
a. Bark loosened from stem with teeth
b. Bark being pulled from stem
c. Inside of bark stripped from stem



8.
Removing bark by preliminary
separation with teeth.



9. Pulling away loosened bark.

10.



10. Another method of
11. removing bark.

11.
different view



with any speed, without cutting across the fibres and so spoiling what was eventually [p. 24] to be the straight edge of the finished sheet. The second method of freeing one end first, starts a slit, that when the bark is pulled, follows naturally a straight course between the fibres of the bark. The whole operation, from the loosening of the end to the rolling up of the *tutu* is completed in a matter of seconds.

Removal of the Outer Bark

After all the stems have been stripped, the green outer bark is removed from the bast. This is done as soon after the stripping as possible, while the bark is not too dry. In fact, when preparing *tutu*, Tongan women generally work in pairs, one to strip the stem, the other to remove the outer bark from the bast. Each strip is unrolled, and about eight inches from the wider, stronger end, a transverse cut is made with a sharp knife across the green outer layer. The green layer is lifted up with the point of the knife blade, and peeled away from the smooth, white inner layer.⁵⁰ Some women pull the shorter section away first, others the longer. If the incision is made to the right depth, not too lightly and not too deeply, the outer layer comes away quite easily; but if it is not deep enough, the inner bark will begin to show green. The green fibers are then carefully separated from the bast with the knife, until they are strong enough again to pull away.⁵¹ A woman who prepares *tutu* regularly rarely makes a mistake when she cuts through the green layer. Her hand gets “set” to the right pressure in the same way as a Maori [p. 25] woman’s does when she cuts through the green of the flax in *piu-piu* making.

The knife is pulled quickly down both sides of the bast once. I was never quite sure whether this was intended to smooth it down, to flatten out the edges, or was just a finishing off flourish. The strips, now about four inches wide are left out on the grass in the sunshine, until all moisture has been dried out. This might take one or two days. When quite dry, the strips of bast are rolled up again and put away until required for beating. Even if they have no immediate use, women like to have some rolls of *tutu* stored away against such a time as they feel like beating them (Plate 15).

Neither the stems nor the inner and outer bark are put into water up to this stage, even to remove outer bark that may cling in places. No more is done to the bast until it is required beating.

Other Methods of Removing Outer Bark

The process of preparing the bark for beating as carried out by Tongan women today has undergone a noticeable change since Mariner’s day. Mariner said: “The bark is soaked in water for a day and night, and scraped carefully with shells for the purpose of removing the outer bark.”⁵² McKern writes: “the outer bark was removed by combined scraping and peeling, rolled into a coil and soaked in water from evening until morning. After removal from the water, [p. 26] it was left to dry, and stored”.⁵³

The Samoan method as described by Buck is:

The outer bark is removed by making a transverse cut on the outer side near the butt end, and lifting it up until it separates across the width of the strip, and sufficiently down its length to allow the left hand to grasp it. It is then peeled off and thrown into a bowl of water. The bast then undergoes several processes, before it is ready to be beaten out.

The bast is put on a scraping board, and with special shell scrapers and a knife made from bamboo, is scraped until any green outer bark still adhering is removed.

50 Fig. 3a

51 Fig. 3b and Plates 12, 13, and 14

52 Mariner 1818: 275

53 McKern 1921: 631

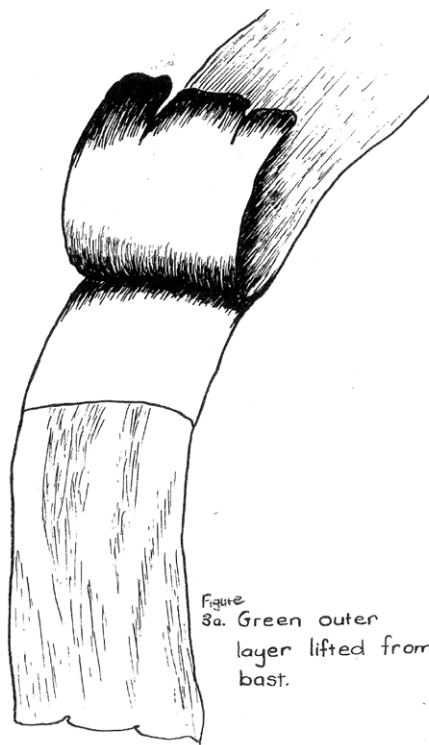


Figure
3a. Green outer
layer lifted from
bast.

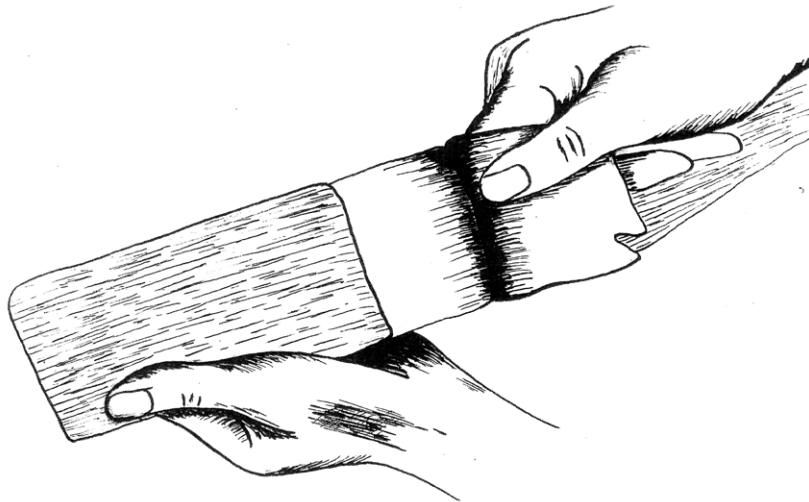


Figure
3b. Method of pulling outer layer from bast.

Figure 3: Removal of Green Outer Bark
a. Green outer bark lifted from bast
b. Method of pulling outer bark from bast

12.



12. Close-up of removing green outer layer from bast

13.



13 General view of removing green outer layer from bast

14. General view of method of obtaining bast by cutting across the bark strip to remove green layer

14.



15

Bast being rolled up after lying in sun



This is done either in a running stream, or in a bowl of water, so that the bast is kept moist. After this, the bast goes through a rasping process when a shell is used to scrape it and loosen any interfibrous material, which the first scraping has failed to remove. Another shell is then used to smooth down the roughened surface of the bast, and firm pressure is applied to remove as much moisture as possible.⁵⁴

The following are early observances in Tahiti, Fiji, Palau and Hawaii and later observances in the Marquesas, Cook Is. and Fiji:

- (1) Tahiti: "The bark is slit up longitudinally and pulled off the stick, then left to soak for some days in water. The outer bark is then scraped using shell, and washed away."⁵⁵
- (2) Fiji (1859): "The bark is steeped in water to facilitate separation of the epidermis which is effected by a large volute shell."⁵⁶
- (3) Palau: "Die abgeschalte Rinde der Pflanzen wird im wasser, gewöhnlich Seewasser maaceriert und dann mit Perlmutter-schalen geschabt um die Epidermis und die schleimigen Teile zu entfernen und endlich tuchtig ausgewaschen und in die Sonne getrocknet."⁵⁷
- (4) [p. 27] Hawaii: "The outer bark was removed, generally by scraping with a shell and the inner bark occasionally laid in water- to extract the resinous substances it may contain."⁵⁸
- (5) Fiji (1940): "The inner bark is peeled from the outer bark by separating the two at the lower end, and carefully pulling and cutting them apart. It is then scraped with a shell to clean and whiten it. The strips are dried for about a day in the sun."⁵⁹
- (6) Marquesas: "Fresh bark is taken to the stream where the coarse outer bark is removed with a shell scraper."⁶⁰
- (7) Cook Islands: "The inner bark or bast is separated from the outer bark at the butt end with a *ka'i* shell and then carefully pulled away throughout the length of the strip."⁶¹

It appears that the Tahitian, Palau, Marquesan, and early Tongan and Fijian methods were the same, scraping after soaking in water. The Samoan, Cook Islands, and the Tongan and Fijian method of today is to remove the outer layer by lifting it from a dry bast and peeling it off, followed by scraping in a more or less degree, depending upon how effective the peeling has been in removing the green. Buck⁶² says that Pritchard was mistaken when he describes Samoan bark as being soaked before the outer layer is removed, yet Kramer's plate 118 shows Samoan women on a river bank and in the water.⁶³ They are described as scraping green from the bark. If there has been such a complete change in the Tongan and Fijian methods, from the wet scraping of Mariner's and William's times to the dry peeling practised by these [p. 28] people today, the same change might well have taken place also in Samoa.

54 Buck 1930: 5

55 Beaglehole 1961: 132

56 Williams and Calvert 1859: 50

57 Kramer 1926: 72

58 Ellis 1826: 78

59 Thompson 1940: 194

60 Linton 1923: 413

61 Buck 1944: 70

62 Buck 1930: 296

63 Kramer 1903: 301

We may conclude then that in widely separated islands two different methods of removing the outer layer from the bast were followed. Tongan, Fijian, Tahitian, Marquesan, Palauan and possibly Samoan women all soaked the bark before scraping away the green outer layer. The Hawaiian, Cook Is., and Samoan women of today, and according to Buck always, peeled and scraped the green away without any preliminary soaking of the bark. At some period after Mariner's observations were recorded and since Williams and Calvert wrote in 1859, Tongan and Fijian women have adopted the "dry" removal of Hawaii and the Cook Is. For the rest of the Pacific generally, it would be as difficult to decide without further research, which of the two methods preceded the other, as it would be to come to any conclusion about one or the other method being geographically characteristic. It is possible that both methods have always existed simultaneously and changes have come about as a result of a desire for faster removal.

I am unable to explain why the Tongan woman, at the time when McKern conducted his investigations, would have soaked the bast after the removal of the outer bark, then dried it again before storage, and feel his description may be mistaken.

PREPARATIONS IN OTHER ISLANDS BEFORE BEATING [p. 29]

Although no more is done to Tongan bast after the green outer layer is removed until it is beaten into sheets, it is necessary here to interrupt the sequence of Tongan manufacture to record methods followed in other islands where the bast receives further treatment before beating.

There seem to have been at least three methods of preparation of the bast before beating, followed in different parts of the Pacific. These methods do not appear to be geographically distinctive, nor are they necessarily associated with the method by which the strips are put together.⁶⁴ Broadly, the three methods are characteristic of:

- (1) Those islands which do no more to the bast after stripping the outer layer and drying the strips.
- (2) Those islands which use retting either before a single beating out of the matured strips or after a preliminary beating.
- (3) Samoa, which follows a process not recorded for any other island group.

In the first group, Tongan women (at all periods) do no more to the bast until it is soaked immediately prior to beating. The soaking of the bark at this stage is not a form of retting as thought likely by Burrows,⁶⁵ but is intended to swell the fibres of the single strips [p. 30] of bast, so that they will be more elastic and will produce a matt finish when beaten. This method, as described both by Williams⁶⁶ and Thompson,⁶⁷ is employed in Fiji as well, although the joining in Williams' time (before 1850) was by pasting, while that described by Thompson (1940) is by felting. In Hawaii, Ellis⁶⁸ gives no indication that anything was done to the bast strips before beating during the early 19th century, or that retting was practised in Hawaii at that time.

The islands of the second group followed a retting process either with or without preliminary beating. Banks records this process for Tahiti:

The bark of these rods (3 or 4 feet long and as thick as a mans finger) is then slit up longitudinally and in this manner drawn off the stick; when all stripped the bark is carried to some brook or running

⁶⁴ Burrows 1938: 20 states that "felting is associated with retting".

⁶⁵ Burrows 1938: 19

⁶⁶ Williams 1859: 50

⁶⁷ Thompson 1940: 195

⁶⁸ Ellis 1826: 78

water into which it is laid to soak with stones upon it and in this situation it remains some days. When sufficiently soaked the women servants go down to the river... and scrape the peices of bark, holding them against a flat smooth board, with the shell... *Tellina Gargadia*... untill... nothing remains but the very fine fibres of the inner bark. This work is generally finishd in the afternoon; in the evening these peices are spread out upon Plantain leaves. In doing this I suppose there is some difficulty as the mistress of the family generally presides, all that I could observe was that they laid them 2 or 3 layers thick, and seemd very carefull to make them every where of equal thickness; so that if any part of a peice of bark was scrapd thinner than it ought, another peice of the same thin quality was laid over it, in order to render it of the same thickness as the next. When laid out in this manner the size of a peice of cloth (is) 11 or 12 yards long and not more than a foot broad... In this state they suffer it to remain till [p. 31] morning, by which time a large proportion of the water with which when laid out it is thoroughly soaked is either draind off or evaporated and the fibres begin to adhere together, so that the whole may be lifted from the ground without dropping in peices. It is then taken away by the women servants who beat it...⁶⁹

Buck records a similar process for Mangareva: "The bark was allowed to ferment after the third washing for from two to three weeks, and even four if fermentation was slow. The material was kept cool and wet by wrapping it in Ti leaves and sprinkling with water."⁷⁰

A similar process was recorded by Buck⁷¹ also for Hawaii. Although it differs from that described by Ellis, it does not seriously affect the authenticity of Ellis's observation, for as has already been shown, techniques of manufacture in the Pacific have changed even within comparatively short periods of time. It would be as well to remember too that Ellis was writing at a time when bark-cloth was still being manufactured in Hawaii, while Buck's information was obtained from reconstructed information after the disappearance of the craft. The value of information obtained through direct observation would not be less than that gained from reconstructed information. The following is the process recorded for Hawaii by Buck: "There is a preliminary beating on a stone anvil, then the bast is spread in the sun to dry. The strips are soaked in water, beaten lightly to break up the fibres, then left in bundles under banana leaves for a week or a week and a half to mature."⁷² [p. 32] Buck⁷³ and Linton⁷⁴ described the same preliminary beating of bast before allowing it to mature, for the Cook Is. and for the Marquesas.

The third method is followed in Samoa, and so far has not been recorded for any other island group. Up to this stage, Samoan bast has already received more treatment than is usual in any of the other islands, and from this point, it undergoes the complicated "bundling process" as described by Buck:

Each scraped strip is folded separately into quarter lengths with the internal surface of the first quarter uppermost on the board. A shell is then used to expel by pressure, as much moisture as possible. It is folded again so that the external surfaces are to the board. Other folded strips are scraping to remove moisture, are placed on top of one another on the first strip. The whole bundle is scraped with a shell after each addition. The butt end is reversed alternately with each strip, in order to keep the bundle as even as possible. The bundle may contain from two to seven folded pieces, and the topmost is folded, so that the outer surface of the bast is to the outside of the bundle, above and below. The Samoans attach importance to the method of folding the bundles.

69 Banks 1962, Vol. I: 355

70 Buck 1938: 251

71 Buck 1957: 181

72 Buck 1957: 181

73 Buck 1930: 70

74 Linton 1923: 414

The pressure of the shell, besides removing moisture, serves to press the strips together, so that they appear like one strip. The bundles are put under cover of an old cloth to prevent drying out, until other bundles are ready.⁷⁵

Kramer's description is neither so detailed nor so clear. If it is the "bundling process" that he is describing, then he makes no mention of the folding, only the expression of moisture by scraping and pressure: "Wenn das Schaben im Wasser zu Ende ist, dann nimmt man den Bast und schlägt ihn bis das Frischwasser ausgetreten ist, und zwar schabt man mit der Asaphis-Muschel das Frischwasser aus."⁷⁶

[p. 33] The "bundling" appears to be a fairly complicated process in order to prepare the bast for beating, and its retention by Samoan women would set the Samoan technique of manufacture apart from that of Tonga, even at this stage.

MAKING SHEETS OF BARK-CLOTH FROM BAST

Implements used for Beating Bast

Not until the bast is ready to be beaten into sheets is any special equipment used by the women. Then it consists of a mallet (*'ike*), and a wooden base (*tutua*) upon which the bast is laid for beating.⁷⁷

The *tutua*, which resembles a log at first sight, varies in length from a few feet, at which a single operator sits, to others of from 12 to 15 feet, at which from four to six women can sit comfortably. Despite the wide variation in length, the width and depth are generally of uniform measurement, about nine to ten inches across the top, and roughly the same or less in depth. The top surface is from flat to very slightly convex toward the middle of the length, but the sides slope away gradually to a rounded bottom. The narrowest depth is at the two ends where the underside slopes gradually upward toward the tips. Some *tutua* are symmetrically hewn out and the wood carefully smoothed over, others are simply cut to the general shape and only roughly finished off. However, the top side on which the bast is beaten, is always smoothed.

The *tutua* is supported above the ground by two fairly green [p. 34] sticks running across the width at each end, and themselves supported by dry coconut husks, turned fibre-side upwards. Some *tutua* have matching cuts in the underside to fit over permanent supports. Raising them off the ground minimizes any jarring by allowing it to give slightly when it is struck. The woods used for their construction vary, but are generally not too heavy. Thus, woods like *toi*, *tamanu*, *mohokoi*, or *ahi*, whose texture probably has some bearing on the ringing note given off by the wooden base when struck, are usually selected although the use of hibiscus logs (*fau*) has also been noted.

Every household where bast is regularly beaten owns a *tutua*, although sometimes families which live next to one another may share one. The shorter ones are portable and can be carried to where they are needed, but the longer ones generally stay where they are owned, and women desirous of using them, take their bast there to be beaten. The length of the wooden base is a matter of preference, although families in which there are several females like the longer ones.

People like to keep their *tutua* under cover when not in use; under the house if it is European style and built well off the ground, otherwise under a thatched roof made for the purpose. This is to keep them out of the alternate rain and sunshine, which might crack them or roughen the surface. Larger ones are sometimes left under the thickly leaved mango or breadfruit trees and covered over with [p. 35] coconut

75 Buck 1930: 286

76 Kramer 1903: 301

77 Plates 16, 18, and 19



16 Wooden mallets or 'ike



17. Bast soaking prior to beating



18 Beating bast or tutu at long anvil or tutua with room for four operators



19. Beating bast or tutu at shorter anvil or tutua, note the support formed by a green stick resting on coconut husks

leaf thatch or old matting when not in use. However, they are not items of great value, and suitable wood that can be quickly hewn into shape, is, plentiful.

Although lighter woods are used for wooden bases, the best beaters are made from *toa*. All the *'ike* I have seen in Tonga are of the same general shape: a square-bottomed implement, gradually narrowing, until at almost two thirds of its length, it finishes in a rounded grip that flares slightly at the top. Some have an incipient shoulder, others turn sharply from the four sides to the rounded grip. They may vary in size but average about 10½ inches in length with a side of two and a half inches at the bottom.

Three sides are deeply grooved longitudinally, cutting in from the surface quite sharply. The grooves narrow toward the grip and are widest at the opposite end. The grooving on two opposing sides is the same, both in number and in depth. The side opposite the smooth one has either more or less grooves than the other two. Two opposite sides might have four grooves and the other five, or the opposite sides might have four and the other three. I could find no reason for the variation in the amount of grooving, and I doubt whether it is significant, as the grooving is intended to prevent possible damage to the fibre through prolonged beating in any one place. Thus, the surfaces between the grooves strike the bast with the same force, while the spaces provided by the grooves are areas of [p. 36] less tension. I have never seen, nor do the women speak of a rounded beater, or one that is entirely grooved or entirely smooth.

Beating the Bast⁷⁸

Women generally beat bast at their own homes, unless neighbours wish to beat on the same days, and then they may do so together for various reasons. In such cases, they will go to the home that has the most convenient size of wooden base.

I watched one group of women beating *tutu*. The bast pieces were soaking in tubs of water where they had been put a short while before. There is no prolonged soaking, just enough to soften the fibres, and make them more elastic. When one strip was taken out of the water, the thumb and forefinger were run quickly down its length to squeeze off as much of the water as possible. After this preliminary smoothing and straightening, one end of the bast was laid transversely upon the wooden base with the rest of it on the beater's lap.

Beating commenced, a width at a time across the wooden base, using one of the grooved sides of the beater, and as each section was completed it was pushed away to the opposite side. The first beating spread the three or four inch strip to about five or six inches in width. The piece of bast was then turned over, and starting from the opposite end, beaten out again.⁷⁹ One woman, who had strips of inferior material with frequent holes caused by lateral shoots that had been left to grow too long before removal, had to be careful to [p. 37] strike with varying pressure so as not to cause any further damage to the fibre. Whenever she reached a maximum width of only a foot without it becoming too thin, she took a second strip, measured it out alongside the beaten one to ascertain whether or not it would be the same length when beaten out, and beat it. She then placed it on the first and beat the two together until the fibres merged, moistening it several times by brushing her wet hand quickly across it as she beat. It was now stronger and wider and was intended as *laulalo*: the sheet for the underside of the *ngatu*.⁸⁰ The women however, do not always add a second strip to the *laulalo feta'aki* if it is wide enough (18–20 inches) and reasonably free of holes. What holes there are can be patched when the sheet is dry.

78 Plate 17

79 Plate 18 and 19

80 Plate 20

The rest of the bast provided wider strips with stronger fibres. They were beaten out for *lau 'o lunga*: the sheet intended for the top layer of the *ngatu*. When the strips had reached a width of at least a foot, they were folded into halves and quarters and all four thicknesses beaten together. As the folded sheet gained in width, it was shaken out, folded and beaten again until it had reached a width from 18 to 20 inches. By this time, any surplus water had been beaten out of the sheet and there was no danger of the various folds adhering one to another. The folding merely serves to facilitate beating and to prevent tearing the fibres as the sheet thins out, the [p. 38] strip being shaken out to its normal length when the beating is completed. The women took the strips out of the water in pairs of the same width and length.

Each piece of bast has a strong straight edge from the root end of the stem, and a thinner more ragged edge from the top of the plant. When two corresponding sheets were beaten out, they were placed one on top of the other as shown in the diagram (fig. 4), thinner ends overlapping and the stronger ends free. The two free ends and the overlapped portion form roughly equal thirds. The top sheet was then folded over, strong ends together, and the thinner end, now exposed underneath, was folded over the top of the other. The two sheets now had their two strong ends together and four thicknesses of the thinner parts together at the other end. This resulted in a double sheet of approximately equal strength in all parts, and no ragged end. The beaten sheets were lightly moistened by flicking the fingers that had been dipped in water across them, and then smoothed over with the palm of the hand. The folded sheets were now subjected to a further beating that merged their fibres into one end added about an inch to the width. The final beating was done with the smooth side of the wooden beater but not continuously. Every now and then the wrist was flicked over without sliding the hand around the grip, so that the opposite grooved side was used as well.

The other two sides with equal grooving were used in the early [p. 39] beating of each piece of *tutu*. There seemed to be so many strokes with the closed fist around the grip, fingers facing downward, then without losing the timing of the strokes, the fist was turned over, and the blows struck with the opposite side of the beater. The reason, I think, was simply to shift the strain on the wrist, and by not stopping to

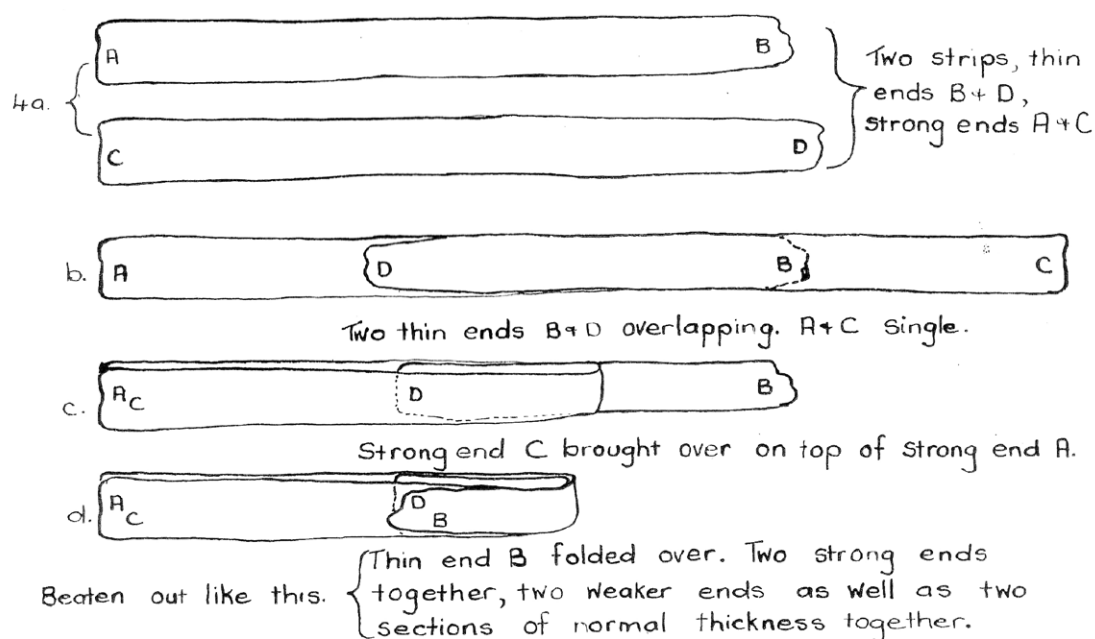


Figure 4

Figure 4: Beating the Bast or *Tutu* before felting together the Strips of the Upper Layer for added strength

move the hand, to maintain the peculiar kind of syncopated rhythm that was effected by all the women beating together. The women are deft too at changing the beater from right to left hand and back again without losing the “beat”. When one or another of them stops to fold or straighten out her beaten bast, she waits to strike at a moment when her blows will fit in again with the others.

The finished pieces, called *feta’aki*, undergo no further treatment before being spread out to dry in the sunshine, either on the grass or on coconut leaves.⁸¹ It might take a day or so in full sunshine before the women are satisfied that they are sufficiently dry to be put away. They like to put the beaten sheets out very early in the morning while there is still dew on the grass, and this slight dampening aids the bleaching in full sunlight. *Feta’aki* sheets are stored away by the women in their own homes, either on the cross planks under the rafters of the houses, or between sleeping mats under the bedding.

Mariner’s description, quoted here, is essentially the same [p. 40] although it lacks the detail that I have been able to supply:

The bark which is from two to five feet long and one to three inches broad, is then laid upon a beam of wood about six feet long and nine inches in breadth and thickness, which is supported about an inch from the ground by pieces of wood at each end so as to allow of a certain degree of vibration. Two or three women generally sit at the same beam; each places her bark transversely upon the beam immediately before her, and while she beats with her right hand, with her left she moves it slowly to and fro, so that every part becomes beaten alike; the grooved side of the mallet is chiefly used first and the smooth side afterwards; early in the morning, when the air is calm and still, the beating of the gnatoo at all the plantations about has a pleasing effect and all with a remarkable regularity. When one hand is fatigued, the mallet is transferred to the other without occasioning the smallest possible delay. In about half an hour, it is so much spread laterally as to be now nearly square when unfolded; for it must be observed that they double it several times during the process. The bark thus far prepared is called *fetagi* which is put aside until there is sufficient quantity to enable them to go on at a future time with the second part of the operation which is called *cocanga*...⁸²

In major outline, McKern’s description is the same. He writes:

The bark was laid across the anvil and the hand dipped in water and shaken over it to dampen it. It was then vigorously pounded with a wooden mallet. One strip of bark was beaten out to the proper thinness, a process which greatly shortened length and increased width. Another piece of bark received similar treatment. The two sheets of fabric like material were next placed upon the other, moistened, pressed together and pounded until amalgamated into a single strip. The finishing process involved folding, beating in this folded position, unfolding and smoothing the creases produced by the folding, by means of additional beating. The sheet is hung up to dry and is called *lau’olunga*. After drying, it is called *feta’aki*.⁸³

It will be remembered that, unlike the present practice, McKern quotes [p. 41] the women as soaking the bark in water after stripping from the wood then drying it out again before storing. He does not mention any resoaking of the bast before beating, only dampening by flicking wet fingers across it. I doubt very much whether it would be possible to beat out dry bast that has had merely a surface dampening. It is essential for the bast to be soft and elastic before it can be satisfactorily beaten. Dry *hiapo* bast would simply separate along the fibres even if enough strength could be continuously exerted to result in an increase in width.

81 Plates 21 and 22

82 Mariner 1818: 276

83 McKern 1921: 632



20. Measuring a second strip to be added to the under layer or laulalo for strength



21. Beaten out sheets or feta'aki lying over the anvil



22. Feta'aki sheets drying in the sun

Koch's account⁸⁴ does not differ in any essential part from those already quoted; however, he does not confuse *lau'o lunga* and *feta'aki* sheets as McKern does.

It appears then, that for the past 150 years at least, the Tongan method of beating out the bast has remained relatively the same. How far this is actually so, would be difficult to assess while so much detail has been omitted by the earliest recorder.

Other Methods of Beating Bast

Kramer's description⁸⁵ of the Samoan method of beating the bast is so brief that it is of little value for comparative purposes. Buck expands it slightly in this way:

The tapapanga bundle, still damp, is placed lengthwise on the anvil and beaten evenly, being opened and refolded several times to beat out the thicker parts in the creases. Though damp, the strips are dry enough to prevent any felting and on opening out bundles, the material from each [p. 42] strip, comes out as a separate and distinct sheet of thin cloth.⁸⁶

The brevity of the descriptions by Williams and Calvert, and by Thompson, make it difficult to discern whether there have been any changes of relative importance over the past 100 years, and what if any relationship the Fijian method might have to those of both Tonga and Samoa. Williams and Calvert wrote: "Two lengths of the wet masi are generally beaten together in order to secure greater strength, the gluten they contain being sufficient to keep the fibre united."⁸⁷

Thompson's description of the Fijian method as distinct from the Tongan method in the Lau Group is: "The bark is beaten on a tapa board with the grooved sides of the mallet first and then with the smooth side to eradicate the water marks. The strips are hung in the house to dry or spread in the sun."⁸⁸

There is a difference in the Hawaiian method as first described by Ellis and later by Buck. Ellis writes briefly:

Each piece is taken singly laid across a piece of wood 12 or 18 feet long, 6 inches square, smooth on top but a groove on the underside, and is beaten with a square mallet of hard heavy wood about a foot in length and two inches wide; 3 sides are carved in grooves or ribs and the other into squares.⁸⁹

Buck records:

The beating is in two stages, first with a round smooth beater on a stone anvil, after which strips are spread in the sun to dry and bleach. The second stage is carried out in a house set aside for the purpose. The strips are [p. 43] soaked in water, beaten lightly to break up the fibres, then left in bundles under banana leaves for a week or a week and a half to mature. The second beating was carried out with squared beaters on a wooden anvil. The matured bundle was beaten out into a rectangular piece of tapa. The beating was finished with a patterned beater, dried and bleached.⁹⁰

84 Koch 1955: 309

85 Kramer 1903: 301

86 Buck 1930: 285

87 Williams 1859: 51

88 Thompson 1940: 195

89 Ellis 1826: 79

90 Buck 1957: 180

Buck is definitely describing a felting process. Ellis's description of the beating of single strips on a wooden anvil would preclude felting, as in fact does his complete description of the particular method which he uses as his type.

The Tahitian method has been described by several early observers not all of whom agree in certain important details. Cook wrote in 1769:

after this is done, it looks like long strips of ragged linnen. These lay together by means of a fine paste made of some sort of root to the breadth of a yard more or less and in length Six, Eight or ten yards or more according to the use it is for, after it is thus put together it is beat out to its proper breadth and fineness upon a long square piece of wood with wooden beaters the cloth being kept wet all the time.⁹¹

Brigham quotes J. Forster as recording in 1773 that: "six women were beating tapa in a small shed... they kept a sticky substance nearby for sticking pieces together."⁹²

Banks, as we have already noted, clearly indicates that retted strips of wet bast are laid out carefully on plantain leaves, two or three layers thick, eleven or twelve yards long, and a foot broad. These were left overnight so that as the water drained off, the pieces would adhere together and could be beaten out into a single felted sheet. The following describes the process of beating:

[p. 44] They lay it upon a long piece of wood one side of which is very Even and flat, which side is put under the Cloth; as many women then as they can muster or as can work at the board begin; each is furnished with a battoon made of very hard wood... about a foot long and square with a handle; on each of the 4 faces of the square are many small farrows of as many different fineness... which cover the whole face of the side. With the coarsest then they begin, keeping time with their strokes... and continue until the Cloth which extends itself very fast under these strokes shews by the too great thinness of the Grooves which are made in it that a finer side of the beater is requisite; in the same manner they proceed to the finest side with which they finish, unless the Cloth is to be of that very fine sort which they call Hoboo which is almost as thin as muslin. For the making of this they double the peice several times and beat it out again and afterwards bleach it in the sun and air⁹³

The differences between Banks' very full description and that of Cook's are an indication of how necessary full description is to understand the similarities and differences between processes in each island group. Cook for instance gives no indication of any maturing of the bast which is the usual preparation for felting, nor does he say that pieces were joined together in a matured state by beating, rather he and Forster seem to indicate that they were joined by pasting.

The picture is clarified, however, if the retting and felting process by which "thin" cloth is made is kept separate from the way beaten sheets of the thin cloth are treated to make the "thick" varieties. Banks goes on to say of the thin and newly beaten sheets:

[p. 45] Each peice is from 9 to 15 yards in length and about 2 and a half broad and serves them for Cloths in the day and bedding at night.... immediately after being beat: it is then stiff as if newly starchd and some parts not adhering together as well as others it looks ragged, and is also of various thicknesses wherever any faults were in the Cloth from whence it was made; to remedy this is the business of the mistress of the family and the principal women of it, who in this,

91 Beaglehole 1961

92 Brigham 1911: 23

93 Banks 1962, Vol. I: 354-55

and dying, seem to spend the greatest part of their time. They are furnishd with each a k(n)ife made of a peice of Bamboo cane... and a certain quantity of a Paste made of the root... called by them *Pea* (*Chaitaea tacca*); with the former they cut off any ragged edges or ends which may not have been sufficiently fixd down by the Beating; and with the Paste they fasten down others which are less ragged, and also put on patches upon any part which may be thinner than the rest, generally finishing their work, if intended for the best, by *pasting a compleat covering of the finest thin Cloth or Hoboo* (hopou) over the whole.⁹⁴

This last pasting process would produce a dual layered sheet of bark cloth as in Tonga. Banks also describes how a fine soft thick cloth can be made from two thin sheets of worn and dirty cloth, simply by resoaking them in the stream, so that when beaten they adhere together to become one sheet as thick as coarse broad cloth.⁹⁵

Confirmation of the continued use of the retting and felting process is furnished by William Smith⁹⁶ writing in the journal of the missionary ship, Duff, for the period 1796 - 1800 and some thirty years after Cook. It would appear then that retting and felting are established as the pre-historic process for making the initial sheets from the bast, but that sheets of two layers were produced both by pasting and felting. Tongan women also felted [p. 46] when it suited them, as in the strengthening of the lower (*laulalo*) sheet by beating in a second, and the felting together of two strips for the top sheets (*lau'olunga*). Both pasted these two sheets together, although the Tahitian also felted thin sheets into thicker ones and used paste to repair thin sheets. Finally, there are major differences in the size of the sheets which result from the beating, so that in Tonga small sheets must be pasted together along the edges to attain the same size of beaten sheet as produced by the Tahitian method, so that while both paste, the process of assembly is quite different.

The Marquesan method as described by Linton⁹⁷ is very similar to that recorded for Hawaii by Buck:

The bark is initially beaten on a stone anvil with a round beater until it is pulp. The pulp is wrapped in leaves, taken into the house and kept for 2 or 3 days, but there is no fixed time which is dependent upon the condition of the pulp. It is beaten out again on a wooden anvil by a square beater, rinsed in fresh water and spread out to dry.

Buck's description of the Cook Islands⁹⁸ process includes two beatings, a modified form of retting and finally joining by felting:

The first besting is done on an anvil with the coarse surface of the beaters on individual strips which flattens them out and brings out the texture of the bark. The strips are then washed in fresh water to remove the sap, salt and any green colouring that may have adhered from the outer bark. The washed material is placed in a rough coconut leaf basket and allowed to drain. The next day the bast is wrapped in leaves for three days. This is a form of retting. The second or final beating was [p. 47] commenced with the medium grooved surfaces. When a number of women were working at one anvil, each put several strips before her, and beat out a section to the required thinness. The edges of the section were overlapped and by a further beating re felted together into one continuous sheet.

94 Banks 1962, vol. I: 355-56 (emphasis added)

95 Banks 1962, vol. I: 355-56

96 Smith 1813: 88

97 Linton 1923: 412

98 Buck 1944: 70

It is difficult to understand why this form of retting was included. Moreover, it is doubtful whether such a process is retting in the proper sense of the term as this applies to a process intended to soften the fibres of the bast by soaking in water, then, sometimes after a light beating, allowing the bast strips to lie in layers while the water drains through them. In this position the strips are left to mature for several days or even weeks, during which time the fibres which have already been broken up by the light beating adhere together in a close mass. When they are ready for the final beating, the pulpy matured layers are beaten out into a single sheet.

For the Cook Islands process however, this is not the intention of the retting process described. There the strips are handled singly during the final beating, the beaten sheets being joined together into a continuous length by overlapping the edges and joining them by felting. This could have been done just as effectively by taking the dry bast that had been separated from the outer bark by “lifting and pulling”, as in the Tongan method, beating it out after a short soaking and felting the overlapped edges together. [p. 48] The edges would have felted just as well. Felting into a complete sheet after retting is a reasonable procedure as one is necessary to effect the other. Dry stripping, soaking and beating out into sheets to be joined into a continuous sheet either by pasting or by felting overlapping edges is also an understandable sequence. But retting as in the first method, combined with the second sequence of methods would seem to have little purpose.

The degree to which comparisons allow one to come to correct conclusions on the methods of beating out the bark-cloth bast employed in different island groups, depends upon the interpretations one is prepared to put on the descriptions by early observers, where these are lacking in specific details.

It would appear from the descriptions I have quoted, that Tongan women at all periods beat out dampened strips of bast singly into sheets. This also is the Fijian method as described by Williams and Thompson, and the Hawaiian procedure according to Ellis. During the beating, Tongan and Fijian (Williams) women felted two sheets together for added strength. Buck's description of the Hawaiian, and Linton's of the Marquesan are the same; that is retting and felting into sheets. Cook's brief description of the Tahitian process and Pritchard's of the Samoan, which is discounted by Buck⁹⁹ are the same: passing of the bast together first [p. 49] followed by beating into sheets. However, they may not be valid, and it is more likely that the Tahitian process is as reported by Banks, retting and felting. The Samoan and Cook Islands procedures both described by Buck are different from the others but closely similar to each other. The bast is left in a dampened state one on top of the other, then beaten out into single sheets for further joining into a complete piece; not beaten into a complete piece by amalgamating the layers.

As some of the observations for the same people do not agree and geographic contributions are not clear-cut, we may conclude that no one Pacific people or groupings of people followed methods distinctive to themselves. Elements which at first sight appear to be characteristic of one area, are on closer inspection, found to be in a degree, depending upon the emphasis the observer has employed in his description, present in all groups.

PREPARATIONS PRIOR TO PIECING *FETA'AKI* SHEETS INTO *NGATU*

The stages in the manufacture of the *ngatu* up to now are generally completed by the women in their own homes, although sometimes when a *kautaha* has a large house (*falekautaha*) with a timber floor, the members will gather there to spread out the sheets for sorting into upper (*lau'olunga*) or lower (*laulalo*) sheets to measure them out into the required lengths, and to do any necessary patching of stem [p. 50] holes. The actual piecing together of the sheets into *ngatu* is a co-operative process carried out by a number of women. This process is called the *koka'anga*.

99 Buck 1930: 296

Before the *koka'anga* begins, the women make several preparations which are carried out by individual women helped by members of her own family including the male members. Sometimes however, women form groups or work as members of a *kautaha*, in which case, the work undertaken is for the special use of the woman who has invited helpers. A woman is responsible for supplying the dyes and sticking agent used at the assembly of her *ngatu*, although here too, there are *kautaha* which own dyes and sticking substances for the use of all its members. Such a store would have been accumulated from an organized expedition in which all the members had taken part. But instances like this are not common as few *kautaha* houses have facilities for storing away an accumulation of bottles and vegetable tubers.

Sticking Agents

The sticking agents used for putting the *ngatu* together are all starchy vegetable tubers. The commonest is¹⁰⁰ *manioke* (manioc, *Manihotesculenta* – Crantz)¹⁰¹ simply because it is the easiest to obtain as everyone grows it for food. As it is a recently introduced plant, it would not have been available in the pre-European period. The older and more effective plant is *mahoa'a* (Polynesian Arrowroot, *Tacca* [p. 51] *leontopetaloides* – Linnaeus)¹⁰² which, is not generally cultivated as a food plant and is therefore more difficult to obtain. Prudent people grow arrowroot so as to have it readily available for *ngatu* making, but most women rely upon wild plants sometimes found growing in seaward plantations. The *misimisi* (*Canna indica* – Linnaeus)¹⁰³ is also utilised and once I saw a group use potatoes that were available when they had run out of arrowroot. They were found to be just as good.

Whatever tuber is chosen, it is boiled in a quantity on the day of the *koka'anga*, until half-cooked, then plunged into cold water. In this state, when the skin is removed, the tuber is soft enough to come away sparingly when rubbed over the *feta'aki*, yet firm enough not to crumble under pressure. Therein lies the weakness of manioc. The half-cooked stage of this tuber is very difficult to judge. It is very hard in texture when not properly cooked, then just when it should be half-cooked and a little softer, it is found to be completely cooked and has no resistance at all to pressure. The result is that it is used a little less than half-cooked while it is still quite hard, and requires considerable pressure to leave even a trace of it on the bark-cloth. This makes it tedious to use, as it is difficult when sitting down, to exert enough pressure to make it effective.

The tuber, although peeled, is left whole. If it dries out too [p. 52] much during use, it is dipped in water to allow it to slide more smoothly over the surface of the sheet.

Dyes for Ngatu

The colours on Tongan *ngatu* are always brown and black on white, the same as Indonesian batik, and I have never seen any other colours but these on bolts of *ngatu*. However, Cook wrote of Tongan *ngatu* dyes: "Their colours are black, brown, purple, yellow and red..."¹⁰⁴ The yellow might be *tavahi* or a pale shade of *koka*. I do not know how the purple was obtained or if it were really a shade of grey produced from sprinkled *tuitui* soot rubbed in with one of the reddish dyes. The Tongan word for grey is *tukumisi*. This is also the word for sea-urchin which exudes a reddish-purple liquid.

The blues of Tahitian and Hawaiian bark-cloth are not used on Tongan *ngatu* and I doubt very much whether they have ever been used. The Tongans have no special word for blue as they have for other

100 Yunker 1959: 165

101 Yunker 1959: 166

102 Yunker 1959: 81-82

103 Yunker 1959: 86

104 Beaglehole 1961, Vol. II: 266

colours used on *ngatu*. Even green is a hybrid word, *lanu mata* which is simply “unripe colour”. Young people sometimes experiment with commercial dyes on table centres or wall pictures which they intend to dispose of as souvenirs, but I have never seen any commercial dyes on bolts of *ngatu*.

The brown which predominates, has a wide range of hues, from [p. 53] a flat almost orange colour, to a rich crimson. The inclusion of a definite red tint might justify the consideration of red as a separate colour, but these hues of brown, although separately identified are considered to be variations of the one colour. *Melomelo* is the all-inclusive colour brown which includes the shades that deepen to red. *Kena* is an orange brown, *kelokelo* a reddish brown, and *kula* is red. Churchward¹⁰⁵ gives the word brown the following Tongan equivalents: *melomelo*, *kula*, *kena*, *kelokelo* or *kekelo*. It is significant that *engeenga* (saffron) which has a similarity to *kena*, orange brown, is not included, yet Tongan children often use *melomelo* for yellow in place of *engeenga*.

The Tongans had a distinct red dye made from an infusion of the root of the *nonu* (*Morinda citrifolia*, L.) mixed with lime water. The yellow root sap becomes red upon the action of the lime water, but lacking experience of this dye, I am unable to say why it is not included among *ngatu* dyes. It is possible that it either faded quickly, or had an adverse effect upon the fabric. Mariner¹⁰⁶ mentions the dye in connection with the colouring of pandanus strips used to decorate presentation yams. The pandanus strips coloured for this purpose would be needed only temporarily. It was used as a yellow dye on Tahitian bark-cloth, however, but not as a red dye.¹⁰⁷ Thus, although the dye was known to them, and the reddish tinges of brown commonly preferred, the *nonu* red never became established as a *ngatu* dye, or was replaced [p. 54] by a better red. The conservatism that restricts Tongans to one red dye also explains the absence of the blues in Tongan bark cloth and the reluctance even at this late period to use commercial dyes. Both Brigham and Kramer spoke of the use of commercial dyes on barkcloth in Hawaii and Samoa during the late years of the last century.

There is only one real black, *‘uli*, that is obtained from the soot of burnt candlenut kernels, called *tuitui* (*Aleurites molucana* – Linnaeus). But any of the brown dyes, boiled until it thickens and darkens, gives a very dark brown that in most cases is indistinguishable from black. Intermittent shades of grey can be obtained by applying more or less black soot to sheets of bark-cloth and brushing it in. The Tongans do not consider these greys as shades of black, although they are obtained through the same medium. They are separately named, *tukumisi* (light grey) and *fulutui* (dark grey). These designations for grey are only used when referring to the grey on *ngatu*, there are other words that express the colour grey in other circumstances. As these colours are only to be found on the special *ngatu ‘uli* (black *ngatu*). I have not included them among colours used on ordinary *ngatu*.

The browns of which I have had any experience are, except for one, all vegetable dyes obtained from the bark of trees. They are *koka* (*Bischofia javanica* - Blume), *tuitui*, the candlenut, (*Aleurites molucana* - Linnaeus) and a mangrove, *tongo* (*Rhizophora mangle* - Linnaeus). [p. 55] A rich reddish brown that is used only on the *ngatu ‘uli* is from *‘umea*, the red brown clay from ‘Eua and Vava‘u. I have heard of villages that get a reddish brown dye from the *‘ahikaulolo* (*Planchonella costata* - Endlicher) and a golden yellowish colour from the *tavahi* (*Rhus taitensis*) but I have never seen either of them prepared. Whether the *tavahi* dye is *engeenga* or *kena* I do not know.

The reason for the variation in hues of brown lies in the fact that the dyes for it are obtained from any of these trees. *Koka* dye which is the colouring agent for most *ngatu* as the word *koka‘anga* would suggest,

105 Churchward 1959: 597

106 Mariner 1818: 187

107 Banks 1962: 359

is a true brown and rather flat in tone. The mangrove dye is reddish and glossy, and the candlenut which is also glossy is almost a distinct red. When the dye is running from the bark under pressure, it is a deep crimson. The *koka* is obtainable in greatest quantity and the other two dyes, which are more difficult both to obtain and prepare, are added to the *koka* sometimes to give it a reddish tinge and a gloss. *Ngatu* which has been coloured with pure mangrove dye is a beautiful glossy, reddish brown. However, *koka* alone is the colouring medium for most of the *ngatu* made and varies from an almost yellowish orange to a dark brown, depending upon the age of the tree, and the use of water to dampen the bark before the juice is expelled.

Equipment for the Preparation of Dyes

To prepare the brown dyes, two pieces of equipment are used, a scraper, *vau koka*, for taking the bark from the tree and a *fau koka*, [p. 56] a specially woven mat. The mat is used to hold the shavings while the juice is wrung from them.

Those scrapers that I have seen, are made from what look like strips of roofing iron, about 1 ¹/₄ inch in width, and 20 inches long. The metal is bent over, the top of the curve hammered out into a circle of nearly 4 inches diameter, and the two ends straightened out for holding together as a grip. The edges of the circular part are filed to give a certain amount of sharpness. It would be useless to attach a wooden covering to the grip, as the constant pulling down while scraping would loosen the nails or whatever was used to hold it on. It is more effective to wrap a piece of cloth or old *ngatu* around the grip to cushion the edges. While nothing has been recorded of the process of obtaining the bark for dyes, and I do not know what was formerly used in place of the metal scrapers, I can only suggest that the most likely means was a shell, and that this is what the Tongan women indicated although none of them has had the experience of using a shell.

The scraper is used by pulling it in strong downward strokes with the circular edge against the tree-trunk, until the bark comes away in thick shavings.

The mat is specially woven for the purpose of extracting the juice from the shavings by pressure. It is a long, narrow mat, made of roughly dressed *fau*, the inner bark of the *Hibiscus tiliaceus* - Linnaeus, and is 18 inches wide and 20 feet long. The two ends of the [p. 57] mat are strengthened by a double weave, and the long strands of *fau* left free at each end, are gathered into each corner where they end in thick strong plaits.¹⁰⁸ With this mat goes a long rope of plaited bark rope, *fau*, used for tying.

THE PREPARATION OF DYES

Preparation of *koka* and candlenut dyes

Koka is by far the commonest of the brown dyes perhaps because the *koka* is such a big tree and a large quantity of shavings can be obtained from a single tree. As well, the *koka* bark is soft and easily scraped from the tree. It gives a rather flat dye, varying in hue from a light golden orange to a dark brown. It imparts little or no stiffening to the *ngatu*. The candlenut bark is much more difficult to take from the tree, but it gives a reddish stain with a high gloss and has definite stiffening properties. The *koka* (*Bischofia javanica*) is one of the larger trees growing in Tonga, standing from 30 to 50 feet in height and with a lower trunk of from 2½ to 4 feet in diameter. It is to be found growing in practically all parts of the Tongan Islands. The *tuitui* or candlenut (*Aleurites molucana*) averages about 25 feet in height, although there are trees of almost 40 feet in height. However, the bark of these older taller trees is so dry and difficult to remove, that it is seldom if ever taken for dye. The candlenut tree, at the stage when the bark is best for scraping, has a relatively slender trunk, rarely more than 20 inches in diameter.

108 Fig. 5a and 5b

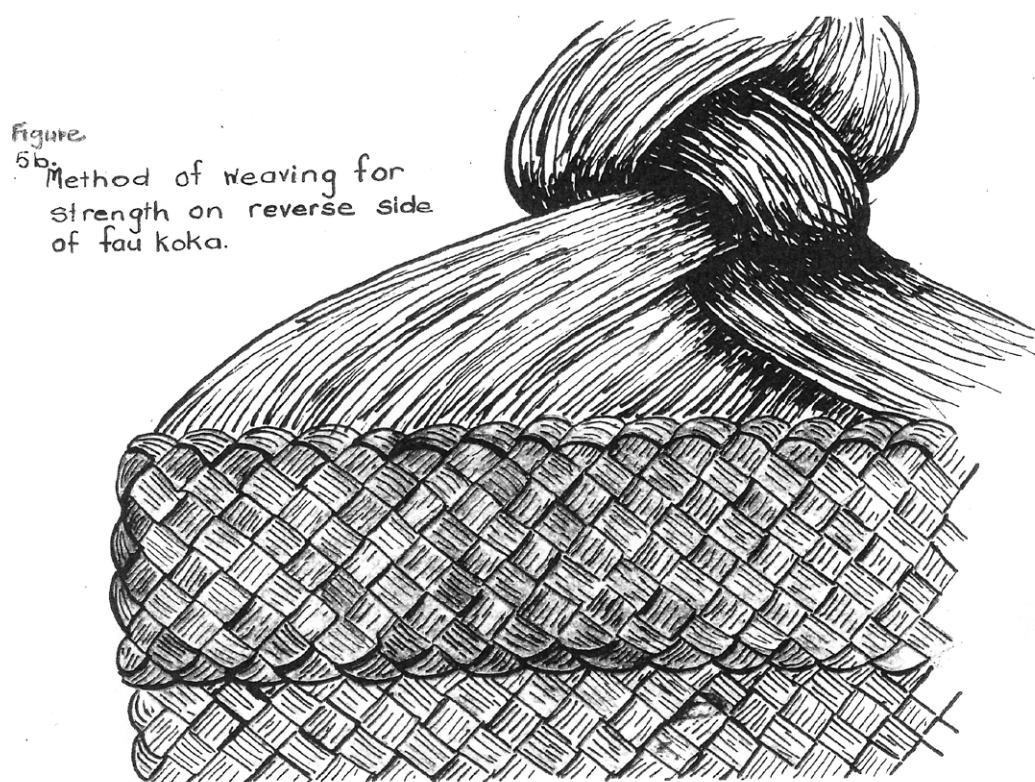
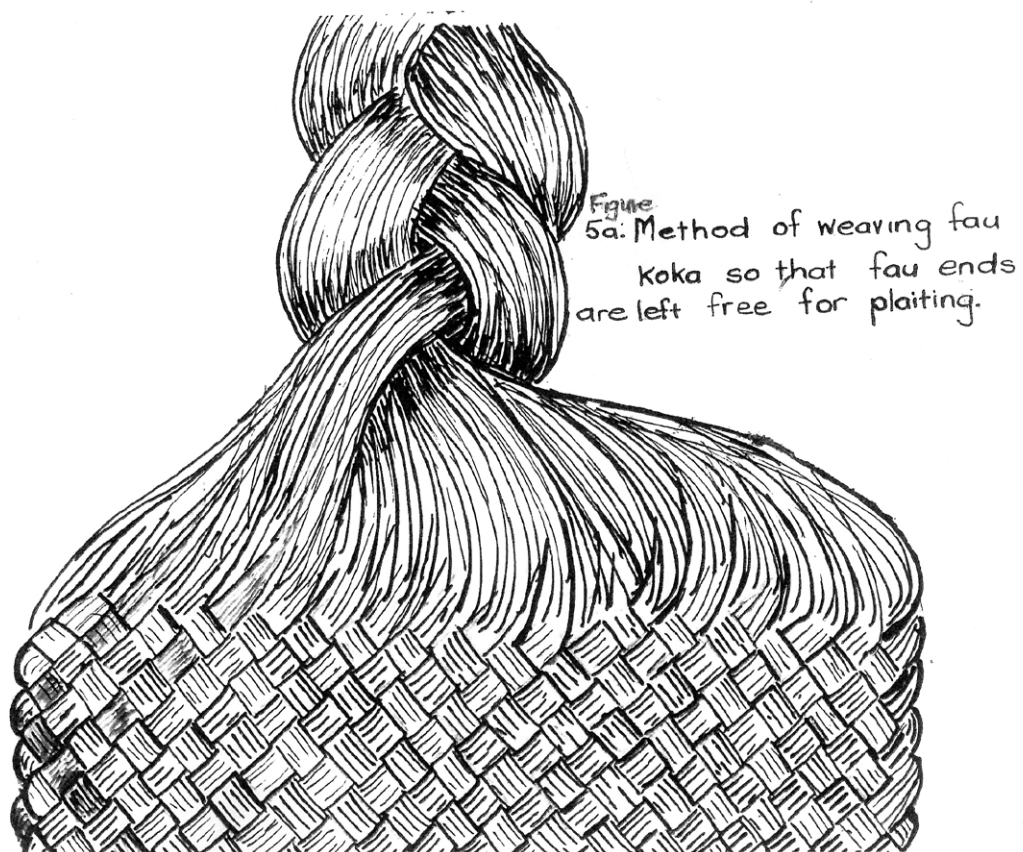


Figure 5: Mat for squeezing out the dye
 a. Method of weaving *fau koka* mat ends for added strength
 b. Opposite side of mat

[p. 58] I watched scraping being carried out on three large *koka* trees (Plate 24). The bark was being taken from the trunks and some of the lower branches. The largest tree had a trunk circumference of almost 13 feet and the two smaller trees circumferences of about eight feet each. The loose dry parts of the bark were lightly tapped or brushed away first, then with strong downward strokes, both the inner and the outer bark were scraped away leaving only the whitish wood of the tree. The bark is fairly soft and not difficult to remove, providing that one can keep up the regularity of the strokes without tiring. It took four youths about three quarters of an hour to strip the main trunk of the large tree as well as the first two branches which forked away from the trunk at about fifteen feet from the ground. From the three trees, seven large coconut leaf baskets full of shavings were gathered. The shavings were moist, and of a light saffron colour with a more reddish tinge to the outside of the inner bark.

In another part of the same plantation, candlenut bark was being gathered. The trees were young and the trunks were scraped only as far as one could reach while standing on the ground. First, the smooth silvery outer bark was removed with the point of a knife. This was slow, tedious work, as the outer bark clings strongly to the tree and can be prised away only in small squares, an inch at a time, to expose the dark red inner bark (Plate 25). The *koka* scraper was then used to remove the inner bark which fell into baskets placed at the foot of [p. 59] the trees. The shavings were drier and thinner than those of the *koka* trees.

Baskets of shavings from both trees were brought together to one place. The boys cut three strong guava tree poles, one with a fork at the top. This forked one was driven into the ground about seven feet away from another *koka* tree, and standing so that the fork was about eight feet from the ground, on a level with the first spread of branches away from the main trunk of the tree. Another pole of the same diameter, was placed across the top so that one end rested in the fork of the pole and the other in the branches of the tree.

A hole was dug in the ground, three feet in diameter and one foot deep, directly under the centre of the cross-bar. Into this a tub was snugly fitted. The *fau koka* or special mat for squeezing the shavings was spread out to its full length on coconut leaves strewn on the ground. *Koka* shavings from which any pieces of dry twigs and leaves had been separated, were put into a large basin and moistened slightly by flicking the fingers over them after the hand had been immersed in water. The shavings were turned over several times by plunging the hands into them, then distributed evenly along the middle of the mat (Plate 26).

Half way down the mat, at one side, there was a hole through which the long *fau* rope was knotted. The sides of the mat were drawn together to overlap each other. One half of the rope was wound around [p. 60] one half of the rolled mat and secured at the end, and the other half was wound around the remaining half. When both ends were tied, it looked like a length of piping (Plate 32).

The mat was looped over the cross-bar with the two ends over the top, and the long plaits of *fau* which had been left at each corner were used to secure the ends together (Plate 34). This left the lower end of the loop hanging about nine inches above the tub. The third pole, slightly shorter but almost as heavy as the other two was placed through the loop. Two boys took an end each, and walked clockwise around the tub, twisting the mat as they went (Plates 27, 28, 29). As it tightened, the reddish brown juice began to run down into the tub. When tightened as far as circumstances permitted, the pole was allowed to swing back and unwind before it was tightened again (Plate 34). To give extra pressure on the last squeezing, two girls sat on each end of the pole, which was pushed around again until the last thin trickle had stopped. The squeezed-out shavings were discarded, and the mat spread out to be filled again. About three and a half pints were obtained from the first series of twistings.



23 Metal scraper or vau koka



24. Scraping trunk of koka tree
to obtain bark for dye



25 Lifting the bark from the
candlenut or tuitui tree



26. Fau koka mat with koka scrapings
distributed down length



27.

Extracting koka or candlenut juice
for dye by twisting mat



28.

Girl sitting on bar for added
weight during extraction of juice



29.

Juice collects in tub under
tightly twisted mat

27. Method of extracting koka and tuitui
28. juice for dye.
29.



30 Boys pounding up dry mangrove or tongo bark for women of Fasi kautaha



31. Dampened pounded mangrove or tongo bark in fau koka mat



32. Mat rolled and tied.



33

Mat secured across cross-bar by plaited fau ropes at corners



34. Twisting mat to extract tongo juice for dye

After squeezing three more lots of *koka*, the two baskets of candlenut shavings which filled the mat once, were squeezed of their juice. These shavings were not dampened with water, but with *koka* juice, and gave a clear red liquid. Another twisting of *koka* finished off the day's work. From the seven baskets of *koka* and two [p. 61] of candlenut, three gallons of dark reddish dye were obtained. Besides giving a reddish tinge to the brown *koka* stain, the candlenut juice would impart a gloss and a certain amount of stiffness.

The *koka* trees recover very quickly and within six months new bark has already begun to darken and harden over the scraped area. The candlenut trees take a longer time to form new bark that will be ready again for scraping.

Because it is difficult work to get the amount of candlenut dye necessary to stain a whole *ngatu* this dye is rarely if ever used alone. However, it is much sought after as an addition to the *koka* stain which lacks gloss and the attractive reddish tinge. Mariner¹⁰⁹ reports that in the period of which he was speaking, the dyed *ngatu* was baked in an earth oven for a time, to deepen the *koka* dye and to counteract the characteristic smoky smell of the *koka* dye. That practice has been discontinued although sennit cord is still baked in the earth oven by some Tongan people. I have seen it after it has been taken from the oven and it certainly deepens in hue to a decidedly red colour. Now the women put the newly stained *ngatu* out in full sunshine for two or three days to darken the *koka* dye.

The Preparation of *Tongo* Dye

The *tongo*, a mangrove (*Rhizophora mangle* - Linnaeus) grows along the shore of the lagoon in the centre of the island and in various [p. 62] other swampy areas near Nuku'alofa.

Its bark is not removed from the tree with the usual scraper as the dry, brittle outer bark is lifted off fairly easily with a knife, leaving the dark red inner bark which can be prised up with the point of a knife and pulled off in strips. These strips actually consist of two layers: a porous, brittle outer layer and a closer textured inner layer. It is much drier than the *koka* bark, therefore easily snapped in two when bent over.

When sufficient of the bark is gathered, it is pounded to very fine chips between stones (Plate 30). The pounded bark is gathered into a large receptacle (usually a washing copper) and dampened by lightly shaking water over it from wet hands. It is turned over several times to ensure that all of it is sufficiently moistened, then left in shade to steep for three days.

The group I watched preparing dye from mangrove bark dye, set up poles in the same way as for the *koka* dye, and used a special mat to squeeze out the juice (Plate 31). From five large baskets, a dark red stain that filled twelve quart bottles was obtained. Because of the greater amount of preparation required, combined with the fact that these mangrove trees are not as plentiful as *koka* trees, *tongo* dye is not as commonly used as *koka*. However, it imparts to the *ngatu* a beautiful red brown colour with a gloss and stiffness similar to that of candlenut dye.

Preparation of the Black Dyes

Black dye is required for two purposes: to delineate the design [p. 63] and decorate the brown on ordinary *ngatu*, and to apply the all-over black for the special *ngatu* 'uli. Dyes for these two purposes are obtained by different methods.

For the decoration of the ordinary *ngatu*, the black dye is not needed in large amounts, as it is not brushed over in the same way as the brown dye is, but painted on only in certain places. Also, the absorbency of the fabric is diminished by the application of brown, so that a second painting of black

109 Mariner 1818: 279

dye moves easily over the surface. The dye for this purpose is obtained by slowly boiling any one of the brown dyes until it darkens and thickens to a syrupy liquid. Nails or small tins of the kind that have formerly contained fish are put into the syrup and left to stand for three to four days. By this time, the stain will have darkened to a brownish black. The longer it is left with the metal in it, the darker will be the hue obtained. Even at very close quarters, it looks black. Although *koka* darkens to quite a good black, both the dyes from the candlenut and mangrove bark have the gloss lacked by the former, and are preferred to black *koka*.

The *ngatu 'uli*, with the exception of certain parts left in brown are coloured all over in black. For this, a black dye is needed in greater quantity. Unlike the brown dyes, it is not obtained from the bark of trees but from soot of burnt candlenut kernels.

The traditional method of making black dye for *ngatu 'uli* [p. 64] is a long and slow process requiring patience and much preliminary preparation, so that only *kautaha* members all working together, or the chiefs who still have many retainers are able to produce it without too much difficulty. As well, its manufacture has always been a sacred (*toputapu*) process with certain restrictions laid upon both those preparing it and the person for whom it is being made.

Because *ngatu 'uli* have a restricted use, being required now only on certain ceremonial occasions, the need for them is not nearly so frequent as for the ordinary *ngatu*. Many of the *ngatu 'uli* now held by women have changed hands in ceremonial exchanges on several occasions. However, there are still some bolts made every year. The ceremony and restrictions attached to the preparation are often discarded, but there is a reluctance among the women to disregard them altogether in case the dye does not “take”. The use of ordinary soot mixed with one of the brown dyes has sometimes been resorted to, but *ngatu* coloured in this manner is easily distinguished. It has not the gloss, adhesive or lasting qualities of dye made from candlenut soot.

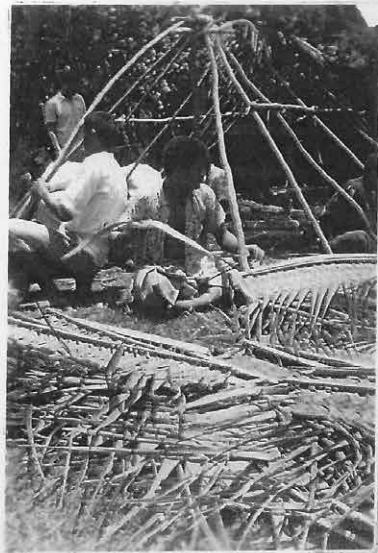
I was fortunate that the women in a group from Fasi in Nuku'alofa decided to make some black dye according to the traditional method when I could watch them. For its manufacture, a separate house (Plates 35, 36), several kinds of plant bark, candlenuts in great quantity and many bundles of coconut leaflet midribs (*tuaniu*) [p. 65] were required. Young boys and little children helped the women with these preparations.

In the middle of the ground space inside the house a square of eighteen inch sides was marked off by pieces of banana tree trunk, and filled with clean beach sand. Three coppers full of candlenuts were put to boil in water. When boiled sufficiently, they were taken out, cooled, and cracked open. The kernels were removed and threaded onto coconut leaflet midribs, from twelve to twenty on each.¹¹⁰

The women who were to make the dye came to the house just before sundown. In an earlier period, women who were designated to make the dye, as well as the chief's wife for whom it was to be made, were expected to abstain from sexual relations for two days before the commencement of the operation. If anything went wrong, they looked at one another or the chief's wife with suspicion.

An old iron pot which they called the “old lady” (*finemotu'a*) was the focal point of the various activities and was used to catch the soot. The root of the small banana tree (*siaine Tonga*) was cut into slices and rubbed around the inside of the pot. This was giving the old lady her “bath” (*kau*) so that she would work satisfactorily for them. The shredded bark from *olongo* (*Pipturus argenteus* – Forster) and *fau'ingo* (*Hibiscus abelmoschus* – Linnaeus) branches were rubbed over the outside of the pot, “oiling her” (*takai lolo*). The dust (*te'e pulu*) that fell from the dried coconut husk fibre as it is [p. 66] teased out was then

110 Plate 37



35 Building special house for making of
black candlenut or tuituidye 36 Another view

37. Candlenut kernels threaded
on coconut leaflet midribs
or tuaniu



38 Burning candlenut kernels under old iron pot
to which soot clings

sprinkled over the pot. The oily juice from the bark caused the dust to cling thickly to the sides and bottom of the pot. This was “dressing her hair” (*fakapipini*). The women felt now that they had done everything necessary to please the old woman; she had been bathed, oiled and her hair dressed. They had only to feed her. Two small crabs (*tafolo*) were put inside the pot for her meal, before it was suspended to the centre of the cross beam of the house, hanging about nine inches above the sand in the square.

Some coconut spathe (*toume*) was lit on the sand under the pot. When it was burning freely, four coconut leaflet midribs threaded with candlenut kernels were placed criss-cross over it. The nut is very oily and burns with a bright hot flame. More midribs with kernels were added, and the flames rose higher, and licked around the pot. Soon there were two loud reports as the crabs burst in the dry heat. The two women were now completely satisfied and settled down to see how the old lady would treat them. The success of the project depended upon whether soot would gather on the treated outside of the pot. If all went well, the thick oily soot would hang in “icicles” from the pot. An unlucky attempt would mean that however many candlenuts were burnt, soot would stubbornly refuse to gather on the pot and the work would be abandoned.

The women covered their hair with sheets of undyed *ngatu* to keep it free from smoke and drifting soot. Long sticks made from the [p. 67] wooden centre of the paper mulberry stem cut on the bias, were used to tend the burning candlenut kernels. They fed the fire with three midribs of kernels at a time, and this kept the flames licking up around the pot (Plate 38). To the women’s great satisfaction, a thick fur of black soot soon gathered on the outside of the pot. As the kernels burnt away, the ashes were scraped to one side and more added. After two hours, the thick fur of soot had increased to such an extent that it hung in lengths of from three to four inches from the sides and bottom of the pot. I imagine that the oiliness of the burning candlenut was responsible for the soot hanging in such long strands. The women now decided to “cut her hair” (*kosi ulu*). The fire was raked to one side, and the pot pulled to the other. They used a stick, cut with a sharp edge, to scrape the soot onto a piece of undyed *ngatu*. There was enough soot to fill a large meat plate, sufficient they said for half of a *launima*.

More leaflet midribs with kernels were fed onto the fire to keep up a steady flame, and in half an hour, the fur began to appear again. At 10:30 p.m., the “old lady” was ready for another “hair cut”. The feeding of the fire and the gathering of the soot went on all night, ceasing at six o’clock the next morning, when it was already broad daylight. The women were well pleased with their work, and decided to let the fire go out. They had been stoking it for twelve continuous hours, and their faces were blackened with smoke and soot.

By custom, women who prepare this dye do not leave their special [p. 68] house until all the work is finished, sleeping during the day and working by night. During this time, they do not bathe and their food is brought to them. Although there was still another night’s burning left to do, the women had work at their homes and eschewed the sleep. They washed their faces because they said that they might frighten their children at home, and unwound the sheets of undyed *ngatu* from their heads. The most they would concede to custom was not to bathe.

They returned after sundown that night, wound the *ngatu* sheets around their heads, lit their fire and took up their vigil once more. During the day, nobody had been into their house or touched anything with which they had been working. The “old lady” was not long in growing a good thick “head of hair”, and so the work went on for the second night. Both women looked very tired and they seemed to be relieved when the candlenuts were used up in the early hours of the next morning. They were then able to stretch out by the ashes of their fire and sleep until daylight. The soot was tied up in the sheets of undyed *ngatu* and the women estimated that there was enough for five *ngatu* ‘uli of *launima* or two *lau tefuhi* and a *launima*.

This black dye is called *fukai tuitui* or sometimes *tuitui 'uli* to distinguish it from ordinary *tuitui* dye. The soot is tied in a small bag made by gathering together the corners of a square of dry coconut leaf sheath (*kaka*). As the sheath is like fine mesh, it acts as an effective sprinkler. The dye is applied to the fabric by [p. 69] sprinkling and rubbing in (*tafi*) with a pad of undyed *ngatu* wrung out in *koka* dye. The amount sprinkled on depends upon the kind of *ngatu 'uli* being made. Some require only a light sprinkling, resulting in the greyish shades while others have a heavy application of soot that gives an all over black appearance.

For one *ngatu 'uli*, the *amoamokofe*, which possesses several non-Tongan features that I intend to discuss later, the candlenut soot is dissolved in *koka* and painted onto the fabric. This appears to be the Samoan method of using black dye, for Kramer wrote: "Wenn man einen schwarzen Rindenstoff machen will, dann mischt man den Russ mit dem Bischoffia zusammen."¹¹¹

The Samoans differ from the Tongans in their treatment of the red clay and *tuitui* soot as dyes. Whereas the Samoan women sprinkle on the clay and rub it in, the Tongan women apply it dissolved and in *koka*, and conversely, whereas the Samoan women dissolve the candlenut soot in *koka* before application, the Tongan women sprinkle it on and rub it in. The exception is the *amoamokofe* which is 'un-Tongan' in appearance.

The close similarity in the methods of preparation in Samoa and Tonga suggest either a common influence on both, or a Samoan-Tongan influence on each other. The Samoans, like the Tongans, attached to its preparation ceremonial prohibitions, and certain mystical conditions for the formation of the soot during the preparations: "So sind ungefähr drei oder vier Leute in Hause beschäftigt wo den Russ gemacht werden soll; wenn man aber die Husse anzundet dann bleibt nur die Person, die die Leitung hat, [p. 70] allein im Hause sitzen, weil sonst de Steins sich nicht beschlagen."¹¹²

Black dye from *tuitui* kernel soot has been recorded for widely separated groups of the Pacific but because, apart from the Samoan and what we know of the Tongan procedure today, no detailed descriptions of the preparation have been included, the direction of influence would be only a surmise. Although Mariner¹¹³ mentions black *ngatu*, he does not include any description of the manufacture of the dye. Writing of Hawaiian bark cloth dyes, Buck records: "Neither Brigham nor Kamakau gives a clear description of the detailed preparation of the dyes."¹¹⁴ This is a pity, for brief though Buck's reference is, it is interesting to note how close it is to the relevant stage in the Samoan and Tongan methods, both of which were possibly known in Hawaii. "The black dye was made by mixing the charcoal powder (made by roasting *kuikui* nuts) with the *kuikui* oil.... Another method was to brush or rub both surfaces of the cloth with a small tapa bag containing powdered charcoal."¹¹⁵

Buck gathered his information from two sources and considering that he himself said that the descriptions of the preparations were neither clear nor detailed, I should not be surprised to find that the *kuikui* charcoal was really soot, and the *kuikui* oil was *kuikui* sap from the bark. It is difficult to believe that the beautiful smooth colouring on the Hawaiian bark-cloth could have come from powdered charcoal which at its finest would still be gritty. The oil [p. 71] used as a solvent would hold the grains separate quite apart from the danger of smudging during the slow drying out of the oil. *Kuikui* oil which is obtained from the nut kernel is very oily indeed. Of greater interest would be indications that ceremonial restrictions were also applied to the manufacture of the dye.

¹¹¹ Kramer 1903: 306

¹¹² Kramer 1903: 306

¹¹³ Mariner 1818: 387

¹¹⁴ Buck 1957: 187

¹¹⁵ Buck 1957: 190

The Preparation of 'Umea

The red clay, 'umea is obtained from both Vava'u and 'Eua, volcanic islands of the Tongan group, respectively north and south of Tongatapu. 'Umea is not found on Tongatapu. The clay is dug from the hills in a moist condition, when it is smooth, very plastic and possesses a certain greasiness. It is rolled into spherical shapes after any small stones or foreign matter have been carefully picked out, and left to dry. When it is required for use, it is pounded to a powder and dissolved thickly in *koka* dye. In this state, it is an opaque, burgundy red.

'Umea, unlike the brown dyes which are brushed on, is painted on. It stiffens and hardens the *ngatu* considerably and is used only for *ngatu 'uli*, where it either alternates with the black dye in a striped effect, forming broad bands at wide intervals down the length of the *ngatu* or is used to colour the borders, when the rest of the *ngatu* is black. It is also used on special funeral *ngatu* as a preliminary wash before the black dye is added. When first applied, the red clay dries with a matt finish, but is not left in this state. Instead, the [p. 72] *ngatu* is spread out to its full length in the sun and brushed over completely with one of the brown dyes. Dyes from the candlenut or mangrove bark are preferred, but most often it is *koka* with a little of either of the other two added. Besides imparting to the fabric a stiffness, which is a desirable quality in *ngatu 'uli*. This final brush over gives a slight gloss to the surface and a brilliance to the red of the clay. It also serves to "set" the black and the red brown clay, both of which tend to powder off when dry.

Comparisons with Neighbouring Islands

Both Kramer¹¹⁶ and Buck¹¹⁷ describe the use in Samoa of red clay, the preparation of which is attended by restrictions and mysticism. The Samoan women shake the powdered clay over the fabric and rub it in with 'o'a dye. Samoan bark cloth coloured with red clay in this fashion displays a beautiful clear red. The opaqueness of Tongan 'umea might result from the kind of clay in Tonga, or the fact that it is applied to the *ngatu* in a much thicker concentration. Red clay is used only on *ngatu 'uli*, never on ordinary *ngatu*. In both Samoa and Fiji¹¹⁸ it is used as a red colouring agent on any bark cloth.

Mariner's account¹¹⁹ records that dyes were made from the soft bark of the 'coca' tree and the 'tooi-tooi' tree, either of which when wrung out without water, yielded a reddish brown juice to be used as a dye. Although he does not mention *tongo*, I doubt whether it is [p. 73] significant or that this brown dye was unknown at the time. Mariner does not mention black dye either, yet there was black dye, for referring to Finau's death he says: "the body was laid on a bale of gnatoos and the house was hung around with black gnatoos reaching from the eaves to the ground." The red dye from the *hea* tree, (*Parinarium insularium*), mentioned by Mariner¹²⁰ was obtained from the fruit of that tree, but it is not used for dye now, although the tree is well known, and the fragrant fruit is used in necklaces.

For Fiji, Williams¹²¹ mentions a candlenut dye but not a mangrove dye, and Thompson¹²² a mangrove but not candlenut dye. Kramer's description¹²³ of the preparation of *koka* is detailed and is the same as the

116 Kramer 1903: 305

117 Buck 1930: 303

118 Thompson 1940: 196

119 Mariner 1818: 278

120 Mariner 1818: 280

121 Williams 1859: 51

122 Thompson 1940: 196

123 Kramer 1903: 304

Tongan method followed today. It is interesting to note that he does not mention the use of *tuitui* dye. The red dye used by the Samoan women was obtained from *'ele* (red clay) mixed with *koka* dye. Buck¹²⁴ too says that the red colouring medium was obtained from *'ele* dissolved in *koka*. Although Buck¹²⁵ quotes Pritchard as recording the use of candlenut bark to make a reddish brown dye, he discounts Pritchard's information by saying that it is not used now, nor do the people ever remember using it.

Candlenut bark gives such a clear reddish brown stain, and was well known as a brown dye in Tonga and even in Fiji early in the last century. Kramer's description of obtaining the red clay shows [p. 74] that it was apparently hazardous because of the magical aura surrounding it and because of the inaccessibility of the sources of clay. If then, considering the amount of intercourse that took place between the groups the Samoans ignored the candlenut bark as a source of brown dye, then there must have been a national preference for the clay. Candlenut trees grew in Samoa at the time that Kramer wrote and grow there today. Kramer's description¹²⁶ of the preparation of black dye includes the reference that as with the Tongans, it was made from soot from burning candlenut kernels. On the other hand it is possible that some Samoan women did use candlenut bark for making dye as Pritchard's records indicate.

From the foregoing observations, it is apparent that the use of these brown dyes had a wide distribution throughout the Pacific area. Little significance need be attached to the mention of the preferences of groups for one or the other dye unless detailed descriptions of the preparation are included. Some relationships might be deduced from similarities or differences in the preparation and equipment used. For instance, Kramer's detailed descriptions of the preparation of brown and black dyes show a close similarity to that of present day Tongan woman, but such detailed descriptions have not been supplied by other observers. Consideration must also be given to the regional differences affecting the cultivation of the plants, and the intensity of the [p. 75] research which investigators carried out.

It is possible for instance that the red *hea* dye spoken of by Mariner, and which is not used now, nor is there any record of its use in Tongatapu, was never a popular dye except in Vava'u, where Mariner made his observations. Mariner adds in the appendix to his book that the *hea* tree is plentiful only in Vava'u and Yunker¹²⁷ confirms this. Nuku'alofa is less than 10 miles from Folaha, but the staining of a bolt of *ngatu* with pure *tongo* in the town would be rare indeed, whereas at Folaha it is the predominant brown dye. These preferences are explained by the availability of the trees. Observers not carrying out specialized research might well record different customary uses of certain commodities which really depend upon what area of the group was being studied.

EQUIPMENT FOR THE MANUFACTURE OF *NGATU*

The *Papa Koka'anga*

The dyes and sticking agents used for the joining of the beaten sheets of bark cloth are expendable and have to be constantly replenished. Two other necessary items of equipment, however, are permanent or can be used for many years before either is replaced. One of these is the *papa koka'anga*.

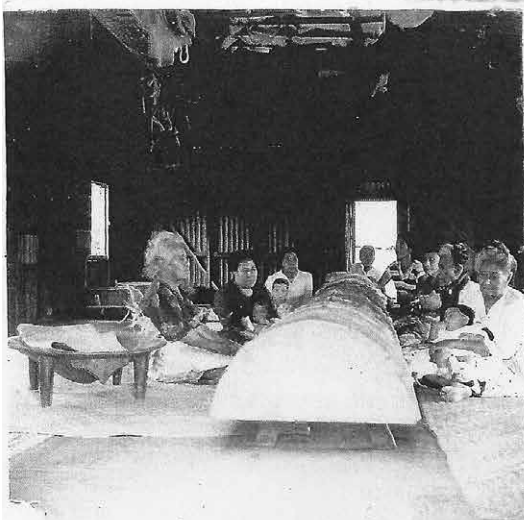
The *papa koka'anga* is the base upon which the single strips of beaten sheets (*feta'aki*) are pieced together into *ngatu*, and stained with dye (Plate 39). It is a half cylinder, closed at both ends, and [p. 76] composed of independent lengths of timber about 15 feet long, attached around the half cylinder ends. Their combined widths form a semi-circular surface of about four feet. The embroidered *kupesi*

124 Buck 1930: 302

125 Buck 1930: 304

126 Kramer 1903: 306

127 Yunker 1959: 128



39.

Long half-cylinder, (papa kaka'anga)
on which ngatu is assembled and dyed.

40. Embroidered design tablets (kupesi)
in place on papa.



41.

Design embroidered on the mat. Type of kupesi
innovation used by Tea Mata Vaka 'o Tongi
kautaha.

which form the design are attached to the half cylinder before the *ngatu* is assembled over it (Plate 40). If tablets are not used, then whatever means is employed to produce the design is composed directly on the cylinder.

Each *kautaha* has at least one *papa koka'anga*, some two, and larger *kautaha* even three. Possessing two, means that if one has a design tablet that was particularly difficult to assemble attached to it, that cylinder can be reserved for *ngatu* that are to be decorated with that particular design. It also means that more than one *ngatu* can be put together at the same time. This is often desirable just before Christmas, when *ngatu* manufacture is at its busiest.

The same kind of base although shorter, was in use in Mariner's time, for he says when referring to design tablets: "they are tied onto the convex side of half cylinders of wood usually about 6 to 8 feet long, to admit two or three similar operations to go on at the same time".¹²⁸ The shortness of the cylinder would not necessarily mean that *ngatu* of that period was much narrower in width for early observers testify to some *ngatu* being even wider than they are now.¹²⁹ Evidently the overturned hulls of canoes upon which bark cloth was pieced [p. 77] together in Samoa¹³⁰ and Fiji¹³¹ were never used in Tonga.

Because the *papa koka'anga* is not needed if the bark cloth is felted into complete pieces, these half cylinders are not widely distributed in the Pacific. However, even when pasting, the Samoans did not always use a half cylinder. Kramer records the use of a curved board when pandanus tablets were used and no base at all if carved wooden design tablets were used. Consequently the distribution of cylinders need not even parallel exactly the distribution of the method of assembling the cloth and applying the design.

The *Kupesi* or Design Tablets

The designs reproduced on Tongan *ngatu* are effected by relief patterns composed in various media. They may be in the form of tablets which are attached to the half cylinder, or they may be assembled directly on the cylinder. The cloth is placed over the pattern, and rubbed over with one of the brown dyes until the relief outlines of the design appear on the upper surface of the *ngatu*. These design patterns are called *kupesi*.

In earlier times the tablets were prepared by women of rank. Mariner said: "The whole of these operations are performed by women: the embroidering of cobecheis or stamps is always done by women of rank".¹³² However, changing social conditions, which came about not long after [p. 78] Mariner's stay in Tonga, influenced the passing of the manufacture of the design tablets from the hands of the women of rank, to those of ordinary women. I have discussed this aspect of change elsewhere in this thesis.

The Embroidered Design Tablets

The most popular form of design tablet used at the present time is embroidered.¹³³ These tablets are rectilinear, triangular, or made in the shape of the particular motif intended for reproduction, e.g. a flower, a star, a necklace in the general shape of a crescent, the Tongan seal or coat of arms, etc. The smaller

128 Mariner 1818: 278

129 Labillardiere 1800: 119: "Two pieces of stuff made of bark of paper mulberry so large that when spread out each would have completely covered two vessels."

130 Buck 1930: 294

131 Williams 1959: 50

132 Mariner 1818: 278

133 See fig. 6 for an example from a *Tokelau feletoa ngatu*.

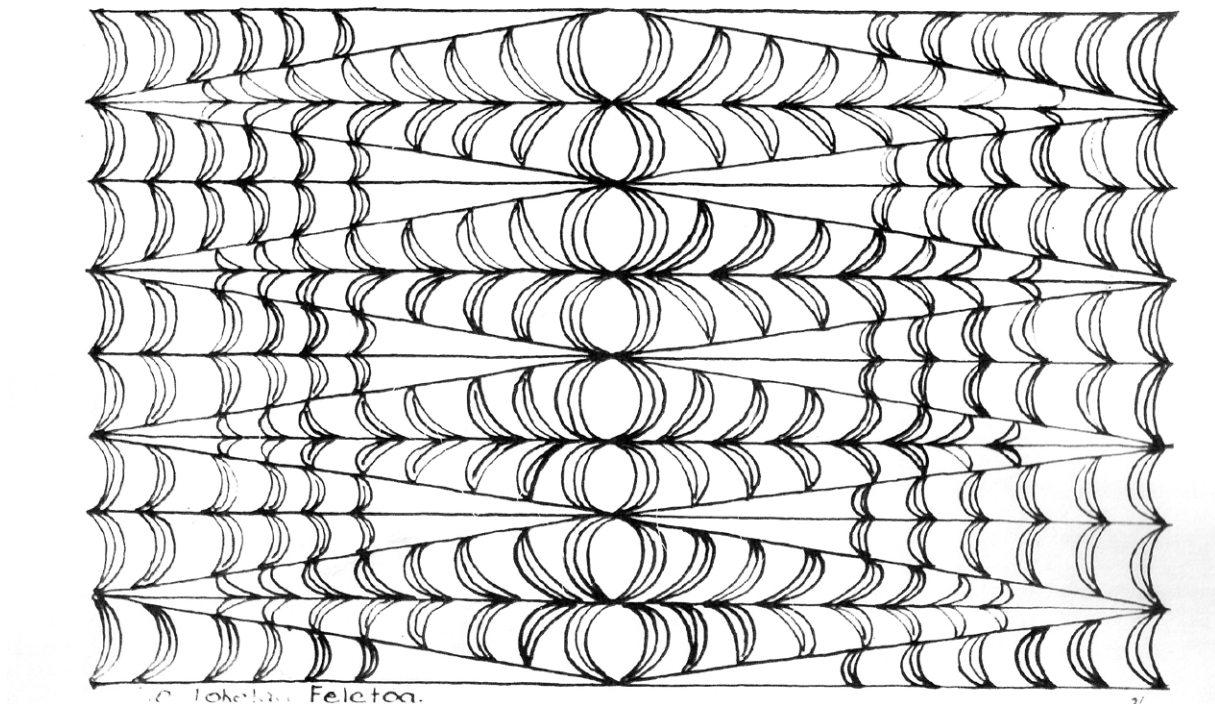


Figure 6: Design tablet or *kupesi* of embroidered type for a *tokelau feletoa ngatu*.

tablets might be no bigger than a hand, while rectilinear and triangular ones vary from one to two and a half feet in length and six to 18 inches in width.

The background on which the design is stitched, is made from the fibrous sheath from coconut leaves, *kaka*, and backed by broad strips of dried pandanus leaves. Sometimes the upper side is of pandanus leaves and the backing of coconut sheaths. The two layers are neatly held together by stitching with *fau*, the inner bark of *Hibiscus tiliaceus* – Linnaeus. Before placing anything on this prepared tablet, it is left for several days between sleeping mats and slept on, with the result that it is perfectly flat and smooth when taken out. The shape and size of the tablet is outlined with a double row of dried coconut leaflet midribs (*tuaniu*) which are stitched in place, after which the design is set out within this area. Midribs in a pliable state, that is, taken freshly from the coconut leaves are [p. 79] used to form the design. As they are placed in the desired positions, on the base, they are stitched down with single threads of the coconut fibre (*kafa*) taken from the inside of the husk. Preliminary stitching at wide intervals may be made with *fau*. Narrow strips of pandanus are sometimes used instead of midribs. The strips are arranged on the base, then stitched to it by threads of coconut fibre that are taken at regular intervals completely across the strips. When the design comes out, on the *ngatu* the stitching as well as the arrangement of the pandanus are reproduced. The *longolongo* design is made in this way. When the stitching is completed, the unwanted part of the background, outside the boundary rows is cut away.

If the tablets are large enough and regular in shape, they are attached to the cylinder by undyed strips of bark cloth stretched along the edges and overlapping onto the cylinder. The overlapping piece is rubbed with a sticking agent and pasted to the cylinder. By this means the tablets are held firmly in place. If small, irregularly shaped tablet units are used, they are covered completely by pieces of undyed *ngatu* and attached along the edges to the cylinder.

The embroidered tablet *kupesi* is the only one mentioned by Mariner: "The cobechei or stamp is formed of the dried leaves of the paongo sewed together so as to be of sufficient size, and afterwards embroidered

according to various devices with the wiry fibre of the coconut husk.”¹³⁴ However, there must have been others, for the stripes on the *ngatu* ‘uli [p. 80] mentioned by Mariner¹³⁵ when describing a funeral would not be produced by means of an ordinary tablet. It is likely that they were effected in the same way as they are now.

Both Mariner and McKern record embroidered *kupesi* of one shape only, rectilinear. Mariner¹³⁶ describes the *kupesi* as being two feet long and a foot and a half broad. McKern’s *kupesi* are less than three feet long and about two feet wide.¹³⁷ He might have been mistaken in his estimation of two feet for the width as that would produce a *langaanga* or division of the *ngatu* length of at least 24 inches. I have measured a great many *ngatu* from widely separated areas and have never found a *langaanga* longer than 20 inches and the great majority are about 18 inches.

The Samoans use an embroidered tablet made in the same way as the Tongan embroidered *kupesi*. Buck¹³⁸ says that some of these tablets were still in use at the time he was in Samoa, but they were being replaced by the board ‘*upeti* (tablet) on which the design was carved out in relief. Kramer¹³⁹ records that both the pandanus and the wooden ‘*upeti* were in use during the period he was in Samoa.

In his work on the arts and crafts of the Cook Islands, Buck wrote: “Dying frames were said by natives to have been used by natives in Aitutaki. Dried coconut leaflet midribs were tied in parallel lines and then the frames pressed down on the cloth.”¹⁴⁰ He stresses the point that the design was not produced on the bark [p. 81] cloth by the Tongan or Samoan method of rubbing it out, but by stamping after dye had been applied to the frame. Later he mentions how Brigham had made a wrong identification of a piece of cloth, said by him to have been collected in Rarotonga.¹⁴¹ Buck identifies the same piece of cloth as coming from Tonga or Samoa, where the ‘*upeti* tablet was used. He also adds that Brigham made the additional error of assuming that rubbing on an ‘*upeti* tablet was done in Rarotonga. Even after a close examination of a Tongan embroidered *kupesi* that has been in use, it would be little short of impossible to tell whether it has been set under the fabric and rubbed over with dye as is the practice today, or whether it has itself been rubbed with dye and applied to the cloth as a stamp. After being in use for even a short time, the dye sinks into the *tuaniu* and sewing threads, and many *kupesi* are black with the application of dye through the fabric. While it is possible therefore that Brigham was correct in attributing this practice to Rarotonga, in this instance the use of a *longolongo* design on the lower border indicates that Buck is probably correct in assigning this place to Tonga.

The embroidered tablet is used in Fiji today¹⁴² and may have been in use there for some time. Hambruch attributes the invention of the embroidered tablet to Tonga and traces its diffusion from there as far as Tahiti: “Tonga gilt als Erfuderin der Drückmatrize. Fidji, Samoa [p. 82] auch Tahiti haben es von den Tonganern übernommen.”¹⁴³ It seems likely that the preparation and use of the tablets could have been acquired by the Aitutaki women in the same way.

134 Mariner 1818: 278

135 Mariner 1818: 387

136 Mariner 1818: 287

137 McKern 1921: 637

138 Buck 1930: 306

139 Kramer 1903: 301

140 Buck 1944: 74

141 Buck 1944: 431

142 Thompson 1940: 198

143 Hambruch 1925: 41

Whether it is indicative of the conservatism of the Tongan people or the fact that the preparation of the tablets has always been women's work, the wooden tablet has never been used in Tonga. Tongan women are not great exponents of wood crafts, and I doubt whether there is a Tongan wood both soft enough to be carved effectively yet hard enough to withstand wood termites, even if men could be persuaded to prepare them, or the women to learn wood crafts.

The reason given for the change over to the wooden '*upeti* in Samoa is that they are more durable, but the Tongan embroidered *kupesi* is remarkably long lasting. Taken care of, and Tongan women take great care of their tablets, they will last many years even when in constant use. It is not unusual for them to be still firm and strong after 20 years of use, and some *kautaha* still regularly use tablets made in the early years of the century. Not many woods would survive the ravages of white ants that long.

Woven Tablets

Two¹⁴⁴ very old designs are made by weaving thin slats of a mangrove tree (*Rhizophora mangle*) together. The slats are not more than three sixteenths of an inch wide and at least 120 of them are required to [p. 83] complete a pattern. The slats are woven together in a distinctive fashion so that the design produced upon the *ngatu* is dependent on the horizontal slat effect and the twist of the weaving running across them. Although of the same width, these *kupesi* are longer than the embroidered ones averaging about three feet in overall length.

This type of tablet is used less than the embroidered kind, probably for several reasons. Greater skill and time are required to prepare them, therefore they are not commonly held by the *kautaha*. Time was not an important factor when all tablets were made by the women of rank but now that this part of *ngatu* manufacture is carried out by ordinary women, they prepare those with which they are most familiar and which they can do most quickly. Also, the secondary schools teach girls how to make embroidered *kupesi* but woven *kupesi* were not specified as part of the teaching programme during the eight years I was in Tonga.¹⁴⁵

Although woven tablets provide traditional designs of high ceremonial value, the economy of decoration lessens their appeal to present day Tongan women, who find decorative designs from embroidered tablets more attractive. The embroidered tablets too, often have personal significance for the women using them. Since the advent of writing, they have incorporated words or groups of words in their designs, and many of these inscriptions have family or lineage [p. 84] associations but writing was included only after women of rank were no longer solely responsible for *kupesi* designs. The earlier traditional designs, whether represented on embroidered tablets, or in some other media, do not have inscriptions attached, even if new tablets for these designs are made. However, although the Tongan women find many of the traditional patterns too austere for ordinary use, they often use them as backgrounds to others' designs.

The woven *kupesi* appear to be confined to Tongan women, although the idea of narrow grooving as a form of decoration is common in the Pacific.¹⁴⁶ McKern mentions the woven tablet as a form of design reproduction, but does not call it a *kupesi*.

144 *Ve'etuli* and *tatau u'isipa*. See pattern section.

145 In 1955, Alisi Sipu who was examiner for the Education Dept. set down the *tatau tu'isipa* to be made by the Higher Leaving Certificate girls. However, the tutors mistook her intention and made actual *tatau tu'isipa*, the article represented by the *kupesi*.

146 McKern 1921: 650

Cordded Tablets

Cording wound around the half cylinder in two distinct ways is responsible for two *kupesi* that are traditionally suitable for presentation to people of rank (*ngatu 'eiki*). One of them is perhaps the most widely seen Tongan decorative pattern, if not for itself then as a background for other designs. One, a pattern that produces parallel cord impressions down the length of the *ngatu*, is assembled by winding corded strands of coconut husk (*kafa*) at close intervals, in a continuous length either backward and forward or completely around the cylinder.¹⁴⁷ The other design is produced by winding the cord diagonally on the cylinder.¹⁴⁸ In both cases, the whole of the area [p. 85] of the *ngatu* which is to be dyed is covered with this parallel winding.

The instrument of cordage was originally *kafa*, the sennit cord rolled from coconut husk fibre. However, cording like fishing line has become very popular, as it is easily obtained from the stores. Some *kautaha* that have more than one cylinder leave the cording on it, even when the particular design is not required, and use it as a background for other designs. Embroidered tablets are put over it and the parallel lines behind the unit tablets increase their appeal.

McKern¹⁴⁹ mentions both tablets made with cording. Koch probably saw half cylinders with twine wound around them for *pangai kafa*, the vertically wound design, used as a background for other designs. He thought this was the usual preparation of the cylinders for all designs, for he writes: "The drum¹⁵⁰ is first wound around by the women with coconut fibre cord, over which pieces of raw tapa (*feta'aki*) are placed and over these, the printing blocks (*kupesi*)".¹⁵¹

Neither Kramer nor Buck write of the corded tablets for Samoa, but many designs shown in Brigham's book on Hawaiian bark cloth show tapa decorated by the Hawaiian "lining method" which are very like *ngatu* bearing Tongan corded designs. Plates S2, Q, R are all like *pangai kafa* and plate 0 is like *pangai kafa* and *hemehema lautoa*, the diagonally corded design.

Buck describes "cord snapping" as a method of decoration in Hawaii: [p. 86]

The cord was dipped in dye, the two ends held taut over white tapa, lifted in the middle and snapped back onto the cloth. This resulted in a coloured line on the tapa showing the oblique twists of the cord, which was termed a *kaula kakau* (*kaula* rope, *kakau* to imprint).¹⁵²

Although Buck¹⁵³ considers this method of decoration was a purely local development, he also adds that Brigham "was inclined to think that the trick was borrowed from the foreigners". It is not clear as to whether the "trick" refers to the snapping of the cord or the impression it produces, but the same type of decoration has been used Tongan *ngatu* for a very long time. Churchward's Tongan Dictionary gives only one meaning for *pangai* "a place where king or queen usually receives visitors",¹⁵⁴ but the meaning of *kafa* is clear enough. It might be that an archaic meaning for the word *pangai* has been lost, and some reference to the method of applying the *kafa* lines, was intended in the appellation.

147 Fig. 7a.

148 Fig. 7b.

149 McKern 1921: 650

150 I am not sure whether or not Koch actually used the word [presumably word] *drum* as I have read only a translation of his work. If so it is a poor definition of *papa Koka'anga*. I would think it more likely that it was a poor translation.

151 Koch 1955: 310

152 Buck 1957: 191

153 Buck 1957: 191

154 Churchward 1959

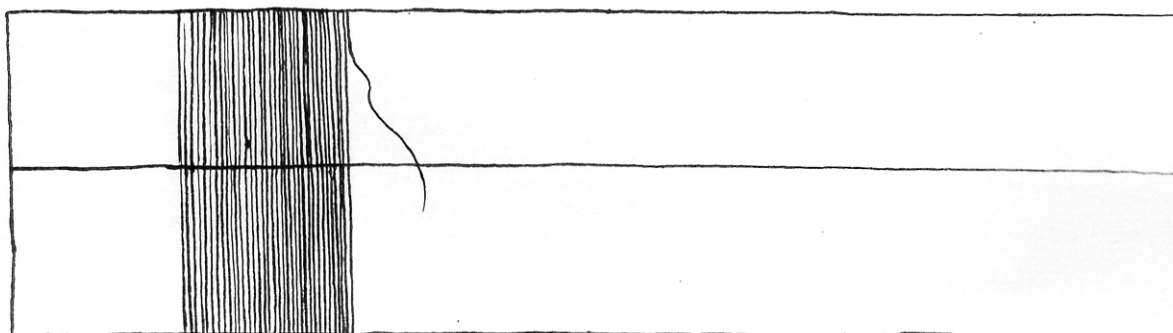


Fig 7a. Pangai Kafa.

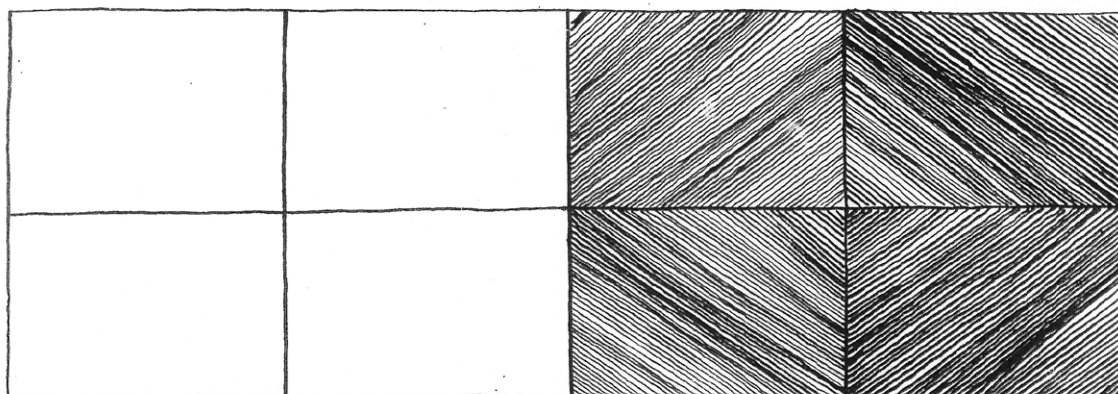


Figure
7b.

Hemehema
loutoa.

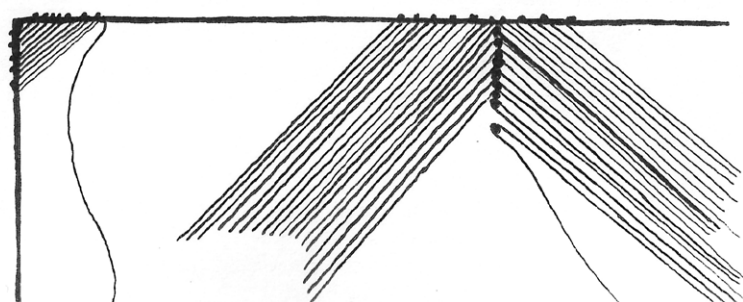


Figure 7: Method of preparing a cord winding *kupes* or design tablet on the half cylinder or *papa koka'anga*
a. The desing tablet for *pangai kafa*
b. The design tablet for *hemehema loutoa*.

Palalafa (Coconut Leaf Midrib) Tablets

This type of tablet is assembled directly on the half cylinder. Sometimes it covers the whole surface and sometimes it is used in conjunction with embroidered tablets. One of the best known designs not only in Tonga but throughout the Pacific, the *manulua* is produced with a *kupes* like this. The *amoamokofe*, not so well known, but very striking is also assembled with coconut leaf midribs.¹⁵⁵ Both [p. 87] of these are *ngatu* 'eiki designs. Coconut leaf midribs are used in many other designs, some of them of recent composition.

Quarter inch wide strips of coconut leaf midrib, *palalafa*, are used to set out the pattern. This midrib should not be confused with the leaflet midrib, *tuaniu*, which is round and almost needle-like in its proportions. The *palalafa* strips are obtained by removing the midrib of the palm, and splitting it longi-

tudinally to a thickness of about one inch, then dividing it into quarter inch wide lengths. The coconut leaf midribs, unlike the leaflet midribs, are brittle even in a green state, so that the designs are generally composed in linear arrangements. When the positions of the midribs are decided, they are secured in place by raw strips of bark cloth that cover them entirely and are pasted to the cylinder.¹⁵⁶ The strips are prominent enough to produce the intended design when the overlaid cloth is rubbed with dye. If the *palalafa* strips are the outlines of the design itself, then the fabric is rubbed over firmly and a second application of dye painted over the impressions produced. Sometimes the midribs are intended as guide lines to a design. In these cases, the preliminary rubbing is only lightly done to ascertain the positions of them between the strips.

McKern mentions the midrib strips used for the *manulua* design: "This *kupesi* substitute is fashioned of splints of coconut leaf [p. 88] midrib... bound in place by small twine. These elements called *palalafa* entirely covered the surface of the *papa* with a raised geometric pattern."¹⁵⁷

The *palalafa* is not a substitute, it is a *kupesi* of a distinctive type. Tongan women speak of any medium placed on the cylinder to produce a pattern as a *kupesi*. Churchward's definition of *kupesi* is "stencil like contrivance used in making patterns on tapa cloth (ngatu)".¹⁵⁸ I am not sure how the midribs would be attached to the cylinder by means of twine, and have never seen it attached this way.

The *palalafa kupesi*, as far as I have been able to ascertain, appears to have been confined to the Tongan and Fijian women.¹⁵⁹ Williams wrote:

Upon a convex board, several feet long are arranged parallel at about a finger width apart, thin straight strips of bamboo ¼ inch wide. By the side of these, curved pieces, formed by the midrib of the coconut leaflets are arranged.

Over the board thus prepared, the cloth is laid and rubbed over with a dye obtained from the *lauci* (*Aleurites triloba*).

The bamboo was used in Fiji where it was more abundant than in Tonga, but whether the bamboo was a substitute for the coconut leaf midrib, or the midrib for the bamboo is not evident.

Other Means for Producing *Ngatu* Patterns

Tongan women sometimes use single strips of pandanus specially woven to give a half-diamond or toothed effect. They are generally used in conjunction with the embroidered tablets. The pandanus which is called *numi* when woven, is attached to the cylinder in the same way as [p. 89] the coconut midrib strips, but whereas the midribs define areas where the dye is to be concentrated, the *numi* are intended to produce the outline of their own form.

The *kupesi* patterns were once arranged so as to cover the whole cylinder, and embroidered tablets, like the woven kind were rectangular in shape and of a regular size so that a known number fitted over the whole area. The corded tablets as with the coconut midrib arrangements were set on the cylinder to cover it completely.

¹⁵⁶ See *kupesi* being prepared for *manulua* and *amoamokofe*.

¹⁵⁷ McKern 1921: 649

¹⁵⁸ Churchward 1959: 276

¹⁵⁹ Williams 1859: 649

Through the years, the shape and size of the embroidered *kupesi* have altered a great deal and the triangular tablet has evolved. Motifs that were formerly incorporated on the rectangular tablets are now made as independent units so that many of them are quite small and of a variety of shapes. Instead of a set number of rectangular tablets placed side by side on the cylinder so as to cover it, these smaller *kupesi*, which are in reality the units of a single rectangular tablet, are arranged in various positions on the cylinder.

The introduction of the small “unit” *kupesi* has suggested the need for backgrounds to tie the separated motifs together. The most often used is the *pangai kafa* corded design. A cylinder that has been wrapped with cording for a *pangai kafa ngatu* is used, and the unit tablets arranged over it. A well-known triangular tablet, *Fakamalu ‘o Katea* is arranged on a *pangai kafa* background. The *ve‘etuli* woven tablet is also used sometimes as a background. Mats are next in popularity to the *kupesi* already mentioned as a means of providing [p. 90] background, the pattern of the weaving forming an attractive setting over which tablets are laid (Plate 41). I have even seen a design made by embroidering the pattern straight on to the mat.¹⁶⁰ In place of leaflet midribs to provide the outline for the pattern, corded sennit braid is sewn directly to the mat. Fishing net is also used as a background and even fine wire netting.

The need for background arrangements are only required with unit *kupesi*, and these stencils are a recent introduction associated with the transfer in manufacture of tablets to the ordinary women.

THE KOKA‘ANGA OR ASSEMBLY AND DYEING OF NGATU

The Assembly Process

The piecing together of the separate sheets of raw bark-cloth (*feta‘aki*) to form a continuous length is a co-operative operation. During the same operation, the decorative designs in various dyes are added to the fabric. Because *koka* is by far the most frequently used dye, this stage of *ngatu* manufacture takes its name from it, *koka‘anga*, which can be loosely translated as ‘the adding of the *koka*’.

The women work together in their *kautaha* groups, or in the case of a woman who has not joined a *kautaha*, with the group which has agreed to help her.

The *ngatu* is composed of two layers. For the bottom layer, two *feta‘aki* sheets are placed so that their length runs from end to end of the half cylinder (Plate 42). This layer is called the *laulalo* [p. 91] (Fig. 9a). The upper layer is formed by sufficient sheets, generally five in number, to cover completely the under layer. The upper sheets are placed side by side transversely to the cylinder and at right angles to the underlying sheets (Fig. 9b), and are added to continuously as the joining of new pairs of *laulalo* sheets requires (Fig. 9d). The upper layer is called the *lau‘olunga* (Plate 43).¹⁶¹ Thus *laulalo* or under sheets run parallel to the width of the *ngatu* and the *lau‘olunga* or upper sheets parallel to its length. The *ngatu* is made by sections, each section being called a *langanga* (Fig. 9c). One covering of the cylinder with two under sheets is equal to two *langanga*, a raised line down the middle from end to end of the cylinder forming an indication of the division between the two sheets (Plate 45).

Each *langanga* is divided in half by a continuous line which runs down the centre of the length of *ngatu*. Like the raised line which marks off the separate sections, this line is fixed by a length of sennit cord which is attached transversely across the cylinder and crosses the other at right angles. Each half of a *langanga* section is called a *maaukupu*.

160 See preparation of *papa koka‘anga*, plate 61

161 A literal translation of the word *lau‘olunga* is “top layer”. McKern was probably confused when he wrote: “The sheet was hung up to dry and was called *lauolunga*. After drying it was called *feta‘aki*.” (1921: 632).

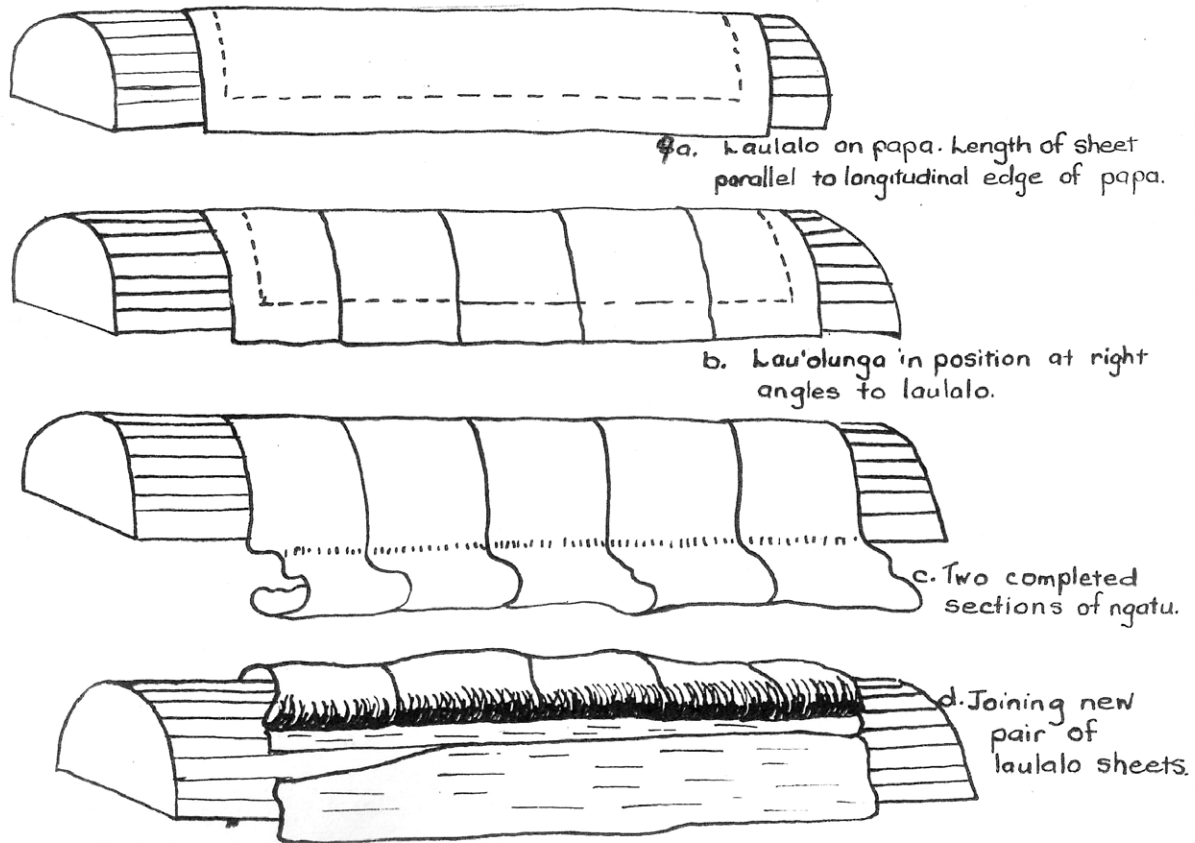


Figure 9: The normal (*hangatonu*) method of assembling ngatu by placing the Upper and Lower sheets at right angles to each other on the half cylinder

- The Lower or *laulalo* sheets on the cylinder with their length parallel to that of the cylinder
- The Upper or *Lau'olunga* sheets in position at right angles to the Under sheets.
- Two completed sections or *langanga*
- Joining new pair of Under sheets to assembled sections.

The women place the design on the cylinder so that it is perfectly balanced in each half section. One side of the cylinder has the complete pattern attached to it, and this is either repeated on the other side, or arranged in opposite positions. Consequently, the stencils required for any particular design must be in duplicate. [p. 92] Sometimes with very long *ngatu* there is a complete change of *kupesi* after so many sections. The original design is repeated after an equal length of the second design has been printed. The designs alternate until the required length of *ngatu* has been completed.

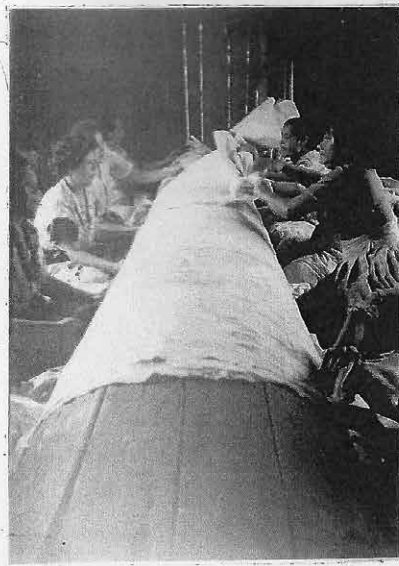
Ngatu are made in lengths containing certain numbers of *langanga*, and in the usual kind of *ngatu* which is intended to be eventually cut up for use, the sections are numbered along the side borders. Lengths of 50, 100 or more may be kept intact for ceremonial presentations and exchange, or pieces cut off for use as required. The women have tables in which the lengths suitable for cutting are named. The following table is the one followed by the Fanamaka *kautaha*, but in the main, it is the same as others used throughout Tonga:

1 – 6 <i>langanga</i>	<i>Fola osi ma'ama'a</i>
1 – 7 <i>langanga</i>	<i>Fola osi mamafa</i>
1 – 8 <i>langanga</i>	<i>Fata ua ma'ama'a</i>
1 – 10 <i>langanga</i>	<i>Fatu ua mamafa</i>
1 – 50 <i>langanga</i>	<i>Launima or fatu valu</i>



42.

Under layer (laulale) on papa.



43. Top layer (lau 'olunga) on papa.

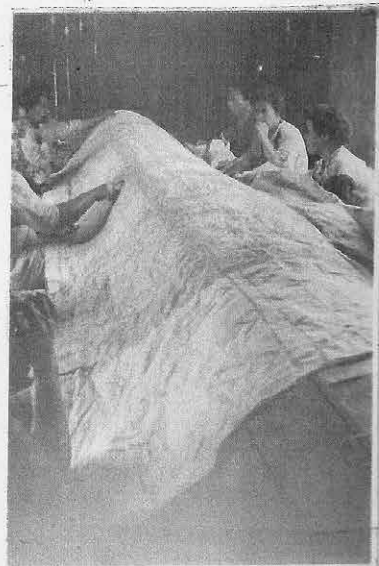


44.

Fastening down lau 'olunga.



46. Adding a further pair of laulale sheets.



45.

Two sections of nxat completed.
(two langanga)

1 – 30 <i>langanga</i>	<i>Lautolu or fatu fa</i>
1 – 40 <i>langanga</i>	<i>Laufa</i>
1 – 100 <i>langanga</i>	<i>Laufefuhi</i>
1 – 150 <i>langanga</i>	<i>Fatu hongofulu</i>

It is not usual to give as a gift, a piece of *ngatu* of less than eight sections, which is called a *pelu ua*, that is two folds, four in each. However, for use, any number of sections required may be cut from the bolt.

The width and length of *langanga* vary. I have measured many *ngatu* and the sections have exhibited widths (including the borders) from [p. 93] 12 to 14 feet, the majority being from 13½ to 14 feet. Although these overall widths are common, the width of the borders varies from as much as eight to 18 inches. This means that the width of the actual area dyed is anything from 10½ to 12½ feet. The length of each section varies from 16 to 20 inches, the greatest number being between 18 and 19 inches.

The reason for the wide variation in length and width of *langanga* lies in the unit of measurement used by Tongan woman when measuring out the area on which the tablets are to be placed. While this unit is the handspan, it is not the usual handspan. It is produced by spreading out the hand in the usual way, thumb-tip to middle finger-tip, then bending over the hand onto the fingers and putting the thumb-tip to the middle finger knuckle before spreading out the fingers for the next span. This adds an extra length to the normal handspan of the distance from fingertip to knuckle. As there are a set number of handspans to the length and breadth of a section, it can be seen that a woman with a small hand will measure out a smaller area for the placing of the stencils than a woman with a bigger hand. A woman who can spread her hand flat upon the cylinder is described as being *nima mafola* (spreading hand) and such women perform this service for *kautaha* who ask her. Thus, several *ngatu* each of 50 *langanga* but made by different *kautaha* would possibly be of quite different total length.

[p. 94] When the first half section is measured and the centre line ascertained, a strip of raw bark-cloth or a length of string is used to take the width of the half section, in order to repeat it exactly on the second half. Once the cylinder has been measured, sennit cord is attached to indicate the bounding lines. It seems to be an indication of the extreme conservatism of Tongan people in some things, that although a measuring tape is used quite commonly [used] in dress-making, the same women do not use one when measuring out the cylinder.

Women generally work in groups of from 10 to 16, placing themselves in equal numbers on either side of the half cylinder. The older, more experienced women are at the ends where they have not only their own part of the *ngatu* to brush over with dye, but must also see that the layers are kept straight at the edges, as well as being responsible for any freehand decoration of the borders. This last includes the numbering of the sections.

Under sheets are joined together beforehand, so that the cylinder is covered by two *langanga* sections at a time with the sheets running lengthways of the cylinder and over the top of the tablets. An area not over the stencils but covered by the under sheets is marked off at each end of the cylinder and defines the uncoloured borders. As the undersheet on the side of the cylinder that carries the first section of the *ngatu* is 10 to 14 inches wider than the one on the second side, it leaves an extra width off the cylinder which will form [p. 95] the uncoloured border at the beginning of the *ngatu*. This border is called the *tapa mua*.

The women on the first side of the cylinder have bundles of upper sheets within easy reach, while those on the other side have the under sheets lying out at full length between themselves and the cylinder. When the pair of under sheets are placed to their satisfaction, each of the women squeezes the excess brown dye from a folded piece of raw tapa and lightly rubs it over the area of fabric within the sweep of her arm. The raised pattern of the stencils shows through indistinctly. She then takes the half-cooked tuber which she is using as a sticking agent, and rubs it over the same area, not covering

it thickly but paying particular attention to the edges. If any of the fibres have loosened during the rubbing, then an extra dab is given to that part.

Next, upper sheets are taken by the women on the first side. As each sheet is from 30 to 40 inches wide, at least five pieces are generally necessary. The sheets are placed transversely across the under sheets and slightly overlapping at the edges, so as to cover all of the under sheets that are on the cylinder. Usually, upper sheets are at least eight feet long so that as the lengths are passed across the cylinder to the women on the other side, they have to roll them back. By doing this they can get a firm grip enabling them to pull the sheets tightly and smoothly over the under sheets, while keeping [p. 96] the overlap along the edges. The women use their pads dipped in dye to rub over the two layers which are now held together by the sticking agent. At the same time, the tubers held in their left hands, are rubbed along the overlapping edges to keep the upper sheets in one complete sheet (Plate 44). The pads, replenished with more dye if necessary, are again rubbed over the fabric, this time more heavily, so that the design comes through quite plainly. The four women at the sides on both ends of the cylinder, decorate the borders with simple free-hand motifs and number each section.

When two sections are completed, they are pulled back toward the first side, so that the end of the second section comes about midway of the second side. The edge of the under sheets, left free under the upper ones are well rubbed over with the tuber and the next pair of under sheets lapped over it and stuck down (Plate 46). The two completed sections are rolled up loosely and pulled down on the first side, so that the first edge of the new under sheet is exactly even with the beginning of the pattern, and takes up where the second of the two sections ended. The process of rubbing over the under sheets with pads dipped in brown dye, pasting lightly over with the half-cooked tubers and finally pulling the upper sheets back across the cylinder to stick them in place, is now repeated. The final rubbing over of the whole area completes the printing operation. The work continues, adding the necessary under sheets to make two *langanga* at a time, [p. 97] and joining upper sheets to the ends of previous ones as they are needed.

The under sheet that will form the part of the final section is, like the piece at the beginning of the *ngatu*, wider than the rest. Part of it will become the finishing border or the *tapa ki vae*.

Before the assembling process begins, the women have already decided what length the *ngatu* will be, that is how many *langanga* it will contain. It is not usual for a *kautaha* to be called together for less than a 50 *langanga ngatu*. If the woman for whom a particular *ngatu* is being made finds during the process that she has miscalculated and has not the required number of raw beaten sheets, or that some of them have been discarded by her fellow members or relatives as being unsuitable, the other members or relatives will supply extra sheets. It is rarely that a stipulated length is not completed for immediate want of raw bark-cloth sheets.

For this reason, I would say that McKern was not observing closely or was misinformed when he stated that the length of the sheet is limited by the amount of *feta'aki* available for use.¹⁶² However, it could happen at one sitting of a *koka'anga*, after the main *ngatu* making is completed, that a number of raw sheets are left over. The owner might then ask for them to be put together for immediate household use. This is one of the few possible circumstances when the number of sheets of raw *tapa* available would limit the length of the [p. 98] *ngatu*.

It takes about twelve members of a *kautaha* about five hours' continuous work to finish a *ngatu* of fifty sections (*launima*). If the *ngatu* is finished early in the day, it is immediately taken outside to dry in the sun (Plate 48). If the work is completed towards evening, the *ngatu* is folded back and forth in pleats on the cylinder and the ends turned back to the centre. It is now called *auni* and is left like that until the morning.

162 McKern 1921: 639

47.



47. Completed ngatu drying in the sun.
48.

48.



Previous Descriptions

Mariner's description of this stage of the manufacture follows:

The stamp being thus fixed with the embroidered side uppermost, a piece of the prepared bark is laid on it, and smeared over with a folded piece of gnattoo dipped in one of the reddish brown liquids before mentioned, so that the whole surface of the prepared bark becomes stained, but particularly those parts raised by the design on the stamp; another piece of gnattoo is now laid on it, but not quite so broad, which adheres by virtue of the mucilaginous quality in the die and this, in like manner, is smeared over; then a third in the same way; and the substance is now three layers thick; others are then added to increase it in length and breadth, by pasting the edges of these over the first, but not so as there shall be in any place more than three folds, which is easily managed as the margin of one layer falls short of the margin of the one under it. During the whole process, each layer is stamped separately, so the pattern may be said to exist in the very substance of the gnattoo; and when one portion is thus printed, to the size of the cobechei, the material being moved further on, the next portion, either in length or breadth, becomes stamped, the pattern beginning close to where the other ended. Thus they go on, printing and enlarging it to about 6 feet in breadth and generally about 40 to 50 yards in length.

It is then carefully folded up and baked underground, which causes the die to become somewhat darker, and more firmly fixed in the fibre; besides which, it deprives it of a peculiar smoky smell which belong to the coca.¹⁶³

[p. 99] Before pausing to consider Mariner's description, I should like to add those of both McKern and Koch. McKern wrote:

The kupesi were applied end to end and side to side placed lengthwise with the *papa* to practically cover its entire surface. They were made fast by means of cords passing through loops on the margins of the kupesi. The pieces of feta'aki were spread over these raised patterns and pasted together by an application of boiled arrowroot (mahoa'a). The tapa was built up of two thicknesses of feta'aki strips which were put together with the grain of one crossing that of the other. The length of the sheet was limited by the amount of feta'aki available for use.... A third layer was sometimes added to heavy tapa in which all three layers were printed.¹⁶⁴

Although Koch says elsewhere that the method to making tapa is largely the same as that observed by Cook in the second half of the 18th century and by Mariner at the beginning of the 19th, he includes in his brief, undetailed description one important change since Mariner made his observations and one startling difference from all of our descriptions.

Koch describes the placing of the under and upper sheets as they are placed today but without detail. He goes on to say:

The pieces of raw feta'aki are rubbed over with dye rag saturated with koa dye, so that the patterns of the printing blocks now start to appear on the brownish surface in a darker shade of brown. The women then retrace the individual patterns with brushes (*fo'i fa*). When the roll of tapa which has now been produced on the drum has been completely painted, it is pushed down until further pieces of feta'aki can be stuck to its longitudinal edge doubled over, dyed and painted. The process is repeated over and over, so that on one side of the drum, a double dyed and painted roll of tapa collects and becomes even longer.¹⁶⁵

163 Mariner 1818: 279

164 McKern 1921: 639

165 Koch 1955: 311

[p. 100] On the face of it, Mariner's description appears to be substantially the same as mine. It was probably the same deduction that prompted Koch to make the observation he did upon the unchanged nature of Tongan *ngatu* manufacture. However, a closer examination of the description will reveal that not only are there marked differences between mine and Mariner's descriptions, but also between Koch's and Mariner's.

The two observations that Mariner makes, that the length of the *papa koka'anga* is eight feet¹⁶⁶ and the width of the *ngatu* six feet¹⁶⁷ are in agreement with each other and also with Cook's statement that Tongan tapa was six feet wide and 50 yards long. While not immediately connected with the process of manufacture, this does establish at once that the shape of the sheets of *ngatu* has considerably altered. The width of the cylinder and consequently of the *ngatu* has almost doubled since Mariner's time.

While Koch gives no detail of the joining and pasting of layers, I presume that he and I are describing the same practices, as he gathered his information only a year before I began to make my own observations. They are quite different from the methods reported by Mariner, who records neither felting nor pasting to join separate layers of the raw fabric together. The joining of the layers now is done by pasting, although not so heavily as that carried out by the Samoan women for the same purpose. I also suspect that the dye still [p. 101] has considerable effect upon the adherence of the layers to each other. Mariner's operators appeared to take three separate sheets of prepared bark and to incorporate them into a single sheet by placing one upon the other, relying upon the mucilaginous quality of the dye and material to hold them together. The width and length were increased by pasting further pieces either to the longitudinal or horizontal edges, in much the same way as is followed in Samoa today.

The present method is to prepare the full width of the bottom layer first, by placing the sheets lengthwise on the cylinder from side to side. This width is covered by another layer in which several lengths of prepared bark run transversely across the bottom layer. The operation of joining these sheets so that they equal the width of the bottom layer and the pasting of the two layers together is a single one.

A difference that one notices immediately is the number of layers used now and in Mariner's time. He speaks definitely of three. Although McKern writes of a certain *ngatu* that sometimes has three layers, two layers are all that are used in present day *ngatu*. I think this has been the practice for many years now, certainly all of the present century, and even the late years of the last century.

Since returning to New Zealand, I have had the good fortune to examine an interesting piece of *ngatu* in the Hawkes Bay Museum at [p. 102] Napier. It was obviously Tongan, both because of certain characteristic superimposed decoration and because the *kupesi* was one of the woven type, not hitherto recorded for any other Pacific group. This particular *kupesi* could have had only Tongan significance, for it depicted a ceremonial adjunct to Tongan royal marriages, the *tatautuisipa*, and the detail was so clearly shown that no Tongan would have had any hesitation in claiming it as his own.

What was of great interest to me was the fact that the piece of *ngatu* was composed of three layers. I carefully examined one corner that had come apart slightly and found that although the layers for the remainder of the sheet adhered firmly to one another, no paste had been used for the purpose. As far as I was able to ascertain, each layer was a single sheet. There was no evidence that sheets had been felted together as is the practice today when preparing the upper sheets. Moreover, there was no discernible difference in the thickness of this three layer *ngatu* and the two layer *ngatu* of today. This becomes more understandable when one considers that although only two layers are put together at modern *koka'anga*, the top layer is already composed of two separate sheets, felted together.

166 Mariner 1818: 278

167 Mariner 1818: 279

As the piece had apparently been cut from the middle of a larger sheet and no borders were included, I was unable to determine the width. However I would not be surprised to learn that it was originally of the width described by Mariner, for it was obviously made according to the method recorded by Mariner.

[p. 103] One further change that has occurred since Mariner made his observations concerns the treatment of the completed bale of *ngatu* by baking in an earth oven. This practice has for many years been discontinued, although it is still the practice when deepening the reddish tinge of sennit cord. Brigham quotes Malo as giving information not already known by his predecessors, that the Hawaiians once coloured the *kapa* in the *umu* or underground oven.

A surprising item in the descriptions of modern Tongan *ngatu* manufacture, is Koch's observation¹⁶⁸ made within a year or so of my own, that the women painted over the outlines of their designs while assembling and dying the *ngatu*. As Koch mentions the attaching of embroidered *kupesi* first, and the blocking in of the pattern with a darker dye, after the *ngatu* has been dyed and dried, he is obviously describing ordinary *ngatu* manufacture. But as I can think of no instance in which this would be necessary, I would suggest that Koch might have been confused in three possible counts: (1) The women were doing the freehand painting and numbering of the borders (2) or he was not watching ordinary *ngatu* being made, (3) or the women were not painting over designs made by embroidered *kupesi*. Many well-known designs and kinds of *ngatu* were not produced with embroidered *kupesi*, but by other means already mentioned in the section on *kupesi*. In these instances, the designs are lightly brushed over with dye to bring out the outline of the pattern, and the spaces between [p. 104] the *kupesi* outlines are then heavily rubbed over with dye. In only one kind of *ngatu* that I know of are the spaces painted on the cylinder. This is the *amoamokofe*,¹⁶⁹ a *ngatu* 'uli. Ordinary *ngatu* made with embroidered stencils are painted over after the whole length has been completed.

Comparisons with Practices in Other Islands

When piecing the sheets of raw bark-cloth together, the Samoans use a design tablet like the *kupesi* and join the layers by pasting. However there are certain differences between the two operations. Before they are dried, Samoan bark cloth sheets are stretched out, and held down at the corners by weights.¹⁷⁰ The sheets are pieced together on a convex base, generally the overturned hull of a canoe. There are two methods of applying the dyes. One like the Tongan method is by rubbing over an embroidered pandanus tablet, and the other by free-hand drawing.¹⁷¹ The tablets, which are all rectilinear, are attached to the base and the cloth assembled over the top.¹⁷² The separate layers are rubbed with the dye to bring out the pattern. When free-hand decoration is intended, the layers of cloth are pasted together first.

The carved wooden tablet has almost completely replaced the former embroidered pandanus tablet. Buck describes the Samoan method by rubbing:

The design tablet (*upeti*) is placed on the ground with its length transverse... A single sheet of *lauu'a* is spread over the tablet with its wider butt end toward the worker... [p. 105] The sheet is not as wide as the transverse length of the tablet so another sheet must be added, but with its narrow end toward the worker. The left edge of the second sheet is placed over the pasted right edge of the first sheet and rubbed with the wiper to stick them together. A third sheet is usually necessary to cover the remaining part of the tablet... it is reversed with the broad end proximal and stuck by

168 Koch 1955: 311

169 Section on kinds of *ngatu*

170 Buck 1930: 291

171 Buck 1930: 306

172 The Samoan base which averages 67 inches in length and 18 inches across is much shorter than the Tongan *papa koka'anga*.

pasting the right edge of the second sheet. The dye is added and rubbed over with the wiper. When the design is sufficiently clear on the first layer of sheets, another layer is added above it. The area of the design is rubbed over with arrowroot... A sheet of white lauu'a is laid on the left side above the first sheet... second and third sheets are added to cover those underneath and pasted together at the edges, and the method alternately reversing the ends being followed as with the first layer.

The wiper is dipped in 'o'a and the design brought out on the second layer by rubbing... the process may stop at two layers, but for thicker cloth a third layer is added in the same way... The last layer gets a more careful rubbing and a more liberal sprinkling of red earth. The completed part is moved to the left and further sheets added to the right edges by pasting. The completed sheet added to from the right and the completed portion accumulates to the left of the tablet. Depth is obtained by adding successive rows of rubbing to the first row, each layer being singly attached to the corresponding layer in the first row. When cloth is prepared for painting, the technique of increasing length and depth is the same. Each layer is pasted together as with the other preparation...¹⁷³

The Samoan method of increasing width and length appears to be the same as that described by Mariner for Tonga, unlike the modern Tongan method. The Fijian method as described by Williams for the mid-nineteenth century years and in modern times by Thompson has undergone a complete change. Williams observed:

Two lengths of the wet masi are generally beaten together in order to secure greater strength, the gluten they contain being sufficient to keep the fibre united.... The pieces are neatly lapped together with a starch of taro or arrowroot boiled whole and may thus reach a length of [p. 106] many yards. The widths are also joined by the same means so as to form pieces of 15 or 30 feet square.¹⁷⁴

Compare this with Thompson's description of bark-cloth made in 1940 according to the modern Fijian method:

Tapa boards and old dug-outs (canoes) were placed end to end to form a long tapa board. The women, each with a mallet, sat in a row along one side of and facing the board. Four damp oblong strips were fitted together with a parallel grain to form one piece of four thicknesses. Twenty such units of four thicknesses each, were passed out by the leader. The women spread them out lengthwise along the board and fitted them end to end. At the seam, the piece consisted of eight thicknesses dovetailed with four thicknesses in the centre two above and two below. At a signal from the leader the women beat along the seam, the grooved sides of the mallets diagonal to it. The beating was done in unison and could be heard throughout the village. Next, the seams were sprinkled with water from a small basin, one for every four to five women, and patted. The long damp piece was then shifted and the whole process repeated several times. The resulting sheet is called katundrau.¹⁷⁵

The Fijian community concerned in the description were living side by side with people, who although Fijian for several generations were originally of Tongan descent. These latter people made their bark cloth according to the Tongan method, which is suitable to the assembling of bales of *ngatu* of great length. Joining by felting was also the recorded method for the Marquesas, Cook Islands and in most versions for Tahiti.

173 Buck 1930: 309

174 Williams 1859: 50

175 Thompson 1940: 196

Ellis and Buck give dissimilar descriptions of the Hawaiian method of joining bark-cloth together. Ellis describes the manufacture [p. 107] of two bark-cloth articles, the *pau* and the *kapa moe* by differing methods. Referring to the *pau*, he says:

To make this, a piece of bark is beaten until it is four yards long, and more than a yard wide, and of an equal texture throughout. Sometimes two or three pieces of bark are necessary to make one piece of cloth. Five of these pieces when finished are spread out one upon the other and fastened together at one end. These five pieces make a pau. The inside pieces are usually white or yellow; but the outside piece is stained or painted with vegetable dyes. No gum is used in the manufacture of the pau except that contained in the bark, yet the fibres adhere firmly together... There is another kind of cloth called *tapa moe*. It is generally three or four yards square and very thick, being formed of several layers of common tapa, cemented with gum, and beaten, with a grooved mallet till they are closely interwoven.¹⁷⁶

Buck describes a felting technique for the Hawaiians:

The bast was beaten in two stages. Dried strips of the beaten bast were found to consist of two strips of beaten bast which, though they are stuck together can easily be separated. The beaten strips were dried and bleached in the sun, then before the second beating were soaked in water until they were soft. They were beaten lightly to break up the fibres. The number of strips necessary to complete a cloth were rolled into a bundle, covered with banana leaves and weighted down at the corners by stones. It was left for a week and a half to mature... when ready, the matured bundle was laid on an anvil and beaten out.¹⁷⁷

It is difficult to assess the significance of differences in Ellis's and Buck's descriptions as Ellis did not supply the same detail as recorded by Buck. However two significant pieces of information do stand out. The strips examined by Buck had been beaten together in pairs as in the earlier Fijian method and to some extent the [p. 108] recent Tongan method of preparing the upper strips and even some under strips. The fact that they could be pulled apart easily although they were stuck together would preclude the use of a paste for the purpose. Had the pieces been pasted together, the fibres would have torn when the layers were separated. Therefore, felting would seem to have been the early method of joining layers in Hawaii which either adhered by virtue of their own mucilaginous quality or were cemented together by some sticking agent followed by further beating.

This latter was the method described by Pritchard for Samoa, and by Cook for Tahiti. Buck discounts Pritchard's observations as being an unconscious transference of ideas from Tahiti. This could well be so, but certainly the type of base used in Samoa, on which the bark-cloth was assembled, could take beating, whereas a base like the Tongan half cylinder for instance, would be too light and springy to be a satisfactory anvil. The Samoan base is a convex board or more often the hull of an old canoe. The Fijians too used the upturned hulls of old canoes on which to felt the raw tapa into lengths. Ellis does not mention the type of base upon which the Hawaiians beat their tapa.

It should be obvious after considering the foregoing descriptions that any attempts to read close cultural links between various island groups on account of similarities or differences, would have to be made at one historical period. Not only do similarities and [p. 109] differences shared by certain groups vary at different periods of Polynesian history, but revolutionary changes of techniques in subsequent years tend to lead to hasty reassessments of earlier observations. The danger lies in grouping similarities and differences that are only such because those being compared belong to different stages in the ethnohistoric period.

176 Ellis 1826: 30

177 Buck 1957: 180

For instance, Tongan manufacture, while not subject to the conflicting accounts of other islands, possibly because of a dearth of early observers, nevertheless does reveal in the sequence of descriptions available that Tongan techniques have undergone marked changes during the past 150 years.

At a contemporary period in the early 1800's, the Hawaiians, Fijians, Tongans and Samoans were using methods other than felting for joining pieces of bark-cloth. Among the Tongans of that period, the separate layers that formed the thickness of the material adhered simply by virtue of the dye used (and I assume through the glutinous nature of the material). The sheets were lapped and pasted together to form continuous lengths. This method of adding to length and breadth is that in present day use in Samoa. The earlier Samoan process observed by Pritchard was first to use a sticking agent between the layers, then to subject them to further beating. This method was recorded by Cook for Tahiti, and by Ellis for Hawaii. The Fijians used to beat strips together in pairs to form sheets which were later joined with paste along overlapping edges to form a continuous piece [p. 110] of tapa. The Hawaiians according to Ellis practised both the Tongan method where several layers adhered without the use of a sticking agent (*pau*) and the Samoan-Tahitian method in which a sticking agent held the layers that were then beaten together (*tapa moe*).

The Hawaiian technique as described by Buck for an indefinite period in Hawaiian history, for his conclusions were based on his study of finished tapa and information given to him by Kamaku, was by felting. Yet it is possible that he intended it to cover the period also dealt with by Ellis, who however, had the advantage of extended personal observation. Thus, Buck himself, for lack of other sources, uses Ellis's observations on the preparation of the bast in his reconstruction, and his general observations cannot be easily discounted.

The manufacture of tapa has been abandoned in Hawaii and in Tahiti and the modern Tongan technique has changed to the extent that a sticking agent is applied between the layers, although the concentration is actually upon the overlapping edges of the sheets. In contrast to Pritchard's description of light pasting and beating, the Samoans now paste without beating, but applying the paste far more liberally than in Tonga. Modern Fiji is said to have abandoned the pasting together of sheets and joins them by felting, although in certain islands of the Lau group where Tongan affinities are strong, the Tongan and Fijian methods exist side by side, but remain technically distinct.

COMPLETING THE *NGATU*

[p. 111] Designs that have been produced by using embroidered *kupesi* of recent composition, or some arrangements of coconut leaf midrib on the half cylinder, are usually blocked in again with one of the blackish brown dyes, specially prepared for the purpose. The blocking in consists of painting over the main lines of the pattern, using the dried key of the pandanus fruit (*fa* or *paongo*) sharpened at the tip to form a firm brush-like instrument. At the same time, the lines that are a result of marking off the sections, and line down the centre dividing their width into equal halves, are carefully painted over with the dark dye, so that the divisions are distinctly shown.

The completion of the *ngatu* is the responsibility of the owner and is done at her leisure (Plate 49). When its completion is a matter of some urgency, a group of women, generally close friends and relations, may participate, but the task is not a function of the *kautaha* (Plates 50, 51).

Those patterns which have been produced by twine winding, woven mangrove slats, some coconut leaflet midrib (*palalafa*) arrangements and the *ngatu 'uli* do not require blocking in. Most often the traditional embroidered designs (e.g. *'aotapu*, *longolongo*, etc.) are not blocked in.

It appears to be an exasperating fact to some modern observers that few women if any, take care over following the lines when [p. 112] painting over a design. They cannot understand why so much



49.

Woman doing her own
blocking in section
by section over
several days.

50



Two women working on Takamalu
'e Katea.

51.



52.



51 &
52

Several women block
in Kee Sisi Maile
'e Tungi.

painstaking care is lavished on the embroidering of the stencils, only to have the often very attractive pattern that is produced on the *ngatu* spoiled by hasty and inexact outlining.

This condition in which *ngatu* manufacture finds itself, will, I think, pass as the girls who are now receiving instruction in secondary schools according to a Government handcraft syllabus, gradually take over the *ngatu* manufacture. In school, they learn to outline the designs as carefully as Samoan or Fijian women paint their cloth. Thus *ngatu* of the first 50 or 60 years of this century will be characterised by frequently inexact outlining, but later *ngatu* should be influenced by more attention to careful blocking in. Already, beautifully finished *ngatu* made by younger women have appeared at handcraft displays in Nuku'alofa.

Some explanation for the apparently illogical attitude of the women toward this part of *ngatu* decoration lies, I think, in the fact that wholesale blocking in is a new development arising out of the greatly increased opportunities for such additional decoration that have occurred during the past 50 years. As already mentioned, the designs produced by twine winding, woven tablets, sense coconut leaflet midrib arrangements, early embroidered tablets and the *ngatu* 'uli were not blocked in. Yet these were the patterns most commonly used at a time when tablets were being made by the women of rank. Decorative patterns that have come into existence during [p. 113] this century would have most likely been the work of the ordinary Tongan women. Their efforts have been confined almost exclusively to the embroidered stencils, the colouring and treatment of which are the prerogative of the composer.

Although the early traditional designs did not require blocking in, extra colour was superimposed over the pattern, whether it had been produced by the use of embroidered tablets or by other means. After describing the assembly and dying of a *ngatu* in which embroidered *kupesi* had been used, Mariner said:

The *ngatu* is spread out on a grass-plot, or on the sand of the sea-shore, and the finishing operation of *toogi hea* commences, or staining it in certain places with the juice of the *hea* which constitutes a brilliant red varnish; this is done in straight lines along those places where the edges of the printed portions join each other, and serves to conceal the little Irregularities there; also in sundry other places in the form of round spots, about an inch and a quarter in diameter.¹⁷⁸

Although the red *hea* stain has been replaced by the darkened brown dyes, the process described by Mariner is still the only form of extra decoration added after the dying, to all those patterns described as not being blocked in. The fact that red *hea* stain was once used has left its mark in the word *tukihea*. *Tukihea* means to add the blackish brown spots of about one and a half inches diameter to the stained *ngatu*.

It is probable that this was the only form of decoration superimposed over the initial dying of the cloth. Although blocking in [p. 114] is not used on these early traditional patterns, the addition of the isolated spots known as *tukihea* still persists on *ngatu* that have been blocked in. It is an overlapping of the two forms of extra decoration.

The *tukihea* form of decoration, apart from any symbolic significance that it might have contained, relied upon balance and colour for its effect, not for the emphasis on any component of the pattern as suggested by outlining of the design. Blocking in is intended to bring out the form of the design by emphasising the outlines. The *tukihea* spots are freehand. Herein I think, lies the explanation for the inexplicable spoiling to foreign eyes of the form of the design by careless outlining. Women are working on a new form of decoration with an old intention. The original idea of adding a contrasting colour in balanced positions persists, so that only roughly guided by the outlines of the design, the women are adding the colour to the *ngatu* primarily to give balanced effect to a contrasting colour.

When the women reach a stage when blocking is solely for the purpose of emphasising the design, then decorative evolution on Tongan *ngatu* will have passed through another phase.

178 Mariner 1818: 279

CHAPTER III: [p. 115]

THE SOCIAL CONTEXT OF TONGAN BARK-CLOTH MANUFACTURE

INTRODUCTION

The social context for the various activities of *ngatu* production is briefly discussed in this chapter. These observations are limited to the immediate context within which they take place, and no attempt is made to fit them into the wider social system. For this reason, the relevant points are dealt with as they arise in Chapter II, and relate the technical processes described there to the social groupings within which they take place.

By following step by step the processes that lead to the final production of *ngatu*, three major divisions of the social context within which they occur will become apparent. The sequence from the planting through the care of the plant during growth to the cutting of the stems, is men's work, sometimes assisted by women. After this stage, men are concerned only with the making of implements (other than woven articles) required for *ngatu* manufacture and assisting with the preparation of dyes. The transformation of the paper mulberry stems into finished sheets of raw bark-cloth are all activities carried out by females, generally as individuals or [p. 116] members of a household, or sometimes in company with neighbours.

While the assembling of the materials necessary to produce *ngatu* is the normal household task of women, the actual piecing together and printing of the cloth is carried out by formal groups called *kautaha*. These co-operative groups have become necessary as a result of social changes that have occurred during the last hundred years, and it would be almost impossible for this particular stage to be carried out by individuals or even by a few members of a household.

In general, the men and women of a household assemble the dye for their *ngatu*, although on occasion, a *kautaha* will work together as a group for the same purpose.

When the *ngatu* is completely assembled and dyed, it is ready for blocking in. This final step is generally the work of the owner, and at this stage the production of the cloth again returns to the household or local neighbourhood group under the control of the owner. Only rarely do the *kautaha* decide to help the owner with this task, in which case, it leaves the *falekautaha* (the house where the assembling and dyeing take place) with the decoration completed.

THE ROLE OF THE MEN

Planting of the *Hiapo*

The planting of paper mulberry is done by the men and young boys of the domestic family. Even when *kautaha* decide to plant trees for the use of any of the members, they take their menfolk with them to do [p. 117] the planting. In these cases, it would be usual for the women of the *kautaha* to go with the men to the plantation, although their actual work would consist of indicating how many trees will be needed and to prepare food for the workers.

Ordinarily, the women are not required to take part in any work at the plantations. Many women never see the paper mulberry stems until they are brought back to the home ready for them to use. Some however, do make occasional visits to the plantations to remove lateral growths on the stems during the growth of the plant, and it is conceivable that somewhere in Tonga, there are women who share in the planting of all crops, but it is not customary for them to do so. The only cultivation usually engaged in by Tongan women is the tending of flower gardens around the house.

The family group caring for the plantation, consists of the men and boys of a single household. The household may contain either an elementary family or an expanded family which includes sons and their wives or, more rarely daughters and their husbands.

Not all families who regularly make *ngatu* plant their own trees. Some do not because of the lack of available land, others do not bother because they are able to get stems from relatives with large plantations, and some prefer to buy it or procure sheets of raw bark-cloth by exchange. The Prison Farm grows paper mulberry trees of a very good quality, which are offered for sale by the prison authorities. Some villages which are situated in areas specially suited to growing these trees, mainly those in the centre of the island around the [p. 118] lagoon, and they grow trees for selling or as exchange for completed *ngatu*.

However, apart from these restricted possibilities, the paper mulberry (*hiapo*) is not grown to any extent expressly for selling. Even when it is sold it is usually surplus. At the prison farm, the wives of warders and prison officials require a considerable amount of the raw material for their own use. Thus only the surplus stems reach the market although because of greater available planting area and labour, there would be a larger surplus than would be the case on household plantations.

Care of the Plantation

The men and boys of the family care for the plantations, whether they are household or *kautaha* plantations, and whether or not part of the stems are intended for sale or exchange. *Kautaha* plantations are unusual, but on these some menfolk of *kautaha* members will attend to what is required during the growth of the plants, although once the trees are planted, there is surprisingly little to do apart from removing lateral stem growth.

The men decide which of the stems are ready for cutting whenever stems are needed. They cut, sort and bring them back to the house. It is at this stage that the men's work ends and the women's begins. There seems to be a complete separation. Just as the women know surprisingly little about the planting and care of the growing plants, the men evince no interest in the manufacture of the cloth, and have little knowledge of the processes involved.

Ownership of the Stems [p. 119]

Although the paper mulberry plantation belongs to the household or wider group whose menfolk planted it, the stems are cut for the use of particular women in the group, who have signified that they wish to beat out raw bark-cloth, either for immediate or later use. If, as is usual, the plantation is owned by a household, then the stems are cut for *ngatu* that will be used by the family group comprising the household, or for tributary or ceremonial gift making in which the family is involved.

If a woman belongs to a family without its own plantation, she can generally obtain what she needs from relatives with substantial plantations. In such cases, she goes to the owners or sends one of her menfolk, and what she requires is cut for her if it is available. If she is an elder sister, or the daughter of an elder sister, she may obtain the stems from a brother or mother's brother, as the case may be, irrespective of the size of his plantation, or the fact that the stems are intended for the use of his own family. This right of the elder sister and her family to her brother's property, rarely, if ever, imposes any hardship on his family, as the request is usually made at a time when the stems are not immediately required by the owner's family. If there should be a simultaneous desire to beat out raw sheets on the part of both a man's elder sister and his wife, the wife would rather go to her brothers or mother's brother for stems than have her husband forego his obligations. At any rate, the man who knows that he is likely to be called upon by his older sister and her family, or younger dependent [p. 120] sisters, wisely plants substantially against the possibility.

There are two other recourses open to the woman without her own plantation, both of which have been mentioned earlier. One is to secure stems by exchanging completed *ngatu* or raw beaten sheets for them, and the other is to buy them with cash. In the case of exchange, the number of stems received, would be expected to produce roughly twice the amount of *ngatu* or beaten sheets (*feta'aki*) given for it.

Preparation of Dyes

Because it is often necessary to climb trees to obtain enough bark for dye-making, boys and young men usually obtain the bark and help with the extraction of the juice. They also make the special houses that are necessary for the making of candlenut soot, and assist with the preparation of nuts and coconut leaflet midribs (*tuaniu*). The red clay from the high slopes of 'Eua and Vava'u is generally obtained by men.

The Manufacture of *Ngatu*-making Implements

All the wooden accessories, the beating stand (*tutua*), the half cylinder (*papa koka'anga*), and the wooden beater (*'ike*) and the metal scraper (*vau koka*), that are used in the manufacture of *ngatu* are made by the men. As no special skill is required in making them, men make them as required. The half cylinders (*papa koka'anga*) and beating stands (*tutua*) will last many years, and a family would not need replacements of either for several generations unless unexpected damage occurred. The wooden beaters (*'ike*) on the other hand, even when made of hard *toa* (*Casuarina equisetifolia*) often lose ridges or corners by [p. 121] accident, and are then not used, as jagged edges might tear the fabric.

Boys in secondary schools make wooden beaters in quantity, as a handcraft. Almost every family that has sons of secondary school age will own several of the school-made beaters, brought home at some period of their school life.

The scrapers (*vau koka*) which are made of metal, generally a piece of corrugated iron that has been hammered out flat, require no special skill in the fashioning and men and young boys make them as required. Those women who have male relatives working at the Public Works Dept., or go to a blacksmith to have them made, generally have very neatly fashioned instruments. There are still several blacksmiths in Nuku'alofa and the outer villages, and the making of these instruments generally falls to their lot.

THE ROLE OF FEMALES AS MEMBERS OF HOUSEHOLDS OR NEIGHBOURHOOD GROUPS

The Ownership of the Implements and Dyes

Beaters are often subject to accidental damage, and for this reason, families own several. There appears to be little dearth of beaters and they are regularly replaced. The beaters made by the boys at school are necessarily well balanced and finished to conform to the standard size set down by the examiner. However, they are not always to the liking of the women for whose use they are eventually offered. Some women like very heavy beaters, others comparatively light and prefer to have [p. 122] theirs specially made for them by their menfolk. Partly for this reason, surplus beaters are common items at bazaars and street sales. Those of other than *toa* wood range in price from 4/- to 5/- while *toa* wood beaters fetch up to 7/6. Although the beaters are for the special use of the women of the family, they are spoken of as belonging to the family.

The half cylinders on which the *ngatu* is assembled are generally the property of the *kautaha* and are kept at the group's meeting house (*falekautaha*). *Kautaha* arrange with men, generally carpenters, to make their cylinders and pay them for the materials and labour. If the *kautaha* undertakes to find the material, it is not usually difficult to find someone who will assemble a cylinder for them without expecting

payment. In such a case, the men will almost certainly receive a gift of *ngatu* at the completion of this work. Sometimes a woman would like to own a half cylinder of her own and pays for it to be made or has a carpenter who is a relative make it, and then takes it to the assemble house of her *kautaha*, where it is used, but is always regarded as her property and not that of the group.

Every household where the inner bark (*tutu*) is regularly beaten, owns a beating stand (*tutua*) and as the beating of inner bark is essentially a household undertaking, the stands are always kept at the homes, either outside, or under an outside shelter. Although women do not usually lend their beaters, stands are portable and as they vary in size, they might be borrowed when one of a particular size is needed.

The Preparation of Dyes and Sticking Agents [p. 123]

The women weave the squeezing mat (*fau koka*) and, once the bark has been collected, prepare the shavings for the extraction of the juice. The women are responsible for providing their own dyes for a session of assembling *ngatu* (*koka'anga*), although sometimes several members of a *kautaha* go to the plantations to make dye that will be used by them all at a projected session. The dyes are not kept in a liquid state for any length of time, but are usually prepared yearly or on special occasions for a particular session. *Koka* dye that has been stored for too long, develops a very strong smoky smell. On the other hand, the dry candlenut soot can be stored indefinitely.

Once the materials are assembled, the making of candlenut soot is wholly the work of the women. The women also boil the brown dye to a blackish syrupy liquid, to be used for the superimposed decoration on the dyed *ngatu*.

The reason why manioc is the most usual, although not the best, sticking agent for use at a session is that this is one of the staple Tongan root crops, which is always on hand and requires no special planting. The much more effective Polynesian arrowroot (*mahoa'a*) is found in its wild state only in seaward plantations and is therefore comparatively much less common. Although the cultivation of arrowroot is not a general practice, some women do have one or two plants growing near the house especially for use at the sessions of *ngatu* manufacture. Otherwise they go out individually or in small groups to gather wild roots. Considering the superiority of arrowroot over manioc as a [p. 124] sticking agent, it is surprising that the cultivation of arrowroot is not general practice.

The women prepare the tubers for sticking on the day of the assembly session. Each woman is responsible for supplying the dyes and the sticking agent to be used at a session where her *ngatu* is being assembled; but there are some sessions where the dyes are provided by the *kautaha* generally from a common store, and where each of the members brings her own tubers for pasting.

Preparation of the Bark

The woman for whom the paper mulberry stems have been out usually prepares her own bark for beating, although other female members of her family might help her. Stripping the bark from the stems is work for younger women as it requires quick hands and strong teeth, although preliminary loosening with the teeth is not the only method of doing so. The women like to work in pairs or with other members of the family either for company, or to get the work done quickly. When two or more women are engaged together, some will strip while others will remove the green outer layer.

The rolls of bast are stored carefully until required for beating. The most suitable place in which to store them is under the rafters in the cooking-house. The smoke rising to the ceiling discourages termites which do considerable damage to stored bark or pandanus rolls. These termites are also active in bolts of completed *ngatu* or mats that might be left undisturbed for any length of time.

Beating the Inner Bark [p. 125]

The beating is done whenever a woman feels inclined to do so and has the time. This may be any hour of the day or week. Only if she has the prospect of having to make *ngatu* in the very near future and is without any prepared raw sheets, will she sit down to a three or four day session of constant beating, until all her available inner bark is beaten out.

Women generally beat at their own homes, but if they wish to beat in company, they go to the home that has the convenient sized beating stand. Most homes have stands at which at least two women can sit. The beating may be shared by younger members of the family, who do not usually take part in any other stage of *ngatu* manufacture. It requires less skill than the preparation of the bast and is, therefore, one of the first tasks a young girl shares in. A bride customarily takes with her to her husband's home a certain number of *ngatu* bales. These are prepared for her by her mother or other female relatives, but she is expected to help with the beating if required.

Women beat together, not only for company, but whenever their homes are in close proximity and they wish to beat on the same day. Such beating can be heard for miles, but kept regular, it is not unpleasant to the ear. However, it can be very irritating, both to the beaters and to any other listeners in the vicinity, if there are several beaters within the same small area, all beating loudly out of time. Together, the women find it a simple matter to synchronize [p. 126] their strokes, so that a pleasant syncopated rhythm results. Women beating at some distance from one another but still within earshot, find it much easier to fit their strokes together, once one has taken the lead, than if they are in neighbouring houses. In this case they do not form a group.

I watched four women beating bast at the same stand, a very long one, almost 16 feet in length. Two women were at either end on one side, and two together at the middle of the stand on the opposite side. They were all related but belonged to three different households. The old lady at one end and her grand-daughter at the other lived together, and were beating cloth for their home. The other two women, daughters-in-law of the old woman, were each beating her own bast and did not live together. They even belonged to different *kautaha*, while the granddaughter did not belong to any, although she was a skilled *ngatu* maker and often went along to her grandmother's *kautaha* to help if she was needed. She did the stripping, and shared the beating and final blocking in of the *ngatu* with her grand-mother. She had already prepared two *lau tefuhi* with the help of her grandmother against her wedding. Her grandmother had a new *fuatanga*¹⁷⁹ put away against the death of her husband, but if the grand-daughter married before one could be made specially for her, she would take this one with her.

These women had decided to beat at the one home, both for company, and because they intended to beat all day. As two of them had little children, it was much easier to have them cared for by one person. As [p. 127] the same person was able to cook meals for them all, there was no need for any of them to interrupt her work unnecessarily.

If a family has suffered a bereavement, the women will not beat for periods of up to three months under ordinary circumstances, and in some cases, even longer. Other families closely related, or living near them will also desist from beating for the first ten days after the death, and sometimes for the same period as the bereaved family.

When the noble of a village dies, the whole village will not beat for up to three months and sometimes for six months. Members of his own family will refrain for a much longer period. On the death of members of the immediate royal family, there is national mourning and no beating is carried out for a prescribed

179 See chapter IV, p. 191

time. The particular villages associated with any titles formerly held by the dead person will observe the ban on beating for a much longer period. The village belonging to Tungi, the late consort of the present ruler, did not beat bast for two years after his death.

Frequent deaths within the same area or the same noble family sometimes cause hardship to the non-ranking members of that social group and the villages concerned, in that their *ngatu* stores become depleted. Such terms of suspended activity, are thus generally followed by periods of prolonged beating, and *ngatu* making.

The completed sheets of raw bark-cloth (*feta'aki*) are the property of the women who beat them out, or for whom they were beaten. They are stored in rolls either on the rafters of the sleeping houses or between sleeping mats.

The Koka'anga or Assembly Session [p. 128]

At this stage *ngatu* manufacture is transferred from the household to the *falekautaha*, the large specially built houses, where the assembly process is carried out by co-operative groups, called *kautaha*, the origins and functions of which are discussed later.

The Blocking-In and Superimposed Decoration on Dyed Ngatu

The final stage in *ngatu* manufacture, which is not the concern of the *kautaha*, is also carried out by the women of the household. Sometimes individual members of a *kautaha*, particularly if they are related might wish to share the work with the owner, in which case they either gather at her home, or the work is carried out in the *kautaha* assembly house.

Usually the owner takes the completed bolt to her home and may do the blocking in at any time she chooses. If the *ngatu* has been made to answer urgent household needs, it may never be blocked in, but be cut up as soon as it is dry. If the owner decides to work on her own, she may unroll the *ngatu* by sections and complete as many as she finds convenient at one time. If she wants the whole piece completed quickly, she spreads it out in the sun and works on it with the help of several other women and girls, generally immediate family or relatives, until it is finished. Neighbours, not members of their *kautaha*, are not generally co-opted, as it is felt they lack sufficient interest to do a good job. This also precludes their seeing the *ngatu* until it is completed.

The blocking in is usually a leisurely process. When carried out [p. 129] co-operatively, each woman has her own supply of dye in a tin or coconut shell, and sits on the *ngatu*, painting around her. Four or five women working on one *ngatu* is the usual number, although Thompson mentions 30 women painting over one *ngatu* in the Lau group of Fiji, where the *ngatu* had been assembled according to the Tongan method.¹⁸⁰

If the *ngatu* design requires the addition of *tukihea* spots, those are added at the same time as the blocking in. Frequently this is the work of an expert specially invited for the purpose.

THE KAUTAHA

Its Origin

It would not be possible to consider Tongan bark-cloth manufacture today, without recognising very quickly the extent to which the craft is dependent for its effective existence upon the organised groups of women all over Tonga known as *kautaha*.

180 Thompson 1940: 200

The word *kautaha* means “a club, a union, an association,” and although there are many organisations in Tonga that may rightly be called *kautaha*, the term in modern times seems to have been especially reserved for these guilds or associations of women organised for the express purpose of assisting one another in the manufacture of *ngatu*.

[p. 130] The Tongan women say they have always had *kautaha*, but it is significant that the great majority of *kautaha* in existence today had their origins within the memories of their oldest members, that is, in the late years of the last century, or the early years of this century. At what rate they have multiplied would be difficult to say, unless investigations into the beginnings of all present day *kautaha* were made, and comparisons taken at certain periods of time.

Actually, there are no known records of when these *kautaha* came to be features of Tongan life. Mariner does not mention them, neither do other early travellers in the Pacific. This is interesting when one considers that in the present author's far from exhaustive survey of 55 villages on Tongatapu, over 115 were listed.

It is probable that at an earlier period, and even in Mariner's day (1806 - 1810), there was no need for any special associations of women for the purpose of putting *ngatu* together. Mariner¹⁸¹ refers to the chief as having a great number of adherents, the men alone numbering from 80 to 90, living with or about him. These men would have their families and close relatives with them, so that a chief might have a considerable number of adults living with him. As a result, the chief's wife would be able to call upon many women to join her in any project which she undertook.

The chiefly women engaged themselves in activities shared by all Tongan women¹⁸², not so much in the necessity for their labour, but as [p. 131] their proper occupation.¹⁸³ They were never expected to undertake any work that required excessive physical exertion or to work on the plantations, but were occupied making *ngatu* and weaving mats. In addition, the embroidering of the tablets (*kupesi*) was always done by the women of rank.¹⁸⁴ Because of the multiplicity of uses of *ngatu*, both ceremonial and domestic, it is conceivable that all Tongan women, ranking and non-ranking, were for a great deal of their time occupied in *ngatu* manufacture.

The holding of the tablets, essential for the finishing of the *ngatu*, [and] the distribution of the women so that large numbers lived within the households of the chiefs, either as servants, or through the adherence of their menfolk, put manufacture very much within the control of the chiefly women. Added to this was the fact that commoner women would not have been able to set about organising groups to make *ngatu* for themselves as their skills were, to a great extent, already fully employed.

Mariner says:

Although the higher class women not only make these employments an amusement, but actually make a sort of a trade from it without prejudice to their rank, the lower class women cannot do so, because what they make is not their own property, but is done so by order of their superiors.¹⁸⁵

The only organized groups of women for *ngatu* manufacture then, would come under the direction of the chiefly women. All *ngatu* was made at their behest. It was not necessary for the ordinary women [p.

181 Mariner 1818: 284

182 Mariner 1818: 275

183 Mariner 1818: 286

184 Mariner 1818: 280

185 Mariner 1818: 95

132] to concern themselves unduly about the household and ceremonial supplies of *ngatu*. Although all the *ngatu* made under her direction was ostensibly the property of the chief's wife, custom required that she give back large amounts to the women who had assisted in preparing it for her. As well, every chief had his commoner relations who could apply to him for their needs.¹⁸⁶ Thus, in spite of the control of labour by the women of rank, there was no absolute monopoly of the *ngatu* and everyone could get what he needed.

During the long reign of King George Tubou I, from 1845 until 1893, many events tended to disperse the large courts that once existed. Changing social conditions and new values came in the wake of missionary activity. The missionaries cultivated the idea of independent family life and the desirability of western education so industriously in the minds of the people, that two situations resulted. Adherents of the chiefs were encouraged to seek a new independence away from the chiefs' immediate households, either on more distant portions of his land holdings or on any of his various outlying plantations. The same teaching that had moved the commoners in their new desire for independence likewise made the chiefs tolerant, and the Tongan system of land tenure that guaranteed a man an economic holding of land from his chief, was taken advantage of by growing numbers. Bodily removal in no way affected spiritual and tributary obedience to the chiefs. A man could carry out any obligatory duties as well from his own household as he could from the immediate presence of the chief. A secondary result of [p. 133] this move to set up independent households was that the permanent courts around the chiefs diminished considerably in size and the concentrations of women-power redistributed.

The further event that was to have so marked an effect upon social conditions of the time was the adoption by Tonga in 1862 of its Constitution. This substituted for a Tongan form of Government which had for centuries lain in the hands of the chiefs alone, an executive order based on the English plan. Basil Thompson wrote of the Constitution:

A system evolved from centuries of experiment to suit the needs of Anglo-Saxons, was forced in a single day upon the people, with whose inborn convictions it was in complete antagonism. It was not until all the attendant excitement was over, that the chiefs had time to realise that they had sold their birthright for a sheet of vellum, and that their power was gone.¹⁸⁷

This, of course, has proved to be an overstatement and his conclusion seems to be drawn from an anticipation that proved to be more illusory than real. For a system that was "in complete antagonism to the Inborn convictions of the people", it has endured remarkably well and has brought Tonga to a state of economic security and stability enjoyed by few other constitutional states. The Constitution certainly tempered some of the chiefs' powers, but in the light of the Christian teaching which both chiefs and commoners had accepted, this was bound to happen eventually anyway. The miscalculation arose from the assumption that the power of the chiefs would be wiped out by [p. 134] temporal restrictions: The real power of the chiefs was never temporal.

Quite apart from the kinship ties that affect every stratum of Tongan society, and the fact that every man knows that his chief is his ultimate bastion against economic necessity, the Tongans are bound by tremendously strong spiritual ties to their chiefs. It would be wishful thinking to expect a form of status obligation that appears to have suited Tongan temperament and way of life for over a thousand years of traditional history to be wiped out "in a single day, by a piece of vellum."

But if the Constitution never threatened the real power of the chiefs, it did have far reaching influences upon the mode of living at that time and to follow. The chiefs who had been used to spending long

186 Gifford 1929: 113

187 Basil Thompson 1894: 365

periods of inactivity with their adherents within their own households, were finding incentives to a more active existence in the life of the newly constituted government. A European executive machine carried the offices and ministries of a European government. The men of rank, by virtue of superior status, moved into these administrative posts. All this was taking place within the same period in which missionary activity was at its height. Church centres and schools came into existence rapidly all over the kingdom, and among the first to be attracted to these now spheres were not only the men, but also the women of rank.

The chiefly women were developing new interests. Church and educational organizations were new spheres of female activity, and the women of rank were necessarily the organizational leaders. In [p. 135] fact it was going to take the Tongan women very many years before they could even contemplate the initiation of female associations or organizations without asking women of rank to direct their activities. They have not yet achieved that state to any noticeable degree.

The result was that the chiefly women found less time, and even less desire, to confine themselves only to the former interests of their own households. Also, the gradual movement of the ordinary women away from the direct and personal control of the women of rank was taking place without conflict or interference. Women of all ranks were now living lives vastly different from their former mode, and two conditions soon became apparent.

Although the chiefly women still retained the right to the making and the holding of the tablets as well as the preparation of certain dyes, they were finding weaving and *ngatu*-making irksome and uninteresting in comparison with new interests. They could still have all the *ngatu* they wanted without having to make it themselves. Some women relatives and retainers still lived with them, and the hereditary seats or villages of their husbands' and their fathers' titles would ensure ample tributary offerings.

The dispersal of women away from the vicinity of the households of its ranking members removed them from the organizational circle of *ngatu*-making under the tutelage of chiefly women. Actually, each situation complemented the other, and suited both groups concerned. The chiefly women had lost interest in organizing *ngatu* manufacture, and the ordinary women were not available in the same numbers for [p. 136] organization. The days when all the *ngatu* making had proceeded smoothly under the women of rank who could call up all the labour they required, either from their own immediate retainers or those belonging to hereditary seats were gone forever.

However, *ngatu* still had to be made, and its manufacture, in its final and most important stage, was a co-operative undertaking that had formerly taken place smoothly under pre-contact conditions no longer in existence. This was conceivably the period when organizations of women for the purpose of making *ngatu* came into existence. These were the early *kautaha*. The women of rank who were the repositories of all the refinements of *ngatu* manufacture, as well as the custodians of the tablets, were still asked to direct the activities of the various groups. Apparently, they held their old positions, but the organization of *ngatu* manufacture was now community based and not as formerly associated grouping of households around the residence of a principal chief. Direct responsibility for the activities of the group was no longer the sole concern of the head of the group. Members also shared the organizational responsibility.

The *kautaha* into whose origins I have enquired quote some lady of rank as their first principal, or even as the convenor of their *kautaha*. It is possible that they never entered into the work of the *kautaha* with anything like the enthusiasm they had displayed in their own residences, but theirs were still the authoritative voices. They assumed leadership as a natural corollary of their rank. The commoner women were totally unfitted to take these positions. They had always [p. 137] been subordinates and an inherent reluctance among these people ever to step into a status circle normally closed to them, was going to keep them in the same mind for many years yet.

The tablets held by the women of rank were given to her *kautaha*, and although she might take little active part in the assembling of the *ngatu*, it is probable that for some years yet she still made the *kupesi* tablets. Many of the *kautaha* still treasure the tablets made by the women of rank who first presided over their activities. Over the next 50 years these chiefly women gradually withdrew from *kautaha* activity, making their final renunciation by giving up the making of tablets, that part of *ngatu* manufacture that had been traditionally reserved to them. These changes occasioned them no economic sacrifice. Tributary offerings of *ngatu* supplied all they would need. However, some of them still retain their positions as head of their *kautaha* without taking any active part in its programme.¹⁸⁸ Some women of rank consent to be patronesses, while the working head of the *kautaha* is elected from the members.

Today, all of *ngatu* manufacture has come within the sphere of the ordinary women. The Education Department, in order to preserve the vigour of the craft and to ensure that Tongan girls, besides receiving instruction in technique, were also given the opportunity to demonstrate the additional refinements that they were able to absorb during the course gave secondary school girls the opportunity of presenting work done by them, as examination units, for the Government Leaving Certificate. [p. 138] Alisi Sipu was early appointed an examiner and consultant on all aspects of *ngatu* manufacture. When called upon to make *ngatu* or *kupesi*, the girls are taught the particular aspect thoroughly. It would not be an exaggeration to say as Koch¹⁸⁹ did, that many of the girls were learning more of the craft than was known by their mothers.

The Effects of Changed Social Context Upon *Ngatu* Manufacture

These changes in *ngatu*-making organisation have had greatest influence upon the decorative aspects of the craft. The making of tablets (*kupesi*) was a new field to the women. It was not very likely that at anytime they were deliberately taught the craft by the traditional makers, so that learning by emulation was necessarily carried out in the less complex medium, the embroidered tablet. The traditional motifs had origins in many cases unknown to the ordinary women. Some of them were closely associated with the lives of the nobility and had little if any significance for the common people. Such designs were the *fata*, using motifs based on the bier on which nobles were transported by their attendants, the *tatautuisipa* (Fig. 8), a partition in a chief's house, and the *pangai kafa* (Fig. 7a), which suggests association with the royal *mala'e*.

For these reasons, the embroidered *kupesi* increased rapidly in number to the exclusion of other types, and the motifs were distinctive, in that they were drawn from a different field of experience. The only [p. 139] other type of tablets used with any significance were those constructed with strips of coconut midribs (*palalafa*), a medium almost as simple to handle as the embroidered tablet.

No new innovations in cord-winding designs or in woven tablets have been introduced since their manufacture has changed hands. This is understandable if one realises that tablets are now made only for practical ends, and not in part as a pastime. Apart from the complexity of construction of these other types of tablets, the austerity of effect does not appeal to modern Tongan women. The artistic trend now is toward, the ornate and realistic, which can best be expressed in the embroidered tablet.

I consider that Koch has made a reasonably accurate diagnosis of the condition of *ngatu* manufacture in modern Tonga, so there would be little purpose in my repeating his observations. However, I should like to refer to two comments he has made, both relevant to the craft in its changed social context. He wrote:

It may be assumed that the great mass of Tongans considering the large quantities of tapa made in the archipelago, own no less bast cloth than in the past.... It is difficult to say whether

¹⁸⁸ Although now a very old lady, the mother of 'Ahomee the noble of Havakatolu, still presides over *koka'anga* at the Mofuika *kautaha*, of which she is the head.

¹⁸⁹ Koch 1955: 317

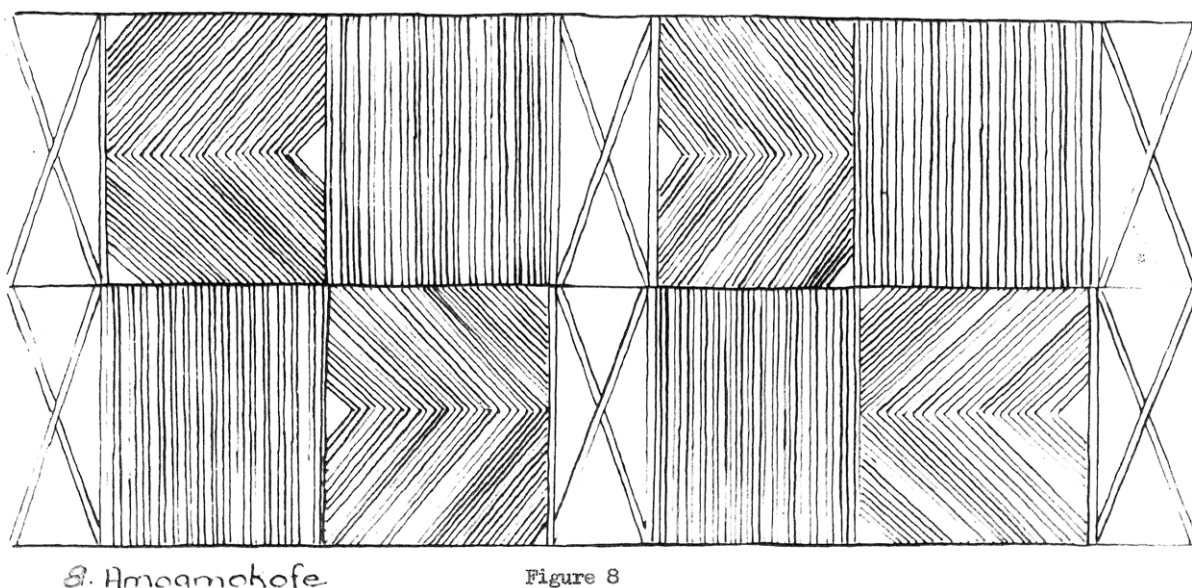


Figure 8: A coconut midrib or *palalafa* design tablet for an *amoamokofe ngatu*.

the fact that tapa production has been removed from the control of the nobles has resulted in an appreciable coarsening of the product.¹⁹⁰

It is true that there is a great deal of *ngatu* both in bales and in shorter lengths in Tonga. It is also true that it is still required in quantity for ceremonial purposes, but I would infer from what I have learned at *kautaha*, that each woman makes less and owns less than she [p. 140] did 30 or 40 years ago. The apparent abundance of the fabric, I think, is due to the fact that more women are making it, simply by reason of population increase and the fact that nearly every woman engages herself in some stage of *ngatu* manufacture, however transitory the association may be.

More *ngatu* is about and visible, but I think fewer bales are stored in individual homes. Approximately 4,000 secondary school boarders in the Tongan colleges¹⁹¹, each possessing at least one bed roll of *ngatu*, and sometimes more, would have a sizeable amount of the fabric transferred to points, outside the home, where they would make significant displays. On the other hand, traditional weddings which once required the greatest quantity of *ngatu* are now infrequent. Most young couples prefer the ordinary marriage by their church ministers without the additional Tongan ceremony, and as a result there is only a minimum exchange of one or two bales. Marriages of the nobility are generally the only occasions when there is full scale ceremonial in which large quantities of *ngatu* are required. Today, the same occasions, together with new instances mentioned by Koch¹⁹² in connection with Christian festivals, call for ceremonial presentations, but I feel that more part lengths of *ngatu* are being given, on these occasions than complete bales as formerly. One bale now serves several ceremonial requirements, whereas once it was only part of a single tribute. Lupe Amine said that in her younger days, she made each year four *lauteфуhi* [p. 41] or (400) *langanga* sections and sometimes a *ngatu 'uli* and a *fuatanga* as well. Now she makes only a *lauteфуhi* each year, although she spends a great deal of the year at her *kautaha* house helping at assembly sessions for other women. In recent years, she had made several *ngatu 'uli* for weddings that involved members of her family and in 1958 she made a *fuatanga* as well. Both she and Alisi Sipu say that there is less compulsion than formerly to give large amounts on ceremonial occasions.

¹⁹⁰ Koch 1955: 316

¹⁹¹ The approximate number of boarders in eleven Tongan secondary schools, except for one, all mission controlled.

¹⁹² Koch 1955: 314

Regarding Koch's second comment, it is probable that he has a better opportunity than any of us in this part of the world to draw reasonably correct conclusions, as he has access to the *ngatu* collection in the Göttingen Institute of Ethnology. I cannot speak with authority, as I have not seen enough *ngatu* that can reasonably be assigned to the period when *ngatu*-making was still under the control of chiefly women. However, there is an abundance of *ngatu* made within the last 40 years, and I feel that although there seems to be little difference in the texture of the cloth, the uniform whiteness and scarcity of patching on present day raw sheets is noticeable in comparison with older *ngatu*. The upper sheets are straighter and longer and fewer of the coarser grained sheets that are generally reserved for under sheets find their way to the top layers. The dyes are clearer and there is a greater use of those dyes that give gloss and stiffness, so that recent *ngatu* present a richness of finish not apparent formerly. Granted that *ngatu* of 40 to 50 years ago would not be the best examples of blocking in, in comparison, *ngatu* of very recent years have shown a refinement in execution of this final decorative process.

[p. 142] On the other hand, the embroidered tablets do not on the whole compare in neatness of execution with those made by the women of rank. They have neither in maturity of design, nor in the variety of types of tablets made, reached the standard attained by the women of rank. Nor have they entered into the making of candlenut soot (*fukai tuitui*), once also the prerogative of chiefly women, to anything like the necessary degree. This has resulted in a noticeable decline in the number of *ngatu* 'uli, the most handsome and distinctive of Tongan *ngatu*.

The Composition of the *Kautaha*

Both Gifford and McKern made cursory references to *kautaha* which are misleading especially in regard to the composition of the groups, the manner of co-operative work, and the provision of raw material for the making into *ngatu*. Gifford wrote:

In modern Tonga, tapa is made by co-operative associations of women (*kautaha*). Each woman contributes an equal amount of white tapa strips which she has previously prepared, and the manufactured goods are shared among the members of the company. The work is done in specially erected houses, and usually under the direction of an old woman.¹⁹³

McKern wrote:

Making of the finished product called *koka'anga* is a community affair. A woman who held the office of overseer of *koka'anga* in any community was called a *tea*.¹⁹⁴ Her duties as the hostess, was to invite other women to join the *koka'anga*. Thus any woman in the village with sufficient social prestige to be accepted by her neighbours as one of their set could invite a sufficient number of women to co-operate in a *koka'anga* bee and so become the *tea* for the occasion. A company of women so assembled for a *koka'anga* was called a *kautaha*.¹⁹⁵

[p. 143] The *kautaha* are actually not so loosely composed as McKern would have it, nor does the ownership of the finished *ngatu* come about as Gifford describes it.

Each village today has at least one *kautaha*, while the larger settlements like Kolomotu'a, Vaini or Lapaha may have as many as five. The *kautaha* have specially built houses, called *falekautaha*, in which they meet together to carry out the communal part of *ngatu* making. At Fahefa village there are two *falekautaha*. One belongs to one *kautaha*, the other, which was built through the combined efforts of several *kautaha*, is used by each in turn.

¹⁹³ Gifford 1929: 147

¹⁹⁴ I think McKern means *sea* (chairman), *tea* means "pale, white".

¹⁹⁵ McKern 1921: 635

The fact that there are several *kautaha* in one village, each having its own special house would negate McKern's statement that the groups are called together as needed, with different women taking the lead at different times in convening them. A *kautaha* house costs anything up to £300 in material alone, the money being found by the women of the group through their own efforts. If the women are gathered from the village in general, as the necessity arose, the provision of more than one special house to a village, would be a hardly justified luxury. As many as five would be necessary only when different groups are working at the same time.

Regular membership of a *kautaha* varies from, in many cases, almost 60 to as few as 12. Membership of a *kautaha* is restricted to those women who are proficient at *ngatu* making and are prepared to give a great deal of their time to work in the assembling of it. Ability to give the time is an important factor controlling *kautaha* membership, [p. 144] as sufficient members are expected to come together whenever called upon by the leader of the *kautaha*. Some groups meet some part of every week in the year.

Kautaha are conservative and tend in the main to include among their members women of the same or allied families, living in the same vicinity. Those who have no connections with members of a *kautaha* have been allowed to join because they are known as proficient *ngatu* makers and live in the same neighbourhood as the rest of the regular members. A woman rarely joins a *kautaha* outside her own neighbourhood, although if she belongs to a kin group mainly concentrated in another village, she might make occasional visits to help them at busy periods. If she has not joined the *kautaha* nearest to her home, she will probably have all her *ngatu* made by the *kautaha* to which her close relatives belong.

Daughters may take their mother's place if they live in the same neighbourhood, or if their mothers wish to continue in the *kautaha* they join as invited relatives, provided that they are considered to be industrious and proficient enough. On the other hand, when a mother dies and her daughter signifies that she would like to join the *kautaha* in her place, the group will take her irrespective of her skill or lack of skill at *ngatu* manufacture. They consider it their duty to teach her what she does not know, in the place of her own mother. The members feel that if her mother has belonged to their *kautaha* during her entire period of *ngatu*-making she will have shared in the assembling of many of the tablets and perhaps in having raised funds for the building and maintenance of the special house, quite apart from the fact that she has [p. 145] laboured at the assembly sessions at which all their *ngatu* have been made, thus they consider that the daughter has a right to join their *kautaha* if she desires, and that they are morally bound to train her if she is unskilled. However, if a young woman has set up a home near her mother's, and wishes to take her place at the *kautaha* at some future date, she will, if necessary, work alongside her mother at the *kautaha* until she is reasonably proficient.

Some groups are, however, so exclusive that apart from daughters joining on the deaths of their mothers, they have had no additional membership for many years and have diminished in number from as many as 50 at their inception to only 15 members today. They pride themselves on the fact that every one of their original members has died while still an active participant. When they did not have daughters in the same neighbourhood, no other woman was invited to take their places. One woman, now 45, whose mother, aged 72 is still an active member of her *kautaha*, says that by the time she takes her mother's place, she will be too old to be interested in learning the finer techniques. As her mother's main occupation is the work of the *kautaha*, and she has only one daughter, the daughter has not needed to join any *kautaha* to have her *ngatu* made. Her mother has done all the assembling and dyeing for her. The daughter feels though that her mother would not like her to join any other *kautaha*, but wishes her to wait until she can take her place. In this particular case there is a grand-daughter, living with the grandmother, who is already a skilled *ngatu* maker and will eventually join the same [p. 146] *kautaha*.¹⁹⁶

196 In this case, the girl would be acceptable as an invited member, but she is reluctant to join. Apart from the fact that there is no necessity while her grandmother is alive, she wants to be free of *kautaha* responsibilities.

If a woman is not a member of a *kautaha*, it does not mean that she cannot have her *ngatu* made up. Established *kautaha* rarely refuse to put the *ngatu* needed by an unattached woman together for her. In such a case, she will probably provide all the food for the meals of the women while they working on her *ngatu*, and in addition, may make presents of uncooked food. There are several reasons why a woman does not join *kautaha*. She might have a young family, and cannot give time to *kautaha* projects, in which case she will indicate that she intends at some later date if possible to join; she may never have become proficient enough to want or be invited to join; or she might not be interested to do any more than just prepare the raw materials.

Older women, and especially widows whose families have grown up, predominate as regular members of *kautaha*. This does not mean that there are no young women who participate. It is probable that at various times all *kautaha* have some young members working but because of other interests and duties they are less regular in their attendance at the assembly sessions.¹⁹⁷ Newly formed *kautaha* have, of course, a large proportion of younger women.

Leadership

Although most *kautaha* still retain a woman of rank as their patroness if not their president, her role as guide and authoritative [p. 147] voice has diminished in importance. She rarely, if ever, visits the *kautaha* house, but she is still the focal point of much of the ceremonial in which the group take part as a body, and their finest efforts are directed toward any tributary offerings they may take to her. At one time the patroness was also the president, but it is now usual for the *kautaha* to elect a president from among their working number. She may be elected yearly or for a period of years. Sometimes one of the members might be so closely related to the nobility that out of respect to her family, she will be elected year after year to the exclusion of the others.

It is the duty of the president to call the women together whenever any of the members signifies that she has prepared enough raw bark-cloth and wishes to make *ngatu*. It is then usually found that several members will take advantage of the assembling of the group to have their *ngatu* assembled as well. The president plans out the programme of work for the *kautaha*, and if there are several *ngatu* to be made for different women she will decide in what order they are to be made. This is especially necessary at periods of concentrated activity in the *kautaha* house, such as the weeks preceding Christmas, or the period following a series of deaths in the same neighbourhood. The relative urgency of *ngatu* for ceremonial uses generally decides which should be done first.

The president cares for the tablets owned by the group, but some women have their own tablets which they are unwilling to give over entirely to the group for general use. This may apply when the [p. 148] designs are new and have particular significance for the owner. Sometimes women bring tablets to be used on their *ngatu*, which they have borrowed from women of other *kautaha*. As a rule, groups are jealous of distinctive designs that have been composed by their members and rarely lend the tablets for them. No one would expect a *kautaha* to lend any tablets that it had inherited from a lady of rank.

It is the president's task to place the women at the cylinder, generally the less proficient toward the centre of each row. Some regular members occupy the same positions for years. The president sets the pace of the work, by taking up her own position at one end of the cylinder, so that no completed section of *ngatu* can be pulled across until she is satisfied with it. She and the woman at the other end of the cylinder occupying the same position as she does, number the sections (*langanga*) as they are finished.

197 Hamala and Seikauta *kautaha* have an unusual number of young members.

Members' Responsibilities

It is the duty of members to go to the *kautaha* house when they are called and to work throughout the time, or at least for part of it, while the *koka'anga* is in progress. If a woman is ill, away from her home, or has some other urgent work to attend to, she generally sends a substitute (one of her daughters or another close relative) in her place. If the substitute is not as proficient as the *kautaha* would like, she can help with preparing food, sorting out raw sheets of bark-cloth, or by just making conversation to entertain the workers. All the women bring contributions of food, for once they assemble in the morning, they do not leave the assembly house until the evening, or [p. 149] until the work is finished. The work may go on for several days or even weeks, in which case the members come early each day and stay until the end of daylight. A woman who is unable to attend an assembly session called by her group will send her contribution of food with her substitute. The men often go to the *kautaha* house too, to drink kava on one side, chat and sing, and generally keep the women company.

The women do not, as Gifford says, contribute an equal amount of white tapa strips, which they have previously prepared, and then share the finished goods. If a woman wants her *kautaha* to help her put her *ngatu* together, she must supply her own sheets of raw bark-cloth, and generally dyes and sticking agent as well. The *kautaha* usually hold the design tablets, and half cylinder at their special house. Sometimes however, if a woman finds that she has not enough raw sheets for the length of *ngatu* that she wants (some may have been discarded as unsuitable by the women, during the assembling) fellow members will help by sending to their homes for any extra sheets that she needs. Some groups too have a common supply of dyes that they have prepared at an earlier working bee.

In the larger *kautaha*, *ngatu*-making is in progress throughout a large part of the year. This means that many *kautaha* members give long periods of time to its tasks. One can understand that many young women, who have not the need for large quantities of *ngatu*, either for household or ceremonial purposes, would find regular membership of a *kautaha* onerous. Work in a *kautaha* is necessarily communal [p. 150] in character, and like all communal undertakings, if the projects are to succeed, certain members must bear heavier responsibilities in "keeping things moving". In every *kautaha* however there is a group, generally of older women and widows who live with sons or daughters and therefore have few household responsibilities, to form a permanent nucleus of women-power at the *kautaha* house. The president is usually elected from among these women. Older women in these categories find *kautaha* work congenial to them. They not only enjoy the regular companionship of other women of their age and status, but they are usefully occupied in making the *ngatu* for their household or relatives as the case may be.

Exchanges

Many of the *kautaha* conduct exchanges (*katoanga*) with other groups of women, giving bolts of *ngatu* for other goods. *Ngatu* of the best kind and in quantity is made on Tongatapu, but although Tongatapu women excel at *ngatu* manufacture, they are not enthusiastic weavers of the finer and more decorative mats. In the scanty soil of Ha'apai and the restricted growing areas of Niuatoputapu, paper mulberry is much more difficult to grow than is pandanus. But the women of these latter islands are skillful mat weavers as also are the women of Niuafo'ou, who weave distinctive and very beautiful double layered mats. In these areas, *ngatu* is produced regularly enough for ordinary needs, but only on Tongatapu are there surplus quantities of the finer types sought after for ceremonial exchange at weddings and funerals. To offset the deficiency, the women of the outer islands weave surplus [p. 151] numbers of fine mats, which as an exchange medium are always eagerly sought after.

Exchange gatherings are arranged between *kautaha* on Tongatapu and groups on the other islands for the purpose of as changing *ngatu* for mats or other desired goods.¹⁹⁸ These exchanges are ceremonial, that is they are preceded by presentations of cooked vegetables, pigs and green kava. Kava is made and drunk and tributary offerings are made to the nobles of the villages concerned, as well as the royal house, of the finest examples of the commodities to be exchanged.

Other Activities Centred Around the *Kautaha*

Members of some *kautaha* work so well in close association with one another, that they show a tendency to restrict themselves to the same groups in other community activities. This is a natural move as the majority of members of any *kautaha* have some relationship with one another, either through kinship or marriage, and are likely to work together anyway, on many ceremonial and festive occasions. But the desire to act as a corporate group stems more from a desire to emphasise *kautaha* affiliation. They help at one another's family weddings and funerals, from dancing groups from among their members for festivals, and undertake church projects as *kautaha* groups.

Over recent years, the Queen has stimulated an interest in improving the general social conditions of the people resulting in a desire among village groups to make directed efforts to raise their own standards of living. To further these ends, a countrywide organization led by the [p. 152] Queen was formed in 1955. It was called *Langa ('ae) Fonua* (raising the land) and branches were set up in all the villages. The members worked systematically through a programme that began in the homes and finally embraced the whole village. Health and educational authorities co-operated and the first two or three years after the movement began saw a noticeable improvement in hygiene in the homes and villages, a dietary programme that emphasised the greater value of their own natural foods and methods of preparation, child welfare and care, the general attractiveness of the homes, inside and outside, and not least an energetic interest in the refinement of their own handcrafts. Frequent '*ahi'ahi* or displays by the various branches of *Langa Fonua* were held to mark the progress achieved in any particular project set down by the central governing body.

Now many of the *kautaha* have also spread their activities into the same field. They are holding '*ahi'ahi* as *kautaha* groups in which they show the results of a particular campaign in one or another direction, home or village, hygiene or care, child care, sewing, food preparation, all these quite apart from any displays of the best examples of *ngatu* made during the year.

As many of the special houses built for *kautaha* have been of European materials with timber flooring, and in some cases, have been fitted up with electric lighting, they provide good living quarters. Therefore, they are often called upon by visiting groups as "hostels", by football clubs as accommodation when the men wish to live together while undergoing important training schedules, and by various groups [p. 153] for choir practices and other social gatherings. *Kautaha* are generous in allowing groups to use their buildings as long as assembly sessions are not in progress. If an occupying group has financial resources it generally makes a cash donation to the *kautaha* funds. In a country which has lacked the special meeting houses as the New Zealand Maoris have, these *falekautaha* have come to serve a useful social function as general community houses as well.

198 One exchange between a Tongatapu *kautaha* and a Vava'u group was of *ngatu* for kapok mattresses and pillows. Kapok grows well in the warmer northern islands.

CHAPTER IV [p. 154]

CLASSIFICATION AND DESCRIPTION OF TONGAN *NGATU*

INTRODUCTION

Varieties of *Ngatu* (Fig. 11)

Ngatu are classified by the manner in which they are dyed, the uses to which they may be put, and the methods by which they are assembled. According to these criteria all *ngatu* fall into two main divisions which are distinct both as to colour and to use. The first class, which comprises by far the greater number of *ngatu* made each year, is designated *NGATU TĀHINA*; the second class contains those *ngatu* described as *NGATU 'ULI*. As a limited number of *ngatu 'uli* exhibit characteristics of the other class as well, while they belong with *ngatu 'uli* class, under certain circumstances they may be used as *ngatu tāhina*.

Although some *ngatu 'uli* may be considered as groups, they exhibit no further divisions of importance beyond those of named types. *Ngatu tāhina*, however, may be further classified. The first and main division is made according to the method by which these *ngatu* have been assembled. Two kinds of *ngatu* are distinguished in this manner, the *FUATANGA* and the *NGATU TĀHINA (hangatonu)*. The greater number of *ngatu tāhina* are made according to the *hangatonu* method, which is the method described in the section on *koka'anga*.¹⁹⁹ [p. 155] These *ngatu tāhina (hangatonu)* may be further sub-divided, according to a cross-cutting classification described below, as *NGATU 'EIKI* and ordinary *NGATU*. In contrast to the *ngatu 'eiki*, which are all named and are well-known, only some of the ordinary *ngatu* are well enough known to be recognised by name. *Ngatu tāhina* of all types may also be classified according to the amount of brown dye used on them into *pa koka* and *tapa 'ingatu*. This distinction in classification is applied to most *ngatu* of the ordinary and *fuatanga* sub-classes, but it is not generally used in describing the named *'eiki* types of *ngatu tāhina*.

A more recent division, cutting through this presumably older hierarchical classification is based on the suitability of certain *ngatu* for presentation to people of rank. *Ngatu* that fall into this group are *ngatu 'eiki*. As the great majority of *ngatu* made today are not included in this special grouping, the *ngatu 'eiki* form a restricted and somewhat more stable group. Thus all *ngatu 'uli* are *ngatu 'eiki* and the principle criterion for designating a *ngatu tāhina* a *ngatu 'eiki* is the kind of *kupesi* used to decorate it. This grouping does not mean that people of rank are restricted to decorative patterns that are suitable for *ngatu 'eiki*. They can, and do, show preferences for *ngatu* irrespective of the decorative significance of the design. However, the classification does serve to preserve the superiority of certain designs for ceremonial purposes.

Other Classifications [p. 156]

Neither Mariner nor Koch attempted to classify varieties of *ngatu* or to identify the various *kupesi* tablet patterns. McKern however, did discuss several of the varieties I am listing, but his descriptions differ markedly from my own. McKern's observations appear to be a curious mixture of correct statements in the wrong contexts, faulty terminology, and confused interpretations of descriptive terms. He himself expresses some doubts as to the accuracy of his information when he remarks at the beginning of the sections: "The following classification is a modern one and probably incomplete and inaccurate from a primitive standpoint."²⁰⁰ As it stands it is inaccurate and illogical, even from a modern viewpoint. His

199 The use of the term *hangatonu* is one suggested to me by Alisi Sipu

200 McKern 1921: 648 – 654

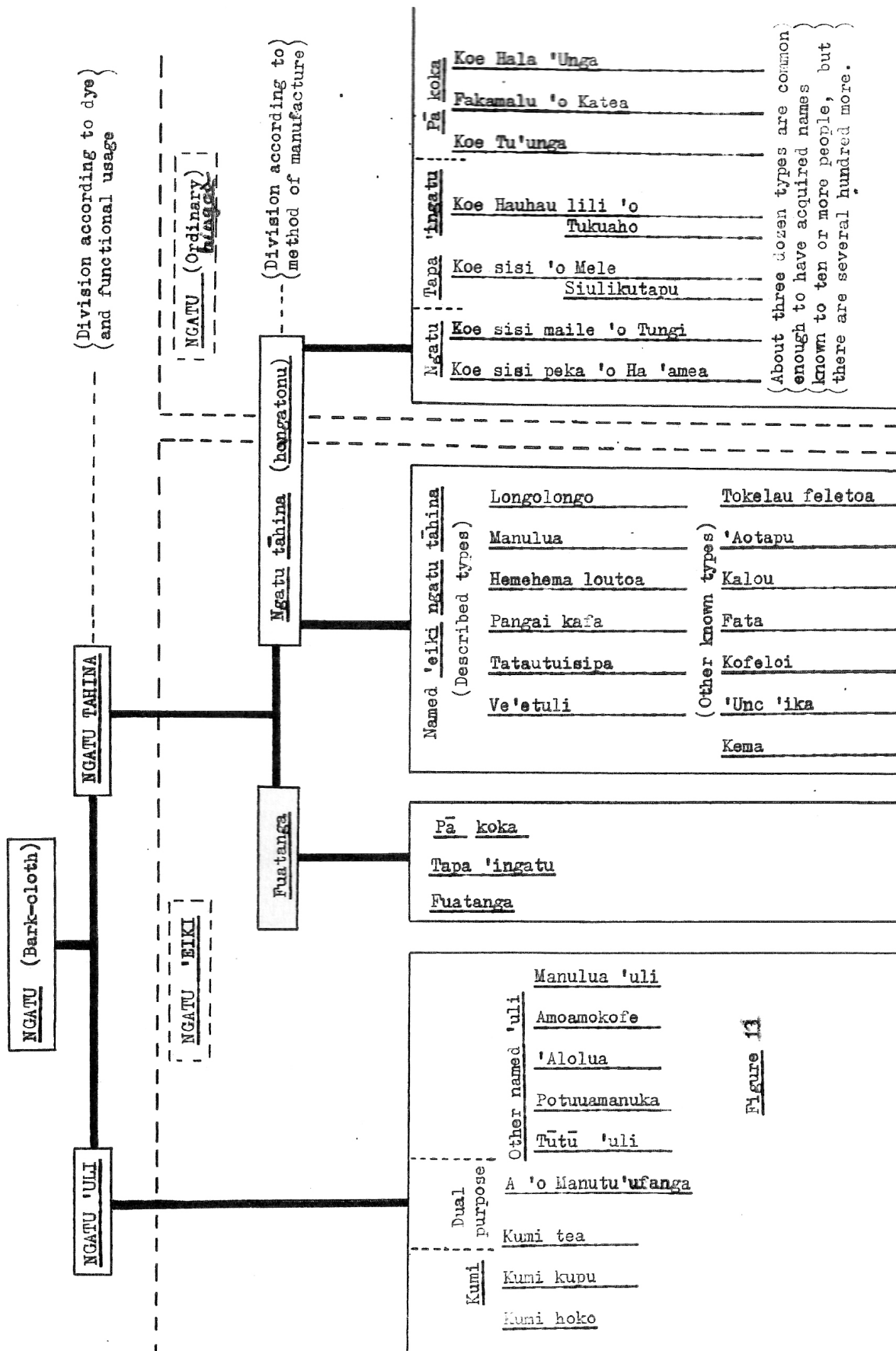


Figure 11: A classification of Tongan ngatu.

further observation that varieties depended largely upon differences in decoration, primarily dependent on the kind of *kupesi* used, can be regarded as an over-simplification of the existing situation.

However, in spite of the above criticism, one has some sympathy for McKern when it is realised that his information was supplied to him by men, who in turn had obtained it from their womenfolk. I know from my own experience how difficult it is to get some points satisfactorily explained even when discussing them with experienced *ngatu* makers in their own language. Whenever there was any doubt, I [p. 157] asked to see the actual design tablet as well as a demonstration of the method under discussion and was often greatly surprised at the difference between the actual and the oral description. Equal difficulties were encountered with the multiplicity of terminology for a single item.

The death of Alisi Sipu will silence the one authoritative Tongan voice remaining on *ngatu* manufacture, its decoration and ceremonial usage. In order to preserve this information, the designs and varieties of *ngatu* included in this classification have all been explained and usually prepared especially by her for this part of the investigation. She was assisted by several old women who have made *ngatu* all their adult lives and, since the widowhood of some, almost every day.

CLASS I: *NGATU 'ULI*

General Description

Ngatu have a ceremonial as well as a practical use. After any ceremonial presentation that may follow their manufacture, all those *ngatu* (whatever their specific classification) that are intended to be used eventually as bed coverings, drapes, wrappings or primarily for various other domestic purposes, are not *ngatu 'uli*. *Ngatu 'uli* are never used in these instances, but are intended for more important occasions.

Formerly, *ngatu 'uli* were used at funerals, either in bales on [p. 158] which the body was laid, or hung about the special shelter in which the body was lying, or draped around the burial place during and after interment. They performed a secondary function, when not immediately required for funerals, as bedding on which one sleeps, though not as a covering.

Ceremonially it was used at weddings for traditional gifts by the bride and groom to each other, for sitting upon during the wedding ceremony and for the making up of the marriage bed, in company with other special *ngatu*. In the latter two instances, the bales of *ngatu 'uli* occupied specific positions in my arrangement of bales of *ngatu*.

When *ngatu 'uli* were being made primarily for funerary use, there was a distinction between those made for such a purpose and those intended for weddings. The former were made from coarsely beaten raw sheets, very often obtained from the bark of the breadfruit tree and heavily overlaid with *'umea* (red clay) before the black candlenut soot was applied. The finished *ngatu* was very heavy, coarse textured and stiff. I have seen one *ngatu* that was made in this fashion for a *kātoanga* at Fasi and afterwards presented to the younger daughter of Kalaniuvalu.²⁰¹ Those intended for ceremonial use at weddings were finer textured and not so stiff. The coarse *ngatu 'uli* would not be used at weddings but the finer *ngatu 'uli* could be used for funerals.

[p. 159] Now that *ngatu tāhina* can be used for any of the funerary uses formerly reserved to *ngatu 'uli* alone, its role has become primarily ceremonial. When not mobile, the *ngatu 'uli* are still kept in bales and their only practical use is for sleeping on. As this bale is generally placed lowest within the pile, there is very little wear and tear upon it. If regularly aired, it will last for many years, for *ngatu 'uli* is not cut but is folded in bales and retains its original length.

201 The noble of Lapaha, the Tongan capital at the time of Cook's visit.

Apart from its traditional place in the wedding ceremony, *ngatu* 'uli can be ceremonially presented for any purpose. This is not commonly done, but when it is, the gift, in spite of its later restricted use has an importance greater than that accruing from any other kind of *ngatu*. All *ngatu* 'uli are *ngatu* 'eiki.

There are two and possibly three *ngatu* that are used as *ngatu* 'uli which can be used as *ngatu* tāhina as well. That is, they can be legitimately used at funerals, and are not a substitute, as some *ngatu* tāhina would be, on such an occasion. Ceremonially, they can be used with other *ngatu* 'uli as an additional one but not as a substitute for one. When not mobile they may be used as coverings. They are coloured partly with the dyes usual for *ngatu* tāhina and partly with *ngatu* 'uli dyes. This dual-purpose variety of *ngatu* is immediately recognised by the combination of the distinctive sets of colouring media. In *ngatu* value, they are only slightly less than [p. 160] the true *ngatu* 'uli with which they are included for classification purposes, and are considered more valuable than other types of *ngatu*.

The second feature that distinguishes the *ngatu* 'uli is the colouring media used to decorate it. Red clay and candlenut soot replace the brown dyes used on *ngatu* tāhina, with more of the dye being candlenut soot than red clay, so that an all-over blackish appearance results. The whole of the decorated surface is coloured in, and only when the application of soot is lightened to give a greyish effect, is the white of the fabric noticeable.²⁰² The method of applying these dyes has already been described in the section on dyes.²⁰³

Kumi Hoko, Kumi Kupu and Kumi Tea

Three *ngatu* 'uli: *kumi hoko*, *kumi kupu* and *kumi tea*, may be considered together. Actually, the *kumi hoko* and the *kumi kupu* are important ceremonial *ngatu* and are complementary to each other. The *kumi tea* is one of the dual purpose *ngatu* that can be used either as *ngatu* 'uli or *ngatu* tāhina, and may or may not be included with the first two on ceremonial occasions. These *ngatu* are usually made in the first instance for ceremonial presentation at weddings, after which they may fill the same role at later weddings or go out of circulation as funerary wrappings.

[p. 161] The *kumi hoko* is the bridegroom's gift to the bride and has a distinctive border made by an arrangement of the under sheet that leaves tags along one edge. At important weddings, more than one *kumi hoko* may be provided by the bridegroom's party, in which case, when the *ngatu* are folded in bales for the couple to sit upon, the tagged borders are knotted together first. The *ngatu* are spread out at full length with tags together and knotted together before folding.

The *kumi kupu* is the bride's gift to the groom. When the *ngatu* 'uli are being prepared for the wedding throne, they are folded in a special manner so that all thicknesses are even, with a smooth side to the ground on the first one and a smooth side upward on the last. They are arranged so that the final border of one is next to the commencing border of the other.

The symbolic importance of these two *ngatu* is best explained by their names and by the positions in which the bales are placed. *Kumi* means "to seek", *hoko* "to join", and *kupu* "a member or part", either of a body or an association. *Kumi hoko* then is translated as "seeking to be joined", *kumi kupu* as "seeking a member or part". The symbolic expression lies in the tagging on the bridegroom's gift, the *kumi hoko*, a device by which joining can be effected and signifying the bridegroom's desire for union. The symbolism is further expressed by placing the bales so that the borders of each are [p. 162] together. The initial folding of each bale is so arranged that there is a regular pleating back and forth through one straight on through the other. It is symbolic of the union of the two people in one harmonious being. The gesture on the bridegroom's part of sometimes providing two or more *kumi hoko* is a demonstration of his family's approval of the match.

202 The *amoamokefe* has white bars left uncoloured.

203 See Chapter II, 57 ff.

The *kumi tea* when it is added, never comes between the *kumi hoko* and the *kumi kupu*, but lies directly below them and above any other *ngatu*. There appears to be no special significance in including this *ngatu*, nor can I guess at any from the name. *Tea* means “white” or “light coloured” and certainly, if it refers to the appearance of the *ngatu*, one could point to the lack of all-over sombreness and stiffness of the true *ngatu ‘uli*. Alisi thought that it had been introduced into ceremonial use after the other two, and took the *kumi* designation because of its association with them. *Tea* was to distinguish it from the other two. In *ngatu* parlance, the word *kumi* is often used when referring to *ngatu ‘uli* generally.

The *ngatu ‘uli* are covered by a bale of *ve`etuli ngatu tāhina*, also given by the bridegroom. Folded on the top is a *fihu*, a soft white mat traditional for weddings.

Kumi Hoko

No tablet is used for this *ngatu*, but coconut midrib strips are attached to the half cylinder to define the width of the borders. [p. 163] When I watched a *kumi hoko* being made, a mat was first thrown over the cylinder and the strips were attached to the mat.

The edges of the undersheet that were intended to cover both sides of the cylinder had rectangular strips cut from them to a depth of six to eight inches at ten to eleven inch intervals, leaving a series of tags. When the upper sheets were put across the under ones, the tags were not covered so that although the rest of the *ngatu* consisted of the usual two layers, the tags consisted of only the under one.

The candlenut soot tied inside a small bag of *kaka*, the porous coconut spathe, was sprinkled fairly thickly over the fabric but leaving both side borders (*tapa*) and the initial border (*tapa mua*) untouched. A pad, in this instance dipped in mangrove juice (*tongo*) and squeezed out, (although any of the brown dyes may be used), was used to rub the soot well into the *ngatu*. The appearance was almost all black with traces of brown.

When the whole *ngatu* had been assembled, it was taken outside and spread to its full length on the ground. Around three sides of the *ngatu*, not including the tagged side, one half of the white borders were folded underneath. As the borders were about eleven inches wide, at least five inches of them were visible. These parts of the folded borders were painted with red clay (*‘umea*) using stumps of coconut husk. The red clay had been prepared by pounding it and then mixing [p. 164] it to a fairly thick consistency with the juice from the *koka*.

The next day the *ngatu* was again spread out in the sun, and *tongo* dye was brushed over the whole of the coloured part. The red of this dye imparted a high gloss to the *ngatu* and deepened the red of the clay. When the borders were spread out to their full width, there was a narrow white uncoloured strip on three sides and the tagged border was wholly white. This type of border is called *tapa peluki*.

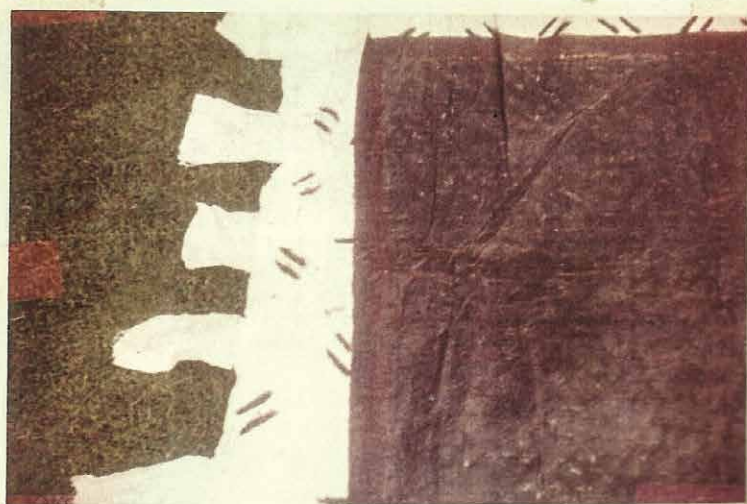
Kumi Kupu

As with the *kumi hoko*, no tablet was used for this *ngatu*. The borders were marked off with coconut midrib strips, and the under and upper sheets assembled in the usual way. No tagging was left on any side. The candlenut soot was sprinkled on and rubbed into the fabric with raw bark-cloth pads loosely squeezed in *koka* dye. The borders were painted all over with red clay. Before each pair of sections (*langanga*) were pulled from the cylinder to make room for the next two, pairs of short parallel lines were painted diagonally at intervals along the painted border. This type of border decoration is called *ve`e puaka* (pig's feet).

I was told later by Lupe Amine of the Fanamaka *Kautaha* that the red clay borders of the *kumi kupu* should not be overlaid with any type of decoration. When I had the opportunity, I examined a very old *kumi kupu* in Alisi Sipu's possession, and the borders were plain. Thus the addition of the pig's feet in the



53. Working on kumi hoko.



54. Part of completed kumi hoko, showing tagged border.

55.



Working on kumi kupu.



56. Part of completed kumi kupu showing 'umea border.

instance I have [p. 165] cited, may have been a personal preference on the part of the owner. Certainly unless her standing among *ngatu* experts was not altogether unassailable, she could expect some caustic criticism when and if her *ngatu* ever came before the traditionalists. While much experimentation is carried out with new embroidered designs on the *ngatu tāhina*, the *ngatu* 'uli designs are traditionally regarded as inviolable, although today there is some slight relaxation of standards in this respect.

The day after the *ngatu* had been completed, it was spread in the sun and painted over with *tongo* dye.

Kumi Tea²⁰⁴

The *kumi tea* is an attractive *ngatu*. A women at Fasi made one at the beginning of 1959. The cylinder was divided into divisions of about 30 inches each by marking them off with coconut midrib strips. There were two panels in each half section (*maaukupu*) making four in the total width of the *ngatu*. The half section strips were a quarter inch wide, and were placed alternately in parallel rows of four and five, each strip one and three quarter inches apart as shown in the design arrangement.²⁰⁵ Embroidered stencils were placed in each of the divisions. The strips and the tablets were held to the matting over the cylinder sheets of raw bark-cloth pasted down with arrowroot (*mahoa'a*).

After the under and the upper sheets had been placed on the [p. 166] cylinder the fabric was brushed over with a mixture of *tongo* and *koka* dyes, using moderately heavy pressure over the tablet and brushing more lightly over the strips. The spaces between the midrib strips were painted with candlenut soot and red clay, both of which had been dissolved in the juice of the *koka*. The outer spaces were black and the inner ones reddish brown. As brushes, the sharpened keys of the *falahola* pandanus fruit were used. The next day the completed *ngatu* was spread in the sun, and the stencil designs blocked in with boiled blackish *tongo* dye. The parallel strips of red clay and black candlenut dye were painted over with mangrove dye as is usual with *ngatu* 'uli, the application of dyes generally distinctive for colouring *ngatu* 'uli.

Potuuamanuka²⁰⁶

Potuuamanuka is a *ngatu* which consists simply of broad bands of alternate black (candlenut) and red (red clay) down the full length of the *ngatu*. For this reason, it is a very striking *ngatu* and my own favourite among *ngatu* 'uli. The tablet is arranged directly on the half cylinder and consists of coconut midrib strips pasted across the cylinder at regular intervals.

The candlenut soot and the powdered red clay are mixed to a thick liquid with *koka* dye. A light rub over the assembled raw sheets with [p. 167] a pad soaked in *koka* dye, and squeezed out brings up the positions of the underlying strips (*palalafa*). The women use any of the dried pandanus keys (*fa*) *falahola* or *paongo* to paint the spaces between the *palalafa* alternately with candlenut and red clay dyes. The borders are usually left plain, but one I saw had horizontal lines in threes drawn across the borders where the section divisions would ordinarily show. Both borders are apparently permissible. The *ngatu* is finished by having all the coloured area washed over with mangrove dye.

The only *ngatu* design that Mariner ever described, and this somewhat inadvertently, was the *potuamanuka*. When speaking of the black *ngatu* at a funeral, he said:

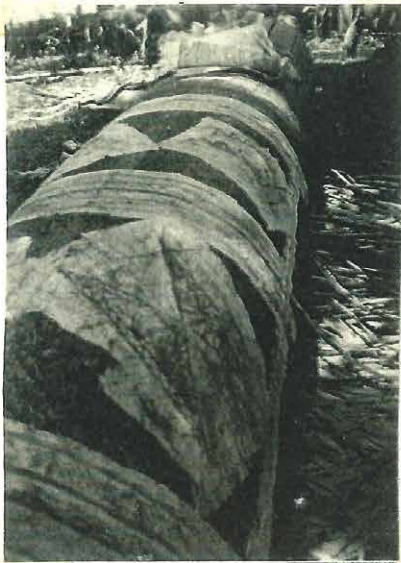
This black gnattoo or rather gnattoo of a dark colour, having a deep brown ground with black stripes, is not chosen on account of its colour, but because it is coarse and common

204 Plate 58

205 Plate 57

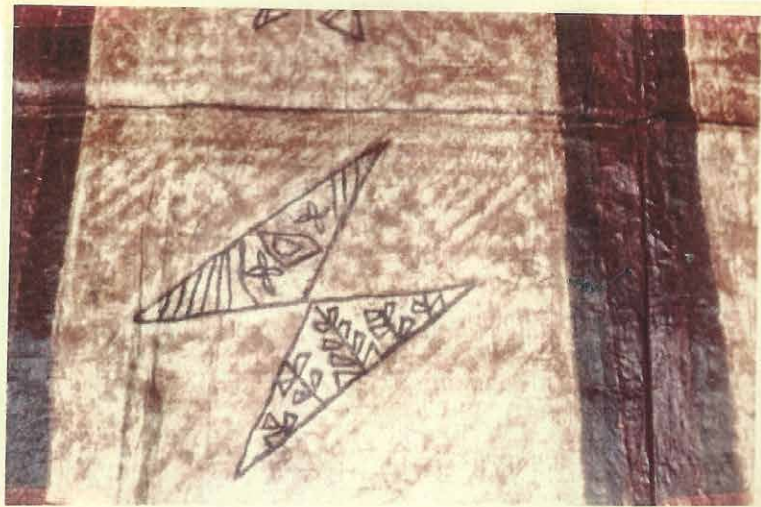
206 Plate 59

57.

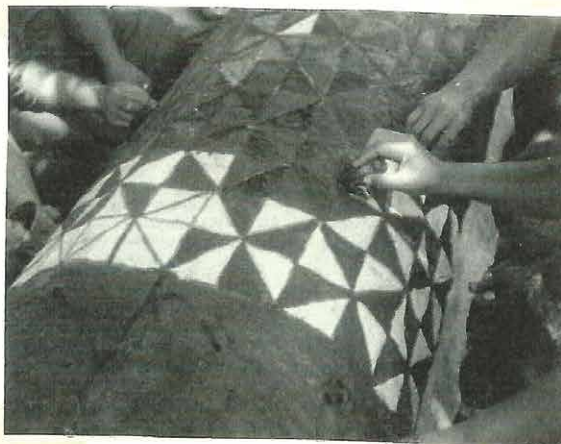


Kumi tea kupesi on papa.

57



58. Part of completed kumi tea.



59. Painting manulua 'u
ngatu on papa.



60. Completed manulua 'uli ngatu.

(emblematical of poverty and sadness). They have a kind of gnatoo of very superior quality, but of the same colour and pattern, and this is used on occasions of rejoicing.²⁰⁷

The latter part of his statement probably refers to a *potuumanuka* used in ceremonial exchange at weddings. The fact is though, that the black colouring and this particular pattern are distinctive of *ngatu 'uli* which, in spite of any ceremonial role they may play, are primarily intended for funerals and weddings. Only the coarseness of the particular *ngatu* that Mariner was referring to, marks it as specifically a funeral *ngatu*, but the same *ngatu* in finer quality “for rejoicing” that he mentions may also be used at funerals after [p. 168] its preliminary use as a wedding gift.

The austere simple lines of the *potuumanuka* are not to any great extent favoured by Fijian and Samoan women, nor is this style of decoration commonly produced by women in modern Tonga, although they sigh with admiration when a *potuumanuka* is unrolled before them. However, it figures several times in Brigham’s collection of Hawaiian tapa where Plate V.I. is the same as the Tongan, while Plates S.2. and E are similar.²⁰⁸

‘Alolua

I was not successful in photographing the ‘*alolua*, as the one I saw was folded in a bale and several people were sitting on it at a *katoanga*.²⁰⁹ When the gathering was over, there was no time to ask for it to be unfolded, as it was to go with the person to whom it had been presented during the exchange. However, in appearance, it is very like the *kumi kupu* although much stiffer in texture. It is the traditional *ngatu 'uli* made expressly for funerary purposes.

No underlying stencil is employed in its manufacture. Red clay is put on thickly all over the cloth. When it has dried, candlenut soot is sprinkled over the clay except along the borders, and rubbed in with a pad soaked in *koka*. The final painting over with mangrove dye is done with a weak solution, not strong enough to give a gloss, but enough to “bind” the clay and the candlenut soot. After the soot is rubbed over, the clay still shows through plainly, so that the [p. 169] ‘*alolua* is redder in appearance than the *kumi kupu*.

I was not able to determine the significance of the word ‘*alolua*. ‘*Alo* has several meanings, among them, “to row”. *Lua* also has more than one meaning, one of them being the archaic form of ‘*ua* (two).

It is usual when a numeral follows ‘*alo* to take “to row” as its meaning: e. g. ‘*alotolu*, “to row or paddle all three together”; and ‘*alolu*, “to row two together”. Another meaning of *lua* is a “reef or rocky ledge or bed which is always submerged”.²¹⁰ Therefore it could also mean “to row near the reef”. However, as the women asked could give no information as to the origin and correct meaning of the word, it seems profitless to surmise.

Amoamokofe²¹¹

The *amoamokofe* is the most spectacular of the *ngatu 'uli*. Because of the sharp edges to the design, the inclusion of white spaces and the addition of stencilled motifs, it has an all-over “un-Tongan” appearance. However, all the points mentioned are characteristic of Fijian bark-cloth.

207 Mariner 1818: 387

208 Brigham 1921

209 A gathering of people for the purpose of exchange, in this case *ngatu* for mats.

210 Churchward 1959: 307

211 Plate 65d

The name too is suspect. *Amoamo* is to “stroke with the hand”, *kofe* is “bamboo”. The *kupesi* is completely composed of an intricate arrangement of coconut midrib strips to define the pattern. The surface of *ngatu* between and along the impressions left by the strips is painted in black with candlenut soot and red clay. Anyone watching [p. 170] the painting of such a *ngatu* might easily compare the actions of the women to “stroking or rubbing the strips”. Thus only the name suggests the use of bamboo rather than coconut midribs (*palalafa*).

The early Fijian method of arranging the tablet directly on a foundation, was described by Williams ²¹² as “to arrange parallel at about a finger width apart, thin straight strips of bamboo about a quarter inch wide.... a pattern was cut out of a leaf²¹³ and held in place by the thumb, while the stencil was rubbed out by a pad steeped in dye.”

In modern Fiji, stenciling by applying a motif externally and rubbing it over with dye to leave its white shape when the stencil is removed, is still a characteristic Fijian decorative practice. However, it does not appear to have influenced Tongan technique except in this one well-known case.

The Tongans never used bamboo on their half cylinder. It is too stiff to be held down over a semi-circular base simply by the application of raw bark-cloth sheets. The Fijian base for this purpose is not nearly so convex. Furthermore, in cases where Tongan women might conceivably use bamboo, as with the woven tablets, they use mangrove slats instead. External stencilling is unknown on any of the traditional Tongan patterns and although I am not prepared to say that some modern Tongans have not experimented with external stencilling, I have never seen or heard of any instance.

[p. 171] The Tongan women say that the *amoamokofe* originated in Leimatua, Vava'u, within the last hundred years. They admit the similarity to Fijian decorative technique but claim it as Vava'u *ngatu*. Certainly the Leimatua women are consulted when an *amoamokofe* is being made and women from Leimatua are very proud of the extensive length of *amoamokofe* which they made for Prince Tunji's wedding.

I have seen one *amoamokofe* made, with Feleunga Tu'itavake from Leimatua, Vava'u directing the work. The strips were split into lengths of less than a quarter inch in width. Each strip was separately covered with raw bark-cloth sheets that were pasted to the mat covering the cylinder.²¹⁴

After the under and the upper sheets had been put together over the tablet, the surface was lightly brushed over with *koka* dye to bring out the positions of the underlying strips. From this stage, the dyes were painted on to bring out the design indicated by the Strips. Black candlenut soot and pounded red clay were dissolved in *koka* juice and applied to the fabric with pandanus fruit keys.²¹⁵

Both candlenut soot and red clay were applied to the diagonal pairs of parallel lines, while the vertical pairs were alternately treated either with soot and left uncoloured. Alternating blocks were all black, but before the soot was applied, external stencils cut from sheets of raw bark-cloth, representing the *lupe* (dove), *mahina moe fetu'u* (moon and star), and the *fetu'u fuka* (shooting star) [p. 172] were stuck on the uncoloured divisions. After they had been painted over with black, the external stencils were removed to leave the shapes of the motifs.

212 Williams 1859: 51

213 This type of stenciling with a leaf was not unknown to the Tahitians.

214 Plate 65a

215 Plate 65b

65.

Making an ameamekufe.



a.

Assembling kupesi of palalafa.



b.

Painting of ngatu with 'umea and tuitui 'uli, using dried coconut husk.



c. Almost completed pair of langanga on papa



d. Completed ameamekufe.

One of the side borders was painted right to the edge with red clay. This was a *tapa tatala*. The other was a *tapa peluki*, in which one half was folded under while the exposed part was painted with red clay. Several days later, the entire dyed portions were painted over with mangrove dye (*tongo*).

The result was a very handsome *ngatu*, and the only one of its kind that I and several other women who were helping, had ever seen, although I was told that the royal wedding *amoamokofe* was still to be seen during a general airing of *ngatu 'uli*. The tablet for this *ngatu* had taken eight women a whole morning until noon to assemble, and the *ngatu* several days to complete.

***Tūtū'uli*²¹⁶**

This is one of the lighter, greyish coloured *ngatu 'uli*. The tablet is prepared by sewing inch wide strips of pandanus, both parallel and diagonally, onto matting. The positions of the strips are reversed several times within the width of the *ngatu*. The word *tūtū'uli* means “to sprinkle with black”, and in this case, the candlenut soot is very lightly sprinkled over the surface of the material before it is brushed over with a *koka* pad. The pandanus strips produce a lightly defined design. Each strip of the design is [p. 173] rubbed with *koka* to make it more distinct, and painted over with liquid candlenut soot. All the borders are painted with red clay. This type of light sprinkling with candlenut soot is called *hāoneone* meaning “having the effect of sand”.

Although Alisi says that the *tūtū 'uli* is a true *ngatu 'uli*, she knows that some women would consider it a dual purpose *ngatu* and would use it as such if the occasion called for it as a *ngatu tāhina*. But she did not think that she would. I was shown another *ngatu* at Fasi, apparently a *ngatu 'uli*, but looked upon by the owner as a dual purpose *ngatu*. She called it a *tūtū 'uli*.²¹⁷ It was a more attractive *ngatu* than the one shown to me by Alisi but differed in several ways. More red clay had been used on it and it had been well brushed over with a brown dye that gave it a high, gloss. The only resemblance it had to the first *tūtū 'uli* was the diagonal nature of the design, reversing its direction at intervals, and the *hāoneone* manner of applying the candlenut soot. If it was an attempt to make the *tūtū 'uli* design more attractive, by adding new decorative touches, while preserving the essential characteristics of the traditional *tūtū 'uli*, then I think it was successful. The owner said that she knew that the *ngatu* shown to me by Alisi was the usual *ngatu 'uli tūtū 'uli* but claimed that hers was also *tūtū 'uli* and she could use it as *ngatu tāhina* if she wished.

***Ā'O Manutu'ufanga*²¹⁸ [p. 174]**

This is a dual purpose *ngatu*, classed as *ngatu 'uli*, although freely admitted to be a recent introduction. I think the women of the Fanamaka *kautaha* who introduced the *ngatu*, are the only ones who have made it as they hold the only tablets. It is not likely that they would have lent them to any other *kautaha* for reproduction, and I don't think anyone would attempt to make a set of the tablets during the lifetime of the designers, although it would be easy enough to do so. In future years it may become a very popular *ngatu*, at least with²¹⁹ Kolovai and Kolomotu'a people, as it is very attractive.

The name means the “enclosure (grave) of Manutu'ufanga”. Manutu'ufanga was the mother of 'Ata²²⁰, the noble of Kolovai and before his death, Premier of Tonga. She was a patroness and chairwoman of the Fanamaka *kautaha* in the early years after its inception. Not only was Manutu'ufanga a noblewoman

216 Plate 1

217 Plate 62. *Ngatu* owned by Lisa Soakai of Fasi.

218 Plate 64

219 Manutu'ufanga was a lady of rank from Kokomotu'a and was buried at Kolovai.

220 Ata was cited by Gifford as his principal informant when he was gathering material for his book, “Tongan Society”.

61.



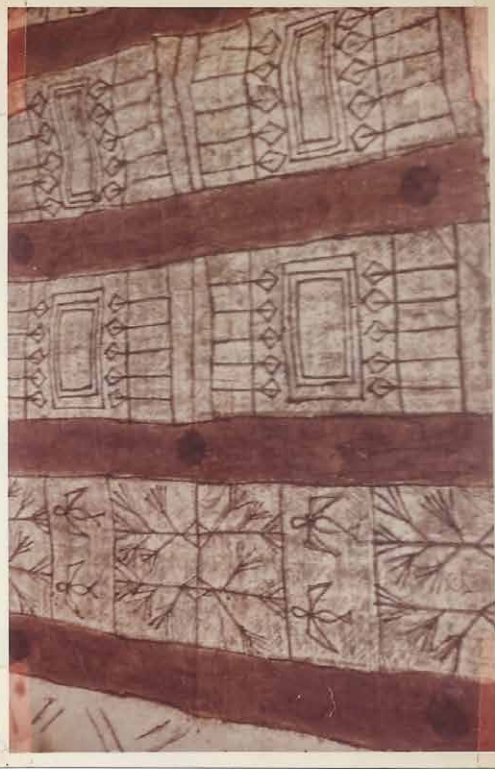
Tūtū'uli, showing 'umea border, and the weaving of mat to which pandanus strips of kupesi were attached.



62. Tūtū'uli (variety).



63. Potuvamapuka.



64. A 'o Marutuufaga.

who was a practising member of the *kautaha*, but she was also an authority in her time on all aspects of *ngatu* manufacture. Alisi says that she learned a great deal of what she knows now of the craft from Manutu'ufanga. After her death, the members of her *kautaha* conceived a special design in her memory. The embroidered *kupesi* depicts the iron fencing around her grave, the truncated mound of the grave itself, and the *toa* trees (*Casuarina* [p. 175] *equisetifolia* - Linnaeus) and flying foxes of Kolovai, where Manutu'ufanga is buried. By employing media characteristic of *ngatu* 'uli, and refraining from including any of the motifs popular in modern *ngatu* it has been raised to the status of *ngatu* 'eiki of the *ngatu* 'uli class.²²¹

The tablets are arranged in sections separated by broad bands of red clay. The candlenut soot is applied *hāoneone*, that is only lightly sprinkled on. The outlines of the design are blocked in with candlenut soot dissolved in a brown dye. Down the red clay bands are the traditional black *tukihea* spots.

It is an attractive design, and an indication of the artistic development of the Tongan women in *ngatu* decoration. They have combined traditional media and form with new skills in colour, balance and careful execution.

***Manulua* 'uli²²²**

I have described in some detail in the section on *ngatu tahini*, the assembling of the *manulua kupesi* or tablet and the making of the *manulua tāhina ngatu*. For *manulua* 'uli the processes of putting the *ngatu* together are the same, but in the 'uli variety, the colouring is different. Instead of rubbing mangrove and *koka* dye into the alternate triangles of the pattern, they are painted with red clay and candlenut soot dissolved in *koka*.

[p. 176] I watched eight women making a *manulua* 'uli using the dried segments of the *fā* pandanus fruit as brushes, and was interested in the difference of technique followed by one of them who was a Vava'u woman. Seven of the women rubbed lightly over the upper sheet with pads squeezed out in *koka*. This brought out the tablet lines and they were able to see clearly where the colouring was to be put. But the Vava'u woman painted straight on to the fabric, feeling with her left hand for the outlines of the tablet. When the *ngatu* was finished, it was brown and black all over. As the borders were black on red clay no part of the raw white bark-cloth was showing. The completed *ngatu* was put out in direct sunlight for a whole day, and the day after, it was brushed over with mangrove dye.

Because of the tediousness of assembling the tablets for an all-over *manulua ngatu*, some *manulua* 'uli are made with only a broad panel of the design down the centre of the *ngatu*. The rest of the *ngatu* is black up to the borders, which are black over red clay. I saw a *ngatu* 'uli like this being taken to be presented at a funeral, but have no coloured plate to illustrate it.

SUMMARY OF THE NGATU 'ULI CLASS

I have described *ngatu* 'uli still known and made in Tonga, of which there are nine types (Fig. 11). Whether there are others not known to the women of Tongatapu, I do not know, but I am inclined to doubt that there are. Since Tongan specimens of *ngatu* collected by early travellers in the Pacific are not numerous and apparently [p. 177] were confined to *ngatu tahini*, we have no ready means of ascertaining whether there were other *ngatu* 'uli that have been forgotten. The Forster-Cook collection now in the Göttingen Institute of Ethnology may probably contain relevant material but as yet this is largely undescribed.

221 All *ngatu* 'uli are *ngatu* 'eiki.

222 Plates 59 and 60.

Considering the number of *ngatu 'uli* still to be seen in Tonga, and the ease with which some women are able to make even the less popular among them, it is difficult to understand why McKern referred to them as he did in his section on varieties, which lists the following types:

KUMIKUPU – a chiefly tapa of primitive type concerning which detailed information was not available.²²³

KUMIHOKO – a chiefly tapa commonly made in primitive days, concerning which detailed information was not found.²²⁴

KUMITEA and *POTUUMANUKA* – chiefly tapa of primitive type concerning which details are now forgotten.²²⁵

He also includes in his short list of *ngatu 'uli* several *ngatu tāhina* so that his attempt to classify *ngatu* into *ngatu 'uli* and *ngatu tāhina* contains enough inaccuracies to make it of little use for reference purposes.

CLASS II: NGATU TĀHINA ²²⁶ [p. 178]

The *Ngatu Tāhina* Class

All those *ngatu* not *ngatu 'uli* are *ngatu tāhina*, irrespective of what further divisions they may fall into. They are distinguished from the *ngatu 'uli* by the colouring media used, and the domestic uses to which they may be put. However, the process of assembling these *ngatu* is the same as that for the *ngatu 'uli*, except for those belonging to the category of *fuatanga*.

In contrast to the overall darkness of colour in *ngatu 'uli* which results from the liberal use of candlenut soot, the opaque reddish brown of the red clay, and the general tendency not to leave any of the light background of the fabric itself showing, the colours of *ngatu tāhina* are various shades made up from the range of brown vegetable dyes.²²⁷ Also some, and frequently a great deal, of white background is in evidence, and any black dyes used are obtained from boiling down a brown dye rather than candlenut soot. The stiffness and often high gloss of the *ngatu 'uli* give way to a much softer texture, as some of the natural gloss from the juice of the candlenut and mangrove dye is absorbed by the raw fabric. The *koka* in its brown state has no gloss.

The *ngatu tāhina* class encompasses all ordinary *ngatu* and exhibits a wider range of uses than the *ngatu 'uli*. They may also be used for ceremonial gift making, although at funerals and weddings, only [p. 179] certain clearly defined types are acceptable. Thus, while it is now permissible to use *ngatu tāhina* at funerals and weddings, where once only *ngatu 'uli* would have sufficed, the value of *ngatu 'uli* remains above that of the *ngatu tāhina*. For this reason, *ngatu 'uli* are still the ceremonial media at funerals and weddings of consequence.

Apart from their ceremonial functions, *ngatu tāhina* are employed for all household and personal uses which still call for *ngatu* rather than for foreign manufactured cloth, and, in many cases, in preference to manufactured cloth.

²²³ This is the best known and easiest of the *ngatu 'uli* to make today.

²²⁴ I saw several *kumi hoko* and have part of one myself. Lupe Amini made a 50 *langanga* one for Ve'ehala's wedding in 1957, and Alisi Sipu says that she knotted four *kumi hoko* together for the wedding throne at the same wedding.

²²⁵ These are not as common as the first two mentioned, but they are still made, and details of their manufacture are by no means forgotten by everyone. Apart from what may be in the Forster-Cook collection at Göttingen, there are other specimens to be seen in the possession of Tongan women.

²²⁶ *Hina* means "white or light coloured" and *ta* "to hit". *Ngatu tāhina* then, is *ngatu* that has been "hit" or coloured lightly, in contrast to the darker more heavily applied colours of the *ngatu 'uli*.

²²⁷ *Koka*, candlenut and mangrove dyes.

The *ngatu tāhina* are decorated by using all types of tablets listed in Chapter III. Rather than discussing all *ngatu tāhina*, I intend to include only descriptions of traditional designs still employed by Tongan women. I shall also include a description of some recent compositions of *ngatu hingo*²²⁸. Any attempt to cover all of these would be fruitless as a list of those already in use is almost inexhaustible and is constantly being expanded by the addition of new compositions. Those that are described are type examples which need only be referred to by name to be recognized.

Woven Tablets (*Kupesi*) Types

Two of the most distinctive *ngatu*, second only to the *ngatu 'uli* in ceremonial value, are those made with woven tablets. They are the *ve'etuli* and the *tatautuisipa*. The decorative effect results from the horizontal or diagonal lining of the slats and the particular [p. 180] weaving knots employed when weaving them. In earlier times only the blackish round spots of *tukihea* were added as extra decoration. This is still the case with *tatautuisipa*, but recently made *ve'etuli* have had triangular decorations or crescent-moons added instead of the *tukihea* spots. At the time of my study, such instances were of isolated occurrence but they are an indication of the changing nature of *ngatu* decoration. *Ngatu 'eiki* are at present the stronghold of traditional decoration, but it is possible that some changes will be accepted without affecting the status of the *ngatu*. Only time will tell.

Both woven of these design tablets represent painstaking handcraft. Those that I saw at one *falekautaha* were very old and quite blackened by the constant rubbing of *koka* over the *ngatu*. The women said that these tablets were inherited from their first members, and only the oldest woman present who was about 80, had seen it made. She was not sure how it was put together, and I had to unravel the weaving for a short way to find out. The Fanamaka *kautaha* also had a very old set made about 40 years ago. However, I later saw a set of *ve'etuli kupesi* at a Fasi *kautaha*. They appeared to be quite new and had not been used more than two or three times, so there are still women who can make this woven tablet.

Ve 'etuli²²⁹

Narrow bamboo like slats of mangrove (*tongo*, *Rhizophora mangle* – [p. 181] Linnaeus) about three feet long and three sixteenths of an inch wide are woven together with *fau*, the inner bark of the *Hibiscus tiliaceus* – Linnaeus. Two thin lengths of hibiscus bark, about the thickness of three strands of embroidery cotton, are twisted together. The length of barkstrip is then doubled over and a mangrove slat inserted in the loop. The strands are then crossed over on top, another slat is added, and the lengths of barkstrips crossed back to their original sides. This intertwining backward and forward as each slat is added, is continued until 125 slats are woven together at one end. When the last slat is attached, the weaving continues back down the tablet slats, one sixteenth of an inch away from the first row. This straightforward weaving continues for about 60 rows, after which a special decorative twist is given to the weaving, with wider spacing around it. The weaving then continues in plain twisting, the wider spacings being repeated at intervals along the slats. The tablets are three feet in length and between 18 and 19 inches in width.

As most *ngatu* are about 12 feet wide in the pattern area, with borders of varying width on either side, four such tablets would be needed for each side of the half cylinder. If embroidered tablets are to be superimposed over the *ve'etuli* design, they consist of small triangles arranged on a slant. The under and upper sheets are assembled in the usual way, and the brown dye rubbed over fairly heavily. The *tukihea* spots, which are the more usual decoration on [p. 182] the *ve'etuli*, are painted on at regular intervals.

²²⁸ Inscribed *ngatu*.

²²⁹ Plate 68 and Fig. 10.

Plate Missing

66 Pangai kafe.



67. Hemeheima loutoa.



Tatautuisipa, an old example which consists

Ve'etuli Kupesi.

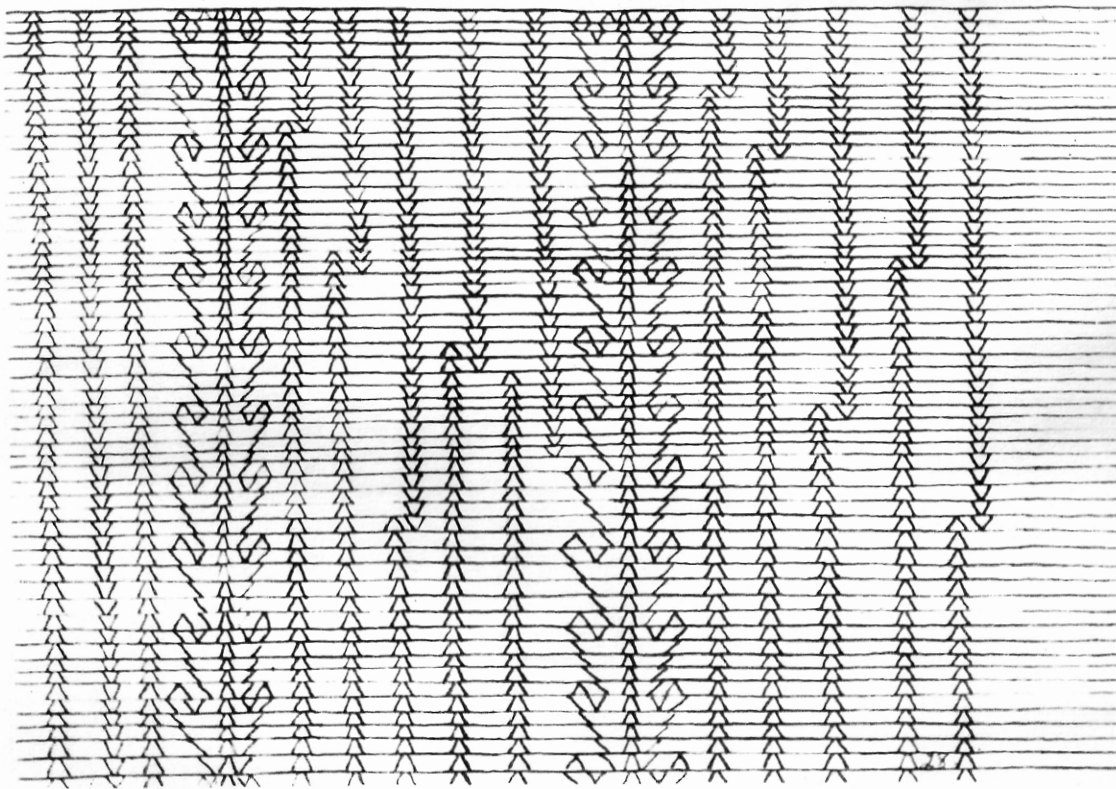


Figure 10: A woven design tablet or *kupesi* for the *ve'etuli ngatu*.

Ve'etuli means “running” or ‘pursuing feet’, and the effect produced by the weaving on the *kupesi* is of a continuous procession of two-toed feet, running up and down the pattern. Ceremonially, the *ve'etuli* must be given together with the *kumi hoko* and *kumi kupu ngatu 'uli*. In the placing of the bales of *ngatu*, when making up the marriage “throne”, the *ve'etuli* is put directly on top of the two symbolic *ngatu 'uli* and covered with a soft white mat (*fihu*) on which the bride and bridegroom sit.

Tatautuisipa²³⁰

As with the *ve'etuli*, the design tablet for the *tatautuisipa* is made by weaving mangrove slats together. It is even more complicated than the *ve'etuli*, as the slats are arranged on a slant and do not lie horizontally as those of the *ve'etuli* do. The weaving is done straight up and down the slats, but because of the angle at which they are placed the weaving appears to be going diagonally in the opposite direction. Another set of rows is started above the first row before it is completed, and the finished effect is of a zig-zag pattern made by the interwoven strands. To keep the slats on a slant, a background of vertical slats is woven together, and the diagonal slats affixed to them. No secondary design tablet is placed over the *tatautuisipa* and the distinctiveness of the design is dependent upon the decorative weaving. Even when *tukihea* spots are added, they are [p. 183] placed very sparsely on this *ngatu*.

Tatautuisipa is the name of the woven pandanus or more usually coconut leaf partitions in a chief's house, used for screening off the sleeping quarters.²³¹ At the marriage of the sovereign, one of these partitions plays a ceremonial part in the wedding ceremony. The weaving technique is thick and strong.

230 Plate 69

231 *Tatau* is a woven partition, *tui* means “to sew”, *sipa*, to “stagger or veer off”. Hence the “woven partitions sewn at a slant or veering away in direction”.

Extra panels are wrapped around the edges and others are attached in a diagonal position across it. Specially dyed black *kafa* (sennit cord) is used to sew on the extra panels. The stitching runs straight across the diagonal panels, so that the stitching and the panels appear to veer off in opposite directions.

This arrangement of layers of weaving and stitching have been cleverly reproduced on the design tablet, although the stitching, when it appears on the tablet, has been considerably stylized to give a better decorative effect. *Tatautuisipa ngatu* are suitable for presentation on the most important ceremonial occasions. It is not as popular as the *ve'etuli* probably because of the unwieldiness of the design tablet.

Cord Wound Tablet Types

Two well-known *ngatu* are made over designs that are assembled by winding twine around the half cylinder (*papa koka'anga*). They are the *pangai kafa* and the *hemehemaloutoa*. The first mentioned is perhaps the *ngatu* pattern most often seen, if not for its own sake, [p. 184] then as a background to other designs. The only traditional decoration customary on these two *ngatu* was the widely spaced *tukihea* spot. However, I have seen a recent attempt to make closely spaced spots of smaller size on a *hemehemaloutoa*. The general effect of these designs on the *ngatu* is of very close grooving.

Pangai Kafa

The Hawaiian tapa shown in Plates O, Q, R and S in Brigham's *Ka Hana Kapa*²³² are all like *pangai kafa*. In making this type, the whole of the *papa* which is normally marked off to carry the design for the *ngatu*, is covered with closely spaced (about three sixteenths of an inch) strands of single twist sennit twine, or more commonly nowadays, with thin cord, or thick cotton. The twine is a continuous length, taken back and forth from side to side of the half cylinder and secured under the edge by tacks or some other projection. In Nuku'alofa, where there is easy access to shops, I have seen only cord, but no doubt in the outer villages, sennit braid twine is still used, as the distinctive braid twist can sometimes be seen on *pangai kafa ngatu*. Instead of looping the twine around some projection under the edge of the cylinder and bringing it back again, it is sometimes carried straight under the half cylinder and over again from the opposite side.

A single sheet of raw bark-cloth, lightly dabbed here and there with sticking agent is put over the twine and secured to it by a [p. 185] damping over with a pad dipped in *koka* juice. This ensures that the spacing between the rows of twine are kept regular, and not disturbed by the sheets of bark-cloth being pulled over it and by the rubbing over the surface.

When a *kautaha* has more than one half cylinder, it is common to leave the one that has been prepared for *pangai kafa* with the design attached so that it can be ready when required. If the *kautaha* has only one cylinder, instead of unwinding the twine, they may use it as a background for other designs placed over it, or a mat might be thrown over the *pangai kafa* before a new design is assembled. In the latter case, the mat will form the background on the new pattern.

Tukihea spots are the usual decoration superimposed over the *pangai kafa*. Sometimes women have added *tukihea* spots to *ve'e tuli* and called it *pangai kafa*, but unless the reproduction of the design is very indistinct, these *ngatu* can be easily recognised.

232 Brigham 1911

Hemehemaloutoa²³³

For this *ngatu*, the half cylinder is prepared in the same way as for the *pangai kafa*, but instead of the twine being carried back and forth vertically across the cylinder it is put on at an angle. Tacks are partly driven in along the divisions on the top of the cylinder between the two sections (*langanga*). They are also put in to mark regular divisions of the width down the cylinder, and along the bottom edges. The twine is looped around the tacks, not from top to [p. 186] bottom, but diagonally, from side to side. When the whole area is covered with the twine, the tacks are driven in completely, so as not to damage the sheets of bark-cloth when they are placed on the half cylinder.

As with the *pangai kafa*, the superimposed decoration is usually confined to *tukihea* spots. However, one already mentioned had smaller spots and short parallel lines between the spots.

Loutoa means “toa leaf” and *hemehema* “on the slant”. It is not difficult to imagine that the lining produced by the twine represents the casuarina needles on a slant. I asked the woman who had decorated her *hemehemaloutoa* with the groups of small dots in place of the usual *tukihea* spots, why she had done so. I was surprised to learn that she had not intended them to be the traditional *tukihea* decoration, reduced in size, but the tiny cones on the giant casuarina trees (*toa*).

Although the *hemehemaloutoa* is well known to women who make *ngatu*, it is not commonly made, possibly because of the work and time involved in preparing the design.

Manulua²³⁴

The *manulua* is perhaps the best known of the Tongan traditional motifs. When it occupies the main decorative pattern, and is not just a unit in another design, it gives its name to a particular type of *ngatu* that in company with several other *ngatu* has special ceremonial significance. The *manulua* motif appears to be widespread in the [p. 187] Pacific appearing frequently on Samoan *siapo*, and is shown by Brigham²³⁵ on Fijian and Hawaiian bark-cloth.

Like many of the traditional designs, it is not made from an embroidered tablet, but is composed directly onto the half cylinder. Unless the cylinder can be set aside with this particular pattern left on it, it must be put together anew each time that it is used.

Although there are many embroidered tablets that include the *manulua* motif, I have never seen a set of embroidered tablets that would produce a plain all over *manulua ngatu*. However, I have seen embroidered tablets depicting very beautifully stylized *manulua* panels, each one different, and they would have made a very beautiful *ngatu*. The present owner of the tablets had come by them accidentally, but had never used them herself.²³⁶

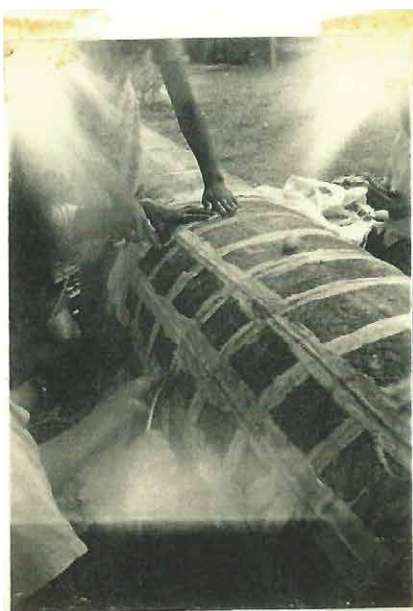
Quarter inch wide strips of the coconut leaf midrib, *palalafa*, are used for making the *kupesi*. The half cylinder is measured out in handspans and midrib strips which are attached to it are covered with sheets of raw bark-cloth. These midrib strips mark off the following: the borders, the line from end to end which shows the section (*langanga*) division, and the centre line transverse to it which indicates half sections (*maaukupu*).

233 Plate 67 and Fig. 7b

234 Plates 70 and 71

235 Brigham 1911: Plates 15 and 37 (lower)

236 The son of the original owner had thrown them into the sea after the death of his mother, and the present owner had salvaged them on the incoming tide.

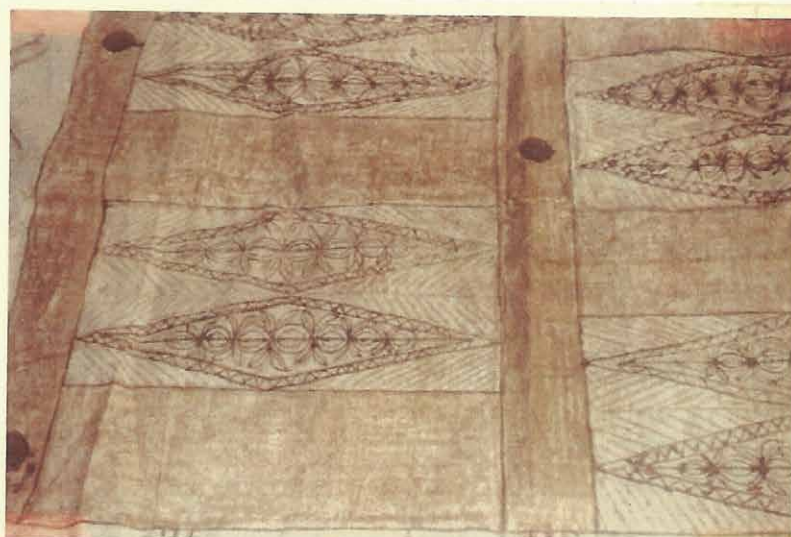


70.

Manulua kupesi being assembled on papa.



71. Completed manulua ngatu, showing border.



72. Kalou.

Each of the four half sections are treated in exactly the same way. Horizontal and vertical coconut midrib strips divide each half section into blocks of about six and a half inches by five and a half. Diagonal strips are then placed in each block. Each strip [p. 188] is attached separately to the cylinder under a length of raw bark-cloth. One half cylinder which I watched being prepared, took six women a whole day to finish, but as the *manulua* pattern can be used both on *ngatu tāhina* and *ngatu 'uli*, these women intended to make the same design tablet serve for 50 section (*langanga*) cloths of both varieties of *ngatu*.

After the under and upper sheets have been assembled on the half cylinder, the surface is lightly brushed over with a mixture of mangrove dye or *koka* should mangrove dye be lacking, in order to bring out the positions of the midrib strips. In each block of the design, alternate triangles were heavily rubbed over with the brown dye. The remaining triangles were left untreated. The blocking in was effected by painting the section and half section division lines with boiled mangrove juice dye and outlining individual diagonals within the blocks with it. In some *manulua* designs, two alternate triangles of the four that make up each block, are completely painted over with black dye. This is usual when the *manulua* motif is part of another design.

Longolongo

While the *longolongo* design tablet is arranged on a background of coconut spathe and pandanus in the same way as an embroidered tablet, it is not strictly speaking an embroidered tablet. Strips of pandanus about three quarters of an inch in width, are arranged closely together end stitched onto the prepared frame by using single threads of coconut husk (*kafa*). The threads are carried across the pandanus [p. 189] strips so that the stitching comes through clearly on the *ngatu*. The *longolongo* is a species of fern. The effect of the closely-spaced stitching across the pandanus is reminiscent of the branching leaflets of the *longolongo*. *Longolongo* panels are usually separated by broad bands of brown dye. These bands are called *hala kafa* (pathway of *kafa*). The separating panels are bounded by sennit twine.

Traditional Embroidered Design Tablets

The remaining *ngatu tāhina*, which comprise the greatest number of *ngatu* in circulation today, are decorated by using embroidered tablets. Of these, the traditional varieties are well enough known to be easily recognised, and are so few in number, that they might be mentioned here without separate descriptions. They are *tokelau feletoa*,²³⁷ *'aotapu*, *kalou*, and *fata*, with all of which I am familiar, and *kema*, *'uno'i ka* and *kofeloi*, of which I have heard but have not seen examples. *'Aotapu* and *kalou*²³⁸ are exclusive in themselves, but the *fata* and *tokelau feletoa* motifs, like the *manulua*, have often been used as units in the inscribed embroidered tablets of more modern composition.

OTHER SUB-DIVISIONS OF NGATU TĀHINA

Pa Koka and Tapa'ingatu

Most *ngatu tāhina* are neither too heavily nor too lightly dyed over with brown, while the more heavily dyed areas are balanced by parts [p. 190] where the dye is so lightly applied, that the white of the fabric underneath imparts a fawn effect to the colouring. Today they include the great majority of *ngatu tāhina*. However, there are two categories of *ngatu tāhina* which are distinguished by having either more or less brown dye added than is the usual case.

When the brown dye has been brushed on heavily, so that there is an overall brown appearance, relieved only by the additions of *tukihea* spots or blocking in of the design, the *ngatu* is called *pā koka*. When only

²³⁷ Plates 74, 75, and 73.

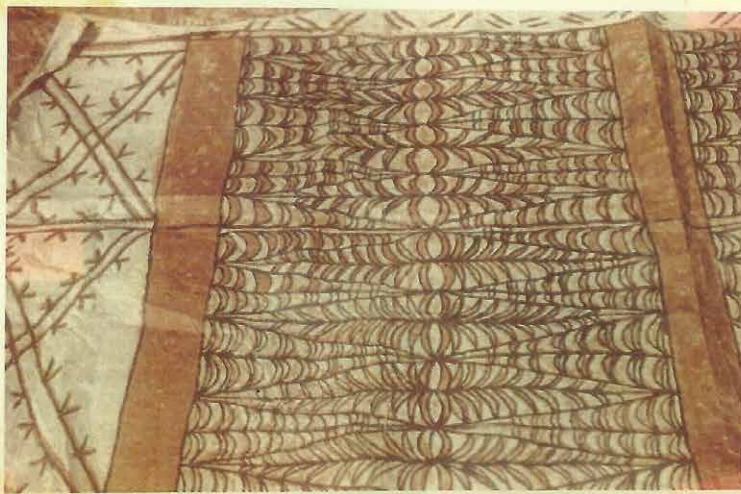
²³⁸ Plate 72



73.
Tokelau feletoa kupesi
 being attached to paos



74.
 Old tokelau feletoa ngatu, not blocked in, and showing wider
 bands (hala kafa) between kupesi in the design.



75.
 Modern tokelau feletoa
 that has been blocked in

the area of the *ngatu* where the tablet designs are located, are rubbed over with dye, so that the spaces between are untouched with colour, then the *ngatu* is *tapa'ingatu*.

Tapa'ingatu and *pā koka* are of equal value unless one of them happens to bear a *ngatu* 'eiki pattern. Some embroidered tablets lend themselves to one or the other methods of colouring. Designs that are intended to focus attention on a dominant motif are generally *pā koka*, as for instance, the triangular *kupesi* of *fakamalu o Katea*,²³⁹ the roadway in *koe hala* 'unga²⁴⁰ of the pulpit in *koe tu'unga*.²⁴¹ Where the decorative effect is dependent upon the close parallel lines of twine winding or the weaving together of slats, attention may be directed to these aspects and the resulting *ngatu* made on these tablets then become *pā koka*.

Sometimes the pattern is composed of several unit design tablets [p. 191] bearing various motifs which may be used in several combinations to form different patterns. So that no one motif is emphasised above another, and to show that each is equally necessary to the particular design, the *ngatu* is often made *tapa'ingatu*. The dye is applied with equal pressure to each unit of the design, and the relief is provided by the intervening white areas.

Pā koka and *tapa'ingatu* can alternate on the same *ngatu*.²⁴² This happens when a very long *ngatu* is made and when isolated unit designs have been used. To counteract the monotony of a design that is merely decorative and has no particular significance several *langanga* may be *pā koka* then an equal number of *tapa'ingatu* will follow.

Fuatanga

This class of *ngatu* is distinguished by the method in which it is made. All *ngatu* 'uli and the great majority of *ngatu tāhina* are made, if there is a need to distinguish them, by a method that may be called *ngatu hangatonu* (straight forward), while *FUATANGA ngatu* are *ngatu tāhina* made according to a method described below.

Fuatanga are highly valued *ngatu*. Ceremonially, whether or not they bear *ngatu* 'eiki designs, they rank in value on a level with *ngatu* 'eiki, and a *fuatanga* which also bears a *ngatu* 'eiki design would be very desirable. Most women make one at least in their late adult [p. 192] lives against being predeceased by their husbands. At the death of her husband, a woman makes the highest ceremonial gifts of her married life, and one *fuatanga*, at least, would be an important part of them. The same design tablets that are used for ordinary *ngatu* can be used for the *fuatanga*.

As the word *fuatanga* and the type of *ngatu* that it designates is so well known, not only by *ngatu* making women, there appears to be little reason for the confusion that has arisen in some quarters as to what a *fuatanga* is. McKern wrote: "Fuatanga – a variety of tapa worn by chiefs. Kupesi plaques were dispensed with and cords of twisted coconut husk fibre placed closely parallel extending across the papa from side to side. The resulting pattern was one of closely parallel lines."²⁴³

McKern was probably describing a *fuatanga* made over a *pangai kafa kupesi*, without realising that it was being made differently from the usual *ngatu*, and that it was a *fuatanga* because of its method of manufacture, not because of the design employed or the use to which it was put.

239 Plate 50

240 Plate 78

241 Plate 82

242 Plate 81.

243 McKern 1921: 649

Pā Keka.



76. Five langezanga of ngatu showing fata motifs.



77.
Five langezanga of ngatu
that has combined
palolafa and embroid
kunesi tablets.

78. Hala 'Unge.
(modern ngatu hinga).





Tapa'ingatu.

79.

Five lananga of a node
ngatu but without
inscription.



80.

Koe Sisi 'o Mele Siliukitapu,
assembled over
a ve'tetuli background.



81.

Pā koka and tapa'ingatu
alternating on the same ngatu



82. Koe Tu'unga.



83.



84.

83. Five langanga each of two modern designs depicting coat of arms of Tonga, lion of England and eagle of America, symbolic of friendship among these countries during World War II. Bottom example also includes lute, dove of peace. The Norfolk pines in the design are the particular trees growing near the palace.

84.

None of the women I asked, would commit herself to offering an explanation of the origin of the word *fuatanga*. McKern²⁴⁴ translates it as *fua* “to measure” and *tanga* “large intestine”, without any explanation as to how this appellation came to be attached to a type of *ngatu*. I would think that the word has something to do either with the direction in which the *ngatu* is assembled or with the [p. 193] measuring of it. Among the very many meanings of the word *fua* are (1) to measure, (2) the direction in which a boat is being steered²⁴⁵; *tanga* is simply a noun forming suffix. The measuring, however, has more to it than the steering. Churchward’s definition of *fuatanga* gives no clue as to its origin.²⁴⁶

Briefly, the differences between an ordinary *ngatu hangatonu* and a *fuatanga* are:

(1) The *ngatu hangatonu* is assembled by adding to its length at right angles to the direction of the cylinder and pulling the finished section back off the cylinder to the first side. The *fuatanga* is assembled by adding to its length in the longitudinal direction of the cylinder and pulling the completed sections off the right end. (2) With the *hangatonu* the under sheets run from side to side forming the width of the *ngatu*, and the upper sheets lie parallel to the length. With the *fuatanga*, the under sheets lie parallel to the length of the *ngatu* and the uppersheets run from side to side to form the width. (3) Each section of a *ngatu hangatonu* is counted as one *langanga*, and it is the practice now to number each *langanga* along the border. The *fuatanga* count eight ordinary *langanga* as equal to one *fuatanga langanga* and are never numbered along the border.

Making a *Fuatanga*

For the *fuatanga*, the width of the *ngatu* is divided into eight sections. As the usual width of the *fuatanga* is the same as that of a *hangatonu*. 12 to 13½ feet, these divisions would be as wide as [p. 194] the length of a section on a *hangatonu*, 17 to 19 inches.

The under sheet is put over the design tablet in the usual way. However, when the uppersheets are put on, instead of beginning the first border at the beginning of the *ngatu* and going on to cover the first two sections the first part completed on the half cylinder forms the first two divisions of the eight comprising the width of the *fuatanga*. At the completion of these first two sections, they are pulled over the cylinder and the next two done, and so on until all eight divisions are completed.

When these eight divisions of the width are done, then eight divisions of its length are also completed, for the length of the cylinder is also divided into eight sections, each one the length of the usual *ngatu langanga*. This is a *fuatanga e taha*(l). Although it is measured and counted in a different way, one section of *fuatanga* is the same as the length of eight *langanga* of an ordinary *ngatu*. “

When the *fuatanga e taha* is completed, instead of being pulled on to the laps of the women on one side of the half cylinder, it is pulled to the right end of the cylinder, and the next lot of under sheets (*laulalo*) attached before the dyed sections are pushed over the edge.

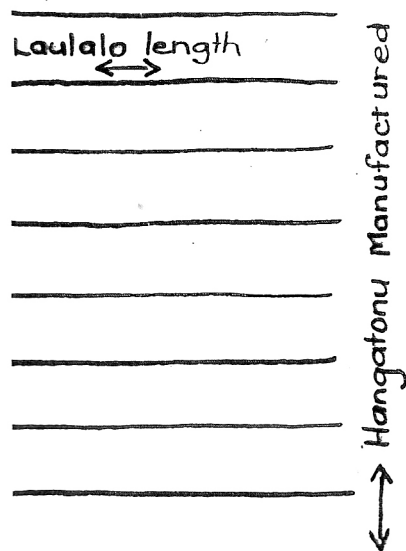
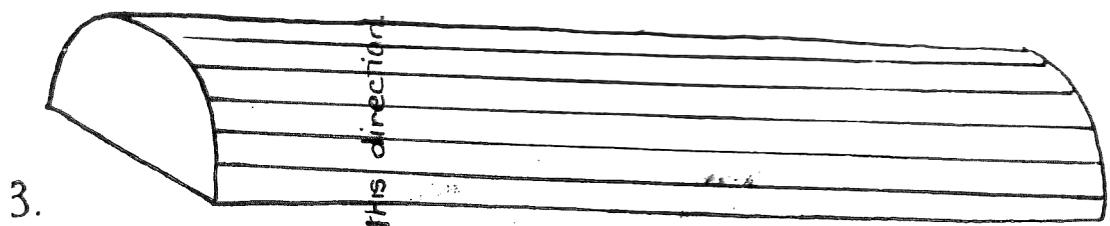
The following is a table allowing how the *fuatanga* sections are counted:

<i>Fuatanga e</i>	1	8 <i>langanga</i>
"	e 2	16 "
"	e 3	24 "
"	e 4	80 "

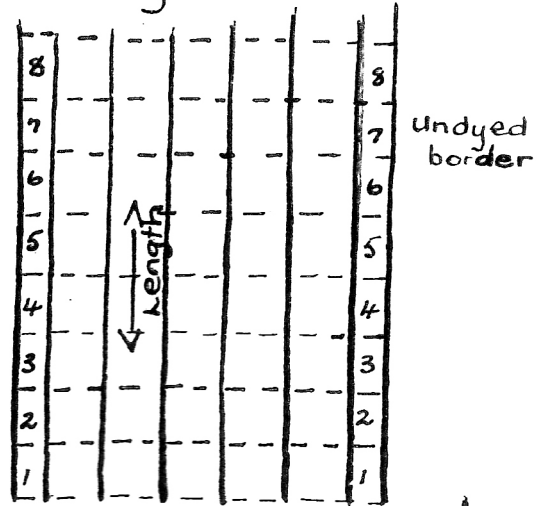
244 McKern 1921: 649

245 Churchward 1959: 199

246 Churchward’s definition of *fuatanga* is even more surprising than that of McKern. He gives “Tapa cloth darker along the edges than in centre” (1959: 199).



A. Ngatu hangatonu.



B. Fuatanga.

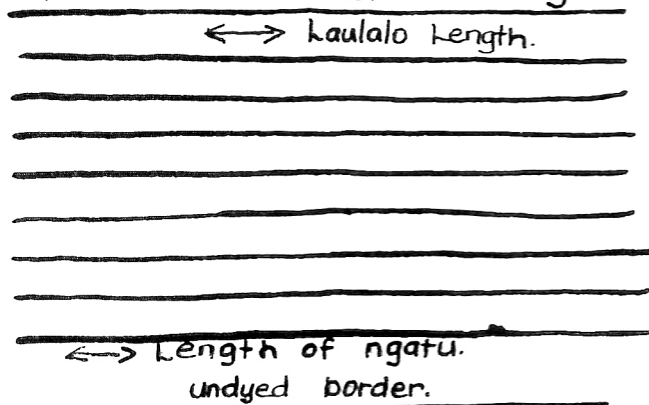


Figure 13

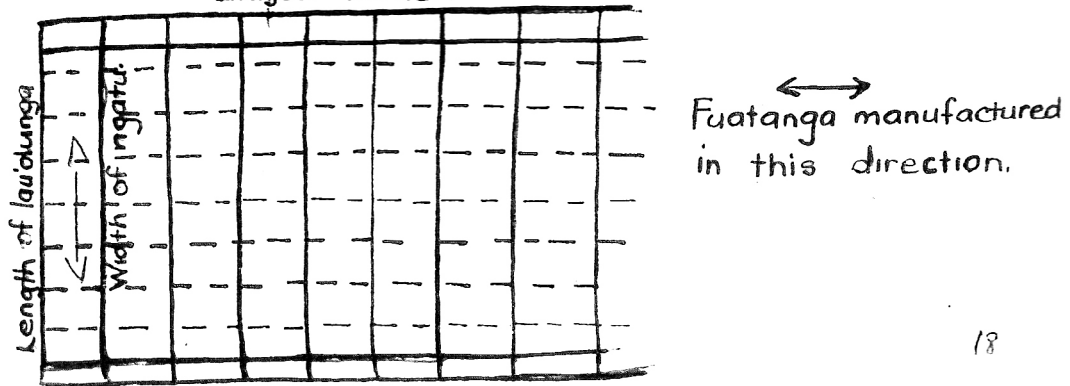


Figure 13: Diagram to show difference in manufacture between fuatanga and ordinary (*hangatonu*) *ngatu*.

Figure

14. Method of placing laulalo and lau'olunga for Fuatanga

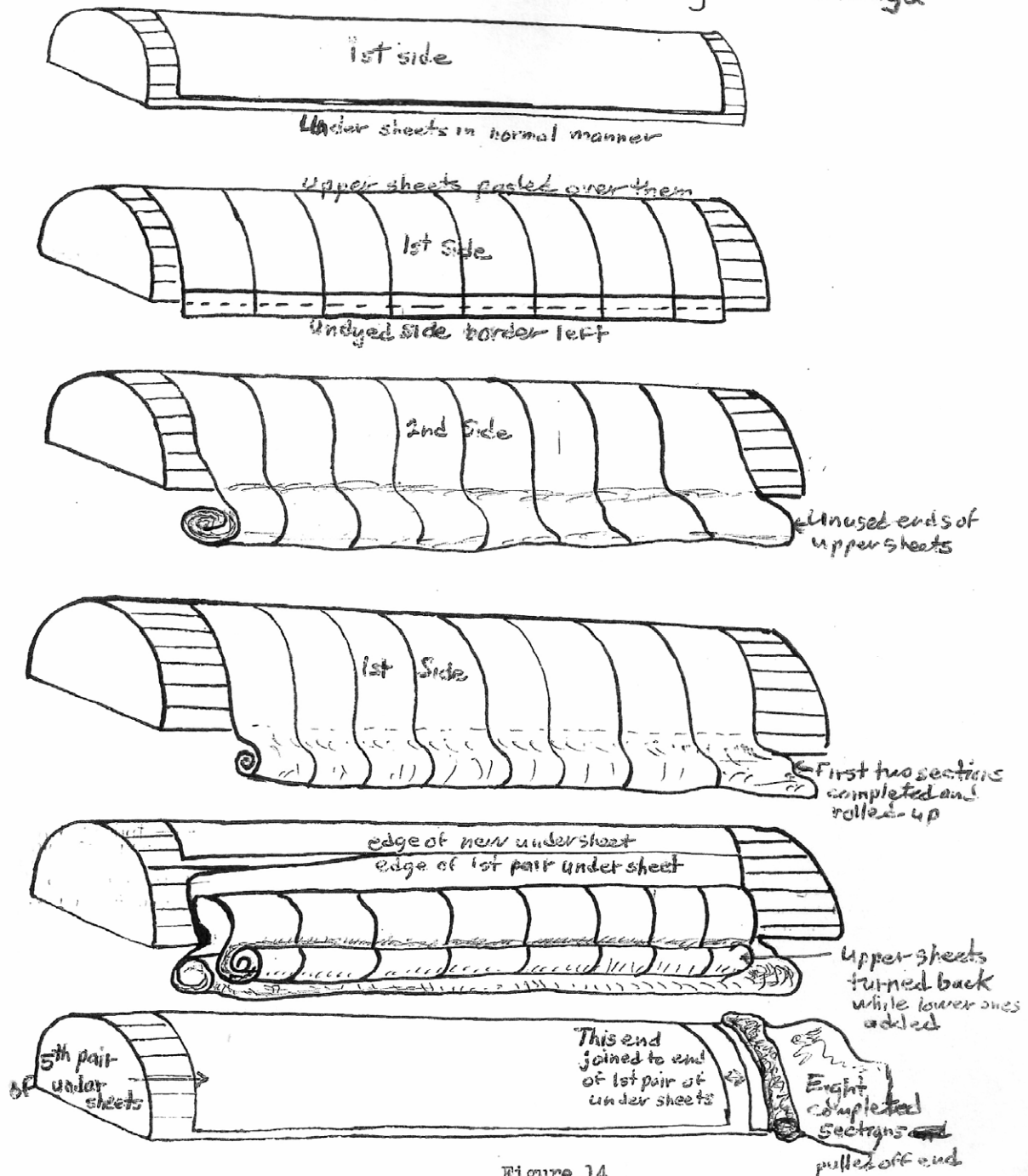


Figure 14

Figure 14: Method of placing under and upper sheets on half cylinder in the manufacture of fuatanga

[p. 195]	<i>Fuatanga</i>	e 20	160	<i>langanga</i>
	"	e 30	240	"
	"	e 40	320	"
	"	e 50	400	"
	"	e 125	1000	" (<i>a lauteau</i>)

As may be imagined, *lauteau* are rarely made, but the women still remember the four *lauteau* which were made respectively by the women of Fu'amotu, Tatakamotonga, Lapaha, and Holonga (Vava'u) for the royal weddings in 1947. Conservatively, a 1000 section widths, each of 18 inches, would measure about 500 yards, so that these four *fuatanga lauteau* would stretch for more than a mile in length.

CROSS-CUTTING CATEGORIES OF *NGATU*

Ngatu 'Eiki or Traditional *Ngatu*

Since the women of rank have given up their exclusive rights to the making of *kupesi*, Tongan women have added considerably to the number of decorative designs appearing on *ngatu*. With the exception of a few that have combined the use of coconut leaf midrib strips with embroidered units, all these recently composed designs have been on embroidered design tablets. However, although Tongan women have taken enthusiastically to the open field of tablet making and very many attractively decorated *ngatu* have resulted, they were at first reluctant to use their new compositions on *ngatu* ceremonially presented to the nobility. When making *ngatu* for this purpose, they used only tablets that bore the traditional designs originally composed by the women of rank.

This had the effect of creating a new class of *ngatu*, which on [p. 196] account of the increased production of new designs has remained distinctive. The new division separates those *ngatu* which bear traditional designs originally composed by women of the nobility, or *ngatu 'eiki*, from those which are of modern origin. Only *ngatu 'eiki* are suitable for presenting to the nobility. This is not to say that the nobility receive exclusively those *ngatu* which bear traditional designs or that *ngatu 'eiki* cannot be made by any women for her own use. Beginning with the creation of embroidered tablets bearing motifs that have particular significance for some nobles, that are further distinguished by the addition of dedicatory inscriptions, this desire to confine *ngatu* presented to the nobility to the traditional designs has been weakened. It is as great a compliment to the noble to receive a *ngatu* whose pattern had been composed especially for him and bears an inscription to the effect, as it is for him to receive a recognised *ngatu 'eiki*. However, the pleasure of the particular noble at receiving such a *ngatu* would not automatically make the *ngatu* a *ngatu 'eiki*. The term *ngatu 'eiki*, when dealing with certain design tablets serves to draw attention to the fact that those tablets were originally composed by women of rank, and establishes the superiority of this variety of *ngatu* as a ceremonial gift for nobility.

In the same category are the true *ngatu 'uli*, all of which had originated from a time before the *ngatu 'eiki* distinction came into use. For classification, the dual purpose *ngatu* are also considered [p. 197] both *ngatu 'uli* and therefore *ngatu 'eiki*. The *fuatanga* also come within the category of *ngatu 'eiki* because of their high ceremonial value, which in this case is not dependent upon the design tablet used in the decoration. However, because of the construction of the *fuatanga*, the traditional designs are best adapted to its decoration, and even when modern compositions are used, inscriptions are not included.

Those *ngatu 'eiki tāhina* which I have examined are the *ve`etuli* and *tatautuisina* (woven tablet); the *pangai kafa* and *hemehemaloutoa* (cord winding tablet); *manulua* (coconut leaf midrib strips); *longolongo* (pandanus strips on frame); and *tokelau feletoa*, *kalou*, *`aotapu*, *fata* (all embroidered tablets). Alisi Sipu also speaks of three others, *kema*, *'uno'ika* and *kofeloi* which she had not seen for many years, and of which I have no reliable knowledge.

Ordinary *Ngatu* (*Ngatu Hingoa*)

Bearing in mind that there are many hundreds of designs in use on modern *ngatu tāhina*, to which more are being added constantly, the number that can be classed as *ngatu 'eiki* is relatively small. It follows that the great majority of Tongan *ngatu* belong to the second grouping of ordinary *ngatu* or *ngatu hingoa*. These *ngatu* are all decorated by the use of the more modern embroidered design tablets, most of which bear designs that have been composed on the small unit type of tablet.

Embroidered tablets were formerly large and rectangular in shape. [p. 198] Modern tablets might be any shape. The motifs that were embroidered on the rectangular frame may be isolated now and each one form a separate unit or tablet, shaped according to the outline of the particular motif. Modern motifs are generally drawn from Tongan fauna and flora, and the particular Tongan environment, but often there are intrusions such as aeroplanes, football cups, umbrellas, and swords. One that I saw even incorporated parchment rolls inscribed as the degrees gained by Prince Tungi at Sydney University. The Tongan crown, seal and coat of arms, the lion representing England and the American eagle became very popular during the last war and are still common motifs used.

All sorts of occasions and objects are commemorated by *ngatu* bearing particularly relevant designs. The building of the large Wesleyan Church in Nuku'alofa a few years ago was commemorated by a *ngatu*, using motifs that depict the interior furniture of the church. Favourite scenes in Tonga and even streets are depicted. Thus a list of all the designs produced in modern times could go on indefinitely.

Whatever the dominant theme of the pattern, it is usual to inscribe these *ngatu* either by explaining the purpose of the design, or by dedicating the *ngatu* to various nobles or to members of the royal family. When Tongans give gifts, they are usually accompanied by *sisi* and *kahoa* (waist garlands and necklaces, made from fragrant flowers, leaves and berries). On *ngatu* that have been dedicated to persons, tablets of *sisi* and *kahoa* are usually included in the [p. 199] decorative pattern. The inscriptions might then read, *Koe hauhau lile'o Tukuaho* (the garland of lilies of Tukuaho) or *Koe sisi maile o Tungi* (the maile waist garland of Tungi).

Because of the writing on these *ngatu*, they are often referred to as *ngatu hingoa* (named *ngatu*). These modern embroidered tablets are a unique development in Tongan decorative art, both in the method of construction and the decorative themes.

As an example of the *ngatu hingoa* or ordinary *ngatu* decorated in the modern manner, a description of the *Sisi maile o Tungi* is included here.

Ko Sisi Maile O Tungi²⁴⁷

As indicated by the name, this *ngatu* was dedicated by the composers of the pattern, to Prince Tungi. The *maile* is a graceful hanging vine. Its willow-like leaves are fragrant and commonly used in *sisi*.

The pattern was composed of three rectangular and two triangular *kupesi* so that different compositions occur in each half section of two sections on the half cylinder. Altogether on the cylinder, there were 20 unit tablets, 12 rectangular and eight triangular. The frames were of *kaka* (coconut spathe) backed by *louakau* (pandanus), and the embroidery was effected by sewing *tuaniu* (coconut leaflet midribs) on the background with the aid of single threads of coconut husk. The tablets were arranged on the cylinder, so that the rectangular and triangular tablets alternated across its width. Although the [p. 200] divisions in which the rectangular tablets were placed were completely covered by the frames, the triangular tablets would have left parts of the cylinder exposed. To offset this, *ve`etuli* design tablets were put onto the cylinder first and the other unit tablets arranged over the top. The *ve`etuli* pattern came through as a background around the triangular designs.

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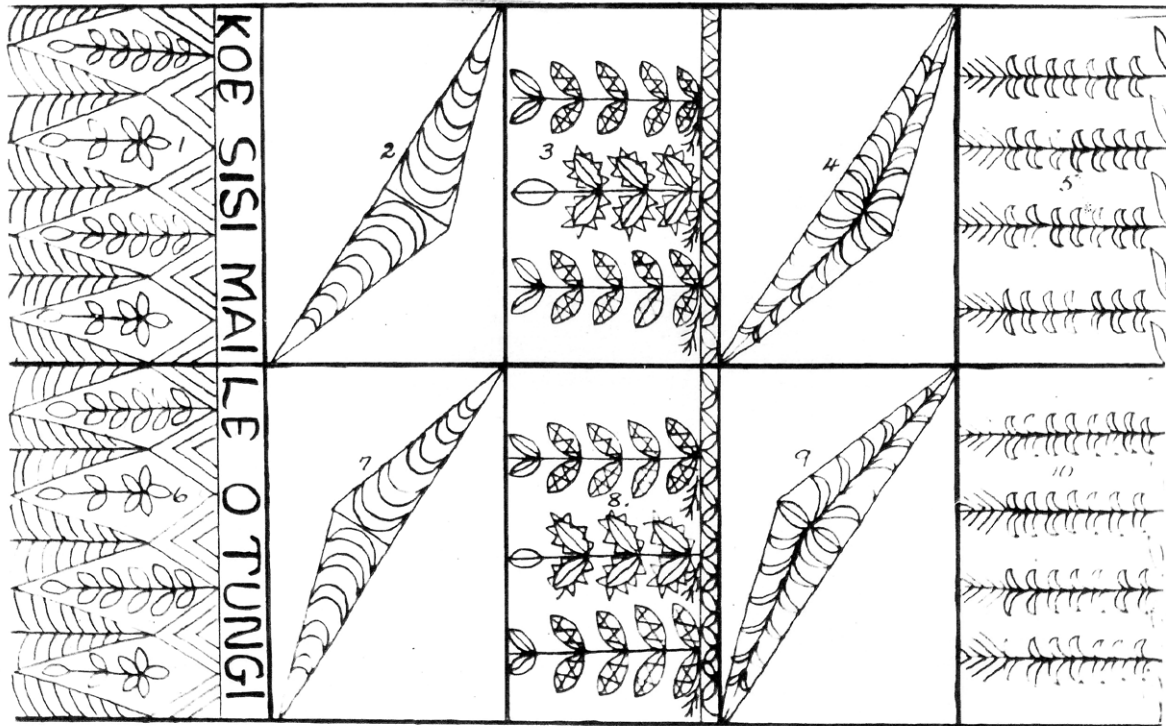


Figure 12: An embroidered design tablet or *kupesi* set out on the half cylinder for a *Sisi maile 'o Tungu ngatu*.

There was a balanced arrangement of colour on the finished *ngatu*. The rectangular tablets at both sides of the *ngatu* showed an equal amount of brown and light coloured cloth. The rest of the rectangular tablets were so lightly brushed over, that only the raised lines of the motifs are coloured and outlined. The triangular tablets too, were treated lightly enough treated with dye to show the fabric uncoloured behind the motif, but the area surrounding each triangle was heavily dyed with brown. The tablets at the sides bore the following inscription, half on one tablet, and the rest on another placed next to it. On one was *KOE SISI MAI* and on the other, *LE O TUNGI*. The only motif to occur in all five design tablets which comprised the entire design, was the *maile*.

About three dozen varieties of ordinary *ngatu* have become common enough to be known by ten or more people and these names are gradually emerging as distinct types. Others will doubtless follow, but at least some are not destined for repetition or preservation. Until this entire category achieves more stability, it therefore seems of little [p. 201] value to enumerate these types or varieties endlessly. One may merely note that we have here the incipient stages of a new stylistic period in Tongan decorative art in which certain types are gradually emerging.

SUMMARY OF *NGATU TĀHINA*

The class of *ngatu tāhina* is divided into two categories according to the method employed in its assembly. One is the common method; the other a method known as *fuatanga*. According to the relationship between background and design, and the emphasis given one or the other, further subdivisions of the *ngatu* into *pā koka* or *tapa'ingatu* can be made. The older or more traditional of the *ngatu tāhina* have been placed with *ngatu 'uli* in a category designated as *ngatu 'eiki*, in order to distinguish them from the more recent *ngatu* made with the unit design tablets and generally bearing an inscription. However, it is this last category of ordinary *ngatu*, which comprises the majority of *ngatu* made today, that represents the most recent stylistic development in Tongan decorative art, and is indicative of the vigor with which the craft continues to evolve.

CHAPTER V [p. 202]

THE IMPLICATIONS OF TONGAN *NGATU* MANUFACTURE

INTRODUCTION

My primary aim in pursuing the investigations that have led to assembling this thesis was to record in detail the Tongan method of bark-cloth manufacture as it is practised today. I used as my authorities for that information which I was unable to learn for myself by actual participation and observation, women who had long and active association with the craft, and whose association in many instances began at a time than widespread social changes were leading to specific changes in social organization and bark-cloth.

It is my hope that I have fulfilled the goal of presenting a reasonably complete record of the technology of bark-cloth manufacture in Tonga today, as it represents the only vigorous Polynesian example of the craft that remains for study. In those sections which deal with the preparation of the bark, the production of the raw cloth, the assembly of them into *ngatu*, the preparation and use of dyes, the various classes and types of *ngatu* that are produced today, and certain aspects of the social context within which these activities take place, I feel this record can lay claim to being a fuller and more thorough treatment than any of those which have preceded it. [p. 203] In the light of the fairly rapid innovations that have occurred in the past fifty years, and those which even now may be anticipated, it also should furnish as well a documented picture of bark-cloth manufacture in Tonga in 1959, as Mariner did in the early 1800's, thus providing future investigators with a further point of reference in the historical development of this craft.

The presentation of this material makes evident a number of salient points about various aspects of the manufacture of bark-cloth which have further implications both in Tonga and Polynesia as a whole. These implications were summarized under the six main headings, each of which will be explored in greater detail in the course of this chapter. These headings are: (1) technological changes within Tonga in the period between the early 1800s when Mariner was writing and my own investigations in 1958, (2) the similarities and differences which these changes in technique exhibit when compared with these from other island groups at the same period in time, (3) the relationship of Tongan methods of bark-cloth manufacture to those of the other islands in the Western complex, principally Samoa and Fiji, (4) the division of Polynesian methods of bark-cloth manufacture into Western and Eastern complexes on what appears to be insufficient evidence, (5) the innovations in technology and design that have occurred as the result of changed social conditions in modern Tonga bringing into existence a new social group for the manufacture and assembly of bark-cloth, and (6) the vitality of the craft in Tonga today in relation to its rather rapid decline in most other islands of Polynesia and the [p. 204] Pacific.

TECHNOLOGICAL CHANGE IN TONGA AND ITS IMPLICATIONS

Technological Changes in Tonga

Most observers of the Pacific who have written about bark-cloth manufacture, have either explicitly or implicitly suggested that the manufacture of bark-cloth in Polynesia did not change significantly after the period of European contact, but merely declined and then, ceased. However, detailed investigation into the Tongan evidence shows that numerous changes have taken place there over the past 150 years thus casting doubt on the validity of this assumption. When the technological and stylistic innovations are considered in relation to the changing social conditions that were the result of European contact, we find that some of these innovations stem directly from the new social contexts in which the production of bark-cloth is carried out in the period following contact. As these changes in Polynesian society were not confined to Tonga, it seems likely that similar changes could have occurred in other island groups as well before the craft ceased to flourish.

At this stage, it seems useful to summarise the principal technological changes that have occurred in Tonga within the past 150 years before moving on to their implications. They may be stated as follows: (1) The width of the half-cylinder on which the *ngatu* is assembled has increased from eight to almost 16 feet, and the resultant width of the *ngatu* from six feet to between 12½ and 14 feet. (2) The earlier method [p. 205] of holding layers of the cloth together simply by virtue of the mucilaginous nature of the dye used, has given way to light pasting in which vegetable tubers serve as an adhesive. (3) The earlier cloths, consisting of three layers, have been replaced by the present-day cloth of two layers. In this respect, it is probable that the present and hitherto unrecorded practice of felting two strips together to form the top layer, in such a fashion that thickness and width are uniform throughout its length, is a new development. This would account for the lack of difference between the textural thickness of the older three layered examples and the more recent two layered examples. (4) Mariner's early description of the placing of three layers, one on top of the other, during the process of combining layers, precludes the probability of a constant orientation of each layer in relation to the length and width of the *ngatu*, so that the fibres of one layer run at right angles to the fibres of the other layers. Thus the present method of a uniform orientation in placing the under and upper sheets would appear to be another innovation. (5) from the previous change, it follows that the earlier method of joining completed three layered sections by pasting them edge to edge, horizontally and diagonally in order to increase breadth and length is quite unlike the present method of joining them, which is related to the method of assembling the under and upper sheets in a consistent pattern. (6) The present practice of blocking in the designs has arisen from changes in decorative preferences, themselves the result of changes in the social norms surrounding the production and ownership of design tablets. [p. 206] (7) The baking of the dyed *ngatu* in an underground oven, in order to modify the dye has been discontinued. Bearing in mind these technological changes in Tongan bark-cloth manufacture over the past 150 years, it is now possible to reassess the evidence for other Polynesian groups.

Comparisons with other Polynesian Techniques

In considering comparable technological processes from the rest of Polynesia, we find that Tongan methods at the point of contact as well as those that developed in later stages exhibit an ever changing set of similarities and differences to techniques recorded elsewhere in Polynesia at any given period of time. Such comparisons also demonstrate that any geographical groupings which are the result of this method of analysis depend on the period of time and the particular technological processes which are selected.

Thus Samoan, Tahitian and Hawaiian women peeled the bark from the stems after first slitting it down its length, while Tongan, Fijian and Cook Islands women pulled it off after a preliminary loosening of the bark at one end. Whereas Tongan, Fijian, Tahitian, Marquesan and probably Samoan women all soaked the bark in water before removing the outer layer by scraping, Hawaiian and Cook Islands women at a similar period, peeled away the top layer. At a later period, the Tongan and Fijian women adopted the dry peeling of Hawaii and the Cook Islands.

When preparing the bast for beating, Tongan women at all periods did no more to it until it was soaked in water, immediately prior to [p. 207] the beating. This was the same procedure as recorded for Fiji by both Williams and later by Thompson, although Williams went on to describe joining by pasting while Thompson recorded a change to felting. Retting was not recorded for Hawaii by Ellis, but it was later described by Buck as being Hawaiian practice. It seems to have been the process used in the Marquesas and according to Banks was in use in Tahiti at the contact period. The Samoan women followed the complicated bundling process, exclusive to themselves, the nearest counterpart to this being the preparation for retting, followed in some parts of East Polynesia, but for a very different purpose.

The present Tongan method of beating individual strips of bark has been relatively the same for 150 years, although this stability is more apparent than real, when we consider that the present method of preparing the upper sheet as a felted cloth of double thickness is a process not recorded by Mariner.

The methods of joining layers and increasing width and length show the widest dissimilarities. The early Tongan practice of relying on the dye alone as an adhesive, might suggest that there was also a certain amount of felting involved. However, I have examined an early three-layered piece of *ngatu*, and the layers although holding quite firmly together, could be easily separated and showed no evidence either of pasting or of felting. Samoa and Hawaii shared the practice of using a gum as an adhesive between beaten out sheets, then subjecting them to a further beating to combine them. The early Fijian method was similar to that of Tonga, in that no sticking agent was used as an [p. 208] adhesive between layers, but whereas Tongan practice has been modified to include an adhesive, the Fijian woman now felt their layers together. Buck also records felting for Hawaii, presumably for a post-contact period, while Samoan women who once shared the same practice as Hawaiian woman, now paste separately beaten out sheets together.

The former Tongan practice of putting the dyed *ngatu* in an earth oven to modify the dye was also recorded for Hawaii.

These instances, taken from the more detailed descriptions in the relevant sections of our survey, serve to show the mobility of techniques over a large area of Polynesia, as well as comparatively rapid evolutionary changes within particular areas during the ethno-historic period. Many of the observations recorded, were not made at the contact period and quite probably represent later stages in the development of bark-cloth manufacture under the impact of European contact. What at first appear to be conflicting descriptions are in reality only such because they were made at different ethnohistoric periods, and once this adjustment is made, and a continued evolution of bark-cloth manufacture granted, they can be seen as a part of the rapidly changing conditions that were the result of this contact.

The Position of Tongan Manufacture within the Western Complex

Much of the evidence already assembled has shown that comparisons between the Tongan, Samoan and Fijian processes of bark-cloth manufacture exhibit more differences than people have normally believed. While there are obvious similarities such as the use of a relief tablet under [p. 209] the raw cloth to produce the decorative pattern, and the use of a sticking agent to join layers and sections, they do not seem sufficient evidence for grouping all three in a Western Polynesian complex which portrays the area as a homogeneous unit with respect to their methods of manufacture.

The relief tablet is at present a predominant device in modern Tonga, but as the section on tablets (*kupesī*) shows it was not always so. Furthermore, it is by no means the general method. In Fiji. Free-hand and stencil painting on to completed layers is more popular practice. The same form of decoration is also an alternative form in Samoa.

The use of paste is employed in varying degrees among the three groups, not always to the same purpose. In Tonga it is intended to augment the combining of layers, but more particularly to paste overlapping sections together. In Samoa it is heavily applied to hold layers together, either before or during decoration, and to paste completed sections together. In Fiji, the paste is used to paste sections together after the layers have been previously felted together. The differences in preparation and beating of bast, joining techniques, and decorative processes could suggest that Tongan, Samoan and Fijian manufacture do not present a convincing picture of a homogeneous Western Polynesian complex of bark-cloth manufacture.

Emphasis on the differences between Tongan and Samoan techniques is not intended to infer a wide cultural and ethnic separation between the two peoples; there is too much contrary evidence for such an assumption. But it is intended to show that in view of the mobility [p. 210] of techniques among bark-cloth manufacturing people, some bases for assuming homogeneity of practices in certain areas,

are not valid, unless comprehensive and detailed technological records are available, and ethno-his-
toric changes are fully controlled. (Thus even where cultural and ethnic homogeneity may presently be
inferred from similar or dissimilar technological practices, these need not always be reliable.)

The Division of Polynesian Bark-Cloth Manufacture into Eastern and Western Complexes

With a full knowledge of Tongan manufacture of bark-cloth, and its relationship to practices in Eastern and
Western Polynesia at various ethnohistoric periods, Burrows' contention of a division between East and
West Polynesian methods of bark-cloth manufacture is weakened considerably. His Western Polynesian
representatives not only differ significantly among themselves but show hitherto unsuspected similarities
with East Polynesian groups when compared at the same ethnohistoric periods. At the same periods,
differences among the East Polynesian complex appear to be as marked as those in the Western group.

Burrows based his division mainly upon the practice of retting and felting in Eastern Polynesia and the
alternative practice of pasting and the use of design tablets in Western Polynesia, these distinctive
techniques being exclusive to the indicated areas. I hope that sufficient evidence has been assembled
here to indicate [p. 211] that these techniques were by no means geographically exclusive. During
the ethnohistoric period, many island groups passed through a stage at which either felting or pasting
was a common practice, and some groups used both techniques simultaneously at some stage in the
manufacture of bark-cloth.

For bark-cloth manufacture, it seems reasonable to assume that a valid East-West differentiation is not
demonstrable on the present evidence, and will only be acceptable when the controls mentioned in the
preceding section are taken into account.

CHANGES IN THE SOCIAL CONTEXT OF TONGAN BARK-CLOTH MANUFACTURE

Important changes in the social context in which Tongan bark-cloth manufacture takes place, stem from
rapid acculturation which Tongan society underwent after European contact. The changes, institution-
alised under the constitution, brought about a shift in the interest and activities of people of rank. For
ngatu manufacture, the most significant outcome of these changed attitudes was the passing of control
of its production from the hands of the women of rank to those of the ordinary women. This transfer
initiated a series of inter-related changes: (1) The centre of *ngatu* production, which had formerly been
concentrated around the principal households of nobles, shifted its location to the villages, and became
a function of the women in the local community. (2) As a result, a need arose for a new means of
organising a number of women in special groups in order [p. 212] to carry out the assembly and dyeing
of the cloth. This stage presented no problem under the former social system and settlement pattern,
as both leadership and concentrations of women were always available. But now, to meet this need,
a special women's group, called the *kautaha*, came into existence. (3) Over the years, as the women
of rank gradually withdrew from active participation in *ngatu* manufacture, their role as leaders and
authoritative voices on all aspects of *ngatu* manufacture has declined in importance. In their places,
women possessing specialist knowledge of the craft as well as qualities of leadership are now elected
from the active membership as the leaders of the *kautaha* projects. (4) As a result of the withdrawal of
the women of rank, certain practices which had formerly been the prerogatives of the women of rank
passed into the hands of the ordinary women. These were the making of the tablets, and to a lesser
extent, the preparation of black candlenut dye. (5) For various reasons, the change of control over the
manufacture of design tablets (*kupesi*) led to a rapid increase in the use of the embroidered type, and
a relative decline in the manufacture, and to some extent the use of traditional types. The restrictions
associated with the manufacture of black dye also influenced this decline in the output of the *ngatu* 'uli
class of bark-cloth which is dependant upon the black dye. (6) A new classification of *ngatu*, *ngatu* 'eiki,
came into existence as a direct result of the changes of decorative style and media.

Most of those cumulative changes have taken place during the lifetime of many of the older members of *kautaha*, and it is possible [p. 213] their full cycle has not yet been completed.

THE VITALITY OF TONGAN BARK-CLOTH MANUFACTURE

The conclusions of Koch and myself, which have their basis in the spread of technical knowledge of *ngatu* production to a wider segment of the female population than was formerly the case, the emergence of co-operative associations to facilitate its manufacture, and the inclusion of these techniques in educational projects, are in conflict with Brigham's contention made in the first decade of this century, that bark-cloth manufacture in Polynesia was either dead or dying. Indications are that at the time that he made his observation, the craft was never more vigorous in Tonga, and subsequent years have shown little change in the overall production of the cloth. Its present state would indicate that bark-cloth manufacture is likely to remain a major female activity for many more years, and indeed that technical and decorative refinement promise to reach standards of perfection never before achieved.

Stability of Techniques

In spite of the numerous changes recorded in the processes of Tongan bark-cloth manufacture, many instances of the stability among the overall process, and even some instances of resistance to innovation, may be noted. Regardless of the tediousness associated with the preparation of Tongan dyes, and the easy accessibility of European counterparts, Tongan women have shown little desire to substitute them for their own in their *ngatu*, as Ellis, writing as [p. 214] early as the 1820's, recorded was a growing practice in Hawaii. Despite new precise tools for measuring, the means of measuring and dividing the sections on bark-cloth is still by hand spans. In general the women have also resisted any attempts to exchange traditional materials for substitutes when making embroidered tablets, or to adopt the carved wooden tablets of Samoa.

In fact if one studies Tongan bark-cloth manufacture, it is only possible to conclude that the craft today is one that has evolved directly from the craft as it was practised at contact. There is no indication that it is an unchanging, dying, or broken tradition now revived principally for the tourists, as are so many handicraft industries today in the Pacific.

APPENDIX I [p. 215]

Two *Fuatanga* made by Hamala Kautaha at Kolomotu'a. Nuku'alofa. 24th November, 1959.

The Hamala *kautaha* at Kolomotu'a has a large membership and a very big *falekautaha*. Although most of the members live in the same area, some come from neighbouring villages. Most of the members are related either by blood or by marriage. There appeared to be a much younger average age than usual among the members, for although there were several very old women, there were a great many more in their twenties than is usual in established *kautaha*.

On this particular day, there were two *papa koka'anga* in use, and the women were making two *fuatanga*. A third *papa* lay across the rafters above the heads of the workers. The designs being used were a *tokelau feletoa* on one end and an unusual arrangement of *numi* (woven strips) and star-shaped *kupesi* on the other. No inscriptions were included in either sets of *kupesi*. Both *papa* were already wound with cording for *pangai kafa*, but although this design would not show on the *tokelau feletoa* it would appear as a background on the other.

The same woman measured out both *papa*, and the eight divisions of the width that would mark off eight *langanga* were indicated by lengths of *kafa* secured across the *papa*. The rectangular *tokelau feletoa*

kupesi were attached by means of *feta'aki* strips to the *papa*. The embroidered *kupesi* on the second *papa* were set in the middle of alternate divisions with [p. 216] *pangai kafa* showing around each. The intervening panels contained *numi*, set diagonally on the *papa*. Each strip of *numi* was covered and pasted down under a strip of *feta'aki*. The embroidered motifs were also secured to the *papa* with *feta'aki*. When the *fuatanga* was being made, the *numi* panels were *pa koka* and the embroidered motifs were *tapa 'ingatu*. It was thus an ordinary *ngatu tāhina fuatanga*. The *tokelau feletoa* was the same type of *ngatu* but rather brown in appearance, on account of the close embroidering on the *kupesi*.

There were fourteen women at each *papa* and several others at the sides who were preparing *feta'aki* strips. Large piles of very white *feta'aki* were already set at the ends of each *papa*. The woman for whom both *fuatanga* were being assembled was not at the *papa*. She sat with the group who were joining up *laulalo*, and left the room at intervals to watch the preparation of food outside.

The women sang as they rubbed the dye over the *ngatu*, a song in which the words "*koka melemele*" were often repeated.

As each of the eight *langanga* sets were pulled off the *papa*, the women pounded the sides of the *papa* rhythmically with their open hands, while they waited for the new pair of *laulalo* to be put on. There was a great deal of good-humoured banter, singing and cross-chat between the two groups of women. I found this unusual, as I had grown used to the rather staid and dignified atmosphere of the Fanamaka *kautaha* and the usually subdued air of most other *kautaha*.

[p. 217] One *fuatanga* was finished while I was there, and about half an hour afterwards at about mid-day, the other was completed. When the first was finished, the women sang, some stood up and danced on the *papa*, while the others slapped the sides in rhythm. The drum was brought in and beaten very rapidly, then *kava* was made and served to all who were present. I had not seen such a gay *koka'anga* before, but then it was my first visit to this particular *kautaha*.

APPENDIX II [p. 218]

The Fanamaka *Kautaha* of Kolomotu'a, 1959.

This is the history of the Fanamaka Kautaha, as told by its three eldest, still active members; Alisi Sipu, aged 76, who joined in 1909, Lupe Amine, aged 72, who joined in 1925, and Sikipeni Fifita, aged 81, who was an original member when the *kautaha* met on its first site in 1907.

In the first years of this century, a group of women from Kolomotu'a—Funaki Tamatau, Meleane Ma'uli, Naa Asaeli, Ohe Inoke, Maka'o Taungongo, Mele Pelaki, Ane Maia (mother of Lupe Amine), and Fusi Kava met at various homes to discuss plans for forming a new *kautaha*. All lived in the same area, and most were connected by blood ties. Most of them had been working with other *kautaha*, but for various reasons felt that they would like to foster this new *kautaha*.

By 1907, they had built an oval shaped Tongan house with floor and shutters of timber. It stood on a particular piece of land called Malinoa, on the other side of the rise above the palace at Kolomotu'a. Other women were invited to join, among them being Sikipeni Fifita. This *falekautaha* served the group until after the first World War, when they decided to build another, in the same area and only a few yards away, on a piece of land called Tuatalatau. This was to be a larger and more durable house.

Over two years, the women collected 300 four shilling notes, and went to Amini Fonua, a carpenter and husband of [p. 219] Lupe Amini, to ask him to put the house up for them. He advised them to purchase iron from a former Government building that was being dismantled under his supervision, but it was found

that more money than the women had was needed for the purchase. By a system of regular taxation of themselves over a further period, the necessary 200 four shilling notes were collected. The total amount of £100 in 500 four shilling notes was given to Amini, and he selected the best iron from that available. He built the house for the women without charge for his labour, but they prepared food for him throughout his working time, and when the house was completed, presented him with several bolts of *ngatu*.

At this time, Alisi Sipu was chairwoman (*sea*) of the *kautaha*, and Manutuufanga, a lady of high rank, their president. Although Manutuufanga attended their *koka'anga* and still cared for the *kupesi*, it was her suggestion that a working head be elected yearly. The women collected 20 cartloads of coral stones from Sopu, a beach about 1½ miles away, to be used for the concrete foundation blocks. They wondered why such a large amount was needed, but were unaware that Alisi Sipu and Amini had decided that a cement tank for storing water in was to be built inside the house, as a surprise for the women. This new Fanamaka *falekautaha* was completed in 1925. The cement tank with drainage pipes running from the roof, and standing inside where it was safe from "water robbers" has been a boon to the *kautaha* ever since. In the same year, on the death of her mother, Lupe Amini became a member.

[p. 220] The *kautaha* has functioned continuously to the present day. There were 40 members in 1925, today there are 15, with only three of the original 50 still alive. The three are still active members, and Lupe Amini is the current chairwoman of the *kautaha*.

When Manutuufanga died, no other lady of rank took her place. The other 12 members have all taken the places of mothers who were in the *kautaha* before them. The *kautaha* is perhaps the most conservative in Tonga, and apart from those members who have joined after their mothers, no new members have been initiated. It is probable that when the three eldest members who are regarded as authorities on *ngatu* manufacture in Tonga, die, the *kautaha* will reform itself, and an influx of new members will result.

Alisi Sipu says that at the present time, it is usual for each member to make one 100 piece *ngatu* (*lautufuhi*), and one 50-piece *ngatu* (*launima*), each year, but the amount fluctuates. One year a woman might make only one ordinary *laute fuhi* and a *fuatanga* or a *ngatu 'uli*, and the next year, several *launima*. In 1959, one of the member's sons married the daughter of a noble, so the mother, with the help of daughters and her *kautaha*, had to prepare a large amount of *ngatu* for reciprocal exchange and ceremonial presentation. While the bales were still packed up in the *falekautaha*, I counted five *laute fuhi* and six *launima*. It was possible that other completed bales and *ngatu 'uli* had been prepared at earlier *koka'anga* and were stored in the home. Alisi says that the lengths of the bales as well as the number of bales to each woman have decreased ever the years. In the '20s and early '30s, women [p. 221] made two or three 300 piece bales and several of 200 pieces each, but now the popular lengths are the *laute fuhi* (100 piece) and the *launima* (50 piece).

If there are several weddings of importance, connected with members of the *kautaha* to be celebrated at some set date, activity at the *falekautaha* is intensified and members might meet every day for weeks or even months. Following the weddings, there is a correspondingly quiet period at the *falekautaha* as a large amount of the *ngatu* originally made for the weddings will go into circulation as reciprocal exchange.

The Fanamaka *kautaha*, or as many as can be present, meet every Monday morning, even when a *koka'anga* is not in progress. Some of these meetings are purely social to discuss the events of the Sunday. The members are staunch followers of the Wesleyan Church, and worship at the main Wesleyan church, attended every Sunday by the royal family. At the same time they discuss plans for any projected activities for the week ahead. If any member has *feta'aki* ready for assembling, or if a request has been made to them to put together *ngatu* for a relative, the work programme is planned. The number of women who can be present each day and the amount of *ngatu* required are taken into account when the working time is being considered. They estimate the time the *koka'anga* should last, a week or several weeks, depending upon whether or not they decide to work continuously until all the bales are completed.

As a result of several enterprises in which the Fanamaka [p. 222] *kautaha* or individual members have been concerned, the women hold cash funds which are cared for by an appointed member. Their *falekautaha* has been used several times during the present year as a hostel for visiting groups from other Tongan islands and some of the women have been asked to demonstrate *ngatu* making techniques at displays for visitors to Tonga. In both cases, payment was made to the *kautaha*. This money is set aside for the maintenance of their *falekautaha*. The *kautaha* has recently had the outside of their building painted, and various repair jobs are necessary from time to time. The women rarely have to pay for labour, for they usually call upon their menfolk when necessary, but the money is needed to pay for materials.

APPENDIX III [p. 223]

Katoanga at Seikauta *falekautaha*. Kolomotu'a, Nuku'alofa.

Sept. 1, 1959, when *ngatu* for mats were exchanged between the Seikauta *kautaha* of Kolomotu'a and the Tae'ikuna *kautaha* of 'Uiha. Ha 'apai.

It was a cool windy day on Sept. 1st, 1959, when, after an all-night trip on the barge "Kao", the Tae'ikuna *kautaha* from 'Uiha arrived at Nuku'alofa to take part in a prearranged *katoanga* with the Seikauta *kautaha* of Kolomotu'a. The exchange was to be of mats for *ngatu*.

The party comprised about 60 people, 11 of the *kautaha* who had come to exchange their mats, the elected head-man of the village (*pule kolo*), a ceremonial attendant attached to the nobility (*matapule*) and a group of young men and women, who were to dance a special action song (*lakalaka*) at the gathering. Several menfolk of the Seikauta women, as well as relatives and friends of the visitors were waiting on the landing with 14 cars and taxis and four trucks. The cars had been decorated with fine white mats (*fihu*) which were attached to the hoods of the vehicles and billowed out behind. The visitors were loaded into the cars, the bundles of mats which they had brought with them into the trucks, and the procession moved off to Kolomotu'a.

The *katoanga* was to be held on an area of land at the home of Mafi Nome, whose daughter was the leader of the Seikauta *kautaha*. At one side of the grassed area, a long shelter of platted coconut leaves (*palepale*), where people might sit and [p. 224] watch the proceedings, was built.

The visitors were welcomed, and after they had breakfasted, they retired to two large Tongan houses which had been reserved for their use. The local people were represented by their *pule kolo* and *matapule*. At about ten o'clock, the 'Uiha *pule kolo* and *matapule* came to sit under the *pale pale* with the local officials. The ceremonial presentation of food to the visitors then began. The Seikauta women had prepared a number of baskets of cooked pigs and yam, as well as green kava and a very large pig (*puaka toho*). The *puaka toho* is the largest pig offered ceremonially, and is drawn along on a platform. Next in size, but borne along on shoulder staves and accompanied by yam, are the pigs known ceremonially as 'umu *hula*. Slightly smaller and carried in a different manner, are the 'umu *fakahunga* and the 'umu *kaveitau*. Classed in the same way are kava plants, offered green, just as they have been pulled out of the ground. The largest of these, *kava toho*, like the *puaka toho* is drawn along on a platform.

The Seikauta offering comprised a *puaka toho* and a *kava toho*, placed side by side on their platforms in front. Behind were three 'umu *hula*, further back eight 'umu *fakahunga* and behind them two 'umu *kaveitau*. The rest of the green kava were in a single line at the back. In decreasing size, one *kava hula*, one *kava fuataha*, and one *kava ha'amo*. Local men ran out to touch each item, and to call out the number and kind, that is, the significant size. The amounts were chanted out by the local [p. 225] *matapule*, and the 'Uiha *matapule* replied by chanting his thanks. One kava plant was left in place while the rest of the offerings were taken away. A kava bowl was brought and an infusion of kava made. All the men and several of the women under the *palepale* were served with the kava.

While we waited for the 'Uiha people to come out onto the green, Hulita, one of the Seikaute women told us how the exchange had been arranged. A year before, eleven women of the Seikauta *kautaha* had made contact with eleven others of the Tae'ikuna *kautaha* of 'Uiha. They arranged to exchange *ngatu* and mats and each of one *kautaha* wrote to one from the other. Correspondence was kept up for the intervening year, and each had some idea what the exchange partner was preparing. The original agreement was one 100 *langanga ngatu* (*laute'ufuhi*) and one 50 *langanga ngatu* (*launima*) for seven mats of no less than 15 feet length each. However, the 'Uiha people had evidently decided to show generosity over and above the agreed exchange amounts. By the time the local women had realised that there were to be more mats than they had expected, it was too late to do anything about preparing more *ngatu*. To balance the value of the local exchange, yams, which do not grow as well in Ha'apai as they do on Tongatapu, were added to the *ngatu* amounts.

While the presentation of food had been taking place, the visiting dancers had been dressing themselves inside one of the houses. When they appeared, their *pule kolo* announced that his people had brought with them more than 100 mats, the best [p. 226] that could be woven, and they intended to give them all away. No mention was made of the reciprocal gift.

The women wore white dresses over their draped underskirts (*vala*), waist garlands of dressed and coloured pandanus, and instead of the usual necklaces of fragrant flowers, they were leis of brightly coloured crepe paper, and necklaces of pearls, coloured beads or gold chains from the stores. Adornments of these kinds are not usual on the mainland, where garlands for waist or neck are always of fragrant flowers and leaves. However, the visitors would not have been able to keep flowers and leaves fresh after the long journey from Ha'apai. Hair decoration was either of bundles of dyed feathers or pompoms of crepe paper. The men were similarly dressed in white shirts and *vala*, and pandanus waist garlands over fine waist mats, crepe paper leis, and dyed feathers or crepe paper pompoms in their hair.

They lined up in two rows, the men at one end and the women at the other. Then, accompanied by the beating of drums, they sang and performed an action song that told of the weaving of the mats and the preparations for the journey to Tongatapu. Afterwards, the dancers went off to repeat their performance for the Queen, taking with them as an offering to her, the *puaka toho* that had been presented to them.

The rest of the people settled down to await the return from the palace before the exchange could begin. Those who wanted to, which were most of the men and some of the women, made a ring under the *palepale*, sang to guitars and made kava.

[p. 227] Fine rain which had been falling all the morning, now came down heavily. The dancers returned at one o'clock, wet through but still singing. They had performed two dances at the palace and also at the home of Fielakepa, the noble of 'Uiha. He has a home at Kolomotu'a also.

When a lull came in the rain, it was decided that the exchange should begin. The excitement which had gradually been rising among the local participants now became evident. They bustled and chattered excitedly as the bolts of *ngatu* for the first exchange were unrolled and spread out to their full lengths over the heads of anyone who wished to join in to carry them before the people seated under the *palepale*. The woman who was making the exchange, walked at the head of the procession, with the two corners of the width of the *ngatu* held around her waist. The *ngatu* were heaped up on the ground and 20 yams piled up beside them.

The first two participants were the leaders of the two *kautaha*. The Seikauta contribution consisted of three bolts, each of 50 *langanga* and 20 yams. The first *ngatu* was a *pangai kafa*, the second a *kumi tea* and the third bore a design of crowns and seals. The 'Uiha people, obviously pleased with the offering, ran cut to fold the *ngatu* and carry everything away. All the *matapule* chanted out their

appreciation and the 'Uiha people brought out the exchange mats. They consisted of one large 20 feet mat of soft white pandanus (*fihi*), four dark brown mats (*paongo*) with and without wool edgings and with super imposed designs in contrastingly coloured pandanus, and [p. 228] three light brown mats (*tofua*), variously decorated. The last of the mats was added especially for the yams and was referred to as *kato ufi*, "basket of yams". Apart from the 20 feet *fihi*, and the last of 12 feet, not originally meant for official exchange, the mats were of 15 feet each. They were beautiful mats and probably all or most of them would be kept for ceremonial offerings at weddings or funerals.

The next exchange was notable, because the 'Uiha participant was a man, who it was said had done the weaving himself. He was the topic of conversation among the local women for the rest of the afternoon. Nobody could quite make up her mind whether to regard him as someone a little odd or with admiration. Certainly, all the mats were very finely woven and were beautifully decorated. It was a bigger exchange than the previous one, being five *launima* and 20 yams for 15 mats.

The exchanging went on for the rest of the afternoon, finally coming to an end at five o'clock, when the earth ovens were opened and the people fed. Altogether, 31 bolts of *ngatu* and 260 yams had changed hands for 112 mats. All the parties seemed pleased and satisfied with what they had received, and as the mats were piled up then held out for every one to see, there were excited cries from the local people of "*malo e langa*" (thank you for the weaving). While the mats were being displayed, the leader of the Tae'ikuna *kautaha* walked down the line in front of them calling out the type of mat, *paongo*, *fihi*, etc. together with the length of each.

Acustomed as we were to seeing quantities of beautiful [p. 229] *ngatu* on Tongatapu, we, like the Seikauta women themselves, felt that they were getting the best of the exchange, while no doubt the 'Uiha women were feeling the same about the *ngatu* that they had received.

The details of the exchange were:

1. 3 *ngatu* (all *launima*) and 20 yams for 8 mats.
2. 5 *ngatu* (all *launima*) and 20 yams for 15 mats.
3. 4 *ngatu* (all *launima*) and 40 yams for 12 mats.
4. 2 *ngatu* (both *launima*) £4-10 and 20 yams for 8 mats.
5. 3 *ngatu* (all *launima*) and 20 yams for 10 mats.
6. 3 *ngatu* (1 *laute fuhi* and 2 *launima*) and 20 yams for 8 mats.
7. 2 *ngatu* (1 *laute fuhi* and 1 *launima*) and 20 yams for 9 mats.
8. 2 *ngatu* (1 *laute fuhi* and 1 *launima*) and 20 yams for 11 mats.
9. 3 *ngatu* (all *launima*) and 20 yams for 9 mats.
10. 2 *ngatu* (1 *laute fuhi* and 1 *launima*) and 40 yams for 12 mats.
11. 2 *ngatu* (1 *laute fuhi* and 1 *launima*) and 20 yams for 10 mats.

It is difficult to assess the cash value as *ngatu* bolts are rarely offered for sale. However, if a family is in urgent need of cash, bolts sometimes change hands for that reason. They are never of any remarkable decoration or manufacture. I once saw two bales, both *launima*, offered for sale by a woman at a street market. She wanted £15 for each of them. They were both sold by the end of the day.

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ENDNOTES

- a Presumably Tamahori meant Berthold Carl Seeman a German botanist who in the 19th century, after visiting Fiji, published a botanical catalogue of the archipelago (*Flora Vitiensis*).
- b "Samoa is the only Polynesian Island group which produces Barkcloth in large amounts."; translation Anja Uhlmann.
- c "The Hawaiians named their material Kapa; however it is uncertain if the name derives, as it is in Samoa, from Kapa, Border, Beach, Shore or if it derives, as I believe is correct from Brigham, from ka pa, ka = Article, pa = struck, kapa would mean something Struck (Palpitated, Pounded)."; translation Anja Uhlmann.
- d "Sometimes siapo is also called tapa referring more to the wide white Border and the red part of unpainted Cloth."; translation Anja Uhlmann.
- e Tamahori lists the date of this publication as 1817, but presumably she meant 1818.
- f Tamahori lists the date of this publication as 1817, but presumably she meant 1818.
- g "The peeled part of the plant is washed in water, normally in Sea water and then scraped with Mother of Pearl shells to remove the Epidermis and the slimy Parts and finally it is vigorously washed and dried in the Sun."; translation Anja Uhlmann.
- h "Once the Scraping in the Water is Done, the Bast is slapped until the Fresh Water is removed, and the remaining Fresh Water is gotten rid of by thoroughly scraping it with an Asaphis shell."; translation Anja Uhlmann.
- i Some women today use a mixture of flour and water to which kerosene is often added to make it less palatable for insects.
- j "To produce black bark cloth, Soot and Bischoffa [presumably *Bischofia javanica* or *koka*] are mixed together."; translation Anja Uhlmann.
- k "Therefore usually three or four People are busy preparing in the House where the Soot shall be made; only the chair person remains in the house when the Nuts are fired because otherwise the stones would not steam up." translation Anja Uhlmann.
- l "Tonga is considered the Creator of the [embroidered tablet]. Fiji, Samoa and Tahiti copied it from Tonga."; translation Anja Uhlmann.
- m In Tonga all sisters outrank all of their brothers and an eldest sister outranks all her siblings. This is intensified through the next generation with the father's sister (*mehekitanga*). Sisters, eldest sisters and *mehekitanga* have a call on the labour and products of their brothers.
- n For the first time, during a visit to Nuku'alofa by Phyllis Herda, the sound of beating could not be heard in the outer suburbs. She was told this was because many of the women were now working in paid employment in town. She was, however, reassured that women were still beating *tutu* and making *ngatu* in the villages of Tongatapu and the outer islands.
- o That is the late 19th and early 20th centuries.
- p <http://sammlungen.uni-goettingen.de/suche/-/DEFAULT:Tongan%20ngatu/1/-/-/>
- q This mother daughter bond associated with *ngatu* was recently explored by Tongan artists Tanya Edwards and Lu'isa Veakovi Fonua Nua in a 2017 exhibition, Mohe Ofi, held August – September 2017 at the Papakura Art Gallery and the Fresh Gallery, Otara December 2017-January 2018.
- r Tamahori was, of course, working before the major *ngatu* collections held in public and private collections had been studied.
- s See Herda and Lythberg (this volume) for discussions of the changes in *ngatu* manufacture, value and use.
- t Tamahori has indicated a footnote here, but none exists.
- u Tamahori has indicated a footnote here, but none exists.
- v *Kautaha* visited by Herda and Lythberg, in the 1980s, 1990s and early 2000s demonstrated the rousing atmosphere reported by Tamahori for the Hamala *Kautaha*. Spontaneous singing and dancing erupted with one 'performance' including rather bawdy songs.

Ngatu Pepa: A Tongan Textile Innovation

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Maxine Tamahori's thesis first came to my attention when I began my doctoral studies in 2002. I referred to it many times throughout my research and indeed within the body of the resulting thesis itself.¹ Tamahori's study offered a crucial baseline for my own, which described Tongan barkcloths made since 1980, and their use and display in Tongan and New Zealand contexts of prestige. As well as asserting the stability of *ngatu* making in Tonga, Tamahori outlined in great detail the numerous changes that had taken place between her time of writing and when the first written observations of barkcloth making in Polynesia were made in the late 18th century, in a complex that she described as both incorporating and resisting innovation.² Covering a period spanning the 1950s to the 1960s, Tamahori's seminal study established that Tongan barkcloth making had, "with relatively little adjustment, always been a vigorous craft in Tonga",³ Yet, *ngatu* making is not a static artform, impervious to change.

In the decades since Tamahori demarcated the material characteristics of plant-based *ngatu* production there have been small adjustments made by Tongan women who beat paper mulberry bast into supple sheets and then paste these into layered cloths decorated with plant- and soil-based pigments. Commercially prepared dyes and pastes are sometimes used; the repertoire of *kupesi* has greatly expanded; and the manufacturing process that separated *fuatanga* from other types of Tongan barkcloth is no longer an essential part of the making of this chiefly cloth. Moreover, the specificity of the barkcloth hierarchy described by Tamahori has diminished as, for example, *fuatanga* and *ngatu 'uli* are increasingly made and mobilized by Tongans without the circumscription of 'eiki women, and have become available for purchase in Tonga and its diaspora. But the biggest change to Tongan barkcloth manufacture, and one that Tamahori could not possibly have foreseen, is the substitution of synthetic fabric for one or both layers of beaten bark that constitute a *ngatu*. This essay draws from my thesis and other recent publications to augment the painstaking research and detailed analyses made by Maxine Tamahori, by tracing recent material changes that have been incorporated into—and which, I suggest, are ratified by—the time-honoured barkcloth-making process of the *koka'anga*.

Tongan Barkcloth Manufacture in Diaspora

As of 2017, Tongans accounted for 98% of the 107,750 people living in the Kingdom of Tonga, with more than 70% domiciled on the main island of Tongatapu.⁴ The Tongan population in Tonga is now matched by the number of Tongans living outside of Tonga, with significant diaspora communities in the United States, Australia and New Zealand. Since the 1960s, Tongan transnational movement to Pacific rim countries has largely been shaped by the search for employment opportunities—a 'labour diaspora'—but it is also a 'cultural diaspora' "shaped strongly by the development, maintenance and renewal of a distinct cultural identity, national and local association, kinship ties, religious practices and economic transactions relating to life-stage events."⁵

1 Billie Lythberg, "*Mama'o 'a folau* [Far away, but only travelling]: contexts and performativity in the making, use and display of contemporary *ngatu*", PhD, University of Auckland, 2011. NB all interviewees were granted anonymity and are not identified in this essay.

2 Tamahori, p. 213.

3 *Ibid.*, p. 5.

4 <http://worldpopulationreview.com/countries/tonga-population/> Accessed 13 November 2017.

5 The Tongan Diaspora in Australia: Current and Potential Links with the Homeland, August 2012, p.5. https://www.deakin.edu.au/__data/assets/pdf_file/0003/629022/arc-tongan-diaspora.pdf Accessed 13 November 2017.

This places pressure upon Tongan diaspora communities to procure the goods required to uphold and constantly renew a Tongan life, and in particular the textile *koloa* presented and exchanged at life-change events. Though it is difficult to source the raw materials required to make plant-based *ngatu*—and other textiles besides—in their efforts to keep weddings and funerals as traditional as possible, some Tongan diasporic communities gift *koloa* at an inflated rate. As Cathy Small observed in 1997, “a commoner wedding in the United States, New Zealand, or Australia can resemble a chiefly wedding in Tonga, with numerous guests, extravagant food, and the display and exchange of quantities of *koloa*.”⁶ The continuation of this practice requires significant financial outlay,⁷ and asserts pressure on diasporic Tongan families to acquire or produce *ngatu* for such events.

My research focused on Tongan communities in Auckland and Wellington, New Zealand, and the ways women made or otherwise obtained barkcloth for life-stage events, as well as their motivations for producing or mobilizing barkcloths for display in New Zealand art galleries and museums.⁸ The opportunities for Tongan communities in New Zealand to obtain the barkcloth *koloa* they require for these activities include making them from imported raw materials, buying them from family members in Tonga, or purchasing them from Tongans who import *ngatu* into New Zealand for sale at markets or through New Zealand’s online auction site, Trademe.⁹ The subsequent movement of *ngatu* between Tonga and New Zealand reinforces the relationships between Tongan people, and harnesses the potential that objects have to “generate ties by moving across territorial and cultural boundaries, sometimes crossing oceans to create and affirm social bonds”.¹⁰ Somewhat more problematically, the proliferation of pawn shops now loaning money against *koloa* in South Auckland offers further opportunities to purchase *ngatu*.¹¹

However, the sourcing of prepared *ngatu* does not permit a woman to contribute to her family’s needs at a deeper level by producing it herself. As it is often not economically viable for Tongan women living overseas to buy *feta’aki* in large quantities from Tonga, substitutes have been sought. The most commonly used *feta’aki* substitute is a form of interfacing material usually called Reemay, Pellon, or Vilene.¹² In the diaspora-coined generic name for *ngatu* made with one or both layers of this fabric (*ngatu pepa*), it is called *pepa*, or ‘paper’.¹³ In its many varieties it is a soft but resilient fabric used to stiffen or support other more delicate fabrics, and to line the plackets and collars of shirts. It seldom finds a

6 Small, Cathy. *Voyages: From Tongan Villages to American Suburbs*, Cornell University Press, Ithaca, 1997, p. 71. Cited in, Helen Morton Lee, *Tongans Overseas*, University of Hawaii Press, Honolulu, 2003, p. 100.

7 For example, in 2002, Kerry James put the total cost of a funeral in Tonga at about T\$53,000 (Tongan *pa’anga*) James, Kerry, “The Cost of Custom: A Recent Funeral in Tonga”, *The Journal of the Polynesian Society*, vol. 111, no. 3, 2002, p. 236.

In her PhD thesis, Ping-Ann Addo described a wedding in Auckland in which the mother of the bride “had given away \$100,000 (New Zealand) worth of *koloa* and cash to her daughter’s future sisters-in-law.” Addo, Ping-Ann, “Kinship Cloth and Community in Auckland, New Zealand: Commoner Tongan Women Navigate Transnational Identity Using Traditionally-Styled Textile Wealth”, PhD Thesis, Yale University, 2004, p. 146; see also Addo, Ping-Ann, *Creating a Nation with Cloth*, Berghahn Books, New York, 2013.

8 On this see Lythberg, Billie, and Phyllis Herda, “*Ngatu* ‘uli: Exhibiting the Fine Art of Contemporary Tongan Black Barkcloth in New Zealand”, *Journal of Museum Ethnography*, vol. 29, 2016, pp. 131–151.

9 www.trademe.co.nz

10 Henare [Salmond], Amiria, *Museums, Anthropology and Imperial Exchange*, Cambridge University Press, Cambridge, 2005, p. 7.

11 Addo, Ping-Ann and Niko Besnier, “When Gifts Become Commodities: Pawnshops, Valuables, and Shame in Tonga and the Tongan Diaspora”, *Journal of the Royal Anthropological Institute*, vol. 14, no. 1, 2008, pp. 39–59.

12 Reemay is trademarked to Fiberweb; Pellon interfacing is trademarked to Pellon Consumer Products LLC U.S.A.; and Vilene is trademarked to Freudenberg & Vilene International Ltd U.S.A.

13 For a more detailed analysis of the range of terms that have been coined and applied to *ngatu* made from synthetic cloth see Lythberg, Billie, “Polyvocal Tongan Barkcloths: Contemporary Ngatu and Nomenclature at the Museum of New Zealand Te Papa Tongarewa”, *Tuhinga: Records of the Museum of New Zealand Te Papa Tongarewa*, vol. 24, 2013, pp. 85–104.

function on its own, except in the manufacture of durable but low-cost reusable shopping bags, such as those promoted and sold in major supermarkets in New Zealand as an alternative to disposable plastic bags.¹⁴ It is also used by paper and textile conservators, and has many of the same qualities of acid-free tissue.¹⁵ It is not commonly used or regarded as a completed fabric in its own right, and ideologically therefore is well suited to being layered with another in the making of a textile such as *ngatu*. Technically, it is a spunbond fabric, made from “molten polymer as continuous filaments that are self-bonded at each cross-over point... to form a web.”¹⁶ Spunbond fabrics have “high strength... [and] are non-ravelling, resist distortion and do not tear readily.”¹⁷

There are two types of *ngatu* currently being made using spunbond fabrics. The first uses just one layer of synthetic fabric as the substrate upon which a *feta’aki* upper layer is pasted (figure 1). The second type of *ngatu* made with spunbond fabrics uses it for both layers and incorporates no *feta’aki* whatsoever. In addition, Tongan dance costumes in New Zealand, formerly made from *ngatu*, are sometimes made from layered and stenciled calico called *ngatu kaliko*, or from stenciled canvas, but neither of these is properly conceptualised as *ngatu* appropriate for gifting in the *koloa* system.¹⁸

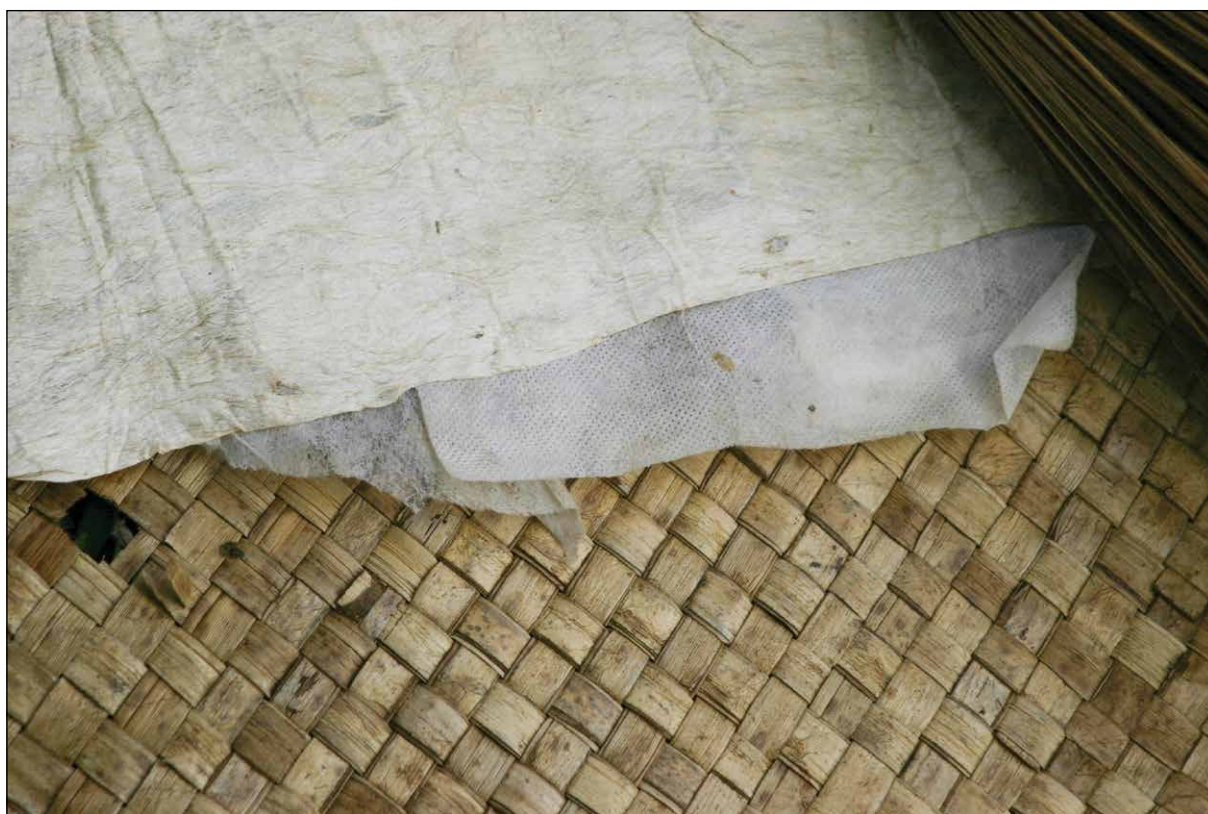


Figure 1: *Ngatu* made with a substrate of spunbond synthetic fabric. Photo by Hilary Scothorn.

14 It is also used to make dust bags for shoes and handbags, and has a similar application within museum environments, where it used to make bags for artefact storage.

15 Richards, Elizabeth, “Non-Woven Textiles for Conservation Use”, *International Council of Museums*, International Council of Museums, Copenhagen, 1984.

16 *Ibid.*, p. 84.9.43.

17 *Ibid.*

18 Herda, Phyllis S., “The Changing Texture of Textiles in Tonga”, *Journal of the Polynesian Society*, vol. no., 1999, p. 152.

Ngatu pepa is used in New Zealand for “interior decorations, and ritual and ceremonial occasions such as weddings and funerals. In weddings, it can be part of the goods exchanged between the two families, and in a funeral it can be presented in place of the traditional tapa.”¹⁹ Maile Drake has stated that, “this development is welcomed and encouraged by the Tongan communities in New Zealand and Tonga”,²⁰ but Ping-Ann Addo has identified that, “the authenticity of *ngatu pepa* as a category of Tongan women’s *koloa* is a contentious issue” for Tongans still living in Tonga:²¹

Despite the growing acceptance of *ngatu pepa* in the diasporic Tongan gift and commodity exchange, there is staunch opposition to accepting *ngatu pepa* into the arena of gift exchange in Tonga by people at all levels of society in Tonga. As long as *hiapo* [paper mulberry] continues to be grown in Tonga and made available for barkcloth making, this homeland–diaspora divide with respect to barkcloth forms may continue.²²

Somewhat ironically, it seems that the first experimentation with synthetic fabrics may have resulted from a desire among diasporic Tongan women to continue to contribute *koloa* to the Tongan Royal Family. An elderly woman recalled seeing a piece of *ngatu* made from interfacing at the Langa Fonua ‘ae Fefine Tonga in Nuku‘alofa in the mid-1980s. She explained that Queen Halaevalu Mata‘aho ‘Ahome‘e of Tonga had received a *launima* (50 *langanga ngatu*) as a gift from women in New Zealand, and brought it to show the women of the Langa Fonua so they might become aware of the new materials being used overseas. It was the opinion of the elderly woman that the Queen appreciated the efforts the New Zealand women had gone to, despite the inherent lack of traditional materials, but she wanted also to discourage women in Tonga from being influenced by this new practice.

Most researchers agree that the first *ngatu* incorporating synthetic cloth were made in the Tongan diaspora.²³ My research indicates that the first *ngatu* made with a spunbond fabric called Vilene appeared in Tonga in the mid-1980s, and that Vilene began to be used in Tonga to make *ngatu* at about the same time. Phyllis Herda was given a *ngatu* made from Pellon (an earlier version of the fabric now commonly referred to as Vilene) and decorated with synthetic dyes, during a research trip to Vava‘u with Elizabeth Wood-Ellem in 1987.²⁴ At the conclusion of their stay their host gave her the *ngatu* as a parting gift. Herda remembers that the woman’s family in Tongatapu, with whom she visited next, were embarrassed that she had been given a *ngatu* they regarded as an inadequate and inappropriate gift and could not understand her excitement at receiving one of these innovative textiles having previously only heard of them.²⁵ Herda was told at the same time about a single-layered canvas that had been decorated with *kupesi* in the USA and sent to Tonga. Unlike the Pellon *ngatu*, this textile was not regarded as *koloa* but was put to practical use within the home.

Ping-Ann Addo’s informants in Tonga attributed the first *ngatu pepa* to a Tongan woman: “It was the idea of a Tongan woman who went to *muli* (foreign countries),” they said. Others added, “She saw the Vilene

19 Drake, Maile, “Ngatu Pepa: Making Tongan Tapa in New Zealand”, in Mallon, Sean and Pandora Fulimalo Pereira (eds.), *Pacific Art Niu Sila: The Pacific Dimension of Contemporary New Zealand Arts*, Te Papa Tongarewa Press, Wellington, 2002, p. 59.

20 *Ibid.*, p. 60.

21 Addo, 2004, p. 281.

22 *Ibid.*

23 Adrienne Kaeppler, Personal Communication, August 2006; see also, Drake, 2002, p. 58. Ping-Ann Addo cites Maile Drake as above, but also offers a different origin for *ngatu pepa*: “I have been told by many of my Tongan women informants in New Zealand and in Tonga that *ngatu pepa* (entirely of Vilene) was first made by some Tongan women in Salt Lake City”. Addo, 2004, pp. 245–46.

24 Phyllis Herda, Personal Communication, 3 May 2007.

25 Likewise, when Herda purchased a *kiekie* or waist adornment made from unravelled video-tape she was told by her hosts not to wear it in Tonga. The *kiekie* is now in the Auckland War Memorial Museum.

and brought some back to Tonga.”²⁶ Certainly by the 1990s Tongan women were using spun-bonded materials to make *ngatu*. An art dealer recalled regularly visiting the Auckland home of a Tongan woman from whom they used to buy *ngatu*. On the occasion of one visit in 1994 the dealer noticed a bale of interfacing partially wrapped in black polythene. The woman explained that she was sending it to Tonga to be used instead of *hiapo* to make *ngatu*. When the art-dealer visited her at home in Tonga the bale had arrived and was being used in the *koka’anga*.

Adrienne Kaeppler recalls seeing a *ngatu pepa* in Tonga in the mid-1990s:

As I recall, it was thought to be a New Zealand thing. As far as I am aware these combinations were considered of lesser status and not appropriate for important ceremonies. But, I think that some were given for the wedding of Princess Pilolevu’s daughter (which surprised me). But as they were from overseas, they felt that it was OK.²⁷

There is then, evidence to support the rapid adoption of diaspora-based innovations such as Vilene by Tongans making *ngatu* in Tonga. There was also a desire expressed by Tongans to confine its use to its place of origin, which played out in the early years of this century through a tendency to dismiss the use of synthetics in *koka’anga* in Tonga, whilst still acknowledging its use in the *koloa* exchanges therein.²⁸

Making *Ngatu* From Commercial Materials

The material base of a *ngatu pepa* determines the types of pastes used to piece it together; it is unusual to use paste vegetables such as those used for a plant-based *ngatu* when pasting together a *ngatu* made with interfacing. This is due to two main reasons. First, when women are working outside of Tonga, many of the paste vegetables are not available. In New Zealand the exception to this is the common canna lily, known in Tongan as the *misimisi*, which is found in many gardens. Second, the traditional paste vegetables are not always suitable to join together synthetic fabrics due to the difference between these and the natural material of *feta’aki*.

Instead, depending on the materials to be joined, women may use a paste of flour and water known as *mahoa’a fakapalangi* (‘European paste’); a paste of commercially prepared tapioca starch and water; or a simple wood glue such as PVA. The use of flour and water paste in *koka’anga* is not isolated to *ngatu pepa*, and is becoming more common in plant-based *ngatu*. It is cheap and quick to prepare and can be used to glaze the completed *ngatu* too, lending it a desirable glossy sheen. Flour is a low status food in Tonga, considered to be “famine food, something used after the lowest ranking form of root crop, *manioke* [cassava] was used up”.²⁹ It is thus on a par with some of the barkcloth paste vegetables, and ideologically suited to being used as a paste. However, it does not have the same intrinsic insect-detering qualities of the paste vegetables, which are bitter or poisonous. As such it requires the addition of kerosene to preserve the materials it is used to join.

When *ngatu* makers began to use a paste prepared from flour and water to layer plant-based *ngatu* together, in preference to the more time consuming and labour-intensive task of preparing traditional paste root-vegetables, it was observed that the resulting *ngatu* were particularly susceptible to the damage caused by insects and rodents. One woman, who had made a special trip to ‘Eua with her friends to buy *ngatu*, was extremely disappointed when it became damaged by insects in a matter of months.

²⁶ Addo, 2004, p. 244.

²⁷ Adrienne Kaeppler, Personal Communication via email, 8 August 2006.

²⁸ Ping-Ann Addo notes, for example, that she never saw *ngatu pepa* being made in a *koka’anga* in Tonga. Addo, 2004, p. 243.

²⁹ Young Leslie, Heather, “Tradition, Textiles and Maternal Obligation in the Kingdom of Tonga”, PhD thesis, York University, 1999, p. 201.

They have a traditional paste either tapioca or Tongan potato, now women use flour. And flour, if it's not mixed with kerosene or something that will turn away the mites and rats...all the tapa I've bought, I wrapped it up in a plastic that is very thick, I discovered when I opened it huge rips—it's eaten.

In the absence of kerosene, the plant-based parts of *ngatu* will be particularly susceptible to being eaten. This has added implications for the *ngatu ngatu* made using flour and water paste; they can be destroyed within a matter of weeks as insects eat holes right through the fabric.

The repertoire of pigments used to decorate *ngatu* has also expanded. Commercial dyes have been used to decorate *ngatu* since at least the 1930s, when 'Diamond' brand aniline dyes were imported to dye fabric and were found to be effective on *feta'aki*. Ernest and Pearl Beaglehole mentioned these commercial dyes in 1941:

The orthodox Tongan dyes for bark cloth give two colours only: black and a reddish-brown. Today some women find commercial dyes less troublesome and more pleasing to use. To the European eye these store-colours are often garish and crude as compared with the softness of the Tongan dyes.³⁰

Siapo-maker extraordinaire Mary Pritchard noted that in Samoa the use of Diamond dyes was "short-lived, a kind of fad from about 1934 to 1941".³¹ During Tamahori's wide-reaching survey she never saw any commercial dyes on large *ngatu* but did see young people "experiment with commercial dyes on table centres or wall pictures which they intend to dispose of as souvenirs."³² This practice remains alive today, when commercial fabric dyes and screen-printing inks are used to decorate small pieces of *ngatu*, particularly those featuring the Tongan Coat of Arms. Bright reds, yellows and blues can be achieved with these inks and create a splash of colour against the *ngatu* decorated with brown and black tones of *koka*, *tongo* and *tuitui*. They tend to be applied after, or instead of, the use of *kupesi*.

When full-size *ngatu* are made with commercial dyes, bright orange and bright red seem to be the colours of choice. One explanation for this could be that red and white are the colours of Tonga and symbolise modern national identity "under which all classes are united in their allegiance".³³ But these hues are also in keeping with the Tongan concepts of *ngatu* colours: orange and red, and even purple fit within the Tongan concept of 'red-brown', which is the colour of *koka*, the most common plant-based *ngatu* pigment.³⁴ As Tamahori described:

The brown which predominates, has a wide range of hues, from a flat almost orange colour, to a rich crimson. The inclusion of a definite red tint might justify the consideration of red as a separate colour, but these hues of brown, although separately identified are considered to be variations of the one colour.³⁵

The subtlety of these natural variations of red-brown is overridden by their commercial counterparts, and the *ngatu* made with fabric dyes and screen-printing inks are easily detected. It seems likely that commercial dyes have existed on the periphery of *ngatu* making since their introduction to Tonga,

30 Beaglehole, Ernest and Pearl Beaglehole, *Pangai Village in Tonga*, The Polynesian Society, Wellington, 1941, p. 40.

31 Pritchard, Mary J., *Siapo: Bark Cloth of Samoa*, American Samoa Council on Culture, Art and Humanities, American Samoa, 1984, p. 40.

32 Tamahori, p. 52.

33 Teilhet-Fisk, Jehanne, "Tongan Grave Art", in *Art and Identity in Oceania*, Hanson, Allan and Louise Hanson (eds.), University of Hawai'i Press, Honolulu, 1990, p. 234.

34 Ping-Ann Addo, Personal Communication, 1 October 2008.

35 Tamahori, pp. 52–53.

perhaps experiencing brief periods of popularity as new varieties became available, before falling back out of favour. A woman who chooses to work with a commercial dye to make large *ngatu* may be working within a Tongan colour scheme, but the results are obviously different to the softer hues of plant-based dyes, and as a result these *ngatu* seem still to be anomalies.

Beyond commercially prepared dyes, brick dust and soot are collected by members of households who work in factories or on building sites, and used to make pigments. The suitability of these for the *koka'anga* process may stem partly from their organic nature: bricks are made from clay or earth, and soot is formed by the burning of organic materials. These have tended to be used to decorate *ngatu* made in the diaspora, as the dyes are not favoured over those made in Tonga from plant barks, ochre clay and burned *tuitui* nuts. In the diaspora, the *tohi* on these *ngatu* is often done using commercially prepared inks and dyes and paints; the paints used to blacken cast-iron stoves and tyres are particularly well suited to this purpose, and create a thick glossy line. In the absence of pandanus keys, paintbrushes are used to embellish the *kupesi* designs. The final application of scented coconut oil is replicated through the use of flour and water paste. This imparts a shine to the *ngatu* but increases its risk of being eaten by insects, and unlike scented oil does not add olfaction to its sensory reception.

Sitting somewhere in between the use of plant pigments and commercially prepared dyes are traditional dyes that are altered by the addition of other substances, usually to produce a substitute for the *tuitui* soot used to make *ngatu 'uli*. Plant-derived *koka* dye can be boiled with caustic soda to produce a comparatively glossy black dye. Unfortunately, it fades to a red-brown in a matter of weeks. Only the real *tuitui* pigment remains black, thus retaining the literal blackness of a *ngatu 'uli* ('black' *ngatu*). However, the alternative *tuitui* dye allows women to quickly produce an item with perceived high value for the market trade.³⁶

Expanding the Tongan Textile Hierarchy with *Ngatu Pepa*

In September 2004 I watched a group of women in Nuku'alofa make a *ngatu* using two layers of interfacing, screen printing ink, and a paste made from a store-bought box of tapioca. They stood either side of a long table, whose surface dimensions replicated a *papa koka'anga*. They laid plastic over the table to keep it clean, then stuck their chosen *kupesi tui* onto the plastic. Next, they cut pieces of fabric from a roll of interfacing purchased in the fabric store at Nuku'alofa. The pieces were sized to replicate pieces of *feta'aki*. They were placed over the *kupesi* and rubbed with small pieces of interfacing dipped into the paste and the ink. When the second layer of interfacing strips was added the tapioca paste was adequate to stick the two layers of spunbond material together, but it did not penetrate through the fabric, so it stayed wet and was quite messy compared with the vegetable tubers I had previously seen used to join *feta'aki*. The women continued layering and pasting, just as they would in a *koka'anga* convened to make a plant-based *koka'anga*, until the *ngatu pepa* was complete. The finished *ngatu pepa* was quite heavy and wet, and despite being taken outside to lie in the sun it took some time to dry. When it was dry, those parts of it that were not well enough stuck by the tapioca starch were later joined with PVA.

Despite the considerable differences between interfacing fabric and sheets of *feta'aki*, between *koka* dye and screen-printing ink, and between vegetable tubers and tapioca pudding mix, the *ngatu pepa* made that day looked quite similar to plant-based *ngatu*. Its surface betrayed numerous smaller pieces of cloth that had been joined together, just as individual pieces of *feta'aki* are discernible in the surface of a plant-based *ngatu*. The *kupesi* were imprinted into both layers of the cloth. Because it was made from two layers of fabric, each comprising multiple pieces of cloth, it had a substantial and handmade feel to it.

36 Tongan curator Kolokesa Uafā Māhina-Tuai has written about the making of a *ngatu 'uli* for a civic gallery commission using a synthetic black paint. Māhina-Tuai, Kolokesa Ū., "Nimame'a Koka'anga: The Fine Art of Tongan *Ngatu* or Barkcloth Making", in Mesenholler, Peter and Annemarie Stauffer (eds.), *Made in Oceania: Proceedings of the International Symposium on Social and Cultural Meanings and Presentation of Oceanic Tapa*, Cambridge Scholars, Cambridge, 2015, pp. 58–71.



Figure 2: *Ngatu pepa*. Photo by Billie Lythberg.

The *ngatu pepa* described and pictured above, and indeed most that I have seen, incorporated well-known *kupesi hingo* (named *kupesi*) such as the Tongan Seal and *Hala Paini*, which depicts the Norfolk pines flanking the road to the Royal residence in Nuku'alofa as well as other motifs associated with royalty.³⁷ Nicholas Thomas has described how “the demand for tapa among Tongans in New Zealand, the United States and Australia has imposed a degree of conservatism, since those on the diaspora are likely to prefer material that stands unambiguously for their traditions and their ethnicity.”³⁸ The use of iconographic and distinctly Tongan *kupesi* attaches people to the new materials being used to make *ngatu pepa*.

For example, when Tongan women in Sydney made a *ngatu* from interfacing in the mid-1990s they decorated it “with the gridded emblems of the Tongan monarchy alongside stylised images of the Sydney Opera house”.³⁹ The *kupesi* of the Tongan monarchy encoded the upholding of Tongan tradition in the diaspora and supported the new *kupesi* picturing the Opera House. Similarly, in Auckland, Wellington and Tonga, the proliferation of *ngatu pepa* made with *Hala Paini kupesi* attests to the role these *kupesi* play in making synthetic materials somehow more Tongan. As Chloe Colchester has suggested, the overlay of imagery in cloth such as *ngatu* provides “vehicles for associative thinking”, pathways through which “surface decoration and detail may serve to articulate seemingly incompatible belief systems or cultural strands”.⁴⁰

³⁷ See Herda, this volume.

³⁸ Thomas, Nicholas, *Oceanic Art*, Thames and Hudson, London, 1995, p. 140.

³⁹ Page, Maude, “Paperskin: An Introduction”, in *Paperskin: Barkcloth Across the Pacific* (Queensland Art Gallery and Museum of New Zealand Te Papa Tongarewa, Brisbane and Wellington, 2009, p. 19.

⁴⁰ Colchester, Chloe, “Introduction”, in Colchester, Chloe (ed.), *Clothing the Pacific*, Berg, Oxford, 2003, p. 10.

The use of iconographic *kupesi* to decorate *ngatu pepa* in the diaspora specifically fulfils an important performative social project of maintaining links to the Tongan homeland and professing ongoing allegiance to the Tongan monarchy and Tongan-ness. But there is ambivalence encoded even through this conservatism, as Thomas describes:

The monarchist iconography seems to belie or mask the polite but insistent resistance to the aristocracy that may be as 'traditional' in Tongan society as the chiefly lineages themselves. This resistance is attested to over the past century, ironically, by the commoner women's clubs that now produce the barkcloth, and by the process of migration away from the island home that remains uneasily dominated by the royal family.⁴¹

Ngatu pepa by their very nature tread carefully the line between overt innovation and allegiance to the maintenance of Tongan chiefly lineages and the Royal Family, as their very manufacture attests to their ongoing involvement in the spheres of *koloa* exchange, where Tonga's social stratification is most visible.

The preference for combining innovative materials with iconographic *kupesi* was in evidence when I visited a home economics classroom at a Mormon School in Tongatapu in August 2004, to observe the results of a class designed to teach female students how to make *ngatu*. The girls in the class had been taught how to make *kupesi* bearing the Tongan Coat of Arms, using plant-based materials and traditional techniques, and were now preparing a *ngatu kaliko* (calico *ngatu*) that would be decorated with them. The teacher explained to me that she was interested in the contrast between the *kupesi* and the *ngatu kaliko*, the blend of the traditional and modern. Despite the nature of calico, which can be used as complete fabric without any further layering, the *ngatu kaliko* was made of two layers of calico joined with PVA, thus replicating the *koka'anga* process of pasting together two layers of material.

The means of selecting and joining together the two layers had been arrived at after a process of trial and error. First, they had tried to use an iron-on fixative that had not been strong enough to join the two layers together. Next, they had tried to paste together one layer of calico and one layer of interfacing, but the paste would not set and ran off the fabrics. Finally, they had used PVA wood-glue to paste together two layers of calico with a thermal backing; this combination proved the most successful. At the time of my visit, the cloth had been prepared and the class were now experimenting with different fabric dyes to use with their *kupesi*.⁴²

The aim of the class, to teach the girls how to *koka'anga*, had been successful, even though they were not working with plant-based materials and the '*ngatu*' they produced would not enter the *koloa* system. The girls had learned about the stages of *ngatu* making, and the status of *koloa*. They had come together to work collectively and learn about *ngatu*, sharing stories and histories with each other. This is a social aspect of *ngatu* production that Ping-Ann Addo has assessed to be as important to the women who participate in it as the end product.⁴³

The use of calico as a layered cloth for *ngatu* making is interesting when put in its historical context. Christine Gailey has suggested that in the 19th century foreign cloth such as calico was promoted as better to Tongan plant-based textiles, to the detriment of the status of women as producers of woven

41 Thomas, 1995, p. 140.

42 Technical difficulties such as those described above stimulate further experimentation by women making synthetic *ngatu*. Ping-Ann Addo has described a group of women who made a *ngatu kaliko* using calico for the *mata* (top) and interfacing for the *laulalo* (bottom). The difficulties they experienced in sticking the two layers together prompted them to make a *ngatu pepa* next because it was 'easier to stick with the *mahoa'a fakapalangi* (flour-and-water-paste)'. Addo, 2004, p. 257.

43 *Ibid.*



Figure 3: *Ngatu kaliko* and dye experimentation. Photo by Billie Lythberg.

mats and beaten bark textiles.⁴⁴ Heather Young Leslie, citing Gailey, argued that “women’s position as producers of economically essential textile wealth was devalued, when foreign calico was promoted as morally and socially superior forms of cloth”.⁴⁵ Though calico has been used to make double-layered *ngatu*, as above, it is not usually accepted into the *koloa* system. The 19th century’s promotion of calico has not proven effective at vanquishing *ngatu*, nor has it been accepted as an alternative to it when *koloa* is gifted. It is rather a kind of teaching mechanism through which school girls learn how to *koka’anga*, and useful material can be produced.

Although *ngatu kaliko* has not yet been acculturated into the Tongan *koloa* system, the textile hierarchy has expanded to accommodate other innovative, layered cloths, including contemporary *fuatanga*. The method for making a *fuatanga*, described so well by Tamahori, is different to the way any other *ngatu* is pasted.⁴⁶ It produces a wider barkcloth than those made by the *hangatonu* method, with a characteristically wide square or rectangle shape, and wide borders. However, many contemporary *fuatanga* made in Tonga and the diaspora are pieced together following the *hangatonu* method of construction. The results conform to a wide square or rectangle shape with characteristic *fuatanga* borders and decorations. In addition, the form has shifted in terms of its symbolic significance, and the term is now used to refer to particular rectangular or square shapes rather than a specifically chiefly form made in a certain way.

Fuatanga are made in these new forms in both Tonga and the diaspora because they are a way of making materials go further. Complete cloths have more value in Tonga, but *ngatu launima* are inconveniently large and expensive to prepare, and as such are frequently cut into culturally-sanctioned sections for *koloa* gifting. Thus, it makes better economic sense to make smaller *ngatu* but to make them to look like a *fuatanga*, which is both a complete form and a chiefly form and therefore of higher

44 Gailey, Christine, “Putting Down Sisters and Wives: Tongan Women and Colonisation”, in Etienne, Moana and Eleanor Leacock (eds.), *Women and Colonization*, JF Bergin/Praeger, New York, 1980; Gailey, Christine, “State, Class and Conversion in Commodity Production: Gender and Changing Value in the Tongan Islands”, *Journal of the Polynesian Society*, vol. 96, 1987, pp. 67–77.

45 Young Leslie, 1999, p. 35.

46 See Tamahori, 1963, figure facing p. 156.

value than a *ngatu* of the same size. These cloths, previously associated with nobility and difficult to make, are now a common form for *ngatu pepa*.⁴⁷

Value is subject to innovation and negotiation here. Tamahori had described *fuatanga* as “highly valued”, and explained that a *ngatu* is primarily considered to be a *fuatanga* “because of the method of its manufacture, not because of the design employed or the use to which it was put.”⁴⁸ Similarly, Tongan researcher Tupou Posesi Fanua described it as “the most chiefly and sought after”, and stated that “the way it is made is different from any other tapa”.⁴⁹ Simon Kooijman concurred with these descriptions, detailing the specialised pasting method utilised in its construction, and describing a *fuatanga* as, “a highly valued kind of ceremonial *ngatu*...which is, for instance, one of the gifts made by a Tongan woman at the death of her husband and is one of the most important ceremonial donations of her married life”.⁵⁰ The new *fuatanga* forms, made in the *hangatonu* way and sometimes from synthetic materials, are used in these ways, but do not carry the same value when compared with *fuatanga* made in the traditional way and from plant-based materials. They demonstrate the expansion of the existing Tongan textile hierarchy to accommodate innovations.

The Significance of Retaining the *Koka’anga* When Making *Ngatu Pepa*

When synthetic fabrics are used to make *ngatu pepa* it is significant that, even in the absence of *feta’aki*, the *ngatu* produced is double-layered and made from pieces of fabric that are cut and joined together following the same basic methods used to make a plant-based *ngatu*. Though large pieces of synthetic fabric could be made into *ngatu* without the *koka’anga*—by stitching two layers together, for example, or by using a single layer of heavier spunbond fabric—this *ngatu*-making process appears to be beyond contestation.

The retention of the *koka’anga* as a technology, above and beyond its functionality, is a result of the social phenomena embedded within technological phenomena, a reciprocal relationship between the *koka’anga* as a technological system and the social system in which *ngatu* belongs.⁵¹ It is an essential part of the performativity of *ngatu*. In other words, synthetic fabrics are worked with through the *koka’anga* because in this way Tongan “sociocultural art-making ideologies are not disrupted.”⁵²

Makers of *ngatu pepa* are charting a course between ancient Tongan practices and contemporary innovations.⁵³ They do so by extending the processes used to prepare and layer *ngatu* plants in order to *koka’anga* with synthetic materials. This is because there are “unseen sociocultural meanings”⁵⁴ embedded in the *koka’anga* that technical and material changes threaten to alter or eliminate. By maintaining the *koka’anga* regardless of other technical or material changes, Tongan women define the “acceptable (steady-state) cultural limitations” of *ngatu* making as a performative process.⁵⁵

47 Drake, 2002.

48 Tamahori, pp. 191–192.

49 Fanua, Tupou Posesi, “A Survey of Tapa Making in Tonga”, unpublished ms, Auckland War Memorial Museum, Pacific Ethnology Department, Auckland, p. 16.

50 Kooijman, Simon, *Tapa in Polynesia*, B. P. Bishop Museum Bulletin 234, Honolulu, 1972, p.316.

51 Lemonnier, Pierre, “Bark Capes, Arrowheads and Concorde: On Social Representations of Technology” in Hodder, I. (ed.), *The Meanings of Things: Material Culture and Symbolic Expression*, Unwin Hyman, London, 1989, p.156. Lemonnier cites Mauss, Marcel, “Les Techniques du Corps”, in *Sociologie et Anthropologie*, Mauss, Marcel (ed.), PUF, Paris, 1983.

52 Teilhet-Fisk, Jehanne, “To Beat or Not to Beat, That is the Question: A Study on Acculturation and Change in an Art-Making Process and its Relation to Gender Structures”, *Pacific Studies*, vol. 14, no. 3, 1991, p. 61.

53 Rees, Simon, *Filipe Tohi: Genealogy of Lines Hohoko e Tohitohi*, Govett-Brewster Gallery, New Plymouth, 2002.

54 Teilhet-Fisk, 1991, p. 43.

55 *Ibid.*, p. 52.

The *koka'anga* is a group activity, necessitating the coming together of women to work collectively towards the production of *ngatu*. The community ties that the *koka'anga* reinforces are significant, and as important to the health of the Tongan culture as the material output of the group. Because of this, even when women come together to make *ngatu* in New Zealand they are participating in a much larger Tongan community. Helen Morton Lee described this as “long-distance nationalism”, the act of perceiving yourself to be a part of your culture albeit from across a geographical divide.⁵⁶ Coming together to *koka'anga* in New Zealand, as in Tonga, allows Tongan women to reinforce their cultural identity, even when they work with synthetic fabrics.

Some of the first *ngatu pepa* made in New Zealand had a top layer of beaten *hiapo* and a bottom layer of interfacing. The face of the *ngatu* (known as the *mata*) was essentially Tongan, but the supportive lower layer was not. A *ngatu* constructed in this way symbolises how the diaspora, in the form of the interfacing, might provide new and innovative ways of supporting, quite literally, Tongan cultural practice. This is particularly important for people living away from their homeland.

Ping-Ann Addo described how *ngatu* mirrors the ideal workings of Tongan communities because the lower layer of the *ngatu* is pasted to the top layer at right angles, strengthening it and supporting the entire cloth, just as Tongan commoners support the Tongan nobility and Royal Family.⁵⁷ Addo applied this analysis to a *ngatu* with a synthetic base layer and suggested that the lower layer of interfacing represents “diasporic commoner Tongan women” who adhere closely to the *hiapo* layer representing “the more ‘*eiki*, island-based layer of Tongan society in the homeland”.⁵⁸ I wish to further this analogy by suggesting that the Tongan women who make this type of *ngatu pepa* in both Tonga and the diaspora are represented by the *hiapo* layer, and the diasporic conditions out of which the first synthetic *ngatu* were produced are represented by the interfacing. The interfacing symbolises the diaspora as not only a place in which the raw materials for *ngatu* cannot be grown, but also the supplier of substitute materials used by women who continue to adhere so closely to Tongan tradition through their *ngatu* making practice.

When Tongan women work with two layers of synthetic cloth, the adherence to the *koka'anga* and to using iconographic *kupesi* performs the role of the *hiapo* layer described above, maintaining ties to *ngatu* making's history. In Teilhet-Fisk's terms, this allows the women to continue a process “thought of in terms of its historical depth and connected with aesthetic socialization and tradition for tradition's sake”.⁵⁹ Making *ngatu pepa* asserts a commitment to Tonga and a Tongan identity, and enacts Tonganness; the resulting textiles straddle a geographical and metaphysical divide between New Zealand and Tonga. Furthermore, when *ngatu pepa* are decorated with recognisable Tongan *kupesi* and patterns the distance between New Zealand and Tonga is conflated. Kuchler and Were explained the importance of pattern in the Pacific in the following way:

Pattern alone is able to address a question that is unique to the Pacific. With three quarters of the population in the Pacific Islands living in the urban centres of Australia, New Zealand, North America and Europe, a Pacific identity that articulates presence and absence has to be fashioned—when one is far away from home, securing and consolidating connections becomes a matter of urgency. Pattern ideally bridges these spatial divides, as its bodily (gestural) and mental (memorable) portability offers the opportunity for diaspora communities to trace and transmit genealogical connections.⁶⁰

56 Helen Lee, Unpublished conference Paper, Tongan History Association, Nuku'alofa, 2003.

57 Addo, 2004, pp. 306–307.

58 *Ibid.*, p. 308.

59 Teilhet-Fisk, 1991, p. 53.

60 Kuchler, Susanne, Graeme Were and Glenn Jowitt, *Pacific Pattern*, Thames and Hudson, London, 2005, pp. 172–173.

Furthermore, in tracing the technical means by which their patterns are engineered, we may see the process of their creation not just as a functional attribute of the design of an object, but rather as an intellectual activity designed to manage relations both temporally and spatially.⁶¹

When *ngatu* is decorated with *kupesi*, the process not only produces a physical output but also conceptually reproduces and reinforces Tongan identity. *Kupesi* are a form of *heliaki*, encoding metaphorical associations and allusions to other things. *Ngatu pepa* and the *kupesi* patterns embedded in them or embellished upon them may be used in themselves to manage relations through their exchange, but equally important is the way in which the performative process of their manufacture in itself manages relationships between Tongan people and the countries in which they live. The importance of layers of cloth and pattern is played out even when synthetic textiles are gifted as *koloa*.

By working with innovative materials, Tongan *ngatu* makers “not only underline the ethos of ‘making do’ in urban Pacific life but actually reinvigorate [their] relationship to roots in the islands of the Pacific which are so heavily invested with ideas of history, genealogy and identity”.⁶² By making *ngatu* from synthetic cloth Tongan women literally reinvigorate their relationships with Tonga and other Tongan people. By choosing to work with spunbond materials in particular, Tongan women have demonstrated their recognition of what Igor Kopytoff has referred to as the biographical possibilities inherent in the status of an object,⁶³ working within the realms of its intended use as a layering cloth to release the potential of this new material in a Tongan performative process “inseparable from ways of knowing and of being”.⁶⁴

At the heart of this discussion are Tongan women who have adapted their modes of production to suit the materials available to them as they uphold the vitality of *ngatu* making. There is a Tongan proverb that concerns the inevitability of change over time: *To’ukai mo hono lohu* (one fruit season, one *lohu*).⁶⁵ The proverb explains succinctly the anticipation that a new stick for picking breadfruit will be required each season. Encoded within it is the lesson that nothing is static and all things change with time. In Tongan culture change is anticipated, and considered vital to the maintenance of tradition, even by members of the Royal Family:

Princess Pilolevu, actively advocated adaptation and change during the four years she lived in the United States...she argued that “Tongan culture is constantly undergoing change. I ask myself why has the Tongan culture been the longest surviving in the Pacific? It is because we have the ability to change the Tongan culture to suit us and the times, that’s the key, and this is why we have to try and maintain it overseas”.⁶⁶

Ngatu made from synthetic materials emerge from a “future-directed consciousness that [feeds] off the immanent presence of the past in local and material objects and things”.⁶⁷ When *ngatu* are made from synthetic cloth in a *koka’anga* the results not only visually resemble barkcloth but are also composed in a process that allows the cloth to “assume an agency that was already invested in the materiality

61 *Ibid.*, p. 27.

62 *Ibid.*, p. 107.

63 Kopytoff, Igor, “The Cultural Biography of Things: Commoditization as Process”, in Appadurai, Arjun (ed.), *The Social Life of Things: Commodities in Cultural Perspective*, Cambridge University Press, Cambridge, 1986, p. 66.

64 Kuchler, Susanne, “The Poncho and the Quilt”, in Colchester, Chloe (ed.), *Clothing the Pacific*, Berg, Oxford, 2003, p. 97.

65 Māhina, ‘Okusitino, *Reed Book of Tongan Proverbs*, Reed Books, Auckland, 2004, p. 54.

66 Lee, 2003, p. 117.

67 Kuchler *et al.*, 2005, p. xxii.

and texture of bound and layered things”.⁶⁸ Tongan women’s adherence to the performative process of the *koka’anga* even when making synthetic *ngatu* demonstrates their commitment to the intangible qualities of *koloa tukufakaholo* (wealth to be handed on, cultural heritage). This commitment to process above and beyond ‘functionality’ is what allows synthetic materials and *ngatu pepa* the potential for full acculturation into the *hohoko* (genealogy) of Tongan barkcloth manufacture. In 2017, as in 1963 when Tamahori submitted her thesis, the careful balancing of innovation with stability in the overall process is a reflection of the vigor with which *ngatu* continues to be made and mobilized by Tongan women.

68 Kuchler, 2003, p. 99.