

Traditional Institution and the Institutional choice: Two CPR Self-Governing Cases of *Atayal* tribe in Taiwan indigenes

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Abstract: The sovereignty of land and natural resources of Taiwan indigenous people have been seriously challenged by the expansion of state power and capitalistic market economy since 19th century. Consequently, many indigenous communities have made efforts to adjust to and negotiate with modern institutions. This article analyses the logic of the lapse of indigenes' land tenure, and examines two common pool resource (CPR) self-governing cases, which *Atayal* communities seek to manage by collective action for collective interest. Furthermore, drawing from neo-institutional economic perspective, this article discusses both how the internal institution affects the solidarity of communities and the derivation of *Gaga*, a traditional institution of *Atayal* tribe. In spite of the fact that the formal organization of *Gaga* no longer exists, its' Meta rule leads to the formation of social constraints then affects the institutional choice. In the end, this article suggests that the reform of land tenure institution support CPR self-governing in indigenous areas, which will diminish the conflicts emerging from the interaction between state power and capitalistic market economy.

Keywords: Neo-institutional economics, internal institution, common pool resources, indigenes, reserved-land, *Atayal*, Taiwan

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From 17th to 19th century, Dutch, Cheng Dynasty, and Ching Dynasty had governed the plain area of western Taiwan consecutively. However, the plain area of eastern Taiwan, and the central mountainous areas where the indigenous tribes located had never been governed by invaders until 1895, during which the Japanese colonial era began¹. Japanese colonial government implemented the land investigation in 1898, and then started a five-year project to conquer indigenes with dominative modern weapon since 1910. After that, the mountainous areas, which were previously owned by different indigenous communities, were totally nationalized. Japanese colonial Government claimed these lands as Terra Nullius, because there was no private land tenure institution in traditional² indigenous societies, and their land tenures were never registered by any official documents. In 1925, the National Forest Business Project confined indigenes to live in reserved-lands, which were only a small proportion out of the whole mountains. At the same time, many communities were forced to migrate to lower mountainous areas, and shift their traditional hunting and gathering production to agro cultivation.

In 1945, R.O.C. from Mainland China replaced the Japanese colonial government. R.O.C. government retained the area of reserved-lands, began the promotion of speaking mandarin and “the Three Movements”³ in indigenous area since 1951. In 1966, the reserved-land tenure institution was transformed to privatization from nationalization in arable land. Consequently, capital of non-indigenes was encouraged to get into this area⁴. In spite of the fact that reserved-land trades between indigenes and non-indigenes were forbidden in the regulation, there were huge amounts of private reserved-land trades in the black market. Nowadays, many indigenous communities try to reclaim their right of the land and natural resource occupied by the government force in the very beginning. However, private lands sold out by individuals can hardly be returned. On the other hand, the trade in black market even has been more frequent than ever.

¹ Before 1874, Chin Dynasty kept prohibiting Chinese immigrants from cross the boundary between Chinese and indigenous area, and defined such behavior as “illegally crossing the frontier”.

In 1874, an international conflict between Chin and Japan, which was caused by a Japanese shipwreck happened on the east coast, made Chin changed its policy to “explore the mountainous area and comfort the indigenes”. However, faced with fiery resistance, Chin can never successfully extend its force into the mountainous indigenous areas before Japan took over it in 1895.

² “Tradition” is an abstract idea, especially without relative referent point to define its time period. The traditions of Taiwan indigenes here mean the culture formed and operated before they contacted with foreign invading civilizations. And, because of methodological limitations, the traditional society represented here was based on the extant ethnologic literatures and field works processed by author of this article.

³ These movements included the improvement of life, the encouragement of located ago-cultivation and the encouragement of reforest.

⁴ For example, the relevant regulation was modified under three times of land use investigations to make non-indigenes’ illegal occupation in public land became legal during 1958 to 1985.

Diverse theories about human economic behavior have been developed surrounding two cores, exchange value and labor value, since the Classical economic theory arose. Within them, Neo-classical economic theory paid its attention to individuals in the market, which is different from national wealth concerned by Classical economic theory. Inheriting the tradition of rationalization proposed by Max Weber, Neo-classical economic theory assumed that every agency is self-interested. This assumption was also induced by political science and developed the theory of rational choice. In the view of political scientists, interest is social values such as power and status, ration means to maximize these values, and the way to seek interest is the acts in political system. In the view of economist, interest is profit and efficiency, ration means to optimize the use of resources, the way to seek interest is the acts based on market mechanism (Hsiao, 1998, 31-36). Therefore, the common character between political behavior and economic behavior is: they are all the behavior of relevant agencies that are trying to seek more interest within limited resources (see Table 1).

Table 1: The comparison between political behavior and economic behavior

Intension	Political behavior	Economic behavior
Interest	Social values	Profit and efficiency
Ration	Maximizing	Optimizing
The way to seek interest	Acts in political system	Acts based on market mechanism

The first purpose of this article is to analyse how indigenes' land tenure lapsed under the institution formed by the interaction between political power and market mechanism, within different agencies.

Although indigenous communities try to reclaim the right to natural resource, the practicability of community-based management was queried. Most of communities seek their legitimate rights under the discourse of historical sovereignty. However, the precondition to practice the right is it should be accepted by the public policy making procedure in the politic system. The first challenge it faced is the question that if indigenes communities possess the ability to manage these resources. The second challenge derived from the previous one is the question to the traditional institutions claimed. Although the ethnographic literature gave pictures of institutions in every tribe, the fact that many new variables involved and even destroyed its organization cannot be ignored. How does it work or does it still work today? Without concrete description, it falls into unrealistic nostalgia.

The second purpose of this article is to answer the questions above after examined the following existent community-based resources management cases empirically.

Within the existent Taiwan indigenous tribes, *Atayal* tribe occupied the biggest area of mountains. Its population (about 85,000) is just second to *Amis* tribe. To be compared with *Amis* tribe, *Atayal* people are more advantage that the heads of 11 townships they live in were indemnify to be indigenes by law. On the other hand, living cross high sea level elevation to mid sea level elevation, *Atayal* people faced both diverse problems of resources use and land property problems raised after contacted with non-indigenes. The *Gen-Shi* Township illustrated in the fallowing analysis is a typical *Atayal* township that *Atayal* people occupy more than 86% of its total population. With further discrimination, *Atayal* tribe here includes *Mknazi*, *Maliqwan* and *Kalapai* lineages. Two common pool resource (CPR)⁵ self-governing cases in this township chosen to be examined are: the community forest of *Cinsibu* Community and the fish band protecting action in *Maliqwan* River (see Table2). Forest and fish band belong to different kinds of resources. However, based on the character that they are both CPR and its specific effect in collective action, this article compares them after distinct analyses.

Table 2: Resources and appropriator in the two cases

Cases	Community forest of <i>Cinsibu</i>	Fish band protecting action in <i>Maliqwan</i> River of <i>Yogohon</i> village
Resources & Appropriators		
Resource	Forest	Fish band
Appropriators	<i>Mknazi</i> community	Several <i>Maliqwan</i> communities

Neo-institutional economists bring institution into the model of Neo-classical economic analysis. Furthermore, corrected the assumptions of no transaction cost, complete ration and sufficient knowledge. Neo-institutional economists consider institution as analyzable object; analyze its demand, supply, equilibrium and un-equilibrium; discuss how rules were made, how people act in the condition given by the rules of behavior, how people made their decisions and how these decisions

⁵ CPR, according to the definition of Ostrom (1990:30), means a natural or artificial resource system which is costly (but not impossible) to exclude the potential beneficiary who benefited with appropriating its resource unit. In same time, although one appropriator can hardly exclude another, but one persons' appropriating to the resource unit will reduce the others' benefit.

change the worlds. According to the definition from North (1981), institutions are the artificially formulated restrictions, which were, used to constraint the behaviors of human interaction. Furthermore, he discriminated institution into formal restrictions, informal restrictions and the organization for executing these restrictions.

To consider institution as analyzable object, people were supposed to make choice based on the information they got when they decide to or not to support the institution in operation. In the discussion of commons, The tragedy of commons theory by Hardin(1968), the prisoners’ dilemma game by Dawes(1973、 1975) and the logic of collective action by Olson(1965) direct to a conclusion that personal strategy with ration might lead to a collective irrational result; every individual will choose to seek their own maximal interest and not to cooperate for seeking collective interest. However, in empirical experiences, there exist some situations that people chose to support cooperative rules (institution) and realized collective interest. Ostrom (1990) concluded the problematic who can’t be explained by the collective action theory, then reanalyzed the situational variables affect individuals to choose the institution of cooperation. She illustrated the institutional choice framework. In it, the common norm is one of the important variables.

Different to North, Kasper & Streit (1998) discriminated institution into internal institution and external institution with the origin of it: internal institution is the rules driven by a group itself, and outsider imposed external institution. And, discriminated internal institution to four compositions: conventions internalized rules, customs and formalized rules. They made further descriptions to the different ways these compositions constraint people to comply with the rules. Also, they pointed out that internal institution derived within peoples’ experience and practice gradually.

Table 3: Compositions of institution and the norm Ostrom refer to

Compositions of institution			The norm Ostrom refer to
Internal institution	Informal	Conventions	
		Internalized rules	Internal norm
		Customs and manners	Shared norm
	Formal	Formalized rules	
External institution	Formal		
Organization			

After describe how people cooperated in the cases illustrated, the last purpose of this article is to interpret how Atayal traditional institution derived and affected institutional choice. Furthermore, make suggestions to the reform of external institution for protecting the ability of indigenous communities to develop the internal institution, which can properly combine itself to external. In this way, the conflicts emerged under the interaction between state power and capitalism market economy can also be diminished.

Atayal* tribe in *Gen-Shi* Township and *Gaga* of *Atayal

Gen-shi Township, near the Centre Mountains, located in the north part Taiwan and administered by *Shin-Chu* County, which possess two *Atayal* townships in it. The total area of this Township is 527.5795 square kilometers. *Atayal* population here is about 7,000, which occupy more than 86% of total population in this township. Within the Taiwan indigenous tribes, *Atayal* was well known as her traditional facial tattoo, head hunting and fiery bloody battles in revolting Japanese colonist. There exists an important story of Rainbow Bridge in the myths of *Atayal* tribe: every soul of dead will come to a bridge weave with rainbow and trailed by the soul of ancestors. If you did follow the regulations of *Gaga* in your entire life, then you can pass the bridge successfully and become a part of the soul of ancestors. In contrast, if you have ever violated it, then you will be pushed down the bridge, and suffer the punishment that mercilessly bit by beasts of prey.

Gaga, traditionally means co-sacrifice, co-production and co-distribution kin groups. People from the same *Gaga* need to follow the common regulations. Meanwhile, in *Atayal* language, *Gaga* also refers to the regulations a member needs to follow. There is no obvious social class in the traditional *Atayal* society. Except the *Maraho* (group leader) of *Gaga*, there is no hierarchy such as nobles and populace in some other tribes. Beside, the *Maraho* was not born by hereditary but chosen on the basis of ability. When a *Maraho* is getting older and weaker, a new *Maraho* will be chose to displace him. Therefore, the statuses of power in a traditional *Atayal* society is not immobilized but grows and declines depend on individual ability. Although obvious social hierarchy does not exist, groups possess strong constraint to their members. The basis of the constraint is polytheism, the belief in *Utux*, which was composed by soul of ancestors. *Gaga* is just the instructions left by ancestors. The members in a same *Gaga* will have to bear common responsibility to the blame cause by any others in the group. The members in a same *Gaga* must follow the common value and instructions to sacrifice, production, distribution and interpersonal relationship. *Atayal* people believe: once you violate it, catastrophe will not only come to yourself but come to every member in your *Gaga* (Lee, 1985: 390). On the other hand, a member can choose to leave his original *Gaga*, and then join another one, which is willing to accept him. Along with migrating to various regions in the history, the archetype of “one community one *Gaga*” evolved to diverse types such as several communities formed one *Gaga* and several *Gaga* in one community (Zhe, 1980).

The organization of *Gaga* and the constraint surround polytheism also regulate the use of land resources and the distribution of tenure. According to the utilization, land can be districted to housing, farming, hunting and fishing fields. Hunting and fishing fields belong to each *Gaga*, and the property rights are commons to its members. The housing and farming fields includes diverse private and common properties. In some communities, farming lands belong to *Gaga* too. Cultivating, trails opening and water carrying over it should be go after public negotiation. In other communities, individuals can own farming lands. However, in spite of that, the owners cannot refuse others to open trails and carry water over it. If any dispute happened, arbitration will be process trough *Gaga* (Taiwan General Government, 1919: 343-345; Wei, 1965: 71-87; Institute of Ethnology in Academia Sinica Ed., Taiwan General Government, 1996: 197-205, 231-251; Yien, 1998: 41-49).

Table 4: The Compositions of land tenure institution in traditional Atayal society

Compositions of institution			Gaga
Internal institution	Informal	Conventions	
		Internalized rules	Concept of bearing common responsibility Lead by polytheism
		Customs and manners	
Formal	Formalized rules		The formation of properties: Hunting and fishing fields are commons; some farming lands are partial privatized.
			The way to own the properties : Properties of the housing, hunting and fishing fields between <i>gaga</i> were decided by principles include preoccupy, abandon, battle and cede. Housing and farming fields inside <i>Gaga</i> were decided by basic principles include preoccupy, abandon, negotiate and inherit.
External institution	Formal		
Organization			Co- sacrifice, co-production and co-distribution kin groups

Two good examples to explain how *Gaga* works in resources management are the way Atayal people distribute their hunting and fishing fields. Traditionally, Atayal people get the fish they need by spear and poisonous rattan. A river runs through different communities is districted to different sections. Different sections belong to different *Gaga* organizations in the communities. Leaders in every *Gaga* organizations will meet every summer and negotiated the time their *Gaga* fish in their own section. The major rules are: group fishing can only be held in summer and there

should be always only one *Gaga* organization fish in one section in a time. Under the rules, fish band can keep sustainable. Similarly, every *Gaga* organizations owns their hunting fields. Hunting fields are usually districted by mountain ridges. *Gaga* forbid hunters from hunting in breeding season. Further more, there are always some sacred places people should never invade within the cross of ridges. According to the legend, those who violate the *Gaga* and invade the sacred place will get serious punishment from *Utux* (spirit of ancestors). In the perspective of modern animal conservation, the sacred places formed safety valves that animals can get refuge.

According to the perspectives of functionalism and Neo-institutional economic, *Gaga* plays an important role for resources utilization and distribution in Atayal culture. And, it helps to internalize external effects in productions. For example, in the hunting activities, personal action cannot be more effective than a group action. On the other hand, group did not regulate individual but hunting unlimited will influence quarry of others. In case of that properties were spread on extensive space, co-owning and mutual supervising are more effective ways to keep these properties. Beside, morals and negotiation are more useful and flexible than legal rules to form constraint and mediate conflict (Hayami, 1998:92-95).

Logic of reserved-land tenure lapse

Atayal people kept on the production of swidden, hunting and gathering before Japan colonial era. In 1899, colonial government established the Camphor Bureau in Shin-Chu; in 1915, after the five-year conquering project, government began the land and forest investigation, and then implemented monopoly institution for attracting Japanese capitalist in metropolitan state to set enterprises in plain area and develop mountain area here. In 1919, Shin-Chu Track Developing Commercial Firm was established and light railways were laid in succession. As the defense line of Japanese force was moving forward to mountains area, exchanging stations were set in *Atayal* communities as the centers for economic and military control in this area gradually. After camphor lumbering began, Mining Association Enterprise was established for the coal mining in Kalapai community (Chronicle of Shin-Chu County, 1956). All the raw materials were sent to factories in plain area, and then transport to metropolitan state after processing. On the other hand, the institutes for political control, such as police stations and indigenous children education schools were also established.

The operation of *Gaga* was impacted. For example, a dispute between Mknazi and Maliqwan lineages caused by a manslaughter event in hunting field was aggravated because the Japanese police station provided huge amount of Mausers and bullets to both of them. The combat between two lineages lasted for two years. Then, Japanese police just involved to suppressing and mediating. It ingeniously weakens the negotiating function of *Gaga*. In the same time, police stations seriously banned those who overstep the boundary of reserved-land and cultivate on the “national properties” (Yien,1999:93). People who were forced to migrate to river valley and began the agro-cultivation in certain location have to exchange the goods they need with the crops.

In spite of the fact that indigenous society was divorced from the exploit by colonialism after R.O.C. took over the Japanese colonial government since 1945, the center/periphery structure between plain and mountain areas was strengthen. R.O.C. government received the Japanese enterprises as national industry and fastens the pace to develop mountain areas. For example, in 1949, Shi-Chu Coal Mining Bureau established. In 1950, Forest Managing Institute was established on the location, which is the strategic passage between two indigenous townships. One year later, new

railway was completed and pushed forward to deeper mountains. All the lands in indigenes townships are nationalized. Center government controlled the exploit of mountainous resources directly. Only very few parts arable lands were allowed to be used (but not owned) by individuals. Meanwhile, new political institution was induced; local township government replaced the status of police station in colonial era. During the reign of the White Terror, some indigenous elites were arrested and the others were fostered to be head of township. Series of policies were implemented to assimilation indigenes in this period.

The area of reserved-land was remained on the purpose to “stabilize life of indigenes and develop economy in mountainous areas” (Reserved-land Management Regulation, Article 1, 1948). On the other hand, although the restrictions for non-indigenes to enter indigenous township and rent the national forest and reserved land were loosen gradually, however, the restriction that non-indigenes cannot possess reserved-land was retained. Even though government transfers its reserved-land policy from totally nationalization to partly privatization in 1966 (as mentioned earlier, arable reserved lands were privatized in this year), a relevant regulation that private reserved land can only be traded between indigenes was kept. It appeared the decision of government to ensure the reserved land tenure of indigenes. In the aspect of political value, it is helpful to legitimate the dominion of government.

In 1980s, Taiwan went through a series of social movement and political reforms. The policy of national assimilation was also changed. Government increased about 10,000 hectares new reserved land to respond the “Turn back my land” movements since 1988. Government consequently privatized part of forestland and distributed it to individuals two years later. The way government maximal its political value in indigenous land tenure issue is to distribute land ownerships to individuals and keep protecting indigenes from lapse their lands in market with prohibition.

However, along with the expansion of non-indigenes’ activities, the restriction retained for political consideration can hardly against market mechanism. Reserved land trades between indigenes and non-indigenes are more frequent than ever (Chang & Yien, 1998; Yien, 1999). Furthermore, during the period of fieldwork, author even found the intermediary companies involved in the trades and advertised openly⁶. This

⁶ The way to avoid the restriction is to set mortgage on land after indigenous seller received money from non-indigenous buyer. So, Even though the nominal owner is still the indigenes, the actually user changed. And, indigenes can hardly ask for returning the land because the mortgage is much higher than the striking price.

situation had never been seen before. At the same time, Non-indigenes groups united to lobby legislator and administrative department. They asked for procedural justices and free market. The type of development was also changed, it transfer to tourism but not high value crops cultivation as earlier years.

Poverty of townships like Gen-Shi aggravates the tendency of land lapse. According to governmental statistic, its average education and incomes are far behind non-indigenous areas in Taiwan. Although the privatization of land tenure means that the effort you make is the fruit you get. And, it was supposed to be an incentive for individuals to optimize the utilization of their property. However, in many situations, peasants have no way to make effort.

The arable lands in non-indigenous areas were also regulated that it can only be traded between farmers. However, indigenous peasants cannot get capital as easy as non-indigenes. Government helps peasants to get capital through Peasant Association and Peasant Bank. However, there were few Peasant Associations in indigenous areas. When indigenes try to get loan from bank with the mortgage on reserved-land, they are often refused because of the extremely low price of their land, which can only be traded between the minor and poor indigenes. Without the way to get capital (it often means no way to get technique in the same time), individual indigenous peasants can hardly manage their arable well. The following description is a try to explain the logic indigenes chose to sell their land, with the payoff matrix and land price theory.

Table 5: payoff matrix of trade between indigenes and non-indigenes

		Indigenes	
		Willing to sell	Not willing to sell
Non-indigenes	Willing to buy	I : MV- P N : RV2-P	I : RV1 N : C-X
	Not willing to buy	I : RV1-X N : C	I : RV1 N : C

MV : market value

RV : profit value

RV1 is the profit value indigenes manage their land can earn

RV2 is the profit value non-indigenes manage the same land can earn

P : the punishment will get when disobey the regulation and trade the land

C : the capital to buy the land

X : the transaction cost who is seeking trade have to pay

According to the theory, market value is the money when trade was achieved. And, the profit value is the recovering of money that calculates the total net profit from manages the land. According to the payoff array, when $(MV - P) > RV1$, indigenes will chose the strategy to sell their land. On the other hand, non-indigenes will choose the strategy to buy the land.

The variable affect their strategies are the punishment (P) and the different consideration to profit values (RV1, RV2). Because government can hardly get the complete information to supervise the trade, (P) is relative small. In the aspect of profit value, because of the drop between non-indigenes and indigenes' ability to get capital and technique, non-indigenes can make higher profit value in the same land. Meanwhile, because of the drop between non-indigenes and indigenes' ability to get capital, the recovering discounts between them are different. It also makes the profit value of non-indigenes higher.

$$RV1 = NV1 / RD1$$

(NV1 is the net profit of indigenes, RD1 is the discount for indigenes)

$$RV2 = NV2 / RD2$$

(NV2 is the net profit of non-indigenes, RD2 is the discount for non-indigenes)

$$NV2 > NV1 \text{ and } RD2 < RD1$$

So, $RV2 > RV1$

Because of the low ability to get capital and technique, indigenes get lower profit value than non-indigenes. If non-indigenes buyer provides a market value, which is higher than the profit value indigenes, can earn by managing the land. Indigenes will often choose to sell it. Comparatively, because non-indigenes can make higher profit value by managing the same land, the profit value is still positive after deducting the market value. The trade achieved under the consideration for seeking maximal interest to individuals, and the lapse of indigenous land tenure began.

To generalize the depiction and analysis above, the privatization land tenure institution and the disadvantage of indigenes in market formed the logic of reserved-land lapse. The political intervention to market can be understood as a way to realize social justice, but the way government used lead to an adverse result. If the land tenure institution can be an instrument to realize social justice with its constraints to behaviors of human interaction in land using and distribution, is there any choice beside nationalization and privatization? The following two cases can bring into

further discussion.

Internal institution as the capitals of self-governing: Case of community forest in *Sinsibu* community

Sinsibu community, located at 1,700 meters above sea level, is the first stop of ancient *Mknazi* migrant while they moved along Central Mountains from central part of Taiwan hundreds years ago. All the residents belong to *Mknazi* lineage, and the population now is about 300 hounded.

Most resident here make alive with fruits cultivation. Beside, hunting and gathering are also important activities. In the early years, because the Forest Affair Bureau refused Atayal people to get into national forest which was used before, sporadic disputes happened all the time. 1986, while Forest Affair Bureau tried to fell trees near here. *Sinsibu* residents unite nearing community protested in front of working station of Forest Affair Bureau and stopped its action. 1990, an arrow shot from hiding hurt a forest investigator of Forest Affair Bureau, and he was sent to hospital in emergency. Nowadays, residents still keep on patrolling the forest. In the view of residents here, Forest Affair Bureau is still an adventive occupant. Because of the negative experience and distrust, the forest controlling of government was challenged by residents here (Wang, 2000).

Recently, the reserved forest became an important resource of income. According to an investigation, the 88,160 hectares forest cross three nearing indigenous townships was the biggest and most complete natural *Sabina chinensis* forest in Taiwan. And, the area of *Sabina chinensis* forest near *Sinsibu* community is about 5,000 hectares. Every holiday, tourist will come to stay at this community here, then go mountain climbing and observe forest in next day. The home stay and forest instructor become new incomes of residents.

In spite of that tourist brought income to *Sinsibu* residents, it also brought crisis to environment. For example, garbage littered on the forest path, flowers and branches were picked. January 2001, about one hundred residents gathered on the entrance of climbing path and held an activity named “forest pilgrimage”. Media journalists were informed to interview it. A bulletin board with “*Sinsibu* community pledge” on it was

set. Tourists were prohibited to catch animals, pick planet and litter garbage. Pastor of local church introduced the spices in the forest and the history of Atayal activity to journalists. He pronounced, “No forest, no life exists. In order to stop the infringing and selfish behavior of tourists, we claim the determination for protect the inherited land to our ancients, also to our Han⁷ friends.” After the activity, residents set a customs pass on the entrance and limited number of customers to get into the forest.

The effort of residents to manage their resource was not achieved suddenly. In fact, the participation of public affairs began long time ago. Because residents here are almost Christian, church plays an important role in community mobilization. For example, residents rather to spend 18 years to build local church by themselves than hiring non-local labors. In the first 8 years, residents collected money to buy the materials. In the next ten 10 years they built the church with their own hands. The pastor in the church was born in local. He graduated from Christian school and came back to serve in church more than twenty years ago. Villagers here are quite convinced to his propagation. According to his explanation, there is no conflict between the believing of *utux* (the sprit of ancestors) and Christian doctrines. “God is the power above all, and *utux* exist under the power”, he said, “The rules of church is just the Gaga of God. And, we should follow the gaga of God just as we follow the gaga taught by ancestors”. Residents participate in the actives of church frequently. Under the organization of church, residents re-hold a traditional ceremony to offer the sacrifice to ancestors. The ceremony has been stopped for more than fifty years since it was prohibited in Japanese colonist era. residents began to edit an Atayal language teaching material and accomplished the works of community embellishment with no payment. Residents also voluntarily patrol the river and made an agreement to protect fish bank in it. Cooperation like that accumulated the experience and self-confidence of people to act for common interest.

Belonging to the same lineage and possessing the same idea about Gaga, residents here share strong internal constrain and have long-term experience for cooperation.

During the filed work of author, while interviewees were asked questions as

“ what punishment will be put to those who violet agreements between residents?”, The answers showed that the blame from others is just a serious

⁷ Non-indigenes, the major ethnic group in Taiwan

punishment. “ It’s ashamed if you can’t be trusted by others”. Although there is no certain punishment, internal constraint makes people keep on cooperation. And, the experiences of cooperation strengthen the trust between villagers. Such an internal institution combined with church organization, became an important capital for community mobilization.

There exist two major opposite approaches in the discussion of “social capital”. According to Bourdieu (1992), it’s a substantive or potential resource relevant to gain the continuous interpersonal network that can know and respect each other in society. He distinguished culture capital from economic capital and social capital. Then, pointed out that the amount of social capital owned by individual can be judged with the extent of social network he can mobilize and the capital owned by the members in the network. In this aspect, one can explain those who owned similar culture capital and economic capital will have different achievement in a society. Another approach was advanced by Putnam (1993). He pointed out the characters like trust, norm and interpersonal network can help a society overcomes the dilemma of collective action. Putnam defined these characters as social capital. Meanwhile, social capital is not personal property but benefit every individual in a society. He considered social capital as networks of civic engagement. In this aspect, one can explain the different societies owned different ability for creating social capital would lead to different results of social development.

The definitions and descriptions to social capital between Bourdieu and Putnam are quite opposite. However, Birner & Wittmer induced the distinction between private property and public good in economic theory, described that Bourdieu and Putnam are observing a same object with two aspects. In order to analyze how local community gained political influence; they further induced the idea of political capital and pointed out that political capital is a kind of resource. In the aspect of individual agency, political capital is the resources, which can be used to influence the policymaking. In the aspect of public, political capital are the structural variables in political system. At the last, they suggested a table cross-connected by social capital and political capital,

public aspect and agency aspect. With this table, one can discuss the process local community transferred social capital to political capital.

1998, public concerned the 88,160 hectares natural *Sabina chinensis* forest because one governmental forestry business-developing unit planned to fell a part of them in Chi-Lan Mountain. Forestry Department claimed that the best way to manage forest is to fell it, reforest it and make full use of its economic value. Environment protecting groups united for against this plan, and appeal for reserve the forest. Two camps stood opposite each other and it lead to uncertainty for dealing with the forest in Chi-Lan Mountain. After strongly criticizing the forest policy, environment-protecting groups began to ask for setting a national park to reserve the *Sabina chinensis* forest in it (Lin, 2001:95).

December 1990, environment-protecting groups held a demonstration to ask for the national park. Exceeding their expectations, a “weak noise” appeared in the contingents of marchers (Lin, 2002:3). A group of marchers composed by residents claimed the Chi-Lan Mountain is the traditional territory of Atayal people, and so-called Chi-Lan Mountain is actually the Maqau Mountain in Atayal language. Further more, they claimed the Maqau Mountain was the hunting field belonged to their Gaga in the history. They protested against the setting of national park, because it will limit their cultural activities. The “noise” impacted justifiability of this demonstration and brought new variable to it. August 2000, government published its plan about the national park. However, the planned area is far below the demand of environment protecting groups. Environment protecting groups turned to seek for support from Atayal residents and demand more negotiation with government. During the process they interacted with Atayal people, a new pattern of national park was put forward. Atayal residents asked for a co-managing mechanism. Public department accepted this pattern after negotiation. Government invited presents of Atayal residents, environment protecting groups, government officers, legislators and scholars to compost a consulting committee of “Maqau” national park.

By now, this committee and its planning work are still continuing. January 2002, pastor of Cinsibu community was elected assemblyman of Gen Shi Township; it made Cinsibu community can involve in the planning procedure with more right to speak.

In this case, the combination of internal institution and churchly organization mobilized community successfully. After participating civil action and linking other social groups, the social capitals were transferred to political capitals. These political capitals enable Cinsibu to influence the public policy making, then seek for its interest. According to table illustrated by Birner & Wittmer, the social capitals and the political capitals formed owned by Cinsibu in the issue of national park can be discriminated as:

In the aspect of individual agency, community members, intensification of internal institution and production of time-space knowledge make community society can be mobilized to purchase specific goal. In the aspect of public, community organization, internal institution and specific time-space knowledge formed the cooperative network. By ways of linking with Elite groups, amplifying influence with election and using time-space knowledge strategically, Cinsibu successfully affected the structural variables in political system. They seem to be more close to the goal of governing their forest legitimately. To review the process Cinsibu succeed in the issue of National Forest Park, the role church plays in community mobilization is a key point. Further more, the combination between the ideal of gaga and church organization is the reason church can play such a role successfully.

Table 6: social capitals and political capitals owned by Cinsibu

Types of capital	In the aspect of public (Structural capital)	In aspect of individual agency (Infra capital)
Social capitals	Organization Internal institution Time-space knowledge	Members in organization Intensification of internal institution Production of time-space knowledge
Political capitals	Elite groups Election institution Public opinion	Link with Elite groups Participate election Use time-space knowledge

(Source: refer to Birner & Wittmer 2000:20)

The accumulation of institutional capitals: Case in “Maliqwan” river fish band protecting action

Yiogohon Village, traditionally named “Liliyon” in Atayal language, means “river bank”. It located in southeast part of Gen-Shi Township, 800-1360 meters above sea level. *Mliqwan* River, which was named after the lineage lives here, runs through this village. Several Mliqwan lineage communities composed this village; its total population is about 1,200.

Mliqwan is the headstream of Shi-Men Reservoir, which is a major water supplier to north Taiwan. In earlier years, fishing is the important production second to hunting and gathering. Except for food, some time it was held for entertainment. Every community owned its fishing field clearly. Fishing activities can be discriminated to personal activity and collective activity. Individuals can catch fish with bamboo arrow or fishing cage. The fish caught will be distributed to their relatives and neighbors. Group fishing was held in every summer. People narcotize fish with poisonous rattan, then pick the fish in their own fishing field. The fish, which were narcotized but not picked, will regain consciousness and keep alive. It kept the fish band sustainable in this river. However, since the tourists come more and more often, some tourists began to catch fish with eclectic instrument and cyanide, fish band here went exhausted. Ecological crisis in river was raised.

“We began to cross the boundary and fish in the rivers of other townships. However, it caused conflicts very often.” Said an interviewees, “ They (villagers in other townships) question us if we don’t have our won river, and it really embarrassed us”. Since 1999, villagers started to draft a “Mliqwan river protecting agreement”, and began to protect their river in action. The fish band protecting action cross several communities. Even though it extends a wide area, villagers overcame the costs for communication successfully. Presents of churches, schoolteachers, and neighborhoods from different communities were invited to join meetings, and then composed the managing committee to discuss and confirm the agreement.

All these presents hold a traditional ceremony for the beginning of the committee. They killed a sacrificial pig and swore after drinking a toast. According to interviewees, this ceremony is a part of Gaga . “Utux will punish those who rebel the promise”. More than 300 villagers signed on the agreement after the ceremony. In the agreement, they claimed: “all the resources in Mliqwan River belong to all the villagers. In order to manage them effectively, to make us a better living environment and to bring our next generation a better future, I am willing to entrust my managing right to river managing committee and join the works for protecting the river.” Thought most of the members need to work in the farm, they convened discussions at night and patrol the river when they can rest from farming.

Wasn’t there any villager try to rebel the rule of protecting the fish? “ Yes, there was”, said a local leader, “ One guy rebelled the rule and stole fish from the river, he died in accident months later. After that, another guy who was with him came to repent to me, and swore that he would never steal fish again”. Most villagers believe the accident was a punishment from Utux.

January 2001, villagers began to hold training courses every month. The courses include “how to explain the relationship between us and animal, plant here to outsider”, “how to use observing instruments”, “the successful fish band protecting experience in Danayiku”. Some experts from other places were invited to lecture for villagers. Meanwhile, Old residents were arranged to tell about history of *Mliqwan* River and relevant knowledge in different churches and elementary schools.

Because communities in this village are all belong to the same lineage, people can cooperate with more trust. Almost every resident in one community have some

relatives in others. On the other hand, because they initiated the action spontaneously, they knew more complete specific time-space information well. The composition of committee can prove that. The agreement clearly regulated villagers can apply for fishing in the need of cultural ceremonies, church activities and weddings. It also regulated villagers should apply through schools, churches or neighborhoods. While an interviewee was asked the question about how to make villagers follow the agreement, he answered “in our place, feeling walks in front of law, it will be sham if one break his promise”. “*yiaqaih la, ungat gaga* (Atayal language, means that will be bad and impolite) ” another interviewee added after him.

Because the committee can understand the interactions within villagers, they constructed a wide cooperation on the basis of minor units. Every unit can bring into full play the constraint to its members. In the same time, with the cross communities meetings, different units can exchange information in the committee.

During the period *Yiogohon* villagers make effort to manage their river resource, they had faced two problems. The first problem is that they were refused while they tried to get subsidy from township government. The reason township government rejected them was there are no enough budgets. The second problem, while patrollers tried to stop those tourists who are fishing in the river, there was no any governmental regulation to support their position. Some time, tourists insisted that villagers have no right to stop them from fishing in a public river stubbornly.

Despite no subsidy from government, villagers still kept patrolling their river to demonstrate their determination. With the network composed by different social units such as school, church and neighborhood, their effort got response soon. A township government officer who is from Mliqwan lineage exercised his authority to help this action. Meetings were held in the township government to discussing the possibility for fish band protecting. Participants invited to attend the meeting increased step by step. In the final meeting, amount of participants is 150 people, which include villagers from *Yiogohon*. The officer started to make a program for the fish band protecting budget in next year.

Since the action was supported by local government, villagers began to deal with their second problem. They revealed the difficulty of lacking legitimate position through village present in the township assembly. Township government reflected this problem and the volunteer patrolling behavior to county government. Gen-Shi Township was determined as a fish reserved region, and prohibit people from fishing

in it, according to the central Fishing Law. Additionally, township government was authorized to make relevant managing regulations. Six months later, township assembly past the regulations, and villagers earned the legitimate position to protect their river.

During the period Yiogohon villagers gradually gained success in the fish band protecting action, people from other villages in the same township began to follow this example. The Kalapai Village follow their steps made an agreement within villagers and sent their program to township government. Meanwhile, county government began to agree for funding the river fish band protecting budget in Gen-Shi Township. One month after the official document of county government arrived, Water Resources Bureau of central government also sent a document to township government to and expressed that they will offer some subsidy.

Nowadays, every village have organized their team and patrolled their river section. Fish protecting have been a common practice in this township. In the last stage of authors' filed work, a fish band breeding plan submitted by a community named Tabaho was rejected by county government with the reason of budget again. However, as an interviewee in Tabaho said "no mater there is budget or not, we should still keep going. To protect the river is duty of us."

This case appeals the effect of institution learning and the phenomenon of institutional capital accumulation. Along with the success of villagers in Yiogoho, other villagers raised the will to protect their river. In the same time, the example of Yiogoho decreased the cost for them to grope in the dark. When Yiogoho constructed their cooperative organization with different minor units, they also build a wide network. To the villagers, this network makes people keep their promise. To the external world, it makes this action can gained help. Further more, these helps accumulated their capitals to seek legislate position and financial support. Every little success accumulated the capital for next step. Beside, the township government also discharge it functions in resources distribution and information coordination. With out transferring the information about the will of villagers by local political system, they can not solve the problem of lacking legislate position so soon.

The derivation of *Gaga* and its effects to institutional choice

Before modern state came, traditional Atayal society had operated with common rules, which were based on *Gaga* institution. While state came with the character of highly concentrated violence potential and exercised its power, the production of rules became different. A relative self-enclosed Atayal society has began to face the higher, external regulations. The experience of Atayal reveals the interactions between external and internal institutions. External institution influences the formation of internal institution. For example, the composed privatization tenure institution changed the acknowledgement to land of Atayal people. In contrast, it is also possible for internal institution to change external one. The cases in *Cinsibu* and *Yiogohon* proved it. Obviously, the possibility depends on the distribution of violence potential, or, the decentralization of power.

The concept that one can own his private land and sell it was formed under the compelling factor (the implement of private institution) and the incentive factor (the interest in market trade). However, to the common pool properties, which can not be privatized, Atayal people still keep or try to govern with cooperative rules. In spite of the fact that these rules were not operated in traditional *Gaga* organization, they are

relevant to the Meta rule of it. Kasper & Streit (1998:478) pointed out: in many situations, lower norms were adjusted, but they still existed in a higher rule and framework of value. The transition of institution forms a path under the lead of framework of value. Such a higher rule and framework of value was defined as Meta rule. The Meta rule partly decides that if the challenge to internal institution in operation can be accepted by most of people in the society.

Being rules, *Gaga* possessed the basic character that “members of same group bearing same responsibility”. Nowadays, the word *Gaga* was merely used to refer to a specific group, but still used to refer to polite and regulation. It means that the character mentioned above was internalized as a value. In the cases of *Cinsibu* and *Yiogohon*, the internalized, personal preference does exist. It was realized in the highly participation of collective actions and the internal constraints. According to the perspective of Kasper & Streit, the cooperation in both cases was formed along the derived path under the lead of the two basic characters of *Gaga*.

The original functions such as co-sacrifice, co-production and co-distribution of traditional *Gaga* organization faded out along with the influence of state power. However, even though it no longer exists, new rules were built on the commons with new organizations under the lead of its Mata rule. In the cases of *Cinsibu* and *Mliqwan*, the concept of bearing same responsibility was combined with new objects: church and River managing committee. It was developed into the acknowledgement to right of forest, the morality to protect the river, and the formal institutions like “*Cinsibu* community pledge” and “*Mliqwan* River protecting agreement” after interacting with external institutions. Nowadays, the meaning of “*Gaga*” was shifted, but the symbol of “*Gaga*” intensifies the guilty of people if they disobey the principle of bearing same responsibility.

Table7: the comparison of compositions between traditional *Gaga* and two cases

Compositions of institution			The norm Ostrom refer to	Traditional gaga	Case in <i>Cinsibu</i>	Case in <i>Mliqwan</i>
Internal institution	Informal	Conventions				
		Internalized rules	Internal norm	Bearing same responsibility	Bearing same responsibility	Bearing same responsibility
		Customs and manners	Shared norm		Acknowledgement to the right of forest.	Morality to protect the river
	Formal	Formalized rules		Properties Types & properties acquisition	Community forest pledge	River protecting agreement

External institution	Formal				Forest law Reserved-land policy	Fishing law Reserved-land policy
Organization				Kin groups	From church to community association	River managing committee include minor units

Considering the success of these formal internal institutions (community forest pledge and river protecting agreement) as the result of rational choice with the institutional choice framework illustrated by Ostrom, we can describe that the internal norm (Bearing same responsibility) derived from the Meta rule of Gaga and the information of share norm (acknowledgement to the right of forest, morality to protect the river) made villagers tend to follow the support them.

Furthermore, the internal institutions were not formed in a vacuum but a process interacted with external factors. The formal internal institutions can never work along. Success of the pledge and agreement should partly attribute to the CPRs characters of forest and fish band. Because of the CPRs characters, external institutions can hardly privatize them. It make villagers can try to manage them with their own ways. In the same time, the initiative effort of human agency and the decentralization of political system made villagers can overcome the costs to implement their formal internal institutions.

New challenges

Even though both the cases successfully managed their resource through collective actions, new challenges came consequently. March 2003, a conflict between *Maliqwan* River Managing Committee and local government officers was caused. The recovering and increasing fish band made the village more famous. The committee made further plan to develop *Yiogohon* Village. In the first step, they districted the river to several sections just as traditional way. After that, different sections were opened to foreign fishers in turn and the fishers were asked to pay the payment to the committee. Under the proposal of the committee, the payment collected can be used in community actives and even used to hire jobless villagers for cleaning the rubbish river. However, soon after the action began, local government officers came to the committee and prohibited their action. According to the law, committee has no right to ask for payment from foreign fishers. The prohibition frustrated villagers a lot. By the time this article was done, dispute is still contineuted.

One the other hand, even though *Cinsibu* residents tended to cooperate with central government for constructing a national forest park that government and indigenious

communities can “co-manage”. Opposite opinion came fiery from some other indigenous communities nearing the location the park supposed to be set in. These communities accused those who agree with setting the park are betraying whole the *Atayal* ethnic group. In their view, “co-manage” is just a trick of government to set one more national park and give more restrictions to the actives in the area. Actually, according to the historical experience, not only the national parks district indigenes directly, the tourist business came along with it also gave further impacts to many indigenous communities. Reserved lands with potentially commercial interest were usually purchased by non-indigenous business groups with the illegal way described earlier in this article. An example happened recently can give further description of the sense of crisis in indigenous communities. An indigenous community located in a national park named Yiu-San National Park kept on protesting to government for years. The community kept on demanding government to modify the boundary of the park and exclude the community from it. However, just after the government agreed to the proposal in last year, the community members changed their minds. They turned to ask for staying in the boundary of the national park. So many years after the park was set, the region nearing the park has become a complete tourist resort with greedy foreign business men waiting to purchase any new land released in further step.

A national park with “co-managing” mechanism indeed provides a positive image to the future of indigenous communities. However, risks also exist. Community like *Cinsibu* may be confident to overcome it, but it can not be ignored that not all the communities nearing the location Maqau National Park supposed to be located in have possessed the same conditions.

Two different challenges came to the two cases both reminded us the insufficiency current land tenure institution. Even though government tried to protect reserved land from being sold out, the prohibition from central government can not completely stop the individual behaviors to seek their interest within market activities. The decreasing of fish band in Maliqwan River before *Yiogohon* Villagers began their collective action proved that state power can not perfectly manage the resource as well. Since the committee organized by villagers can do a better job, villagers should be relatively entrusted to deal with the income from foreign fishers and get more motivation to deal with further development issue. Hence, being the Fundamental external institution, the land tenure institution should be modified to allow community owning specific land and land resources. In this way, the external institution can provide intensives and possibility for community to deal with the public affairs within their living

environment. Those communities abominate the interference of state power and fear the compact of market mechanism can maybe get new inspiration from it. According to the experiences of the two cases in this article, the traditional *Gaga* can be ingenious applied to adapt modern world. The communities, who can successfully interpret *Gaga*, can therefore decrease the cost of community mobilization. To allow community owning specific land and land resources can also give more chance for community members to interpret what their *Gaga* is nowadays.

Conclusion

As the analysis in the cases has shown, not only the traditional *Atayal* society but also the modern *Atayal* communities can govern the common in their living environment with cooperative ways. It should be doubtless that modern *Atayal* people possess the ability to manage their resources with the rules developed by their-selves. These cases prove two advantages of CPRs self-governing to decrease transaction cost: First, because the rules for cooperation were formed inside local communities, people can gain time-space information more completely. The formalized rules correspond to the internal norm derived with Mata rule of culture can decrease the transaction cost for supervising and executing. Second, CPRs self-governing institution can be imitated in local network and expanded, it decreases the transaction cost for institution supplying.

Since the CPRs self-governing way is practicable in indigenes communities, and it also performed good effects in protecting common resources from exhausted by vast and undeterminable outsiders, the relevant external institutions should be adjusted to empower indigenes communities to operate it. The reform of current dualistic division

of nationalized/privatized in reserved land is important and necessary. If the property right of CPR system can belong to community, the transaction cost of institution innovation and executing will be decrease. It will also protect the ability of communities to develop the proper internal institutions. Furthermore, it will not only prevent certain lands from lapse but also increase the possibility for communities to internalize external interest with their specific social capital.

All agencies will try to seek their best interest within limited resources. But the structural disadvantage seems make some of them keep on being losers. The characters of material resources destine that they cannot be explored unlimited, however, institutions can be progressed to make higher value and diminish conflicts under ceaseless efforts of agencies. As Ostrom (1990:23) addressed, all the institutions can be considered as games in a broad sense. If we can change the items and of sequence choice, provide new information, new punishment and incentive, then the foregone conclusion can possibly be changed.

References

1. Dawes, R. M. (1973), The Commons Dilemma Game: An N-Person Mixed-Motive Motive Game with a Dominating Strategy for Defection, ORI Research Bulletin 13:1-12.
2. Dawes, R. M. (1975), Formal Models of Dilemmas in Social Decision Making, In Human Judgment and Decision Processes: Formal and Mathematical Approaches eds., M. F. Kaplan and Schwartz, pp.87-108, New York: Academic Press.
3. Dunn, William N. (1981), Public Policy Analysis: An Introduction Englewood Cliffs, N.J.: Prentice-Hall.
4. Fairley , John E. (1995), Majority-Minority Relations , Upper Saddle River : Prentice Hall
5. Hardin, G. (1968), The Tragedy of the Commons. Science 162:1243-8.
6. Haiyami, Yujiro (1988) "Community , Market , and State", in Carl K. Eicher & John M. Staatz, International Agriculture Development, London : Johns Hopkins Press
7. Kasper, Wolfgang; Streit Manfred E. (1998) " Institutional economics: social order and public policy" Cheltenham, Glos, U.K.: Northampton, Mass.
8. Malinowski, Bronislaw (1944) ,A Scientific Theory of Culture and Other Essays , Chapel Hill, NC: University of North Carolina Press
9. Natcher, David C. (2001) , Land Use Research and The Duty to Consult ,Land Use Policy ,18 : 113-122

10. North, D.C. (1981), *Structure and Change in Economic History*. New York : W.W. Norton.
11. O'Connor, J. (1994), "Is Sustainable Capitalism Possible?" In *Is Capitalism Sustainable? -- Political Economy and the Politics of Ecology*. Ed. M. O'connor, New York: Guilford.
12. Olson, M. (1965), *The Logic of Collective Action, Public Goods and the Theory of Groups*, Cambridge, Mass.: Harvard University Press.
13. Ostrom, E. (1990), *Governing the Commons-the evolution of institutions for collective action*, New York: Cambridge University Press.
14. Ostrom, E. (1993), *Institutional incentives and sustainable development: infrastructure policies in perspective*, Boulder, Colo.: Westview Press..
15. Ostrom, Elinor, Roy Gardner, and James Walker (1994), *Rules, Games, and Common-Pool Resources*, University of Michigan Press, Ann Arbor.
16. Perry, Richard J. (1996) , *From Time Immemorial : Indegenous People and State System* , Austin : University of Texas Press
17. Radcliffe-Brown, A.R. ,Edited by M.N.Srinivas (1958) ,*Method In Social Anthropology* ,Chicago : The University of Chicago Press
18. Richmond, Anthony H.(1988),*Immigration and Ethnic Conflict*,New York : St. Martin's Press
19. Tang, Ching-Ping (2000) , "Negotiated Autonomy: Transforming Self-Governing Institutions for Local Common-Pool Resources in Two Tribal Villages in Taiwan" , Presented at the 8th Biennial Conference of the International Association for the Study of Common Property
- 20.** Wittmer, Heidi (2000) , "Converting Social Capital into Political Capital: How do Local Communities Gain Political Influence? A Theoretical Approach and Empirical Evidence from Thailand and Columbia", Presented at the 8th Biennial Conference of the International Association for the Study of Common Property