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The Following Sea: Cultural Perceptions and Knowledge on Traditional Sailing in Sāmoa

Connor Olin Ventling
SIT Study Abroad

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Connor Olin Ventling
Advisor: James Atherton
Academic Director: Jackie Fa'asisila
S.I.T. Sāmoa, Fall 2013

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Abstract

Traditional Polynesian voyaging techniques, which rely solely on the surrounding natural environment, have been undergoing a revival in the past 50 years. This study examines the *Aiga Folau o Sāmoa*, or the Sāmoa Voyaging Society, a modern entity which accurately undertakes traditional sailings around the world, and the cultural perceptions and knowledge on traditional voyaging lore and techniques in Sāmoa. Research efforts included primary interviews, visits, participant observation, as well as secondary sources. The study investigated not only how traditional sailing techniques enabled a watercraft to be navigated accurately over the open sea but also current cultural knowledge and perceptions of this information in present-day Sāmoa. The study revealed that most of this knowledge lies with the *Aiga Folau o Sāmoa*. Currently the Ministry of Education, Sports, and Culture (MESC) is documenting words in the Sāmoan language pertaining to sailing culture, however this has not been finalized for publication. The United Nations Educational, Scientific, and Cultural Organization (UNESCO) has also published a draft of an education module on traditional voyaging in the Pacific, but it too remains in draft form and has yet to be implemented.

KEYWORDS: Cultural Anthropology, Maritime history, Traditional Voyaging, Traditional Navigation, Sāmoa

Dedication

To those who have gone before us,
The brave, the hearty, and the bold,
Blazing the trail ahead
From which we are now
So readily able to depart.

It is with your knowledge
And in your memory
That we plunge onwards
Into the darkness ahead,

Blazing our own trail
For the explorers of tomorrow,
Setting course
To the heart of the sun.

Acknowledgements

I would like to begin by thanking our Academic Director and Assistant, Jackie Fa'asisila and Ronna Hadfield, for all of their support and guidance.

To my advisor, James Atherton, for always taking the time out of his busy schedule to provide his valuable insight and to give me new directions to explore.

To the *Aiga Folau o Sāmoa* and the crew of *Gaualofa*, for all of their hospitality and willingness to take me on board and literally show me the ropes.

To my countless informants and research contacts, for answering my endless stream of questions and each providing their own unique piece to my puzzle.

To the people of Sāmoa and my housemates and friends at USP, for making this my home away from home.

Lastly, to the diverse and sometimes eccentric individuals I have met along the way, for making my time here that much more interesting.

I will never be able to adequately express my gratitude.

Please accept this as a humble attempt.

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Introduction

I have always found myself drawn to the sea. It was only natural that this fascination and curiosity would manifest itself here, in the land known as the Navigator Islands. Over time, this interest has led me to pursue knowledge of how societies have adapted to and utilized the marine environments which surround them.

When I first began my research, I found it quite easy to discover the actual techniques which were used to navigate solely by the natural environment, with no reliance on instruments. During the last 50 years the art and knowledge of traditional sailing has undergone somewhat of a revival, with modern-day recreations of these astounding voyages once undertaken so long ago. However, despite a wealth of information, such as techniques on how to navigate using the movement of phosphorescent plankton in the water, there was next to nothing concerning Sāmoa. Scholar Damon Salesa writes that, "The historical evidence that remains suggests that there was much more to Sāmoan navigation than was ever fully comprehended," (Salesa, pg. 8).

How is it, I wondered, that the land known as the Navigator Islands is being completely surpassed by places such as Hawai'i and Tahiti, places simply not as well-regarded for the art of traditional voyaging and navigating as Sāmoa once was?

With this question in mind, I began my research. My main priority was to attempt to answer where this traditional knowledge now lies in Sāmoa, if it even exists at all. Secondly, I wanted to document how this traditional knowledge and cultural heritage is currently being revived. Since there is so little information available regarding Sāmoa and traditional sailings, I wanted to make a small contribution to the current body of knowledge.

Methodology

The initial objectives of this study were to determine the cultural perceptions surrounding traditional voyaging in present-day Sāmoa as well as to discover where and with whom the knowledge of traditional voyaging still resided, if at all. It became apparent after the second week of ISP that these objectives would not be feasible in their entirety, at least in the three week time frame given. At least half of my key contacts simply didn't follow through.

Given these constraints the focus of my project shifted to research the cultural perceptions of traditional voyaging at an institutional level, rather than an individual one. This was done for several reasons. First, institutions reflect the interests of the individuals that they serve. For example, if Institution A is actively promoting knowledge of traditional voyaging as part of a cultural heritage education initiative, then it is reasonable to assume interest or concern on the individual level to promote or preserve this. Second, the study of this cultural perception at an institutional rather than an individual level was more feasible to conduct given the time constraints. Assessing individual perceptions of the subject would require surveys, which would be difficult to conduct fairly and accurately in the short timeframe, especially if there were control and experimental groups. Again time did not allow the necessary number of surveys to be distributed in order to ensure a valid study.

This project continued to evolve given the various leads and influences provided by research contacts. Additionally, as I was in the process of researching and acquiring sources this project continued to change. This final finished product differs from the original goals

but still provides information concerning the current state of knowledge regarding traditional voyaging in Sāmoa.

Location was not important to my project, aside from *Gaualofa*. Meetings took place wherever was convenient with informants. I originally sought out members of the Sāmoa Voyaging Society (SVS) who were recommended by my advisor, James Atherton, the Secretary of the Society. I then branched out based on continuing recommendations of who to get in touch with, such as other individuals with an interest in voyaging or who have compiled their own research on it. Lastly I tried to gain an understanding of the cultural significance of traditional voyaging, so I contacted individuals associated with the Ministry of Education, Sports, and Culture (MESC) and a few others who had incorporated the theme of traditional voyaging into other fine arts such as dance.

A Baptism by Fire: An Examination of Traditional Sailing Based on Observations by the Author, November 14-15, 2013

What better way, I figured, to understand traditional voyaging, than to experience it firsthand? This was why I found myself aboard *Gaualofa*, the double-hulled sailing canoe of the *Aiga Folau o Sāmoa*. We would be sailing from Aqua Sāmoa, where *Gaualofa* was beached, to the Apia Marina. This was originally planned to take 5-8 hours depending on wind conditions, however it was not until 20 hours later at 10am the next day that I stumbled up the wharf in Apia, utterly exhausted and soaking wet.

When I first got to Mulifanua, where *Gaualofa* was beached, the other crew members were preparing the vessel for sailing. Introductions were made, and I was put to work helping rig the sails. For this voyage we were using the traditional rigs instead of the offshore ones, at a tradeoff of less sail area and therefore less speed. I put what little I had brought down below in an empty spot of the starboard (right side, looking to the front of the vessel) and slathered on some sunscreen. At roughly 70 feet in length, and with only five people aboard *Gaualofa* there was plenty of free space to be had. The main deck is relatively open, unlike most modern sailboats, with only the *fale* and a few benches taking up space. All of the crew quarters are contained in the twin hulls. The *fale*, literally “house”, contains the toilet, chart table, and stove. Keeping with traditional Sāmoan custom, neither shoes nor the consumption of food are allowed in the *fale*. With all preparations completed, we began to haul in the anchor and with help from bystanders shove off from the beach. It quickly became apparent that the anchor holding *Gaualofa* in place was stuck, so we had to free the line from the shackle and leave it there to be retrieved later. We

proceeded under power through the ferry channel, as the *Gaualofa* is equipped with two solar-powered motor pods, and then set sail once we were in clear water.

When sailing, there is lots of free time, especially when one is not on watch or steering with the *uli*, or rudder. *Gaualofa* can be sailed with only one person at the *uli*, until it comes time to tack or change course by turning the bow (front) of the vessel through the wind. Then several sets of hands are needed to change the trim of the three sails and raise and lower the centerboards in each hull. For this trip from Mulifanua to Apia, we had to tack back and forth across the wind in order to move up the. In between tacks, crew pass the time by preparing food, cleaning, singing and telling stories, or just resting. On this voyage, Taleni kept the time passing quickly with his sexually explicit jokes involving a Sāmoan, a Tongan, and a Fijian.

Since we were still within sight of land for the majority of the sail, we did not need to rely as extensively on traditional navigational methods as we normally would if *Gaualofa* was undergoing an offshore voyage beyond visual distance to land. Since we could still see land, we navigated using certain landmarks. For example, when I was on the *uli*, I would aim at a distinctive white church with a tower, or keep the marina lights between one set of stays (cables which support the mast, the vertical pole that the sails are attached to. I inquired more about how navigation occurs during an offshore voyage. Fani Bruun, the captain-in-training, remarked that Kalolo Stefany, the navigator, directs the crew as to how the sails should be trimmed and what heading the vessel should be at. Since navigating the *va'a* is a full time job, the navigator will often sleep in one of the "navigator's chairs" at the stern, or rear, of the vessel (F. Bruun, Personal Communication, November 14, 2013). She also mentioned that the navigator uses the *va'a* as a compass to navigate by. For example, he does not perceive the *va'a* sailing to a landmass, but rather the landmass coming to the

va'a (F. Bruun, Personal Communication, November 14, 2013). Eventually the landmass of Upolu came to us in the midst of an unpleasant rain squall. While we had to wait for an hour for a cruise ship behind us to come in and dock, we made it into the marina. The next section describes some of the traditional navigational techniques employed by traditional navigators.

An Overview of Traditional Navigational Techniques

The specific location of where certain stars rise in the east and set in the west enable the navigator to determine a fairly accurate position fix (Finney, 1992). The locations of these stars as well as others in similar positions are memorized so that the navigator has some form of navigational redundancy if the primary locational stars are too high in the sky to be navigationally useful or if they are below the horizon (Finney, 1992). Additionally, the location of stars can be calibrated against the ocean swells, so that if the stars are obscured there is still a form of backup to navigate by (Finney, 1992). Another natural navigational aid is that of phosphorescence, composed of, "…streaks, flashes, and momentarily glowing plaques of light, all well beneath the surface," (Lewis, 1975). This phenomenon can be used to indicate the direction of land and functions in relation to distance from land (Lewis, 1975). Further out to sea the light patterns move slowly, increasing in the rapidity of motion as the vessel sails closer and closer to land (Lewis, 1975). In addition to using the stars and swell movement of the ocean, a navigator can also utilize a dead-reckoning system that is used to estimate the distance and course sailed. In combination with the locations of the stars and ocean swells, the navigator can calculate a fairly accurate course and position for the voyage (Finney, 1992). Dead-reckoning entails taking into calculation the factors that can affect the course of a vessel, such as current, leeway, and gale-drift. These all affect the difference between the course being steered by the navigator and the course physically travelled by the vessel (Lewis, 1975). Lastly, the navigator can use sightings of certain bird species to determine how close the vessel is to land. For example, specific species of terns and boobies nest on land and fly out to sea to catch fish. When these are spotted, it means that land is usually never more than 20-30 miles away (Finney, 1992). Interestingly, it is only

during the morning and evening hours that their flight paths indicate in what direction land lies in as they either fly out to sea or back home to land (Lewis, 1975).

To determine longitude, the first tool that a navigator can use is a star compass. Thirty-six different stars are used in order to create seventy-two points on the compass (Kyselka, 1987). What is special about the star compass is that a navigator needs only one star to be able to orient the entire compass relative to the position of the canoe. Another tool which can be employed by the navigator is the principle of star culmination, which states that a star climbs in the sky until it reaches its meridian and begins to descend. Therefore, a point on the ocean directly under a culminating star can only be north or south (Kyselka, 1987). Instead of working with single stars, a navigator works with star pairs. Two stars on the same longitude celestially from a line running north-south. An example of this is the stars at the top and bottom of the Southern Cross. When the cross is vertical, south is on the horizon below it (Kyselka, 1987). The moon can also be used as a navigational aid. When it is in a crescent, a line drawn through the portion between day and night on the moon's surface can sometimes be directly north-south (Kyselka, 1987). This is called the cut of the moon. To determine latitude, a navigator also uses star pairs and star culmination. He is also able to determine latitude by judging the height of Polaris as well as using zenith stars (Kyselka, 1987). Zenith stars are stars that pass directly overhead a specific location on the Earth. For example, the star Sirius is directly overhead when at the same latitude as Tahiti, and Arcturus is the same latitude of Hawai'i (Kyselka, 1987).

Now that the basic fundamentals of traditonal navigation have been described, other efforts to preserve this aspect of cultural heritage in different fields outside of recreating traditional voyages will be discussed.

Initiatives in Education

In 2008 the United Nations Educational, Scientific, and Cultural Organization, or UNESCO, completed a draft of an educational module concerning traditional navigation in the Pacific. Titled “The Canoe is the People: Indigenous Navigation in the Pacific”, the module consisted of four sections, “Beginnings and Origins,” “Canoe Building and Sailing,” “Becoming a Navigator and Navigation,” and “Voyages and Revival” (O’Connell, 2008). The physical module is also accompanied by a CD-ROM, which includes interactive lessons for the four sections.

The first chapter, or “Strand A”, provides information as to the origin of many Pacific Island States. It includes a geologic explanation, as well as two indigenous tales from Tonga and Pohnpei (O’Connell, 2008). Additionally, it brings in archaeological evidence and origination theories to detail where Pacific Islanders first came from, pointing out the many linguistic similarities between the Pacific Island cultures (O’Connell, 2008). Lastly, this section elaborates upon several potential scenarios for why islanders would leave their homelands and undertake dangerous voyages across miles of open ocean (O’Connell, 2008). It also point out the two major beliefs as to how these islanders executed these voyages. They either didn’t really know where they were going and simply happened to find land due to sheer luck, or, as David Lewis and Ben Finney argue, that they embarked on “intentional voyaging”, knowing where they were going and how they could return to their starting point (O’Connell, 2008).

"Strand B" covers the construction of traditional watercraft and how they were sailed. It begins by stating that no one knows today what the first canoes or other watercraft looked like, since there is no archaeological or other evidence such as drawings or sculptures which describe them (O'Connell, 2008). The section then details the likely evolution of watercraft in the Pacific, from rafts, dugout canoes, outrigger canoes, and finally double hulled sailing canoes (O'Connell, 2008). Additionally, this strand explains what the canoes would have likely been made of, from the hulls, sails, and ropes (O'Connell, 2008). Lastly this section describes how canoes were sailed and the processes of tacking and shunting, as well as how canoes were balanced against the force of the wind (O'Connell, 2008).

"Strand C" describes the methods used for "indigenous navigation" as described in the previous chapter (O'Connell, 2008). It also details the process by which one would become a traditional navigator, using examples from the Caroline Islands (O'Connell, 2008).

"Strand D" begins to focus more on modern voyages attempt to revive this aspect of Pacific culture (O'Connell, 2008). It details the Polynesian Voyaging Society and *Hokule'a*, a Hawaiian sailing canoe which inspired other Pacific island states such as New Zealand and Rarotonga to construct their own vessels (O'Connell, 2008).

The next question is, what became of this module? The answer is, unfortunately, not much. According to Dr. Amituanai-Toloa, one of the editors, this module never proceeded past the draft version that I have (Dr. Amituanai-Toloa, Personal Communication, November 18, 2013). Additionally, it is highly likely that no further changes have been made to the module according to another editor of the module, Dr. Airini (Dr. Airini, Personal Communication, November 18, 2013). She believes that the, "next step would be a pilot

programme to implement the module, with an associated research programme. That would be very exciting and I would be very interested in contributing to this," (Dr. Airini, November 18, 2013). In terms of similar projects or research being conducted by organisations or individuals apart from UNESCO, Airini said that, "There are indigenous navigation resources available from other organisations and individuals. It would be interesting if a stocktake of these resources and expertise were to be made," (Dr. Airini, Personal Communication, November 18, 2013). There is also similar research to this being conducted right in Sāmoa.

Current Initiatives in Sāmoa

The Sāmoan Ministry of Education, Sports, and Culture (MESC) is currently conducting its own research into the culture of traditional sailing. Mata'afa Elia Autagavaia, one of the researchers on the project, explained that MESC is currently working to compile a dictionary of Sāmoan language which pertains to the *va'a* and the other cultural aspects of traditional voyaging (M. Autagavaia, Personal Communication, November 22, 2013).

Currently, this research is still being collected and compiled. A printed copy for publication has not been finalized and the text will be only in Sāmoan but will hopefully later be translated into English (M. Autagavaia, Personal Communication, November 22, 2013). MESC is focusing first on the language aspect so they can later use the language to research the art itself; to gather further information regarding this important aspect of Sāmoan culture (M. Autagavaia, Personal Communication, November 22, 2013). Unfortunately, some of the relevant language has died out over the years, but MESC researchers are still working to try and regather the majority of it (M. Autagavaia, Personal Communication, November 22, 2013).

Discussion of Findings

Professor Damon Salesa states that, “Very few descriptions of navigational technique remain, and the major ones are not very detailed,” (Salesa, pg. 9).

This is problematic in today’s time, especially when there is a renewed focus on re-finding and reviving this art. At some point, traditional voyaging in Sāmoa began to die out. James Atherton, the Secretary for the *Aiga Folau o Sāmoa*, believes that this occurred with the European conquest of Sāmoa (Atherton, 2013, Interview with Author).. Salesa provides more information,

> The decline…was led and resulted from the narrowing of Sāmoan involvement in the wider region. This was largely (but not solely) precipitated by the civil wars that plagued Sāmoa after 1850. These wars were fought by Sāmoan alliances in a Sāmoa destabilized by the interventions of *Papalagi* – particularly the intense rivalry between Germany, the U.S., and Britain, the establishment of Christianity, and new commercial and economic formations. (Salesa, pg. 16).

This begins to explain why there is so little of a presence of traditional voyaging knowledge in Sāmoa today.

When this project first began, the original goal was to end up with concrete and conclusive data of traditional navigation in Sāmoa. The ideal finished product would have a specific list of where this cultural knowledge still exists today. However, what this study has found, or rather, what it hasn’t, is still significant.

This research has found that it is quite clear that Sāmoa is still in the very early stages of reviving its cultural heritage in traditional navigation. This differs from other Pacific islands such as Hawai’i, where traditional voyaging remains a much stronger aspect of its

culture today. Fani Bruun theorizes this is because Sāmoans don't need to touch a *va'a* in order to revive their culture, as they are still living it today. Sāmoans still retain their language, their dress, and many of their customs, such as respect for elders (F. Bruun, Personal Communication, November 5, 2013). Hawai'i, in contrast, has lost much of its traditional culture (F. Bruun, Personal Communication, November 5, 2013).

Conclusion

It appears that the majority of the knowledge concerning traditional Sāmoan voyaging lies with the *Aiga Folau o Sāmoa*. There is a possibility that there is other cultural knowledge out there in Sāmoa, but it has not been discovered yet. In regards to why Sāmoans don't necessarily see traditional voyaging as important in today's times, Bruun explains that Sāmoans are more concerned with the day to day aspects of life, not something so hobby-like such as sailing (Bruun, 2013, Interview with Author).

This is not to say that Sāmoans simply don't care about this aspect of their cultural heritage. It obviously retains some significance, especially if MESC is conducting a study to document the language associated with it. At this point, it may just simply be too early to tell where the knowledge of traditional voyaging still lies in Sāmoa, more research is certainly needed.

I have several recommendations for further study, unfortunately due to time constraints; these are not realistic given the timeframe of the ISP. The first would be to follow up on the MESC study and to translate the Sāmoan words concerning traditional voyaging into English. The second would be to use the language study in order to pursue where the knowledge of traditional navigation and boatbuilding still lies in Sāmoa, if it even exists at all. Another future study would be to conduct a survey concerning how important traditional voyaging is to Sāmoans today. This would also be extremely time-intensive and would have to be set up properly in order to ensure valid results.

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Glossary of Sāmoan Terms

Aiga Folau o Sāmoa: The Sāmoa Voyaging Society, or SVS

Fale: Literally house, or on *Gaualofa* the structure that contains the toilet, stove, and navigation table

Gaualofa: The traditional double-hulled sailing canoe of the SVS

Papalagi: The plural of *palagi*, used to refer to foreigners, commonly whites

Uli: The rudder, or steering oar, of *Gaualofa*

Va'a: Literally boat, can also be extrapolated to the culture of traditional voyaging

Appendix A: List of Informants

Note: These were all of the individuals that I contacted as part of my research. Some were not utilized and have not been cited as a primary source in my bibliography. I have listed as much of their contact information as possible to assist future research, however in some cases in there may only be a phone number or email, or nothing at all as they were contacted through other informants.

Airini, Dr. Airini, Dr. Head of School, Critical Studies in Education, University of Auckland. airini@auckland.ac.nz.

Alo, Allan. Oceania Centre for Arts, Culture, and Pacific Studies. allan.alo@samoa.usp.ac.fj. 775-6157.

Amituanai-Toloa, Dr. Meaola. Associate Director, Woolf Fischer Research Centre, University of Auckland. m.toloa@auckland.ac.nz.

Apelu, Lumepa. Principal Museum Officer, Sāmoa Museum. l.apelu@mesc.gov.ws. 765-9523.

Atherton, James. Secretary of the Sāmoa Voyaging Society and Advisor to the Author. jatherton@samoa.ws. 777-0787.

Autagavaia, Mata'afa Elia. Cultural Researcher at the Ministry of Education, Sports, and Culture. Contacted through Lumepa.

Bruun, Fani. Captain-in-Training of *Gaualofa*. 777-2887.

Leilua, "Anne". Mother of Fani, Affiliated with the Sāmoa Voyaging Society. 724-6774.

Paul, Harry. Craftsman, Knowledgeable about Traditional Boatbuilding. 725-0192. 758-4125.

Martin, Owen. Traditional Voyaging Research and Museum Volunteer. owenbmartin@outlook.com. 727-1765.

Stefany, Kalolo. Navigator of *Gaualofa*. 773-3331.

Appendix B: Pictures of *Gaualofa*

Taken from amidships, facing the bow. The *fale* is immediately to the left. Note the offshore booms, the horizontal poles which attach to the masts and are used to trim the sails, lashed to the railing on the right. Photo by Author.

The bow of *Gaualofa*. Note the attachment of the boom and mast at left. Photo by Author.

On the bow, facing the stern. The *fale* is in the middle of the frame. Note the offshore booms on the left again, as well as the spare *uli* on the right side. All lines are always coiled and stored the same way, such as on the mast. Photo by Author.

Taken amidships on the opposite side. The end of the *uli* is visible on the right. Photo by Author.

The stern of *Gaualofa*. The *uli* is lashed down at center. Behind it notice the solar panel array, which powers the electronics and the engine pods. Photo by Author.

Gaualofa at her slip in Apia Marina. Photo by Author.

Appendix C: Glossary of Sailing Terms

Anchor: A metal device used to hold the vessel in place by grabbing onto the ocean bottom. Can be deployed from either the bow or stern

Boom: The horizontal pole attached to the mast which is used to trim the sails

Bow: The front of the vessel

Catamaran: A double-hulled vessel where equally-sized hulls are placed parallel to each other

Mast: The vertical pole(s), attached to the vessel, that hold the boom and the sails

Port: The left side of the vessel, when facing the bow

Rudder: A blade or foil, attached to the tiller, that when turned adjusts the vessel's course

Shackle: A U-shaped device, closed by a threaded bolt, that is used to secure a rope to a chain

Starboard: The right side of the vessel, when facing the bow

Stays: Wires, cables, or lines which are used to support the masts

Tiller: The pole, connected to the rudder, that is used to steer the vessel with