

*Navigating the Revival of Voyaging in the
Marshall Islands: Predicaments of Preservation
and Possibilities of Collaboration*

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I look toward a calm lagoon on a hot, nearly windless day in August 2009. My eyes rest on the beautiful lines and contours of a voyaging canoe anchored just offshore (figure 1). This thirty-six-foot canoe has recently been built to conduct a voyage using indigenous navigational knowledge as part of an ongoing collaborative effort to revitalize ocean sailing in the Marshall Islands (map 1).¹ The many government ships moored on the other side of the lagoon of Majuro Atoll contrast starkly with this lone voyaging canoe; they are a bleak reminder of the extent of the loss of such specialized indigenous knowledge in the Marshall Islands and throughout many regions of Oceania.

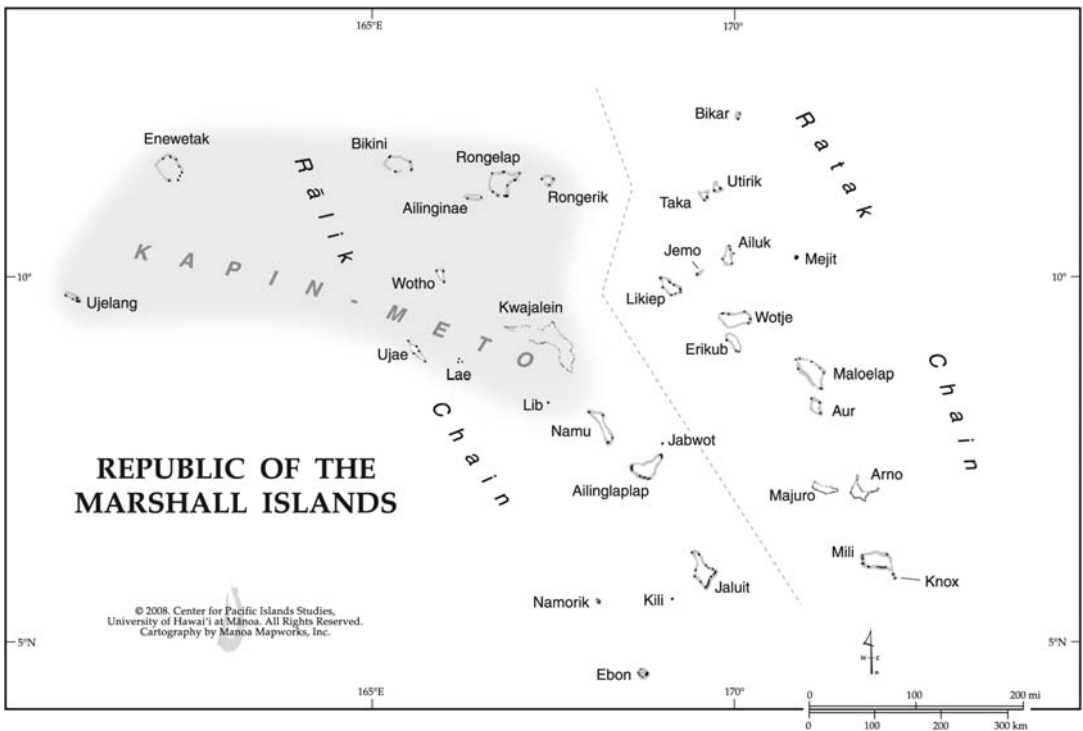
Indigenous knowledge systems in the Marshall Islands have been eroded and fractured by one of the most violent histories of the twentieth century, a history of militarization that spans the Pacific War, the nuclear age, and ongoing missile testing. Despite these and other enduring legacies of colonialism, there are a number of experts in several domains of esoteric cultural knowledge who still remember, practice, and share their techniques, lore, stories, chants, and songs that are tinged with sacred qualities, and there are several community efforts solidly underway to ensure that these traditions are being renewed, including, for example, canoe building and medicinal knowledge (Alessio and Kelen 2004; Taafaki and others 2006). Still, specialized cultural knowledge is at risk of being lost forever with the passing of the last custodians of that knowledge. Compounding such a tragedy in the Marshall Islands is the fact that some specialized knowledge systems, such as voyaging, may become more prestigious, guarded, and restricted as the number of people who possess that knowledge continues to diminish.



FIGURE 1. Thirty-six-foot voyaging canoe *Jitdam Kapeel* anchored in Majuro Lagoon. Photo by Joseph Genz, 2009.

Using the canoe as a metaphor for island histories, communities throughout Oceania are navigating through unknown routes to recover highly specialized and especially powerful knowledge that has been lost, forgotten, and fragmented (DeLisle and Diaz 1997). Emerging revitalization projects aim to document and preserve this knowledge in ways that are appropriate, respectful, and beneficial to the communities and individuals that possess that knowledge. However, such cultural preservation projects face a central paradox—the process of revitalization recontextualizes the knowledge and this weakens its cultural significance (Krauss 1992). Avoiding this requires navigating complex and competing claims regarding who the legitimate holders of knowledge are, how the knowledge is properly used and transmitted, how the exclusive retention of the knowledge sustains the personal status and authority of the specialist, and how specialists' knowledge supports chiefly or supernatural power and authority (Rubinstein 2009).

In this paper, I draw attention to the predicaments of revitalizing highly specialized indigenous knowledge systems in Oceania. I provide ethnographic details from an ongoing voyaging revival in the Marshall Islands to illustrate the complexities and tension of specialists' competing cultural



MAP I.

imperatives to simultaneously safeguard their knowledge-based positions of identity, maintain their deferential relationships with chiefly authority, and revitalize their cultural heritage (for more on this topic, see Genz 2008). By highlighting the region of Micronesia (Hanlon 2009), I offer possibilities for new models of collaborative research in Oceania that are sensitive to the politics of culture and tradition as they address the practices of cultural recovery.

INDIGENOUS KNOWLEDGE

The concept of indigenous knowledge is central to understanding the contemporary predicaments of preserving and reviving specialized cultural traditions. The term “indigenous” was originally used to contest the deprecation of marginal peoples by using it in sustainable development or to advance claims that local knowledge was scientific, which led to such descriptors as “indigenous science” and “indigenous scientific tradition” (Nuttall 1998). More recently, scholars have used the term “indigenous

knowledge” heuristically to talk about local knowledge in strict contrast to Western scientific knowledge (Ellen and Harris 2000). Such extreme comparisons have sparked a relativistic debate about the definition of science that takes place between a philosophically narrow positivistic-reductionistic view and a more broad-minded perspective espoused through the lenses of anthropology, sociology, and the philosophy of science. Several scholars have deconstructed the division between indigenous and scientific knowledge to show that it is produced by presumptions of substantive, methodological, theoretical, and contextual differences (Agrawal 1995; Hess 1995; Nader 1996; Turnbull 2000). Such dismantling of this divide moves beyond dichotomous rhetoric to recognize multiple types of knowledge with varying but equal epistemologies.

Recent studies of indigenous epistemologies in Oceania have illuminated the ways in which cultures construct and theorize about knowledge (Gegeo and Watson-Gegeo 2001; Lauer and Aswani 2009; Meyer 2001; Nabobo-Baba 2006), and in doing so have emphasized a plurality of knowledges and equally valid ways of knowing. In particular, Matthew Lauer and Shankar Aswani have provided ethnographic evidence from the western Solomon Islands to show that fishers’ ecological knowledge is less about intergenerationally transferred cognitive information—a prevalent conceptual predisposition in Western science—and more about knowledge embedded in daily practice (2009). Lauer and Aswani viewed this ecological knowledge “as a process intrinsic to the social situated activities of people engaging with one another and with their biophysical environments” (2009, 236). From this, they argued that all knowledges—including indigenous and Western scientific knowledge—are embedded in practical activities and everyday experiences, and are thus epistemologically equivalent. With this recognition, ethnographic studies of specialized knowledge in Oceania have been used to inform Western science (see, eg, Johannes 1981).

Specialized and esoteric bodies of indigenous knowledge are especially powerful. In Micronesia, for example, lineages and their members possess specialized proprietary knowledge and skills, such as fishing and gardening, and certain individuals within esoteric occupations are known for their exceptional abilities (Peterson 2009, 104). Voyaging, especially, is perhaps the quintessential example of expert ways of knowing—canoe builders develop technical ways to harness the power of the wind to move across the water; weather forecasters time the voyages for optimal sailing conditions; and navigators deploy elaborate mental representations of space,

embodied knowledge of the ocean, and sailing strategies to guide their voyaging canoes across a seemingly undifferentiated surface of waves toward unseen islands. Given that interisland voyaging connects communities and makes island life possible, the knowledge, techniques, and personal fortitude required of navigators are held in the highest respect (Peterson 2009, 115). Skilled and intrepid navigators among the Carolinian atolls, in fact, can attain status greater than that of a chief (Alkire 1965).

Recent revitalization projects throughout Oceania from several cultural domains illustrate some of the complexities and predicaments of preserving specialized cultural knowledge. In particular, a recent project to revitalize sacred machi textiles on Fais Island in Micronesia has revealed a continuing link between sacred objects and traditional chieftainship (Rubinstein and Limol 2007). Machi weavings, a unique cultural product of the women of Fais Island, were formerly an obligatory item of chiefly tribute within the sawei interaction sphere that connected distant outer islands to Yap. The machi textiles are still very much associated with chiefly authority and status; however, the traditional context of the machi was eroded in the twentieth century due primarily to the cessation of interisland chiefly tribute voyages to Yap. With only a few women retaining this knowledge at the dawn of the twenty-first century, a project was developed to prevent the loss of their unique knowledge. The main paradox of the project was that by reviving the sacred weaving, the project risked recontextualizing it and eroding its relationship to chiefly authority, which is what gave the item its particular cultural significance in the first place (Rubinstein 2009). With a similar central paradox to the machi project, the recent revival of navigation in the Marshall Islands is connected to an intense history of voyaging research and revival throughout Oceania (Finney 2007).

VOYAGING

The indigenous knowledge and techniques of voyaging and navigation enabled seafarers to explore, discover, and colonize every inhabitable island in Oceania (Irwin 2007; Kirch 2000). Long-distance voyaging initially linked distant island communities, but over time many began to focus on local sailing (D'Arcy 2006; Neich 2007). The European penetration into Oceania exacerbated this decline in long-distance voyaging in many regions with the introduction of new diseases, social disruptions through trading and colonial occupation, and restrictions on the use of traditional canoes and navigational methods (D'Arcy 2006).

The question of how the Oceanic seafarers navigated and sailed their voyaging canoes generated intense debate, which in turn sparked a renaissance of voyaging in the latter part of the twentieth century. Captain James Cook had first hypothesized that navigators exploited seasonal wind shifts to settle Oceania from the west (1955), but scholars in the mid-twentieth century began to question the supposed performance capabilities of voyaging canoes, sailing strategies, and the accuracy of navigational knowledge and skills. In particular, Thor Heyerdahl reversed the direction of the accepted history of migration (1953), while Andrew Sharp charged that the remote regions of Oceania were not discovered and settled through a succession of regular two-way voyages over thousands of miles, but rather they were encountered by chance (1957). As K R Howe noted (2006), a symposium of specialists met to discuss Sharp's thesis (Golson 1963), but his argument became distorted over time because of the use of the words "chance" and "accidental"; readers came to believe that Sharp had claimed that the voyages were accidental, which suggested a model of one-way drift voyaging. Significantly, Heyerdahl, Sharp, and others pointed to a paucity of detailed observations (see, eg, Åkerblom 1968; Hilder 1963).

Scholars responded to these critiques by turning to those communities that had maintained their voyaging traditions in practice or living memory (Finney 1976). At the time, voyaging persisted largely where islands were close enough to invite interisland visits, but far enough apart to present a challenge (Feinberg 1995a). David Lewis conducted a pan-Oceanic survey to contact and sail with traditional navigators and to interview elders who remembered but no longer practiced traditional navigation (1972). Drawing from Thomas Gladwin's 1970 analytical division of navigation into the tasks of orientation and setting a course, estimating position and keeping on course through dead reckoning procedures, and expanding the range at which islands can be detected in order to make landfall, Lewis demonstrated that navigation traditions in the remote regions of Oceania share a common basis and can be considered part of a single system of navigation (1972). In particular, the deep seafaring traditions of the atoll cultures of Micronesia (Gladwin 1970; Thomas 1987); the Santa Cruz Islands (Feinberg 1988); and Indonesia (Ammarell 1999) have been a central focus for ethnographic research on Oceanic navigation.

To assess the performance capabilities of voyaging canoes, Ben R Finney pioneered the approach of experimental voyaging. Synergistically mixing science with cultural revival, he engaged the Hawaiian community in reconstructing and sailing *Hōkūleʻa* and other Polynesian voyaging canoes

over long distances using traditional navigation (Finney 1979, 1994, 2003). The ethnographic and experimental voyaging, combined with simulated voyages (Evans 1999; Irwin 1992; Levison and others 1973), have provided overwhelming evidence to refute Sharp's thesis of accidental discovery and presumed thesis of accidental voyaging by demonstrating how the early maritime explorers could have sailed voyaging canoes and navigated out of sight of land into the remote regions of Oceania.

Now, at the beginning of the new millennium, many cultures are revitalizing their voyaging traditions. Islanders from the central Carolinian atolls of Micronesia experienced a recent resurgence in voyaging in the mid-twentieth century (McCoy 1976), which continues today (Flood 2002; Metzgar 2006; Ridgell and others 1994). This renaissance has played a central role in the relearning of navigation in Hawai'i and throughout some regions of Polynesia where it had disappeared altogether (Finney 1979, 1994, 2003). During the 2007 voyage of *Hōkūle'a* to Japan, two events received widespread attention. First, the Polynesian Voyaging Society honored Mau Pialug, a Satawalese master navigator who had previously shared his knowledge with Hawaiians to help them recapture their maritime legacy, by presenting him with the *Alingano Maisu*, a voyaging canoe of Polynesian design. Second, members of the Hawaiian crew participated in a traditional Satawalese pwo ceremony recognizing them as master navigators (Kubota 2007).

This blending of Satawalese and Hawaiian voyaging traditions illustrates two different historic trajectories of knowledge maintenance and loss. Satawalese voyaging represents one end of a voyaging spectrum, with its historic continuity and recent resurgence; Hawaiian voyaging represents the other end of the spectrum, with a complete historic cessation and recent rebirth. Other major voyaging traditions lie somewhere in between but remain far less well known. For example, a few elders survive who remember but no longer practice traditional voyaging in the Marshall Islands and in the Santa Cruz Islands (Genz 2006; George 2007). It is in such island communities that specialized knowledge is at risk of being lost forever with the passing of the last custodians of that knowledge.

MARSHALLESE NAVIGATION

Marshallese navigators apparently took the common landfinding technique of remotely sensing land based on how islands disrupt the flow of swells and currents and developed it into a comprehensive system of navi-

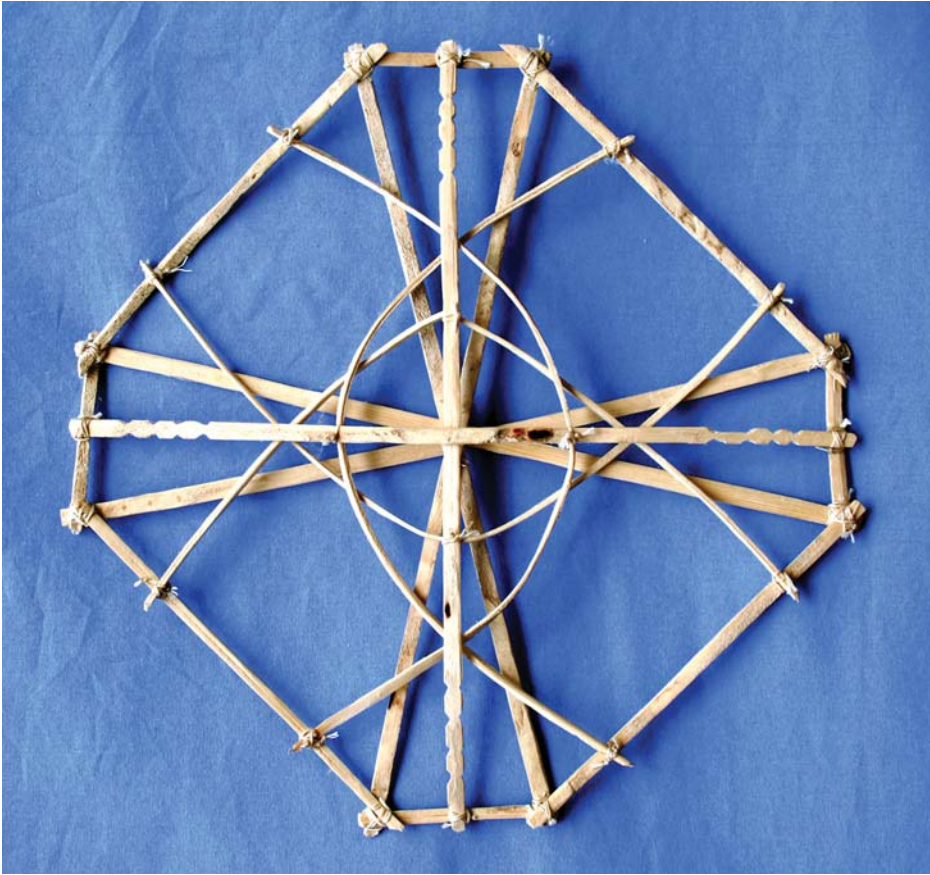


FIGURE 2. Captain Korent Joel's uncle, Isao Eknilang, constructed a wave model called *wapepe* by lashing pandanus roots into a latticework of lines and curves. Photo by Joseph Genz, 2005.

gation. The unique island geography of the Marshallese atolls contributed to the development of this wave pattern navigation. The Marshall Islands comprise twenty-nine coral atolls and five coral islands in two chains that extend over five hundred miles just north of the equator along a southeast-northwest axis (see map 1). The dominant northeast trade wind swell, which travels unobstructed for thousands of miles across the open ocean, hits most of the atolls directly and transforms in several ways. Marshallese navigators pilot, or guide, their canoes with reference to these reflected and refracted wave patterns (Ascher 1995; Davenport 1960; Finney 1998, Genz and others 2009).

Navigators today model their wave concepts by weaving the midribs of coconut palms or thin sections of the aerial roots of pandanus into a latticework of lines and curves (figure 2). These models, commonly referred to as “stick charts,” are strikingly similar to those of historic times (Schück 1902; Winkler 1901). The physical oceanographic basis of the wave concepts and models is only partially understood; some of the indigenous wave concepts and models do not fit easily within a Western scientific framework (Genz and others 2009).

DECLINE OF MARSHALLESE VOYAGING

The unique wave-based system of Marshallese navigation enabled widespread interaction within and beyond the two island chains of the Marshall Islands during prehistory and early historic times (Weisler 2001; Spennemann 2005), but voyaging declined dramatically in the late nineteenth and early twentieth centuries for a variety of reasons.

The decline of navigational knowledge and interisland canoe voyaging is partly in response to the reciprocal use rights of a three-tiered social and political system (Tobin 1956). The iroij (chiefs) take responsibility for the aļap (lineage heads) and the ri-jerbal (commoners), who, in return, provide the iroij with food and labor. In the past, navigators and other voyaging specialists worked for their iroij under strict protocols of knowledge use and transmission. The iroij permitted their navigators to impart their knowledge on only a few apprentices, usually their favorite children (Erdland 1914, 77), thus imposing a restriction on the dissemination of navigational knowledge and reinforcing a professional secrecy and rivalry between navigators of different chiefly influence (Davenport 1960, 23). This led to the development of distinctive family-based “schools of navigation” (Krämer and Nevermann 1938, 215); it also contributed to the chief’s power and authority in relation to rival chiefs (D’Arcy 2006, 89; Davenport 1960, 23). In addition, the restricted dissemination of navigational knowledge in the Marshall Islands and in many seafaring cultures throughout Oceania contributed to a fragility of seafaring institutions that made them vulnerable to sudden catastrophic events, such as natural disasters and introduced Western epidemics (D’Arcy 2006, 94–95).

The Marshallese had a distinctive cultural response to the new, contested forms of knowledge brought by foreigners. In general, they valued nontraditional knowledge and cultural practices. Several scholars have observed that the Marshallese often reject, or act ambivalent toward, their

cultural traditions, while valorizing the “other” (Carucci 2001; Walsh 2003)—a notion Nicholas Thomas has referred to as “the inversion of tradition” (1992). This practice was noted in the late nineteenth century when the chiefs began to expand their economic power through control of European maritime technologies. They purchased schooners from German and British trading companies, and their restrictions on the use and transmission of navigational knowledge aided their monopolization of this new maritime technology. In addition, the larger carrying capacity of the European vessels and chiefs’ perception of the prestige derived from owning the ships contributed strongly to the collapse of the social infrastructure behind canoe voyaging (D’Arcy 2006, 141; Spennemann 2005, 33). The lack of chiefly motivation and support undermined community support for the building and maintenance of canoes and interest in the transmission of traditional skills and knowledge. The transition from Marshallese canoes to European-style schooners was rapid. Nearly all the iroij owned European-style vessels by 1910 and Marshallese mariners readily adopted or adapted Western boat construction and design (Spennemann 2005).

Social disruptions under the German and Japanese colonial administrations hastened the decline of Marshallese navigation and voyaging practices, particularly the transmission of knowledge to the younger generation. By the first decade of the twentieth century, voyaging was limited to lagoons of atolls and closely spaced atolls (Giesberts 1910). The most immediate and direct colonial impacts on seafaring were prohibitions and bans on the use of voyaging canoes and indigenous navigation. In Micronesia during the early twentieth century, the German and Japanese colonial administrations placed prohibitions on interisland canoe travel. They discouraged voyaging because of its presumed inherent dangers, the costs of searching for and retrieving shipwrecked and adrift Islanders, and the lost revenues for their trading companies (Alkire 1978, 141; Hezel 1995, 108).

Amid these colonial restrictions, however, some seafaring traditions in the Marshall Islands and the broader region of Micronesia persisted. During the Pacific chapter of World War II, Marshall Islanders faced extreme hardships under an increasingly violent Japanese occupation—physical danger, exhaustion, ongoing air raids, and shortages of food and shelter. After invoking traditional kinship ties for nurturance and seeking sacred protection through a combination of traditional and Christian beliefs, some Marshallese made the daring decision to escape on their canoes by

sailing or drifting on the ocean to distant atolls. They risked dying at sea, being killed by the Japanese, facing unknown treatment at the hands of the Americans, and leaving behind others who might be killed for retribution (Falgout and others 2008, 159–165).

Meanwhile, in central Micronesia, Carolinian voyaging continued and even experienced a resurgence in the mid-twentieth century. Eric Metzgar attributed this to a combination of relative geographic isolation, economic necessity, cultural identity, regional competition, and the creation of districts with the establishment of the Trust Territory of the Pacific Islands after the Pacific War, which resulted in irregular interisland governmental transportation between Yap and Chuuk, which are now states in the Federated States of Micronesia (2006). The Marshallese, in contrast, faced extraordinary conditions as a result of US militarization that adversely affected their voyaging traditions.

During and after the Pacific War, the Marshallese began to implicitly devalue their traditional practices in favor of powerful discourses of modernity, development, and progress (Walsh 2003). The US military and administration left strong impressions of American power, wealth, and knowledge on the Marshallese. The Marshallese contrasted the power and generosity of the Americans to their experience of the Japanese, under whose control they had suffered greatly and were expected to assimilate into the expanding Japanese empire. Several scholars have noted how the Marshallese began to refashion the Americans as chiefs by attributing the mythological trickster Letao, or Etao, as the source of American intelligence and military power (Carucci 1989; McArthur 2000; Walsh 2003). The Marshallese maintained a favorable impression of the US despite hardships by making sense of American power in terms of Letao's power, which derives from his "ambiguity, destructiveness, regenerative capacity, mobility, inversion of cultural rules, lies, and deceptions" (McArthur 2000, 92). This provided the Marshallese with agency and a sense of ancestral heroism (Dvorak 2008), but also contributed to a growing cultural valorization of nontraditional knowledge and practices in the postwar era, including the use of Western maritime technology such as outboard motorboats and modern navigation instruments.

The greatest symbol of American power to the Marshallese—the nuclear bomb—contributed substantially to the decline of traditional voyaging. Between 1946 and 1958, the US government detonated sixty-seven atomic and thermonuclear bombs on Bikini and Enewetak atolls as part of their nuclear weapons testing program. The consequences of this were

particularly acute for the residents of Rongelap, Rongerik, and Ailinginae atolls, who, in the aftermath of the 1954 Bravo test, suffered from radioactive fallout, contamination of terrestrial and marine resources, and forced relocation. All of this undermined their health, subsistence, socio-political organization, and community integrity, while their treatment as human subjects in biomedical experiments further damaged their health and psychosocial well-being (Barker 2004; Johnston and Barker 2008).

The US government chose the northwestern atolls as testing sites due to their relative geographic isolation from the rest of the archipelago, yet this isolation most likely ensured the continuation of cultural traditions throughout the first waves of the successive colonial regimes, including voyaging. In interviews, several elders from Rongelap Atoll describe how navigation apprentices from Bikini, Rongerik, and Ailinginae atolls sailed to Rongelap Atoll prior to the nuclear testing to begin their formal training. Instruction centered on a circular coral reef near the main islet of Rongelap that models how atolls disrupt the flow of ocean swells and currents. Ethnographic accounts of navigation describe family-based systems of navigational knowledge (Krämer and Nevermann 1938, 215), but they do not mention the use of regional training centers. This early research did not, however, focus on the northwestern atolls of the Rālik chain. Thus, the Rongelap Atoll training reef may have been the only regional navigation school at the time of the nuclear testing.

The physical and social consequences of the massive radiation fallout from the 1954 Bravo test on Rongelap, Rongerik, and Ailinginae atolls essentially terminated the transmission of navigational knowledge to a young generation of navigation students, including surviving elders Captain Korent Joel, Isao Eknilang, Lijohn Eknilang, and Willie Mwekto. These four remaining stewards of Rongelapese voyaging and navigation strongly lament the loss of their oceanic heritage. In interviews, they reflected on how the nuclear testing altered the trajectory of their lives. Captain Korent shared his memories and family members' experiences of the nuclear testing as they relate to voyaging and navigation in the following life story:²

Now there's something different in the story of our growing up and living on Bikini, Rongerik, Ailinginae, because as my ancestors lived and grew up they were used to their customs. Their culture was very good because they didn't need to look for food; they got their food from coconuts and pandanus on the islands. Come to the ocean and you can eat fish and everything from the ocean. But after the time of the bomb they moved from the places that had pandanus.

When I saw the bomb's light, I stood up in the house and looked down, and it was very bright. I didn't know what it was but I thought it was a very big moon. Wow, all very bright, I could see some smoke, but I was thinking at that time it was a cloud. A very big cloud. It's only 120 miles from Kwajalein to Bikini. So I can see the cloud and it's really a big cloud. The women there, my mother stayed on Ebeye but all the children of my mother's younger sister, they all got burned, even my grandma and grandpa they all got burned, all of them there. Everybody there.

All the elder navigation teachers were from Rongelap. Some of them died, some they stayed—Pedpedin stayed; Antak also stayed there; Monean stayed on Kwajalein; Iturtak stayed there; Jiblik stayed there; and Joob lived and stayed there. Of all the elders, half died. They were old, very old. There were some that were sixty years old, some seventy years old. I saw those guys. They bathed in water that was contaminated.

The Rongelap people have stopped going to the place to learn navigation because there are no more people there. . . . I would have learned many things if I had stayed on the island, such as making canoes. I probably would have made my canoe and its measurements. If I had stayed on the island I would now know canoe building because I had learned. But due to the bomb I haven't returned to study. I repeat, if I had stayed on the atoll. . . . My knowledge has not yet grown like that of my ancestors. I haven't learned yet how to build canoes or how to sail. I don't know how to build canoes now.

There are no teachers now. If we were to return there, all the old teachers are gone. There is Ijao. He can do it but he cannot go out sailing. But he can teach. They said it's okay if you drink coconuts, so they ate coconut crabs and things like it. My grandfather, Henri, went to small islets and got coconut crabs and ate them secretly. But he knew it was bad food. Nevertheless, he wanted to eat. Even though he knew he was already sick with poison he never changed his life. Every day went fishing, climbed coconut trees, and moved around. I saw him in Hawai'i at Queen's Hospital when I came to Honolulu. I didn't see his death. He was buried on Kwajalein on a small islet with his wife.

But what can I do? There is nothing we can do. He told me to go ahead and enjoy my life. My grandfather comes from Bikini and the Bikini people allowed the bomb to be dropped. He used to travel there all the time. All the time back and forth, but no more after the bomb. Those people didn't know what the bomb meant. There was no understanding. (Joel 2005)

Captain Korent's story highlights the lost opportunity to claim his identity as a Rongelapese navigator. He listed his famed Rongelapese ancestral navigators and described their regional voyages to Bikini Atoll, but he lamented how the nuclear testing arrested his training to become a titled navigator. He and the other Rongelapese navigation apprentices lost their

teachers to radiation exposure. They also lost the community infrastructure to build and sail voyaging canoes once they became displaced from their homeland. In subsequent interviews, Captain Korent elaborated how he and the others lost the opportunity to apply their knowledge at sea by taking a navigation test that, if successful, would have qualified them for the title of navigator.

The surviving Rongelapese elders described in interviews the traditional process of becoming a navigator. The student first learns on land the wave concepts by studying the teaching devices (stick charts) that model how islands disrupt the flow of swells and currents. Then the student learns the feeling of the waves by floating in a small canoe at various locations around the distinctive coral reef on Rongelap Atoll. The student next puts this knowledge to the test at sea by conducting his first oceanic voyage, which involves an intellectual transformation called *ruprup jökur*. The literal translation of *ruprup jökur*, “breaking open of the turtle shell,” metaphorically means that the apprentice’s mind will fill with knowledge once he completes the journey. Typically, the novice sails several days at sea and must make landfall at an atoll that is specified in advance. If he successfully returns to land, the *iroij* bestows the title of *ri-meto* (literally, “person of the ocean”; navigator) on him. In the event that the apprentice becomes lost or misjudges landfall, the chief denies the title and the pathway to becoming a navigator is forever closed.

The nuclear testing interrupted the training and potential *ruprup jökur* voyage for the Rongelapese apprentices. Without the requisite experience, title of *ri-meto*, and chiefly permission to share the knowledge, the surviving elders have not been able to transfer their knowledge to the younger generation. This has contributed substantially to the historic decline of voyaging.

RESURGENCE AND REVITALIZATION

Nowadays, only a few atoll communities in the Marshall Islands rely on outrigger sailing canoes for local transportation. But the building, sailing, and maintenance of outrigger canoes remain central to the social life on these atolls. Young boys frequently accompany the sailors on trips within the protected lagoons, and young men observe and participate in the construction process with master carvers. Once the initial construction is finished, the main advantage of the sailing canoe over a motorboat with

outboard engine is its sustainability—the obvious ability to harness the power of the wind rather than to burn costly fuel (Alessio 1991d).

The persistent use of traditional canoes in these few atoll communities caught the attention of American boatbuilder Dennis Alessio. He developed a project in 1989 to document and preserve the design and construction techniques of sailing canoes throughout the archipelago (Alessio 1989, 1990, 1991a, 1991b, 1991c, 1993; Alessio and Kelen 1995). He enlisted the local help of Alson Kelen and together they have been working to preserve canoe building knowledge and revitalize the canoe culture by training a younger generation of canoe builders and restoring a sense of pride in their cultural heritage. This project, called *Waan Aelōn* in *Majol* (WAM; Canoes of the Marshall Islands), now centers on providing vocational skills to at-risk youth through traditional outrigger canoe building, as well as modern boatbuilding, fiberglass technology, carpentry, and woodworking (Alessio and Kelen 2004).

During WAM's initial documentation phase, Alessio and Kelen observed a competitive spirit among sailors. What started as a day of fishing often finished as a race to sail back home. After discovering this, they initiated several canoe races and festivals that have since become the most celebrated cultural events today in the Marshall Islands. These races evoke a strong sense of atoll identity, as the best sailors from each atoll represent their community in the regional and national sailing races (Kabua 2004). This has energized a recent resurgence of canoe building and sailing throughout the archipelago.

With the country's renewed interest in, and the resurgence of, canoe building and sailing, Captain Korent, whose interview was quoted above, wanted to call for a concerted effort to preserve the navigational knowledge and revitalize voyaging. Captain Korent had been thinking about initiating the voyaging revival for several years, but his learning had been unsanctioned, and this precluded his attaining the formal title of navigator through a *ruprup jōkur* voyage, despite his reputed depth of navigational knowledge. However, the death in 2003 of one of the last master navigators, Toshiro Jokon, elevated Captain Korent's status to that of the "last navigator" in the maritime community.

As the last reputed navigator, Captain Korent suddenly faced a paradox. Any attempt to revitalize navigation ran the risk of recontextualizing the knowledge and eroding its relationship to chiefly authority, and it is precisely such chiefly control that continues to give navigation its particu-

lar cultural significance. On the one hand, Captain Korent could not risk damaging his relationship to his iroij by violating chiefly protocol on the dissemination of navigational knowledge. He felt obligated to maintain the knowledge within his family in deference to his iroij. On the other hand, Captain Korent and his iroij both acknowledged that they needed outside financial and logistic assistance to build a voyaging canoe and train a future generation of navigators.

A solution to this dilemma emerged that drew from the traditional chiefly authority of the iroij. The iroij gave Captain Korent and other knowledgeable Marshallese permission to share their navigational knowledge with WAM. Since Captain Korent and Kelen were related, the knowledge would initially stay within the family. However, the iroij also gave Captain Korent and WAM permission to draw from outside help, a decision that would undoubtedly result in the widespread distribution of the knowledge through publications, community outreach, and the development of educational materials. Alessio and Kelen were familiar with Finney's efforts to research and revitalize Polynesian voyaging (1979, 1994), and they invited him to assist in the Marshallese navigation revival project. Finney then introduced me to the emerging project after I enrolled as a graduate student of anthropology at the University of Hawai'i at Mānoa (UHM) with an interest in learning about traditional navigation and voyaging. With deference to the iroij, Captain Korent began to deploy his knowledge within and beyond his family.

ETHNOGRAPHIC COLLABORATION

Collaborative approaches to research are both necessary and difficult (Field and Fox 2007). In particular, the politics of academic research have been highly visible in Oceania. What started as examinations of the "invention of tradition" in the postcolonial Pacific (Keesing 1989; Keesing and Tonkinson 1982) quickly shifted to the politics of representation and reception—how ethnographies are received by increasingly shifting audiences (Feinberg 1995b; Jolly and Thomas 1992; Lindstrom and White 1993; Linnekin and Poyer 1990). Anthropologists and other researchers must now consider the collapsing distinction between cultural insider and outsider, and their multiple and shifting obligations, responsibilities, and audiences (Tengan 2005; White and Tengan 2001). Indigenous communities are increasingly asking critical questions about research (Smith 1999), sometimes mandating that scholars collaborate with local researchers.

Drawing from Finney's pioneering work on voyaging (1979), we developed a collaborative and interdisciplinary project that aimed to synergistically combine navigation and oceanographic research with cultural revival that involved WAM and the UHM departments of anthropology and oceanography. The research took place for fifteen months between 2005 and 2006 as well as during the summers of 2007 and 2009.

Such an approach makes the entire enterprise—from the research design and fieldwork through the writing process and promotion of community outreach and activism—a collaborative endeavor undertaken by researchers and consultants as co-intellectuals (Lassiter 2005). This ideal was tested as soon as the project started. The project's original research design centered on Captain Korent sharing his knowledge as a master navigator. Captain Korent's reputation in the maritime community had led us to believe that he was an expert in Marshallese navigational knowledge. When we first discussed the project with Captain Korent, however, he candidly revealed to us that he did not know the system of Marshallese navigation in its entirety. In his youth, Captain Korent learned navigation from his grandfather, but he lost the opportunity to complete his training after being dislocated from Rongelap Atoll as a consequence of the nuclear testing. He had been making his own observations at sea for four decades while captaining government transport ships, but he could not fully explain the wave patterns used in navigation. In addition, he had not been able to share the extent of his knowledge with anyone, as his grandfather had taught him clandestinely, without the requisite chiefly permission.

At the start of the project, Captain Korent was able to reconcile his prior unsanctioned learning with his iroij and gain permission to share his knowledge with us, but, as we discovered, he had not yet attempted his ruprup jökur and was thus not recognized by the iroij as a ri-meto. In response to our query as to how to proceed, he conceptualized the project as a way for him to learn the science of the wave patterns and finish his training. This would enable him to then undertake and complete a voyage using indigenous navigational knowledge and finally become recognized as a navigator. (We already had an oceanographic field study in place to investigate the wave patterns.) To continue his training, he began to invite several elder family members, primarily from Rongelap Atoll, to share their navigational knowledge with him. Thus, Captain Korent's role shifted continuously; he was, at different times, our consultant, teacher, and co-learner.

Alson Kelen's multiple roles and capabilities were crucial in the development and implementation of the project. He brought a local research perspective to the project from years of experience documenting canoe designs and construction techniques; he assisted my Marshallese language acquisition and the translation and transcription of interviews; he served as my cultural intermediary with the community and iroij; he guided the construction of the new voyaging canoe; and his family ties to Rongelap Atoll permitted Captain Korent to share his navigational knowledge with him. With the requisite family relationship, ties to the community, cultural knowledge, and experience in ethnography and documentation, Kelen apprenticed himself to Captain Korent with the aim of becoming the next navigator. He christened the voyaging canoe *Jitdam Kapeel*, which can be translated "to seek knowledge," and similarly named the revival project Kapeel in Meto, which can be glossed as "knowledge of the ocean."

The contemporary Marshallese concept of research called *je ilo bok*—which translates as "to write a book" and emphasizes written documentation—proved especially valuable in guiding our work with Captain Korent and the other elder consultants to seek their knowledge of the ocean. Previous historic preservation projects conducted primarily by the Alele Museum and WAM used the *je il bok* concept to record elders' knowledge, including their *bwebwenato* (stories), *bwebwenato in etto* (legends), *roro* (chants), *al* (songs), *ikid* (song-stories), and *kajin etto* (older forms of the language). These native communication patterns figure prominently in the Marshallese community. As we introduced the navigation project to the consultants, we requested that they share this knowledge with us so that we could document it. We took special care to explain to the community through informal conversations, formal presentations, and newspaper interviews that my role as the outside academic was *not* to learn navigation. Instead, my position was to assist Kelen to *jitdam kapeel in meto*, or "to seek knowledge of the ocean."

The navigation consultants, motivated by their familiarity with the concept of *je ilo bok*, took an active role in documenting their own knowledge. Following the precedent set by the earlier historic preservation projects, they shared many stories, legends, chants, and songs. They also provided lists of important vocabulary and worked together to explain the meanings of archaic words. As *Kapeel in Meto* progressed, we focused on documenting the consultants' knowledge that fit within their concept of *je ilo bok*. Despite these efforts to employ a Marshallese approach to the recovery of indigenous knowledge, we encountered formidable obsta-

cles in our attempts to document and revitalize Marshallese navigational knowledge.

CULTURAL POLITICS OF TRADITION

Donna Stone recently suggested that indigenous Marshallese knowledge no longer holds the same prestige as it once did (2001). While this may hold true for many domains of generalized cultural knowledge, navigation is an esoteric body of cultural knowledge that is still highly valued. A virtual cessation of contemporary interisland voyaging has worked to maintain, and possibly elevate, the prestige of navigational knowledge from earlier times because the knowledge is so rarely used today. The knowledge has remained highly secretive, carefully guarded, and strategically linked to the power of the iroij.

The iroij gave permission for Captain Korent and other elders under their sphere of chiefly influence to share their knowledge of navigation and weather forecasting. Captain Korent began to recruit his closest family members, who, in turn, were instrumental in encouraging others to participate in the Kapeel in Meto project. Yet, chiefly permission did not guarantee willing participation. For example, one relative held in his possession a locally written book that details Marshallese navigation. According to Captain Korent, the book is a compilation of descriptions and diagrams from several deceased navigators of the entire repertoire of navigation concepts. The individual who possessed the document, however, refused to share it with the Kapeel in Meto project. In fact, he told Captain Korent that he plans to take the book to the grave with him when he dies. Captain Korent believed his relative's motivation was to not lose the prestige that came with the possession of the book, even in the event of his death. The cultural imperative to safeguard navigational knowledge impelled this one person to protect his status through the private possession of a locally written book rather than contribute to the community's preservation of navigation by sharing the information.

A second example involves an entire community's reluctance to share their navigational knowledge. In April 2006, Kelen and I flew to an atoll to work with a knowledgeable elder. The navigator's aļap, under the direction of the iroij, had previously requested that he share his knowledge of navigation with us. Unfortunately, neither the elder nor his aļap could greet us at the coral runway when our flight landed. The reception we received from members of the community as we exited the plane had a

palpable air of hostility that we both felt. As we walked down the stairway to the coral runway, one individual spoke the following words to his friends as he approached us: “*Īōmarā reitōn katak kapeel in kapen kein ad im rōl*” (These men are going to learn our knowledge of navigation and go back). This was followed with the harshly voiced and oft repeated question: “*Kwōnaaj rōl nāāt?*” (When are you going to leave?)

When we met the elder at his home, Kelen explained our purpose in visiting him and asked respectfully for his permission to allow us to work with him. Once the elder realized that Captain Korent was really directing the project, he agreed to share his knowledge. He insisted that he adopt us into his family in order to transfer his knowledge according to traditional etiquette. We accepted his request under the assumption that our formal integration into his family would relieve some of the anxiety, tension, and hostility we had felt upon arrival.

However, we continued to feel an undercurrent of suspicion despite our incorporation into the family. Walking along the main village path, nearly everyone addressed us with the phrase, “*Enaaj ke wōt?*” (Will it rain?) We felt they were repeatedly asking us this question in order to test our supposed newly acquired knowledge of weather forecasting. But it was only at the very end of our visit that we inquired directly about weather forecasting knowledge. The people were not, then, necessarily testing us about weather forecasting. It was probably more culturally appropriate to ask about weather even if they were more interested in the extent of our learning their navigational knowledge. It was also much easier for them to talk about weather forecasting than navigation. The restrictions on even talking about navigation highlight the continuing secrecy that surrounds it. This is reinforced by the fact that on this particular atoll there is no word or title to recognize an individual as a navigator, as no one other than the *iroij* is supposed to know who has the navigational knowledge.

A final example comes from the interaction among the consultants within the Kapeel in Meto project. These elders were encouraged by their *iroij* to share their knowledge with us. Our engagement with them has been both at the individual and group levels. Commonplace communication patterns (*bwebwenato*, *bwebwenato in etto*, *roro*, *al*, and *ikid*) have revealed very important insights into navigation and voyaging. However, the elders tend to openly share their knowledge with us only when they are alone. Our most useful discussions have occurred while on a canoe, yacht, or ship at sea with only one of the elders present. Despite the fact that all of them are willing to transfer their knowledge to Kelen and open

it to the wider Marshallese community, they remain hesitant to talk about navigation among themselves. This concealment of personal knowledge and expertise may have deep roots in the traditional protocols of secrecy (Davenport 1960, 23). At the same time, such reluctance to share knowledge may work as a sort of impression management. They might impress others—both fellow navigators and researchers—through their silence in order to be recognized as the best navigator. Alternatively, concealing knowledge may be a virtuous quality for the elder navigators (Peterson 1993). In this way, reluctance to share knowledge could be their way of evincing their personal values of modesty and humility so as not to appear to be flaunting their knowledge among themselves.

The concealment of navigational knowledge, as sketched in the three aforementioned examples, suggests that families continue to guard their proprietary esoteric knowledge for a variety of personal, familial, and cultural reasons. At the same time, the knowledge is at risk of being lost forever with the passing of the last few custodians of that knowledge. By retaining the knowledge, individuals, families, and communities assert the traditional aspects of their identities. Captain Korent and the other navigation experts had permission from their iroij to share their knowledge under a new set of chiefly protocols, which allowed navigational knowledge to be disseminated within and beyond their families. By *not* sharing their knowledge now under these new directives, they risk damaging their relationship with their iroij. At stake is the opportunity to document the surviving knowledge and transmit it to the younger generation. This could have a profound and lasting impact on the revival of the practice of indigenous voyaging.

Despite the cultural politics of navigational knowledge, we engaged several elders in the Kapeel in Meto project. Through their participation and instruction, Captain Korent continued his belated learning. Since the construction of *Jitdam Kapeel* was not yet complete, he applied his knowledge at sea by guiding a yacht between two distant atolls using indigenous navigation techniques (figure 3). Captain Korent successfully completed this ruprup jøkur voyage and the iroij bestowed upon him the title of ri-meto.

Following the voyage, we honored Captain Korent as *the* cultural expert in navigation by nominating him for the title of ri-kapeel, or a “person with indigenous knowledge and skills” (Genz 2006). “Ri-kapeel” is an official title within the Marshall Islands Historic Preservation Legislation (Spennemann 1992, 29–31). Traditionally, chiefs bestowed this



FIGURE 3. Captain Korent Joel guiding a yacht using indigenous navigation for his ruprup jøkur voyage that qualified him as a ri-meto. Photo by Joseph Genz, 2006.

title on people with exceptional skills and knowledge. Today, the Historic Preservation Office reviews nominations from the community and, with the Council of Iroij, selects one individual with unsurpassed knowledge in a particular field of knowledge (eg, a ri-kapeel in navigation, a ri-kapeel in canoe building, and a ri-kapeel in weather forecasting). The chosen ri-kapeel agrees to train one apprentice for at least one year, for which he or she receives monetary compensation. Importantly, the ri-kapeel title offers a way to continue the transmission of knowledge from elders to the younger generation, a critical component in safeguarding the intangible cultural heritage. The ri-kapeel legislation draws from indigenous concepts and may resonate with Marshallese today more than US models of preservation (Genz and Finney 2006). Based on Augustin Erdland's (1914) ethnography, however, Carmen Petrosian-Husa noted that ri-kapeel were people with magical powers that could use them at their will (2004, 52). This suggests that contemporary usage of the term "ri-kapeel" may not be entirely free of negative associations and may be the reason why the

legislated title has not yet been implemented since its inception (Petrosian-Husa, pers comm, 2006).

CONCLUSIONS

The preservation of esoteric domains of cultural knowledge in Oceania faces severe obstacles. Paradoxically, revitalization projects risk recontextualizing the knowledge and thus weakening its cultural significance. There are competing cultural imperatives to simultaneously safeguard knowledge-based positions of identity, maintain relationships to chiefly authority, and revitalize cultural heritage. In the Marshall Islands, navigational knowledge is being carefully guarded within families despite, or perhaps because of, decreasing numbers of custodians of that knowledge. The enduring value of such specialized knowledge is dramatically evident for the Marshallese today, who have experienced successive waves of militarization in the past century that have rapidly and severely weakened the use and transmission of indigenous knowledge.

The ongoing Kapeel in Meto project raises two interrelated questions about the predicaments of esoteric bodies of indigenous knowledge, the revival of cultural practices, and the possibilities for new models of collaborative research in Oceania. First, can a balance be maintained between preserving knowledge-based positions of identity and chiefly authority and preserving the cultural traditions and practices of the specialized knowledge? Second, what are the possibilities for new models of collaborative research in Oceania that address these predicaments of indigenous knowledge?

The customs of Marshallese voyaging are in fact being preserved in several ways, including the maintenance of traditions relating to power and the management of knowledge; inheritance through family lines; requirements for demonstration of knowledge and the high value placed on experienced-based learning (*ruprup jökur*); the power of the chiefs over the transmission of knowledge; and the formal awarding of the navigator's title (*ri-meto*). However, the elder navigators' participation in the Kapeel in Meto project has enhanced their prestige within the wider community, while the act of sharing their knowledge has diminished their status among themselves and their elite navigation-centered families. Thus, paradoxically, the efforts to safeguard their specialized knowledge have started to erode their identity and prestige as navigators.

We have navigated through new routes to uncover forgotten and frag-

mented knowledge still connected to chiefly authority and power by enacting community participation with a high sensitivity to the politics of culture and tradition (DeLisle and Diaz 1997). The Kapeel in Meto project has been fundamentally collaborative throughout the entire research process, from the research design and fieldwork through the writing and the engagement with community outreach (Lassiter 2005). UHM anthropologists and oceanographers and WAM researchers developed the original research design. We first gained the permission of the iroij to document the most highly guarded domain of voyaging knowledge. This was largely based on Captain Korent's request for assistance in coordinating the revival and the project's commitment to maintain the knowledge within the family by teaching Kelen as a navigation apprentice. We then reconceptualized the research design so that Captain Korent could relearn certain aspects of navigation from his elders, thus fluidly melding his roles as consultant, instructor, and co-learner. We later provided Captain Korent with a Western scientific explanation of some of the wave patterns. All of these steps cumulated in a voyage that Captain Korent navigated by indigenous methods, thereby confirming him socially and according to chiefly protocols as a navigator and intellectually as a "person of the ocean" through the process of ruprup jōkur.

Despite these accomplishments, the attainment of our goal to synergistically combine research with cultural revival remains uncertain. We now have both written and visual documentation of the indigenous wave concepts, but this is of minimal help in training a new generation of navigators. Learning a wave-based system of navigation requires that most of the traditional instruction take place on the water so that students can internalize the embodied knowledge of wave movements through the motion of a canoe. Based on our extensive search, Captain Korent is one of three elders left with this navigational knowledge. A fourth expert passed away during the documentation, sadly highlighting the imperative to document the surviving knowledge now. The canoe *Jitdam Kapeel* is currently being used as a floating classroom for Kelen and others to learn the wave patterns, but their health limited the ability of the remaining elders to conduct in-depth instruction at sea.

More critically, the Kapeel in Meto project may be altering the chiefly authority of navigational knowledge, and the future outcomes of this dramatic shift in power are unknown. Based on interviews with surviving elders, the last stronghold of navigation centered on Rongelap Atoll and the last ruprup jōkur events to sanction the title of ri-meto took place

there prior to the social and environmental disruptions of the US nuclear weapons testing in 1954. The surviving navigation experts remember the strict protocols of transferring the knowledge. To safeguard the surviving knowledge, the iroij recently accepted new protocols that involved, for the first time, sharing the knowledge beyond family inheritance lines. With the start of Kapeel in Meto, sharing this knowledge with others has now become the new way to preserve the special relationship between navigators and their iroij. At the same time, the widespread flow of knowledge may ultimately undermine the chiefly authority and power. In sum, it remains unclear how the tension of simultaneously safeguarding knowledge-based positions of identity, maintaining relationships to chiefly authority, and revitalizing cultural heritage will be resolved.

* * *

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Notes

1 The spellings of Marshallese words follow the new orthography as reflected in the Marshallese dictionary (Abo and others 1976), but I revert to older spellings of place-names for ease of recognition.

2 All interview selections and quotes are transcribed and translated by the author.

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Abstract

Endeavors to preserve esoteric domains of cultural knowledge in Oceania face severe challenges. Paradoxically, revitalization projects risk recontextualizing specialized knowledge and this weakens its cultural significance. In this article, I draw attention to the complexities of this predicament by providing ethnographic details on an ongoing voyaging revival in the Marshall Islands. I examine the competing cultural imperatives to simultaneously safeguard knowledge-based positions of identity, maintain deferential relationships with chiefly authority, and revitalize the cultural heritage. The navigational knowledge is being carefully guarded within families despite, or perhaps because of, decreasing numbers of custodians of a unique wave-based voyaging tradition. Now, Marshallese are navigating through unknown routes to uncover knowledge that has been lost, forgotten, and fragmented, and this suggests possibilities for new models of collaborative research that are sensitive to the politics of culture and tradition as they address the practices of cultural recovery.

KEYWORDS: indigenous knowledge, voyaging, navigation, cultural revival, ethnographic collaboration, Marshall Islands