The Ie Toga (Fine Mats)

of

Samoa

A

Term Paper

submitted to:

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and

Project MACIMISE

by

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Introduction

The giving and receiving of the fine mats is an integral part of the “faa-samoa” (literally, the Samoan Way). They are used for special occasions such as weddings, funerals, and the bestowing of chiefly titles. These cultural practices have been passed down from generation to generation. The fine mats are as enduring as our Samoan culture.

The value of a fine mat is derived from the knowledge, skills, patience, and especially the love for upholding this valuable trade and vocation that go into its weaving. Some fine mats take years to complete. In the past, there were many accomplished fine mat weavers. Almost every village had a distinguished spot (fale lalaga) where the women folks would gather together to weave these mats. One of their important responsibilities was teaching their children the art of weaving fine mats.
The number of fine mats as well as fine mat makers are dwindling. Methods and techniques used in making fine mats have evolved because of modern tools and equipment. Today, we honor all the skilful, talented, and dedicated artists who participate in the preservation and perpetuating of the craft of making and weaving fine mats, and keeping this very significant component of our culture alive.
Methodology

Talanoa (Informal Conversation)

Tools or methods used for data gathering were relatively simple. I was aware throughout the design of the project that my data would come from a combination of talanoa (informal, conversational interviews) and my own social constructionist held in Afono, American Samoa, in settings of the Fale-lalaga. This helped me to gain an understanding of the participants interpreting their experiences in their natural environment (Cresswell, 1998; Janesick, 2000; Kvale, 1996; Morse & Richards, 2002; Plummer, 2001). In addition, working with relatives and face-to-face in the participants’ environment enabled me to ask questions on occasions about various events happened in the village. However, I remained open to talanoa being the source of much rich data. Mara (1999, as cited in Mutch, 2005) also suggests that face-to-face methodologies are the most appropriate to use when researching with people from the Pacific.

Glense (1999) suggests taking time to establish a rapport with participants before going into interview questions. In this approach, there was a slightly different focus. I wanted the participants to tell their own stories, freedom to choose what to tell and, in keeping with the concept of ie toga. I therefore did not prepare a list of questions. Instead, I prepared an opening, “You know the topic of my research, I’m interested in how you identify the ie toga as the most culturally valued artistic product created in Samoa.” In addition, I suggested that they might like to think of mathematics concepts related to the ie toga (fine mats).

At all times during talanoa I was mindful of aspects of goodwill, compassion, humility and respect. The participants were aware that I was recording all of our talanoa in my research journal. They have read and approved the inclusion and weaving of various aspects from our talanoa in the metaphorical ie toga. I engaged in further talanoa with elders who attend church service on a regular
basis. They loved to talk. They loved to tell me about themselves in the past. I also heard stories from 2-elders who had never left Samoa because of the responsibilities of caring for parents, or caring for family lands. There were so many similarities to some of my participants’ stories which provided a corroboration of the strong cultural spirituality that exists in the Samoan society.

Fine mats are large, handmade finely hand-woven pandanus floor mats, decorated with brightly dyed chicken feathers woven into the hem. In olden times, fine mats served as a form of currency in faalavelave transactions and were often used for dowry payments to the groom’s family. Today, they are still prized by families and carry the family’s respect and appreciation for the receiver in their exchange. Fine mats do not have decorative or functional uses within a Samoan family. After they are proudly displayed for viewing, they are carefully rolled up and put away for the next faalavelave.

‘Ie toga or fine mats are the most precious type of mat and represent most of the traditional wealth of Samoan families. They are exchanged and presented during important occasions such as funerals, weddings, and many other significant events. The ceremonial installation of fine mats – the fa’alelegapepe in Samoan, is also a very important part of the Samoan culture. It is likened to the celebration and dedication of a newly built guest house that belongs to a village high chief or high talking chief, a new church building, and new living quarters for a village minister/pastor. That is why when the fine mats are completed they are brought out to the village green, or malae for everyone to see. The fine mats are unfurled, flapping in the wind like butterflies, for everyone to witness and appreciate the women’s hard work that took many days, months, and years to carry out. This is the reason why fine mats are always used in every important occasion in our Samoan culture. Fine mats are worth more than the American dollar as far as we are concerned with the local trading of products of any kind.
Wherever a pandanus plantation is at, the weavers and their children would go there and cut the most appropriate leaves that would be used for making fine mats. Sheets of plaited coconut leaves are used to carry the pandanus leaves due to the manyu thorns on the sides and bottom. The pandanus leaves are placed accordingly on the plaited coconut leaves, tied, and carried back to the village for processing.
When the bundles of pandanus leaves reach the village, the women folks would then remove the thorns by scraping them off with small knives. This would be a challenging task because some types of pandanus leaves have sharp and prickly edges. Other types of pandanus leaves are without thorns. This species of pandanus leaves is called, lau ‘ie.
After scraping off all the thorns from the pandanus leaves that have been chosen for the weaving of the fine mats, then they will be laid out in the sun to wit, which prevents the leaves from tearing apart easily when they are rolled up together in a circle for the next step.

After doing all these things, then the leaves will be ready to be boiled in large circular stainless-steel containers. After boiling the leaves, then they would have to be dried out and sorted according to their quality. The quality of each leaf would dictate exactly the kind of fine mat that it will be used in its making/weaving. None of the leaves will be wasted because the long process of getting them ready for the weaving of fine mats was not an easy one. If any leaf will not be used in the weaving of fine mats,
then it will be used for the weaving of other types of mats that are normally used everyday in our homes.

There are different types of pandanus plants. The lau ‘ie leaves are used especially for the making of fine mats, because the leaves become very appealing when its texture becomes light colored. The lau ‘ie also, is often used to make some of our valuable handicrafts, such as bags, fans, table mats, and other valuables.
In boiling the leaves properly, modern day detergents would replace the usual long bar of soap that has been used in the past. As soon as the water is boiled, the rolls of leaves will be place in the stainless steel containers, a process that will help in whitening the color of the leaves. This would be the normal end of the first day of processing the leaves. Witting the leaves thoroughly is the main reason behind the boiling of the leaves chosen for the weaving and making of fine mats. After boiling, then the leaves are taken out of the containers and laid out in the sun, which is another part of the process to whiten the color of the leaves a little bit more. In doing so, the color of the fine mats in the end will definitely be closer to the normal white color, which is the high expectation of every fine mat weaver. The finer the leaves become from all this process, the better looking any product would become when they are at the finishing stages. This would add more value to whatever is woven or made from the well boiled and dried leaves, such as coarse mats, and many other handicrafts, especially the fine mats.
There is no doubt that if the trade and vocation of fine mat weaving will not be preserved for the sake of the Samoan culture, then everything else connected to its making and preservation will be lost as well. However, the organization called, “Tina mo a Taeao (Mothers for Tomorrow) of the Department of the Territorial Administration On Aging has found a new vision towards the reviving of skills and the know-how of this important trade. “It’s a hard job, some people think it’s easy, but they don’t know that our hands and legs get cut.” (Laupola, E., personal interview, February 2010) “It’s very hard, when a fine mat is woven and ready to be sold, the consumers would say, it’s too expensive. They don’t know anything about all the hard work that is involved in processing the leaves to weave not only
the regular mats, fine mats, and hand bags.” (Naiuli, L., personal interview, February 2010) Many things can be made with pandanus leaves.

On the second day for the fine mat weavers, they would spread the leaves once again on dry grass, gravel or on any other available space. The reason is that the sun’s heat would make the leaves soft and fair. When it rains, the leaves would have to be brought into the house, and taken back out again when the rain stops. When the leaves become dry, thin, and light in color, then they go through another process called the faa-sapini or faa-migimigi – the twisting of the leaves and bundling up together with a piece of a strong string to hold them together while being hung onto the posts of Samoan houses to dry-up some more. This practice occurs often during the evening of each day of the whole process. When the sun rises the next day, the bundles of leaves are taken out of the house again for some more drying out in the sun. When all the leaves are ready for the weaving stage, then they are slit into fine and long strips.
To begin the weaving process, all the leaves would have to be slit into very fine and long strips. Some fine mats that are woven from these strips are called ‘ie ‘ini’ini and ‘ie sae, where the whole leaf is split. There are also fine mats where the leaves are just slit into fine strips and woven right away. This is the beginning of the weaving process. Two slit leaves are used to start the process. One strip is placed on the other one, and the actual weaving process begins. Smooth stones gathered from nearby streams or the coast-line are used to hold down and keep the edges of the fine mat straight. When a strip becomes short or almost exhausted, then a new one should be added and continue the process.
Nowadays, most of our younger generation do not know how to do these things, let alone weaving any kind of mat, basket or bag. Our children grow up in our families without learning all these skills due to neglect of duty and responsibility by most of the parents. “It’s important to me and the women’s program to teach the children. We can teach the kids on how to weave hats, coarse mats, and any other type of Samoan handicrafts using pandanus leaves.” (Sua, F., personal interview)

In the ancient times, knives were not always available; the use of the coconut beetles’ wings was a common practice that really prevented the hand and fingers from getting cut. The sharp edges of the beetle’s wings were used to slit the leaves. The incisions were straight because the edges were very sharp. The beetle’s wings were often dried up in order for them to become hardened and unbreakable – a tool that every fine mat weaver or maker would love to have. The striped ends of the fine mat must
be split again and again into finer strips then cut off the protruding strips. The goal has been completed successfully.
In the past, when a large and important fine mat has been completed, it was bathed accordingly. Then it was spread out on a flat surface. The nonu leaves are then oiled with regular Samoan oil, and then they are rubbed against the fine mat from end to end, so that the fine mat would have a yellowish-brown color. This process makes the fine mat become a beautiful creation as well as being an invaluable commodity in the Samoan culture. It should be laid out in the sun again for the oil to be dried-up. Then the fine mat will compressed under other mats on special bed for the family's fine
mats. In this day and age, when a fine mat is completed coincidently with an important event, then it will be used for that event.

The last step for the fine mat to be declared complete and ready for use, it must be spread out again on a clean and flat surface for the beginning of its proper decorations. Beautiful feathers from some of these native birds; the fruit doves, the cardinal honey eater, and the blue-crowned lory were plucked out and used for decoration. The feathers were often glued on the fine mats using the Polynesian arrow-roots that were dug-up and boiled. They become sticky when the skins were peeled-off. These were then rubbed onto the fine mat and used as glue. Nowadays, we use all kinds of Western made glues.
Fine mats are the most precious and important. In former days, every woman wove fine mats. Presently, fine mats are rarely produced in American Samoa. The quality of fine mats today has also changed. Before it was used to take several months or a year to finish a mat in olden days. Some women still produce fine mats of good quality. Since they are too busy in producing as many fine mats as possible, they seldom do so.

Samoans have an expansive view of family bonds. A Samoan family includes all individuals who descend from a common ancestor. Samoan family ties are complex and highly interwoven, but they are also very important. All Samoans are expected to support and serve their extended families. Each extended family has one or more chiefs who organize and run the family. Family pride is a central part of Samoan culture as well. Individuals in Samoan villages fear breaking village rules not only because of any individual consequences but because of the same it might bring.

In Samoan culture, serious offenses may be redeemed by an ifoga (a lowering). ‘Ie toga also have a role in the ifoga (ritual apology). This is a ceremony that reflects deep contrition on the part of the perpetrator. In an ifoga, all of a transgressor’s village will gather before dawn in front of the residence of the offended or injured party. They will sit covered by fine mats as the sun rises. They remain in the same position until forgiven and invited them into the house. They then present ‘ie toga, pigs, as evidence of their contrition.

A Samoan wedding, ‘ie toga and other gifts are presented to the groom’s family by the bride’s family. The greater the number of ‘ie toga, the more clearly the bride’s family show their status and worthiness. In return the groom’s family will collect and present a sum of money to the bride’s family. Later on, they will redistribute the ‘ie toga to members of the groom’s extended family.

Samoan funerals are a serious of events. They include important demonstrations of high Samoan culture. In a funeral, the extended family of the bereaved prepares money, ‘ie toga, kegs of
corned beef, pigs, and case goods to present to visitors at the funeral. ‘Ie toga are given to the family of the deceased and gifts of mats and food are given in return.

Conveyance of a chiefly title is another noteworthy cultural event in Samoa. The family of the chief-to-be will prepare kegs of corned beef, ‘ie toga, money, and other items with which to pay the village granting the title.

Mathematics Behind ‘Ie Toga in Samoa

I could see the locally based mathematics called ethno mathematics in weaving the fine mats. Geometry appears in many examples of indigenous design. Repeating patterns require the weaver to memorize sequences and those are usually passed from generation to generation.

Many types of mats are produced for a variety of purposes, such as bedding, room dividers, floor coverings, gifts, ceremonial exchanges, and clothing. The patterns used can vary from small to large, and from quickly made to finely woven. The mat’s flexibility, strength and importance depend on the size, quality and texture of pandanus.

There are mainly two types of weaving techniques used in making the fine mats. The simplest one is making a plain weave mat. The application of geometry could be seen here when the weavers use two group of strips that will be woven perpendicularly to each other. Some weavers use strips of two different colors – one color for the vertical strips, and another color for the horizontal strips. The vertical strips are called the warp. The horizontal strips are called the weft. The following are the steps involving in making a plain weave mat which shows the role of the counting and geometry in weaving.

1) 20 strips are laid (amount varies in regards to availability) vertically on a table or floor, pushing the strips close to each other. These are the warp strips.
2) A strip is chosen in the second color to start the weft. Weave the strip horizontally through the warp, going under the first strip, over the second, under the third strip, over the fourth, and so on. Keep going until the horizontal piece is woven completely through all the vertical strips.

3) Push this horizontal weft strip up near the top of the warp and choose a new strip of the second color. Weave it into the warp just like the first one, except this time start by going over the first strip (instead of under it), under the second strip (instead of over it), and so on. When the second strip is completely woven in, push it up against the first weft strip. Weave the third weft strip exactly like the first one and the fourth strip exactly like the second one.

4) Continue in this way, weaving each strip in the opposite over/under pattern from the strip above it. Push each new weft strip firmly against the previous one. Push the warp strips together to make the mat tight and firm. The techniques involved in weaving a twill mat are much more complex than that of plain weave mat. The weavers’ creativity reflects in the production of different kinds of twill mats.

The following are the steps involved in weaving a twill mat:

1) Begin by making a vertical warp of about 20 strips.

2) Weave the first horizontal weft strip in a two over/two under pattern. Weaving in this strip should be easy, but you might wonder where to start weaving in the second strip.

3) When you find a pattern you like, weave in about 20 horizontal strips.

When we examine the mathematics in the structure of these fine mats we could see patterns that are symmetrical, repeating in specific ways. There are many different kinds of symmetry to explore within the plain weave mats. We could notice the Translational symmetry, 90-degree rotational symmetry, or four-fold symmetry there. If you place the mat on a table and put the edge
of a mirror along a strip that goes through the middle of the mat, you could see that one half of the mat on the table and one half of the mat in the mirror.

The area of mathematics like Geometry, Measurement, Data Analysis and Probability, Problem Solving, Reasoning and Proof, Connections and Representations are done in the process of making a fine mat. Geometry is used when applying the transformations and use symmetry to analyze mathematical situations. Measurement is involved from the beginning of the weaving. The probability of completing a strong fine mat is discussed mentally before starting weaving. Problem solving is done throughout the process of weaving. Reasoning and proof occurs when the existing samples are closely observed and discussed. Making connections happens when different kinds of pandanus leaves are compared. All these are represented by the beautifully woven fine mat.

Looking Back – Looking Forward

Research Process

A question often asked at the conclusion of a research study is what would be done differently were the study to be repeated. There are slightly few alterations I would make to this study. The participants accorded me a great honour in allowing me to engage in this research. It was important to me that I returned the honour through careful consideration and planning during each stage of the research process. I worked closely and collaboratively with the participants throughout the process. They were fully engaged in the co-construction of their stories through on-going checking and consultation.

At all times I endeavoured to respect the participants and to act in a culturally appropriate way. The participants themselves took on the role of cultural advisors, as mothers during talanoa (informal conversations).
Initial preparation for the research commenced in February 2010. The whole process has taken 3 months of part-time study. I have found this a very tight time-frame to work within. Were I to repeat the study I would spread the process over a longer period.

The participants defined clear parameters for the research. As I engaged with the data, the impact of Samoan culture on the participants’ lives was revealed.

This research was conducted with a small group of senior citizens in Samoa. Questions that arise from this are, how have the participants’ differed from those of others who have not got a chance to weave an ‘ie toga? What influence the participants to keep on weaving? What impact on mathematics behind ‘ie toga influence the future learning in Samoa?

Final Reflection

I began and developed this research from feelings of respect, awe and admiration I had for a group of senior citizens in my village who were undertaking tertiary study in what appeared to me to be very difficult circumstances. The willingness of these people to allow me to share their stories has enhanced these feelings and given me an understanding of how they have undertaken their journeys. I have developed firm and true friendships. I have a much greater awareness of my own culture. Through my own research I have learnt the meaning of ‘I have in my arms’.
Bibliography


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