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Cultivating Connection: Fanua and Environmental Stewardship In Samoan Youth

Julia Stern , '25

Cultivating Connection

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Figure 1. two young boys collecting shells in Amalie, Samoa; image by Tessa Garnett

Julia Stern
Advisor: Dr. Maria Kerslake
AD: Dr. Fetaomi Tapu-Qiliho
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“If all the world is a commodity, how poor we grow. If all the world is a gift in motion, how wealthy we become”

- *Robin Wall Kimmerer*

Abstract:

This study explores how the concept of fanua is cultivated in Samoan youth. Fanua can be simply defined as land, but the term more deeply encompasses the inherent and reciprocal connection between Samoans and their natural environment. In a world increasingly disconnected with the natural world due to technology and globalization, Samoans have been able to maintain a strong connection with their environment. This study looks at the family, the formal schooling system, and other lived experiences of Samoan youth as mechanisms through which fanua is taught and learned. Eleven talanoa sessions were conducted with teachers, parents, and Samoan youth over the age of 18 regarding fanua. Classroom observation was also utilized. The study found that cultivation of fanua is characterized by familial oral transmission of environmental knowledge and traditions, unstructured playtime in nature, and a strong connection between land and ancestry as a result of Samoa's customary land system. The idea of nature as a sacred teacher was found to be an overarching theme across interviews and observations. Future research could interview children directly, study the differences between rural and urban villages in Samoa, or study the Samoan diaspora and how a loss of land affects one's understanding of fanua.

Keywords: fanua, Samoa, oral tradition, environmental education, conservation, Pacific studies

Acknowledgements

This is without a doubt the most challenging section of my paper to write. No words, or at least English words, are able to fully and completely express the gratitude that I have for this experience. As Katlyn Wong said to me a few days ago "I have never felt so held by a group of strangers before." I have experienced a level of generosity in my time in Samoa that I never even knew possible. Thank you to my families in Amalie, Fiji, and to my Apia family: Alana, Oli, Malili, Mapu, and Ele. It was from you that I truly came to know the fa'asamoa and the way of the Pacific. Thank you for caring for me and allowing me the grace to learn as I navigated unfamiliar terrain. I am endlessly grateful for the generosity and vulnerability of the wonderful Samoan people that I was able to talanoa with for this research. This paper is but a frame to hold the stories and wisdom of my participants. Readers, pay attention to the quotes, they are where the heart of this research lies. Thank you for your stories. I am honored to be able to carry them with me now. I will do everything in my power to treat your sacred perspectives with the utmost alofa ma fa'aaloalo. Sinu'u and Hanna, Fa'afetai mo mea'uma. Thank you for taking your constant care and for making us laugh. And Dr. Taomi, Fa'afetai tele tele tele lava. Thank you for hugging us on the first day, for being our parent away from home. Thank you for uplifting us, for supporting us, for inspiring us. You have gone above and beyond as an academic director and I feel so lucky that I got to experience Samoa under your wing. Thank you to my fellow SIT students. The connection we have as a group is beautiful and rare, and I will keep it in my heart for the rest of my life. And lastly, Fa'afetai fanua. I thank the land of Samoa for its healing powers, for its mightiness, for its boundlessness. I thank the land for its abundance, for its generosity to pass on its beauty and nourishments to the people of Samoa. Fa'afetai Samoa for

teaching me to feel and experience the sacredness of fanua. Fa'afetai Samoa for helping me cultivate connection.

*A Note on Language:

Because many Samoan concepts are difficult to describe in English, and in respect and with adoration for Samoan language, there are Samaon words throughout this research. Some words have the English translation listed after the word if I felt it was necessary for context. All Samoan words are included in the glossary in Appendix B which contains English translations and explanations of cultural significance for many of the words. I encourage the reader to visit the glossary to learn more about Samoan language and culture. All diacritical marks of Samoan words are included except for the macron a in "Sāmoa."

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Introduction

A growing body of research provides ample evidence that a strong connection with the natural world has numerous benefits for children including improved mood, cognition, and physical health (Stevenson et al., 2019). Further, a deep relationship with the environment from a young age promotes environmental stewardship throughout life, (Litz, 2010), an essential quality for the generation that will face the most detrimental effects of climate change in history. Despite this, technological advances, urbanization, and capitalism have caused youth across the globe to be increasingly disconnected from their natural environment (Driessnack, 2009).

In Samoa, citizens have been able to preserve a deep relationship with the natural world in spite of the weighty presence of western globalization and technological development in the Pacific islands. This preservation is likely bolstered by fanua, the Samoan concept of a deep and intrinsic connection with one's land and the natural world (Lilomaiava-Doktor, 2020). Other aspects of Samoan life, including fales, traditional Samoan open air homes, subsistence farming of native crops, and customary land tenure, may also contribute to Samoans' deep respect for their land.

Beyond the previously mentioned benefits that all children get from a strong relationship with nature, it is exceedingly important to cultivate fanua in Samoan children for a number of reasons. The practice of fanua in Samoan children is an act of cultural preservation. It is vital that fanua, and other forms of Samoan traditional ecological knowledge, are passed on through generations. This is especially important given that most Samoan indigenous wisdom is transmitted orally, with no written record, or no fully encompassing or adequate written record. In terms of cultivating fanua and traditional ecological knowledge (TEK) in schools, there is growing evidence that "the inclusion of TEK in formal curricula might be an important means of

increasing a student's awareness and participation in environmental issues" such as climate resilience and adaptability (McCarter & Gavin, 201, p. 2).

Climate resilience is of increasing importance in Samoa, given the nation's high ecological vulnerability to natural disasters and anthropogenic change (Imo-Seuoti, 2023). Research shows that children, when aware of climate change impacts, are significant drivers of community climate resilience (Latai-Niusulu et al., 2023). Additionally, Paulo Freire, acclaimed educational philosopher, argues that a deep understanding of one's culture in the context of the global community empowers individuals to mobilize against injustice in their communities (Freire, 1970). This research project aimed to holistically explore how fanua is cultivated in the Samoan child. The influences of the 'āiga (Samoan family), the formal schooling system, and out of classroom environmental education experiences, were all considered in the molding of the Samoan child. Using a Pacific Research Framework, semi-structured interviews and focus groups were conducted with Samoan teachers, mothers and youth. Additionally, I was lucky enough to observe a Samoan classroom and a Ministry-organized environmental education event, and talanoa with a member of the Ministry of Natural Resources and Environment.

Background

Samoa

Samoa, an independent Polynesian country in the center of the South Pacific, has a population of around 200,000. Samoa is a homogeneous nation; over 96% of people living in Samoa are Samoan citizens (Foster, 2023). Christianity is the prominent religion in Samoa, but like many other western concepts that have made their way into the Pacific, Samoans have thoroughly integrated the fa'asamoa (the Samoan way) into the religion. Traditional Samoan way of life is in harmony with the islands' natural resources and ecosystem. Fales, traditional

Samoan homes, are open air and made with local natural resources. Native plants like niu, talo, esi and ulu grow abundantly in Samoa and make up for a large portion of many Samoan's diets. Globalization and western development have certainly changed Samoan's relationship with the natural world; many Samoan's have enclosed European houses in addition to Samoan fales and rely less on subsistence farming, especially in urban areas (SIT). However, Samoans have been able to pass down through the generations a strong emphasis on environmental protection, through traditional Samoan concepts like fanua.

Fanua

Like many words in Samoan, fanua can take on multiple meanings depending on context. One simplified translation of fanua is *land* or *soil*, and it also can also be translated to *placenta*. However, the true meaning of fanua is much more complex and cannot be directly translated into one word. In Samoan culture, the concept of fanua "express[es] wide-spread notions of identity, group membership, and belonging" (Lilomaiava-Doktor, 2020, p. 139). Fanua means land, yes, but Samoans' understanding of land differs greatly from Western discourse, which views land as "abstract concepts" and directs scholarly attention of land towards "the economic (particularly capitalist) aspects of land usage and tenure" (ibid, p. 121). This view on land is limiting to indigenous peoples and doesn't take into account the cultural and ancestral dimensions of land and place (ibid). As put by Dr. Maria Kerslake (2023), "Samoan philosophy is that we are the caretakers of the land." In the West, land is something to be owned, extracted from and exploited. For Samoans, land is to be cared for, land is ancestry, land is sacred space. In Samoa "you belong to the land, the land doesn't belong to you" (ibid).

Fanua intrinsically connects Samoans with their natural environment in a reciprocal relationship: "People take care of the land [fanua]; the land [fanua] nourishes the people" (Lilomaiava-Doktor, 2020, p. 140). The concept of fanua implies that the health of the land

doesn't just *affect* the health of the people, but truly *is* the health of the people. Further, embedded in fanua is the idea that "the environment lives, shares pain, grows, and dies in a manner and form similar to humans" (ibid, p. 140). The inherent ties between Samoans and their land can be seen throughout the Samoan language. The translation of fanua to "placenta" connects to the Pacific tradition where after birth, the placenta and the umbilical cord are buried in the earth to forever unite one with the land where they were born (Tamasese Taisi Tupuola Tufuga Efi, 2005). Often a tree is planted on top of the buried placenta, either a coconut tree or a totem tree for the village. The first thing that a new mother is fed after giving birth is coconut cream, symbolizing the reciprocity of humans and the land; the placenta fertilizes the coconut tree, and the coconut cream nourishes the mother (Kerslake, 2023). The dual meaning of fanua as land/placenta signifies fanua as a source of life. The placenta gives life to the fetus, just as the land yields nourishing crops and fresh air, giving life to humanity. This duality is also seen in the Samoan word ele ele, which can mean soil or blood, indicating that Samoans are "emotionally tied to place[land] through the sweat, tears, and especially blood of their toil" (Lilomaiava-Doktor, 2020, p. 140). The reciprocity of the Samoan relationship with the land, as seen through translations of ele ele and fanua, promotes environmental stewardship and protection of the land.

The concept of fanua is present throughout the Pacific, taking on different names such as whenua for Maori, honua for Hawaiians, fonua for Tongans, and vanua for Fijians (Lilomaiava-Doktor, 2020, p. 140). While the translations differ slightly, (e.g. honua translates to both world and soil) a deep connection with the land is rooted in the values of many, if not all, Pacific nations. To conclude, I would like to note that fanua has no equivalent in western culture and is difficult to encompass using the English language. Further, every Samoan has a personal

and unique relationship with fanua, and thus no generalizations should be made from these attempted explanations. Fanua cannot be unilaterally defined, but the stories of fanua can be shared and phenomenologically studied. More insight on fanua will be given in the findings portion of this research.

Samoan Family and Village Structure

At the core of Samoan culture is the ‘āiga and the nu’u (village). The ‘āiga includes the nuclear family, but may also extend beyond to include “a wide group of relatives by blood, marriage or adoption” (SIT, 2023, p. 1). It is the duty of the Samoan child to fulfill familial responsibilities and expectations throughout their life. Samoans have great respect for their elders, and take their word very seriously. The home is certainly a place of learning for the Samoan child.

A ‘āiga may include anywhere from 5 to 25 individuals, and a nu’u is often made up of 100 to 2000 people (SIT, 2023). Each family has a matai, who together make up the council of chiefs, with a village matai as the head of the council. This system allows each family to have a say in village decisions and act as “an integral part of the community” (Latai, 2014). The counterpart to the council of chiefs is the aualuma, a social group made up of the unmarried women of the village. The aualuma group is comparable to the council of chiefs, and traditionally have had say in village affairs (ibid). The aualuma also used to serve as formal education for village girls before the integration of western schooling (Tuia, 2020).

The importance of fanua is embedded in Samoan family values. In Samoa, fanua/land can only be owned by Samoans, and customary land (family land) belongs to a family collectively and is open for anyone in the family to use. Customary land is passed through the generations and thus “has a strong connection to past ancestors and the family chiefly title” (Latai, 2014,, pg.

302). The family matai isn't referred to as the "owner" of the land (even though he/she technically has the final say in land decisions), but instead as the "custodian" of the land, showing that for Samoans, land is meant to be protected, not exploited (ibid).

History of Formal Schooling in Samoa

In the past few centuries, Samoa has undergone many significant shifts in their education system. Pre-colonial contact, youth education in Samoa was centered around their ecological and cultural environment, where learning happened "in the home, the ocean, the farm, at social gatherings, village meetings, or other cultural activities" (Tuia, 2020, p. 12). Traditional school was separated by gender, with an emphasis on learning what one needs to know to fulfill their role in the ʻāiga and greater village community, as well as the passage and preservation of sacred familial wisdom (ibid). Missionary contact introduced literacy, in Samoan and English, with an emphasis on religious schooling. While secular subjects such as arithmetics and geography were taught, "the goals of [missionary] schooling were: (1) to spread the word of God, and (2) to give Samoans the vehicle by which to receive it – literacy" (Huebner, 1989, p. 62). While German colonial rule allowed for the continuation of religious schooling as the primary mode of education for Samoans, New Zealand's occupation of Samoa brought about the rise of secular western schooling. Even after Samoan Independence in 1962, schooling has remained largely based in New Zealand curriculum (ibid).

Recently, the Ministry of Education, Sports, and Culture, initiated an Environmental Education Campaign called "Guardians: Tausi Lou Fa'asinomaga – know and preserve your identity" (Samoa Ministry of Education, Sports, and Culture, 2020). The program's goal is to improve environmental literacy for Samoan youth through interactive lessons and field trips. The activities are a combination of traditional and nontraditional Pacific ecological knowledge, such

as learning about Gaualofa, Samoa's traditional voyaging canoe, or identifying live and dead coral in the local reefs. The ministry emphasizes the importance of the program within the context of climate change and developing a sustainable future (ibid). It is unclear from literature how widespread the implementation of this program has been since its establishment in 2020, or how it has been received by teachers and students.

Cultivating Connection:

Finally, I wish to delineate my repeated use of the term cultivate as opposed to terms like "instill", "teach", or "develop". To cultivate is to nurture, to nourish, to inspire growth. I offer an analogy to further elucidate my point. Many Samoans have gardens or niu and talo farms in which they cultivate their plants. In actuality one does not truly grow their plants, they provide the plant with the tools — water, food, sunlight — for the plant to grow *itself*, so the plant can flourish and thrive and create fruits and seeds to pass on its life to future generations. Children can learn and even be instilled with topics and lessons and quite easily forget them if it does not resonate. To *cultivate* a value in a child is to provide that child with the resources and care to allow that value to become a part of the child's identity. Cultivation in this context does not happen in one place or at one time, but over many years and across many domains of a child's life.

Literature Review

Children and Climate Change

Climate change affects everyone at different rates and in different ways. Islands in the Pacific are ecologically increasingly vulnerable to climate change, especially atolls like Tokelau and Tuvalu that are actively sinking due to sea level rise (Imo-Seuoti, 2023). Research has shown that children, especially the current generation of Pacific children, are affected by climate and

environmental change at a disproportionate rate (Foley, 2022). However, research also shows that while scientifically the Pacific people may be vulnerable to climate change, they are also extremely resilient in their ability to adapt and thrive in the changing climate (Latai-Niusulu et al., 2020). Further, children are known to boost community climate resilience (Latai-Niusulu et al., 2023).

Despite the common understanding of children as dependent and naive beings, children in Samoa actually have a deep awareness of climate change and its effects. Children seem to develop their understanding of the changing climate through observations during playtime and chores, learning about the climate in school, and overhearing conversations from adults in their lives (Latai-Niusulu et al., 2020). Like Samoan adults, Samoan children are able to see the potential benefits or opportunities for growth in adapting to the changing climate. There is currently no research about Samoan children and fanua, but it is likely that children learn about fanua in similar ways that they learn about climate change, with the possibility of fanua being taught by parents more deliberately than climate change. Additionally, awareness of climate change could result in increased emphasis on care for the land and cultivation of fanua.

Schooling in Samoa and the Pacific

The state of the Pacific education system has been a highly discussed topic throughout Pacific literature. Many Pacific academics have criticized the education system and argued that for years it has not met the expected outcomes set by Pacific nation governments, with many countries struggling with high dropout and youth unemployment rates ((Pene et al., 2001), (Dorovolomo et al., 2008), (Craney, 2021)). While funding, pressures of globalization, and gaps in the job market are all potential causes of this, Pacific literature has most consistently placed blame on the disconnect between Pacific realities and the mandated curriculum ((Craney, 2021),

(Thaman, 2009), (Dorovolomo et al., 2008)). The western curriculum is essentially irrelevant to the values and issues of Pacific communities (Craney, 2021). Students have nothing to contextualize the information they are being taught, and thus become disengaged and unmotivated in school (Nabobo-Baba, 2012). Students who do find the motivation, feel as though they need to leave their Pacific identity behind in order to succeed academically (Thaman, 2019). Tongan academic and poet Thaman (2019) reflects on her struggle with simultaneously maintaining her academic standing and Pacific identity in a poem:

Your way
Objective
Analytic
Always doubting
The truth
Until proof comes
Slowly
Quietly
And it hurts

My way
Subjective
Gut-feeling like
Always sure
Of the truth
The proof
Is there
Waiting
And it hurts

To Thaman, the disconnect between her culture and her schooling goes beyond subject matter, and into the very core of how one learns and one's way of knowing. Teachers also feel this discrepancy. After 30 years working in education, Samoan teacher Afamasaga (Dorovolomo et al., 2008) reflects on this, saying that the education system as it stands "is a totally foreign import" to Samoans (pg. 141). Again, this sentiment goes beyond merely the topics in the curriculum. Even the Pacific concept of time does not align with the mechanical and capitalistic

schedule that the west implements in schools (ibid). The answer to this disconnect, the literature argues, is the integration of indigenous knowledge into the education system.

In Samoa, there have been movements in the past few decades to reintegrate the fa'asamoa into formal schooling, namely the inclusion of the Samoan language into the curriculum (Nunes, 2006). All literature regarding Samoan cultural education emphasizes the importance of language as a teacher of fa'asamoa. Samoan language implicitly conveys the fa'asamoa and the concept of fanua through everyday words and proverbs (Lilomaiava-Doktor, 2020). Further, research has shown that while teachers may not get a say in the increasingly westernized curriculum (Tuia, 2020), simply having Samoans as teachers and having a classroom in Samoa has resulted in an indigenization of western schooling (Wilson, 2023). In other parts of the Pacific, research has been conducted regarding the integration of TEK into the formal schooling system (McCarter & Gavin, 2011). In Vanuatu, educators and TEK experts alike recognize the numerous benefits of integrating traditional knowledge into formal education (ibid). However, there are concerns regarding the practicality of this and of preserving the integrity of TEK whilst also making it "fit" within formal schooling methods of learning.

While the integration of indigenous knowledge into formal curriculum is generally seen as a positive thing, many Pacific educators and scholars are calling for a more drastic shift in the education system. The 2001 Rethinking Pacific Education Colloquium birthed the idea that Pacific languages and cultures should not just be merely added to the curriculum, but be at the center of it, allowing students to learn all of their school subjects through the lens of indigenous wisdom. The "Tree of Opportunity" model (Pene et al., 2001) likens indigenous values and knowledge to roots of a tree. The roots will allow the student to grow a strong and sturdy base in their own culture. Foreign knowledge, such as formal school topics, can then be added onto to

the proverbial tree “without changing its fundamental root source or the identity of each tree” (ibid, pg. vii). This model gives each student the opportunity to connect with foreign knowledge using local context. Additionally, it addresses the concerns of dishonoring indigenous knowledge in trying to make it fit within the western schooling environment. Most discourse surrounding centering indigenous knowledge in Pacific schools has been theoretical, and the few implementations that have been made, according to the literature, have been at the tertiary level ((Nabobo-Baba, 2012), (Thaman, 2009)). Further research needs to be done to determine the outcomes of the 2001 colloquium 20+ years later.

Passage of Samoan Indigenous Environmental Knowledge

Traditionally, indigenous knowledge in Samoa has been passed through the generations orally, by means of multiple kinds of storytelling and proverbs. Fāgogo, which are similar to the western idea of bedtime stories or “stories of the night” are seen as a pedagogical tool to teach Samoan children about their culture, as well as give them culturally relevant context for the things they learn in school (Collins, 2023). On fāgogo, Collins quite powerfully states that “educating Samoan children without the analysis of Samoan wisdom merely serves, ultimately, to deaden the souls and dim the minds of the people, weaken, and devalue, the foundation of Fa’asamoa” (p. 1). Thus, indigenous knowledge is not only important for the preservation of cultural heritage, but for the holistic development of the child as an educational being. Additionally, Collins draws on theory from Paulo Freire’s *Pedagogy of the Oppressed*, that education of one’s culture and positionality in the world empowers an individual to fight for justice and change in their own community. In the context of Samoa, Collin asserts that “learning one’s own home language and culture was crucial in understanding the significance and value of one’s self [within the global context]” (p. 7). Education for Samoan youth about how unique and

sacred their environment is will empower them to protect and fight for their fanua as they move into adulthood.

'Fāgogo' and other forms of Samoan storytelling such as alaga'upu (proverbs) and tala le vavau (ancient stories), inherently teach environmental conservation, arguably more effectively than formal conservation efforts. Samoan place-based storytelling has resulted in increased conservation of the story sites (Lilomaiava-Doktor, 2020). For example, the infamous story of Metotagivale and Alo ends with the beautiful man Alo turning into stones and falling into the ocean to create the coral reefs of the district of Amoa. To this day, Alo's reef is the largest and most sheltered reef in the country (ibid). University of Hawaii's Professor Lilomaiava (2020) explains this phenomenon by stating that "as people retell village histories embedded in tala le vavau, their sense of place is affirmed, and the meanings they give to their connections to fanua persist" (p. 129). Even something as simple as a place-based name for a village "creates meaning about the places and establishes experiences of belonging to them" (p. 130). Thus, it is clear that teaching Samoan oral heritage *is* teaching ecological conservation of Samoa. Given the strength of storytelling as a Samoan pedagogical tool, "Samoa's education department is promoting the use of local stories and documenting these oral sources to be integrated into the curriculum" (p. 138). Similar to the Guardians program, it is unclear whether these efforts have been successfully implemented and received.

Conclusion

The current body of research surrounding children's learning and fanua is extensive and fascinating, but leaves many opportunities for further investigations. Specifically, the mechanisms and facets through which children come to understand fanua has yet to be documented. It is my hope that my research can contribute to this gap in the literature, and work

to uncover the link that connects Samoan's environmental resilience, children's education, and the passage of traditional knowledge.

Methods

Aim:

The aim of this study is to holistically explore how fanua is cultivated in the Samoan child. My hope is that this research will contribute to the current body of Pacific Research on how Samoan children effectively learn, engage with their environment, and absorb cultural knowledge that can be passed on to future generations.

Research Paradigm

This study was conducted through a qualitative Pacific research framework, drawing on components from the Talatalaga and Talanoa research methodologies. Talatalaga research centers Pacific people and their wisdom in every step of the research process, emphasizing "the importance of representing Pacific people's perspectives in ways that are culturally appropriate" (Toelupe Tago, 2022). The verb talatala translates to unravel or distentangle, symbolizing the core philosophy of Talatalaga. It is not the job of the researcher to extract information and create something of their own, but to artfully display the knowledge bestowed upon them as it unravels throughout the research process. Talatalaga can be divided into four phases, which are stated and explained below in *Objectives*. The talanoa methodology can be defined as "a personal encounter where people story their issues, realities, and aspirations" (Vaioleti, 2006). A talanoa requires that the researcher engages with the participant beyond that of an interview format and in a reciprocal fashion. The researcher and the participant alike should share, listen, and be

vulnerable. Both research methods give the utmost respect to the vā, the sacred space between all beings.

My research analysis will follow the phenomenological approach, which focuses on "understanding the meaning that events have for participants" (Vaioleti, 2006, pg. 25) as opposed to drawing stringent conclusions. Pacific researcher Sa'iliemanu Lilimaiava-Doktor (2020) asserts that using phenomenology to research Samoan indigenous ways of knowing "contribute[s] to a broader academic understanding of place and physical resources." Historically, western research paradigms have treated Pacific people as subjects without agency, diminishing their lived experiences and resulting in inaccurate and harmful research (Tapu-Qiliho, 2023). In utilizing a Pacific Framework paradigm I sought the active involvement of Pacific people through every step of my research and worked to respectfully and accurately portray the voices of my Pacific participants.

Objectives

My objectives for this research followed that of the Talatalaga research methodology and can be divided into four phases (Toelupe Tago, 2022):

1. Tōfā sa'ili/Search for Wisdom: to assess the current body of Pacific literature on fanua, children's learning in Samoa, and the passage of Samoan traditional knowledge as it relates to my study.
2. Tōfā sas'a/Wisdom through Dialogue: to graciously accept the stories of Samoan learners and teachers through meaningful talanoa.
3. Tōfā fetāla'i/Negotiating Wisdom: to organize, or in the way of Talatalaga, to disentangle, the stories that I have collected and weave them together to showcase them as respectfully and truthfully as possible.

4. Tōfā tatala/Redistributing Wisdom: to share my findings with my participants and their communities, so that their stories may live on in Pacific literature and contribute to future studies.

Procedure

Interviews in the form of casual talanoa sessions were conducted with Samoan mothers, teachers, and youth over the age of 18. Many participants fell into more than one category (i.e a young mother or a teacher who is also a mother) and were able to discuss the dynamics of the two identities. I was also lucky enough to observe in two educational settings: at a rural preschool and at a Guardians Environmental Education event. During these observations I chatted with teachers and supervisors, helped out around the classroom, and played with the children. For safety and ethical purposes, I was unable to interview anyone under the age of 18. However, in Samoan culture, persons are generally considered youth until well into their 30s (Filoi, 2023). I was able to talanoa with some youths over the age of 18 and reflect with them on their cultivation of fanua throughout their childhood.

Ethical Considerations

It was vital to my research that I recognize my positionality as a palagi (foreigner), and the power dynamic that comes with that. I made sure that all of my participants were genuinely excited to engage in the research, and gave informed and enthusiastic consent before interviewing began. Recordings from interviews were stored securely on my laptop and will be deleted one year after the research is completed. All names and identifying information were removed from interviews, except for Maria Kerslake, my academic advisor, and Sam Kwan, an employee of the Guardians program. Participants who are quoted many times throughout the paper were given pseudonyms in order for the reader to be able to reference their previous

comments, and participants that are included less are not given a pseudonym to remain fully anonymous. Given that all interviews were conducted in the same month, quotations from anonymous participants are not cited in-text, but a list of personal communications are listed in Appendix A. Throughout the research process, I made efforts to reciprocate the generosity of my participants. During observations I assisted in the classrooms as much as I could. In the spirit of Talanoa, I too shared my personal stories and vulnerabilities during interviews. I ensured that all of my research procedures were conducted in a culturally sensitive manner. I recognize my positionality in this research as an outsider, and have worked to ensure that any implicit western biases that I have do not affect the accuracy of my findings.

Findings and Analysis

Part 1: Defining Fanua

As expected, fanua was not easily or simply defined by any of my participants. Nevertheless, every story that came out of my talanoa sessions helped to deepen my understanding of what fanua means to Samoans. While I cannot provide an "answer" to what defines fauna, I can share the stories of my generous participants about what fanua means to them and their families.

Almost everyone who I spoke with immediately brought up their ʻāiga while speaking about fanua. Malu, a secondary school teacher, expressed to me that fanua is just as much about the relationship between people as it is about the relationship between humans and the earth. One example of this is "the exchange of ʻie toga as gifts of honor and respect, as they are considered cultural treasures that embody the fanua and the sacred relationships between people." Since most land in Samoa is customary and passed on through the generations, fanua is deeply

connected to the ‘āiga. Many families choose to bury their deceased on their land. Thus, their land must stay healthy not only for future generations, but also for their ancestors' place of rest and for their extended ‘āiga that may choose to come live on the land at some point in their lives.

Many Samoan families rely off of the land, especially in the more rural villages, and experience the direct connection between the wellness of the land and the wellness of their families. However, even the families who do not rely on subsistence farming still see their land as vital to their livelihoods. A student at the National University of Samoa (NUS) who I engaged in talanoa with, put it as simply as: “It is where we live. Where would we live if we didn’t have our fanua?” In contrast to the western norms of renting property and moving many times throughout one’s life, many Samoans have one place (or a few if they belong to multiple villages) where they plan to spend their lives, and where they expect their children and grandchildren to also live. Most Samoans who I spoke with expressed that they couldn’t imagine a life without their land. Their land is a gift from their ancestors and they treat it as such. One participant I spoke with showed how ingrained this outlook is in the village community by explaining that “if you cannot respect [the land] you are not respected.”

As mentioned, the customary land allows many Samoans to live on one plot of land for their entire lives. This forms a deep connection not just with the idea of land, but also the physical plot of land that they are living on. This is the case for Alo, an NUS student who I spoke with, who told me about how his father has memorized every single detail of the land throughout his life. From knowing which plants on his property will heal an ailment to knowing the exact age of a breadfruit tree, Alo’s father is an expert of his land. This familiarity with the land comes with the deep love and care that embodies fanua.

Two of my participants, one a teacher and one a mother, both likened fanua to alofa, or love. They described fanua as a love for the land that one would have for their family: genuine and reciprocal. Samoans practice fanua through acts of love for their land, such as "being mindful and sustainable in the environment", and "being appreciative and protective of the environment through learning plant names and planting trees."

Malu, the secondary school teacher that I spoke with, described fanua as a "cyclic bond" emphasizing reciprocity and the never ending nature of the fanua relationship that passes on through Samoan generations and generations of wildlife. A youth and new mother named Paia that I had the privilege of speaking with furthered this idea by insightfully commenting on what she believes is the role of humans for their short time on earth :

"And it's funny how everything that dies, still stays. Even gone, it's still here on the earth. In the sea or in the river, you are given back to the earth. It's important that you understand that you are not just… how do i say this. So every minute in your body one hundred cells die, but those hundred cells needed to be there at some point for you to live and breathe, so I feel like we are just like those hundred cells. We are here to contribute whatever we can and then leave so that the next can come and do the same."

For Paia, fanua is a guide. Fanua is a way to view the world, and one's place in the world. From my talanoa sessions I learned that fanua means something different to every Samoan. However, it is clear that fanua, whether referring to family, land, love, or purpose, is integral to the fa'asamoa. I will end this section with the words of Malu, who beautifully defined fanua in all of its undefinable-ness: "fanua is not just a physical space, but a source of identity, belonging, and spirituality. Fanua is not only a word, but a vision that guides Samoans to their natural heritage."

Part 2: Cultivating Fanua

Much like defining fanua, the act of cultivating fanua is not as straightforward as learning a lesson in school or getting a talk from your parents at home. In my talanoa sessions I found many facets through which fanua was instilled in a Samoan person throughout his or her life, namely the understanding of fanua as a part of Samoan identity and the natural exploration of children in nature. It is through these themes that I attempt to convey how my participants felt fanua has been cultivated in them throughout their life.

Fanua as Samoan Identity

Going into my talanoa sessions, I had originally created two separate categories for what is now this section, called "Individual Identity" and "Community Identity". However, as I talked with my participants and began the Tōfā fetāla'i stage of my project, I realized that, by the way of the fa'asamoa, these categories are one in the same. With such a strong emphasis on 'āiga and community, these concepts of individual and collective become one.

A significant link between Samoan tradition and the natural world are measina, precious cultural heritage items. Measina come from Samoan nature and are created in a manner that is respectful and non-exploitative of the earth's resources. Siapo, 'ie toga, fales, and tanoa are all measina that are made directly from plant matter. Malu explained to me that when these plants are taken from the earth, the fa'alanu (prayer chant) is performed "to seek permission from the god of the forest and acknowledge the life of the fanua." Traditional Samoan tattoos and textile patterns depict symbols of local flora and fauna. In Paia's childhood village in Papua New Guinea, trees were only cut down to make siapo if they were near death, and she explained that "by taking [the tree] while it was dying, I can keep it alive with me." She went on to describe how these cultural totems cultivate connection to the land and thus fauna: "One of our beliefs is

that when we wear the tapa [siapo] we become a part of the tree, so it never really leaves us. And so I believe that wherever I go, whatever I become, I can never be anything but a part of that tree first." These cultural items made from the earth have the ability to forever link Pacific people to their fanua, and thus the fanua becomes a part of them, and a part of their identity.

This cultural connection translates to conservation efforts in Samoan society and a deep need to protect the environment. Threats to the environment are threats to the very root of Samoan culture. The extinction of flowers or animal species in traditional patterns on tatau or siapo would be devastating. For measina like siapo or ie tonga, the loss of the trees from which they come would be the end of them. When I spoke with Alo about climate change and its effects on his village, he expressed to me that he was deeply concerned about the fate of the earth, because "to lose that [fanua] will be losing the very source of our culture." Thus, the protection of the environment is the protection of the culture. Growing up, Paia was always taught that "you are *nothing* if you do not give back to the environment."

Fanua is also cultivated in Samoans through fāgogo and other oral teachings. Every participant that I spoke with had a favorite place-based fāgogo, many of which are originally stories of plants or places in Samoa, connecting culture to the natural world. One participant told me the story of Sina and the Eel, a fāgogo that I have heard many times before in the few months I have spent in Samoa. My favorite thing about hearing the Sina and the Eel fāgogo is that every time I hear the story from someone new, it has a slight variation to it— a slight emphasis on one aspect of the story. This, I believe, is one of the most beautiful and sacred things about oral tradition in the Pacific. In every passage of oral wisdom, information can be adjusted slightly, allowing the teller, or teacher, to leave their mark on the tradition, continuously connecting people to their heritage. Just as Paia had said in her cell analogy, in the sharing of oral wisdom,

one can leave their small (but mighty!) mark on the culture in their short time on earth. In this retelling of Sina and the Eel, Malu taught me something new: niu, the Samoan word for coconut, also means life, referencing the life of the eel whose decapitated head became the origin of the coconut tree. She explained to me that the coconut nourishes us and gives us life. Alo also shared with me that learning about the traditional healing properties of native plants from his elders helped him cultivate his connection to the fanua. Thus, it is clear that the transmission of oral knowledge throughout the Samoan community allows Samoans to connect to their land and the idea of fanua in general.

Physical and social aspects of the Samoan village also help to cultivate fanua during Samoan childhood. Villages are often built around utilizing a local natural resource, such as a reef or a forest, which inherently connects the people of the village to the natural resources of their land. Paia spoke with me about her grandfather's village by the sea, where they "respect the ocean like it is a part of them, and they fear it." There is a belief in the village that "if they respect it [the ocean] enough, they will not be harmed with tsunamis." This is another example of traditional wisdom acting as the connecting bridge between Samoans and their environment. Paia also explained to me how customary land cultivates fanua as Samoan identity. Paia's grandfather's village is almost entirely made up of Paia's family, and Paia spoke of the connection she felt to her ancestors as soon as she stepped onto the fanua: "you can feel that you've walked into something that is older than anything you could ever count. It is so fulfilling because it's like I am touched without actually physically being touched." Just as Samoan culture can bridge people to their fanua, fanua can connect people to their ancestors. This embodies the reciprocal nature of fanua, the unbreakable "cyclic bond" that Malu spoke of. The reciprocity of fanua is not just between one person and their land, but between families, their

ancestors, their land, their culture, their identity and so on. Fanua is not simply a cycle, but an infinite web of love and connection bonding Samoans to the earth.

Exploration

In my research, I found unstructured exploration of nature as a significant mechanism of cultivating fanua in the Samoan child. Children, not yet bearing the weight of societal pressures, live off of instinct. As humans we are one with nature and our instincts act as so. Paia, while reflecting on lessons she's learned as a young mother said, "Don't light a fire next to a baby if you don't want them to touch it. They will do it! It is their instinct to figure out what's going on around them." We are instinctively curious as children. We want to discover and learn our own lessons. We are also most open to learning when we are young, making it the best time to form the basis for a strong life-long connection. It is important for a child to build a connection with nature because they are "at their most intuitive and creative" and are able to "bond with the earth and life forces around them" (Paia) without societal predispositions.

When speaking with Alo about his childhood, he explained that his relationship with nature growing up was formed by his experiences playing with his friends outside or doing chores. He explained that since "a lot of our childhood is outdoors so, unknowingly, we do form that bond [with nature]." Alo, who had spoken previously about his father memorizing every inch of their land, also noted that his experience with his land growing up was similar, as he interacted with all the plants around him and became passionate about discovering their medicinal properties. Unstructured exploration is also present in the school system as a way to build a connection with nature. At Saoluafata Preschool, field trips to nature spaces are worked

into the curriculum once a semester, to allow the children to "freely dig through the sand, look at the fish, or play in the mud and leaves."

At its core, unstructured exploration is an act of allowing nature to be your teacher. As opposed to learning from another person, exploration allows you to learn your lessons from the earth with self agency. This act of pedagogy is particularly powerful for children, who are often hesitant to listen to the rules of their parents. Paia spoke of the impact of letting children learn from the earth:

"Children in the village, their parents tell them 'don't go swimming', but the children will go. They will have to go, because they are curious, and intuitive, and creative. So only when they feel like they are drowning have they learned their lesson. And nobody better than the earth to teach you that."

These lessons from the earth can form core memories in the child, bonding them forever with their fanua. Thus, there seems to be two types of unstructured exploration in children that bind them with the earth. The first is wrapped within the subtlety of everyday life. It is in the chores outside such as picking ese or cleaning litter from the village courtyard. It is in play, the beautiful moments of hide and seek in the forest with your friends or swimming in rain — the moments that don't necessarily feel sacred at the age of nine, but you'll realize surely are as you reflect on them later in life. The second is through the hard lessons, through near drowning from the current, or getting stung by a wasp after poking the nest. The impact of these lessons are permanent, and teach children to respect the power and sacredness of the natural world. Through experiences of the grand and the minuscule, the subtle and the crude, children come to understand, respect and love their fanua.

Part 3: Imparting Fanua

The imparting of fanua onto the next generation is vital to cultural and environmental conservation. While Part 2 of the findings looks at how children receive tools to cultivate fanua, this section explores the efforts of adults to create those tools. In this research, I chose to focus on the two major influences in a child's life: Parents and School.

Parenthood

In my talanoa sessions with mothers, it became clear to me how important the generational passage of fanua is to Samoans. Like parents in every part of the world, different people have different parenting styles and different ways of teaching their children. But for every parent and youth I spoke to it was clear that imparting fanua in the Samoan child was the honor and duty of the parents, more so than the duty of formal schooling. Paia, when speaking about the importance of imparting fanua onto your children said, "I think that's the one thing you can't afford to not do as a parent. You have to honor that spiritual ritual." There were three main ways that I found that parents imparted fanua onto their children.

1. Teachings from the Earth: Parents allow their children to explore and learn lessons from the earth as their first teacher. They use the natural world to teach different concepts to their children. This is a technique that Paia often employs. During our talanoa, she told me about how she has recently been teaching her one year old daughter about nature:

   > *"Every now and then they'll cut a tree somewhere, and so what I've been doing with my daughter recently is just teaching her that every layer on a tree trunk calculates how old a tree is. And so if you look at that and then you look at your fingerprint, it mimics the same thing right? And so I've been teaching her that. And now whenever she sees a dead tree she will hold her thumb up to it."*

   Paia loves to let her children experience nature freely, but she also understands the value of the lessons that the earth has for her children. It is interesting to note that when

reflecting on her own childhood, Paia described her father's parenting style similarly, suggesting that she had used lessons from her own childhood in her experience as a parent, thus continuing the passage of cultural knowledge through the generations.

2. Teachings of Circumstance: Alo explained to me that his parents didn't go out of their way to teach them formal lessons about the fanua, but always made sure to impart some wisdom if the situation called for it. When Alo was a young boy, he stepped on a stingray in the ocean and injured his foot. The remedy, according to his uncle, was beating his foot with the stick of a specific type of plant. His uncle explained to him the medicinal properties of the plant while he hit his foot over and over again. Alo remembered thinking it was all nonsense, but when he woke up the next morning, his foot was completely healed. He knew the stick had worked because he had "seen those kinds of injuries on people who get stung by stingrays and they would have a swollen foot easily the morning after." When Alo's uncle was curing Alo's sting, he took it as an opportunity to impart fanua on Alo, teaching him about the properties of the plant so that next time Alo can heal himself or help someone else.
3. Supporting connection: At Saoluafata Preschool, I got to speak with a mother and teacher named Tusa. Tusa talked with me about how important it is to her to support her children in her interests with nature. Her daughter, only three years old, loves fish and the ocean. Tusa makes sure to take her down to the sea to swim and look at the fish as much as possible. She believes in fostering and nourishing her children's relationship with the environment, while also allowing her daughter to choose which aspects of the environment she wants to connect with.

All of these parenting methods are acts of cultivation according to my definition. To impart fanua, they are allowing their children to cultivate fanua. They are giving them the tools and support that they need to make meaning of nature and nourish their own personal connection with the land. Among the people I had talanoa sessions with, there was a general consensus that the role of instilling fanua fell upon the parents and family of the child, and less on the school. One mother I spoke to at Saoluafata said that it was her sole purpose and her greatest honor to teach her children about the importance of their fanua. An NUS student that I spoke with reiterated that "your family is your first school" and that they grew up with the understanding that they had much to learn from their parents, perhaps more so than their teachers. However, as discussed in the next section, there is still a widespread effort in Samoa to teach children environmental and traditional knowledge within the school system.

Schooling

There seems to be varying degrees of integration of fanua into the Samoan classroom. The youth that I spoke with expressed that they didn't learn much about fanua or other traditional knowledge in school. Paia, who spent the first 12 years of her life in Papua New Guinea before moving to Samoa, spoke about how integrated the natural world was into the classroom there. They had an indoor classroom, but would often go outside for class, into the school courtyard that was "anything but a courtyard." Surrounded by massive rain trees and lush flora, she would sit with her friends and talk, play, or learn from her teachers. Once she moved to Samoa, specifically to urban Apia, she felt that compared to the PNG there was not as much connection with nature in her schooling experience. I would like to note that this is one voice of many in Samoa, and thus generalizations cannot be made. Additionally, her schooling in urban Apia likely differed from that of a child living in a rural Samoan village.

When talking with Alo about his schooling experiences, he explained that while he didn't learn specifically about fanua or other indigenous knowledge in primary or secondary school, he learned to think and question things in school, something he never felt he was taught at home. He took that knowledge and applied it to learning more about medical plants in his village and the nature around him. Alo also told me about his favorite teacher at NUS, who teaches him and his classmates about traditional knowledge even though it is not included in the curriculum. Alo's teacher uses traditional ecological knowledge to augment and contextualize the topics that are in the set curriculum. As a scientist and traditional artist, Alo is passionate about proving methods of indigenous knowledge, such as plant medicine, through scientific method. He spoke excitedly to me about a recent discovery in his class. "For one of the plants that we [Samoans] use, we have to use it during noon when the sun is at its highest, or else it won't work. And when we [Alo's class] actually studied it, we discovered that the plant was sensitive to Ultraviolet light."Alo and I discussed the controversy of the idea that traditional ecological knowledge needs to be "proved" by western standards in order to be validated. He explained that while he does feel the pressure to prove his traditional knowledge is accurate, he also believes that using the scientific method to explore traditional practices can be helpful because "you never know whether the benefits of a plant go beyond what we know now and be useful [to his community]." He also believes that utilizing the scientific method can help the use of traditional knowledge "in tandem with foreign types of conservation" to fit the needs of the changing climate in Samoa. A true scientist, his curiosity is endless, as is his desire to provide for his people.

It is important to note that the youths that I spoke with were all in their mid to late twenties. While the students I spoke with may have not received extensive traditional knowledge education in their formal schooling, there likely have been changes within the formal schooling

system since their time in primary or secondary school. Teachers who I spoke with and my visit to Saoluafata Preschool gave evidence for this. Malu, the secondary school teacher who I held a talanoa with, shared with me the many ways in which fanua is integrated into her classroom and at her school. Teachers at her school are able to integrate fanua into the curriculum, across a multitude of subjects. She spoke of environmental science lesson plans that explored "the concept of fanua and how it relates to the ecological systems and the human impacts on them," lesson plans on social science that teach "how it [fanua] shapes the identity and values of the Samoan people," an English class that "uses the concept of fanua as as source for poetry," and even a math class that "uses fanua and its connection to the cycle of life as a way of introducing fractals or decimals." Malu's school is going beyond simply teaching the definitions of fanua, and instead utilizing fanua as a lens to learn other subjects. This seems to be an example of the Tree of Opportunity pedagogical model (Pene et al., 2001) of providing local context for indigenous students studying western curriculum to help them relate to the topics. Malu expressed to me that one of the reasons that she enjoys teaching at the secondary level is because she can use indigenous knowledge to teach more advanced subject matter. However, I was also able to witness these same practices of utilizing indigenous knowledge as a curriculum framework at a lower level of schooling, at Saoluafata Preschool.

While the students of Saoluafata preschool are ages two to five and spend their day building blocks, coloring, and playing, there is actually an underlying curriculum that loosely dictates all of the activities that they do. The curriculum teaches a set group of topics for the whole year: math, science, health, sports/games, music, social science, and language. However, each quarter they utilize a different framework to contextualize these subjects, one of which being the environment. For a math lesson during the environmental quarter they look at the rings

in a tree stump and practice counting how old the trees are. Every quarter they go on field trips to the forest or the sea to explore in nature. It is thus clear that fanua is a framework that can be used for all levels of learning and across many subjects.

Fanua is also seen in the classroom outside of the curriculum in the class rules and setting. As mentioned in the defining fanua section of the findings, fanua is just as much about the relationship between two people as it is about the relationship between humans and the earth. Thus, “fanua can be used as a basis for establishing classroom rules that reflect the respect and care for the land, the people, and the relationships in the learning environment.” Malu explained that rules such as keeping the classroom tidy, listening and respecting one another, and participating in classroom activities are all ways of honoring the fanua. Fanua can also be a guide for classroom design. In Malu’s classroom they have fanua corners “where the students can display their fanua [placenta] trees or plants, or other items that represent their place of birth, sense of belonging, cultural identity, and love and service for the family.” Saoluafata had a similar setup with a “family corner” where students brought in items of importance from their family.

Based on my interviews and observations, there seems to be major efforts to integrate fanua into the classroom. Further, it seems as though these efforts have been successful, not just in including traditional knowledge in schools, but in improving students' understanding of the curriculum subjects through an indigenous framework.

Schooling: Issues and Practice

In my talanoa sessions about schooling, I was blessed with many beautiful stories of empowerment, connection, and curiosity. However, I was also lucky enough to engage in some critical discourse about the Pacific schooling system. A theme that came up again and again in

my conversations was the difference between inclusion and integration with respect to indigenous knowledge. Most students I spoke with said that they didn't learn about indigenous knowledge in school outside of their Samoan Language and Culture class. Even Malu, who had many ways of integrating fanua into her classroom, felt that the Samoan school system as a whole needed to work on moving beyond inclusion into integration. She felt that even when the school system did work to include indigenous knowledge, such as in the Samoan Language and Culture class, it was not as prioritized as the western-knowledge classes that are taught. Specifically, Malu wishes that indigenous knowledge was reflected and valued in learning outcomes. For example, she explains that,

"the science curriculum for year nine states that students should be able to 'explain how bodies work to create homeostasis' and 'describe the structure and function of the organs in the human body'. These are important concepts, but they do not necessarily connect to the Samoan worldview of the body and its relation to the fanua. Similarly, year twelve geography students must be able to 'evaluate response to natural hazards' but they do not necessarily acknowledge the role of TEK in coping with natural disasters in Samoa."

Because of this, she feels that integration is a better solution than inclusion. Malu sees places in the curriculum at her school (outside of her classroom) where not only fanua could be integrated, but the indigenous knowledge about the environment could actually add to students' understanding of the subject matter. However, learning outcomes is not the only benefit of integrating indigenous knowledge into schools. The prioritization of western knowledge over local and indigenous knowledge can be detrimental to a child's identity development: "It has a very negative impact on how children see the world they are going into. It teaches them that they need to walk in a white man's world the way they walk to be a part of it, not walk as you are and be proud of who you are and teach them the way you walk" (Paia).

When a child sees that their culture is not being prioritized in their place of learning, it may cause them to feel shame for their cultural identity, a need to distance themselves from their culture, or, rightfully so, frustration with the systems in place that have created this devaluation of their identity. It is vital that educators in the Pacific continue to rethink the current education systems for the good of Samoan youth.

Malu was gracious enough to share with me some recommendations that she has to improve integration of indigenous knowledge, specifically traditional ecological knowledge and the cultivation of fanua, into Samoan schools. Her quoted recommendations are as follows:

"1. Recognize and value TEK as a legitimate and complementary source of knowledge alongside [western] scientific and academic knowledge.

2. Incorporate TEK into the curriculum objectives, content, activities, and assessment, in a way that is respectful and relevant to the Samoan context and culture.

3. Engage with local communities, elders, and experts, who are the holders and transmitters of TEK, and invite them to share their wisdom and experiences with students and teachers.

4. Encourage students and teachers to reflect on and apply TEK to their own lives and practices, and to contribute to the conservation and sustainability of the fanua."

Case Study: Guardians

Case:
"I am a tree, I am a tree,
I am a t-r-e-e I am a tree,
when I reach my branches high
and I spread my roots down low,
I can eat, you can breathe, we all grow"

A chorus of youthful voices rang through the halls of the Apia yacht club. Children giggled with their friends as they tried to get a hang of the hand motions that went along with the song. They continued to practice the song as the late students trickled in, cheering every time they completed a verse without messing up. After the tree song, they began singing a song in Samoan, with the same enthusiasm and innocent joy. I wasn't able to get anyone to translate it at the time, so I just enjoyed listening to the sounds of their voices and observing their playfulness. Once every student had arrived, Dani, one of the instructors, began quizzing the students on what they had learned yesterday.

"Do we like top predators?" She asked.

The students' hands shot up, some of them answering without being called on. After reflecting on their previous lessons, the students divided up into groups and headed off to their modules. The modules, with creative names like "Wise Fisher" and "Trash Star" were a hybrid of interactive activities in an outdoor classroom and field trips to experience the topics of their lessons in real time.

In one lesson, the "wise fishers" each received a name tag with a different component of the marine ecosystem such as "sun," "coral," and "red snapper". Their instructor then handed them a rope and told them to pass the rope around the circle based on the organism's environmental interactions, creating a physical food web. The sun passed the rope to the algae, who grabbed a hold of it and passed it onto the snail, and so on. After this activity ended, the students learned and rehearsed a song:

"Tele i'a ole sami
Tele fo'i laau o le vao
Tele manu felelei ile lagi
Tele fe'e o le sami
A ua e faatupu lo'u ma'i
Ua e fa'aotaota ile sami

O le ala lea o la'u savali
Tu'u lou mana'o lasi"

This song translates to…

"There are plenty of fish in the sea
There are plenty of trees in the bush
There are plenty of birds flying in the sky
There are plenty of octopus in the sea
But you have caused my illness
You have polluted in the sea
This is why I must come here
Stop wanting for more"

In a different group, the "trash stars" were asked about the difference between trash, recycling and compost. Students hurriedly copied down the information into their notes, even knowing they will never be tested on these topics. They later went to the beach to identify and categorize pieces of trash that they found. The "Coral Champions" drew pictures of animals they had seen in the sea growing up, before they ventured out snorkeling and identifying living versus dead coral in the later half of the day. Their "classroom" was set on the deck of the yacht club, overlooking the ocean. In the distance the "Samoan Voyagers" group were out on the Gaualofa, Samoa's traditional va'a, learning about the parts of the boat and using the stars and wind as navigation tools.

To the untrained eye, these lessons may look like silly or meaningless activities, but they are actually meticulously planned out lessons that are a part of the Guardians' curriculum book. Each module contains learning objectives, detailed methods of activities with alternatives available, and printable materials. The instructors carrying out these lessons are from a diverse range of disciplines: classroom educators, Ministry of Education and Ministry of Natural Resources employees, fisherman, forest ecologists, even the captain of the Gaualofa, all come

together to make up the Guardians instructional team. The varied backgrounds of instructors allow students to be taught by experts of their fields, learn perspectives of working individuals in Samoa, and get inspiration for future career paths.

After observing some of the classroom-based lessons, I was invited to travel with the "Tree Guardians" to the nearby mangroves. The bus was filled with energetic students. "Oh we get to walk? I love walking!" exclaimed one of the children to her friends. This group of students were all from a private primary school in Apia, and spend their days doing rigorous academic work at their desks. This was the first time the Guardians have worked with non-governmental schools before. They usually travel to a village and work with the local schools there, as opposed to having students come to them. The program has previously only been taught in Samoan, but this week instructors have used a combination of English and Samoan, depending on the group they are working with.

One of their teachers accompanied them, who mentioned that she enjoyed watching her students experience this Guardians' lesson. It reminded her of her youth in a village in Savai'i hiking through the bush to harvest the talo and niu, an activity that was vital to her lived experience as a Samoan, and something that her students living in wealthy urban Apia may never participate in.

After a short hike along the coast, the students set off on a plant identification scavenger hunt, running around with their clip-boards shouting things like "I found the Bruguiera seed!" After racing around to identify each plant on their list, the students joined back together to learn a siva tau about the mangroves. The children chanted in Samoan, struggling with the language a bit, as their teacher informed me that many of her students are not fluent in Samoan. They eventually mastered the chant, before hiking back through the mangroves and hopping back on

the bus. Once back at the yacht club, the groups came back together, and the "Tree Guardians" proudly performed their mangrove siva tau. Everyone sang "I am a tree" one more time, and then broke away for lunch. Their meals were served on traditional biodegradable plates, made from woven banana leaves.

A few weeks later, I was lucky enough to sit down with Sam Kwan, a director for the Guardians program, for a talanoa about the history and current-day objectives of Guardians. It is through this interview and my case study observations that I provide an analysis of the Guardians program within the context of this research.

Guardians Background

The Guardians program is an environmental education campaign for primary school children led by Conservation International, the Samoan Ministry of Natural Resources and Environment, and the Samoan Ministry of Education. The program aims to fill the gap in the Samoan schooling curriculum that omits environmental knowledge, using local context and experiential learning methods. Guardians was inspired by a campaign led in 2017 in response to the Disney movie *Moana*. The campaign planned to play the movie on the Gaualofa at various locations along the coasts of Upolu and Savai'i. At the last minute, Conservation International asked the facilitators, one of them being Sam, to do some environmental education presentations before the movie came on. The campaign was a huge success, and they continued to repeat it, each time adding more and more educational components, until it eventually morphed into the current day Guardians program.

The Guardians program holds one week programs around four times a year. The program is highly thought out and structured, using an extensive 200 page curriculum. Lessons are taught by a variety of field experts including teachers, fishers, conservationists, forest ecologists, and

even the captain and crew of the Gaualofa. The program that I visited took place at the Apia yacht club and worked with students from private and church schools, but it was actually the first of its kind. Up until then all Guardians programs had operated in rural Upolu villages. Dani explained that the decision to work primarily in villages came out of a series of surveys that were conducted by the Ministry of Natural Resources and Environment that showed that women and children had little knowledge of relevant environmental information despite past programs led by the ministry. This is because these programs had been geared towards the Matai of the village and the information had not been disseminated down to the rest of the village community. Dani explained to me that since Guardians was related to childhood education, mothers in the villages often turned up to help throughout the week and were also able to learn from the program.

The Guardians' curriculum uses a unique combination of western and local knowledge. For example, Figure 2A shows the biological anatomy of a coral polyp. The image uses western explanations of the coral anatomy, but is of course teaching about an organism that is local and sacred to Samoa. In Figure 2B, local Samoan fish are listed with their western scientific species name, and with their Samoan name. This duality is seen throughout the entire curriculum. Additionally, the Guardians emphasize the local through their experiential learning opportunities, where the coral reefs, the mangroves, and the coastlines of Samoa *become* the classroom.

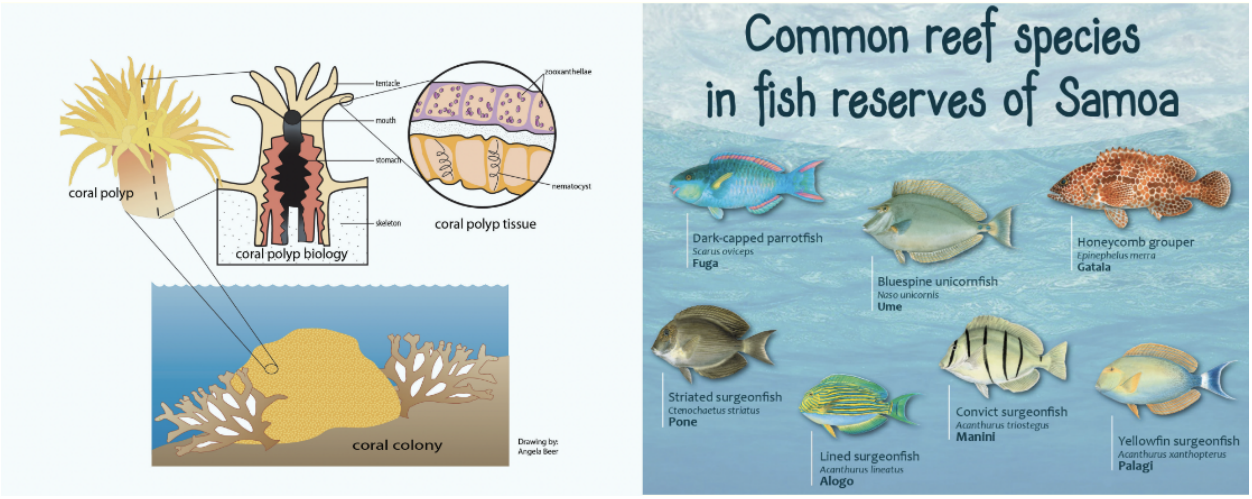

Figure 2: 2023 Guardians Environmental Education Modules (A) Anatomy of a coral polyp in module "Coral Champions" page 52; (B) Common reef species fish names listed in English, Samoan, and species name in module "Wise Fisher" page 83.

Analysis: Bridge between formal schooling and indigenous knowledge?

Guardians is unique in that it is able to meet the different needs of both the rural and urban communities of Samoa using only one curriculum. In the rural context, Guardians is able to provide villages with modern environmental conservation strategies that can be used in tandem with indigenous knowledge. In my talanoa with Dani, she explained that as a result of climate change, many indigenous practices relating to the environment are no longer sustainable, or even feasible, for Samoan communities, such as certain fishing methods and the harvesting of endangered native plants. Many Samoans in rural villages have not been made aware of this, and as a result are unknowingly harming their fanua or struggling to understand why their practices are not yielding successful outcomes. Through childrens' and community education, the Guardians can aid rural communities in protecting and conserving their fanua.

In urban communities, Guardians seems to play a different but equally important role. In speaking with Dani and other educators throughout my visit at Guardians, I learned that there is a great deal of concern regarding the loss of Samoan culture for Samoan children in non-public

(private or church) schools. Many students who I came in contact with were unable to speak Samoan fluently, and struggled to pronounce the words in the siva tau that they were learning. Students who explored the mangroves exclaimed how excited they were to spend time outside. Many in the group that went snorkeling confided in their teacher that they hadn't been able to go swimming in a long time. Private school teachers I spoke with showed concern for their students' lack of knowledge about their own culture. This research found that a huge part of the importance of fanua to Samoan's is rooted in customary land. However, with more and more land in Apia being purchased, many children are unable to develop that identity connection to their land that is so vital to the cultivation of fanua. While this seems to be a bigger issue (maybe a future student's ISP?), the Guardians program does seem to provide private school children with a path to connecting with their Samoan roots, especially in the context of cultivating fanua.

The Guardians program makes a strong case for a potential bridge between formal schooling and indigenous knowledge in Samoa. However, there are significant barriers that the program faces in both realms of pedagogy. The Guardians curriculum walks the line of indigenous knowledge, without ever actually crossing over it. The "I am a Tree" song, for example, describes fanua and the concept of vā, and emphasizes the reciprocal relationship between humans and nature through the line "I can eat, you can breathe, we all grow." However, the song never directly references any Samoan indigenous concepts. In the "Wise Fisher" module, students learn about sustainable fishing practices that are in line with indigenous values, and certainly discuss local concepts like village MPAs (Marine Protected Areas), but there is no mention of ties to Samoan values or traditional fishing methods that are still active today. As for the Gaualofa module, it is of course teaching traditional Samoan navigation techniques, but given that these practices are all but extinct aside from the va'a crew, there is still no mention of

active indigenous practices or values. There is a specific reason for these discrepancies. Sam explained to me in our talanoa that the program as it has developed has moved away from teaching traditional knowledge because "once you touch on to that traditional part, the Matai have to be there. It triggers a different type of response from the community" (Stern & Kwan, 2023). With the direct inclusion of indigenous knowledge comes the intricacies of the Matai system, as well as the differences in indigenous practices and beliefs from village to village: "we don't want to upset the people that we are teaching, if there are certain traditions that the Matai haven't approved, or if we teach a practice that the one village doesn't want to do" (ibid). Guardians feels as though the inclusion of indigenous knowledge takes agency away from the facilitators and impedes on the versatile curriculum that they have created.

The program has also faced obstacles in integrating into the formal schooling system. According to Sam, a longtime goal of Guardians has been to include the curriculum in all Samoan primary schools. However, they have recently shifted this goal for a number of reasons. All teachers and facilitators of the Guardians program need to undergo a thorough training process, in order to ensure that the curriculum is being taught in a way that contributes to the goals of the initiative. Training all public school teachers in the country would be a huge task, one that requires ample funding and the support of the Ministry of Education. Additionally, the Guardians wanted to be integrated into the school system during the year, but the Ministry of Education, a partner of the program, would prefer that the workshops be run during school break. The Guardians have thus shifted their objectives, and are looking into running the program as a summer camp, for parents to pay to send their children to during the longer holidays. While Sam assured me that the program would not be too expensive, it would still likely make it less

accessible to lower income families in Samoa, or for families who need their children to stay home during holidays to help around the house.

Thus, it seems as though the Guardians program may have to make adjustments to their objectives if they are to become a bridge between indigenous knowledge and formal schooling. However, this doesn't seem to be the current goal of the initiative. Further, I would like to pose that perhaps these two forms of pedagogy can stay separate. Perhaps Guardians can continue to meet the environmental education needs of both rural and urban communities without bringing the traditional and the formal together. I mentioned earlier that a dilemma exists in the Pacific literature on education. On the one hand, the literature recognizes that formal schooling as it stands in the Pacific does not resonate with Pacific people. On the other hand, there is concern that the integration of indigenous knowledge into formal schooling will devalue it. This tension is seen again in the findings of this research, where teachers are calling for the integration of indigenous concepts like fanua into formal schooling, while many parents feel as though it is their job and their job only to bestow sacred indigenous wisdom upon their children. I believe that the Guardians program takes a step towards solving this problem, by utilizing the *local* context to engage students, without appropriating the traditional. The accessible integration of the Guardians initiative will be integral towards the improvement of the culturally appropriate cultivation of fanua in Samoan schools.

Conclusions: Mother Earth as our Teacher

At its core, this project's purpose is to uplift the voices of my Samoan participants. I feel honored to have had the opportunity to share these stories. This study was constructivist by nature, thus I am reluctant to draw any concrete conclusions. In my analysis I touched on a few

themes that are weaved throughout this research such as the dichotomy of the parent teacher and the school teacher, the differing needs of children in rural versus urban Samoa, and the inherent nature of fanua as a part of Samoan identity. Many of these themes bring about conflict or contradiction, but I would like to take a step back to address an overarching concept that I believe brings together these topics in harmony: learning from Mother Earth. Fanua is cultivated in the Samoan child in many ways, and there may be disagreement among Samoans about the best way to pass fanua on to future generations. Further, some mechanisms of cultivating fanua are at risk or even extinct as a result of climate change and globalization. However, it is my opinion that all found mechanisms of cultivating fanua are simply carving a pathway for lessons from the earth. Our earth, our fanua, is here to teach us. She teaches us how to see the beauty of all living beings. She teaches us to question and be curious. She teaches us how to heal. She teaches us how to take care of her, and how to take care of each other. All we need to do is open our minds and hearts and listen to her. To cultivate fanua is to open ourselves up to accept Mother Nature as our most sacred and knowledgeable teacher.

Limitations of Study and Future Research

There were many limitations to this study. Perhaps most significantly, I was unable to talk with children for this project due to ethical considerations and not having enough time to obtain the required clearances. As mentioned in the exploration section of my findings, children are exceptionally open to connecting with nature as they have not yet fully experienced the social pressures of technological development and globalization, and generally are more open minded. I believe that getting real time opinions from children would yield very different perspectives than that of older youth reflecting on their childhood. Additionally, I had a short period of time to complete this research, and thus was unable to integrate into the communities that I was working

with as much as I would have liked too. I was lucky enough to have participants that were extremely open and vulnerable in sharing their stories, but I would have preferred to have a longer period of time to build trust with my participants before our talanoa sessions. Lastly, I believe that there is an intrinsic limit to what information about Samoan culture can be transferred into an academic paper that was written by a palagi. Samoan is an oral language, and in many ways, the oral tradition and wisdom that is passed down can not be adequately recorded or replicated. Additionally, as a foreigner who has no lived experience as a Samoan, I will never be able to fully understand concepts like fanua. I want to make clear that the findings in this paper are not to be generalized for all of Samoa, but are merely the stories of the people I was lucky enough to speak with.

There are many exciting ways to build upon this research. A few examples are: Speaking with children and learning about their understanding of fanua directly; diving deeper into the differences in understanding of fanua for children living in urban versus rural Samoa, or even in youth that are a part of the Samoan diaspora; and the effects of physical removal from Samoa on connection to land and understanding of fanua. I hope to be able to continue this research later in life, but would also be ecstatic to see someone else pick it up and make it their own.

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Appendix A: Personal Communications

Maria Kerslake. Academic and Founder of Saoluafata Preschool. November 14th, 2023

Sam Kwan. Employee of Guardians Environmental Education Campaign. November 16th, 2023

Anonymous. Student. National University of Samoa. November 19th, 2023

Anonymous. Student. National University of Samoa. November 19th, 2023

“Malu”. Secondary School Teacher. November 21st, 2023

“Paia”. Samoan Youth and Mother. November 23rd, 2023

“Tusa”. Preschool Teacher. November 26th, 2023

Anonymous. Preschool Teacher. November 26th, 2023

Anonymous. Preschool Teacher. November 26th, 2023

Anonymous. Preschool Teacher. November 26th, 2023

“Alo”. Student. National University of Samoa. November 28, 2023

Appendix B: Glossary of Samoan Terms

‘Āiga: Family.

Alaga’upu: Samoan proverbs.

Alofa: Love.

Ele ele: Soil; Blood.

Esi: Papaya.

Fa’aaloalo: Respect.

Fa’afetai mo mea’uma: Thank you for everything.

Fa’afetai tele lava: Thank you very much.

Fa’alanu: Prayer chant or ritual.

Fa’asamoa: “The Samoan way”, the lived realities of Samoan people and the values and outlooks on life that they possess.

Fāgogo: Samoan “stories of the night”; fairy tales/bedtime stories.

Fale: Traditional Samoan open air homes.

Fanua: Land; Placenta; and so much more. :)

‘Ie toga: Fine-mats woven from a variety of the pandanus plant. ‘Ie toga have great cultural significance and are often exchanged at weddings, funerals, or other sacred cultural events.

Measina: Precious cultural heritage items.

Nu’u: Village.

Niu: Coconut; Life.

Palagi: Foreigner.

Siapo/Tapa: Measina and artform made from tree bark, with painted cultural motifs. Traditionally worn as clothing, but also exchanged in ways similar to ‘ie toga.

Siva tau: Samoan version of Haka. Traditionally a war chant but now used in many sports events.

Tala le vavau: Ancient Samoan stories.

Talo: Taro, Native root plant commonly consumed in Samoa.

Tanoa: Traditional Samoan wooden bowl that is used to prepare and serve kava, which is a drink made from a native Samoan plant, the kava kava plant, and is served at village welcoming ceremonies

Tatau: Traditional Samoan method of tattooing

Ulu: Breadfruit.

Vā: The sacred space between all things, living and nonliving.

Va’a: Boat.

Appendix C: Interview Questions

*****These are guiding questions. Interviews were conducted in the form of casual talanoa. Many participants fell under more than one category of questions.

Guardians*:*
What are the goals and objectives of Guardians?

What backgrounds do the instructors come from?

How do Guardians Programs generally operate (private schools vs villages)?

Are there future plans to expand the program? If so, what are they?

How long have you worked at Guardians? What are your favorite things about working there?

What have been challenges, if any, of achieving that goals of the guardians (if you feel comfortable sharing)?

How do you see traditional knowledge and concepts implemented into the program? Do you think it's important to include traditional practices in the guardians curriculum?

How do you think the guardians promote the concept of fanua in children?

How do you think the guardians promote environmental stewardship in children?

Teachers:
What does fanua mean to you?

How do you see fanua connecting to environmental conservation in Samoan society?

How do you see fanua implemented into the classroom/home? In lesson plans? In classroom rules? Classroom setting?

How have government environmental education initiatives (such as the Guardians program) affected your classroom?

What is your favorite place-based fagogo that you learn growing up/teach to your children/students?

Do you feel that the government mandated curriculum allows room for traditional ecological knowledge to be taught/discussed in the classroom?

What is a value that you learned growing up that you feel is important to pass on to your children/students?

Mothers who are also teachers:
What does fanua mean to you?

How do you see fanua connecting to environmental conservation in Samoan society?

How do you see fanua implemented into the classroom/home? What are the differences between fanua in your home environment vs your classroom environment?

How do you think being a mother has taught you to be a better teacher and/or vice versa?

How have government environmental education initiatives (such as the Guardians program) affected your classroom?

What is your favorite place-based fāgogo that you learn growing up/teach to your children/students?

Reflecting on your childhood and how you developed a connection with the environment, how do you think your experience differs from your children's? What do you think has changed over the years that have either strengthened or weakened children's connection with the environment? If the connection has weakened, how do you think that can be fixed?

Do you feel that the government mandated curriculum allows room for traditional ecological knowledge to be taught/discussed in the classroom?

What is a value that you learned growing up that you feel is important to pass on to your children/students?

Students/youth:
What does fanua mean to you?

How do you see fanua connecting to environmental conservation in Samoan society?

Do you remember learning what fanua was growing up? Were you in the classroom or the home? How do you feel you developed your relationship with nature over the years?

How do you think lessons from your family and village have shaped your relationship with the environment?

How do you think lessons in your formal education have shaped your relationship with the environment?

What is your favorite childhood memory of being outside?

How important is protecting the environment to you?

What role does nature and your connection with nature play in your identity as a Samoan? What about your identity as a young person?