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The Articulation of Modern Fetishisms and Indigenous Species*

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Modern conservationism and natural resource management (NRM) can be portrayed as contemporary forms of fetishism, of using or not using certain biological species; these articulate with indigenous ideas or "traditional" fetishisms, which hold that these species control human beings. With their shared mechanistic worldview, the global discourses of conservation biology (CB) and natural resource management have promoted the rational use of key material resources among the Yami fetishisms, under the influences of ever-expanding global commodification and conservationism, have become a hybrid that expresses contested worldviews and social relations between genders and across generations. Through the introduction of new commodities and modern projects, young men and poor women gain access to the means to challenge traditional ideas or rituals about indigenous species. Many indigenous species, already powerful elements in Yami epistemology, have acquired new meanings under Taiwan's national capitalist agenda. Borrowed modern techniques have proved useful in local fetishist practices against spirits of the dead, but are not fully in sync with the ecological concerns of conservationists. Furthermore, the transition of Yami fetish species from traditional "sensuous beings" to scientific species has meant that they have gone through a dual conversion, first from a vehicle of the human-Otherland engagement to modern market commodity; then, from materialist inventory to the object of scarcity tracking. In this sense, natural species constitute a busy conjuncture of the materialist imaginary through which the Yami have experienced modernity.

Keywords: Fetishism, Species, Commodity, Yami, Orchid Island

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Introduction

Scientific practices and knowledge must be anchored in their unique cultural milieu in order to develop locally (Reingold and Rothenberg 1987:x-xii). As a part of contemporary science, conservation biology (CB) aims to preserve and maintain biological diversity, while natural resources management (NRM) intends to promote their rational use. The globalized practice of these fields has bought scientific philosophy and advanced technology into many indigenous contexts where they manipulate the use and understanding of local biological species so they, in effect, become productive capital. This conversion process makes local plants and animals a busy intersection dominated by modern techno-science, instead of the premodern biota in which religious incarnation and supernatural power figure large. In the context of ideological change, such as that seen among the Yami of Taiwan, whenever there is conflict over scientific interpretations or policy conflict with government projects, traditional fetishisms embedded in indigenous species have always yielded to the scientific paradigm.

Fetishism was first discussed by de Brosses in 1757 in the context of West African religion, which holds that witchcraft and ritual objects control human beings. In the evolutionary scheme of religious development, fetishism is perceived to occur at the most primitive stage, followed by totemism, polytheism, and monotheism. In the nineteenth century, scholars redirected their attention from sacred relationships between humans and gods to a modern form of fetishism termed "the religion of sensuous desire" (Pietz 1993:133). Marx understood the meaning of "natural capital" in the modern sense when he suggested that crop plants and natural productivity should be considered varieties of capitalist fetish, which "become manifest endowed with a will and a soul of their own" (Marx 1867:1003). Indigenous species, including many non-human beings, become a "materialist imaginary proper to a communist mode of apprehending capitalist reality" (Pietz 1993:130).

When juxtaposing the national projects of CB and NRM on Orchid Island, different natural species have become subjects through which local people experience an intruding scientific culture and its global reach. Since the incursion of global colonialism in the seventeenth century, scientific models and mechanical rationales have introduced the "curious effects of the market on human life and imagination, which displaced contact between people onto that between commodities" (Taussig 1993:22). The new uses and meanings of local plants and animals are based in villagers' re-interpretations within the modern context, which creates a degree of complexity unexplained by recent ethno-

graphies and global CB and NRM discourses.

This article examines native "sensuous desire" and its later manifestation between indigenous and modern fetishisms. Changing beliefs about how material objects control humans provide useful insights about how indigenous natural fertility beliefs have been repackaged under the impacts of scientific discourse. For this study, selected cases of magic plants and animals are analyzed with regard to their "social essence as an organizing principle" (Pietz 1993:129). This discussion will also illustrate how natives began to understand modern capitalism through the new monetary values assigned to living species. The transition from indigenous "tradition" to modern (commodity, scientific, conservationist) fetishisms will illuminate the impact the changing meanings of biological species is having, and how it triggers changing social relations on this Pacific island.

Field Site and Background

The field site, Orchid Island (Lanyu in Chinese), is located between the Asian mainland and the western Pacific island rim, about 75 km off the southernmost tip of Taiwan and 110 kilometers north of the Batan Islands of the Philippines. It is the second largest island near Taiwan, with 46 square kilometers of surface area. Orchid Island is also situated in the strong Kuroshio Current (arrow in Figure 1a), which originates at the equator and flows along the eastern coastlines of the Philippines and Taiwan. Its axis of maximum speed passes between Taiwan and Orchid Island, and so persistently brings a dispersal of human and biota north from the equator.

Orchid Island is a typical tropical island. Well-developed tropical forests have largely remained intact; it is populated by the indigenous Malayo-Polynesian speaking "Yami" people. Geographically isolated, the Yami people live in six scattered villages—Iraraley (north), Iranmeylek, Ivarino (east), Imorod, Iratay (southwest), and Yayo (west) (Figure 1b). In 2008, the human population of Orchid Island was approximately 3,800 (Figure 2).

In 1877 the Qing dynasty claimed Orchid Island within the territory of its empire using new Western mapping technologies. But after the first Sino-Japan War, Orchid Island was ceded to the Japanese along with Taiwan in the 1895 Treaty of Shimonoseki. After World War II Japan ended its 50-year colonial rule of Orchid Island, returning it to the Chinese Republican leader Chiang Kai-shek and his Kuomintang (KMT) regime, which was soon exiled from China to Taiwan in 1949. Under the KMT's assimilation policy, the Orchid Island was treated as an untamed periphery area, and the KMT government sent officials, soldiers, police, and school teachers there. Only in the

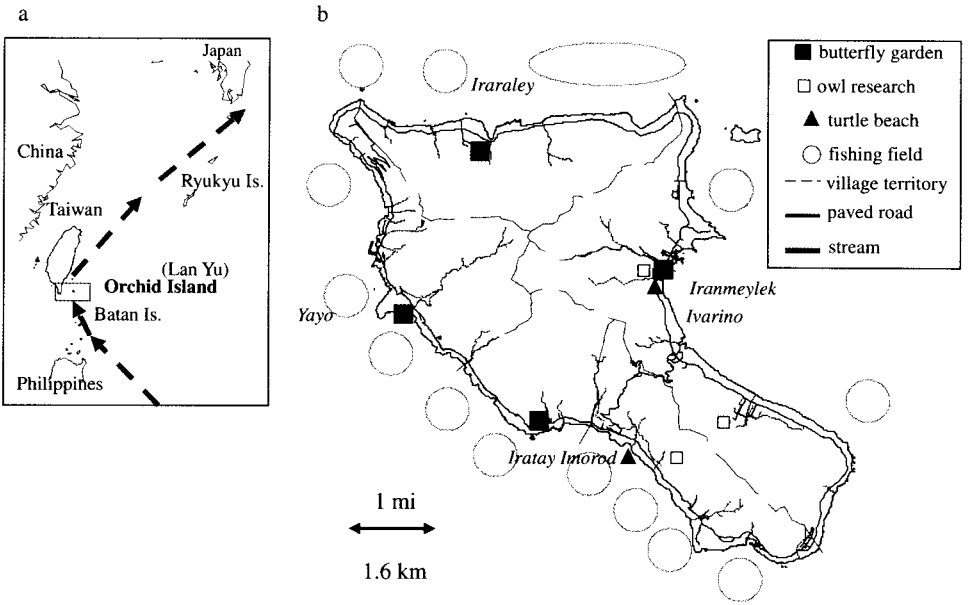

Fig. 1 Orchid Island and the Kuroshio current (a), with key political boundaries, paved roads, streams, fishing fields and conservation projects sites (b).

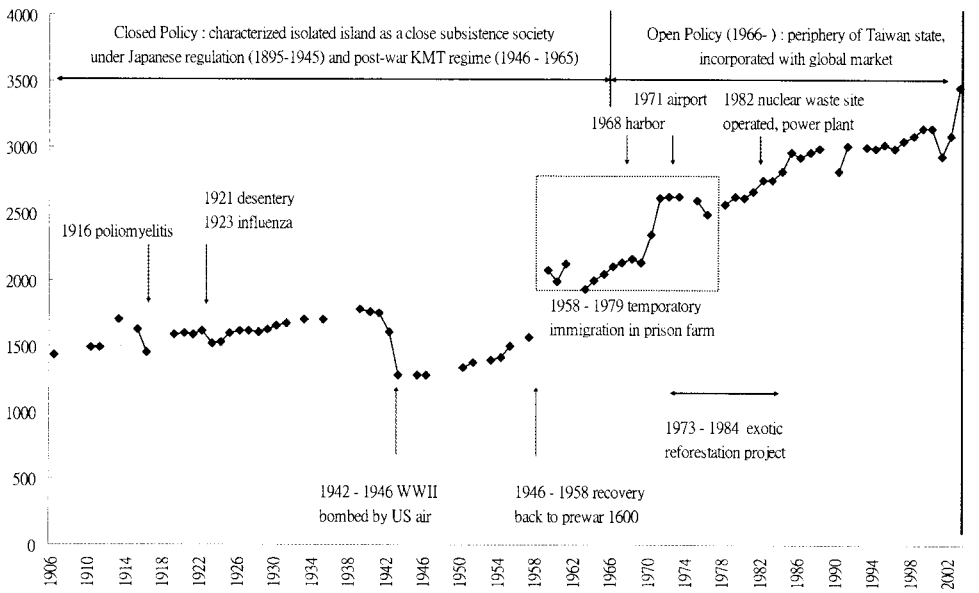

Fig. 2 Human population, historic events and major national projects on Orchid Island in 1906-2002. (Tseng 1976; Census Service Office 2003)

last half century have the people of Orchid Island had regular contact with modern amenities like airplanes, ships, electronics, cash, and liquor.

Tropical forest resources in this peripheral island attracted the Taiwan government's attention, and dramatic land use changes began on Orchid Island in 1958. The indigenous landscape of such a peripheral territory became

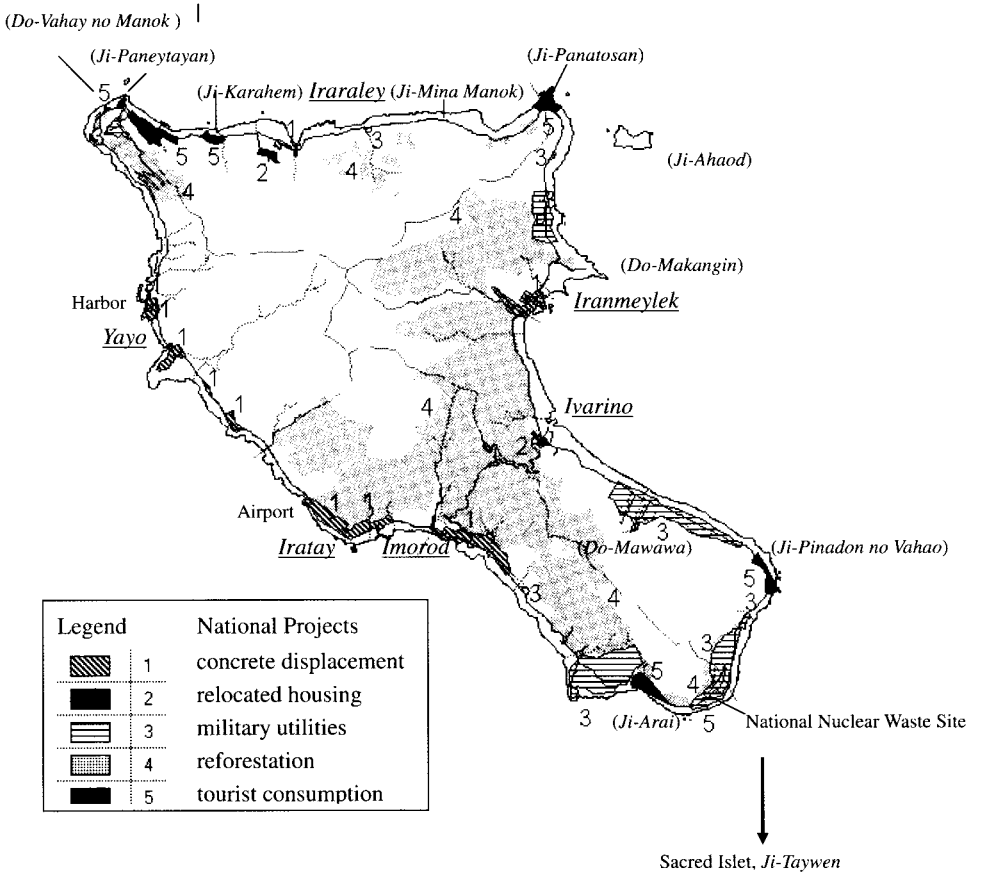

Fig. 3 National projects of large-scale landscape management on Orchid Island. Five series of influential projects include:

1) building and road construction for economic development since 1958,
2) village relocation and re-housing projects across 6 villages (underline) since 1966,
3) peripheral pastoralism to establish army camps and prison farms in 1958–1979,
4) strip logging and exotic reforestation projects in 1973–1984, and
5) tourist-oriented renaming since 1967. Some famous tourism hotspots are listed in parentheses.

the perfect laboratory for nationalist pastoralism. Many modern projects have been deployed across Orchid Island, including: 1) road construction undertaken across the island for economic development since 1958; 2) village relocation and government housing projects since 1966; 3) the establishment of army camps and prison farms in 1958-1979; 4) logging and reforestation projects in 1973-1984; and 5) the promotion of tourism since 1967. (Figure 3)

Recently, natural resources of the Yami people have been incorporated into a managed network under government projects and international CB agendas, such as endangered species conservation using artificial recovery protocols. Many of the national projects have brought cultural conflict and social change to Yami society (Hu 2002:116; Hu 2005:46). To understand the Yami's struggles with (inter)nationally sponsored modernization projects, and the ways they have appropriated scientific models and global goods to accommodate their changing beliefs and subsistence economies, we must analyze these conflicts and their blending of diverse articulations. Moreover, we may gain insight as to how the Yami construct new typologies of changing social relations and cultural knowledge about biological diversity.

Methods

In this study I use interviews to inquire into local narratives on how or what fetish species were chosen by the Yami to identify their preferred themes. Frequently mentioned themes might express strong human attachment to natural things. I conducted interviews with Yami people during three distinct periods for a total of eight months: June, July, September and November of 2001, February and April of 2002, and January and February of 2003. During my participant observation of the island, I used open questions about traditional names for special plants and animals, to identify interested informants who were willing to talk about their favorite species. More than eighty field contacts were made, and thirty-one key informants were invited to talk, including youth and adults across all six villages. Most informants were born between 1950 and 1980 (i.e., they were between 20 and 50 years of age); they had worked or studied in Taiwan for fewer than ten years, which meant that their youth experiences differed greatly from those of the elder generations. I made appointments with informants to meet in their houses and conducted informal interviews by asking open questions usually beginning with "what kinds of plants and animals do you like or dislike?" If we were interrupted, a second interview would be scheduled for clarification on place narratives. All interviews were conducted in Chinese language, with the aid of Yami translators.

To help informants to talk with more specificity about their traditional and modern fetishisms, I explored past and current management projects around indigenous species in the vicinity of the villages, such as the introduction of new rice varieties and a butterfly recovery project. To minimize the biases embedded in my questions, I was careful to avoid terms such as "resource exploitation," "state management," and "conservation." Once the informants mentioned material impacts of their gardens, crop, and harvest, I used additional follow-up and open-ended questions about specific desirable ties or possible avoidance they might observe with natural things. Field notes were written in Chinese immediately after finishing each interview, and narrative details regarding specific plants and animals were typed in the computer after fieldwork.

Species as Nexus: Modern Fetishisms and Worldviews

Well before modern biological science began building a knowledge system with which to classify natural living things, indigenous peoples already had their own practical understandings about the material objects that served as a powerful means to meet the needs of everyday life. The Yami on Orchid Island have long been actively engaged with many local biotic species in daily life (Wei and Liu 1962; Yu 2004:10-40). "Yami fetishisms" here refer to a dynamic and compound body of knowledge that pertains to the inherent value or power of material objects in the "traditional" context. For example, the Yami people often see divine significance in certain fish, which possess the innate power to control or influence human beings. These species have been key to recognizing, understanding, and defining social relations in Yami society at large.

Traditional Yami fetishism imagines "*abo icazig ta milovang do pozo*," a different world that sits side-by-side with living human beings (Guang 1989; Hu 2004:81-83). This "Otherland" is believed to be the source of an abstract power that controls the reproductive capacity of humans and natural beings, and is acquired directly from the immediate surrounding tropical rain forest in which Yami people have direct contact with indigenous species (Figure 4).

Fetishist production of the Yami staples, fish and taro, is a vital arena in which the ordering and re-ordering of social relations and renewals human-spirit exchange take place. In a local legend, a god's daughter (*tazak*) was married from the Otherland to the human world (*pongso no tawo*). This daughter brings all kinds of food species to her Yami husband, because "food appears automatically in the forms of taro, millet, pig, goat and fish, which are kindly bestowed on them from gods." This natural abundance is only possible through a strong "human-Otherland association," namely "*nipiyaven-do-*

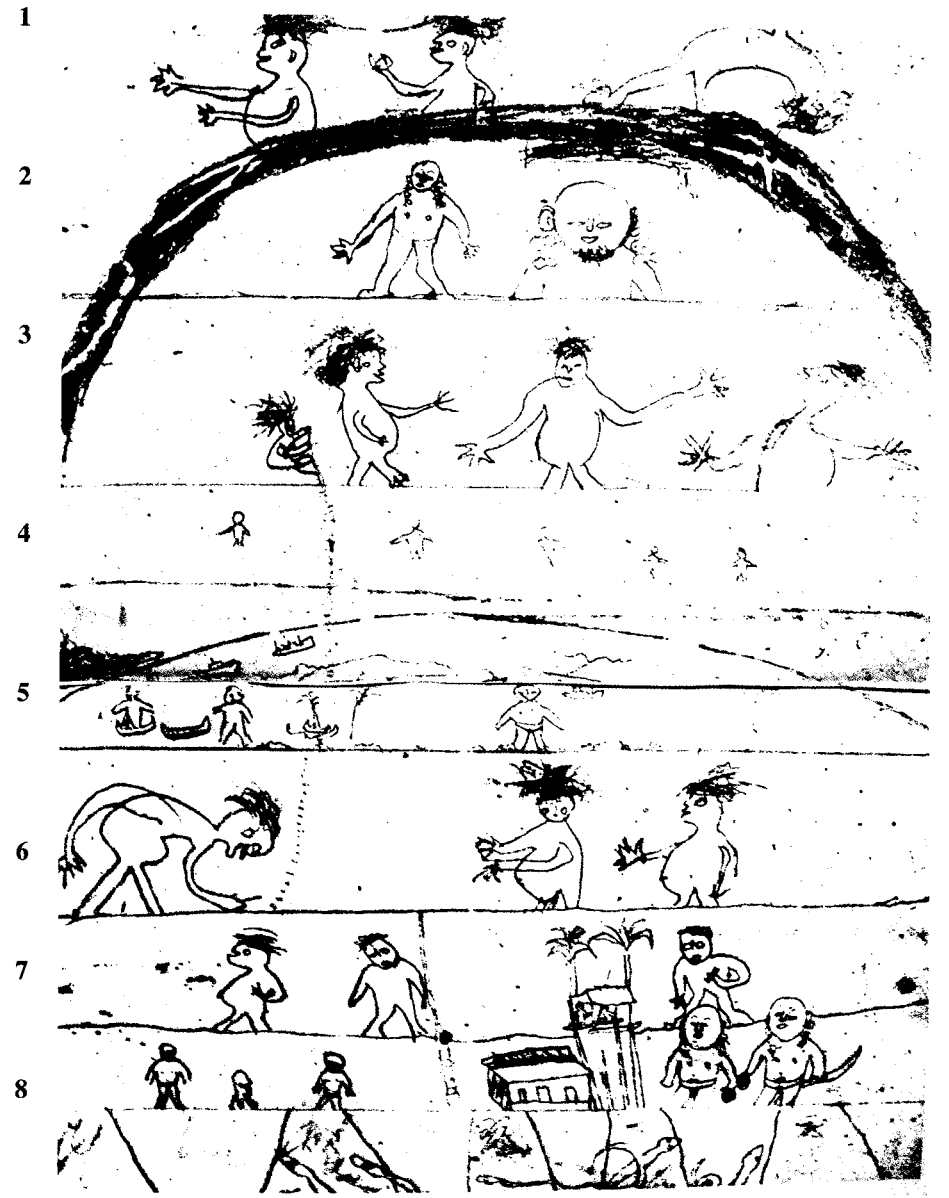

Fig. 4 Yami human and spiritual worlds, photo from del Re (1951:54-55). Note: Layer 1) The upper right is the God's lazy son rolling across the heavens. 2) Gods in the upper worlds *tawo do to* include *Shimo-rapo* and *Shimo-mima*. 3) Upper *anito: Shivairai* (center) and *Shipariud* (right). Their wild hair and pot-bellies characterize them as *anito*. 4) goddesses *Pina-lungao*. 5) Yami human level. 6) Lower *anito*. 7): *anito* (left) wander around the entrance of underworld, in which ancestral spirits (right) decorate themselves, pavilion, and subterranean house. 8) Trunk bases of *cai* trees, with numerous twisting snakes supporting the Yami worlds.

do-vahay no tazak a kano tawo" (Liu 1980:138). An incessant supply of fish and taro represent and manifest the Yami ideal of healthy interactions between the secular world and the Otherland.

Yami people love to use biological metaphors to explain their traditional worldviews, in which some indigenous species mediates between secular reality and supernatural transcendence. The dangerous boundary between humans and the Otherland is marked by many species that Yami claimed had spirit attachments. From their place in the Otherland, "the gods are far away, yet Yami refrain from casual talk about them; spirits of the dead (*anito*), on the other hand, are supernatural beings with which the Yami are concerned daily" (Yu 1991:87). In other words, the Yami sincerely care about these spirits and about how to pacify them, in the sense of Mary Douglas' avoidance (1966: 40-41).

Traditional worldviews, based on careful avoidance and spirit pacification, now interact with modern Newtonian cosmology, often resulting in the conflicts and/or syncretism seen in CB and NRM projects. In the case of the Yami people, indigenous species that are highly cherished religious objects include sacred fish, taro, pigs, and civets. Reproduction of these species, as well as of human kind, is socially set, but it has been interrupted recently by the concepts of commodities, introduced with modern CB or NRM projects. What has happened with the changing imagination of these traditional fetish species? In their role as key objects that shape the Yami social essence, the modern alienation of species production and reproduction must simultaneously mark the alienation of human beings and their social relationships. As Marx's characterizes capitalism, "the seller of labour-power realizes [*realisiert*] its exchange-value, and alienates [*veruässert*] its use-value" (Marx 1867:301). Through an understanding of this value transformation, we can recontextualize conflicts and negotiation between traditional and mechanistic worldviews, and emerging modern humanity under capitalist or conservationist regimes.

The capitalist projects of CB and NRM introduced a "disenchanted," mechanistic worldview in the name of rational scientific management and predictable calculation. The intruding rationales of inventory-building and scarcity identification have pushed this new fetishism of natural beings among the Yami, articulating with the re-ordered Otherland. Rapidly shifting from a precapitalist barter economy to commodity exchange under Japanese colonialism and the KMT nationalist regime, the Yami saw many indigenous species suddenly gain cash value through trade with outsiders. Let me first turn to the changing (re)production of sacred fish and taro in Yami subsistence, and then

expand the discussion to include other local living objects, such as pigs, civets, and bugs.

Sacred Fish Manifest Marvelous Natural Fertility

Flying fish, *alibangbang*, command important political and economic significance among the Yami. Previous anthropological studies of Yami flying fish culture have primarily focused on documenting its associated ritual meanings, processes of preparation and distribution, and its socio-economic functions (Wei and Liu 1962:121; Hsü 1982:17-128). But natural things are not merely food that feed the Yami, they are also material embodiments of the production of social relations.

In the Yami dietary culture, the fish category is used to claim corresponding human virtue achieved by proper taboo observances, and differentiates prescribed from ascribed group identities (Yu 1991:92; Chen 1994). For example, my Invarino informants were proud of their fish harvest in 2003, which accrued to their unique family history of good luck. The Yami use the edible character of fish to distinguish the sacred from the secular in social life (Kao 2004). Rooted in myths that flying fish once taught moral practices that could heal illness and correct problems of the current world, the Yami invoked the sacred fish as an active agent to mediate their social relationships; villagers used various kinds of fish gifts to deliver messages between households, especially before when the fish myths were well-known.

Fishing also functions as a "natural" means by which social identity can be mobilized. For example, in the early spring of 2003, an Imorod fishing group[1] blamed a poor harvest the year before on taboo violations by another neighboring group. The leading Imorod helmsman encouraged the young to obey the taboos for purification against *anito* and allegorically criticized the other group: "We have to keep our culture. Especially our group has to know the taboos. If fish harvest is poor again, this year will be very tough for us." (Field note: Feb. 1, 2003) The speaker suggests that, according to the fish signs (scarcity), group members need to work together to fish; only by performing correctly can they rid themselves of misfortune. Such social practices, which mimic natural correction?, can play a significant role in enhancing group cohesion and identity.

The flying fish is a symbolic gift from the spirit world to the living world.

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[1] The fishing group among Yami, *kakavay*, is a unique social institution. By building and maintaining a plank boat (*cinedkeran*) bilateral kin form this unit of fishermen who engage in flying fish harvests.

Through fish harvests, the Yami can tell if the "gods in the Upper Worlds" (*tawo do to*; see Figure 4), are satisfied with their yearly work, such as preparations for fishing, crop production, and ritual performance. According to Yami myths, the sacred fish originates in the mysterious South, the homeland of their ancestors. It returns to Orchid Island annually, exemplifying the gifts of the gods in the Upper Worlds to this northernmost drifting colony, the Yami (Guang 1989). Fish harvest thus becomes a moment in which Yami experience transcendence between this and the other world. In addition, flying fish is a cosmological metonym that underscores the perpetuation of life through the dual fertilities of natural species and human beings, in sharp contrast to the destructive actions of ghosts. Yami people hunt the sacred fish in a secret manner because "*anito* are everywhere listening and ready to interrupt, especially when humans are arrogant," according to one of my informants. People eat and share this specific sacred fish among families to connect with the spirit world, as well as engage in the transcending human-nature relationship and the interlocking past-present causal loops. *Syaman Hua* in the village of *Iranmeylek* described one time he met with flying fish on a dark night, an account that illuminates his experience of fish flying:

> Suddenly, from the peaceful sea surface popped hundreds, no, thousands of blue flying fish. They made the quiet dark night into a noisy playground, full of the busy flapping of fins. I saw fish flying over the whole ocean. Our boats were among them. We followed them. They seemed to invite us to do something. They were telling us something. (Field note: April 16, 2002)

Furthermore, the flying fish has become a desirable object, since freshly caught fish are periodically sent to particular coastal places where well-equipped modern fishermen pick them up. These harvests fill villages with an atmosphere of eager anticipation. Yami want to eat flying fish, store them well for later consumption, and then redistribute them to kin (Figure 5). The fish is a kind of messenger, its presence conveys the Yami ability to engage in its never-ending life through proper gift-giving practices and sharing rituals. The Yami also believed they must "treat the yearly return of the fish gods well in exchange for family health and crop-production." Fish gifts between relatives consolidate the social relations of kin, exemplifying both labor and goods exchanged. Fish harvesting is thus a fetishist rite by which Yami group identity is reconstructed and human accomplishment demonstrated.

Modern Fishing in an Indigenous Context

For decades, the Yami have been impacted by Taiwan's expanding market

Fig. 5 Indigenous boats as a crafted technology. (a) flying fish, *alibangbang*, handling and sharing in *Yayo* Harbor, 2001; (b) the *mivanwa* rite initiated fishing season in *Iraraley*, 2002. Note in many boat heads, the crucifix as a religious symbol has replaced the conventional figure, the fish-eye for the boat, *mata no tatala*.

economy, under which the youth leave home for jobs in Taiwan and remit earned cash back to Orchid Island. Many of them have also introduced novel and now popular means of fish harvesting, such as nylon nets and various-sized motorized fishing boats. But these new commodities were only accepted once they were transformed and incorporated into the traditional fetishism that gave proper consideration to the master of material production, namely the *anito*.

Increased desire for the sacred fish has triggered seasonal unusual anxiety among the villagers and engendered an array of innovations for offering sacrifices and preparing rituals. By insisting on catching, sharing, and eating the sacred fish together as traditions prescribe, the Yami's daily life is a step-by-step enactment of the sacred mystical power of natural production that determines human well-being. Through these symbolic acts sophisticated innovations are incorporated with indigenous techniques inside the wooden boat (Figure 5); new innovations include modified fish hook shapes from the southern Batan islands, a new pedal design for boaters, a newly designed night torch, a hidden storage space in the boat, and painted fish-eyes (*mata no tatala*) on the exterior of the boat to search for fish. These innovative practices in traditional Yami technology ensure that productive fishing continues, which will in turn fulfill their economic, social, and spiritual obligations. Furthermore, through a series of ritualized performances, painting a boat, preparing fish and handling fish gift, link the sacred and the secular; thus, the flying fish inscribes ultimate meanings about human life on Yami experience, connected it to gods, ancestors, ghosts, and the mystical southern origin that the sacred fish represents.

The Yami's indigenous cosmology and their symbolic acts had to inevitably confront modern ideas about commodities in the capitalist market in the 1980s. Their hand-made plank boats, for instance, were replaced by large expensive motorized fishing boats, each worth over US$100,000, when the Taiwan government introduced them to Orchid Island. Funded by the villagers' collective saving trust and national financial aid programs, these modern vessels quickly displaced the hand-crafted boats across all six villages. The modern ships proved highly efficient in catching flying fish, and the Yami could now obtain a season's harvest in only three days, with a maximum of thirty people.

However, the egalitarian Yami found it difficult to share sacred fish with the many crew members who are not relatives but are needed on the modern fishing boats; crews on traditional big boats (*cinedkeran*) had a maximum of ten people. In 2003 my Yami informants complained that traditional taboos requiring equal shares of the fish harvested for each crew member on the new

boats put them in a very difficult situation. This resulted in more conflict than had been the case with wooden boat crews. Frustration at unfairness as well as a lack of operational capital and technological knowledge came to prevail in the operation of the motorized fishing boats.

Contemporary Yami want more sacred fish by smaller boats, especially motorized ones. They still follow their traditional fetishism to fine-tune inter-group, intra-group, and human-spirit relations. This premodern Yami fetishism has sustained the dramatic transformation of sacred fish harvesting as well as the commodification of social relations. The rituals and technologies of Yami fishing practice are well documented, from the period between the fish-summoning rite of *mivanwa* in early spring *rayon* (about February) to the fish-farewell rite of *manoyoyoyen* in late summer *teteka* (about June) (Wei and Liu 1962:116; Yu 1991:105; Yu 2004:17). Each rite in the series uses or displays specific powerful things according to local taboos (Hsü 1982:17-128). For example, in the early spring, villagers hold the fish-calling rite to initiate blessings and divine protection for the year. The initiation requires the sacrifice of a cock or a piglet, to summon the sacred fish from the South. Locals make the following prayer: "We summon you, fish from the southern islands. May all of you flock toward our beach. Spirits of our ancestors who first carried out this *mivanowa* ceremony, bring us fish" (Hsü 1982:38). At the *mipiabengan* rite near the end of fishing for the year, the Yami cut fish fins ritually and hang them around the harbor to end of the fishing season (Syapen Jipeaya 1996:23). The completion of these symbolic, moral, and ritual acts ensures that the Yami fetishism of flying fish will bring about fertile production again the next year.

The Yami can be characterized as a big-man society which emphasizes personal achievements; it especially values individuals who are able to share with household members, close kin, and marital relatives (Chang 2003). Local adults compete in the arena of traditional fetishism, which fuels the desire among the wealthy to invest in smaller mechanized fishing boats instead of sharing fish harvest with too many people in the big mechanized boats. Although cheaper motorized fishing boats are still expensive for a personal owner (each worth over USD$30,000), this competitive ethos of individualism makes four-man-operated motor boats sustainable since the prestige of those who can maintain these boats is also enhanced through their more efficient harvest, concentrated share and greater quantities of fish.

I observed that a four-man-operated motor boat can harvest a similar quantity of the traditional boat (10 crews) about 300 flying fishes in 2007. After equal share as their common agreement, motor boat owners with more sacred fish have been greatly praised by those who wanted fish in the new context of

a capitalist economy, which involves cash investment in boats and the acquisition of new technology in boat operation and fish harvests. By sharing sacred fish with his potential "voters," I observed that a local representative very successfully manipulated his personal wealth and newly acquired techno-knowledge to promote his social standing, thus syncretizing traditional and modern fetishisms. Therefore, four-man-operated motor boats have gained popularity over the traditional 2-man boats (*tatala*) in Yayo, Imorod, and Iranumelik, and there are strong taboos that the boats can only be used in the later two months of the fishing season after the traditional harvest of wooden boats.

Women's Taro Production: Access to the Otherland

If increased sacred fish harvest is promoted by the modern boat owners who are typically rich men, taro production is a shared area of experience where women's personal lives engage traditional fetishism. Taro cultivation not only requires that household men initially clear fields, it also requires frequent weeding and planting by household women. To ensure a successful harvest, Yami women are skillful in deploying many taboo plants to protect the crop from insect pests or other intruders. A taro garden without pest damage points to the owner's ability to ward off *anito* interventions, an important economic and symbolic indicator of blessings from the Otherland. In the following section I will discuss the means of taro production and how it maintains an ideal but fragile human-Otherland relationship through deploying commodity fetishism, and how women adopt accessible and cheap herbicides to end their incessant battle with garden weeds.

To ensure a proper food supply for daily life Yami women make all possible efforts to ward off "bugs" (*icik*), a collective term for damage to a crop. *Icik* are usually connected with the destructive wills of the *anito*, who are bent on disrupting ongoing harvest events and rituals. The Yami believe crop damage is not merely physical, but rather a failure of the household hosts to pacify spirits in Otherland.

Icik control by taboo plants: Japanese ethnologist Segawa interviewed Yami farmers in the 1920s and reported that they conventionally set up a mini-altar to protect their plants from *icik* damage.

> They used a special plant, *abobonbon no anito*, as a magic for warding off rats. This is a toy boat about 60 cm long, around which four sticks and two young shoots of *behbeh* (Arenga engleri Becc.) are inserted in the ground, while a snail-shell is set at the top of a stick" (Inaba and Segawa 1931:7; Kano and Segawa 1956: 152) (Figure 6).

Fig. 6 A mini ritual device in the Yami landscape of magic. Note that *abobon-bon no anito* is "a magic device for warding off rats . . . with a snail-shell is laid on the top of a stick." (photo from Inaba and Segawa 1931:7; Kano and Segawa 1956:152)

With this ritual remedy, the Yami clearly treat *icik* as wandering *anito*. The *icik* protection mimics a Yami boat (*tatala*), that functions as a miniature version of a magic field, ritually drawing a clear boundary to distinguish living people from surrounding *anito*. In this anti-*icik* struggle, taboo plants served as spears, the weapons used in real life against *anito*.

Icik control by shellfish: In the above case, the empty snail shell also simulates a mini-version of a magic shellfish, *kazab*. Segawa reported how the Yami used shells for protection: "the Yami stick a tree limb into a wet field to which [*kazab*] shells have been attached . . ." (Inaba and Segawa 1931:8; Kano and Segawa 1956:143; Figure 7). Yami used *kazab* as a magic device to summon spirit birds, such as *karav*, *tarokok* and *maradan*. To the present day, these birds are still believed to be sacred and able to speak in human tongues and transmit messages from the spirits (Cheng 2004).

The breaking of *kazab* shells is believed to be the essential way that the Yami women make a communicative effort to deter *anito*. Anthropologist Li

Yih-Yuan, documented a Yami response about why the *kazab* shells have to be old and broken:

> When a ghostly *anito* comes to the field, it would ask "Why is this used stuff so similar to me [the dead]," and "Why is it here to stop my path." Then the *anito* would not disturb this land. (Li 1960:50)

Their use of *kazab* demonstrates the women's intention to ward off wandering *anito*. Here *anito* is a general term for spirit figures from the Otherland, who can disorient people and influence material objects. The Yami deployment of *kazab* is believed to be an efficient way of negotiating with *anito*, when the *kazab* shell is properly placed as a landscape marker (Figure 7).

Articulating commodities with kazab fetishism: At the present time, the ethos behind the broken *kazab* metaphor persists. But now, shells of *kazab* can be replaced by modern manufactured goods. I recall one old woman who responded to my questioning the effectiveness of non-*kazab* commodities: "Things change over time, but the meaning stays the same." Many housewives claim equivalent magical effects by adopting used or broken things, including cloth, plastic bowls, and fishing nets (Figure 8b). Commodity fetishism echoes

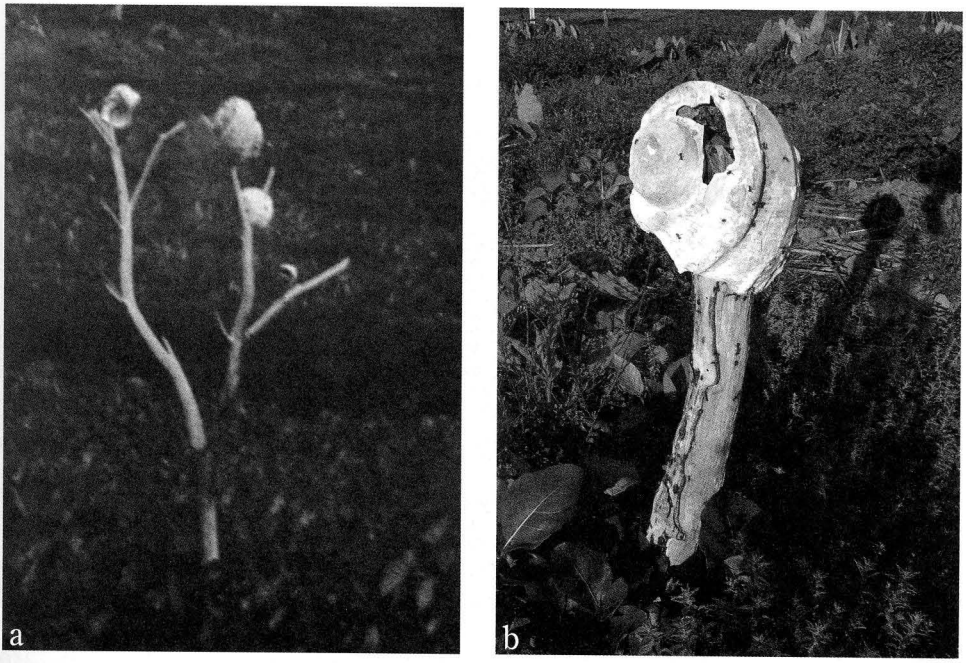

Fig. 7 *Kazab* shellfish is one of the "magic device for scaring away and warding off evil spirits or *anito* from a wet field." (a) photo from Kano and Segawa 1956:143. (b) recent deployment in the *Ivarino* village, 2007.

Fig. 8 Indigenous deployments of natural objects to expel *anito* in taro paddies involve (a) a grass stem of *avyao*, and (b) an old broken cloth. Other contemporary devices include manufactured products, such as fishing nets, floating balls in fishery, and plastic bottles and bowls.

the indigenous logic of fetish species. This makes the fetishist nature of biological species and purchased commodities highly commensurable. Currently Yami are actively using manufactured goods in a new articulation of "traditional" fetishism that will serve their long-term needs.

Divided Worldviews that Accompany Commodity Fetishism

Changing labor value in NRM projects: The Yami's traditional notion of labor value was chiefly based on the exchange of work among kin (Wei and Liu 1962:113-126). However, the impact of labor as a marketable commodity became clear during the reforestation project in 1973-1984. Introduced by the Forestry Bureau of Taiwan in its resource management of "peripheral forestry" policies (Hu 2002), this national reforestation project aimed to "improve" the local tropical flora by planting saplings of more economically profitable trees. This program used government funding to hire local natives who were given cash payment. They cleared the primary forest in strips (ca. 3 meters in width), and replanted the swath with selected "useful" tree species. This secondary growth was dominated by many exotic windbreak species, including *Acacia confusa* Merr., *Casuarina equisetifolia* L., and *Cocos nucifera* L.

The Forestry Bureau maintained detailed seasonal records of cutting and replanting for each managed and reconstructed region, particularly areas measured for seeding and thinning for wage-calculation purposes (Figure 9). The planting of saplings peaked between 1977 and 1979, followed by labor-intensive thinning of competitive weeds. I interviewed managers and native workers about their daily cash payment, which was a remarkable modern experience for the Yami, comparable with the occasional shellfish trading for cash in the 1910-1940s, hosted by the Japanese police station in Imorod. The government closed the project in 1984, but many informants recalled that they got used to receiving a uniform cash payment for one day's weeding work. Up to ten non-kin people from a village would work in a crew, sometimes for days. Some of them became good friends and went off to work in Taiwan together. Villagers remembered the incessant flow of cash into the villages and were amazed that work for the government generated a unique opportunity to buy commodities, particularly tobacco and wine.

The Yami's human-Otherland interface inherited through various living objects has been further disrupted by the introduction of other modern biotechnologies. Agricultural transformation and its associated pest control projects have confused natives working in traditional production since the 1960s. During the Green Revolution, the government advocated an "advanced" culti-

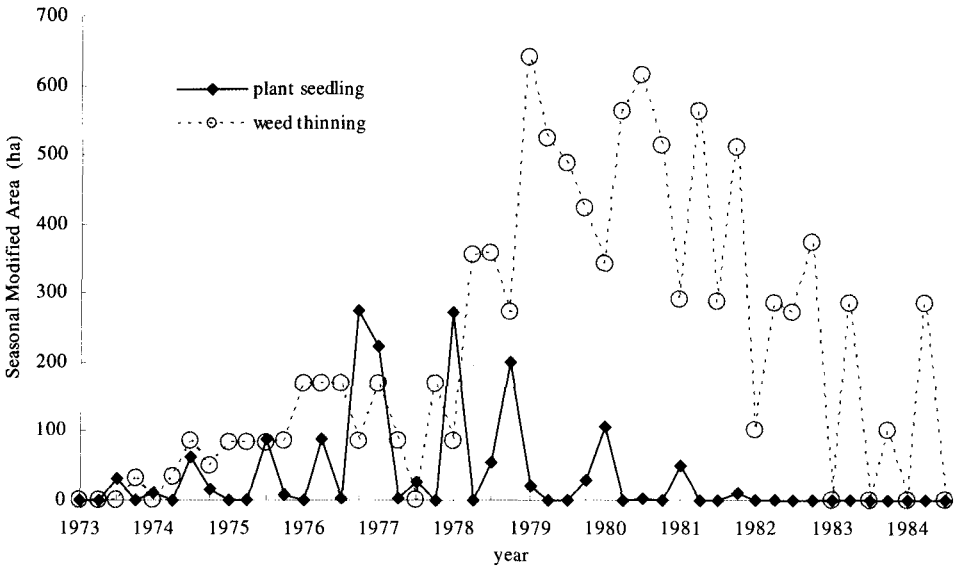

Fig. 9 The widest modern impact on Yami labor-exchange conception occurred during the reforestation project in 1973-1984. Forestry Bureau had detailed seasonal accounts of cutting and replanting for each managed and reconstructed region, particularly area sizes of seedling and thinning for wage-calculating reasons. (Forestry Bureau, interviewed in 2003)

vation of Taiwanese rice to replace the indigenous taro paddy. A government employee, Mr. Hsu, recalled the policy and its implementation:

> In 1966 the Taitung County government sent the first modern chemicals and agricultural tools to the Yami for free, including hoes, sickles, and reaping hooks. The county office also set up an education program to reform local agriculture. By introducing new rice varieties and irrigation methods, the government fully promoted the advanced rice agriculture, with the belief that the Yami could plant sufficient rice for the consumption of the island-wide population. (Lin 1996)

Rice agriculture had completely failed on Orchid Island by 1971, primarily due to severe pest damage, harsh weather, and the infertile soils of the tropical rain forests.

Modern bio-agriculture could not resolve the poor growing conditions and wide-spread pests in the tropical fields of Orchid Island. In the past, Taiwanese agricultural engineers believed that advanced techno-science would eventually overcome the hazardous local ecology, but were soon disabused of that belief. A number of other cash crops, including coconut, bamboo, and cacao were introduced by the Agricultural Institute of Orchid Island in 1973; coconut, mango, and lichee by the Forestry Bureau in 1975, and many exotic tree species in the national reforestation project in 1978-1986. These agricultural

projects have triggered waves of cultural frustration among Yami for decades as the exotic flora has become invasive ands new crops are too difficult to manage.

Divided worldviews represented by different sets of material objects: The Yami have suggested that even if bio-agriculture provided mechanical and scientific advancements, a successful harvest should not be an excuse to disregard traditional conceptions. In reference to these canceled projects in Ivarino village, Syapen Manip pointed out that modern bio-agriculture had failed because it had ignored the Otherland. He joked: "Only the true Yami people can establish a garden on this ground, because outsiders don't know how to build farms and expel *anito*" (Field note: April 18, 2002).

The Yami gradually differentiated "pests" from "bugs" *icik*. Elders merely mentioned them as a "terrible sign that taro leaves and stems gradually die out," while young people count many insects belonging to the emerging category of "pests," because these insects bite taro tissue and cause severe infection. These include different kinds of biting organisms near taro fields such grasshoppers, lady bugs, apple snail, and beetles; the Yami's notion of "pests" is not, however, equal to the scientific definition. Yami housewives not only have a rich description on *icik* phenomena, but also believe that *icik* in the traditional fetish system are more than the "pests" that modern commodities can deal with. The many failed bio-agricultural projects convinced villagers that to prevent *icik* would require them to go back to indigenous ritual treatments, in which techno-science may still partially assist to reduce physical damage by pests. This explanation persisted in the widespread coexistence of anti-*icik* witchcraft and the use of science-based chemicals in the field. The following section will discuss the conceptual disparity between *icik* and pest, the changing articulation between traditional and commodity fetishisms and between religious and mechanistic worldviews, as well as the shaping of new gender-power relationships.

Pest control with bio-chemical commodities: Chemical pest control was introduced by the government and popularized among Yami households in the 1990s. Since that time, its use has been strengthened by a government project to promote "scientific" agriculture. The government introduced an array of modern techniques to eradicate pests, including herbicide, pesticide, and pheromone traps. Although most national projects to introduce exotic plants failed, imported pesticides were perceived as a kind of powerful substance (*kosoli*), coinciding with the Yami word "medicine." Paralleling Yami magic devices to secure fertility, the cheap herbicide *kosoli* was found by modern Yami women to effectively ward off harmful intruders, a conventional *anito* alias from the Otherland.

Syapen Shi, an informant from Ivarino, recalled that his wife received a large number of fertilizer samples, iron tools, and pesticides in 1992. He was even taught how to operate a mechanized power tiller by the government staff (Field note: Mar 4, 2002). Most mechanized power tillers had to be abandoned because farmers lacked the knowledge to maintain them, except for a few experts like Syapen Shi. However, *kosoli* such as parathion, had impressed the Yami with its capacity for killing *icik*, while "healing natural body and taking *anito*'s fear away from us" (Field note: Mar 6, 2002).

New wine in old bottles of emerging Yami fetishism: The Yami are ready to choose new commodities for their needs, if they are compatible to their "traditional" fetishist ethos. In the Yami ethno-scape, petrochemical-based farming commodities have had a powerful impact on their gardening practices. Most villages have fewer than three machine-operated tillers or boats, while almost every household knows how to apply pesticides, herbicides, and fertilizers in their gardens. Yami knowledge of pest control can be traced from long period of mandatory education. National policy called for public scientific education in the late-1970s, after a junior high school was established in Yayo village in August 1969. The school curricula and various other educational programs have brought a science-based knowledge of pest control to the Yami. The influence of scientific reasoning, along with technological innovations, deeply altered the perceptions of local youth.

The young people used to save cash earned while working in Taiwan and had become resourceful about purchasing cheap pesticides and outside agricultural tools when they returned. In my fieldwork observations in 2006, young women spent less time working in gardens, but had better taro yields than their parents' generation with the assistance of powerful bio-chemicals inputs. Unlike the expensive machine-powered boats and tillers wealthy men invested in to achieve the Big Man status, the availability of cheap bio-chemicals in nearby free markets provides a ready tool for poor and young Yami women. Although many women do not know the names of categories of bugs, they are all clear about the efficacy of the chemical-sprayer to ward off pests, even if they are working alone in the field. This desirable technology has been particularly attractive to poor Yami women, who usually have widely scattered holdings because their ancestors could only occupy poor and marginal land patches (Hu 2007). Poor and young women have explained their acceptance of these "chemical weapons" because they support their "traditional" actions against *anito*, even while using these commodities to demonstrate the power of techno-science and its associated mechanistic worldviews such that different bio-chemicals can treat different pests or plant parts specifically.

Old wine in new bottles for a reinvented tradition: Many ancient devices

for treating indigenous species have taken on new heuristic explanations. Thus the same object can represent very different meanings or worldviews. Another magical plant grown across the landscape is *avyao*, a grass species traditionally used for *anito* avoidance in Yami fetishism. To ward off *anito* embodiments, the conventional practice now blends old and emerging meanings into a new configuration, however. In the past, the Yami displayed *avyao* grass within or beside paddy ridges, in the shapes of either straight or fork-like crosses (Figure 8). This practice's meanings changed with the introduction of Christianity in the 1950s. Nowadays, a wide distribution of *avyao* grass crosses can be seen in the form of a crucifix, sometimes sitting side by side with shellfish deployments of *kazab*.

Field protection from an ambivalent crucifix: In the crucifix shape, crosses present a contemporary magical entity to protect against *anito*. This transition closely links the indigenous fetishism to Christian beliefs about the use of the material signs against Satan. Although crossed *avyao* are still widely used in farm fields, there has emerged a new hybrid of the indigenous *avyao* and Christian crucifix, which is perceived as "a stronger object," since it carries dual fetishist meanings (Figure 5b).[2]

This same syncretic worldview can be seen in the above-mentioned pesticide case. The Yami believed that a newly invented and stronger hybrid has been automatically accepted by the Otherland if the inventors do not meet with misfortune. I observed many farmers used both hybrid objects—the crossed *avyao* sign against *anito* and the chemical application to treat pests. In a particular case found in the Yayo hill paddies, the farmer had hung several imported pheromone traps to kill pests next to the indigenous device, the cruciform *avyao* grass. It appears that the Yami have readily accommodated both scientific techniques and magical devices; pest control seems to coexist peacefully with indigenous technologies to ward off *icik*.

Revisiting divided worldviews: Inappropriate technology failed in many NRM projects, but its associated side-effects triggered unexpected transformation across gender lines. In what Max Weber called "disenchantment" (Weber 1968), the Yami's dual worlds of the realistic and the symbolic have become increasingly discrete. After a series of NRM projects in the 1970s, the poor and young Yami women felt free to spray chemicals to kill pests, while traditional elders remained confident about the efficacy of *kazab* and *avyao* rituals against the *anito*. According to my recent interviews with local grocery owners and supermarket managers, the consumption of house- and field- used

[2] A detailed analysis of the transformation and appropriation from forked crosses of magic plants to a Christian symbol of a single cross is beyond the scope of this paper.

pesticides have at least doubled since 2000. I saw a housewife working side by side with her mother-in-law in an Ivarino field. The elder had erected *kazab* and *avyao* in the center of field, and periodically the son sprayed pesticides for both his mother and his wife. Similar phenomena can be observed in many families. Young housewives are more knowledgeable and resourceful in fixing agricultural problems with commercially available chemicals. They dare not fully disregard the threat of the *anito*, but joke that "if we only use rituals, *icik* sometimes grow more and more." An informant explained that the separate concept of "pest" is no longer confused with the *icik* that originate in the Otherland:

> Pests are pests. They are not *anito* or anything else. School education has taught us modern knowledge .... We are now educated people and free from superstition. (Field note: June 25, 2001)

In fact, the term "superstition" here was used in an ironic sense. It means a category of subordinated knowledge among Yami, indigenous knowledge that runs against scientific explanation but is still practiced in a cryptic form in their daily lives. Most Yami use the term "superstitions" in the context of historic embeddedness to refer to their long-lived but changing belief practices, without implying a sense of cultural inferiority and lost tradition. Therefore the disenchanted separation or dichotomized worldviews represented by "pest" and "*icik*" are manifest in a subtle differentiation in Yami family relations. These parallel cosmic visions of pest and *icik* leave room for young couples to communicate or even negotiate with elders, using the same fetishist logics—that material objects represent the social essence that organizes interactions among Yami.

Traditional fetishisms can articulate with and accommodate many contemporary themes and commodities, including Christian beliefs and scientifically-based technologies. Under modern capitalist inputs, Yami fetish production against *anito* does not vanish at all, but rather has been syncretized to become a stronger hybrid. Yami husband and wife are "mutually engaging through conflict and accommodation in a household, which is situated in the wider context of village-house relations" (Chen 1995:133-164). Through new commodities or modern projects, young men and women have greater opportunities to manage indigenous species. Using the cultural mechanism of deploying fetishist objects, many Yami have re-ordered the symbolic meanings of indigenous species. Displayed animals and plants are once again the

powerful basis of a Yami epistemology for social reproduction.[3] The separation of worldviews into the imaginative and the bio-physical preserves the core values of traditional culture and resists the overwhelming strategies and concepts of modern NRM. The Yami's practice of divination and avoidance, for example, can persist, while the advantages of commodity fetishism can be incorporated into traditional beliefs with fewer contests.

The mechanistic worldview behind scientific models, such as the traceable pest-crop links in agro-ecosystems, is largely excluded from the spiritual meanings of *avyao* and *kazab*. Furthermore, since the 1980s, conservation projects concerning endangered species have became a nexus of conflict between scientifically based technologies and indigenous cosmologies. In this case, natural objects have been dramatically transformed from marked beings to manageable biotic species under a scientific classificatory scheme.

When Magic Livestock Become Rare: Pig and Civet

Native pigs: The local "Lanyu miniature pig" or black small-eared pig (*Sus barbatus sumatranus*) is of Southeast Asian origin. The Lanyu pig has amazed animal husbandry officials in Taiwan for its consistently large number of offspring per birth and short reproductive cycle. However, the Lanyu pig cannot grow "big" locally, because of the limited kitchen food residuals Yami households produce. Even with a better corn fodder and under scientific management, the Lanyu pig is not favored by animal husbandry professionals because of its small body weight (less than 15 kg at 5 months old), usually about a fifth of ordinary feral pigs.

However, the native black pig has its own significance. As was the case for piggery studied in other Austronesian ethnographies (Rappaport 1968; Strathern 1988; Goodale 1995), this pig (*kois*) has tremendous socio-material implications for the Yami community. In the Yami context, the sacrificial blood of the *kois* is used to identify the boundaries of spiritual purity (Wei and Liu 1962:147; Cheng 2004:27). By the same token, the Yami seek interactions with the Otherland through signs revealed during the slaughtering of pigs. Animal offerings serve as the human-Otherland exchange to actively influence or even manipulate the gods in the Upper Worlds and spirits of the dead.

In the anthropological literature on the Yami, the meanings of pigs are

[3] Modern encounters between gender metaphors (male : female = fish : taro) and dichotomized worldviews (sacred : secular) in the Yami's transformation are beyond the scope of the current article. What effect hybridity between traditional fetishisms and disenchanted worldviews have had on gendered humanity and family relations in taro and fish harvesting separate paper topics that need to be dealt with elsewhere.

multiple. Pigs may carry a message to be read, or be presented as a gift to the spirits in the Otherland. A pig is a form of deferred payment or an agreed upon compensation for resolving group conflicts (Wei and Liu 1972:162-163). Furthermore, the uses of sacred livestock are managed through Yami social institutions and organizational memberships. From the perspective of functionalism, the sharing of meat consolidates Yami group identity through both economic and symbolic exchanges. During the year-long preparation of family feasts, growing large herds of sacred pigs or goats (*kangling*) usually signify ancestral blessing and spiritual support from the Otherland. Therefore, glorious feasts with large quantities of meat offerings signify ascending social status and prestige for a family head.

Bigger pigs, bigger men: Another aspect of engagement between traditional fetishism and scientific discourse has been the introduction of exotic domestic pigs. Since the 1960s, imported bigger white pigs have gradually replaced the indigenous black pigs. In the past, villagers raised live native black pigs for slaughter. However, in the face of convenient shipping from Taiwan and the already long-term conflation of traditional taboos and modern goods, imported pigs have become popular with the Yami because of their superior size. Organizers of government-funded festivals have urged tribal hosts on Orchid Island to purchase the bigger pigs from Taiwan with cash, to put on a better spectacle for the tourists.

The imported pig is entirely a capitalist commodity, having no relevance in the indigenous household's gender division of labor. With the poor domestic food supply among Yami households, even a white piglet would not grow as big as the imported pigs. White pigs have been widely accepted by villagers, who share its meat in the traditional way. Like their adoption of imported two-man motorized boat, the young men have learned to apply for governmental funds for hosting activities in the name of cultural tourism. With this funding, imported pigs can be purchased and slaughtered, to be distributed among participant villagers. Thus imported pigs have become another marker of the emerging Yami big man, signifying his capacity to acquire outside resources and so be a player in tribal politics.

Pure pigs, better blessings: Over my longer stay in 2006 on Orchid Island, I heard much talk that reminisced about the pure black pig, which had recently been crossbred with the larger imported pig. After decades of bringing exotic pig species from Taiwan, a now largely hybrid stock threatens the survival of local populations of "pure blood" black pigs. The Lanyu pig was listed as a rare or even threatened species in a national roster of faunal diversity in 2006. This conservationist discourse has been appropriated by some Yami, who want to preserve the pure-blooded black pig for ancestor worship.

Yami people usually use native black pigs for family rituals, and I have heard villagers mention that black pigs have better effect communication with ancestors. They compare this with "the white-pig show for tourists." During the traditional *miparos* rite in the winter *anian* in 2001, approximately fifteen families (with no tourists present) in the village of Ivarino offered sacrificial pig organs to the gods in the sea, as well as meat and crops to the ancestors on their house roofs. Before the whole kin group held its feast and shared the meat, a family head read signs from a slaughtered native black pig:

> If you see a full bile or stomach, it is an auspicious sign that the Upper Grandfather in the higher-level worlds will bless us in this coming year. He will keep us well fed, and protect us from the *anito*. If the stomach appears less full, it may foreshadow impending hunger or disaster. (Field note: November 22, 2001)

When family members and I ate the shared meat, they discussed the subtle differences between pure-blooded and hybrid pigs. They also commented on the poor texture and taste of the introduced pigs. The Yami insist that only through the proper fetish media can humans correctly interpret biological signs from the Otherland. They welcomed the recent government's pronouncement on the endangered status of Lanyu miniature pig: The scientific category has become a popular label for many indigenous species to the extent that it aids in conserving local bio-diversity.

Civets: The gem-faced civet, *Paguma larvata taivana* (Swinhoe), is another magic animal for the Yami. It is officially considered threatened and has been classified as endangered for decades. Before the 1980s, there was ongoing illegal poaching by Taiwanese commercial hunters, and the government finally listed it under protection by law. According to my Ivarino informant Syapen Liau, the local civet (*panganpen*) used to be common in nearby hills and coastal regions. The civet is known locally as *kois no anito* or "pigs fed by *anito*." Due to its small size, large population, secretive nocturnal habit, the civet is considered unusual prey, a kind of special meat gifted from the Otherland. In the founding myth of Iranmeylek village, Yami ancestors magically received a civet as food (Yu and Dong 1998:34). In another myth about past inter-village competition, villagers who were capable of driving civets out of the bush were proved to be worthy winners and power holders.

The Yami respect civets because of their spiritual master, the *anito*. For instance, when Syapen Liau caught an old fat civet in a coastal shrub, he was nervous to show it to me because its left ear was cut deeply by *anito*, in the same way that humans mark their domestic cattle (Figure 10a). He talked in a low voice, seemingly to avoid detection by *anito*, and yet with great excitement at being able sharing his lucky adventure with me. He was very proud to

Fig. 10 Animal species with indigenous magic on Orchid Island which now are considered endangered: (a) *Ivarino* locals believed the left ear of civet *panganden* was cut by *anito*, 2006; (b) a male newborn butterfly *pahanito* in the *Iranmeylek* conservation garden, 2006; and (c) a researcher handled a owl *totowo* which wore an aluminum foot ring (photograph courtesy: Severinghaus).

be praised as "the top hunter around the village" and among friends for stealing this magic animal from attentive *anito* of the area. He was also anxiously eager to share the meat with his close friends immediately, and rejected my suggestion to release it. In the religious arena, the liver of the civet is sacrificed to the *anito*, and this is believed to be an effective means to pacify them. Civet meat, like pork, can be used for ritual purification if a feast is intended to unite a special group for certain purposes. Consuming civet sometimes signals a hunter's bravery and unusual ability to communicate with the Otherland. Other creatures marking *anito* and Otherland also include the bird-wing butterfly and night-calling owls. Under severe hunting pressure and habitat loss, the civet, butterfly, and owl are all listed as endangered or threatened species by modern development agencies.

Traditional Fetishism and Avoidance: Butterfly and Owl

In the traditional Yami fetishism, people admire high levels of production (i.e., of fish, taro, millet, pig, and goat), as well as avoid *anito* efforts to interfere with harvests; this gives a religious stamp to the desire for material things. Magic animals and plants help individuals, who through daily effort, struggle for a personal career up the Austronesian wealth-defined ladder. To become a successful man, the Yami not only must accumulate bountiful harvests and raise livestock, but also need to engage effectively with the Otherland—chiefly to pacify *anito*. Many natural entities, including both plants and animals, are considered destructive agents under taboo (avoidance) rules, as well as active agents that help construct a proper world. Conventionally, the Yami fear dead spirits and the after-world. Once their kin are buried in the cemetery on the outskirts of the village, they are not allowed to revisit the graveyard, or to hold any memorial services for their families. They are afraid of any natural objects associated with the *anito* in the cemetery, including sand, stones, plants, and animals (Li 1960:41). The long list of spirit others includes some seashore trees (such as *tava* and *tagtagzang no anito*), the golden bird-wing butterfly (*pahabahad* or *pahanito*), the pygmy owl (*totowo*), and the green sea turtle (*irang*), principally because these organisms are common inhabitants or visitors to taboo burial sites (*kanitoan*) (Figure 10b).

Historically transformed butterfly: Natural living beings who may embody *anito* are seen as active agents whose power the Yami fear. The golden butterfly (*LEPIDOPTERA: Papilionidae*) is an endemic butterfly, *Troides magellanus* (C. and R. Felder). This rare species from the Philippines is extremely large and beautiful, with a wing-tip length up to 25 cm and a golden body with shining post-wings (Figure 10b). The Yami developed their own notions about this

butterfly after observing its unique behaviors and flying motion. Compared to ordinary fast-moving butterflies, its strange jumpy flight pattern is believed to be the embodiment of *anito*, or its equivalent, people whose "souls are stolen" through *anito* seduction. Syaman Shanshu described it this way:

> Yami believe golden butterflies are a substitute *anito*. They are demons and ghosts. They do not have real names like humans. We call them *pahanito*, meaning ghostly spirits or ghostly stand-ins. (Field note: July 28, 2002)

Syapen Kotan also gave a word of caution about working in the mountains:

> If you encounter a golden butterfly, it is very possible that the dead are following you. It may fly close to capture your soul. Young people usually do not possess enough protective spiritual power to counteract *anito*. You may be brought to the deep mountains, see wandering *anito*, and never return again. Even if you are lucky enough to escape and return to the living world, you never know what misfortune will happen to you in the future. (Field note: June 13, 2001)

To this day, the Yami still report many cases of ordinary people who become "crazy" or "lose their mind" when they encounter *anito* in the mountains or fields, and sometimes even in factories in Taiwan. The golden butterfly is a symbol of a taboo place, the dangerous realms where spirits of the dead wander—across the ghostly underground, in the mystic inland mountains, and along the unpredictable undersea.

The recently impacted owl: The seduction by ghosts that the Yami fear can happen through either the visual or aural presence of certain natural objects. Another example of an *anito* agent is the Riukiu Scops Owl (*Otus elegans botelensis Kuroda*), which inhabits the big woods near the seashore. It has a low-tuned night call that sounds like "*to-to-wo*" (Figure 10c). The Yami call these owls *totowo* imitating their call, which is widely conceived as the owl mimicking the human voice, or as dead spirits calling "*tawo*" (literally, "humans"; colloquially, "Are you there, human?"). Syaman Cho heard the owl calling one evening and alerted me: "Listen, *anito* is calling from the dark land. We should not sit outside. It would be better to talk indoors" (Field note: June 10, 2001).

The Yami believe both sound and image from the afterworld can carry messages and bad luck to the victim, especially if he or she is sick, weak, or not fully equipped with ritual protection. Since to local people, the ecological occurrence of plants and animals is always a meaningful sign that invites local interpretation. To scientists, the Yami classifications of fish, butterflies, and owls may appear irrational. But the internal logic of social reproduction

in the Yami cosmology behind these meanings is always consistent and never arbitrary.

In Yami cosmology, natural creatures and wandering spirits are linked in two separate yet mutually penetrating worlds. Through natural beings, the Yami experience connections between the mundane and the spiritual, and between the secular and the sacred. Owls and butterflies are physical manifestations through which the Yami experience cosmic fate (in this case, doom), hearing their voices or seeing them predicts misfortune. Although *anito* may not be present, their traces, such as *to-to-wo* calling of the owls, exist in the appearance of this sign. It is an image-based magic system that is the matrix for various interactions between human and magical power. In Yami's world, not only humans have agency; fetish species also have the power to intervene in worldly events.

The Yami interpret natural things through their cosmological ideas and constructive imaginations. The owl and the butterfly are examples of what the Yami use to refer to their interface with the Otherland. For the Yami, spirit worlds overlap the secular landscape, and only by following proper practices with indigenous species can they identify the boundaries between those worlds. The specific natural signs indicate the materialization of their fetishism.

To summarize, civet, butterfly, and owl may live near cemeteries. But civet can live in all kinds of wilderness, while butterflies and owls are patchily distributed along coastal jungle, the area usually chosen for cemeteries. The butterfly and owl are signs marking the Otherland's boundary and the terror associated with the presence of *anito*, while civet as the *anito*'s livestock can be consumed for better luck and spiritual support after a ritual exchange with *anito*. These natural things take part in the fetishist discourse that makes human-Otherland exchange possible. This dynamics of this interaction allows the conflation of material objects and fetishist species, which in turn provides a promising gap through which commodity fetishism can penetrate, in the form of the capitalist market and conservationist regimes.

Conservation Projects and Scientific Models: The Case of the Butterfly

In the 1990s wildlife conservation regimes were adopted in the western Pacific region and soon began to shape policies concerned with managing nature on Orchid Island. Conservation biology and natural resource management brought a disenchanted, mechanistic worldview, with accompanying ideas about inventory-building and natural scarcity; this essentially constitutes a

kind of contemporary fetishism of natural beings. Although pre-capitalist Yami society had long been engaged in a subsistence-oriented mode of fishing-farming-gathering, they nevertheless accepted the economic exchange of commodities (outside goods) after contact with Japanese colonialism and the nationalist development of Taiwan. Numerous natural things suddenly gained cash value as trading commodities. The golden butterfly was one of the natural things first commodified on Orchid Island.

Butterfly as commodity: In the 1950s, when specimen collections and paste-crafted decorations were the primary exports from Taiwan, Orchid Island was one of the most highly exploited areas, producing extensive butterfly collections. The annual exports peaked at 5,000–10,000 golden butterflies to Taiwanese factories. Many Yami adults still recall that in their junior high school years, they were hired to capture this *anito* alias. Despite its marked status, then, the golden butterfly became a means to earn cash income.

In 1983 the International Union for the Conservation of Nature and Natural Resources (IUCN) declared the Papilionidae butterfly populations endangered in the Philippines and adjacent regions. The threat came mainly from the profit-driven collection of the species. Its conservation status has been listed as either vulnerable or endangered in Appendix II of CITES, in order to restrict or stop their trade.[4] On Orchid Island, the golden bird-wing butterfly experienced a sharp population decline in the 1980s, when merchandisers paid an increasingly high price for specimens; other causes of its decline included logging and habitat loss. Due to over-harvesting and the resulting population crash, the golden butterfly is almost extinct. The Yami certainly remember how commodification impacted this indigenous species, reflecting market prices and pressures. With persistent scarcity, commercial interest in the species quickly shifted to a new scientifically based fascination that centers on its threatened or endangered status. In 1989, Taiwanese ecologists classified it as endangered, under the Wildlife Conservation Law of Taiwan. Nationalist discourse and state sovereignty have thus entered into defining natural things on Orchid Island, and this has introduced the scientific vision of resource management and population monitoring.

The mechanistic worldview behind natural resource conservation focuses on counting in several ways, ranging from individuals, populations, and species. Both conservation monitoring and free-market competition share a similar logic of resource scarcity, but use it in the opposite way. Commodity fetishism targets the rare and expensive things for consumption, while conser-

[4] The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

vation introduces new categories to express a degree of urgency in scarcity, and hopefully to stop exploitative consumption. Conservation practices on Orchid Island, then, embody a similar fetishist ethos—that is, a fascination with rare species. The fascination has only increased during this "massive extinction era of biodiversity" (Wilson 1992).

Conservation Works to Counteract Commodity Fetishism

Conservation programs borrow economic theories and policies to achieve their goals, including placing legal restrictions on demand, providing compensation for local conservationists, devising policy instruments that promote non-market benefits, and making scarce resources renewable through reproduction (Groom et al. 2005). For example, in the past decade, the Taiwanese government established a butterfly recovery project and hired people to patrol for illegal captures with the hope of put an end to the residual underground market. This was also done to regulate the harvest of commercial specimens of green sea turtle and the native owl. At the Orchid Island airport and harbor, the customs check for smuggled live individuals and specimens.

The implementation of natural resource management and conservation biology programs has produced **double abstractions** of natural things on Orchid Island. The first abstraction is the change from a secular/spiritual cosmology of the natural things to the material consumable resource in commodity markets, moving butterflies, turtles and owls from *anito* aliases to exploitable resources. The Yami cosmological values were converted to a narrower sense of natural resources. The market price of the commodities made the Yami gradually accept discrete, computable monetary values. The specimen-catchers, who were good at counting, came to be viewed as a group of "modernized" individuals, with a new identity defined by cash payments, fancy techniques, and the novel devices they carried. This translated into an image of bravery, since it proceeded from the capture of *anito*-embodiment, the golden butterflies. These catchers' intensive economic activities in the 1980s demonstrated to other Yami that there was another possible worldview. They challenged the taboo Otherland by catching butterflies without any observable punishment through misfortune. Their adoption of the mechanistic worldview was praised in the symbolic exchanges of other villagers in daily conversation, such as jokes and complements.

In addition to their becoming countable resources in a mechanistic worldview, the second abstraction of the butterflies has come with the changing view of their scarcity from a commercial fascination to a conservation fascination. Informants recognized this as a simple rule, and counting natural

objects and especially the rare ones has become the priority. The modern fetishisms for scarce commodities and endangered species share a similar philosophical basis. The discourse of endangeredness as a form of **scarcity** (i.e., the second abstraction) is fully grounded in the concept of **inventory** (i.e., the first abstraction).

Such double abstractions thus deprive natural beings their spiritual essence, making them merely vehicles for human desires, whether as commodity or conservation targets. The former poachers may earn more cash by assisting scientists in their research by capturing butterflies, but these actions are not necessarily related to a commitment to a holistic and sound conservation model. In both circumstances (poaching and assisting) Yami weighed the benefits of commodities, conservation, and the Otherland as they acted.

Techno-Embedded Species: Owl and Turtle

As a modern manifestation of scientific practice, many conservation biology or natural resource management projects require increasing technological assistance for sorting, monitoring, dissecting, and analyzing the targeted species. Technology is an important first attractor for the Yami when they encounter conservation projects. The Yami work with and understand conservation through the technologies of science, which are rooted in the above mentioned dual abstractions of inventory and scarcity, but the insights gained through the modeling of this mechanistic worldview are left behind.

Owls: One example is the owl conservation project on Orchid Island. Since 1985 researchers have annually documented the regional owl population, using playback counts of *to-to-wo* calling, color banding, and monitoring survival (Severinghaus 2000; Severinghaus and Rothery 2001). During this long study period, the Yami occasionally saw owls with aluminum rings and a combination of colored foot bands that the researchers had used to identify each owl individually. The owl's home range was tracked by small, light, radio-collars attached to the backs of adult owls. During 1998-2001, seven parental owls were studied for reproduction, infant mortality and seasonal migration in *Iravino* village (Severinghaus 2001). In addition, from 1999 to 2002, researchers began to study the owl's population genetics based on sixty-nine owl families with 129 individuals, collecting blood samples for a DNA micro-satellite examination (Hsu et al. 2006).

Islanders knew about the population census in specific study sites and saw the researchers in the spring, on a weekly basis, for more than a decade. But the Yami had few insights as to the owls' group dynamics and population genetics. This may have been because the owls are a highly taboo animal on

Orchid Island. Yami occasionally saw owls with their leg bands and knew about the researchers' tracking them, but few were willing to participate in data recording and field surveys. Several villagers mentioned that they had stopped on their way past the owl researcher, Mr. Guon, who was listening to the sound of radio receivers from his base on the Ivarino village road. But as soon as the villagers realized there were owls were nearby, they left with concerns about bad luck the owls might bring. One individual even commented "Only tourists want to see the owls at night!" (Field note: August 16, 1997). Through news in the Taiwanese media, the Yami gradually came to understand the idea of in-situ owl conservation in terms of population counting, individual tracking devices, and the owl's endangered status.

Sea turtles: The importance of sea turtle conservation has been recently popularized among the Yami through eco-tourism. The green sea turtle, *Chelonia mydas*, chiefly migrates between their nesting grounds on Orchid Island and foraging in South China Sea. Since 1997 sea turtle researchers have monitored the female reproduction and egg-laying periods in the Little Imorod Bay. They used both aluminum tags for individual identification, and GPS (Global Position System) radio-collars for overseas satellite tracking. They also took flipper tissue for DNA analysis, and made a temporary fenced circle to protect unhatched eggs in the nests. A great number of Yami saw the news stories about sea turtle activities and the fenced areas to protect the turtle eggs. Many asked researchers if they could watch the egg-laying sea turtles with the research team. In 1997 summer, approximately sixty Yami people watched and participated in the sea turtle conservation program over that season.

By seeing the rarely seen objects that are part of the Yami taboo conventions, most Yami observers experienced a kind of cultural shock in connection with scientific work and technological manipulations. For example, during the installation of the expensive GPS devices on the turtles' backs, the Yami participants were astonished that a small water-resistant GPS box could possibly track oceanic paths up to thousands of kilometers. As she waited beside a fenced-in female turtle overnight for the glue to dry on the GPS attachment before release, Si Luo related:

> We, the Yami, never really see a sea turtle at night. We just know they are there. We know they lay eggs under the sand beach. But we never touch them. Elders will not allow us to eat the turtle, dig eggs out, or even see them. So we don't need a fence to protect their eggs. We just leave them alone. . . . The researchers and the captured turtles are very cool. This [the GPS] is a great machine to understand so much detail about each turtle's journey in migration. (Field note: July 24, 1997)

A strong taboo still prohibits most Yami elders from seeing or touching sea turtles. For example, during a school science exhibition that followed a local ritual festival in 1998, one Iraraley village elder saw the skin specimen of a sea turtle in a class room. He shouted aloud, complaining that it was really inappropriate to put this *anito* alias indoors. But to Yami youth, watching sea turtles or checking their eggs was a great scientific experience that challenged the *anito* taboo, since they had previously learned about the ecology of sea turtles in the school curricula and public media. Professor Chen, the leader of the turtle research team since 1997, has complained that the Yami youth now often disturb turtle nests, breaking the taboo against young Yami touching turtles. In fact, because many government projects have hired local people to work with the scientists, the Yami acknowledge that the *anito* aliases have now become scientific objects for research and conservation. Although local turtle conservation has a relatively short history compared to the long-term golden butterfly recovery project, it has become evident that this species has also become a key fetishist vehicle by which Yami social reproduction can be re-ordered to adapt to new circumstances, such as environmentalism and other exotic experiences.

Conservation Garden: A Pedagogical Mini-World

Butterfly: In another example of conservation, the rarest animals became the most famous. The population of golden butterflies had dropped to historic lows of fewer than 500 individuals in 2002. In 1987 the butterfly conservation project was established by the Taiwanese government, which hired many Yami for population monitoring and habitat recovery by replanting a particular milkweed feed plant for the butterflies. Si Machi, an experienced butterfly harvester in the past, now worked for conservation in Iranmeylek village. In 2001 he commented about the conventional taboo on the butterflies, as he held a sweep net under a flowered canopy, looking for specimens to catch.

> There used to be many butterflies before. In my childhood, I saw them often in groups, by roadsides, at school, and in our village. They were common. But we did not like this butterfly too much; because it is an embodiment of the dead spirits. The elders would speak to you: if you see one, you must change your direction and don't follow it. Who would follow the dead? (Field note: May 1, 2001)

When asked why he didn't fear them at all, since he spent the entire day waiting to capture these aliases of dead spirits, he laughed out aloud:

> Oh, you know *anito*. Who is afraid of them? Now we are not primitive anymore. We are modern people like the Taiwanese. Don't mention such an old superstition.

> We don't possess such blind faith now. You know, since businessmen love to buy these butterflies, I captured them by hand, and sold them for cash. One butterfly, one dollar. A dollar at the time was a large sum of money. Many other kinds of butterfly species only amount to a few cents. Now the golden butterflies become the target of conservation. We have to protect them, rather than sell them. So, I got the job to capture them for research and artificial reproduction, then release them, then capture them again. (Field note: May 1, 2001)

Mini-world: Since 1997 the national butterfly conservation project has worked to increase survival rates during the fragile stages of egg-hatching, pupa and larva growth. Initially, captured butterfly adults were first protected in a fenced net-house. After they laid eggs indoors, some eggs were transported by the researchers to green houses in Taiwan, which were a more controlled environment. Then the offspring would be brought back to be released on Orchid Island. By the end of 2003 three fenced butterfly preserves had been built: two within the school in Yayo and Iraraley, and one on Syaman Jian's family paddy in front of the Iranmeylek cemetery, a territory that had been rich in butterflies and their food source in the past and present (Figure 1b). These protected areas offered great protection for eggs, larva, and pupa, and provided abundant fresh nectar to attract adults. These "butterfly recovery gardens" were also created as exhibition sites for students and tourists to see the butterfly's life cycle in one place. Reproduced in semi-artificial environments, an extraordinary number of butterflies in different stages were periodically transferred into the fenced sanctuary for exhibition (Figure 10b). The sheer concentration of golden butterflies drew a great number of villagers. In 2003 the government put out informative placards in the recovery gardens, to satisfy the increasing scientific curiosity of the villagers and tourists about the butterfly's ecology, endangered status, and recovery pace.

These protected exhibition areas have been influential in Yami social life, teaching them science-based rationale for the standardized inventory, a mechanistic worldview, and technology-fueled management techniques that support scientific fetishism. In the butterfly gardens, the modern steel-cage technologies highlight conservation ideas underlying protected areas, and a scientific model of the world in exhibition. This microsystem entails modern devices for technological manipulation and scientific monitoring: food plants (a unique milky weed) are labeled, population records are kept, life stages of adult butterflies, larva and eggs are tracked, and invasion by competing butterflies is prevented. The Yami workers hired to maintain the Iranmeylek recovery garden said there was no ghostly aura dispatched by *anito*, even though the area is only five meters from the graveyard that used to attract the

golden butterflies as *anito* alias. Obviously, the decade-old transformation of butterflies, via basic science education, and the fetishist incentives of the commodity market, has turned a ghostly thing into a common species that can be manipulated scientifically. Protected by government authority, the mini-world is considered a good place under scientific management, which allows monitoring on scarcity, record keeping, sorting, and precise calculation for measurable biological traits. The devices—whether animal hybridity, techno-manipulating biology, or the mini-world of the exhibition—all serve as pedagogical tools. Their scientific rationales are accessible to humans and their object, whether pig, turtle or butterfly, is no longer a site of spiritual and mundane interactions.

On Orchid Island, the most prominent endangered species—the owls, the sea turtles, and the golden butterflies—have been transformed from the powerful agents of the Otherland into charming stars of the conservation project. The syncretization process by which the Yami have re-ordered the Otherland and scientific domains with their animistic fetishes is constantly reinforced, whenever they see a banded owl flying across a road, a GPS-loaded sea turtle leaving the beach, or the recovered butterfly population near the cemetery, either during visits or in newspaper photos. In the modern era, the Yami realize that a high level of technological fascination is key to scientific fetishism, at the same time transforming the spiritual notions of previously magic things.

Still, conflicts between indigenous religion and scientific fetishism have caused cultural frustration, motivating the Yami to change their desires for material goods. For example, the Yami seem to have to acquire new ideas from the conservation mini-world of butterflies or turtles. But before the 1990s, the Yami had rejected any kind of protected-area establishment. From 1987 to 1989, the Yami had strongly protested the creation of a national park on the island, to the point that that project was cancelled. And during the 1990s, establishing an "autonomous region" on Orchid Island was the priority of their political struggle.

But more recently, the Yami seem to have agreed that maintenance of an open-pool resource requires some government assistance, whether through technological interventions or scientifically based conservation projects. The most recent case is the conflict resulting from Taiwanese fishermen over-harvesting flying fish near Orchid Island. The Taiwanese ships have been too efficient in locating flying fish and their extraction has left almost no fish for the Yami boats. Yami elders had long complained about the disrespect of Taiwanese over-fishing, but since the 1980s there had been no way to stop it. Now, the Yami have switched to a new legislative strategy, favoring a fishery

protected area instead of tribal autonomous zone. In the spring of 2005 the Taitung County government in Taiwan finally created a legal fishing prohibition, stating that large ships over ten tons would not be allowed to harvest flying fish near Orchid Island. The restricted range was set at six nautical miles (about 11 km), as a marine protected area. Only the Yami were allowed to fish within their traditional territory.

The conservation models of identified species in protected areas represent in turn a powerful support for Yami fetishism. Under new CB projects, indigenous animals and plants in Orchid Island are well protected through manipulation and monitoring. The natural beings and associated cultural notions are greatly transformed, from indigenous fetishes in the anti-*anito* cosmology into various abstract icons and commercial products, but they are also scientifically recontextualized, in a way vividly associated with a "pedagogy." Species reinterpreted through the scientific worldview in exhibitions demonstrate an unstable hybrid of indigenous fetish and techno-science that offer new meanings and models for contemporary Yami social life.

Conclusion

Traditional Yami fetishism is a displacement of desire onto certain material objects or living species that can control human beings. Many indigenous species are powerful vehicles of epistemology that determine human life seasonally and group interactions historically. Recently, Yami fetishism has gone through a dynamic transition process in which the values or power of natural species have been transformed by both the capitalist commodity market and modern scientific projects. However, the emerging conflation of the three—the traditional, the commodified, and the conservationist fetishisms—is still more fascinating to the Yami. Yami fetishist actions against *anito* have become disoriented and embedded into a larger mosaic. Through new commodities and modern projects, young men and women have gained greater access to ways of manipulating the sacred or magic species of the past, using new fetishist mechanisms to challenge or reinvent tradition. Different groups across the gender and generational divides may benefit differently from this historical conjunction.

Young men who can maintain motorized boats have greatly increased their catch of the sacred fish, and enhance their social and political position through the new context of modern-technology-reliant harvesting. By increasing the number of sacred fish he can share with his potential "voters," a local representative has become very influential. By manipulating new economic

capital and technological knowledge, he is able to promote his social standing as well as a traditional big man.

In taro cultivation, the effective pesticide or herbicide has been particularly helpful to poor or young women. The widespread use of these chemicals has been largely explained in terms of the goals of "traditional" fetishist actions against *anito*, while demonstrating the efficacy of new commodities and the power of the mechanistic worldview.

Yami fetishism of indigenous species continues even in the face of commodity and conservationist regimens. Although civet, butterfly, owl and sea turtle are all now endangered species on the national conservation list, they had different articulations historically. Civet could be used as an exchange item with *anito*, while the others were strictly taboo, markers of danger. The golden butterfly-as-commodity was ecologically tamed from the 1950s; while research and conservation of the endangered owl and sea turtle just began in the last decade. The case of the monetized butterfly illustrates how the cash incentive transform the avoidance fear into overharvest, while pushing the mechanistic worldview from behind, at the same time dovetailing with the highly (if negatively) charged idea of "value" (tabooness) in the indigenous context. The two modern senses of "counting" additionally make the marked indigenous species one that may be calculated, controlled, and managed for harvest or conservation. Places once full of fetish species have become a built environment; they have been reduced to homogenous grids against which both capitalist consumption and scientific supervision may proceed.

The Yami continue to mediate their social reproduction through fetish species under the recently installed capitalist and conservationist models. The conceptual disparity and changing articulation between traditional and commodity fetishisms, as well as between religious and mechanistic worldviews, have created new gender-power relationships among the Yami. Furthermore, the transformation of indigenous species into scientific species has introduced into their conceptual character a dual abstraction focused on inventory and scarcity, qualities they now share with other capitalist commodities. Therefore, natural species constitute a busy conjuncture of the materialist imaginary through which the Yami experience modernity.

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現代物神信仰在土著物種中的接合

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自然資源管理與保育的現代物神信仰，是一種關注於生物物種使用或不使用的當代欲求，往往能與土著生活中深信這些物種能控制人類生活的物神信仰傾向相契合。自然資源管理與保育的全球論述介入蘭嶼雅美族的生活世界，並提倡著一種機械論式的理性計量世界觀。當商品流入與保育概念強加在原有雅美的物神信仰時，在不同性別與年齡層引發多重宇宙觀相嵌的混合激盪。年輕男人與貧窮女性能更藉由現代性計畫中新商品的力量來操弄或挑戰傳統物神。許多土著生活中的物種因而在國族資本主義的當代脈絡中汲取嶄新意義，成爲當代族人認知與身體體現的新工具。挪用的現代技術與概念要是能有效地被施展在反制鬼靈的拜物生產上，但卻不必與全球保育論述的生態關懷同步同調。當傳統認知中重要的感知載體轉變成現代意義下的科學物種時，雅美人經歷了雙重抽象性的世界觀轉換，從人與靈界的延遲交換轉變到著重市場通貨的可計量性與稀有性之錙珠必計。生物物種作爲雅美人重要的物質想像因而成爲他們體驗現代性的繁忙場域與再現窗口。

關鍵詞：物神信仰，物種，通貨，雅美人，蘭嶼