

Human Organization, Vol. 72, No. 3, 2013

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0018-7259/13/030220-10\$1.50/1

Of Boars and Men: Indigenous Knowledge and Co-Management in Taiwan

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Around the world, especially since the passage of the UN Declaration on the Rights of Indigenous Peoples in 2007, indigenous people have hoped that advances in legal rights can help them gain recognition for their ecological knowledge and autonomy in the use of natural resources. In Taiwan, following legal changes in the 2005 Basic Law on Indigenous Peoples, indigenous people hope to gain control of their own hunting regime through establishment of co-management boards with national parks and other state institutions on their traditional territories. This article explores hunting practices and indigenous knowledge in Truku communities. Hunters and trappers possess rich knowledge about the mammals and birds of the forests. Hunting practices embed them in the ancestral law of Gaya and contribute to cultural survival. This article explores whose knowledge is most relevant to the establishment of co-management institutions and makes suggestions for their creation.

Key words: hunting, indigenous knowledge, indigenous autonomy, co-management, Taiwan

Around the world, especially since the passage of the UN Declaration on the Rights of Indigenous Peoples in 2007, indigenous people have hoped that advances in legal rights can help them gain recognition for their ecological knowledge and autonomy in the use of natural resources. Even in the best situations, however, there can be a disconnect between the aspirations at the international or national levels and the lived experience of local people. For local people, the legalization of hunting, trapping, and fishing for subsistence purposes are among the most important issues. In this article, with the Truku hunters of Taiwan as a case study, I argue that a political ecology of indigenous peoples and their ecological knowledge requires the addition of what Tim Ingold (2000) calls a "dwelling perspective." I subsequently explore what

implications this approach may have for indigenous policy in Taiwan on hunting and co-management of natural resources.

Since 2005, when the Legislative Yuan (Taiwan's Parliament) passed the *Basic Law on Indigenous Peoples*, indigenous activists, politicians, and bureaucrats have negotiated legal and institutional reforms for the country's 528,000 indigenous people.¹ Part of global indigenism (Niezen 2003), Taiwanese indigenous rights activists have built a dynamic social movement, lobbied politicians, and presented their causes in UN and other international forums. Constitutional revisions, the Basic Law, and other laws have integrated key concepts from international conventions into domestic legislation. One challenge, of importance to hunters and trappers who wish to carry out their traditional practices legally, is to create co-management institutions for Taiwan's mountainous regions, according to Article 22 of the Basic Law:

The government shall obtain consent from the locally affected indigenous peoples and *formulate a common management mechanism* before establishing national parks, national scenery, forest district, ecological protection zone, recreation zone and other resource management institutions. The regulations shall be made by the central relevant authority jointly with the central indigenous affairs authority. (ROC 2005, emphasis added)

The problem is that, although hunting for subsistence and cultural purposes was legalized in the Basic Law, it remains illegal to hunt in national parks (where indigenous people own land and reside on a permanent basis), and trapping is illegal everywhere. Indigenous activists, thus, promise hunters that their problem will be solved with the eventual creation of co-management boards and, even further on the horizon, new

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forms of indigenous autonomous governance (Simon 2007; Simon and Mona 2013).

The goal of this article, based on field research with the Truku since 2004, is to explore risks and possibilities presented by this legislation, especially as Truku activists are currently lobbying to create co-management boards in existing parks. The challenge is to move beyond the declarations of indigenous rights and the legislation that claims to promote these ideas, better understanding the lifeworlds of hunters on the ground. How do the Truku, through their life projects and practices, gain knowledge about the ecology of their traditional territories? What do differences between the lifeworlds of local actors, in terms of lived practices and social positions, suggest about the future composition of co-management boards? What does this mean for Truku hunters and trappers? What policy recommendations can be made for the future creation of co-management boards?

A Political Ecology of Truku Land

Taiwan, an island of 35,980 km², has the highest mountains in East Asia. With 165 mountains surpassing 3,000 meters, it is one of the world's most densely alpine countries. Taiwan has eight national parks, amounting to 8.64 percent of its land mass. The Taroko National Park, established on November 28, 1986,² covers 92,000 hectares ranging from tropical rainforest to arctic tundra and snow-capped peaks up to 3,705 meters. The main tourist attractions are the Taroko Gorge, steep limestone canyons carved out by the Liwu River, the Skadang River, the Baiyang Waterfall, and various Chinese-style buildings. The park, known for floral and faunal biodiversity, covers part of the traditional territory of the Truku people, which also extends well beyond park boundaries.³

For the Truku, the Park is a vivid reminder of their colonial situation. In pre-colonial days, clan-based communities moved as needed through the mountains in search of game and fertile soil. They were acephalous societies with no permanent institutions of power, in which all adult men were political equals. The sacred law of Gaya, enforced by *utux* (ancestral spirits), regulated social relations between community members. Clans sometimes formed weak alliances based on marriage exchange with other groups in the same watersheds but were frequently at war with groups competing for hunting territories between rivers.

This situation ended after the 1914 Taroko Battle, when the Truku capitulated to the Japanese. The Japanese ruled over Truku territory as well as the rest of Taiwan until 1945 when the island was transferred to the Republic of China (ROC) after World War II. After the anti-Japanese Musha Incident in 1930, all but two Truku communities were forced to resettle to places where they would be easier for Japanese police forces to control.⁴ The hamlets of Xoxos and Skadang remained in their mountain location until 1979, when they were encouraged to move to the foot of the mountain. Their land is now entirely within the boundaries of the Taroko National Park.

Figure 1. Map of Taiwan Showing the Taroko National Park and the Traditional Territories Claimed by the Truku and Sediq Peoples



The Taroko National Park has been the arena of frequent protest, as its inhabitants experienced the criminalization of many of their practices after the park's establishment (Chi 2001). The inhabitants of Skadang and Xoxos maintained legal title to the land they farmed but were suddenly subject to park regulations as well as national laws. There are, thus, conflicts between the hamlets and park administration about construction of work sheds, permitted forms of agriculture, transport of agricultural products and implements up and down the mountain by cable car, and the elimination of wildlife (especially boars and macaques) that threaten crops and fruit trees. Whether in the park or not, the Truku value their traditional knowledge and practices and hope to have at least an equal voice in policies affecting their traditional territories. It is probably no surprise that the Truku have emerged as strong proponents of indigenous autonomy (Simon 2007).

Hunting was banned in national parks in 1972. This restriction was applied on Truku territory when the Taroko National Park was created in 1986. The *Wildlife Conservation Act* (1989) further restricted hunting, making most hunting and all trapping practices illegal. After the passage of the Basic

Law, the Wildlife Conservation Act was revised to permit some indigenous hunting for ritual and subsistence. In enforcement, however, this conflicts with laws and regulations criminalizing the use of traps and unregistered rifles. In the absence of a transparent rifle registration process, police continue to arrest and prosecute indigenous hunters. Without a legal hunting supplies industry, moreover, hunters must get by with rifles, bullets and gunpowder hand-crafted from items sold in ordinary hardware stores. The Truku experience the criminalization of hunting as a colonial imposition and refer to it as such.

Outside of the park, the Forestry Division, the Veterans Affairs Commission, and private owners of farms and tea plantations have all successfully laid claim to traditional Truku hunting territories in both Hualien and Nantou Counties. Truku lobbyists hope that the creation of co-management institutions with the Taroko National Park can help them assert autonomy, leading someday to regional forms of indigenous autonomy, but many hunters and trappers are skeptical about how useful such institutions can be for their life projects. They often describe proponents of indigenous autonomy as "elites" seeking political positions for themselves, without any practical benefits for "ordinary people." It is difficult to understand these different perspectives without a bodily experience in the dwelling of hunting.

Political Ecology Plus: Ingold's Dwelling Perspective

Political ecology, a rich theoretical field within and beyond anthropology, has provided key insights into how indigenous peoples have been deprived of effective control of their territories by resource-hungry states and corporations within unequal power relations. Arturo Escobar, for example, showed how discourses of "development" justify the actions of external interests in the "Third World." Recognizing the threat that "biodiversity" discourses may merely extract local knowledge for deepened commodification of nature, he nevertheless hopes that ethnic minorities and indigenous peoples can articulate alternative strategies within a context of decentralization, debureaucratization, political pluralism, and cultural autonomy (Escobar 1995). Calling our attention to the unequal power relations between states and indigenous peoples, Mario Blaser (2004) likewise calls attention to the "life projects" of indigenous peoples, who are unlikely to subordinate their fundamental interests without resistance. These life projects, as this article demonstrates in a discussion of Truku hunters, are intrinsically tied up with what Thornton (2010:110) calls *topophilia* ("loves of places") and *historia* ("atlases of time"). They love their land in a way that cannot be compromised or exchanged for other values.

The goal of incorporating indigenous ontologies and epistemologies into conservation can be elusive. Even in North America, where well-intentioned policy makers have promoted co-management, unequal power relations between the state and First Nations stakeholders have marginalized First Nations perspectives (Nadasdy 2005; Spak 2005;

Stevenson 2006; Thornton 2010). There is always the threat that state institutions transform indigenous knowledge into only one form of data among many others, subordinating indigenous autonomy to other agendas. This compartmentalizes indigenous knowledge, limits its use, and denies its bearers real autonomy. In the Canadian Yukon, for example, Kluane First Nation elders are consulted, and indigenous people constitute half of the members of co-management institutions, but their lifeworlds are systematically ignored in policy formulation and implementation (Nadasdy 2003).

Certainly, the study of conflicting ontologies is important to understanding the relationship between indigenous peoples and nature, as a number of scholars have documented (e.g., Blaser 2009; Descola 2005). Tim Ingold's (2000:42) dwelling perspective allows for further nuance, especially as he apprehends ontology as "not of making a view of the world but of taking a view in it." There is, thus, a closely related question of epistemology, of how people know and, based on this experience of being, create ontologies. In this spirit, Ingold (2000) and Nadasdy (2003) emphasize the importance of skills and lived experience to the accumulation of knowledge. Nadasdy argues that Athapaskan peoples favor knowledge gained from experience. He argues that new political institutions risk transforming hunters into bureaucrats, distancing individuals from knowledge learned on the land and, thus, undermining the real inclusion of traditional ecological knowledge into co-management. The colonial situation has subordinated indigenous epistemologies and ontologies to the goals of the state and other external forces. The goal of the indigenous movement is to shift that balance of power back to indigenous communities.

Research with Truku hunters and trappers, especially excursions into the forested mountains, has taught me the importance of a dwelling perspective.⁵ Since the beginning of the research, fieldwork has involved living in the villages and participating in village life. Over time, I became initiated into the male world of hunting and trapping. This began as I was offered game to eat, causing delight when I ate the raw muntjac liver or lightly boiled flying squirrel intestines that Taiwanese visitors usually refuse in disgust. Men began to discuss their hunting practices with me, showing me guns and traps, and even taking me with them while hunting or trapping. In return, I shared with them hunting stories from my own family.

This field research gave me insight into what Tim Ingold (2000:153) calls a dwelling perspective, which treats "the immersion of the organism-person in an environment or lifeworld as an inescapable condition of existence." This fieldwork also made real to me the differences between different Truku actors. The hunters inhabit a lifeworld of nearly vertical mountainous terrain, the danger of poisonous snakes, and the masculine glory of sharing game with family and friends. The social activists and indigenous legislators inhabit a lifeworld of auditoriums and boardrooms, the danger of political opponents, and the masculine glory of sharing political victory with family and friends. Although hunters



and activists are relatives, meeting at various events that punctuate Truku social life, their daily lived experience could hardly be more different. As an ethnographer, I experienced both worlds, which led more than one hunter to remark gleefully that I dared to eat raw muntjac liver, whereas some of their self-proclaimed leaders refuse the delicacy due to fear of parasites or food poisoning. The following story, from fieldwork in 2007, illustrates how different positions in the state system have led to differences between Truku actors in terms of dwelling perspectives.

The Politics of Indigenous Hunting

One winter, the time that Truku hunters consider to be hunting season, two older men climbed a mountain in the Park to inspect their traps and shot some flying squirrels. As they returned at night, park police stopped them, shone searchlights in their eyes, and demanded to inspect their bags. One of the men was so frightened by the prospect of a heavy fine or prison sentence that he fled and slipped down a cliff to his death. Fellow hunters were so furious that they considered storming the police station in an act of “head-hunting.” They, thus, expressed their grief and anger through an appeal to Truku concepts of justice—head-hunting being called *mgaya* (“implementation of the sacred law of Gaya”) in Truku (Pecoraro 1977).⁶ These men’s anger clearly expressed the power of *historia*, atlases of time, as they claimed both their historical territory and a right to exercise their former means of enforcing territorial boundaries.

As word spread, proponents of Truku autonomy suggested they instead hold a protest demonstration. This is also a project of *historia*, as indigenous activists use the Chinese *chuciao* (“head-hunting”) to mean “to protest,” thus preserving the Truku sense of justice. Truku activists, local Presbyterian churches, and indigenous legislator Dr. Kung Wen-chi (Kuomintang [KMT] or Chinese Nationalist Party) organized a petition drive, a demonstration, and a hearing. In the “Taroko Nation Statement to Oppose the Violation of Human Rights,”⁷ they demanded a public apology from park police, a promise that the captain and officers would be evicted from Truku territory if they again “violate human rights,” and implementation of the *Basic Law* to guarantee indigenous people the right to hunt. They freely evoked discourses of inherent sovereignty and human rights from the international indigenous movement.

About 30 people showed up for the early morning demonstration. Respecting the request of park managers, they did not prepare protest banners. Instead, Dr. Kung and Truku activist Tera Yudaw (a retired high school principal) led the crowd in protest chants. The police, who had prepared a paddy wagon in case arrests were made, watched idly. Everyone then entered the air-conditioned auditorium, which park administration had provided for the occasion. Park administrators, staff, and police officers were all waiting inside.

Dr. Kung, Tera, and one hunter sat around a table on the stage. Kung began by framing the issue in terms of human

rights, saying that “we are merely subsisting on our own land.” Tera argued that the central mountains had always belonged to the Truku, who never ceded their territory to Chinese or Japanese colonial administrators. Noting colonial continuity, he said that the ROC now uses the National Park Law to dominate the Truku and that police actions constitute colonial violence.

Kung asked the hunters—all middle-aged to elderly men—to testify. The first hunter said that the police regularly arrest them at night, shine lights in their eyes, and point guns in their faces. “You will never stop us,” he said. “Hunting is part of our culture, our life, the spirit of the Truku.” In an appeal to *historia*, he said the government should learn from history, since the Truku fought against state control in the Taroko Battle of 1914 and the Musha Rebellion of 1930.⁸ He said, “The police should not force us. We are prepared to use our own lives to protect our land.”

Dr. Kung said that these angry words express the daily pain of the people. He explained that the Basic Law recognizes the right of indigenous people to hunt for cultural, ritual, or subsistence purposes. He acknowledged that necessary revisions have not yet been made to the National Park Law, which bans hunting in national parks, or to other relevant laws. He suggested, however, that police simply refrain from enforcing the old laws until legal revisions could be made. He blamed the Democratic Progressive Party (DPP), which then held control of the Presidency and Executive Branch, and its environmentalist allies for blocking progress on indigenous hunting rights.

In succession, community members testified that they have been harassed and fined for carrying weapons, collecting wild plants, and cooking in the park. They claimed to have been searched arbitrarily and warned by the police not to enter mountain areas too frequently, even though they possess title to land within the park. Evoking the *topophilia* toward ancestral land, they stressed that they merely practice the same subsistence activities as their parents and on the same land. Audience members occasionally shouted, “We are the masters of this land.”

A representative from the Ministry of the Interior, who had come from Taipei for the hearing, took the microphone. When asked by Kung for an apology, he said that the police should reflect on their practices and on their “service attitude.” He said that there are 30 police officers in the park, and 20 of them are indigenous.⁹ The local police captain took his turn, saying that “we want to be flexible, but we need to enforce the law.” When he said that tourists sometimes report gunshots and the police must respond, someone shouted, “We kill squirrels, not people!” As the crowd began to get agitated, Tera seized the microphone and said, “Just apologize!” The police officer bowed his head and apologized. Kung gave another speech about legal reform, blaming the DPP for manipulating “partnership” with indigenous people as an empty slogan.

After further questions from the audience about such issues as collecting bamboo sprouts and building work sheds, Tera said the main problem was the National Park Law, which

attempts to impose a North American model of “parks without people” on Taiwan. The vice-superintendent of the park concluded the event by promising that park administrators would help the Truku communicate with the police. Needless to say, his words fell on deaf ears.

In the literature distributed at the events, the Committee for the Promotion of Taroko National Autonomy declared, “The land is our blood. The mountain forest is our home. Only with hunters do we have land. Only with hunters do we have wild animals.” Their argument was that indigenous hunters know more about local ecology than park officials and that only their hunting activities can contribute to effective conservation. Their proposed solution was to create a Truku autonomous government that would appoint members to a co-management board with park administrators.

One People, Many Dwelling Perspectives

An unpacking of this event shows that hunting as well as political claims to indigenous rights are actions of actors with conflicting ontologies and motives. Shortly before an election, Dr. Kung wanted to present himself as a champion of indigenous rights, gain political support, and discredit the ruling party. Proponents of Truku autonomy wanted to justify their agenda of self-government and co-management. The police wanted to prevent communal violence. Park administrators wanted to present themselves as peaceful mediators. The family of the deceased hunter wanted an apology and some kind of compensation. Others wanted to air personal grievances with the park, claiming the right to farm and hunt as in the past.

After the hunters’ protest, only some actors achieved their goals. Dr. Kung subsequently held a hearing in Taipei, sent DVDs of the hearings to his supporters, and was re-elected. The park administrators and police pre-empted a potentially violent conflict with local people. Tera Yudaw refined his message, taking it to the UN Permanent Forum on Indigenous Issues, and was able to gain assurances after 2008 from newly elected KMT President Ma Ying-jeou that the Truku would gain autonomy—a promise that has not yet been implemented. But, the family of the deceased hunter never received any compensation, and the issue that sparked the demonstration eventually faded from memory. This disappointing *denouement* only contributed to the cynicism of ordinary Truku villagers toward the state, the park authorities, and toward the Truku political actors who speak in their name.

These actors all have very different dwelling perspectives. Dr. Kung, who holds a Ph.D. from Great Britain, was escorted in a chauffeured car to fly back to Taipei by air. Tera Yudaw and other members of his autonomy promotion team, including local politicians from two townships, drove to their offices and homes across Hualien County. The park officials and police officers merely returned to their offices in the park headquarters. The hunters and their families from the two neighboring villages returned home on scooters and on foot, certainly returning as soon as possible to their trap lines.

Although they grew up in indigenous villages, Dr. Kung, Tera Yudaw, and others like them have followed careers that took them far away from the Truku hunting grounds of their fathers. Park officials, mostly non-indigenous Taiwanese from urban areas, are well educated in forestry and related disciplines but spend more time in air-conditioned offices than in the forest. Hunters are quick to point out these differences of dwelling. Proud of their abilities to climb difficult terrain, carry back heavy animals, and endure long periods on the hunt without food or water, they point out that the Truku elite, like the non-indigenous Taiwanese, are incapable of surviving such ordeals.

Truku hunters prioritize an epistemology of lived experience. They argue that forestry theory taught in Taiwan is based on the relatively flat terrain of North America, whereas their ancestors derived knowledge from generations of hunting Taiwan’s mountainous terrain. Their knowledge comes from physical experiences of using headlamps to find flying squirrels in the night, navigating steep slopes and crossing perilous cliffs to set traps, listening to dreams given to them by their ancestors, and carrying heavy animals back down the mountains. In the same way that they criticize forestry experts, they also express cynicism about their own leaders. When Truku nationalists drafted a “Taroko Constitution,” for example, some people said that it seemed to be inspired by the ROC constitution more than by Truku Gaya. Hunters claim that the superiority of their knowledge is proven by the fact that animals still inhabit the forests after 6,000 years of hunting. A reflection on Truku Gaya, thus, has practical as well as theoretical implications.

Entering the World of Gaya

Gaya, which the Truku translate as law (“fa” in Chinese), is “at the center of the life of the Taroko, the source, criteria, and the judge of their entire personal or social life from birth to death—and after! Gaya is certainly the most sacred reality for the Taroko” (Pecoraro 1977:70). Gaya regulates relations between people in such domains as property rights and sexuality, as well as between humans and non-humans. It regulates relations between the living and the ancestors, especially during the pig sacrifices made at weddings and other events.¹⁰

The Truku speak often of Gaya in terms of sexual morality. The ancestors enforce Gaya through punishment in the immediate life. A hunter who has committed adultery, for example, may fall and injure himself. Many Skadang and Xoxos people say that they violated Gaya by giving up their ancestral land and moving. Shortly after relocation, they were punished by a spate of fatal traffic accidents. The Truku also accuse people of violating Gaya if they accumulate individual wealth or political power. In acts that seriously violate Gaya, such as divorce, they appease the anger of the ancestors by sacrificing pigs. Converts to Christianity say that their new religion is the same as Gaya, calling the Ten Commandments the “ten Gaya” (Chien 2001). Hunters talk about a close relationship between hunting and the continuity of Gaya.

One story, also recorded in Japanese ethnographies (Kojima 1996), concerns the origin of hunting. In ancient days, whenever someone wanted to eat the meat of a wild boar, mountain goat, muntjac, or other animal, he or she would simply call the animal's name. The animal would come out of the forest and let the person extract two or three hairs from its back. The person would put the hairs in a pot and cover it with grass. After a while, the pot would be filled with meat. One day, however, a woman called a wild boar and greedily cut off its ear. The boar screamed in pain and returned to the forest, where it told other animals what had transpired. Ever since, animals are afraid of humans, and humans must hunt for food. This story is used to explain that greed is a violation of Gaya and has spiritual repercussions.

Hunting, in ways not captured by state law, is intrinsically a ritual activity. When hunters enter the forest, they self-consciously enter the realm of ancestor spirits and Gaya. They begin with ritual oblations of rice wine, cigarettes, and/or betel nuts, accompanied with prayers for a successful catch and safe return. They avoid areas of the forest perceived as sacred, including places where ancestors are buried. They sometimes wait for messages from the oracle bird *sisil*, who communicates messages from the ancestors, predicting success or failure. Some hunters carry with them a small bag, in which they place boars' tusks or other animal parts given to them by more experienced hunters, for good luck. Trappers rely on dreams given to them by the ancestors to inform them when an animal has been caught. Hunters, more than anyone else, are aware of Gaya, since violation of Gaya leads to failure to catch animals, injury, or even death. Successful hunting is interpreted as an outward manifestation of moral righteousness (Huang 2000; Simon 2010).

Hunting is also a community relationship, as hunters bring back the meat and share it with others in ways that reinforce bonds of kinship and friendship. They are proud of their generosity and perceive game as the most valuable gift they can offer. Whether hunters return with a 100 kg boar or a small flying squirrel, giving endows the giver with a sense of identity, place, and power and binds people in an unbreakable relationship. It is considered immoral to eat alone, and those who do so are called *qeulit* (rats). Although there seem to be no formal rules for meat sharing, it is important in social relations and must be reciprocated. In the past, men were expected to provide meat to the parents of a prospective wife, proving his ability to hunt as a prerequisite to marriage. When they hunt in pairs or in groups, the glory of the catch and the meat are shared equally. It is a violation of Gaya to boast about one's hunting ability, and hunters always speak about their catches collectively. Sharing is, thus, integral to Gaya.

The Truku see hunting as central to their identities. The fact that they hunt on treacherous mountain terrain is meaningful, and they refer to hunting as "going up the mountain." The relationship with mountains is so important that hunters expressed surprise when I said that North Americans hunt in forests that are not mountainous. Hunting is also important for linguistic survival. As a collective activity of older and

younger men, it is one of the few social arenas for cross-generational communication in Truku. Men and boys speak Truku while hunting, upon arrival in the village, and while preparing meat. They refer to all talk about hunting and hunting tools as "men's talk."

There are, however, differences in hunting practices. Almost all young men hunt flying squirrels at night by shining lights into the trees. The squirrels are stunned by the light, their eyes reflecting back the glare, which allows the hunter to identify the position of the squirrel and shoot. If he kills the squirrel, which can be difficult with hand-crafted rifles and lead pellets, he must then descend into the treacherous ravines to find it. Often, a hunting dog is used for this purpose. Trapping is practiced mainly by older men. When I asked one elderly trapper how he knows where and when to lay traps, he simply replied, "Of course I can trap here. I bought this land, and it is mine." Thus, there seems to be a difference between trappers, who own land, and squirrel hunters, who are often young and landless. There are also a few expert hunters, also predominantly older men, who venture deep into the mountains with homemade hunting rifles and ammunition.¹¹

There are also differences due to religious confession. Some Protestants now pray to God rather than to the ancestors and pay less attention to oracle birds. Members of the True Jesus Church avoid ancestral worship and observe biblical injunctions requiring that blood be let immediately after slaughter from animals trapped alive. If an animal is found dead in the trap, they bury the body instead of eating it, a restriction that means True Jesus trappers inspect their lines more frequently. The Catholics are more open to syncretic practices. Because all of these complex practices require intimate knowledge of the forests, hunters have extensive knowledge of animals. These dwelling experiences, far more than the legal classification of "indigenous" on personal ID cards or what Ingold (2000:133) calls the "genealogical model" of indigeneity, explain differences between most indigenous and non-indigenous people but also within those groups.

Truku hunters point out that non-humans are better at observing human behavior than are humans at observing theirs. Monkeys, for example, can distinguish between the sight of a hunter's gun and that of a farmer trying to scare them with a broom. Similarly, they disperse at the sound of gunshot but remain unfazed by similar sounding firecrackers. Flying squirrels watch curiously at men eating and drinking around a campfire, but disappear into the forest when the hunt begins. One hunter told me, "We are unable to catch local squirrels, since they know us and run when they see us coming. We can only catch the occasional squirrel who come from outside, since they are naive." Birds intentionally convey messages to humans, especially about the success or failure of the hunt. Hunters say that animals try to pre-empt hunting attacks, as wild boars may charge hunters or mountain goats may push a hunter over the edge of a cliff. These are intentional acts, as the same animals would not attack pleasure hikers. This knowledge of animal behavior is created from actual experience with animals in the mountain forests.

This perspective is very different from the natural epistemologies taught in Taiwanese schools and promoted in the visitors' center of the Taroko National Park. The permanent exhibit shows the Linnaean classifications of the animals and plants one is likely to view in the park. The very last panel, presenting the "indigenous hunter," says that hunters destroy the environment by killing animals and that poaching should be reported to park police. In this perspective, human beings, even those who inhabited the forests before the establishment of the park, are foreign to the environment and should be removed in an ethic of "conservation." For the hunters, this reveals an intolerable difference in power between them and the powerful non-indigenous people who simply do not understand Taiwan and its natural world. To many of them, the prohibition of hunting is only the latest blow in a history of injustice.

Contemporary Hunting Practices

Long-term participant observation with Truku hunters lends credence to their claim that Taiwan's game animal population has survived and thrived for millennia *because of* their hunting practices. An understanding of Truku epistemologies suggests that their knowledge may be relevant for conservation and, thus, for the work of co-management boards. In the 1990s, wildlife biologist Kurtis Pei (whose research methods are quite ethnographic) found that Rukai hunters in southern Taiwan have a hunting system that contributes to sustainable populations. It does so through three characteristics: (1) hunting only in the winter and mainly on hoofed animals with higher reproductive performance; (2) scattered distribution of hunting territories that disperses hunting and leaves most areas as effective wildlife protection areas; and (3) limiting the number of hunters in each hunting territory (Pei 1999). Fikret Berkes (2008), however, has noted that there are two further requirements for making management of such common resources work: (1) members of a given community must be able to exclude outsiders and (2) they must have ways of making and reinforcing rules for resource use among themselves.

Truku hunters meet the above conditions quite well. With very few exceptions, they hunt in the winter, when it is possible to keep the meat fresh for longer periods of time, and when they are not busy with agricultural work. They hunt mostly hoofed animals, with a preference for the Formosan Wild Boar (*Sus scrofa taiwanus*), the Formosan Reeve's Muntjac (*Muntiacus reevesi micrurus*), the Formosan Serow, or mountain goat (*Capricornis swinhoei*), and, but only rarely and by specialists, the high elevation Formosan Sambar (*Cervus unicolor swinhoei*). For pleasure and self-consumption, young men in particular shoot flying squirrels, and there is some bird hunting, although these activities are not considered to be "real hunting." Other animals, including macaques and civet cats may be caught accidentally in traps and are eaten. It is widely considered a violation of Gaya to kill the Formosan Black Bear, people saying that ancestral retribution will arrive quickly as deaths

in the immediate family of the hunter. The favored species tend to be precisely those that wildlife biologists identify as having the highest reproduction rates. Conservationists generally agree with hunters that the Formosan Wild Boar and the Formosan Reeve's Muntjac could be hunted sustainably and that the sambar is not in danger (Hsu and Agoramoorthy 1997). Pei (1999) even thinks that some animals can be hunted sustainably for a game meat market.

The boar, the capture of which brings great prestige to hunters, can certainly be considered a cultural keystone species, defined by Garibaldi and Turner (2004:15) as "culturally salient species that shape in a major way the cultural identity of a people. Their importance is reflected in the fundamental roles these species play in diet, materials, medicine, and/or spiritual practices." The boar figures prominently in the above legend about the origin of hunting. Hunters use boar teeth as talismans, and young men wear them as jewelry as signs of their virility. The boar and the domestic pig play important roles in the generalized reciprocity between the living and the dead: the living sacrifice domestic pigs regularly to the ancestors, and the ancestors give success in hunting, especially boars, to those who uphold Gaya.

Like Rukai hunters, Truku hunters have widely scattered hunting areas. Due to hunting restrictions, the most common form of hunting is for farmers to lay a few traps near their fields for the wild boars that attack their crops. Based on my observations, they are rarely successful, saying that the boars have a strong olfactory sense and can smell human traces on even a well hidden trap. The more active hunters all have very clearly defined hunting territories, and all members of the community are quite clear about who hunts where. This is the main rule within the community for hunting management and seems to be strictly enforced. Hunters also insist that they are able to exclude outsiders. Nonetheless, their options for enforcement of local norms are limited. Like elsewhere in the world, where encapsulating states have displaced former, self-regulating institutions (Spaeder and Feit 2005), the state-based regime risks contributing to a tragedy of the commons.

The trapping lines require difficult labor, which is where the dwelling perspective is especially revealing. Trappers must carve paths through the forest on steep slopes, often crossing dangerous cliffs, and they must do so regularly as the rain forest vegetation grows back quickly. In fact, part of the difficulty of this work is conquering the fear of heights. The trap lines are socially recognized as the product of human labor and as belonging to individuals. Due to the difficult terrain and the need to maintain the paths, trappers rarely establish trap lines far from their hamlets or agricultural lands, making it easier to exclude outsiders. The need to navigate steep slopes while carrying heavy animals, a wild boar weighing up to 100 kg and a mountain goat up to 30 kg, means that hunters tend not to stray too far from their hamlets, their work sheds, or the main roads. Hunters and trappers are expected to share the meat equally with anyone who accompanies them and helps carry the load.

Hunters must also cut paths through the forest and, thus, work in similar ways. The one renowned sambar hunter I worked with, who unfortunately passed away during my research, was actually a good example of this, as he set up a temporary hunting lodge during the winter months near his hunting paths. From the perspective of the animals, who can navigate terrain inaccessible to humans, this means that hunters are widely dispersed and that most territory is effectively protected area. Hunters and trappers alike say that they do not hunt at the higher elevations, meaning that they capture only surplus populations that move away from those protected areas and toward human settlements.

In line with the usual balance of power between states and indigenous peoples, some conservationists suggest that hunting can be sustainable "if the *government* develops an effective management system of sustainable use" (Hsu and Agoramorthy 1997:835, emphasis added). A political ecological approach, combined with Ingold's dwelling perspective, suggests just the opposite. Governments and office-bound bureaucrats are part of the problem; indigenous hunters with epistemologies and ontologies rooted in the forests of their ancestors are more likely to provide effective solutions. Most hunters recognize that they need some kind of institutional framework for hunting, and some of them told me quite frankly that they had overhunted during the 1970s and 1980s when the Taiwanese economy was growing rapidly and the bushmeat market appeared as a lucrative source of income. But, observing the renewal of animal populations since then, they wish to hunt and in ways that they control themselves.

Conclusion

Current practices in the Taroko National Park obstruct Truku autonomy, as the Truku are excluded from all decision making processes that affect their lives and lands. Truku activists hope for co-management, noting an affinity between the park's goals of conservation and hunters' hopes to guarantee game animals for generations. From the perspective of Truku hunters, cultural survival and wildlife survival are closely interwoven. Thriving wildlife communities are necessary to maintain hunting practices, certain rituals, and social norms of reciprocity. Hunters, who call the mountains their "ice-box," are concerned about the survival of boars, muntjacs, and squirrels. The relevant ends for Truku hunters are an affirmation of masculinity and community identity. Hunting also contributes to intergenerational knowledge transmission and linguistic survival. National Park administrators, on the other hand, work toward wildlife conservation and generally perceive the death of even one individual animal as an obstacle to that goal.

For the Truku, knowledge of animals, and especially of certain mammals, ranks among their greatest intellectual assets. Perhaps it would be a good idea, as Thornton (2010) has proposed for Alaska, to think of natural resource management as cultural repatriation rather than as co-management of empty wilderness. Recognition that Truku stewardship

of their forests, or even of certain cultural keystone species such as the Wild Boar, constitutes cultural property that is inalienable but that has been violated and can be repatriated, might be a step in the right direction. Based on this understanding, it would then be possible to create new hunting institutions based on Gaya in which hunters could legally hunt one or two of the more populous species in return for an obligation to participate actively in the stewardship of the forests.

It is certainly worth studying other examples of co-stewardship, such as that of the James Bay Cree, where Cree hunters serve as tallymen of the forest (Scott 2005), and participating hunters are guaranteed an income even when not hunting (Scott and Feit 1992). In fact, the Cree, trapping for Euro-American markets in a similar colonial situation, depleted beaver populations until their resource tenure was recognized (Berkes 2008). Berkes (2008) argues that indigenous knowledge contributes to conservation only when autonomous communities can contribute to common rights regimes with rules of access, etc., in a process of participatory, community-based resource management. If appropriate institutions can be created, wildlife management may become an effective arena to promote both conservation and indigenous autonomy. Although the actual management of hunting should be done by Truku hunters themselves, perhaps on co-management boards, I think that this research leads to some useful policy suggestions on how to implement existing laws calling for the legalization of indigenous hunting and the creation of co-management boards (see below).

Perhaps the most important applied contribution of this article is that it demonstrates the utility of Ingold's dwelling perspective when planning the composition of co-management boards. There is a difference between the grizzled old trapper who brings meat to a church feast every Sunday and the retired high school principal who gives speeches about Truku hunters in English at the UN. All of these people can claim indigenous status by what Ingold (2000:150) calls a "criterion of descent," but only hunters maintain a sense of real kinship with other creatures that share the same forests. If co-management boards are to contribute effectively to goals of autonomy and conservation, they must include not only park administrators and well-educated indigenous activists but also experienced hunters and trappers who may lack the educational credentials of the state.

Policy Suggestions

1. The first hurdle is legislative. In accordance with the Basic Law, the *Wildlife Conservation Act* should be revised to permit indigenous people to trap, as only this change can make other suggestions possible.
2. The Basic Law permits hunting for cultural and subsistence uses, but this has been interpreted to mean that local associations (NGOs) apply to township offices for permission to kill a specified number of specific species,

for public rituals and ceremonies. This actually violates Gaya, according to some hunters, as only the ancestors give animals to hunters and determine the number. The understanding of culture must be expanded to permit hunting and trapping by individuals.

3. Incentives should be provided to hunters and trappers, perhaps identified as "stewards of the boar," to encourage them to join a new management regime. An income security program, like that of the James Bay Cree, could give them a minimum income all year but on the condition that they hunt and trap within agreed-upon limits (e.g., regarding species, seasons, catch limits, zoning, etc.). At a minimum, trappers could be given better traps and training (e.g., on how to remove human smells from traps) in exchange for joining a licensing regime.
4. Legalization of trapping would make it possible to better regulate traplines. Currently, Taroko National Park officials ask Truku men to stop trapping in the name of hikers' safety. Legalization would make it possible to more clearly demarcate traplines, with signs warning hikers to stay on official park paths.
5. Legalization would make it possible for trappers to acquire better traps and would make it possible for co-management boards to require the use of certified traps. Currently, trappers use old foothold traps with tightly closing jaws that they purchased when trapping was still legal. If these could be replaced with modified traps triggered only by heavier animals (such as boars), they could minimize the risk of capturing non-target animals such as civet cats and macaques.
6. Legalization would make it possible to conform to international humane trapping standards, similar to those developed by Canada, the European Union, and Russia.
7. Legalization would make it possible for trappers to report catches, as well as to turn in non-target animals to co-management boards, practices that would make it possible for conservationists to gather better information on species populations.

Notes

¹Taiwan's indigenous people, part of the Austronesian peoples of the Pacific and Indian Ocean areas, are currently classified into 14 officially recognized "tribes." They have a fixed quota of seats in the Legislative Yuan, currently for six legislators. Their presence on Taiwan dates at least 6,000 years, whereas permanent Chinese settlement on the island began only in the 17th century.

²The park was first planned as the Tsugitaka-Taroko National Park in 1937 when Taiwan was part of Japan. Taroko is the Japanese pronunciation of Truku.

³The correct ethnonym was the subject of local debate. The Truku of Hualien were recognized in 2004 as an independent tribe. Other local factions advocated the name Sediq (meaning "human being,") incorporating the Truku, Tkedaya, and Teuda subgroups. Following local usage, this word is spelled as Sejiq in Truku, as Seediq in Tkedaya, and as Sediq in Teuda. The Council of Indigenous Peoples uses the Teuda spelling. The Sediq tribe was recognized in 2008. Individuals are free

to register as members of either group at local household registration offices. In February 2013, there were 28,551 people registered as Truku and 8,412 as Sediq.

⁴For a full discussion of this history, within an anthropological analysis of state-indigenous relations in Taiwan, see Simon 2012a.

⁵The research for this article is based on nearly a decade of work with Truku hunters. First, I conducted 18 months of research in two Truku villages in Hualien and one Seediq village in Nantou from 2004 to 2007 and have subsequently made annual visits. In the summer of 2010, I conducted ethnobiological research in two villages, which permitted me to not only gather lists of local species but also to engage in conversations with hunters and accompany them to their traplines. In 2012 and 2013, I conducted six months of more traditional fieldwork, which included time spent high up in the mountains with local people.

⁶The Truku, like all other indigenous groups on Taiwan, were formerly known for headhunting. For a broad discussion of head-hunting among the Sejiq (Sediq), of which the Truku are a part, see Simon 2012b.

⁷Truku nationalists prefer to use the Japanese spelling Taroko in English documents, saying the word is already well-known due to the Taroko National Park and is inclusive of all three sub-groups (Truku, Tkedaya, and Teuda). The Council of Indigenous Peoples uses the spelling Truku, which is closer to local usage.

⁸This is a bit of an anachronism. In fact, the Musha rebellion was instigated by six villages of the different, yet closely related, Tkedaya group.

⁹According to Truku hunters, indigenous police officers are rarely Truku. They say the administration hires Amis people as police officers in a long-standing colonial practice of using some groups to oppress others.

¹⁰A comprehensive analysis of Truku Gaya can be found in the Ph.D. dissertation by Lin (2010).

¹¹For a detailed study of Truku hunting practices, written by a Truku hunter, see Huang 2000.

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