

# **Culture Change Dynamics in the Mariana Islands**

Amy Owen  
University of Guam

## **Abstract**

This work provides new information on culture change and adaptation by examining the patterns in the Mariana Island chain. These islands share environmental setting as well as early history with the Chamorro, the indigenous group at the dawn of the colonial age. Socio-economic and political profiles of Guam and the Northern Mariana Islands were compared and analyzed, along with a perception survey conducted in collaboration with Northern Mariana College. Results indicate that the different colonial and political treatments the people of Guam and the Northern Mariana Islands experienced have less to do with culture change processes than expected. Keywords: Chamorro, Mariana Islands, Micronesia, Culture, Geography.

## **Introduction**

The island of Guam is the southernmost populated island in the Mariana Islands, a chain lying between Hawai'i and the Philippines, south of Japan in the Pacific. The indigenous people of this chain, the Chamorro, have experienced change throughout history due to a central "cross-roads" location in the Pacific. Although Guam, Rota, Tinian and Saipan, the largest inhabited islands of this chain, lie in close proximity, they differ today. This study looked at and compared the culture change patterns in Guam and the Northern Mariana Islands, now know as the Commonwealth of the Northern Mariana Islands (CNMI).

The purpose of this study was to provide new information on culture change by looking at a specific people and place in the Asia Pacific. The Mariana Island chain offered a unique geopolitical situation for examining cultural change and adaptation over time. Guam, the southernmost island in the chain, lies close to and is geologically and biologically similar to the northern inhabited islands in the chain. Guam has experienced the same climatological and environmental effects as the other inhabited islands in this chain. These islands were settled by the Chamorro, a Pacific Island culture likely hailing from Southeast Asia, Indonesia. Although Chamorro remain on all inhabited islands, Guam is now distinctly differs from the CNMI as different political entities. With environmental and early cultural factors controlled, this study generated new information on patterns in culture change by comparing Guam and the CNMI. The central questions in this study were:

- 1) How do Guam and the CNMI differ socio-economically and politically?
- 2) What are the patterns of variation in perception in the local people of Guam and the CNMI?
- 3) According to these results, what are the apparent dynamics of culture change in Guam and in the CNMI?

History is understood widely as a temporal account of a defined area or group of people. In this case, the focus is the area geographically defined as the Mariana Island chain. The group is defined as the people that have lived there over time, including those that live there today. The political framework must be considered as it is an attribute of the social organization of groups. Because this study investigates changes in culture within the historical framework, it is important to define culture.

Culture is a term with hundreds of meanings and very different meanings in different fields of study. This study uses a simple anthropological definition (Linton 1940: 466) that defines culture as "...the sum total of the knowledge, attitudes and habitual behavior patterns shared and transmitted by the members of a particular society." In addition, culture can be defined as a practice, as in a religious practice. Francois Matarasso (2001: 3) defines culture as "...the expression of human values. It may be very intense and conscious, as in art objects and performances or religious practice. It may be pervasive and relatively unconscious, in the rituals of food, the use of time or family celebrations. It embraces the extremes of this spectrum and everything between." Linton (1940:466-467) further asserts that cultures are "adaptive" mechanisms and the temporal aspect should be considered when characterizing change in a culture (1940:490). White (1949:166) characterizes cultural traditions as dynamic systems powered by natural forces. Culture, identified as a sum of patterns that includes attitudes and practices such as religious language practices, contains variations within the population.

Variation and change in an attitude or practice is therefore an indicator of change in a culture. In this study variations in culture perception between Guam and the CNMI were determined and compared. Because culture is also identified as a changing, dynamic system, this study looked at the dynamics of change. The Mariana island chain provided a unique opportunity to study culture change because of the shared history, native population and environment.

Culture and cultural change is difficult to measure. Both quantitative and qualitative methodologies were used in this study. Empirical data (statistics) were analyzed deductively and reported quantitatively. Inductive generation of hypotheses was reported qualitatively. First, information regarding the people and history of the Mariana Islands was examined. Sources included demographic data, literature and local news and commentary. From this, historic cultural aspects in the Marianas were determined. Three trips each to the islands of Tinian, Rota and Saipan were made for conducting field work during the fall of 2009 and conducted through a collaborative effort between the University of Guam and The Northern Marianas College with Sam McPhetres, a NMC political science instructor and former trust territory representative.

A questionnaire was developed using the defined cultural aspects of importance. Perception patterns and practices of the local population of Guam and the CNMI were compared through an anonymous survey. Twenty-five survey questions included independent and dependent variables for analysis. Independent variables included seven questions on participant demographics: ethnicity, island of residence, annual income, age, sex, religion and education level attained. Dependent variables included 20 questions regarding attitudes, perceptions and practices of culture. Of these, 16 utilized a percentage bar scale and 4 were yes or no questions. The bar scales were designed to provide participants a wide range of choices, approximately one hundred data points each, enabling parametric type analyses. Bar scales ranged from zero to one

hundred percent or from negative fifty to positive fifty with neutral in the middle. Data were analyzed (Pallant, 2001) with SPSS 17.0.

Surveys were distributed by the principal investigator (University of Guam) on the islands of Tinian and Rota. In Guam, surveys were offered by geography students. On Saipan, in collaboration Sam McPhetres distributed surveys to political science students.

The sampling design was snowball, on the most population islands of Guam and Saipan, with students offering the survey to family and friends in the following age groups: 18-22, 23-29, 30-44, 45-64. The surveys were offered randomly at public places on the small islands of Rota and Tinian.

The survey attained very good statistical representation of Guam's population of 178,430 (US Census 2000) and the CNMI's population of 65,927 (Commonwealth of the Northern Mariana Islands, 2008), a total of 244,357 for the natural population of the Mariana Islands. With 1144 total study participants, 696 were from Guam and 448 from the CNMI, results attained 95% confidence with a 3.71 confidence interval for Guam and a 4.61 confidence interval for the CNMI. Following pattern analyses (literature, demographics information, socio-economic profile comparison and perception survey), results were summarized and hypotheses regarding the current mechanisms of culture change in this island chain were generated.

### **The Chamorro in the Marianas**

The Mariana Islands are a Pacific Island chain that runs north to south at 13 degrees north latitude and 144 degrees east longitude. The southernmost and largest islands of the Mariana chain are from the south Guam, Rota, Tinian and Saipan (see Figures 1-4 below). The volcanic islands lie on the edge of the Philippine plate, with the Marianas Trench to the east and Challenger Deep, the deepest spot on earth, off the southeastern tip of Guam. The islands are volcanic and limestone, and prone to draught, typhoons and earthquakes.



Figure 1. Guam's Ritidian Beach  
(Photo by Amy Owen)



Figure 2. Rota's Limestone Rocks on the Shoreline  
(Photo by Amy Owen)



Figure 3. Tinian's House of Taga with Large Latte Structures  
(Photo by Amy Owen)



Figure 4. Bonzai Cliff in Saipan (Photo by Amy Owen)

The Mariana Islands were populated by the Chamorro, who sailed there thousands of years ago. Oral in tradition and without a written language, post-contact accounts, archaeology, linguistics and genetic studies are used to piece together the cultural history. Post-contact histories, while useful, are often biased due to the very different cultures of the writers. Genetic study indicates original settlement from Southeast Asia (Lum and Others, 1998:613-622; Lum and Heathcote, 1998, Lum and Cann, 1998) and a close relationship to the people of the Philippine Islands (Budowle et al, 2000;459). Language studies, another way to trace origin, provide further evidence of commonalities with Indonesia (Murdock, 1988) and with the Philippine Islands (Topping and Others, 1975). This suggests migration from Southeast Asia/Malaysia to the Philippines and then on to the Marianas, likely using prevailing winds and currents to navigate proa canoes with lanteen sails (Cunningham, 1992:4-9) that were capable of very high speeds.

These islands lie in the northern sector of thousands of islands grouped by different ethnic origin into three regions – Micronesia, Melanesia and Polynesia (see Figure 5). A political boundary map (see Figure 6) reveals the US territory of Guam as separate from the rest of the Mariana Islands, the US Commonwealth of the Northern Mariana Islands, the CNMI.

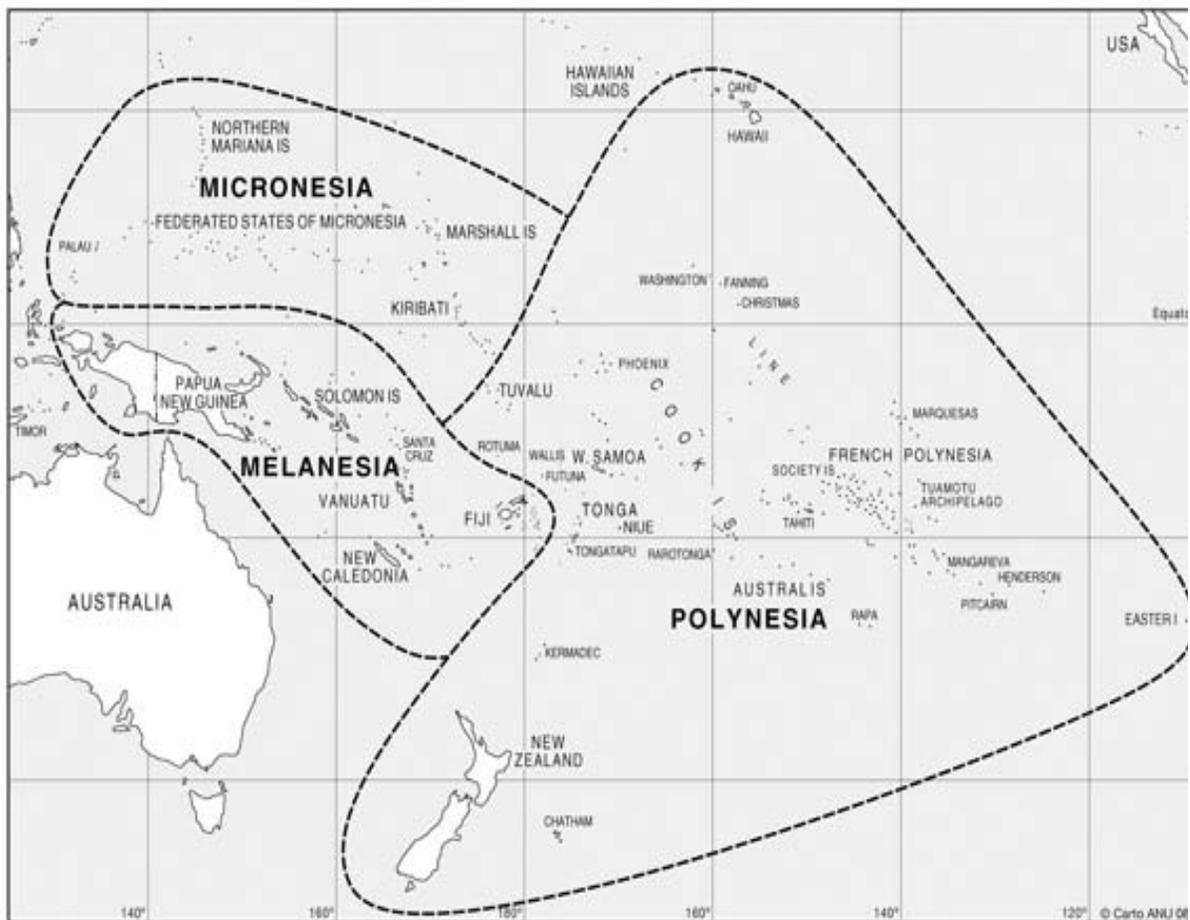


Figure 5. Three Major Ethnological Groupings in Oceania  
(Source: Australian National University (ANU), Research School of Pacific and Asian Studies)



Figure 6: Political Boundaries of Oceania  
(Source: National Geographic Society 1998-2003)

Although Guam falls within the larger ethnological grouping of Micronesia, it is also politically separate from former US Trust Territories; the Federated States of Micronesia (FSM), the Republic of the Marshall Islands (RMI) and the Republic of Palau (Palau). Each of these became sovereign republics, while Guam remains a US possession.

Genetic and linguistic studies are both useful in identifying the origins and movement of Pacific Island cultures with oral traditions. The settlement of Micronesia and Polynesia is sex based, meaning patterns can be classified by tracing different male ancestral lineages versus female lineages (Lum and Heathcote, 1998; Lum, 1998). In the case of the Chamorro of the Marianas, evidence suggests sex based genetic variation that differs from the rest of greater Micronesia. Mitochondrial DNA analysis, which follows the maternal line in populations, reveal that the people of the Marianas have not diverged much from origins in Asia, while the rest of Micronesia and Polynesia has (Lum and Heathcote, 1998). Tests for male DNA indicate current populations in Micronesia have contributions from Melanesia to the south whereas male DNA from people in the Marianas today is closer to Asian and Philippine Island populations. Further, population data supports evidence of an infusion of mostly male DNA from the Philippine Islands rather than from intermarriage with colonizing groups (Underwood, 1976). This genetic

and linguistic evidence that the Chamorro are distinct from the rest of greater Micronesia may explain why the Chamorro refer to the people from the Caroline Islands as “Micronesians,” and do not consider themselves as such.

Archaeological evidence suggests the Mariana chain was estimated to have been settled by the Chamorro 3,500 years ago, while the Carolinas were settled 1,500 years later (Rainbird, 1994:336). Although the Chamorro genetically and linguistically differed from their southern neighbors, trade was established early on with islands of the FSM and the RMI, known collectively as the Caroline Islands (see Figure 7).

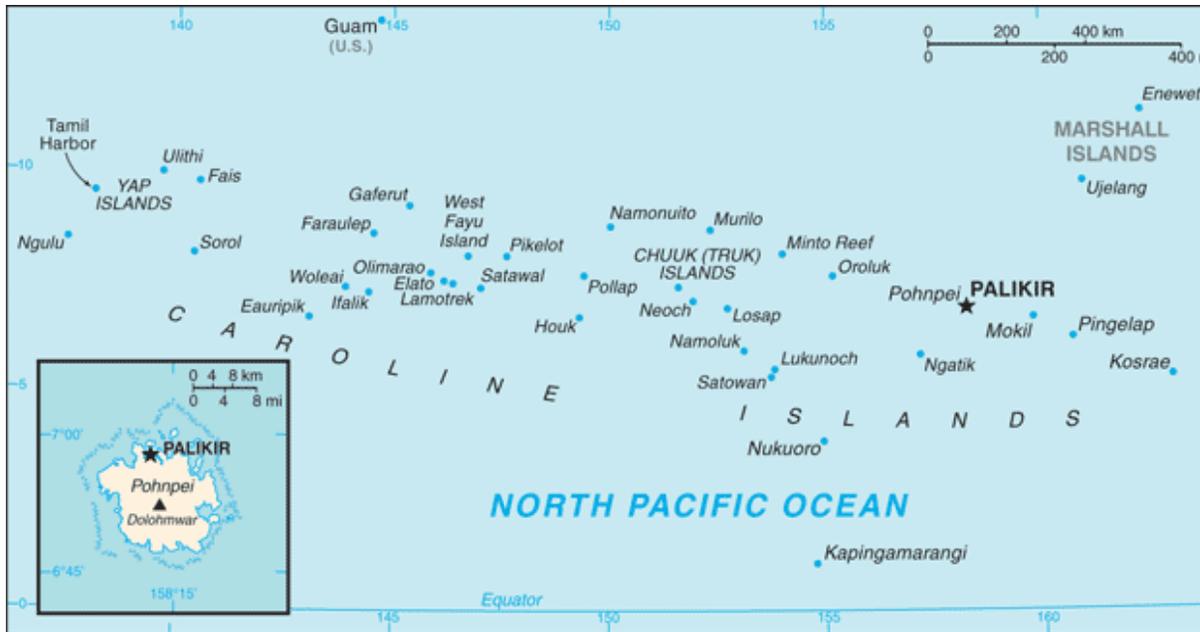


Figure 7: The Caroline Islands  
(Source: US CIA The World Fact Book 2010)

The Chamorro were a seafaring people that in early times shifted between and around coastal island sites in their watercraft (Rogers, 1995:31) to exploit favorable conditions and food sources (Rainbird, 2004:106) and later developed more sedentary inland village sites. The Chamorro lived in extended family groups on the inhabited islands that waged war against each other at times, and traded and communicated as well by sailing from island to island. Approximately 1,000 years ago the Latte period began, named for the construction of stone structures known as Latte, unique to the Mariana islands (Rainbird, 2004:110). These structures of pillar and capstone are thought to be the foundation of houses. Although latte type structures were found on all of the large islands, very large ones found on Tinian and unfinished in a quarry on Rota indicated possible competition between islands in developing the most prestigious sites. Latte are also associated with burial sites, especially those found along the coast (Graves 1986; Rainbird, 2004:121.). Midden remains indicate the diet of Chamorro before this period was taro and seafood, augmented by fruit bats and coconut crabs. During the latte period rice was introduced and likely used for special occasions and ceremonies rather than as part of the staple diet.

The clan based social structure of the Chamorro was ranked (Thompson, 1945:13, 14; Thompson, 1942:39, 45; Cunningham, 1992:89-90; Rogers, 1995:36-37) with a high and low caste that did not intermarry. The high caste had positions of authority and professions in boat building, sailing and war, living mostly on the coasts and to fishing zones. The lower class on the other hand, lived inland and instead of owning land worked it for the upper class. They were not allowed to learn the skills of sea fishing and diving, navigation, boat building or war – consigned instead to working the fields and were limited in social access to contact with the upper class.

Chamorro spiritual beliefs included reverence for the souls of ancestors. Skulls and certain bones were cared for and revered in and around homes and Latte structures, as well as used in the creation of spears and other weapons. Ancestor reverence has survived today in the belief the existence of *taotaomona*, or ancestor spirits (Souder, 1992:154, Cunningham, 1992:98-99; Rogers, 1995:38), though the Chamorro have been Catholicized by the Spanish.

Although much has been made of the strong role of women in ancient Chamorro society, the actual rules of society were highly complex and males had strong roles as well. Lawrence (1984:14-87) classified lineage, or descent as passed through females, or as matrilineal. He determined that Chamorro structure fit the requirements for strong clan structure. This clan type was classified as avuncular. Although descent is through the mother, brides went to live near the mother's brother who clearly had a powerful social role as well. Therefore, while children belong to the wife's clan, the husband has a lot of responsibility toward his sister's children. Property is passed through the mother's clan. Although the marriage bond was strong, marriages did not always last and either spouse remarried frequently. Society was based on strong social integration with a high degree of cooperation and strong social bonding that included blood ties as well as those bound by rules of descent rather than blood. Villages, made up of several family clan groups, were themselves a strong social unit and competed with each other socially.

In the islands, land is still passed through females and localized around males. Villages still compete with each other, have their own patron saints and village fiestas at certain times of year. During elections family clans get involved and make a lot of noise in celebrations and public events. Although a US Territory, political elections have far more to do with clan ties than party affiliations. In fact, although candidates take on a party, there is little meaning to the populace whether a person is Democrat or Republican and far more who their family is. Despite a switch to patriarchy, women are still strong community leaders and the maternal brother continues to play a large role in society. Catholic practices not found anywhere else in the world captures adapted ancient Chamorro spiritual beliefs and practices.

### **European Contact**

Contact with Europeans began an era of drastic and irreversible change for the Chamorro in the Marianas. Spanish vessels, traveling between colonial New Spain (Mexico) and the Spanish colony in the Philippines were the first recorded visitors (Rogers, 1995:10; Fritz, 2001:1-3). Cultural difference between the Spanish and Chamorro was immediate when Spaniard Magellan dubbed the islands the Thieves Islands because the Chamorro helped themselves to belongings of Magellan's flotilla. The Spanish system of private ownership conflicted with the community resource system of the Chamorro. Pre-colonial Chamorro culture, and oral tradition,

was documented only by Europeans (Driver, 1991;1992;1993), who did not have the same perceptions and worldview.

The islands became a way station for the Spanish en route to colonial headquarters in Manila in the Philippines and to the colonies in Mexico. Because the Spanish patriarchal society so differed from the cooperative, matriarchal, community and clan oriented Chamorro, descriptions were often biased (Goetzfridt, 2010). These extreme social differences ignited the Chamorro Spanish War in the latter half of the 17<sup>th</sup> century, when the mission in the Marianas became conversion to Catholicism (Hezel, 1982:137; Driver and Hezel, 2004). Violence martyred the famous priest San Vitores, who established the first church in the Marianas, as well as other priests. Both warfare and diseases introduced by the Spanish decimated the Chamorro population (Thompson, 1942:28-35; Hezel 1982:129; Marche, 1982). Many rebellious Chamorro were located in the northern islands, and so any remaining were moved to Guam (Hezel, 1988:137) and the northern inhabited islands were completely depopulated. Carolinians were allowed to settle there by decree of the Spanish Government on Guam in the early 1800s following typhoons and droughts in the Caroline Islands (Freycinet, 2003:212-213).

Through war and punishment for rebellion, most of the males were killed and females survived to intermarry with Spaniards, mestizos from Mexican Spanish colonies and Filipinos. The church was then insinuated into Chamorro culture at this time and many traditions were adapted into Catholic ritual and rite (Thompson, 1942:32-45). For instance, strict matriarchal clanship customs directed courtship and marriage, including preparation of young maidens for physical relations with males prior to marriage and freedom for wives to end marriages at will. What was traditional and proper for Chamorro in learning and initiation rituals before beginning marriage was abhorrent to the Spanish, who abolished these practices. The head of the family became male as was true in European society and women no longer had the freedom and power to divorce at will. The Church now took over the role of leadership instead of the complex clan system the Chamorro followed. The spiritual beliefs were entwined into church rituals for survival. The Chamorro belief that a spirit's ancestors wandered for 9 days until judgment, often causing mischief, became the 9 day Novena. Unique in the Marianas, prayers were offered every four hours for 9 days to hold spirits in purgatory. Chamorro language was infused with Spanish vocabulary.

By the turn of the century few, if any, Chamorro families remained. Spain's Empire was in decline and in 1898, during the Spanish American War, the US took Guam from the Spanish without a fight. The Americans replaced the Spanish in the Philippine Islands and on Guam. But Rota, Tinian and Saipan now began to live a different reality. They were purchased from Spain by Germany at the close of the Spanish American War, along with the nearby Caroline and Marshall Islands. Thus began the separation that rendered Guam politically, demographically and economically different from the CNMI, though the Chamorro people remained on all of the Mariana Islands (Farrell, 2005:117, 149-150).

### **Divergent Guam and CNMI**

While the northern islands lived under different administrations, Guam was heavily influenced by the US Navy since the turn of the nineteenth century. In many respects Guam

remains influenced by the military, while the northern islands have had a much different experience with the US as well as other occupiers.

Throughout Spanish colonization the Chamorro survived in large part by retaining close ties to family lands (Thompson, 1946:7-8; 1991:82-83). The US Navy governed Guam with a strong hand that brought American comforts and American culture to Guam in a rapid, then prolonged and persistent way (Hanlon, 1998:1-14, 51-54). Much of Guam, including a large percentage of Chamorro family land, was taken for military use and remains a sore spot with Chamorro families to this day. Under Naval Law, people were often treated for diseases or sent away from their families without consent (Hattori, 2004:189-192). Guam was experienced by many locals as a possession that lacked self governance, a constitution, human rights and citizenship (Thompson, 1946:10-11). The Naval government was perceived by the Chamorro as treating them as if they were unable to govern themselves (Hanlon, 1998:14, Thompson, 2002:560).

It was during wartime that the northern islands were to fall under a UN mandate to become part of a special US trust – events that forever altered the islands and separated them from Guam. Germany continued to administer the northern Marianas until WWI broke out. Through an earlier agreement between Japan and the British, the Japanese replaced the Germans in administration of the Marianas and Micronesia (Caroline and Marshall islands). Whereas the Germans had had little effect on the people of the northern Mariana Islands, the Japanese began to populate them with settlers. Then, in 1941 during WWII, the Japanese attacked Pearl Harbor in Hawaii. They soon took Guam from the US and began using the Pacific islands as a staging area for war against the US. The 3 years that the Japanese held Guam are remembered by the Chamorro as a traumatic and tragic period (Higuchi, 2001:35; Aguon, 2006; Aguon, 2007:34-37). In the northern Marianas, Chamorro families were considered by the Japanese to be part of their colony, while Guam's Chamorro families were considered prisoners. In Guam, the Chamorro were forced to dig munitions tunnels, were forced into concentration camps, beaten, beheaded and sent to Japan as POWs. Many died and many brutalities occurred, often at the hands of Chamorro from the northern Marianas that were loyal to the Japanese. This pitted Chamorro against Chamorro in acts of brutality and violence that are not forgotten today. The Americans did retake Guam in a campaign that began on July 21, 1944 on what is known today as Liberation Day. Although the Chamorro welcomed the Americans back both in Guam and the northern islands, solidarity was not to be.

Although the people of the northern Marianas expressed a desire to be reunited with Guam as part of the US, the US relationship with Guam was now of ownership and of the northern islands part of a larger trust agreement with distinct benefits to the US in each arrangement. Former Japanese holdings that included the Northern Marianas, the Marshall Islands and Caroline Islands (Micronesia), were part of a strategic trust territory assigned by the United Nations to the US. Within this Trust Territory of the Pacific Islands, the US had indefinite military access and under the Security Council the US held veto power. The Northern Mariana Islands wanted a more direct relationship to the US and negotiated commonwealth status with the US. A Covenant to Establish a Northern Marianas Commonwealth was adopted in 1975 and the new government of the Commonwealth of the Northern Mariana Islands (CNMI) took over in 1978. The other trust territories in the Congress of Micronesia elected "free association" status

with the US, which is vaguely defined and allows for immigration to the US and US territories along with social services and support in exchange for continued military access to the US. By the mid nineties the Republic of the Marshall Islands, The Federated States of Micronesia, and the Republic of Palau were free, independent entities under the free association agreement with the US, with benefits in their arrangement with the U.S. The Marianas were now a US Commonwealth, with rights, a vote in Congress and US responsibility to support. Guam has remained a territory of the US to this day, a possession with a more tentative tie and without the political power of a Commonwealth. Although there is confusion over political identity in both Guam and the CNMI, it is for different reasons.

### **Different Political Identities**

The political identity of Guam is as complicated as its relationship to the US. The Chamorro have strong cultural views on reciprocation of loyalty and favors and expect respect and support from the US in return for their loyalty and sacrifice of land and island.

Complex relationship between Guam and US: Though Guam was rescued by the US, the US had abandoned the island to the Japanese for three years. The rescue involved bombings that completely erased the village of Sumay from existence, another sacrifice as seen through the eyes of the Chamorro (Palomo, 1984:4-5; Oelke, 2007:26-27). Liberation Day, though it is celebrated by the patriotic Chamorro, thus evokes mixed feelings today (Palomo, 1984:201-233; Farrell, 2005:145-149). Although Guam remains a territory, effort has been exerted over time in self-determination or political development. Guam's Congress petitioned for an act that would provide citizenship for the local people and establish local governance, but hindrance by the Naval Governor resulted in a famous 1947 walk-out. Although the US Guam Organic Act of 1950 won civilian government provided territorial status (Cogan, 2008) Guam residents cannot vote for President and Guam has no vote in the US House (Underwood, 2009). Guam's small size and population have been used by Federal officials against political development or self-determination, toward independence as well as toward statehood (Hofschneider, 2001:208-209). Thus, when the Northern Marianas Islands became a US Commonwealth (CNMI) in 1975 (Aguon, 2006), it added to Guam's perception of being ignored. President Ford did approve Commonwealth status for Guam, yet it is thought by Guam locals that federal officials interfered and blocked it (Willens and Ballendorf, 2004:5-7). Commonwealth status, held by the CNMI but not by Guam, would alleviate the concern that the US could terminate citizenship at any time without consent. The local fear of abandonment stemming from wartime is reinforced (Bevacqua, 2005; Underwood, 2009). Socially, Guam's uncertain political status results in an identity crisis among Chamorro in the US mainland as well as in Guam (Perez, 2002:462-469). Guam's subjugated political status has fostered dependency and a negative self-concept on the island of Guam, which is reinforced by a colonial style education system and US minority policies which don't apply to the Chamorro, who are a majority in danger of losing their identity.

CNMI and US Commonwealth Status: The CNMI, on the other hand, does have a Constitution drafted by native people. It includes protections regarding practice of traditional medicine, limited police search and seizure, and of extreme importance in what has become a major difference between Guam and the CNMI, the stipulation that only people of northern

Marianas descent are to own property on the CNMI (McPhetres, 2010:162). While still in trusteeship, the US had made its headquarters in Saipan, affording locals in the CNMI a closer affinity with US government officials, fluency in English, education and government jobs (McPhetres, 1992:252). This gave them distinct advantages over people in other trust areas, especially Micronesian people that often lived on remote islands. A class distinction was quickly developed between the local Chamorro and the large immigrant Micronesian people, who were often landless and had fewer social and economic opportunities. Under the Trusteeship, the northern Marianas had been protected from outsiders and locals of these islands had enjoyed preferential treatment (McPhetres 1992:253-254). The Trust Headquarters in Saipan hired locals for government positions, and land was restricted to Trust citizens. When the CNMI became a commonwealth and its people became citizens, the status was equalized and mainland US citizens had as much right and power in the CNMI government as the locals, who are also US citizens. There has, in recent times, been tension between US mainlanders and local CNMI citizens, who see themselves as citizens with special circumstances. For instance, current US law is being questioned in cases of corruption – with a current judicial review questioning whether US law applies there. The confusion of identity is due to what it means to be a US citizen, which laws apply to the CNMI, and whether political leaders there are exempt from certain US laws. Another issue, although resolved now, created tension between local people and the US government. Passports and citizenship were denied to locals that had parents of outside nationality, creating more distrust and ill will.

### **Contrasting Economies**

The economic profiles of Guam and the CNMI are as distinctly different as their political identities and their relationship with the US. Guam's top economic sectors are the US Military and tourism (USCIA, 2010a).

Guam's hopes regarding US military buildup: Guam's boom and bust pattern has largely been tied to the activities of its powerful colonizers. Today, hopes and fears have currently arisen due to impending US military plans for expansion on the island. An influx of an estimated 40,000, including Marines, their families, support services is underway as a military base is moved from Okinawa. A joint effort between the U.S. and Japan, the effort could initiate a different way of life for the local population. While the buildup will undoubtedly bring in new money the question remains whether the local population of Guam will benefit from this funding bonanza. Although public support for the venture remains strong, a perception study revealed private concerns and uncertainty (Owen, 2010:312). While funds will no doubt be welcomed, many locals are concerned that benefits will be "within the fence" and not available off base to Guamanians. Land taking and loss of sites of historic significance remain contentious. Further loading to an already strained infrastructure, more traffic and loss of culture and island way of life are all now at issue.

Crash of Garment Industry and Immigration Changes in CNMI: In contrast to the hope and uncertainty of Guam regarding the buildup, the CNMI economy is now deteriorating. The CNMI's rapid decline is an example of how globalization forces can raise and smash economies. The garment industry had grown to a billion dollar industry there because it was a "haven for

cheap labor,” along with US exemptions on quotas and duty (Carnegie, 1998). The CNMI was allowed to enforce its own immigration per agreement with the US and has been accused of turning a blind eye to the entrance of illegal workers, many Chinese and other Asians. In addition, critics have cited worker abuses such as “shadow contracts,” which force workers to pay huge transport fees and are forced into indentured service for years, prostitution and forced abortions. In 1998 the population was approximately 30,500 US Citizens and 37,000 foreign workers, many of those illegal. The minimum wage was 3.05 USD and not heavily enforced. Recently, the US has enforced immigration and wage rules. In 2008, immigration control was turned over to the US, minimum wage raised and the favorable trade quotas and conditions for the US removed. The garment industry crashed and due to the worldwide recession that followed, tourism declined as well. Russians and Chinese, which were previously able to enter with visa waivers, were now excluded from the program. Most of the foreign workers left, many that stayed became prostitutes for survival (Islands Business 2007b).

Residents of the CNMI perceive the upcoming US military buildup as financial opportunity without the burden of change, hoping that activities ancillary to the buildup on Guam may be used to boost the flagging economy (Islands Business International, 2007a). The military has leased a portion of the island of Tinian, and it may be used for training troops (Marianas Variety, 2010). Although Guam prefers that local workers are utilized, workers from the CNMI may be brought in to Guam for construction if there are not enough and that would mean jobs for CNMI locals. It’s also possible that the incoming thousands may go to the northern islands for rest and relaxation, boosting the economy through recreation. This places Guam and the CNMI in competition for the buildup dollars. Whatever fears and uncertainties locals of Guam may have over the buildup, much hope rests on the slotted incoming funds. The economic situation on Guam is far better than it is in the CNMI, which teeters on the verge of collapse.

Currently, roads are being improved in Guam, and development projects are underway. In the CNMI, the last of 34 garment factories closed, ending the \$3 million per month revenue they once brought in as a result of immigration federalization and the raising and enforcing of minimum wage (Saipan Tribune, 2009). Tourism has become the sole source of revenue, yet the visa waiver program only includes Japanese and Korean tourists, not the sought after Chinese and Russians. The economic downturn is further hampering any hope of ending the downward spiral. On Friday, October 1, 2010, the CNMI failed to pass the budget by deadline and partially shut down (Saipan Tribune, 2010). Millions of dollars in grants, social projects and social program have produced dependency on the US for funding (McPhetres, 1992:259-260). Food stamp use is widespread, and often the use is more lucrative than working for the low minimum wage. Although there are requirements such as documentation, fund matching and audits that come with the money, at times requirements are waived for citizens of the CNMI due to expectations. The high unemployment rates and use of social support services is comparable to that in Puerto Rico, another US Commonwealth. The CNMI population, dwindling from the loss of the foreign workers, will likely lose more. Many could move to Guam, further swelling the rush of incoming people.

## **Different Demographic Realities**

Ethnic patterns vary between Guam and the Northern Mariana Islands, and much of it relates to the different economic forces and changes experienced by each as discussed above. While Guam's mix has been relatively stable over the past decades, change may come as a result of the expected military buildup. That of the northern islands is highly volatile and undergoing major changes at present due to the collapsing garment industry and changes in immigration policy.

Asian Workers in the CNMI: Since the 1990s and the garment industry boom, the CNMI has hosted a majority of Asian foreign workers, many of whom are Chinese and Filipino. It is difficult to accurately estimate the population after the recent collapse of the garment industry and the departure of many Chinese foreign workers. Some remain part of an informal sector that includes those that stay on illegally and get by on unregistered work such as prostitution and street vending. In addition to probable underestimation of the population, it is now undergoing radical and unpredictable shifts. There are 20,000 Overseas Foreign Workers, many of them Filipinos that have been here for 5 years or longer and have children that are US citizens born in the CNMI (Overseas Filipino News Worldwide 2010a). Their situation is precarious and they may be deported at any time at the end of their contract. Threatened with leaving family and children behind, they are calling for the US to approve citizenship or green card status (Overseas Filipino News Worldwide, 2010b). According to the 2005 HEIS report (Commonwealth of the Northern Mariana Islands 2008:S3), the last population survey conducted in the CNMI, there is an Asian majority there with the largest single groups Filipino (30%), Chamorro (23%), Chinese (16%), Carolinian (5%) and Caucasian (2%).

Guam Faces Loss of Chamorro Majority: Guam, on the other hand, has for reported single ethnic groups a Chamorro majority (37%) followed by Filipino (26%), Carolinian (8%), Caucasian (7%), and Chinese, Korean Japanese (6%) according to projections from the US Census for 2009 (2000: 295). The ethnic percentages have not changed much over past decades. However, if the military buildup is implemented, a predicted 40,000 people will enter soon. Significantly, those moving to Guam will be mostly Caucasian and Asian support workers, which may cause Chamorro to become a minority on the island. Although the majority is Chamorro, the criteria for determining and defining what is a Chamorro are not clear and of major concern is determining demographics using the data available. Historical evidence appears to suggest that the Chamorro, drastically reduced or wiped out by war, disease and typhoons, thereafter mixed with Europeans and Asians. Underwood's (1976:204-208) analysis of Spanish census records suggests a far greater genetic contribution by Filipinos, and is verified by genetic tests (Howells, 1973:274). It is therefore possible that many more Chamorro have a greater degree of Filipino ancestry than previously thought.

Class Stratification Remains: In both Guam and the CNMI, the Chamorro are the upper class ethnic group, the landed gentry. Filipinos are perceived as the second class and are often laborers or workers – though many are medical, technical and academic employees as well as business owners. In the CNMI, many Filipinos have taken work as maids and servants, often for Chamorro households. The class system may be incentive to claim Chamorro ancestry rather than Filipino or Asian ancestry. Carolinians, or Micronesians as they are often called, are the

lowest tier ethnic group as they are considered less educated and more apt to need and use the support services. In the CNMI, however, Carolinians that were established before the seventies were able to claim land and so have a higher status there than in Guam.

Chinese and Russian Tourists: Compared with Guam, many more Chinese and Russians have entered the CNMI in the past decades in order to work, develop businesses and for recreation. Chinese and Russian tourists are a fast growing emerging tourism market, which Guam and the CNMI now compete for. Currently, neither Russia nor China is included in the Visa-Waiver program and so tourists cannot enter except on a case by case basis. Both Guam and the CNMI seek 'parole' for Chinese and Russian tourists under the authority of the US Department of Homeland Security (Pacific Islands Report, 2010), which would stimulate economies and make both of them less dependent on US dollars.

The Chamorro Diaspora: According to the US Census (1980), of a total of 85,052 Chamorro, 47,690 lived in Guam, 6,667 lived in the northern Marianas and 30,695 on the US mainland. By 2000 (US Census 2000), of 135,233 total there were 61,922 Chamorro living in Guam, 15,071 in the Marianas and 58,240 in the US. The percentage of Chamorro living on the mainland increased from 36 percent to 43 percent during that period and grows each year. Chamorro move to the mainland mostly for economic opportunity. They are often immersed in a western value system that contradicts core Chamorro values such as cooperation, interdependence, interfamilial and extended family connections and ownership as well as status based on family support and community involvement. These are in conflict with western values that promote the nuclear family, individual achievements and ownership and accruing material goods for status. Of great concern to the Chamorro is a loss of culture. Loss of language is occurring rapidly, especially on the mainland, as the youth are taught the language less and less by their parents. Many Chamorro cultural rituals, beliefs and values were transmitted through the Catholic religion during the conversion by the Spanish as a way to preserve culture and adhere to directives from the Spanish priests (Bevacqua, 2005, 2010). Therefore, language and religious practice are thought to be key elements of Chamorro culture as perceived by Chamorro.

Today, there is a grassroots movement to restore and revive culture in Guam and the northern Marianas. Youth and women community leaders are at the forefront of a revival of dance, music, language, history and political self-determination that includes resistance against the military buildup and against loss of culture and traditional values. The perception survey was used to determine the important variables and patterns regarding culture and culture loss in Guam and the Northern Mariana Islands.

### **Survey: Cultural Perception Patterns in Guam and the CNMI**

In the survey sample of 1144 participants, 696 were from Guam and 448 from the CNMI. The sample size produces a high level of confidence in the results with a 3.71 confidence interval for Guam and a 4.61 confidence interval for the CNMI at a 95% confidence level. Although the sample provides excellent statistical representation of the populations of Guam and the CNMI, the sample groups of both contain more Chamorro, are younger and slightly more females than the actual populations (see Tables 1a and 1b). In the CNMI, the Asian population is underrepresented since immigrant workers may not be permanent residents and were not targeted

for this study. Of note, the actual population of Guam still retains a greater percentage of the native population, the Chamorro, than any other ancestral group (37%). In the CNMI, the percentage of Filipinos (30%) has surpassed the Chamorro ancestral group (23%).

Table 1a. Independent Variables: Participant Characteristics: GUAM

Independent Variable	Categories	% in sample	% in population
Sex	Male	44	51
	Female	56	49
Ethnicity	Chamorro	53	37
	Filipino	29	26
	Other Pacific Island	8	8
	Other Asian	4	6
	Caucasian	7	7
Age Range	18-22	34.2	8
	23-30	18.7	11
	31-44	20.7	19
	45-63	21.9	18
	64 and older	4.5	8
Income Range	Less than 15,000	34.7	**53.6
	15,001-25,000	19.4	17.8
	25,001-35,000	13.9	11.8
	35,001-45,000	9.8	7.0
	Over 45,000	22.2	9.8
Education Level	High School or less	8.3	*
	High School Graduate	61.9	*
	Bach or Assoc Degree	25.5	*
	Graduate Degree	3.2	*
	Terminal Degree	1.0	*
Religion	Catholic	82.8	*
	Protestant	2.3	*
	Other	14.9	*

Source: US Census 2000

\*no data

- zero or rounds to zero

\*\*income data from Government of Guam 2009

Table 1b. Independent Variables: Participant Characteristics: CNMI

Independent Variable	Categories	% in sample	% in population
Sex	Male	43	47
	Female	57	53
Ethnicity	Chamorro	53	23
	Filipino	24	30
	Other Pacific Island	16	14
	Other Asian	4	23
	Caucasian	4	2
Age Range	18-22	45.6	6.8
	23-29	14.0	13.2
	30-44	22.2	29
	45-64	16.6	17.7
	65 and older	1.6	2.2
Income Range	Less than 15,000	63.5	44.4
	15,001-25,000	17.1	18.8
	25,001-35,000	6.9	11.0
	35,001-45,000	8.6	7.2
	Over 45,000	3.9	17.9
Education Level	High School or less	5.1	*
	High School Graduate	65.3	*
	Bach or Assoc. Degree	24.7	*
	Graduate Degree	4.2	*
	Terminal Degree	.5	*
Religion	Catholic	78.6	*
	Protestant	2.6	*
	Other	18.8	*
Island of Residence	Saipan	79.0	91.9
	Tinian	10.5	4.3
	Rota	10.5	3.4

Source: Commonwealth of the Northern Mariana Islands 2005 HEIS Report (2008)\*no data

The participants were asked nineteen questions related to cultural practice, cultural perception and culture change factors as determined from the historic and socioeconomic comparisons. Sixteen questions provided scale variable data because they used a sliding scale that represented percentages, while four questions required a yes or no answer and provided nominal type data. Table 2 compares the mean percentages and frequency of yes and no answers for Guam and CNMI participants. When examining mean scores and frequencies, Guam and the CNMI have similar scores for many of the questions. Language usage and keeping of traditional culture appear at first glance to be two areas where they differ. Statistical analyses and comparison of the Guam data sets with the CNMI data sets reveal more complex patterns.

Table 2: Dependent Variables: Descriptive Characteristics of Guam and CNMI Compared (means for scale questions and percent for yes/no questions)

Question	% Guam	% CNMI
% Time participant uses computer	62	58
% Time participant uses cell phone	61	59
% Time participant speaks ancestral language	39	59
% Time participant speaks English	85	78
% Time family speaks ancestral language	56	73
% Time family speaks English	82	72
% Time participant shows respect to elders (kissing hands/face)	77	73
% Time participant attends church	53	50
Whether family practices <i>chinchule</i> (yes or no)	35 yes 65 no	37yes 63 no
Whether participant practices <i>chinchule</i> (yes or no)	24 yes 76 no	21 yes 79 no
% Participant believes Nepotism is positive	53	46
% Participant believes US going to war to fight for democracy is good	50	53
% Participant believes culture will survive into future	65	63
% Participant keeps traditional culture	64	67
% Participant believes children will keep traditional culture	53	58
Participant is aware of new CNMI immigration policies (yes or no)	37 yes 63 no	80 yes 20 no
% Participant believes US deporting immigrants is positive	54	48
Participant is aware of military buildup on Guam (yes or no)	96 yes 4 no	83 yes 17 no
% Participant is positive regarding the buildup	56	61

For comparison of two continuous scale data sets, Pearson’s Correlation Coefficient was used. Moderate to strong (+ or - .4 through 1.0) correlations were reported. For comparing the relationship between 2 sets of categorical data, Chi-square test of independence was used. For the independent variable sex, a two level data set compared with a continuous data set, Mann

Whitney U Test was used. For comparing age groups with continuous data sets, one-way ANOVA was chosen.

### The Age Factor: an Island Wide Pattern

Of all of the variables explored in this study, age is the strongest and most significant indicator of culture change. Significant differences occur among the age groups in the areas of technology use, religion, language use, and cultural attitudes.

Youth and Apparent Loss of Major Culture Traits: There is a strong, inverse pattern of correlation that occurs with age and technology that is not surprising. Of significance, however, is that the pattern is island wide and does not differ between Guam and the CNMI. Throughout all of the islands, the older people get, the less they use cell phones and computers. When the age groups are compared, the youngest tested age groups (18 to 30) used computers an average of 70% of the time while the oldest two groups (45 and older) used them from 17 to 48% of the time. Cell phone use ranged from 69% of the time with the youngest group to 17% with the oldest group. This similarity in pattern of technological use is consistent throughout the islands, despite the differing colonial and neocolonial treatments the islands received by Japan and then the United States. Along with age being a factor in technological use throughout the islands, there is a compounding effect – the more a person uses a cell phone the more they are apt to use a computer.

A pattern with youth also occurs on an island wide basis in relation to the practices of language and religion. Religion as a practice is considered a basis of culture in the Mariana Islands since culture transfer occurred through religion during the Spanish Conversion era. When means of age groups are compared, differences are significant. There is a strong downward trend for youth to attend church less than the older age groups. The youngest group attends church 47% of the time, while the oldest attends 62% of the time. There is also a strong downward trend in practice between the age groups regarding language use. The youngest group speaks the ancestral language 37% of the time while the oldest group speaks the ancestral language 77% of the time. The youngest group speaks English a mean 89% of the time while the eldest group speaks English a mean 61%.

Table 3: One Way ANOVA

Independent Variable	Attend Church	Ancestral Language	English
Age Groups	.00	.00	.00

The practice of practicing *chinchule*, or keeping track of a favor deserving of a gift of reciprocity is a known cultural practice which began with the Chamorro and is visible as an indicator in these islands of traditional cultural practice. Age group mean score comparisons of practicing *chinchule* shows significant difference between groups, with a mean of 17% of the youth practicing and the eldest a mean of 50% practicing. These trends are all disturbing as they may indicate loss of ancestral culture. As further evidence that youth may be experiencing culture loss, there is a negative pattern of retention of traditional culture reported among the youth. The mean score of the youngest age group shows a strong significant difference in

comparison with older age groups. The youngest group reports a mean 61% retention and the eldest group reports a mean 80% retention. These strong indicators, taken together, are indicators of strong culture change occurring in the youth.

Table 4: Chi-Square\* and One Way ANOVA\*\*

Independent Variable	Practicing <i>chinchule</i>	**Retaining culture
Age Groups	.00*	.00**

While it is clear that the youth use technology more and are not selecting for many of the traditionally ancestral culture traits, there is also evidence that retention of culture is important to the youth. In addition, they may find other ways of adapting, of retaining the traits they deem important.

Youth and the Importance of Culture: In a previous study on Guam, the youth were determined to be the most negative in perception regarding the upcoming impact on the military buildup (Owen, 2010:313-314). In fact, they cited destruction of culture as the major reason that they felt this way. Indeed, a large surge of incoming American troops, family and support will change the island and island culture. This study confirms the earlier results, along with the added information that this is an island wide trend throughout the Mariana Islands. Positivity differs by age regarding the military buildup throughout the Marianas, with the youth the most negative and most passionately against the military buildup.

Further, the youth have retained the cultural trait of “showing respect,” which they perceive is of importance culturally. These results show that the youth, while “losing” certain cultural traits such as language, going to church (where early spiritual beliefs were transmitted) and practicing *Chinchule*, are very concerned about culture and have retained trait(s) that they deem important.

Table 5: One Way ANOVA

Independent Variable	Positivity on US military buildup	Showing of respect
Age Groups	.00	.032

### Other Island Wide Trending

Culture Transfer Through the Family Regardless of age, people throughout the Marianas share similar attitudes regarding familial roles in transfer of traditional culture. Throughout the islands there is a strong correlation between how much an individual keeps or hangs onto traditional culture and how much one’s family does.

Table 6: Pearson r Values, all participants

	% culture children will keep
% traditional culture kept	.649*

\*Correlation is significant at the 0.01 level

This, along with the common early history described above suggests a strong retention of Asia/Pacific, specifically Chamorro, cultural attributes as described earlier. This evidences the strong ongoing importance of cultural transfer between family members and ancestry, something that has remained throughout in these islands from pre-colonial times. There is a moderate correlation between how much a person’s family speaks the ancestral language and how much the individual speaks the ancestral language.

Table 7: Pearson r Values, all participants

	Individual speaks language
Family speaks language	.466*

\*Correlation is significant at the 0.01 level

There is also a moderate correlation between how much an individual speaks the ancestral language and how much an individual retains the traditional culture.

Table 8: Pearson r Values, all participants

	Individual retains culture
Individual speaks language	.443*

\*Correlation is significant at the 0.01 level

Finally, there is a perception of cultural survival that is associated with passing it on to one’s children with a moderate correlation between the belief that one’s children’s will retain the culture and cultural survival in the future.

Table 9: Pearson r Values, all participants

	Culture will survive in the future
Children will retain the culture	.370*

\*Correlation is significant at the 0.01 level

Facing Culture Loss, Native Chamorro at Risk: Analysis of patterns in the ancestry factor reveals the Chamorro face a significant threat of loss of culture throughout the islands. There are strong significant differences when the responses of Chamorro are compared with immigrant groups. Excluding Caucasians, the Chamorro speak English more. Of all major ethnic groups, they attend church less.

Table 10: One Way ANOVA

Independent Variable	Speak English	Attend Church	Culture will survive
Ethnicity	.069	.000	.000

They are also the most pessimistic of all of the groups on the island (including Caucasians) that their culture will survive into the future. However, although Chamorro face culture loss through loss of language – there is evidence that other cornerstones of Chamorro culture remain strong. For instance, mean comparison for showing of respect remains significantly strongest among the Chamorro at 87%, with the other groups ranging from 38% to 69%. Chamorro have families significantly more likely to practice *chinchule* than other groups, compared to mean of 17% to 42 percent in other groups.

Table 11: One Way ANOVA

Independent Variable	Culture will survive	Showing of respect	Practice <i>chinchule</i>
Ethnicity	.00	.00	.00

Finally, the Chamorro, like the youth, are the most pessimistic ethnic group throughout the islands regarding the impending buildup of US military troops. There will be many people moving to the island in a short period of time, and they will likely be non-Chamorro. This may have the effect of transitioning the Chamorro into becoming a minority. Mean positivity regarding the military buildup is lowest among the Chamorro (55%). The Chamorro also differ in that they are the least positive in feeling good about America sending out troops for fighting, even for “good” causes such as democracy. The low mean positivity (48%) is surprising, since the Chamorro are among the highest in US military enlistment and service rates.

Table 12: One Way ANOVA

Independent Variable	Positivity on US military buildup	Positivity regarding US “wars” and fighting
Ethnicity	.00	.00

The Gender Difference: Variations occur between the sexes in patterns that run throughout the islands, with females attending church significantly more than males and speaking the ancestral language a greater percentage of the time than males.

Table 13: Mann Whitney U Test\*

Independent Variable	Attending church	Speak language
Gender	.026*	.005*

\*2 Tailed

This is in keeping with historical Chamorro culture in the islands, where the matrilineal and matrilocal society was converted to Catholicism and made to conform to a patriarchal society. Additionally, when the population crashed, males perished at far higher rates and females were left to pass on the culture. Since much of it was transmitted through the church, it makes sense that females would attend church more than males. With language being another cornerstone of culture for all ethnicities in Guam, language use, both ancestral and English, is greater in females. These results, taken together, suggest that the indigenous island group, the Chamorro, are selecting traits of importance to pass on as well as adaptive traits to ensure survival. It appears the Chamorro, though most pessimistic about culture loss, continue to retain their idea of “Chamorro-ness” in this way. They appear to take the lead in the selection of culture traits, which are diffused and adapted throughout the islands and the immigrant groups. Could it be that Filipinos, other islanders and Americans on Guam are “Chamorized?”

### Guam More “Westernized”

Locals of Guam use computers a significantly greater percent of the time than in the CNMI. Both they and their families speak the ancestral language less and English more in Guam than in the CNMI. Locals perceive that their children will keep the ancestral culture a significantly lower percentage of time in Guam than in the CNMI. They are more pessimistic regarding the military buildup in Guam. And yet, locals of Guam report the showing of respect a significantly greater percentage of the time than do the people of the CNMI, a strong core Chamorro cultural trait. These patterns, along with the strong patterns found throughout the islands and discussed above, indicate that people of Guam are more western in lifestyle than in the CNMI. However, while they are more westernized and fear culture loss more, they appear to retain core adapted Chamorro culture values of family importance, strong females roles in family and community as well as the showing of respect.

Table 14: Mann-Whitney U Test\*

Dependent Variable	Guam/CNMI Difference
Use of Computers	.006
Speaking ancestral language	.000
Speaking English	.000
Perceive children will keep ancestral culture	.010
Military Buildup Optimism	.019
Showing of respect	.002

\*2-Tailed

Between Island Perceptions: While mean cell phone use is highest on the island of Saipan (61%) in comparison with Rota and Tinian (51 – 52%), Saipanese believe their ancestral culture will survive into the future a higher mean percentage of the time (66%) than do those in Tinian (54%) and Rota (52%). Yet, mean percent of the time participants practice *chinchule* is significantly higher in Rota (35%) and Tinian (34%) than in Saipan (17%).

These between island differences may be attributed to the different colonial histories and treatments, as well as wartime experiences. In the actual cultural practices that are indicative of cultural retention, the smaller islands of Tinian and Rota appear to be keeping to traditional culture at a higher rate. But why are those in Saipan most positive about retaining culture and those on the smaller islands most negative? It is likely that the families on the smaller islands have traumatic memories that go back in time. Memories of wartime and being colonized by Spanish, Japanese and German may increase the concerns of people in the smaller islands that culture may be lost due to outside influences. Saipan, with its huge immigrant population, its dependence upon “cargo” funds from entities such as the US. In addition, there is the huge and inflated government sector that employs so many and that so many families depend on. The government in Saipan is currently threatening to go bankrupt following the changes in immigration laws that affect the garment and tourism industries and this may render the Saipanese more hopeful that military funds will save the economic crisis. Positivity regarding the military buildup is significantly highest on Rota (72%), followed by Tinian (60%) and Saipan (58%), all higher than positivity regarding the buildup on Guam.

Table 15: Mann-Whitney U Test\*, Chi-Square Test\*\*

Dependent Variable	CNMI Inter-island Differences
Use of Cell Phones	.035*
Perceive ancestral culture will survive	.002*
Practice <i>chinchule</i>	.002**
Military Buildup Optimism	.011*

\*2-Tailed

These results, along with those of the previous Guam study, provide strong indication that the youth are the strongest variable when it comes to culture change. The Chamorro, while “losing” certain core traits, seem to be continuing to adapt in the survival of the important ones and to be diffusing these throughout immigrant ethnic groups that arrive in the islands. That the patterns are island wide is surprising and in spite of the very different colonial and wartime treatments, political and socioeconomic situations. Differences that do occur between the islands appear to be attributable to these different profiles.

### Summary of Cultural and Cultural Change Patterns in the Mariana Islands

1. Perceptions regarding traditional culture and the retention of culture are remarkably similar throughout the Mariana Islands. Although those on Guam are more “westernized,” there are similar patterns of retention of core cultural values.
2. The youth are the strongest variable indicating culture change patterns throughout the Mariana Islands, as first reported in an earlier study of Guam. They are most passionately pessimistic about the military buildup and view it as a threat to culture.

3. The Chamorro, indigenous culture of the Marianas, speak English less, go to church less, use technology more and are more pessimistic about the loss of their ancestral culture than are Filipino, other Asian and other island immigrant groups.
4. However, the Chamorro select for culture traits of importance such as family, the showing of respect, the importance of women in society and family.
5. These traits appear to be taken on by immigrant groups throughout the islands, despite the demographic, economic and political differences between Guam and the CNMI.

The patterns of culture change and adaptation appear to be island wide in trend for the most part. This study, along with an earlier Guam study, confirms age as the most important variable, specifically the youth. The fact that the CNMI has a different colonial history, pattern of outsider influence and especially treatment by the US does not seem to be a major factor. The youth, high technology users from birth, may be exhibiting new and different ways of culture adaptation. This generation, a global networking generation from birth, have less need and use of traditional language.

Accepted major culture traits such as going to church and the keeping of reciprocity records seem to be “dropped,” yet others, such as the showing of respect are selected. Culture is undoubtedly of high importance to these youth. Although they accept diversity and technology they do not want a troop surge because it threatens the island with culture loss.

The importance of family in these islands remains ever strong and the youth select their traits from the family. The Chamorro, the indigenous group in these islands, are currently being threatened with becoming a minority. They do show high levels of concern over loss of their traditional culture and the greatest pessimism over things that may hasten the change such as the military buildup. The middle age group, especially, is threatened with the loss of language and yet retains the traits of importance such as the high value placed on family, cooperation, remembering to respect and reciprocate (though records are not kept), the passing of culture through family, and the important roles of females. The role of the church is diminishing as passer of many traits, but the family and extended family continues in this role. Throughout history, the Chamorro have often survived by passing of the core traits while conforming to the most pressing culture changes brought in by the powerful “western” entities that colonized and ruled. Here, in neo-colonial times and as a US territory, the pattern appears to be continuing. But surprisingly, is continuing throughout the islands rather than only on Guam or only in the CNMI, despite the different political and economic treatments by the US and the differing situations that have resulted.

The differing political and economic situations between Guam and the CNMI do appear to produce some attitude differences. These differences, for the most part, do reflect the respective political climate and economic forecasts discussed above. In the CNMI, the change in immigration laws, loss of the garment industry and many Russian and Chinese tourists leaves the bloated government sector, which is now in trouble. The expectation of guaranteed government positions, as well as dropping of windfall funding from the US promotes an attitude of hopeful expectation in the CNMI that the military buildup will benefit their economy. The locals of Guam, who are more pessimistic, are the most affected by the buildup. The increased traffic and

strained infrastructure may signal a diminished quality of life that could be permanent. There is fear that the funding may benefit only the incoming military and support, without benefitting locals. The differing treatment of the CNMI and Guam, ending in US Commonwealth status for the CNMI and continued US Territory (possession) status for Guam, results in far greater political insecurity in Guam.

In conclusion, this study provides new information on patterns in cultural change and adaptation today by examining an isolated island chain with a shared environment as well as a shared early culture. Although history and differing colonial treatments have rendered the islands with distinctly different politic and socio-economic realities, the culture bases of the original group are continuing to be passed along, though the mechanisms are now different. Instead of the Church, the Chamorro extended family, clan, community system selects for the traits. They are diffused through the populace. The youth are the initiators of change and selection, but they select from the family pool, their “well” of knowledge.

It is hoped that this work will contribute to the understanding of culture change in the greater Pacific region and beyond. These patterns may have worldwide significance. Changing socio-political events the world over, with surprising waves of change initiated by the youth, suggest that this may be the case.

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