

Indigenous Hawaiian Cartographer: In Search Of Common Ground

Maps, and the ability to spatially organize the place we live, are basic necessities of human survival and may very well be “one of the oldest forms of human communication”. Whether they are derived from scientific or mythological impetus, maps do the same thing – they tell stories of the relationships between people and their places of importance. Every map is a blending of experience, theoretical concepts, and technical craftsmanship; “constructions of reality”; representations of the environment as seen by the societies that create them. The way people experience their environment and express their relationship with it is directly linked to their epistemology, which in turn indicates how knowledge is processed and used. Indigenous and Western science share many similar characteristics, yet are distinctly different in ways that affect how geographical information is communicated. Hawaiian cartography is an “incorporating culture” that privileges processes such as *mo’olelo* (stories), *oli* (chant), *’ōlelo no’eau* (proverbs), *hula* (dance), *mele* (song) and *mo’o kū ‘auhau* (genealogy). This article describes and defines Hawaiian cartography, identifies the internal struggles an academic Indigenous Hawaiian cartographer shares with other Indigenous scholars attempting to negotiate different epistemologies, and presents three autoethnographic Hawaiian cartographic projects that are necessary steps in resolving the differences between Western and Indigenous epistemologies.

I tend to differentiate between a “Cartographer” and a “Map-maker.” A Cartographer is someone who makes a map by applying cartographic, geographic, aesthetic, and graphic design principles. A Mapmaker is someone who uses the default settings in the GIS software. (Anonymous)

Demand for maps of all kinds and formats continues to increase while the turnaround time to produce these maps has decreased. Not long ago there were, and still may be some people that kept street maps in the glove compartment, mounted general reference maps on their walls, and rotated the thematic map insert from National Geographic when the new one arrived. Today, however, there are software programs that allow people to download a street map into their cell phone or Personal Digital Assistant (PDA), to create customized general reference maps of an area to be visited, or to generate thematic maps of gross sales across the country. Contemporary map-making is caught up in the whirlwind of scientific and technological development driven by a market economy. As long as it remains profitable, the market will continue to provide point-and-click mapping software for users with little or no cartographic training.

Not to dispute Wood’s witty (dis)regard for the usefulness of the modern cartographer, (Wood and Fels, 1992:193-4), there is a concern among academic and professional cartographers that software developers are

*Renee Pualani Louis
Department of Geography
University of Hawai‘i
at Mānoa*

INTRODUCTION

“Every map is a blending of experience, theoretical concepts, and technical craftsmanship; ‘constructions of reality’; representations of the environment as seen by the societies that create them.”

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making it too easy for lay or hack cartographers to “select an inappropriate projection or a misleading set of symbols.” (Monmonier, 1996:2) Furthermore,

...unintentional cartographic self-deception is inevitable. How many software users know that using area-shading symbols with magnitude data produces misleading maps? How many of these instant mapmakers are aware that size differences among areal units such as counties and census tracts can radically distort map comparisons? (Monmonier, 1996:139)

Yet, these same mapping and GIS software products provide indigenous people with the economic and technologic capabilities a sense of empowerment. Indigenous people are creating maps in their own language, maps crammed with place names that fill the blank spaces and make an area appear less desirable for development, and maps sensitive to their own cultural and spiritual traditions. When indigenous people understand those cartographic techniques used in depicting their social and cultural condition, past or present, and are enlightened to what maps are capable of and where the “power” of the map resides, they not only become cartographically empowered, they must also deal with academic marginalization. Finding a niche from which Indigenous scholars can maintain cultural essence and academic veracity becomes a constant Herculean feat.

This work describes and defines Hawaiian cartography, it identifies the internal struggles an academic Indigenous Hawaiian cartographer shares with other Indigenous scholars attempting to negotiate different epistemologies, and it presents three autoethnographic Hawaiian cartographic projects that are necessary steps in resolving the differences between Western and Indigenous epistemologies.

Cartography – Perceptions of Reality

According to Robinson and Petchenik,

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cartography is generally restricted to that portion of the [mapping] operation often termed ‘creative,’ that is concerned with the design of the map, ‘design’ being used here in a broad sense to involve all the major decision-making having to do with specification of scale, projection, symbology, typography, color, and so on. (Robinson and Petchenik, 1976:19)

The International Cartographic Association (ICA) takes a broader view of cartography as a “discipline dealing with the conception, production, dissemination and study of maps in all forms” (ICA, 1995, quote from web page). Furthermore, a map is “a symbolized image of geographical reality, representing selected features or characteristics, resulting from the creative effort of its author’s execution of choices, and is designed for use when spatial relationships are of primary relevance” (ICA, 1995, quote from web page).

There are probably as many definitions of cartography as there are cartographic texts. The important distinction each of the above definition makes is specific to maps as an end product. However, when dealing with a type of map that is not a material artifact, the artifact is either excluded by Western culture definitions of a map, or parallel definitions exist in both Western culture frameworks and in an indigenous framework.

Rundstrom's (1991) "process cartography" provides an alternative to the map as end-product.

[Process cartography] consists of two concentric ideas. It situates the map artifact within the mapmaking process, and it places the entire mapmaking process within the context of intracultural and intercultural dialogues occurring over a much longer span of time. (6)

Process cartography is the result of Rundstrom's interests in the cartographies of 'incorporating cultures' as opposed to 'inscribing cultures', terms he borrows from Paul Connerton's (1989) book, *How Societies Remember*. Rundstrom (1995) summarizes:

Incorporating cultures traditionally emphasize oral communication and other performance-based modes (e.g., dance, painting) in transmitting all sorts of meaningful information. The actions, lasting hours or days, carry greater meaning than any object they produce. In contrast, inscribing cultures hold and fix meaningful information years after humans have stopped informing, and typically must do so by means of some object (e.g., maps, GIS). Storage is crucial, and leads to stasis and fixity. (51)

Such an incorporating culture can be found in Hawaiian cartography. Like the Maori, pre-contact Hawaiians had a clear understanding of the world they lived in and communicated their perception of the world orally (Kelly, 1999:1). Hawaiian cartographers privilege process by incorporating their understanding of their island setting into their *mo'olelo* (stories), *oli* (chant), *'ō lelo no'eau* (proverbs), *hula* (dance), *mele* (song) and their *mo'o kū 'auhau* (genealogy). This is a form of cartography categorized by Woodward and Lewis (1998) as "performance or ritual cartography" and may "take the form of a nonmaterial oral, visual, or kinesthetic social act [in order] to define or explain spatial knowledge or practice." (Woodward and Lewis, 1998:4)

In Hawaiian cartography place names are mnemonic symbols. Place names performed in daily rituals are a conscious act of re-implanting genealogical connections, re-creating cultural landscapes, and re-generating cultural mores. Those performing these traditional practices deliberately incorporate familiarity, awareness, expertise, and fluency of the spatial relationships of their environments thereby communicating cartographically. Sharing the names and meanings of places is a conscious act of cultural regeneration as Hawaiians are 'people of locality' (Johnson, 2003a). They continue to write their culture on the landscape and use place names as mnemonic symbols to encode their knowledge of the environment in a cognitive cartography (Basso, 1996).

With the introduction of the Western cartographic tradition, many Hawaiian place names became the (un)intentional victims of epistemological difference. By adopting Western cartographic techniques and accepting them as better representations of physical reality, native Hawaiians unwittingly lost many place names of cultural significance in these alien cartographic products.

Maps "are constructions of reality, images laden with intentions and consequences that can only be studied in the societies of their time" (Andrews, 2001:36). They are representations of the environment as seen by the societies that create them. The environment is a social construction and different societies have distinct and sometimes unique ways of thinking, perceiving, and relating to it. In "some cultures, or within particular

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worldviews (ways of thinking), the environment can include the dead, one's ancestors and/or other entities from the 'supernatural' realm, such as gods, goddesses, spirits, angels, ghosts, etc" (Barry, 1999, 21). This means that each culture or worldview has and uses its own "symbolized images" and "geographical reality" to represent the world as they know it using "selected features or characteristics, resulting from the creative effort of its author's execution of choices". (Recall the definition of a map earlier in this article from ICA, 1995)

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The Hawaiian environment includes *nā kūpuna* (elders and ancestors), *akua* (gods and goddesses), and *aumākua* (spirit guardians) as part of the framework of how Hawaiians experience their geographic reality. Hawaiian reality "challenges the assumption that we learn **only** [my emphasis] by observable sensory input and not in a more mystical phenomenological way" (Meyer, 1998a:40). Hawaiians do not separate the physical from the metaphysical. Instead, they mix observable events with supernatural phenomenon in order to explain the world they live in. Wood identifies the way Hawaiians understand the world and express themselves therein as a "polyrhetoric, which emphasizes the multiple, shifting, and context-specific meanings this discourse constructs" (Wood, 1999:129-130). It is distinctly different from the discursive strategies of positivist science as a "monorhetoric" where representations of the world are composed of a singular, linear, visible reality (Wood, 1999:129-130).

The way people experience the world and express themselves in it is tied directly to their epistemology, which in turn indicates how knowledge is processed and used in an Indigenous science (cf. Meyer, 1998b; Roberts, 1996; Smith, 1999; Waddell, 2000; Gegeo, 2001, 2002). Roberts (1996) indicates that Indigenous science in the Pacific and Western sciences are "distinct but not necessarily entirely dissimilar knowledge systems" (59). Both gain information by observation over time, make use of models or theories to predict possible outcomes to particular situations, and involve explanations of cause and effect as an important component. However, Indigenous sciences include subjective sources of information and consider qualitative information relevant to their information gathering. It also tests and explains either predicted or anomalous results in different ways. Tests "largely involve trial and error 'experiments' under natural, uncontrolled conditions" (63) and explanations frequently make use of "metaphor, personification and symbolism to embellish and sometimes encode the explanation." (Roberts, 1996, 64) Lastly, the knowledge gained by Indigenous science is not meant to be an objective representation; instead, it is a culturally and geographically rooted presentation meant to impart not only the knowledge itself but also ethics and morals. "By providing standards of conduct for each individual in that society, it helps maintain social stability, order, self and cultural identity" (65).

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Similarly Cajete (2000) presents Native science as "the collective heritage of human experience with the natural world" (3). Its "ultimate aim is not explaining an objectified universe, but rather learning about and understanding responsibilities and relationships and celebrating those that humans establish with the world" (79). Native peoples have accumulated a vast amount of knowledge about the places they have occupied for centuries and have traditionally used their landscapes in ways that guaranteed their cultural survival. They did so by maintaining and celebrating relationships with all entities of nature, aspiring to live according to an "ideal reciprocity with the landscape guided by cultural values, ethics, and spiritual practice. Living a life of relationship through ethical participation with nature is the ideal behind the practice of Native science and its orientation to place" (183).

The basic differences between Indigenous and Western sciences are embedded in their epistemologies. While Western science has developed along the line of objective/subjective separation, Indigenous science has developed in an objective/subjective union. This has direct affect on how geographical information communicated, either by representation or presentation. Maps are representations of geographical information in a Western cartography. Poetic narration and body movement are presentations of geographical information in Indigenous Hawaiian cartography. How does the Indigenous Hawaiian cartographer, or any Indigenous researcher, find common ground from which to express or deal with the internal battle between epistemologically diverse cultures?

The margin: perceptions of myself

Cradled in one culture, sandwiched between two cultures, straddling all three cultures and their value systems, *la mestiza* undergoes a struggle of flesh, a struggle of borders, an inner war. Like all people, we perceive the version of reality that our culture communicates. Like others having or living in more than one culture, we get multiple, often opposing messages. The coming together of two self-consistent but habitually incompatible frames of reference causes *un choque*, a cultural collision. (Anzaldúa, 1999:100)

I am silenced by the limitation the tools that Western cartography provide for me as an Indigenous Hawaiian cartographer, tools that have been developed to favor empirical objectivity and thereby marginalize Hawaiian cartographic expressions. Yet, as I search for a means to express myself, I find myself using the language of my colonizer to convey a perception of myself. If "language is a place of struggle" (Hooks, 1989:144), then it is a place I share with other indigenous researchers (see Anzaldúa, 1990; Cajete, 2000; Gegeo, 2002; Hauofa, 2000; Hereniko, 2000; Johnson, 2003b; Kameyehiwiwa, 1992; Little Bear, 2000; Meyer, 1998b; Momaday, 1997; Smith, 1999; Teaiwa, 2000).

Linda Tuhiwai Smith (1999), an indigenous maori researcher, "grew up within indigenous communities where stories about research and particularly researchers (the human carriers of research) were intertwined with stories about all other forms of colonization and injustice" (3). She asserts the inner struggle of the indigenous researcher comes partly from the cynicism, distrust, and abhorrence toward Western researchers studying Indigenous people, places, and issues. Sometimes these researchers promote their findings to people in authority who turn around and introduce policies that affect their lives based on the legitimacy of this research. At other times, these researchers' main goal is to advance their career by adding another publication to their curricula vitae. They think nothing of the Indigenous values of accountability and reciprocity neither maintaining relationships with their informant(s) and/or study site(s), nor giving back anything of real value to the people and places they research.

It's no wonder why the Indigenous researcher is often scrutinized the most by their own people. Regardless of their experiences within the community, regardless of their meaningful intention to do right by the community, regardless of having shared the same humility and disrespect, indigenous researchers are sometimes scorned and ridiculed by the very people they have set out to help. Although these are the very people that encourage them to learn "western" ways to help the community, once they have jumped through all the hoops, they are no longer

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trust worthy or respected as a member of the community because they look, sound and smell like the colonizer. Although it is a painful position to be placed in, it is a necessary reality for all indigenous researchers to remember there is more at stake than career advancement.

Bell Hooks illustrates this point in an interview with Gloria Watkins in 1989 answering the question, "why remember the pain, that's how you began?" as follows:

Because I am sometimes awed ... when I see how many of the people who are writing about domination and oppression are distanced from the pain, the woundedness, the ugliness. That it's so much of the time just a subject – a "discourse." The person does not believe in a real way that "what I say here, this theory I come up with, may help change the pain in my life or in the lives of other people." (Hooks, 198:215)

As an Indigenous researcher, I know that it is our intimacy with pain that helps to define our character, not our condition. It is proof of our ability to navigate through currents pulling us in opposite directions. It is a testament of our will, not just to survive cross-cultural concepts but also to provide the groundwork of the "new consciousness" that Anzaldua (1999) writes about, where inclusivity and mutual respect are paramount.

While the blending of two contradictory epistemologies appears impossible, it is a part of the path indigenous scholars walk, an undertaking those of us that straddle cultures and embody varying views are capable of walking. We are hybrids of both cultures seeking a way to heal ourselves from the deafening madness of one view attempting to dominate all other views within ourselves. In describing the process of balancing opposing cartographic traditions it is necessary to discuss the psyche of an Indigenous¹ Hawaiian² cartographer.

As an Indigenous Hawaiian cartographer, I am internally rebellious and angered by the disregard and disrespect Western science has shown toward Indigenous epistemological traditions, categorizing it as a lower form of intelligence. At the same time, I also internalize an arrogant curiosity about "the other" in myself and use Western cartographic techniques to autoethnographically re-present and communicate the various aspects of the Hawaiian cultural landscape. The Indigenous Hawaiian cartographer is someone who attempts to balance Indigenous and Western epistemologies by drawing upon a vast amount of knowledge from both cartographic traditions while accepting the rhetoric of cultural politics.

The idea of "balancing opposing thoughts" is not a new concept. Post-modernists have described this scenario countless times, where research is performed by listening to all voices. According to Anzaldua (1999), incorporating all voices is natural for those that operate in a pluralistic mode where "nothing is thrust out, the good the bad and the ugly, nothing rejected, nothing abandoned" (101).

As part of the journey to find common ground from which to express varying epistemologies, I have undertaken various projects in hopes they will help me find my voice. Although they are not presentations of an Indigenous Hawaiian Cartography, they are necessary steps leading toward an autoethnographic re-presentation that can only succeed in a space of mutual respect. Each project brings together different cultural and cartographic issues resulting in a successful exchange of tradition and technology.

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Working in the margin: Indigenous projects of re-presentation

What is more important than what alternatives indigenous peoples offer the world is what alternatives indigenous people offer each other. The strategies that work for one community may well work for another. The gains made in one context may well be applied usefully in another. The sharing of resources and information may assist groups and communities to collaborate with each other and to protect each other. (Smith, 1999:105)

Indigenous people, *with the means*, have been making use of cartographic and Geographic Information Systems (GIS) software for some time now.³ Hawaiians are no different; there are several groups currently using mapping and GIS software and working to preserve language, culture and the environment in Hawai'i. Three of these will be briefly described, including the Hale Kuamo'o, the Hawai'i Board on Geographic Names, and the Office of Hawaiian Affairs.

Hale Kuamo'o

The Hale Kuamo'o is the Hawaiian Language Center within Ka Haka 'Ula O Ke'elikolani Hawaiian Language College of the University of Hawai'i at Hilo. Established by the Hawai'i State Legislature in 1989, the center supports and encourages the expansion of the Hawaiian language as a medium of communication in education, business, government and other contexts of social life in the public and private sectors of Hawai'i and beyond.

In December 1997, plans were put in motion to improve the geographic component of the immersion schools by adding maps designed and printed in the Hawaiian language. A total of 15 maps have been completed and approved for use including: North America, Central America, South America, Africa, Europe, Asia, Southwest Asia, East Asia, Southeast Asia, Australia, the United States, the Pacific ocean, the world with European and Hawai'i centering, and an additional Hawai'i centered world map labeling where the immersion school students' families living in Hawai'i today originated from. Some design issues that needed careful consideration included appropriate map projections, end-use vs. reproduction costs, and font sizes.

Since some of the staff were not familiar with map projections and the distortion that results from them, several common projections were compiled and printed with an accompanying description about the distortion depicted in the map. After weighing all options, they decided to use an equal-area projection for regional maps, the Robinson projection for the World maps, and an orthogonal projection for the Pacific Ocean map.

There was also a lengthy discussion about end use vs. reproductive costs. They decided to produce color and black-and-white page-size maps for teacher assignments, color page-size transparencies for teaching tools, and color wall-size maps for classroom support. Additionally, both the color and black-and-white page-size maps were printed with and without Hawaiian place names so teachers could hand them out for students to complete.

After the first draft was completed, font styles and sizes were of the utmost concern. It was just as important to use the same font size for similar levels of features, city or state names, as it was to portray areas in proper proportion to one another. This was extremely challenging for

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U.S. Board on Geographic Names (USBGN) for federal approval and use on official maps and documents. The USBGN is the governing body that maintains and approves additions to the list of place names in the Geographic Names Information Systems (GNIS) database according to their place naming standards explained in their Principles, Policies and Procedures. The USBGN usually approves the recommendations from each State's Board on Geographic Names as long as it follows their naming standards.

The process to accomplish this task, agreed upon by HBGN Board members, involves recording each place name from a topographic map with a Hawaiian component into a spreadsheet. The initial attempt at correcting orthography is accomplished by using two books, *Place Names of Hawai'i* by Pukui, Elbert, and Mo'okini (1974) and the *Atlas of Hawai'i* by Juvik and Juvik (1998). Hawaiian speaking kupuna are consulted whenever possible, and generally win any place name orthography discrepancy. Any name not found in the book or known by a Hawaiian speaking kupuna is marked for further research.

The HBGN meets to approve the names making adjustments as needed and submits their recommendations to the USGS and USBGN for inclusion on the topographic maps and the GNIS. The HBGN has also adopted some of the standards from the Hawaiian Spelling Project Report while maintaining the right to make exceptions to those standards. The report proposed "a uniform spelling system ... until such time that a standardized Hawaiian orthography is established." (Ahahui 'Ōlelo Hawai'i, 1978:1)

Some of the issues the HBGN faced thus far include the treatment of place names with a geographic feature (pu'u - hill, pali - cliffs, hono/hana - bay, wai - stream, lae - point) as a component in their Hawaiian names. For example, what if there is a Hawaiian geographic component as part of the place name followed by the English geographic component (Ka Lae Point)? Shall place names with a Hawaiian geographic component be separated, compressed, or eliminated altogether? Does the meaning change when place names that are currently split like "Mauna Loa" and "Mauna Kea" are compressed into "Maunaloa" and "Maunakea"? How is it different from "Kalae" / "Ka Lae"? Why can you compress "Ko'olauloa" (Long Ko'olau) and "Ko'olaupoko" (Short Ko'olau) but separate "Kalihi Uka" (Mountain Kalihi) and "Kalihi Kai" (Ocean Kalihi)? Should you capitalize a proper name in the middle of a compressed place name like "KaluaoKamohoali'i"? What's the difference between "Haleolono" and "Hale'olono"? More importantly, what are the implications of these decisions?

One obvious implication is the economic cost of changing the current accepted spelling. If the HBGN agrees to compress Mauna Kea into Maunakea, then by law, the federal government must use the correct spelling in all correspondence and signage. But there are gray areas to this law. For example, street names found on USGS topographic maps and corrected in the GNIS may not necessarily be enforced on the City & County level.

To date, the HBGN has reviewed 5,806 place names and recommended orthographic changes for 87% or 5,023 of them. The remaining 13% or 783 have been marked for further research. Although the process is quite daunting, as nearly 93% of the names in the GNIS for Hawai'i have a Hawaiian component, it has its rewards. (See Figures 2 and 3) While the HBGN acknowledges that many Hawaiian place names do not exist on the topographic quads, additional place names will be reviewed and added in another phase of this project as it must undergo a different process.

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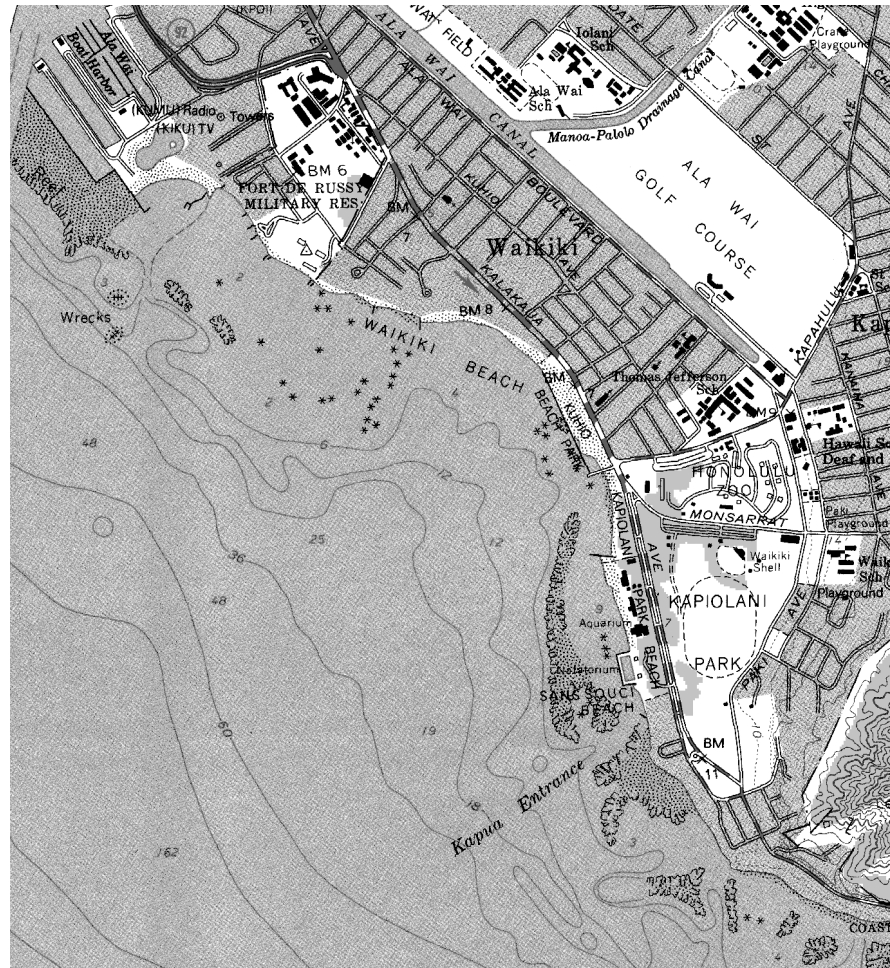


Figure 2. Section of the Honolulu 1980 Series U.S.G.S. 7.5-minute Topographic Quadrangle of Waikiki. (See page 66 for color version)

Office of Hawaiian Affairs

“... OHA decided to implement their Geographic Information System (GIS) in a manner that would provide graphical support for their administrative decision making processes regarding the allocation of resource for their beneficiaries.”

In 1978 the State of Hawai‘i constitutional convention established Office of Hawaiian Affairs (OHA) as a public trust, with a mandate to better the conditions of both Native Hawaiians and the Hawaiian community in general. In June of 2000, OHA decided to implement their Geographic Information System (GIS) in a manner that would provide graphical support for their administrative decision making processes regarding the allocation of resource for their beneficiaries.

In the summer of 2000 funding for a GIS consultant was made available to assess the current GIS software, hardware and data, provide insight on the capabilities of that data, and create templates (census tracts, property boundaries, zip code areas, and moku divisions - traditional Hawaiian land divisions) for future staff use. The creation of templates lead to the most critical element of this project—educating a few staff members in various departments in the hopes they would actively use the system for their own departmental projects. Part of the funding was allocated for map compilations as visual aids on an as-needed basis. Two such projects include the use of census data to determine resource allocation, and the search for a new method of determining the location of government and crown ceded lands.



Figure 3. Section of the Honolulu 1980 Series U.S.G.S. 7.5-minute Topographic Quadrangle of Waikiki. (See page 67 for color version)

The first project involved population data from the 2000 census. OHA created four age groups that would reflect the Hawaiian perspective of demographics, specifically, keiki (child 0 – 9 years), ‘ōpio (teenager 10 - 19), makua (parent 20 - 54), and kupuna (grandparent 55+). They then totaled the appropriate population statistics to determine the areas of highest Hawaiian concentration in each age group. The final products included page-size compilations for staff use and a wall-size plot for use in community meetings. (See Figure 4)

The second project is a work in progress. OHA is funded with a pro rata share of revenues from State lands designated as ceded. Ceded lands consisted of 1.8 million acres of crown lands (land belonging to the Hawaiian Monarchy) and the Kingdom of Hawai‘i government lands that were transferred or ‘ceded’ to the U.S. government pursuant to the Joint Resolution of Annexation in 1898. In 1959, the U.S. government returned some of the lands to the State of Hawai‘i and directed the State to hold the lands in trust, listing 5 purposes in section 5(f) of the admissions act.

1. Support public education
2. Better the conditions of Native Hawaiians of 50% or more blood
3. Development of farm and home ownership

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4. Public improvement
5. Public use

Unfortunately previous attempts to accurately assess all State lands designated crown or government lands have been criticized as incomplete. Furthermore, because the work was completed by the State Department of Land and Natural Resources (DLNR), there is a conflict of interest issue. In the summer of 2002, the State Auditor’s office in conjunction with a private firm published a cost analysis of completing an accurate assessment of all ceded lands based on a small sample of parcels. Their estimated budget was nearly \$10 million. OHA was expected to budget half the amount to complete the project but questioned spending such a large sum for a project they would have little to no control over. As a result of this and other issues, the project was shelved. OHA is currently seeking alternative methods to resolve this issue in-house.

Assessments and Afterthoughts

“Cartographers communicate a (re)presentation of the world, conveying perceptions of the world that can be understood by an audience that shares their same perspective.”

I did not make a conscious decision about becoming a researcher, about deciding to become actively involved in the politics of research, or in teaching of research, or in the practice of being a researcher. Research seems such a small and technical aspect of the wider politics of indigenous peoples. It is often thought of as an activity which only anthropologists do! As indigenous peoples we have our own research needs and priorities. Our questions are important. Research helps us to answer them. (Smith, 1999:199)

Cartographers communicate a (re)presentation of the world, conveying perceptions of the world that can be understood by an audience that shares their same perspective. Hawaiian cartography, like other performance cartographies, gives “preminence to performance, privileging

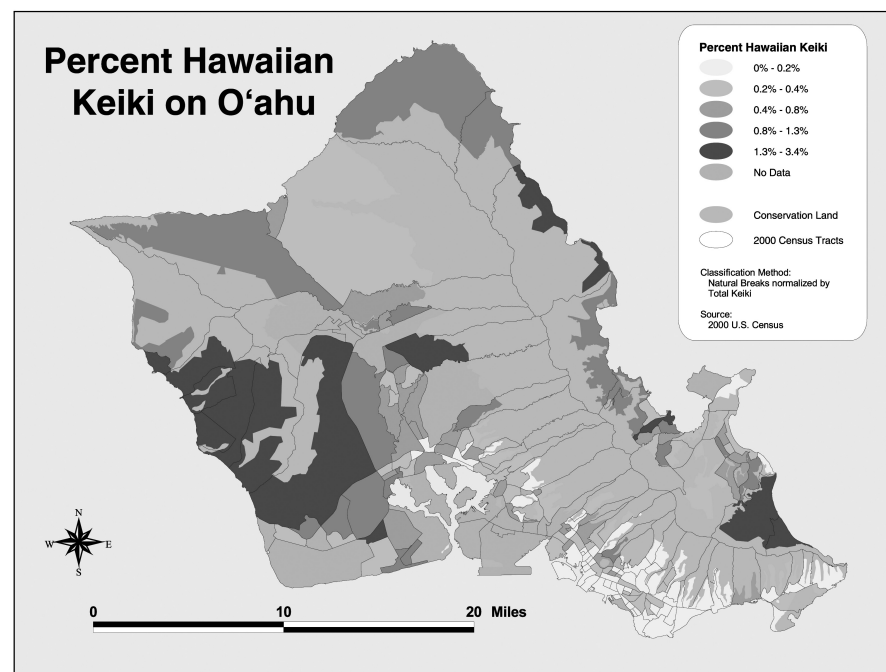


Figure 4. Percent Hawaiian children on O'ahu per 2000 census. (See page 67 for color version)

process over product, particularly where permanence of the artifact might be a disadvantage in societies where maps were designed to grasp the ever-changing rhythms of nature and territory.” (Woodward and Lewis, 1998:5)

For Hawaiians, importance lies in the narration of the story, the performing of the dance, the reciting of the genealogy, the delivering of the chant, the telling of the proverb, and the singing of the song. It allows the presentation of the map to change dynamically as the performance cartographer saw fit. Hawaiians use place names as mnemonic symbols to encode their knowledge of the environment. Place names performed in daily rituals (i.e., stories, chant, song, and dance) are conscious acts of cultural regeneration.

Indigenous Hawaiian cartographers are hybrid scholars sharing the same inward struggle with other indigenous researchers, working on projects that attempt to balance both Indigenous and Western cartographic traditions. Each of the projects presented here is a necessary step toward developing an Indigenous Hawaiian Cartography that thrives in a space of mutual respect.

In the first project, the staff of the Hale Kuamo’o took the time to learn how maps distort the world and how font styles and sizes affect the way children relate to the information being represented. In this project, Western cartographic techniques, such as map projections needed to be explained so that Hawaiian language experts could appropriately incorporate non-Hawaiian concepts.

When the USGS and USBGN offered the HBGN the task of orthographically correcting all place names with a Hawaiian component, steps were taken to reverse the political and Western cartographic domination of Hawaiian place names. Although arguments could be made that it is yet another attempt for the dominant culture to appear as though it is doing a good deed...that it is ‘too little, too late’ to make amends for the century of cultural subjugation. All egos aside, it is a step in the right direction as the 1990’s edition of 7.5-minute topographic sheets of Hawai’i do in fact include all approved orthographic markings, and the USGS has agreed to ‘short run’ many of them in an effort to give the HBGN time to resolve many of the place names requiring ‘more research’. There is still much to do, but it is necessary to acknowledge a step in the right direction.

Lastly, the OHA mission is “to mālama [protect] Hawai’i’s people and environmental resources and OHA’s assets, toward ensuring the perpetuation of the culture, the enhancement of lifestyle and the protection of entitlements of Native Hawaiians, while enabling the building of a strong and healthy Hawaiian people and nation, recognized nationally and internationally” (OHA, 2003, quote from web page). To that end, the OHA took the time to train selected staff members in GIS for the sake of their beneficiaries and their fiduciary responsibilities. Perhaps they have embraced this technology because they choose to take control of their own cartographic future in Hawai’i’s political arena, or perhaps they just want to continue protecting the Hawaiian culture, its people, and environment. Either way, they are cautious of their use of GIS technology to better the condition of Hawaiians as they are well aware it can only represent empirical data and not present a more Hawaiian worldview.

With regard to what Indigenous Hawaiian cartography can be in this modern age, I defer to Kame’eleihiwa, Hawaiian Historian at the Center for Hawaiian Studies. She sees it as a public domain interactive multimedia hypertext document where someone could click on a point/line/area to bring up maps, 3D terrain models, photographs, and sound

“For Hawaiians, importance lies in the narration of the story, the performing of the dance, the reciting of the genealogy, the delivering of the chant, the telling of the proverb, and the singing of the song.”

“Place names performed in daily rituals (i.e., stories, chant, song, and dance) are conscious acts of cultural regeneration.”

“One of the most effective ways for Indigenous peoples to affectively control how they are represented cartographically is to understand how Western cartographic techniques are used . . .”

“It is critical for Indigenous peoples to create a counter-cartographic culture informed by those that live, breathe and theorize in the ‘margin of radical openness’.”

and video clips. It would also provide for other Hawaiians to contribute their own family’s knowledge to dynamically enhance and enrich it for others. While I agree that this autoethnographic technique is one of many steps toward blending of Hawaiian and the Western cartographic representations, I am also reminded of Rundstrom’s caution on cross-cultural representations:

Representations make apparent what was not apparent, and are therefore a source of knowledge. For someone steeped in the ways of the culture from which particular representations emanate, they appear transparent; the particular way in which they are thought to become a source of knowledge is deemed natural and unproblematic. In cross-cultural situations, “re-presentations” accomplished with restricted technology by an outside consultant (e.g., GIS), and then exported, can be quite dangerous for a local informant. (Rundstrom, 1995:51)

As one of a handful of Indigenous Hawaiian cartographers, my goal is to promote a cartographic literacy such that Hawaiians and other Indigenous peoples become more than just GIS users. One of the most effective ways for Indigenous peoples to affectively control how they are represented cartographically is to understand how Western cartographic techniques are used to depict the social and cultural condition, and learn where the “power” of the map really resides. Only then can Indigenous people become truly empowered cartographically, because only then can they say with certainty which parts of their world can and should be mapped and which parts cannot or should not be mapped with any tradition but their own. It is critical for Indigenous peoples to create a counter-cartographic culture informed by those that live, breathe and theorize in the “margin of radical openness” (Hooks, 1990:149). It is my belief that Indigenous peoples need to reawaken the imagery of their cultural heritage, re-create the mental maps of their ancestors by practicing our oral and performance cartographies, and, where appropriate, incorporate modern day cartographic techniques by adapting them to their cultural epistemologies.

NOTES

¹ The term “indigenous” is problematic as it represents yet another label popularized by post-modern, post-colonial, post-structural, post-imperial, post-...thinking Western academic researchers. Linda Tuhiwai Smith states that in “positioning [her] self as an indigenous woman [she] is claiming a genealogical, cultural and political set of experiences.” (1999:12) Here, the term Indigenous does not merely mean someone native to an area; it is an accepted realization that there is a rhetoric that involves cultural politics.

² According to the Hawaiian Homes Commission Act, 1920, a “Native Hawaiian means any descendant of not less than one-half part of the blood of the races inhabiting the Hawaiian Islands previous to 1778.” (*Hawaiian Homes Commission Act, 1920*, 1920) The Hawaiian Homes Commission Act was enacted by the U.S. Congress on July 9, 1921 and adopted in to the Hawai’i State Constitution. Only recently (2000 census) has the U.S. Census provided a category for Hawaiians and Native Hawaiians that allows for self-identification or self-perception. Nonetheless, the legal definition continues to be practiced by the Department of Hawaiian Homelands, a State agency whose current mission statement is “to manage the Hawaiian Home Lands trust effectively and to develop and deliver land to native Hawaiians.” (Department of Hawaiian Homelands, 2004) For the purposes of this text, a Hawaiian is any person with Hawaiian blood and some affinity toward Hawaiian cultural practices.

³ Some examples can be found on the Indigenous People's Specialty Group web page links to indigenous cartography (<http://www.unc.edu/depts/geog/aisg/links.html>).

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