What are cultural landscapes?

Cultural landscapes are cultural properties and represent the “combined works of nature and of man” designated in Article 1 of the Convention. They are illustrative of the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal. More specifically, cultural landscapes fall into three main categories, namely:

(i) The most easily identifiable is the clearly defined landscape designed and created intentionally by man. This embraces garden and parkland landscapes constructed for aesthetic reasons which are often (but not always) associated with religious or other monumental buildings and ensembles.

(ii) The second category is the organically evolved landscape. This results from an initial social, economic, administrative, and/or religious imperative and has developed its present form by association with and in response to its natural environment. Such landscapes reflect that process of evolution in their form and component features. They fall into two sub-categories:

- a relict (or fossil) landscape is one in which an evolutionary process came to an end at some time in the past, either abruptly or over a period. Its significant distinguishing features are, however, still visible in material form.

- a continuing landscape is one which retains an active social role in contemporary society closely associated with the traditional way of life, and in which the evolutionary process is still in progress. At the same time it exhibits significant material evidence of its evolution over time.

(iii) The final category is the associative cultural landscape. The inscription of such landscapes on the World Heritage List is justifiable by virtue of the powerful religious, artistic or cultural associations of the natural element rather than material cultural evidence, which may be insignificant or even absent.

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What are climate threats to the cultural landscapes of indigenous peoples?

There is actually a great deal of information regarding the effects of global climate change on indigenous peoples. These can be generally categorized as: environmental effects; effects on cultural practices; and effects on identity.

The effects on the environment of the indigenous peoples of the Arctic were among the first described. Native peoples in the Arctic reported experiencing and observing some of those effects including major economic and cultural impacts caused by reduced sea ice, thawing permafrost, and coastal erosion due to storms. Caleb Pongoylwi, a Siberian Yupik, reported the following observed changes in the Bering Straits region:

- Wetter summer and fall seasons with drier winters.
- Sea ice forms later in fall.
- Sea ice melts and disintegrates earlier in spring.
- Sea birds dying from starvation.
- Lots of beaver moving into area streams.  

Alaska has warmed twice as fast as the global average during the past half-century, and temperatures are projected to rise 1.5-5° F (1-3 °C) by 2030 and by 5-18° F (3-6.5 °C) by 2100. Less sea ice covers the Arctic Ocean today than at any time in recent geologic history. At the same time, the land itself is also affected by temperature increases. Permanently frozen subsoil – permafrost – keeps the land intact and habitable along the northwestern Alaskan coast, but is melting. These environmental phenomena are resulting in accelerated rates of erosion and flooding which damage or destroy infrastructure and threaten the livelihoods and well-being of people residing throughout Alaska. For the Alaska Natives of Shishmaref, Kivalina, and other coastal and island villages, these environmental phenomena have destroyed their villages and forced their relocation. These villagers, to a large degree, have been serving as iconic “corroborative detail” for a political and scientific agenda by demonstrating the reality of global warming.

Cultural practices in the Arctic are affected by the lessening sea ice which has made sealing and whaling much more difficult and dangerous. In the Navajo Nation of Arizona, New Mexico, and Utah, an ecologically sensitive semi-arid to arid area where rapid population growth is outstripping the carrying capacity of the land. The extended drought, combined with increasing temperatures, is significantly altering the habitability of a region already characterized by harsh

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5 For example, the plight of the Inupiaq villagers of Shishmaref has been documented by, among others, Jan Louter in his 2008 film, The Last Days of Shishmaref; photographer Gilles Mingasson, http://www.mingasson.com/#!/features/the-end-of-shishmaref/Shishmaref_New14_006 (last viewed January 16, 2014); and in Elizabeth Kolbert's 2006 book, *Field Notes from a Catastrophe: Man, Nature, and Climate Change*, which opens in Shishmaref. Additionally, these works resemble salvage archaeology projects.
living conditions. Dr. Margaret Hiza of the U.S. Geological Survey, in presentations at meetings of the Indigenous Peoples Climate Change Working group at Haskell Indian Nations University and Institute for Tribal Environmental Professionals at Northern Arizona University, stated that the extended drought has meant a lower carrying capacity for the sheep that graze Navajo land, and a decline shepherding. That in turn has decreased the amount of wool available for Navajo weavers, and fewer rugs are being produced, impacting the family incomes of weavers.

A changing climate also challenges what were eternal verities and identities. For example, Merlin Koonooka of the Native Village of Gambell in Alaska reports changes in the weather and ice conditions result in changes in animal behavior, habit, and migration: during spring, walruses are now seen spread out individually on small pieces of ice instead of in large herds on larger pieces of ice. In the Pacific, threats to the traditional lifestyles of indigenous communities may include destruction of coastal artifacts and structures, reduced availability of traditional food sources and subsistence fisheries, and the loss of the land base that supports Pacific Island cultures. These losses will make it difficult for Pacific Island communities to sustain their connection with a defined place and their unique set of customs, beliefs, and languages.

None of these examples directly address a major threat of global climate change to indigenous cultural landscapes—the marginalization and destruction of native systems and institutions that create the religious, artistic or cultural associations between the natural element and a people that are the predicate to cultural landscapes.

These examples comport with and support the view that climate change impacts pose a direct threat to indigenous societies because of their reliance on resource-based livelihoods that is prevalent in much of the works by the United Nations University, Intergovernmental Panel on Climate Change, Secretariat of the Convention on Biological Diversity, United Nations Development Programme, and United Nations Educational, Scientific and Cultural Organization (UNESCO). Also prevalent is the view that changes to the landscape, e.g., wetter summer and fall seasons with drier winters, sea ice forming later in fall, sea ice melting earlier in spring, and shifting wind patterns have resulted in the loss of traditional knowledge by drastically altering the assumptions and factual bases upon which traditional knowledge was learned.

These characterizations of climate vulnerabilities of indigenous peoples and the adaptive management policies, plans, research, and programs undertaken by international organizations, NGOs, governments, and corporations based on these characterizations may prove inadequate, ill-adapted, and even inimical to the myriad interests of indigenous peoples in protecting and preserving their cultural landscapes.

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6 Hiza, Margaret M., Increasing Vulnerability to Drought and Climate Change on the Navajo Nation, Southwestern United States, AGU Fall Meeting, 2011.
7 See, for example, Navajo Nation: Dune Study Offers Clues to Climate Change, http://www4.nau.edu/tribalclimatechange/tribes/southwest.asp, (last viewed January 16, 2014).
8 Secretariat of the Convention on Biological Diversity, Indigenous Peoples and Traditional Knowledge Related to Biological Diversity and Responses to Climate Change in the Arctic Region, Montreal, Quebec (2009).
The problems with these characterizations of vulnerability are twofold: First, focusing on changes to landscapes, seascapes, and natural resources perpetuates the notion of indigenous peoples as inhabiting isolated landscapes and more importantly, ignores the secondary or induced impacts of climate change, e.g., the militarization, industrialization, and the resultant urbanization of the Arctic.

Second, defining traditional knowledge as a compendium of factoids, is, at the very least, condescending and at its worst neocolonial—especially when, as has happened in the recent past, traditional knowledge is mined for agricultural, medicinal, and land and other resource management technologies that can be integrated into Western climate adaptation strategies.  

Beneath the veneer of consultation or participation is the raw exercise and projection of power of mainstream science and society. Iris Marion Young aptly describes the dynamic.

“Cultural imperialism consists in the universalization of one group’s experiences and culture and its establishment as the norm. Some groups have exclusive or primary access to what Nancy Fraser [in “Social movements vs. Disciplinary Bureaucracies: The Discourses of Social Needs,” CHS Occasional Paper #8 (Center for Humanistic Studies, University of Minnesota, 1987)] calls the means of interpretation and communication in a society. As a result, the dominant cultural products of the society, that is, those most widely disseminated, express the experience, values, goals, and achievements of the groups that produce them. The cultural products also express their perspective on and interpretation of events and elements in the society, including the other groups in the society, insofar as they are noticed at all. Often without noticing they do so, the dominant groups project their own experience as representative of humanity as such.”

The Swinomish Indian Tribal Community’s Swinomish Climate Change Initiative Impact Assessment Technical Report. The report looks at potential local effects of climate change including effects and projected impacts on the local environment, forestry resources, agriculture, fish and wildlife, water resources, and shorelines, as well as critical infrastructure and public health. It is well done using a generally standard approach and format. To assist with complex

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10 For example, the last Intergovernmental Panel on Climate Change Fourth Assessment Report: Climate Change 2007 noted that indigenous knowledge is “an invaluable basis for developing adaptation and natural resource management strategies in response to environmental and other forms of change”. This characterization of indigenous knowledge was reaffirmed at the 32nd Session of the IPCC in 2010: “indigenous or traditional knowledge may prove useful for understanding the potential of certain adaptation strategies that are cost-effective, participatory and sustainable”. However, indigenous peoples and their organizations also similarly define the term. For example, the working group convened under the auspices of the National Congress of American Indians submittal to the National Climate Assessment defined the term as: T[raditional K[nowledge] encompasses all that is known about the world around us and how we apply that knowledge in relation to those beings, physical and otherwise, that share our world. From this knowledge emerges our sense of place, our language, our ceremonies, our cultural identities, and our ways of life. As knowledge keepers pass away, the continued existence and viability of TK is threatened.


analysis of myriad scientific issues, the Tribe enlisted the support of the University of Washington Climate Impacts Group (CIG), a premiere regional climate research entity. The Tribe also invited the participation of and coordination with local jurisdictions. However, the format and approach in many respects reflects the Galbraithian framing of power.

“Conditioned power is the product of a continuum from objective, visible persuasion to what the individual in the social contract has been brought to believe is inherently correct. As we have seen, such power can be explicit, the result of a direct and visible attempt to win the belief that, in turn, reflects the purposes of the individual or group seeking or exercising the power. Or the belief can be implicit in the social or cultural condition; submission to the authority of others reflects the accepted view of what the individual should do. As one moves from explicit to implicit conditioning, one passes from obtrusive, ostentatious effort to win belief to an imposed subordination that is unnoticed—taken for granted. And, an important point, the social acceptance of conditioned power rises steadily as one moves in the direction from explicit to implicit conditioning.”

The issue is not whether it is a good, bad or indifferent vulnerability assessment. There’s no question in my mind that it is an excellent vulnerability assessment. The issue is that it is a vulnerability assessment and not a tribal narrative that interweaves the songs, stories, and ceremonies of the peoples and places of the Swinomish Indian Tribal Community and through those cultural manifestations, connects the future and the past through the present.

What could have provided a powerful boost to the Tribe’s traditional knowledge systems and institutions instead marginalized them. It is as though, as Michel-Rolph Trouillot argues, the past has been silenced.

Admittedly, the need to connect the past and the future through the present in a climate vulnerability assessment may not be immediately apparent, especially if the assessment is funded by federal grants. Returning again to Galbreath: “Once belief is won, whether by explicit or implicit conditioning, the resulting subordination to the will of others is thought to be the product of the individual’s own moral or social sense—his or her feeling as to what is right or good.”

But some people are making these connections and refusing to acquiesce to the dictates of standard approaches and format. In a recent article, Keola Donaghy, instructor of music at University of Hawaii Maui College, article examines how the elements and interactions of the natural world can used as metaphors for the formative processes of Hawaiian language

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14 What no nation can be without is an image or myth with which it can identify itself. This image can be provided by legend or history, religion, poetry, folklore, or what we more vaguely call ‘tradition’. It need not be expressed in precise or absolute terms, but if a people is to be conscious of its identity it must have such an image. Davis, R.H.C., The Normans and Their Myth, Thames & Hudson, London, (1976).
15 . . . there is the more serious task of determining not what history is—a hopeless goal if phrased in essentialist terms—but how history works. For what history is changes with time and place, or better said, history reveals itself only through the production of specific narratives. What matters most are the process and conditions of production of such narratives. Only a focus on that process can uncover the ways in which the two sides of historicity intertwine in a particular context. Only through that overlap can we discover the differential exercise of power that makes some narratives possible and silences others. Michel-Rolph Trouillot, Silencing the Past: Power and the Production of History, Beacon Press, Boston, IL (1995), p. 25.
composition and vocal performance. By examining the composition Ka Wai A Kāne (“The Water of Kāne”) and its depiction of the movement of water through the ahupua’a (a pre-contact land division), Donaghy presents a conceptual metaphor of the author's construction—mele (Hawaiian language composition) as ahupua’a (a Hawaiian land division). The challenge for indigenous peoples is to make this kind of thinking the standard approach and format.

What is the role of traditional knowledge in managing cultural landscapes?

It is in the clearly defined landscape designed and created intentionally by man that traditional knowledge is most apparent. A prime example is the terraces and irrigation systems the Incas cut into the hillsides. At the Incan civilization’s height in the 1400s, these terraces covered about a million hectares throughout Peru and fed the vast empire. Other examples include:

- Kīkī-a-Ola or the Menehune Ditch, located just above Waimea town, a remarkable feat of engineering and stonework built to bring water from the upper Waimea River to the lo‘i kalo (taro patches) in the valley.  

- From A.D. 600 to 1450, the prehistoric Hohokam constructed one of the largest and most sophisticated irrigation networks ever created using preindustrial technology. By A.D. 1200, hundreds of miles of these waterways created green paths winding out from the Salt and Gila Rivers, dotted with large platform mounds.

- Loko i`a. Hawaiian fishponds are one of the best examples of successful fish farming worldwide. Nowhere else is there such a simple, yet technologically well-developed aquacultural system as there was in ancient Hawai`i. Prior to contact with the western world in 1778, it is estimated there were over 480 fishponds statewide producing an annual yield of 1.9 million pounds of fish and other edible sea life.

Evidence of other ancient indigenous geo-engineered cultural landscapes was destroyed by conquerors or decay and often concealed for centuries by the unrelenting forces of Nature. For example, heavy seasonal rainfall, concentrated in the Eastern Andes and the Northwest area of the Amazon Basin, are responsible for the river level fluctuations and the consequent leaching of minerals from the forest floor. These annual and extended inundations led Betty J. Meggers of the Smithsonian Institution's National Museum of Natural History, to conclude that the Amazon basin was a “counterfeit paradise.” She argued that despite the seeming abundance of plants and wildlife in the rainforest, the soil in the region is so poor that it could not support the intensive agriculture necessary for the establishment of large communities.
The extensive deforestation that is currently taking place in the Amazon, in combination with the application of emerging technologies such as Google Earth, other satellite imagery, and ground penetrating radar has revealed, contrary to Meggers’s belief, popular belief, sizeable and sedentary societies of great complexity existed in the rainforests of this region. These societies produced pottery, cleared sections of rainforest for agriculture and managed forests to optimize the distribution of useful species. Some of the earthworks may date as far back as AD 200, a millennium before the Incan empire was founded. As many as 60,000 people lived in or near the “perfect circles, rectangles and composite figures” carved into the ground. And many were linked by bridges or “avenue-like” roads.22

Studies suggest that at least 10-12% of the Amazon’s terra firme forests are “anthropogenic in nature” resulting from the careful management of biodiversity by indigenous people. These forests are the result of traditional knowledge that produced the Amazonian Dark Earth, or terra preta do indio. Three times richer in nitrogen and phosphorous, and twenty times the carbon of normal soils, terra preta is the lost legacy of those ancient inhabitants of the Amazon. Scientists who long debated the capacity of ‘savages’ to transform the virgin rainforest now agree that indigenous people transformed large regions of the Amazon into amazingly fertile black earth.23 Environmental changes and the application of research new technologies have revealed the Amazonian wilderness to have been a clearly defined landscape designed and created intentionally by man.

We live on a water planet, unique in the solar system. Seen from space, the earth is a shining blue sphere, partly covered with clouds of condensed water vapor with only shadowy hints of solid land here and there. Yet those born and bred on continents, the vast majority of humankind, tend to forget the oceanic character of our globe’s surface—that over 70 percent is covered by water. Because of their millennia-long experience of sailing the sea the Polynesian world view was more oceanic, and more accurate. They had learned that the ocean extended in all directions; that everywhere they sailed islands broke the surface of the sea; and that if they sailed east the islands they reached would be uninhabited and thus ideal for colonization.

Poetically referred to as ke kai popolohua mea a Kāne (the deep dark ocean of Kāne), for Hawaiians the ocean was divided into numerous smaller divisions and categories beginning from the nearshore to the deeper pelagic waters. Likewise, channels between islands were also given names and served as connections between islands, as well as a reminder to their larger oceanic history and identity.24

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The cultural connections of Hawaiians and indeed, all Polynesians, with the Polynesian Triangle\textsuperscript{25} are indisputable. Arguably, the Polynesian Triangle is an associative cultural landscape with powerful religious, artistic and cultural associations of the natural element. It is also a cultural landscape notwithstanding the near total absence or ephemeral nature of the material cultural evidence, and especially notwithstanding the apparent evanescence of the people and institutions in which those associations were created and evolved. It was the Polynesian intimacy with the sea that enabled them to detect and use a number of subtle cues for navigation: clouds, water color and taste, wave patterns, currents, presence of birds\textsuperscript{26}, fish, and plants as well as the position of stars and planets.\textsuperscript{27} But the intimacy needed to see signposts on the trackless expanses of the Pacific was the product of highly developed native systems and institutions founded on family, tradition, and religion.

The story of the Polynesian Voyaging Society (“PVS”), Mau Piailug and the Hōkūle‘a is illustrative.

The Polynesian Voyaging Society was established in 1973 by Dr. Ben Finney, an anthropologist from California, Herb Kawainui Kane, a Hawaiian artist; and Tommy Holmes, a waterman to challenge the accidental discovery theories\textsuperscript{28} of Thor Heyerdahl\textsuperscript{29} and Andrew Sharp.\textsuperscript{30} The PVS was a scientific endeavor whose object was to determine: how Polynesians discover and settle small islands in ten million square miles of ocean, geographically the largest “nation” on earth;

\textsuperscript{25} The region of the Pacific Ocean anchored by Hawai‘i, Easter Island (Rapa Nui), and New Zealand (Aotearoa).

\textsuperscript{26} For example, the Kolea or Pacific golden plover’s migration route strongly suggested the presence of land to the north, prompting the Polynesian explorers to sail in that direction and eventually discover the Hawaiian Islands. Leskiw, Tom, The Discovery of the Hawaiian Islands: A Case of Human-Bird Mutualism, in Messier, Vartan P. and Batra, Nandita, eds., This Water World: Humans and the Sea, Cambridge Scholars Publishing, Newcastle upon Tyne, UK, (2010), p. 147. An even more compelling example is one Herb Kawainui Kane recounts in his Voyagers: In 1820, homeward bound from Samoa where the young King Taufa‘ahau had endured a tattooing ceremony that marked his coming of age, the Tongan fleet was struck by storms and blown off course. When the weather cleared, the king’s navigators admitted that they were lost. In another canoe, an old and blind navigator of lower rank, Tuita Kahomovailahi, heard of the trouble. He asked that their canoe be turned into the wind, luffing the sail and bringing it to a stop. Then he asked his son to lower him over the side. He felt the water, smelled and tasted it. He asked if fishing birds were in sight, and the direction of their flight. Then he said, “Tell the king we are in Fijian waters.” When the king asked for sailing directions, the old man asked his son for the position of the sun in the sky. He suggested a course, saying “When the sun is in the middle of the sky you will see land.” At noon, they raised Lakemba, a Fijian island in the Lau group. p. 66.

\textsuperscript{27} Lewis, David, We, the Navigators: The Ancient Art of Landfinding in the Pacific, University of Hawaii Press, Honolulu, HI (1972), pp. 153-216.

\textsuperscript{28} Heyerdahl claimed that it would have been impossible for early canoe voyagers to have sailed directly eastward from Southeast Asia against the prevailing trade winds and currents of the Southern Hemisphere to reach Polynesia. A few years later Andrew Sharp, a New Zealand historian, claimed that the vision of the Polynesians as great voyagers who had set out to explore and settle the Pacific was nothing but romantic nonsense. He theorized that the settlement of Polynesia was simply the product of many accidental voyages which had moved the Polynesians slowly westward across the Pacific and then throughout the Polynesian triangle. Sharp claimed that the canoes of the Polynesians were not seaworthy enough, and their navigational methods were not accurate enough, to have enabled them to intentionally set out to explore and colonize the Pacific. See, Finney, Ben R., Voyage of Rediscovery: A Cultural Odyssey through Polynesia, University of California Press, Berkeley, CA (1994) p. xiv.

\textsuperscript{29} Heyerdahl, Thor, American Indians in the Pacific: The Theory Behind the Kon-Tiki Expedition, George Allen & Unwin, London ((1952).

\textsuperscript{30} Sharp, Andrew, Ancient Voyagers in the Pacific, Polynesian Society, Wellington, NZ (1956).
and how they could they navigate without instruments, guiding themselves across ocean distances of 2500 miles.

To demonstrate that the ancient Polynesians could have the purposefully settle the Polynesian Triangle in double-hulled, voyaging canoes using non-instrument navigation the Society's first project was to construct a replica of an ancient voyaging canoe. On March 8th, 1975 this replica, Hokule'a, the first voyaging canoe to be built in Hawai'i in more than 600 years, was launched. But before Hokule'a could leave Hawai'i on her planned maiden voyage to retrace the traditional migratory route to Tahiti, a major hurdle had to be overcome—voyaging had ceased for two hundred years and the navigation lore lost.  

Ben Finney recruited Pius “Mau” Piailug, a master navigator from a remote atoll in Micronesia to be the Hokule’a’s navigator for the Tahiti voyage. At that time, Mau was the only man who knew the ancient Polynesian art of sailing by the stars, the feel of the wind and the look of the sea. So he stepped forward. The Economist’s obituary of Mau is an excellent recounting of Mau and the Hokule’a.

As a Micronesian he did not know the waters or the winds round Tahiti, far south-east. But he had an image of Tahiti in his head. He knew that if he aimed for that image, he would not get lost. And he never did. More than 2,000 miles out, a flock of small white terns skimmed past the Hokule'a heading for the still invisible Mataiva Atoll, next to Tahiti. Mau knew then that the voyage was almost over.

On that month-long trip he carried no compass, sextant or charts. He was not against modern instruments on principle. A compass could occasionally be useful in daylight; and, at least in old age, he wore a chunky watch. But Mau did not operate on latitude, longitude, angles, or mathematical calculations of any kind. He walked, and sailed, under an arching web of stars moving slowly east to west from their rising to their setting points, and knew them so well—more than 100 of them by name, and their associated stars by color, light and habit—that he seemed to hold a whole cosmos in his head, with himself, determined, stocky and unassuming, at the nub of the celestial action.

Setting out on an ocean voyage, with water in gourds and pounded tubers tied up in leaves, he would point his canoe into the right slant of wind, and then along a path between a rising star and an opposite, setting one. With his departure star astern and his destination star ahead, he could keep to his course. By day he was...

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31 The reasons for the cessation of voyaging are not clear. According to the text in Ancient Tahiti (Bernice P. Bishop Museum Bulletin, 48) (1971) by Teuira Henry and J.M. Orsmond, for many generations, “priests, scholars and warriors” from the Pacific islands periodically set sail from their respective islands to meet at Taputapuatea and celebrate great religious observances and international deliberations until a murder shattered the alliance. The great canoes from the distant islands sailed away and never again sailed together to Ra’iatea. Ben Finney cites another reason posited by an orator who spoke at Taputapuatea on the occasion of Hokule’a’s first visit there in 1976—that a formal tapu on voyaging had been laid down after a fleet composed of elites and experts was lost. See, Ben Finney, Sailing in the Wake of the Ancestors: Reviving Polynesian Voyaging, Bishop Museum Press, Honolulu, HI (2003) p. 62-63.
guided by the rising and setting sun but also by the ocean herself, the mother of life. He could read how far he was from shore, and its direction, by the feel of the swell against the hull. He could detect shallower water by color, and see the light of invisible lagoons reflected in the undersides of clouds. Sweeter-tasting fish meant rivers in the offing; groups of birds, homing in the evening, showed him where land lay.

He began to learn all this as a baby, when his grandfather, himself a master navigator, held his tiny body in tidal pools to teach him how waves and wind blew differently from place to place. Later came intensive memorizing of the star-compass, a circle of coral pebbles, each pebble a star, laid out in the sand round a palm-frond boat. This was not dilettantism, but essential study; on tiny Satawal Atoll, where he spent his life, deep-sea fishing out in the Pacific was necessary to survive.  

Hokule'a arrived 33 days later in Papeete, Tahiti, to a crowd of more than 17,000. Over half of the island had turned out to greet the canoe. What had begun as a scientific experiment to prove a theory about the settlement of Polynesia, had touched a wellspring of cultural pride in Polynesian people and inspired a spate of canoe building, revitalization of traditional navigation, and voyaging.

After the voyage Mau returned to Micronesia, and with him went the knowledge of the traditional art of wayfinding. But Mau had ignited a strong interest in many members of the Voyaging Society to continue sailing and learning about navigation. In 1978 in response to this interest, Hokule'a attempted an abortive and nearly catastrophic voyage to Tahiti. Six hours into the voyage Hokule'a capsized and a member of the crew lost.

The Polynesian Voyaging Society turned again to Mau and asked him to teach them about sailing and navigation. Mau agreed, and for the next two years he helped prepare the members of the Voyaging Society for the enormous task of sailing and navigating a deep sea voyage. In 1980 a crew from Hawai'i successfully sailed Hokule'a to Tahiti and back to Hawai'i, but this time the canoe was guided by one of Mau's students, Nainoa Thompson, the first Hawaiian to navigate a voyaging canoe in more than 600 years.

The Polynesian Voyaging Society began in 1973 as a scientific experiment to build a replica of a traditional voyaging canoe for a one-time sail to Tahiti to challenge the accidental discovery theories of Polynesian colonization. Through the efforts of dedicated Native Hawaiian leaders and the incorporation of Hawaiian concepts, beliefs, practices, and values as lokahi (unity); pono (just) and aloha (love) transformed the organization from a predominantly scientific endeavor to a culture-centric, nation-building one.

The story of the Polynesian Voyaging Society, Mau Piailug and the Hōkūle’a demonstrates that cultural experts, holders and producers of traditional knowledge, in short, people like Mau Piailug and Nainoa Thompson are key to creating and sustaining cultural landscapes. This notion comports with the thinking behind Article 2.3 of the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage which places transmission among the safeguarding measures aiming at ensuring the sustainability of this heritage.\(^{34}\)

But such living treasures need traditional systems and institutions in which to operate. The transformation of the Polynesian Voyaging Society also reinforces the notion that institutions are not simply “rules” but are constituted as well by accompanying rituals and symbols systems. Thus, the fate of an institution can be closely tied to the significance attached to its rituals, whether formal or informal, and conditioned by cultural shifts in which new sets of symbols acquire authority as others fall into desuetude.\(^{35}\) The symbiotic nature of these relationships is remarkable. The Hawaiians recognized the need for such systems and institutions so they organized and reshaped the Polynesian Voyaging Society, built the Hōkūle’a, and went in search of a navigator. Mau recognized that the traditional systems on his home in Satawal had fallen into disarray and saw the Polynesian Voyaging Society and the Hōkūle’a as a way of restoring these systems and institutions at home.

Cultural objects like the Hōkūle’a are important not only because they serve to reify cultural traditions or traditional knowledge, but more importantly, they serve as instrumentalities to relearn and further the development of traditional knowledge.

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\(^{34}\) “Safeguarding” means measures aimed at ensuring the viability of the intangible cultural heritage, including the identification, documentation, research, preservation, protection, promotion, enhancement, transmission, particularly through formal and non-formal education, as well as the revitalization of the various aspects of such heritage, available from: [http://www.unesco.org/culture/ich/index.php?pg=00006](http://www.unesco.org/culture/ich/index.php?pg=00006). (Last viewed February 18, 2013.)