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Indigenous Language-Informed Participatory Policy in Taiwan: A Socio-Political Perspective

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This chapter highlights the importance of incorporating indigenous language and its daily practice in the local context of newly transformed indigenous policy in Taiwan. Currently, the official indigenous people's language policy is relatively confined to curriculum development and certification of indigenous peoples' language abilities with little consideration of language practices in real socio-political situations. This paper questions whether the revitalization of endangered indigenous languages can rely only on language policy *per se*. The participatory action research (PAR) methodology is employed as a main research method in inhabited Atayal communities. This chapter is divided into three main parts: firstly, a brief socio-political history of indigenous people in Taiwan is provided; secondly, two socio-political official projects related to traditional territory sovereignty are analyzed: their failure is revealed due to the neglect of indigenous language and local participation; thirdly, a case from an Atayal village, *Smangus,* is provided to show how indigenous languages can be revitalized through combining the villagers' daily practices and participation. In conclusion, this chapter argues for a combining of language policy with other socio-political policies so as to create environments in which indigenous peoples can speak their own languages.

1. INTRODUCTION. This chapter[1] highlights the importance of incorporating indigenous languages and daily practices into Taiwan's policies for indigenous peoples. Since 2000, the authors have been involved in several projects under the "New Partnership Policy." The policy originated from a commitment by Mr. Shui-Bian Chen to representatives of indigenous tribes when he was running for his presidency in 1999. This policy has become President Chen's principal governmental policy for indigenous peoples when he was elected in 2000. The commitment has the following seven goals: 1) recognize the natural rights of indigenous peoples in Taiwan; 2) promote the autonomy of indigenous peoples; 3) sign land treaties with indigenous peoples; 4) recover the traditional names of indigenous communities and living places; 5) recognize the traditional territories of indigenous peoples; 6) allow traditional uses of natural resources and indigenous peoples' autonomic development; and, 7) achieve equal representation of indigenous peoples in parliament. The policies of the central government's Council of Indigenous Peoples have been directed to work toward achieving these goals in line with the president's commitment.

The traditional territory mapping project, documentation of traditional ecological knowledge and co-management of natural resource management—with which the authors are involved—have been regarded as flagship projects. This involvement indicates that the importance of indigenous language practices is rarely noticed in government socio-political projects even though indigenous languages typically play a crucial role in revitalizing traditional cultures.[2] Rather, these projects, carried out primarily by the Council of Indigenous Peoples, utilized a top-down technocratic operational framework that offered little opportunity for local participation. This chapter argues that the major reason for endangerment of Taiwan's indigenous languages is the alienation of indigenous languages from their socio-political contexts, which may have a greater influence on contemporary indigenous communities than language policy. In other words, we argue that revitalization of endangered indigenous languages not only relies on language policy, but also requires combining language policies with other socio-political policies to create environments in which indigenous peoples can speak their own languages.

This chapter brings together both indigenous and non-indigenous voices. The first author, a non-indigenous ecological scholar[3], has been involved substantially in major events such as proposed Maqaw national park and traditional territory mapping.[4] The second and third authors are Atayal and are committed to revitalization of their culture. Participatory action research (PAR) is employed as the principal methodology in our research (Whyte 1991; Stringer 1996). In the context of indigenous peoples' studies, this methodology has only recently been applied in Taiwan (Lin 2005). Different from conventional anthropological and linguistic studies, this methodological scheme does not entertain a clear distinction between researchers and those researched, but rather puts relatively more importance on reflection and capacity-building of those researched from a researcher's perspective. Therefore, one evaluation criterion is whether a researcher can explain explicitly the entire research process and strategies to generate trustworthy data. Stringer (1996) indicates that understanding is generated from a dialectical circular process of researcher's observation, thinking, and actions via their participation and interaction with research subjects. How-

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[2] Although the New Partnership Policy mainly focuses on curriculum development and certification of indigenous peoples' language abilities, indigenous language speaking ability in its daily life practices should be considered crucial to the policy's success (Sun 2000, 2005). The bureaucracy has not created relationships with other socio-political policies in terms of overall cultural revitalization.

[3] The first author is a committee member of the "Maqaw National Park Advisory Committee" and used to be a key member of the Project of Indigenous Traditional Territory Survey. Both activities are described later in this chapter.

[4] Maqaw (*Litsea cubeba*), an Atayal word, is a fragrant plant used by Atayal people for seasoning foods. However, the term "Maqaw" in the context of establishing a new national park has multiple definitions: (i) a seasoning plant; (ii) the Chi-Lan Shan area where the most precious and contested Chaemacypris forest is located—one mountain top in this area is rich with this tree; and (iii) the name of the proposed and controversial national park. This issue has been markedly promoted by the media through the social movement of saving ancient Cypress forest (Lee 2004).

ever, regardless of the type of action research (Castellanet and Jordan 2002)[5], the question "Who is participating?" must be asked. Additionally, one must identify whether the researcher or local actors determine the direction of the research project.

Based on methodological concerns, this chapter describes the critical processes in projects related to transformative policies for indigenous peoples with which the authors have been involved since 2000, and discusses the implications of a lack of indigenous language input. Moreover, the two Atayal authors, who are fluent in the Atayal language and have considerable commitment to Atayal culture, play an important role in evaluating and analyzing the data from an insider perspective. From 2000 to 2004, discursive data was collected through participant observations, documentation, workshops, meetings, cultural teaching activities and individual interviews with elders from major events of proposed Maqaw national park and traditional territory mapping. Some of our analytical results have been published in Chinese (mainly) and English (Lin 2004, 2005, Lin *et al.* 2006) from an ecological perspective; however, the language issue was not addressed. The issue of language is discussed in detail in this chapter.

The remainder of this chapter is organized as follows. First, a brief history of the socio-political situation of Taiwan's indigenous people is provided and contrasted with the ideals in the "New Partnership Policy" from an Atayal perspective. Second, two cases are introduced that are related to the Policy's so-called "partnership" and construction concerns as they are linked to local ecological knowledge, namely, i) the proposal to establish a national park based on co-management by indigenous communities and the state, and ii) the project of mapping the traditional territories of indigenous peoples. Moreover, the lack of indigenous language input is discussed. Third, a participatory case in which the authors were involved suggests a way of creating a socio-cultural field for revitalizing the languages of indigenous peoples. This chapter concludes with a recommendation that linguistic input into Taiwan's current socio-political policies for indigenous peoples is demanded.

2. A BRIEF SOCIO-POLITICAL HISTORY OF INDIGENOUS PEOPLE IN TAIWAN. Taiwan is an island of Austronesian indigenous peoples. From the 17th to 19th centuries, the plains in western Taiwan were governed by the Dutch, an exiled government of the Ming Dynasty and then by the Ching Dynasty. However, the plains in eastern Taiwan and central mountains, which are home to indigenous tribes, were not governed by foreign governments until 1895, which was the beginning of the Japanese colonial era. The Japanese colonial government implemented a land survey in 1898, and then in 1910 initiated a five-year military project to conquer indigenous peoples in Taiwan. The mountainous areas previously "owned" by different indigenous communities were then nationalized. In 1925, the National Forestry Survey Project confined indigenous people to Reserved Lands, which were small and fragmentary land parcels in the mountains. At the same time, many communities were forced to migrate to low mountainous areas, and shift from traditional hunting and gathering to agricultural production.

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[5] In their research of the PAR methodology, Castellanet and Jordan (2002) identified three research orientations based on the extent of researcher participation in the research process.

In 1945, the Kuomingtang[6] (KMT) government replaced the Japanese colonial government in Taiwan. The KMT government retained the Reserved Lands Policy and exploited forestry resources. Taiwan's indigenous peoples resisted this domination just as they had previously dealt with colonists in different historical periods. Many bloody battles between the Japanese military and indigenous peoples occurred. After WW II, the indigenous intelligentsia asserted the right to self-determination. However, many were arrested and executed by the KMT government.

During the late 1980s and 1990s, while Taiwan was going through democratic reforms, many demonstrations and protests were held over land rights, autonomy and self-interpretation of indigenous culture and history. One significant achievement during this period was that the congress incorporated the term "indigenous peoples" into the Constitution in 1994. Before that, indigenous people were called "mountain people" in the Constitution. In 1997, the central government created the Council for Indigenous Affairs. However, indigenous land rights were rarely discussed.

The KMT's policy toward indigenous peoples was largely devoid of recognition of indigenous rights; thus, discussing what "traditional territory" means is very difficult. However, in the 2000 presidential campaign, presidential candidate Mr. Chen Shui-Bian (president at the time of writing) announced a "New Partnership Policy" as his major indigenous policy. This policy, which committed the government to recognizing indigenous claims to traditional territories, was codified in legislation when Chen assumed the presidency.

The following presents two cases that are extremely relevant to President Chen's New Partnership Policy. Thus, this chapter also discusses the limited understanding of the role of indigenous languages and peoples in these two cases.

3. TWO CASES RELATED TO THE "NEW PARTNERSHIP POLICY."

3.1 CASE I: LACK OF NATIVE LANGUAGE INPUT — CO-MANAGEMENT OF THE PROPOSED MAQAW NATIONAL PARK. The controversy surrounding establishment of a co-managed national park is worthy of discussion and was initiated by a social movement of nature conservationists to save ancient Cypress forest (Nokan 2003; Lee 2004; Lin 2004). This controversial issue was the first government project to involve indigenous peoples in natural resource management, and has generated considerable academic discussion in Taiwan. Over 20 doctoral and master's theses are related to this issue. Additionally, the Maqaw national park issue is utilized in a popular international conservation textbook as a case study illustrating multiple environmental values in a contesting context (Lin 2005). Development of this issue is strongly related to traditional ecological knowledge and community development of Taiwan's indigenous peoples. Cypress trees (*Chaemacyparis* spp.) in Taiwan belong to the same *Cupressaceae* family as *Cupressus* spp. in the southeastern swamplands in the United States. These trees in Taiwan are found at elevations of 1800–2500m, can grow as tall as 60m tall and to 20m in girth. Based on habitat, ecology, commercial value, and appeal, these trees resemble California redwoods. However, after nearly a century of intensive logging sanctioned by several governments, only two large Cypress forests remain in Taiwan—Chi-Lan Shan dominated by *C. obtusa var. formosana* and Sho-Ku-Luan Shan dominated by *C. formosensis*. With de-

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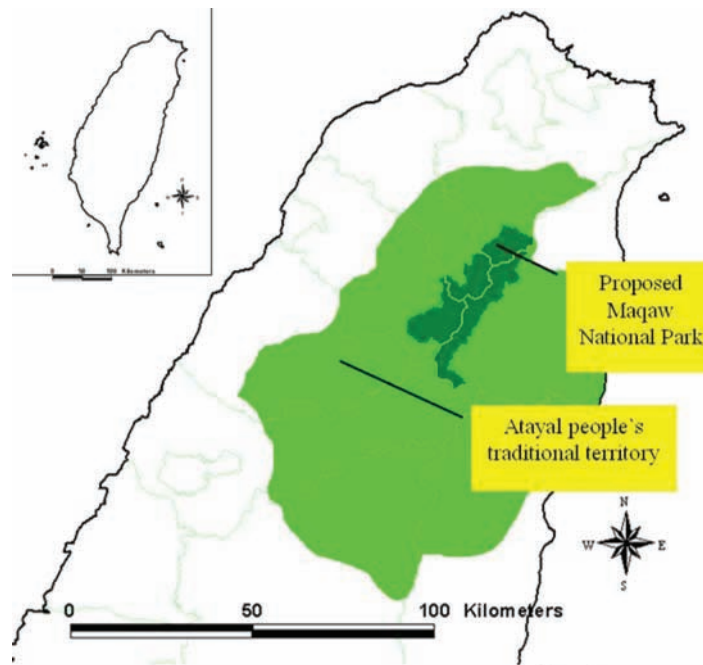
[6] The nationalist political party.

FIGURE 1: The Map of the proposed Maqaw National Park within Atayal People's Traditional Territory

mocratization of the political landscape and increased ecological literacy, a "Ban for Logging Natural Forests" was instituted in 1991 by the Council of Agriculture—a cabinet-level government department—in response to environmental concerns (Huang 2004). However, many in the forestry industry still pursued access to cypress timber through political means due to the economic value of cypress trees. Since 1986, the Council of Veterans (COV), another cabinet-level department, has "salvaged" cypress trees blown over by high winds and killed by lightening strikes and disease, and replanted young cypress trees in openings. In 1998, the COV again proposed a new 5-year plan to remove dead trees in most of the remaining cypress forests, with the rationale that if they do not, the living forests will no longer be able to reproduce themselves and will eventually die out.

As a result, the COV's proposal provoked a number of nature conservationists including academics, legislators, and some local environmental groups[7] that subsequently banded together and launched "The Rescue Cypress Forests Movement League". The group's goal was to force the COV to halt its salvage operations and revoke its right to manage the cypress forests. On Dec. 25, 1999, the league held a rally with the goal of establishing a new national park for protecting ancient Cypress forest. This rally was staged during Taiwan's presidential campaign. To obtain the support of environmentalists, the Democratic Pro-

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[7] Notably, no indigenous peoples were involved in the beginning of this event.

gressive Party (DPP) candidate Mr. Shui-Bian Chen responded by promising to establish a new national park if elected president. This new national park, however, would have to be carved out of the traditional Atayal territory. The Atayal comprise the second largest indigenous group in Taiwan. Figure 1 shows the area of the new national park within the traditional Atayal territory.

The new national park proposed by the league therefore introduced a new interest group and set of values into the cypress forest conservation debate, namely, the Atayal. Taiwan already has six national parks comprising 8% of the island's total area. When these parks were created, indigenous peoples were frequently ignored and dispossessed (Sung 1999). Understandably, the Atayal tended to oppose any additions to the national park system. Conversely, indigenous peoples are not natural allies of the COV—which also opposes creating new national parks—because traditional subsistence uses in the highlands do not include logging, nor is logging consistent with those uses. After discussion with Atayal opinion leaders, the league decided to include local indigenous people in the design process for the new national park, and to establish a new "co-management" protocol for the new national park that would have indigenous people on the park's board of directors and employ indigenous people as, for example, park rangers, guides, and naturalists. Thus, the proposed new national park would preserve the precious old-growth cypress forest, revitalize indigenous culture and language, and improve the livelihood of indigenous people. The national park proposal would also need to know the Atayal's traditional ecological knowledge of protecting the forest in their own way.

In 2000, Mr. Shui-Bian Chen won the presidency. The league began lobbying the new president to make good on his promise to create a new national park. In October 2000, the league and some indigenous groups appealed to the Ministry of the Interior—which oversees national parks—to respect their joint concerns. In response, the Maqaw National Park Advisory Committee was formed. Unavoidably, the proposed new national park was also valued highly by the central government and put on its political agenda as one means of realizing Chen's "New Partnership Policy." Over the course of more than 10 meetings, the committee discussed issues related to co-management, means of implementation, and national park boundaries. The committee's main purpose was to establish the new national park, preserve the cypress forests, and benefit local indigenous people. This committee soon became a forum for dialogue between conservationists, indigenous peoples, scholars, and the state. However, the committee has not succeeded in eliminating skepticism and distrust among opposing groups. Once the park proposal was publicized, political turmoil, initiated by other skeptical indigenous political leaders, ensued and these leaders created relationships with the opposition parties[8]. In 2003, the central government's budget for the

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[8] Until 2000, the national park authority under the Department of Interior had not been in discussions with indigenous peoples living near or within national parks as land was controlled by National Park Law. Three national parks affect the lives of indigenous peoples: Yu-Shan National Park, Shei-Pa National Park, and Toroko National Park. The indigenous peoples impacted are the Atayal, Bunun, Tsou, and Toroko tribes. In some senses, the National Park Authority embodies a great threat to the traditional practices of indigenous peoples (Sung 1999). Thus, the Maqaw National Park proposal has provoked some indigenous politicians even though the "new" park contains goodwill toward indigenous peoples as promised by the New Partnership Policy. On the Maqaw issue, indigenous opinion leaders are split on the new park. The counter-camp allied with the opposition party and

new national park was frozen by the Legislative Yuan[9], which demanded increased communication with local people and input of local knowledge, such as knowledge about traditional territories and traditional ecological knowledge. The concept of "co-management" as a new concept remains only a slogan and has not been implemented.

Importantly, the proposed co-managed national park demands that the active involvement of local indigenous people be increased. Moreover, the input of Atayal traditional ecological knowledge is regarded as an urgent need. The reason for the need is based on discussion of the co-management mechanism of the ninth round meeting held by the Maqaw National Park Advisory Committee in April 2002. The official management document stated that the national park should "assist neighboring indigenous villages in developing autonomous eco-industries, tourism, services and research facilities. Furthermore, through exploration of traditional ecological knowledge, the national park can enhance nature appreciation and protect cultural heritage." The document also states that the national park should "respect the traditional territory of indigenous people and their living space." However, it should be noted that at that time no official records of traditional ecological knowledge and traditional territory in the Maqaw area existed. Most importantly, such knowledge cannot be understood when not expressed in the Atayal language. Furthermore, this knowledge is held by the local and older generation to whom politicians and academics on the advisory committee have little access. In terms of nature conservation and autonomy of indigenous people, the committee's conclusions regarding traditional ecological knowledge and territory are far from the real social context of the Atayal people.

Additionally, although indigenous ecological knowledge has become gradually recognized by nature conservationists and governmental agencies protecting natural areas, it is frequently seen as promoting stereotypical and romantic perspectives. Rapid social changes of indigenous communities caused by modernization and free-market mechanisms are often neglected. Hence, social and economic problems faced by indigenous communities are also ignored. The impact of cultivated economic plants on the environment is largely negative. For instance, roads built for transport of agricultural products to markets are often inappropriate. As for the huge amount of forest areas and forest resources still largely not harvested, most of which are situated in government-owned forests and protected areas, indigenous people are forbidden to use these areas under existing laws. As a whole, this situation is far from the romanticized discourse of indigenous people as guardians of mountains and forests (Lin 2007). This study does not analyze the capabilities of indigenous people to manage forests, but rather indicates the existing social conditions, such as market economics, the collapse of tribal communities, population outflow and existing laws and regulations. Notably, these social factors play important roles in endangering indigenous languages simply because indigenous people are rapidly alienated from their environments and related language practices. Classic studies on social change impact on indigenous peoples' culture in Taiwan can also be found in Huang (1973, 1993).

adopted a strong oppositional strategy by holding several protests in front of government offices, including the presidential hall, that pressured the government to cut the budget for the new national park (Lee 2004).

[9]   Taiwanese parliament.

The difficulty in identifying traditional ecological knowledge in the proposed national park relates to a decrease of spoken Atayal in people's daily life and a lack of understanding of the relationship between Atayal language and the Atayal people's living environments. Without noting the real context, any committee's decision related to traditional ecological knowledge and traditional territory will be based on the cultural prejudices of committee members and not on Atayal cultural practices. Despite the existence of linguistic studies and Atayal language professionals, no linguists were used by the committee as consultants at that time (Li, 1980, 1981, 1982, 1985, 1995; Huang 1993, 1995, 2002; Rau 2004; Chang *et al*. 2005; Huang 2006a, 2006b). The Council of Indigenous Peoples has devoted substantial resources to protect indigenous languages; however, teaching and learning activities are limited to passing a certification examination rather than learning about the history, geography, culture, and social situation of indigenous peoples by thinking in a native tongue (Wu 1999; Sun 2005). However, the real need for native language from the perspectives of the proposed Maqaw national park and the "New Partnership Policy" resemble two lines that run parallel and never cross. Unfortunately, the proposed development of the Maqaw national park was stopped in 2003 by the Legislative Yuan primarily due to a strong distrust of the process by indigenous political leaders and lack of support from local indigenous communities. National parks have had a considerable impact on indigenous people living in mountains. Because of protected areas such as national parks, indigenous peoples have no access to lands reserved by the state. Governmental restrictions on access to traditional lands hinder the ability of indigenous peoples to acquire traditional knowledge. Subsequently, much vocabulary related to traditional practices, such as hunting and gathering, has been lost. Moreover, language related to traditional skills, rituals, taboos, and even traditional beliefs associated with the land are endangered. The proposed national park brings about an opportunity to revitalize the language practiced in a local environment; however, due to a lack of interaction with linguistic professionals and the omission of a socially-engaging indigenous language policy, the proposal failed.

To certain extent, the Maqaw national park embodies an encounter between the ideals of nature conservation and indigenous traditional ecological knowledge. The ideals of nature conservationists can be expressed easily in Mandarin, the dominant language in Taiwan; however, the expression of traditional indigenous ecological knowledge is codified in indigenous languages and daily practices. The discussion of indigenous ecological knowledge is closely related to how people understand nature and their relations to nature.

The question, "What is nature?" has long been discussed in many different academic disciplines. Glacken (1967) and Worster (1979) traced the transformation of the concept of "nature" in the western societies. Their research revealed that understanding "nature" has social and historical aspects. That is, "nature" is not naturally presented as it is, rather it is presented in the context of imagined characteristics derived from different social or cultural contexts. The question of who interprets these imagined characteristics is of primary importance. Wright (1992) argued that we must give up viewing "nature" as external and objective. However, by doing so, one need not give up the possibility of pursuing reasonable knowledge. Furthermore, Wright suggests that a "wild" knowledge exists in which languages are the key media between humans and the world they inhabit. In the Maqaw case, this project found that understanding the Atayal language is critical for constructing indigenous ecological knowledge and dialogue with nature conservationists and the state.

3.2 CASE II: LOST IN TRANSLATION—THE NATIONWIDE INDIGENOUS TRADITIONAL TERRITORY SURVEY. A map can be understood as "a conventionalized image representing selected geographical features or characteristics designed for use when spatial relationships are of primary relevance" (Board 1991). Maps have long been used by indigenous people in diverse ways; for example, vocal chanting is a common method by which the Atayal and many other indigenous peoples in Taiwan communicate how ancestors moved from one place to another. Indigenous ways of mapping were marginalized in the arena of spatial politics by the progress of "modern science" driven by an assumption of universality and objectivity intertwined with the authority of state power since the 16th century (Escolar 1997; Harley 2001; Turnbull 2003).

Motivations to integrate indigenous people into the mapping process first came about through the simple academic interests of anthropologists conducting ethnographic research in North America (Boas 1934; Boas 1964). During the 1960s, Boas and his students conducted a series of investigations in North America and worked with indigenous groups to map their daily activities and ecological practices (Natcher 2001; Chapin and Lamb *et al.* 2005). In these studies, indigenous people were more likely "being mapped" than "mapping." A breakthrough event was the success of the Cree people in applying a map generated with an anthropologist to claim their land rights and reject a planned hydroelectric plant planned for James Bay in the 1970s (Natcher 2001). Their success demonstrated the possibility for indigenous people to construct maps according their interests, particularly land rights. Diverse methods emphasizing different aspects of mapping indigenous lands have been developed worldwide and have resulted in diverse terminologies (e.g. Land Use and Occupancy Studies (Usher 1990; Usher *et al.* 1992) in Canada; "participatory mapping" (Fox 1998); "community mapping" (Bennagen and Royo 2000; Eghenter 2000; Fox 2002) in Southeast Asia; and Participatory Geography Information System (Seiber 2000) in the United States). Nevertheless, such mapping represents "a shift in the way cartography is undertaken and used" (Chapin and Lamb *et al.* 2005) that "increases the power of people living in the mapped areas to control representations of themselves and claim to resources" (Peluso 1995). The participation of indigenous community members in mapping processes is a common method of indigenous self-representation, and a way to empower indigenous communities.

In 2002, the Taiwanese government launched a nationwide Indigenous Traditional Territory Survey (ITTS) to fulfill President Chen's commitment in his "New Partnership Policy." In this survey, community maps, community participation and computer-based GIS were integrated to identify the territories and traditional knowledge of indigenous communities. This survey was a response to the growing assertion by indigenous groups for inherent land rights. However, without sufficient awareness of epistemological differences between languages, the opportunity for indigenous self-representation was lost.

3.2.1 MISTRANSLATED "COMMUNITY MAPPING". After struggles over the constitution and the central governing party in the '80s and '90s, the indigenous movement in Taiwan turned to local and place-based issues. For instance, the Rukai people in the Hau-Cha village organized and successfully resisted a governmental project that planned to build a reservoir downstream on the Ai-Liao River that would require moving the Rukai people and submerge their heritage permanently. In Danayiku, the Tsou people organized

to protect their fishery and village. By using the clan system in patrolling the Danayiku River, villagers successfully eliminated unlimited tourist fishing activities, which were considered as the primary cause of the ruined fishery. The above case on co-managing the Maqaw national park in the Atayal area is another example demonstrating that the focus of the indigenous movement has shifted from the constitution and central government concerns to peoples and the places in which they live.

Two trends can be identified along with this shift. First, "Bu-Luo" (部落) has become a popular term and appears in many discussions of issues related to indigenous peoples. "Bu-Luo", initially a Mandarin term used by anthropologists, refers to "tribal settlement" in non-western and underdeveloped tribal societies. However, as the indigenous movement shifted its concerns, "Bu-Luo-ism"(部落主義)— regardless of its definition of tribalism in anthropology— was utilized by indigenous activists to highlight a new movement strategy that emphasizes grass-roots power and seeks local knowledge. In fact, the term "Bu-Luo" has become generally synonymous with the indigenous communities, even though the way in which a "community" is organized varies with different peoples and different regions.

Second, GIS was first adopted by indigenous peoples to make sense of their "place". Even though some zoologists have conducted studies using GIS and worked corporately with indigenous people, Taiban Sasala, a Rukai tribal intellectual and activist (formerly the director of Kaosiung City's Bureau of Indigenous Peoples) was the first person to introduce the concept of "community mapping" in Taiwan. Taiban was also the first to employ modern GIS to map the Rukai's traditional territory and organize a team, including village members, to survey local names and natural resources in these areas. During controversies associated with the co-management scheme for the proposed Maqaw national park, Taiban was the first to publicly discuss the importance of community mapping. In a letter to the editor published in China Times, a national newspaper, he advocated "before the setting of Maqaw national park, a "Bu-Luo-Di-Tu" (部落地圖) should be made in advance." This letter garnered many positive responses in Taiwan.

"Di-Tu" (地圖), is the noun for "map" in Mandarin. "Bu-Luo Di-Tu" (部落地圖) refers to "a map of a tribal settlement." Although community participation in the mapping process is acknowledged as important in "community mapping" discussions in academia, this translation can very easily mislead readers, and be misunderstood as emphasizing the outcome of mapping—that is, a map of an indigenous community.

3.2.2 MISLED SURVEY. In the ITTS launched in 2002, the Council of Indigenous Peoples, the financial sponsor of this project, announced its goal of mapping all indigenous communities (more than 600 communities located in 55 indigenous townships) over a three-year period. Through open tender, the Council of Indigenous Peoples contracted a research team of mainly geographers from different universities to conduct surveys starting in 2002. In the first year of the survey, 30 indigenous communities were chosen as exemplar locations for the survey. Among these communities, the Atayal community of *Smangus* was chosen as a model to demonstrate official mapping practices. Research team members were assigned to facilitate community mapping. Although "community" was in the project name, the project goal was made without first gaining community input. The 30 communities in the first year were chosen based on geographers' familiarity with the

communities. Furthermore, the project degraded community participation to a very low level—this is discussed further after the following description of the mapping procedure in the second year.

In the second year, a relatively larger team was organized and the survey area was extended to all 55 indigenous townships. The mapping work was mainly conducted using the following procedure (Chang 2002; Chang 2003; Chang 2004):

(a) Organizing Working Groups and Accommodating GIS Sets. The mapping procedure began by organizing working groups for surveying and generating the GIS sets. The survey working groups organized into three levels. In the first level, geographers and other professional researchers comprised the research team in charge of the following tasks: generating the GIS sets; organizing workshops (which is explained further in the next section); facilitating mapping work in the other two levels (basically, each facilitator in the research team was assigned to map 3–5 townships); collecting paper-based maps and records of oral histories from local township functionaries; compiling these records and histories into digital data; and presenting these data as digital maps. Second, functionaries from 55 indigenous township governments served as facilitators at the township level, and were in charge of collecting the paper-based maps and records of oral histories from community mapmakers. Financial funding for this mapping work in communities came from the Council of Indigenous Peoples and was distributed through township governments. In the third level, some community members were invited to join the mapping work as community mapmakers. These community members provided oral histories and identified locations, boundaries, and areas on paper-based contour maps according to their knowledge or information from community members.

The GIS settings included preparing the GIS software, digital contour maps, satellite imagery and aerial photographs, providing GIS software to township governments and providing the 1:25000 paper-based contour maps to community mapmakers.

(b) Plenary Session and Regional Workshops. A plenary session was held in advance of field visits. All township-level facilitators and community mapmakers were invited to attend the sessions. The research teams, survey goals, concepts of participatory mapping, operational processes and GIS settings used in the following workshops were introduced. Regional workshops were then held separately in or between communities according to local needs. Community mapmakers joined the workshops and were taught basic skills of ethnographic information recording and contour map reading. Satellite imagery, aerial photos and 3-D maps in GIS were shown to local mapmakers who used them to identify targets on paper-based contour maps.

(c) Information Coding, Compiling and Public Hearings. The oral histories included community events and their relative locations. Boundaries and areas were recorded in indigenous languages and translated into Mandarin by community mapmakers, and identified on the paper-based contour maps collected by township facilitators. The data collected were transferred to research teams and compiled in a text-based report, atlas and GIS database. Research team facilitators attended public hearings held by township facilitators in township governments. With the atlas primarily compiled through GIS, the research team

facilitators and township facilitators jointly explained and interpreted the data collected about community residences and required the residents to verify the data. After public hearings were held in each township, the research team further revised the text-based report, atlas and GIS database. The revised text-based report and atlas were presented to the Council of Indigenous Peoples and then published.

In the survey's third year, a similar procedure was executed to complete the survey. By the end of the third year, approximately 464 indigenous communities belonging to 12 different tribes located in 55 townships were mapped. About 3700 native place names in indigenous languages (translated into Mandarin) were recorded along with folk stories, myths and oral tales attached. Some communities have well-defined territory boundaries or boundaries of hunting/cultivating territories (Chang 2004).

Although the initial objectives of this survey were met, community participation was decreased to a minimum. Community members were only used for collecting information and operating computers. Indigenous communities did not participate in the debate over what constitutes a "territory" in indigenous epistemologies. Informed by the term "Bu-Luo Di -Tu," the survey sponsor focused excessively on the "map" and the outcome of mapping geographical boundaries of "community" (which is the necessary geometrical element forming a territory in a modern state), and ignored the dynamic meaning of "community participation" in the mapping process. In the next section, we discuss how insufficient indigenous participation resulted in mistranslation of the indigenous concept of "territory".

3.3.3 MISTRANSLATED "TERRITORY." In Mandarin, the term "Ling-Yu" (領域), which means "territory" in English, has been utilized by indigenous movements prior to the 2002 ITTS. "Ling-Yu" (領域) was typically illustrated in the context of sovereignty claims against the state, rather than as a well-defined geographical boundary of an individual community. Dr. Ming-Hui Wang, for instance, a member of the Tsou tribe, launched the indigenous autonomy movement to claim traditional indigenous territories. Dr. Wang is a human geographer teaching at a university. Over 20 years ago, Wang first began mapping his own tribe's traditional territory and used these materials to write his master's thesis (Wang 1989). The Tsou then had a chance to create their own tribal council, which was the first among all tribes in Taiwan and independent from official governments. Dr. Wang was a key figure in the establishment of tribal councils. Due to his academic career, Dr. Wang can easily access rich resources and shape public opinion about indigenous land issues.

Masa Towhu is an Atayal elder who is experienced in dealing with different colonial powers, namely, the Japanese and KMT. He has devoted over 30 years to fighting for Atayal traditional territory. Masa was trained by the Japanese to use modern maps made by the Japanese. However, he utilized these official maps from different colonial powers to expose their different attitudes toward indigenous lands, and further to publicize that Atayal land had been stolen. As the second largest tribe in Taiwan, the Atayal people are distributed widely from central to northern Taiwan. Elder Masa utilized different maps to document geographical evidence of Atayal villages, even those in ruins. In his relentless pursuit to identify Atayal traditional territory, he recorded rich oral histories from different villages. Additionally, he is also involved in a law-suit and initiated a social movement to fight for traditional indigenous territories (Lin and Hsiao 2002)

In the ITTS "territory" was detached from its social context and utilized as a goal of mapping the "Bu-Luo Chuan-Tung Ling-Yu"(部落傳統領域), the traditional territories of indigenous communities. The idea that each territory has a fixed geographical boundary is a concept of the modern state and was applied in this project without considering the indigenous notion of territory. Notably, no indigenous language has a word that completely corresponds to "territory." Furthermore, our finding from studying Atayal traditional hunting grounds indicates a phenomenon of sharing territory. For some indigenous communities, there is no fixed geographical boundary between them. Concisely speaking, the geographical boundary is very much determined by the social relations between indigenous communities.

3.3.4 MISLED BOUNDARY DELINEATION. Empirical survey experiences indicated that delineating the boundaries of some indigenous communities is extremely difficult as they change continually over time and because definitions of different ethnic groups differ significantly. As the research team acknowledged and noted in its report, "some boundaries are ambiguous, some territories between communities overlap and some territory maps were confined within the boundaries of existing administrative districts. It is difficult to identify boundaries based on the perspectives of different ethnic groups" (Chang 2004). However, the goal of the Council of Indigenous Peoples was to map the territory of each individual community with concrete boundaries. Thus, this goal also urged the survey team to identify concrete geographic boundaries.

In Atayal language, different terms refer to various social-spatial relations. *Gaga*, for instance, refers to a set of customs, rules and rituals driven from *Utux* (the highest spirit) belief. Meanwhile, this term also refers to a group of individuals who follow the same set of customs, rules and rituals. *Qalang* refers to the residence of a group of individuals, similar to the definition for "settlement" in English. The relationship between *Gaga* and *Qalang* varies across regions. In some regions, one *Qalang* is home to one *Gaga*, while, in others, one *Qalang* may have many *Gagas*. Conversely, many *Qalangs* can belong to one single *Gaga*. *Qyunam* may be the Atayal term closest to the term "territory" in English. A lineage group normally shares a *Qyunam*, which typically occupies a watershed for purposes of hunting, farming and fishing. Although easily deemed as "territory", *Qyunam* differs somewhat from the concept of territory in modern societies.

As for the *Smangus*, which is one *Qalang* of the *Mrqwang* lineage, it shares a *Qyunam* with all other *Qalang* in this lineage. Inside the *Qyunam* of *Mrqwang* lineage, each *Qalang* acknowledges its responsibility to *Malahang* which, in the Atayal language, refers to "taking care of" their *Qyunam*. However, when individuals from *Mknazi* (another lineage group that occupies a nearby watershed) came to hunt in the *Qyunam* of *Mrqwang*, they were welcomed and even given more prey because, in the *Mrqwang* elder's word, "*Mknazi* live farther and have more difficulty in capturing prey". *Mrqwang* people were also welcomed and given more fish when fishing in the *Qyunam* of *Knanzi*. Rather than a total, exclusive ownership, the relation between people and their *Qyunam* is flexible and contingently determined by social relations.

At the 2002 ITTS, *Smangus* was the only *Qalang* selected in the *Mrqwang* lineage. When *Smangus* community members were asked to identify their "territory", they identified the whole area of the *Qyunam* of *Mrqwang* lineage. The published report of 2002

survey designated this area as the "traditional territory of *Smangus*", subsequently raising tensions between *Smangus* and other *Qalang* of *Mrqwang* lineage. In subsequent years, after all other *Qalang* of *Mrqwang* lineage groups were included in the survey, this area was re-designated as "the traditional territory of *Mrqwang* group". In 2007, when the Council of Indigenous Peoples attempted to officially announce the *Mrqwang* Traditional Territory, which will be followed by a new regulation allowing *Mrqwang* people to gather certain natural resources in this area, neighboring *Mknazi* community members angrily and fiercely resisted. The gathering activities have been stringently forbidden by the Forestry Bureaucracy since Taiwan gained independence from Japan in 1945. This new regulation will provide some access, although extremely limited, for the *Mrqwang* communities to utilize the forest. However, for the *Mknazi* lineage, designating this area as "the traditional territory of *Mrqwang* group" implies that *Mknazi* are officially excluded from legal access to this area. However, the Council of Indigenous Peoples was confused over whether the survey team had delineated a "correct" boundary between *Mrqwang* and *Mknazi*. Nevertheless, the fundamental error is that the survey carelessly deemed the Atayal *Qyunam* and "territory" as the same entity without seriously considering language concerns.

4. LOCAL PRACTICE OF REVITALIZING THE ATAYAL LANGUAGE— A CASE FROM THE SMANGUS VILLAGE. In this section, an Atayal village, *Smangus*, is utilized to illustrate the local practice of revitalizing the Atayal language. A university-community collaborative course developed by the authors is introduced to show how local Atayal can participate in revitalizing the Atayal language in their local environment. In this way, this work demonstrates the critical link between practical socio-cultural concerns of indigenous communities and their indigenous language practices. Furthermore, the course establishes a forum for speaking an indigenous language in the modern context of ecological education and provides a channel for communication with nature conservationists. The course, entitled "Peoples and the Environment," is a liberal arts course taught at Providence University. By focusing on the subject of Indigenous Peoples *vs.* Natural Resource Management, the course enables students to interact with indigenous villages via PAR and Atayal villagers *vice versa*. Theoretically, this course is an ecological education course that considers culture and nature as inextricably linked. This view is in contrast to the nature-culture dichotomy and has earned considerable support by sociologists and geographers in recent years (Soper 1995; Cronon 1996; Macnaghten and Urry 1998; Castree and Braun 2001). Similarly in the field of environmental education, Educating/Learning with Environments is proposed by Gough (1987). Environments here imply multicultural perspectives. In other words, an environment is a product of social construction by actors under various social-cultural contexts. In the process of environmental education, the idea of "environments" should encompass more than the physical, and exceed the mere physical dimension of human society. Consequently, environmental education should focus on groups of people and their interaction with their living environment, the society to which they belong and the culture in which they exist. Therefore, the Atayal culture and language is the core of this course.

The course begins by examining the forestry issue of proposed Maqaw national park, followed by students' real experience in interacting with nature and culture in the *Smangus* village. The *Smangus* village is a unique Atayal village that has strong interests in issues
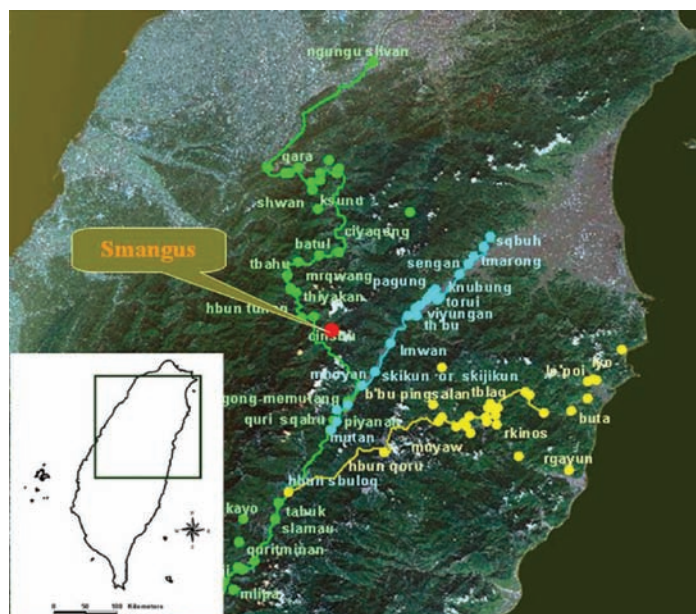
FIGURE 2. The Location of the *Smangus* village from the Atayal Historical Migratory Map

associated with the proposed Maqaw national park and the traditional territory survey. Figure 2 shows the location of *Smangus* from the Atayal historical migratory map. First, the Chaemacypris forest, which plays an important role in the controversy surrounding the national park, is partially overlapped with *Smangus* traditional territory. Before the co-management concept is raised via the government's "New Partnership Policy", knowledge of the Chaemacypris forest was confined to western biological research carried out by the national park authority and Forestry Bureau. Indigenous knowledge of the forest was simply ignored by the outside world even though the forest is alive in daily practices and talked about in indigenous languages. The controversy surrounding the national park and the protection of ancient giant tress by the *Smangus* village has garnered attention from the outside world. This community was then chosen as a model community for the community mapping project initiated in 2003. However, both the proposed national park and the mapping projects have failed to recognize the importance of indigenous language practices and their meaning in daily life. To certain extent, *Smangus* villagers' participation was limited by being only a symbol of a national plan.

The course design allows students to learn through reflection on cultural and environmental values in the abstract and through learning environments outside classroom that feature an interpretation system with villagers in their mother tongue, coupled with consecutive translation into Mandarin. We believe this framework will make it possible to combine local people speaking their native language with knowledge of the local environment. Hopefully, the villagers will develop skills for interpreting the environment for outsiders. Conversely, students of Providence University are also a main course target

and attend classes that are not germane to villagers concerns, such as watching ecological documentaries that enhance student reflection on the human-nature paradigm. Moreover, the course introduction in the very beginning also concentrates on essential material like issues of Maqaw national park and community mapping for introducing students to the Atayal understanding of nature.

To allow students to experience nature in a village, students are taken to the *Smangus* village and nearby forest trails for a two-day visit on one weekend. This part of the course is the foundation for our long-term involvement in PAR on community development and natural resource management over the last seven years. Through exhaustive discussions with villagers, an outdoor course was designed autonomously by villagers according to their understanding of their ecological environment. This course is a manifestation of the social development approach from the perspective of community empowerment. Therefore, when students partake in the two-day village program, they are imperceptibly involved in community empowerment work. Furthermore, students are educated by indigenous people.

The course curriculum is the result of interaction between the teacher, villagers, teaching assistants and students, especially when teaching in the approach of PAR. Despite the fact that the teacher has a crucial role in this course and in conventional instruction, the teaching differs in certain ways. The coordination of workload between the teacher and teaching assistants is a novel approach: in addition to using teaching assistants from the institute, a few assistants from the village were recruited. Research and social practices in the last few years has garnered full assistance and support from the village. Since a student visit to the indigenous village must be arranged, it is necessary that villagers participate, thereby playing an important role in the communication with the village. After all, the village visit requires the most effort— taking a large class into the mountains is a difficult trip to organize. The teaching assistants usually spend 75% of their time coordinating with the villagers. These assistants are partners the authors have worked with for a long time. This fact implies that the relationship between the authors and village assistants is built on solid foundation of trust and cooperation. The outcome of this relationship is rich, not only for students who learn from their experience but also for the host villagers who learn how to arrange a two-day ecological visit for student tourists. After the visit, the host village reviews the activities and opens a space in which they consider future industrial development for the village. Villager participation initiates a social practice in this program. Walking in the forest is in itself an enjoyable activity, and it is an excellent opportunity for students to gain experience in village life. For instance, students observe cultural "performances," such as staying in a local person's house, eating Atayal food, and drinking fresh cabbage soup. Through village life, students obtain knowledge of political-economic issues associated with marketing agricultural products and resource exploitation. The predominant goal of these practices is to generate interaction between students and villagers. This teaching approach aims to create and understand the "socio-cultural dimension of nature." This so-called humanistic dimension comprises the act of generating meaning and value. If a student learns stories about the mountain on which he or she is staying, this mountain is no longer solely a physical entity, it also takes on cultural meaning.

In this course, cultural experience is combined with an ecological program. Students are taken to the indigenous village, allowing them to gain knowledge of the land from multiple socio-cultural dimension of nature. From villager viewpoint, the Atayal language is a basic instrument in which village assistants must be fluent and capable of discussing and organizing course preparation, ranging from coordination, course design, division of labor, and internal training, to interacting with students. These processes combine village lifestyles—the shift between agricultural production and tourism—and experience of village life to create a teaching experience that best shows the vitality of local cultural ecology and helps students consider the question "what is nature?". The Atayal language has gained an irreplaceable position in the course. We now discuss some examples that demonstrate how the course works and the indigenous language is practiced.

It is worth noting that most of the cultural and ecological instruction by the villagers will begin in Atayal language, followed by translation into Mandarin. During group learning, village assistants teach students traditional place, animal and plant names, mythologies, village history, and about the relationships with each village in that area. Interpretation is, in a way, a representation of local environmental knowledge, which is presented as a narrative by village elders, village assistants sharing their life experiences and the spoken Atayal language, all of which are important to modern Atayal culture. We believe these experiences can only be gained in an indigenous village.

Sbalay: **the cleansing ceremony for the start of the two-day trip.** When the course participants arrive at the village of the first day, the chief of the *Smanugs* village briefly outlines his expectations of the students during this two-day village program. *Sbalay*, the cleansing ceremony through the act of watering two saplings, serves as a blessing for each student. Afterwards, each student introduces himself or herself. In line with Atayal tradition, village elders hold the ceremony and speak to Atayal children returning from the world outside the village. Similarly in the course, the elders hope to embrace the souls of the students in the village air—this is a very important Atayal ceremony. The hope is that students can "feel" the *Sbalay* via the act followed by translation of a local interpreter. The meaning of *Sbalay* is thus introduced.

Pnhwan: **fire place.** Those who grow up in the village generally have many memories of the elders, especially of tribal stories told endlessly at the Pnhwan (fire place). On the first night, students are introduced to the fire place custom, sometimes accompanied by a barbeque and the making of millet cakes. Normally, a comprehensive history of the village and activities are told on this occasion within which two other main activities related to Atayal traditional knowledge and language are introduced: (1) the introduction of the whole process of millet growing through a slide-show, often followed by a DIY activity of making millet cake; (2) the half-day walk in Koraw eco-park forest trail and introduction of ethno-biological knowledge on the next day. In the following, the main teaching and learning materials are provided.

4.1 THE PROCESS OF MILLET GROWING AND PROCESSING.
Trakis: **millet.** The story of *Trakis* (millet) is always the first story told by elders. This story starts with the complete production process from seeding, harvest to manufacturing food products and focuses on *Sm'atu* (the millet seeding ceremony), which is observed with many taboos and symbols that signal the beginning of a new year. However, students cannot participate in all stages of the process; thus, some stages are discussed during a slide show on the first night. Additionally, teaching material is prepared in advance by recording the oral histories. The following knowledge in Atayal language is explained in the course. Moreover, photos are provided for better understanding of how the course program works.

The sign for starting growing millet. Tribes and villages vary; take the upstream village of *Llyung Papak* (the watershed of *Papak*) as an example. Village inhabitants usually use the time at which the cherry trees in *Tanan Sayun* (a place name) blossom as the time for the millet seeding ceremony. Figure 3 shows that the sight of red and white buds signals the start of the millet-seeding season, which ends when the cherry blossoms fall. According to the elders, if seeded after the cherry blossoms fall, the millet harvest would be poor due to fierce storms.

FIGURE 3. Cherry Blossom as an Indicator of Beginning of Growing Millet

Sm'atu: **the millet seeding ceremony.** First, *sm'atu* signals the start of work for a new year, and literally means the act of spreading seeds and covering them with soil. Before seeding millet and corn, villagers hold a ceremony to pray for a good harvest. Second, the term officially refers to the beginning of a new year for the village. Figure 4 shows a chicken is killed and offered to God in heaven and ancestors. After the chicken is killed, its blood is dripped into a bamboo basket and on the seeds, hoes, and in the fields to pray for a good year and a *qoyat* (blessing) that is as abundant as the chicken blood. The most important aspect of killing the chicken is *qmes* (avoiding disaster); that is, pray for a peaceful year and plentiful harvest, without disturbing the evil spirits.

Figure 4. The Essential Elements for the Millet Ritual

***Tmubux:* seeding.** Whether the fields are seeded with millet on the next day is determined by a dream divination on the previous evening. Figure 5 shows villagers are seeding in the field. A dream of a river suggests a great millet harvest, whereas a bad dream tells some to seed on another day.

Figure 5. Millet Seeding

Lmahing: weeding

The elder says: Hbku te magal qu abaw nya qu Trakis lga, 'san ta mahing ru bkgun qu yaya nya ga helaw mrkyas hopa ru bwaxun.

"When each millet plant grows five leaves, it is time to weed. Weeding helps make room for the plants to grow strong and tall in an adequate space and brings an abundant harvest."

FIGURE 6. Weeding

Smi ukuw qoliy: setting up rat traps

The elder says: Babaw nya hengan lga, aring zik pinturing ru rmapit (kugan) beh sesaw na qmayah. Ini wahi kmyut na Bhut、Tuku、Qoliy ru nnanu.

"When the millet begins to tassel, we know the reaping season is coming soon. To prevent animals such as Red-bellied Squirrels, the Formosan Striped Squirrel, Spinou Country Rat, and others from eating the millet, we set up traps around the millet fields."

FIGURE 7. The Trap to Catch Rats That Might Eat Millet

Smi tlpak mlawa: setting up devices that repel birds

The elder says: Mrrang (aring mhebung qu bway trakis) lga. 'san smi tlpak ru ki'an mlawa kryax. aki ini wahi maniq na Qayu ru Pzit.

"Before the millet tassels, we need to set up devices that repel birds around the fields and have people guard the fields so that the birds will not come and eat our crops."

FIGURE 8. The Device to Repel Birds

Kmluox: harvest

The elder says: Tehoq qu ryax kmluox lga, cingay qu gaga nya .

Ini p'sang.

Ini pskura gleng t'asiy.

Ini kayal mha moyay.

Ini piyu atu' kmluox.

Ini kayal mha usuw qu bengan.

kmayal qu bnkis Atayal:
Ini ta glgiy lga, baq ini bhoywaw ru cipoq qu knluox ta qutux kawas la.
cingay na qu gaga nya ga, nyux ini bruy na.

"There are many regulations (Gaga) for the time of millet harvest, which are norms and taboos associated with millet production. For instance, noise, inconsistent harvesting direction, coughing forward, cries of hunger, and calling the millet heavy are not allowed. These taboos are passed down from the ancestors. If we don't harvest in obedience with the Gaga, we will end up with a harvest of millet that is less than enough."

FIGURE 9. Millet Harvesting

Pgyan: drying the millets in the sun

The elder says: Blaq kayay mu qu wagi, pgyan bengan cyugal ryax ru syukun, pgyan bway cyugal ryax. kyay lga psktan.

"When the sun shines on the land, the harvested millet should be dried under the sun. Both sides of each tassel need to be dried for three days. Until millet are thoroughly dried, each tassel has to be rearranged."

FIGURE 10: Millet Drying

Tt'an bengan: **cleaning out the tassels**

The elder says: Galun pucing (soki、lalaw) tt'an qu ami, cint'an ami qu qaya nya ga, ini pqli baq stngahoq.

"After that, we cut the superfluous stalks that cannot be trodden upon. If you tread upon them, you will get a malignant boil."

FIGURE 11. Millet Cleaning

Skun khu': **storing millet in the barn**

The elder says: 'son smi khu' ru blequn stluhung (cinlhongan) sa ska khu'.

"After drying and cleaning the millet, we store the stalks in bundles in the barn, and will call the production work finished."

FIGURE 12: Millet Storage

4.2 THE WALK IN *KORAW* ECO-PARK FOREST TRAIL. The activity includes:

FIGURE 13: Students' Reflection Time in the Forest

the ethno-ecological interpretation along the crest line and the trail, the story of the *lhyux na bnkis* (ancestral cave), traditional hunting culture such as demonstrating how to set up traps, use fire and cook food. Finally, Figure 13 shows that a group discussion in the forest is a very critical time for reflection of students and the villagers.

4.3 REFLECTION TIME INVOLVES GROUP DISCUSSIONS WITH THE PAR-TICIPATION OF VILLAGERS Group discussions are enjoyable and reflective, and often held in the forest. Before the two-day program ends, each group discusses the feelings and experience before and after the village visit as feedback to instructors and villagers. To encourage the students, the lecturers and teaching assistants from the village also share how they feel about the interaction during the two days. Figure 14 shows the lectures of villagers in the forest.

FIGURE 14: The Forest Lectures Led by Smangus Villagers

5. CONCLUSION. In summary, the examples and cultural practices from *Smangus* are distinct from state indigenous policies that we analyzed above. On the contrary, through autonomous research and investigation, *Smangus* manifests as the relationship between village development and ecological systems in an actual collaborative interpretative program with a university, and, importantly, involves practice of an indigenous language. The difficulties associated with land use under state control are discussed. Until now, the Reserve Policy has confined development to reserve land and encouraged indigenous peoples to grow economically viable crops. This decision resulted in environment degradation and stigmatized indigenous peoples. However, *Smangus* creates a contemporary social system based on traditional knowledge and is extended to a new construction of tribal culture and ecological conservation and industry that are harmonious with nature. These acts not only consider the concepts of modern conservation but also combine elements of industrial development and cultural inheritance. Many ways exist for creating a culture that lives in peace with nature, some of which may be more important than concerns for the environment only. Moreover, the daily life practices of *Smangus* villagers also emphasize that local knowledge is rooted in the place where knowledge is produced, especially when the mother language is prevalent.

Local participation is a recent and new aspect of Taiwanese nature conservation and the indigenous peoples' movement under rapid social change. Local participation highlights the importance of local management of their surrounding environments rather than nature conservation managed by specialists. This concept is built upon the idea of diverse environmental values, which indicate that different communities have different views toward the environment that is most suitable for social development. The idea of local participation also affirms the environmental understanding of local people. In other words, the so-called local knowledge has social value. The knowledge of local people is not less useful than scientific knowledge, even when they differ. This local knowledge is always based on daily life and local cultural, historical, economic and political systems. This knowledge, additionally, is usually expressed through indigenous languages. Thus, the knowledge has considerable accessibility and popularity. People in Taiwan have recently become aware of the importance of integrating nature conservation with the concerns of daily life. Some local environmental protection and indigenous organizations have started participating in local environmental affairs. This trend of local participation suggests that environmental protection must be a lifestyle-based social process linked with cultural politics. This chapter brought this issue into the context of indigenous communities and argued that indigenous language practices are extremely important to local participation and construction of local knowledge. To a certain extent, local knowledge will be difficult to reveal without the daily practices of indigenous languages. Consequently, the insufficient or inadequate understanding of indigenous peoples' local knowledge will also create improper imagination of socio-political policy such as the cases we have examined above. For this reason, this chapter further indicated that a lack of active linguistic input to the government's indigenous socio-political policies— based on the spirit of the "New Partnership Policy"—will be a great loss.

References

Bennagen, Ponciano, and Antoinette Royo. 2000. *Mapping the Earth, Mapping Life*. Quezon City, Philippine: Legal Rights and Natural Resources Center.

Board, Christopher. 1991. Report of the Working Group on Cartographic Definitions. *ICA Newsletter* 18:14-15.

Boas, Franz. 1934. *Geographical Names of the Kwakiutl Indians*. New York: AMS Press.

Boas, Franz. 1964. *The Central Eskimo*. Lincoln: University of Nebraska Press.

Castellanet, Christian, and Carl F. Jordan. 2002. *Participatory Action Research in Natural Resource Management*. New York: Taylor & Francis.

Castree, Nowl, and Bruce Braun. 2001. *Social Nature: Theory, Practice, and Politics*. Oxford: Blackwell.

Chang, Chang-Yi. 2002. Report of Indigenous Traditional Territory Survey. Taipei: Council of Indigenous Peoples.

Chang, Chang-Yi. 2003. Report of Indigenous Traditional Territory Survey. Taipei: Council of Indigenous Peoples.

Chang, Chang-Yi. 2004. Report of Indigenous Traditional Territory Survey. Taipei: Council of Indigenous Peoples.

Chang, Nai-Hung, and Yuan-Rue Shu. 2001. Natural Seeding and Seedling Occurrence in the Chamaecyparis Forest at Chilan Mt. Area. *Taiwan Forestry Science*(16):321-326.

Chang, Su-Juen, and Wen-yu Chiang. 2005. Language Ability, Language Using and the Continuity of Language :A Case Study of Atayal Silaq Village. *Journal of Language and Literature* 12:139-154.

Chapin, Mac, and Zachary Lamb. 2005. Mapping Indigenous Lands. *Annual Review of Anthropology* 34:619-638.

Chen, Mei-ju. 2000. Ways of Implementing Taiwan's Aboriginal Language Education from the View of Multicultural Education. *Journal of Education Studies* 45:173-202.

Cronon, William. 1996. *Uncommon Ground*. New York: Norton.

Eghenter, Cristina. 2000. Mapping people's forests: the role of mapping in planning community-based management of conservation areas. In *Indonesia. Peoples, Forest Reefs Program Discussion Paper Series*. Washington, DC: World Wildlife Fund.

Escolar, Marcelo. 1997. Exploration, cartography and the modernization of state power. *International Social science Journal* 49:55-75.

Fox, Jefferson. 1998. Mapping the commons: The social context of spatial information technologies. *Common Property Resource Digest* 45:1-4.

Fox, Jefferson. 2002. Siam Mapped and Mapping in Cambodia: Boundaries, Sovereignty, and Indigenous Conceptions of Space. *Society and Natural Resources* 15:65-78.

Glacken, Clarence. 1967. *Traces on the Rodian Shore*. Berkeley: University of California Press.

Gough, Noel. 1987. Learning with environments: towards an ecological paradigm for education. In *Environmental Education: Practice and Possibility*, ed. Ian Robottom, 49-67. Victoria, Australia: Deakin University Press.

Harley, John Brian. 2001. *The New Nature of Maps*. Baltimore: John Hopkins University Press.

Hu, Ai-ruo. 2002. A Study on Educational Policy over Taiwan Aboriginal Languages. *Journal of Institute of Dr. Sun Yat-Sen's Doctrine* 24:153-173.

Huang, Hui-chuan. 2006a. Squliq Atayal syllable onset: Simple or complex? In *STREAMS CONVERGING INTO AN OCEAN: Festschrift in honor of Professor Paul Jen-kuei Li on his 70th birthday*, ed. Dah-an Ho, 489-505. Taipei: Academia Sinica.

Huang, Hui-chuan. 2006b. Resolving vowel clusters: A comparison of Isbukun Bunun and Squliq Atayal. *Language and Linguistics* 7(1):1-26.

Huang, Kai-Ju. 2004. A literature-review study on Transformation of Timber Production Institution in Taiwan, Department of Forestry, National Taiwan University: Mater Thesis.

Huang, Lillian. 1993a. *A Study of Atayal Syntax*. Taipei: Crane Publishing Co.

Huang, Lillian. 1995. *A Study of Mayrinax Syntax*. Taipei: Crane Publishing Co.

Huang, Lillian. 2002. Nominalization in Mayrinax Atayal. *Language and Linguistics* 3(2):197-225.

Huang, Ying-Kuei. 1973. Economic Adaptation and Development in an Aboriginal Settlement in Central Taiwan. *Bulletin of the Ethnology, Academia Sinica* 36:35-55.

Huang, Ying-Kuei. 1993. Crop, Economy, and Society among the Bunun of Taketonpu. *Bulletin of the Ethnology, Academia Sinica* 75:133-169.

Li, Keng-Cheng. 2004. The Study on the Promotion of Maqaw Cypress National Park within Civil Society in Taiwan, Department of Ecology, Providence University: Master Thesis.

Li, Paul Jen-kuei. 1980. The phonological rules of Atayal dialects. *BIHP*. 51(2):349-405.

Li, Paul Jen-kuei. 1981. Reconstruction of proto-Atayalic phonology. *BIHP*. 52(2):235-301.

Li, Paul Jen-kuei. 1982. Male and female forms of speech in the Atayalic group. *BIHP*. 53(2):265-304.

Li, Paul Jen-kuei. 1985. Linguistic criteria for classifying Atayalic dialect groups. *BIHP*. 56(4):699-718.

Li, Paul Jen-kuei. 1995. The case-marking system in Mayrinax, Atayal. *BIHP*. 66(1):23-52.

Lin, Yih-Ren, and Hui-Chung Hsiao. 2002. Contesting Aboriginal Community Mapping: A Critical View from Local Aboriginal Participation in the Natural Resources Management of Taiwan. Paper presented at *Society for Conservation Biology 16th Annual Meeting*, Cantebury, UK.

Lin, Yih-Ren. 2004. Cultural Construction of Natures: Contesting "Forest" Metaphors of Proposed Maqaw National Park. *Museology Quarterly* 18(2):25-38.

Lin, Yih-Ren. 2005. The relationship between indigenous people and the land: The perspectives of ecology and traditional resources rights. In *The Recordings of Discussing the Proposed Indigenous Chapter of the Constitutional Amendment*, Taipei, Council of Indigenous Peoples.

Lin, Yih-Ren, and Keng-Cheng Lee. 2005. Cypress forest conservation on Taiwan. In *Principles of Conservation Biology*, eds. M. J. Groom, G. K. Meffe and C. R. Carroll, 131-134. Sunderland, Massachusetts: Sinauer Associates.

Lin, Yih-Ren, Jun-Ming Lai, and Huei-Chung Hsiao. 2006. Understanding through actions: Reflection on the development and ecological discourse of Pyanan Village in I-Lan. *Journal of I-Lan Documentation* 27:191-242.

Lin, Yih-Ren. 2007. The Chief Seattlization of Nature Conservation in Taiwan: A Radical Perspective on Indigenous Traditional Ecological Knowledge. *Chung Wai Literary Quarterly* 36(3):15-62.

Macnaghten, Phil, and John Urry. 1998. *Contested Natures*. London: Sage Publications.

Mei, Kuang. 1994. Word order, case and theta-agreement in Mayrinax Atayal. Paper presented at *The First Symposium on Austronesian Languages of Taiwan,* Taipei.

Natcher, David. 2001. Land use research and the duty to consult: a misrepresentation of the aboriginal landscape. *Land Use Policy* 18(2):113-122.

Nokan, Walis. 2003. Give Me a Magau: Magau, Atayal, State and Park. *Historical Monthly* 183:78-88.

Peluso, Nancy. 1995. Whose Woods are These? Counter-Mapping Forest Territories in Kalimantan, Indonesia. *Antipode* 27(4):383-406.

Rau, Der-Hwa V. 2004. Lexical similarity, sound change and intelligibility of Atayalic dialects, *Papers on Austronesian Subgrouping and Dialectology*. Eds. by John Bowden & Nikolaus Himmelmann, *Pacific Linguistics*, Canberra, Australian National University. 37-96.

Seiber, Renee. 2000. Conforming (to) the opposition: The social construction of Geographical Information Systems in Social Movements. *International Journal of Geographical Information Science* 14(8):775-793.

Soper, Kate. 1995. *What Is Nature?* Oxford: Blackwell.

Stringer, Ernest. 1996. *Action research: A Handbook for Practitioners*. Thousand Oaks: Sage Publications.

Sun, Ta-Chuan. 2000. *The Ethnic Construction in Crack: Taiwan Indigenous Languages, Cultures and Politics*. Taipei: UNITAS.

Sun, Ta-Chuan. 2005. Multiculturalism and Indigenous Language Policy. Paper presented at *Series II of The Conferences of Multiculturalist Thinking for Language Policy: The Vitality and Succession of Taiwan Indigenous Languages*, Taipei:.

Sung, Bin-min. 1999. Responding National Parks' Impact to Taiwan Indigenous Cultures. *Journal of National Park* 9(1):65-80.

Tang, Yi-Jie. 2001. The Word-final Glottal Stop in Squliq, Department of Linguistics, National Taiwan University: Mater Thesis.

Turnbull, David. 2003. *Masons, Tricksters and Cartographers*. London: Routledge.

Usher, Peter. 1990. Recent and Current Land Use and Occupancy in the Northwest Territories by Chipewyan-Denesutine Bands (Saskatchewan Athabasca Region). Prince Albert, Saskatchewan: Prince Albert Tribal Council.

Usher, Peter, Frank Tough, and Robert Galois. 1992. Reclaiming the land: Aboriginal title, treaty rights and land claims in Canada. *Applied Geography*(12):109-132.

Wang, Ming-Hui. 1989. The Spatial Organization of Traditional Tsao Society in A-Li Mountain, Department of Geography, National Taiwan Normal University: Master Thesis.

Whyte, William. 1991. Introduction. In *Participatory Action Research*, ed. William Whyte, 7-15. Newbury Park, Calif: Sage.

Worster, Donald. 1979. *Nature's Economy: A History of Ecological Ideas*. Cambridge: Cambridge University Press.

Wright, Will. 1992. *Wild Knowledge: Science, Language, and Social Life in a Fragile Environment*. Minneapolis: University of Minnesota.

Wu, Tien-Tai. 1999. The Promotion of Indigenous Language Teaching in a Perspective of Multiculturalism. *Aboriginal Education Quarterly* 10:49-64.

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