ORIGINAL ARTICLE

How do swiddeners organize small groups and react to exogenous development?
A case study of the Bahau in East Kalimantan, Indonesia

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ABSTRACT

Although it is said that societies in Southeast Asian countries are loosely structured, every area has its own attributes. In such vastly differing societies, the mode of organizing themselves differs between ethnic groups, as well as geographic location. The objective of this study is to understand how local people respond to exogenous development by focusing on their mode of organizing themselves, through dyadic relationships or individual ties between peoples, groups, and development organizations. One of the Dayak ethnic groups, which can be found in the central region of Borneo, the Bahau, make swiddens along rivers. They call a complex of these swiddens "daleh". The Bahau people organize a reciprocal labor exchange known as pela'do with the people who have swiddens in the same daleh, but recently their method of organizing pela'do has undergone changes. The people have adapted themselves to the introduction of tight development organizations (farming groups), in such a way as to allow for coexistence with customary loose organizations (pela'do).

Key words: Organization, Development, Dayak, Dyadic relationship,Swidden agriculture, Labor exchange system, Farming group

INTRODUCTION

In 1969, the Indonesian government launched goals for an economic development program, the first five years of which were focused on agricultural development, which dispersed aid by means of investment to farming groups (Sa’danoer 1974, Takahashi 2003). Because of this, many development projects in various fields were being promoted drastically. Especially in the central area of Borneo Island, called "Heart of Borneo", where these programs attracted varieties of outsiders such as international NGOs, foreign governments and researchers due to its rich biodiversity. In this region, economic development projects were conducted in consideration of the natural and cultural circumstances.

Given this, we have to reveal how local people build up organizations or groups in order to make those aids effective and sustainable, because aids are often invested through groups that have existed throughout tradition or other organizations that have been more recently introduced by outsiders (Shigetomi 1996). There exists some fear that the aids do not fit with local traditions nor are suitable for the local people when outsiders introduced their way of thinking and their common knowledge.

The local traditions and thought processes - how they think and act - differs between ethnic groups as well as geographic location. Embree (1969) described Thai society as loose when compared to that of Japan, the United States, and Europe. The characteristics of loose societies are individualistic behavior and an absence of regularity, discipline, and regimentation. However, tight societies have more clearly defined structure as well as a series of rights and obligations for its members (Embree 1969). Picker (1969) also explained that bilateral descent observed in Thailand strongly correlated with this looseness. Informal connections and relations are usually dominant in societies of bilateral descent, even economic relation between individuals and families does not persist long term, and there are few permanent working systems. Picker (1969: 63) noted "also the voluntary' quality of continuing participation in those functionally important groups that do exist, namely, the monkhood the family, and the kindred". Kuchiba (1975) supports Picker's insistence that loose societies and bilateral descent are strongly connected. He performed research in Thailand, the Philippines, peninsular Malaysia, Malacca and central Java; but from the analysis of relationships with Malay bilateral descent, he found there were various differences in the societies of Southeast Asia in terms of leadership, hierarchy, bilateral descent and much
more, even in similarly loose societies. Maeda (1989:90) also mentioned that there are words that describe close relatives, far relatives, and sometimes not in the same manner as other more closely-knit culture’s languages. For example, people in Southeast Asian countries such as Thailand, Vietnam, Myanmar as well as Malay language regions use words such as “aunt” and “uncle” without strict rules associated with their definitions observed in Japan or China. The people in Borneo or Kalimantan also live in a society in which dubious boundaries between units of a family exist. For example, many people used to live in one large sized longhouse while the interior was separated into distinct families within (Tsugami 1999:29). However, some of the Dayak who live in the central regions of Borneo have been conducting mutual aid flexibly in regards to food and labor resources for a long time as if the entire village was an extension of their own family (Inoue 2004:81). Therefore, it is surely necessary to know the social structure of each local society.

Some studies on organizations or groups in the context of development in Indonesia have been conducted in the Suharto era when agricultural development had been pushed, and specifically around 1979 when local administrative organizations were introduced. For example, studies on the changes or dynamism of administrative organizations and farming groups in rural area of Java (Shimagami 2001, Ito 2006, and Kuroyanagi 2009), and on the role of women in family welfare activity groups or Pembinaan Kesejahteraan Keluarga (PKK) (Hirano 2005) both were conducted.

However, few studies on organization in the context of development had been conducted in the rural areas of Kalimantan, another area that is considered to be a loosely structured society. Ishikawa (1990) reconsidered the concept of ‘kindred’ defined by Freeman (1955, 1960, 1961, 1970), and deepened our understanding of non-unilineal descent societies of the Dayak agricultural people. Tsugami (1988) studied on the working organizations of swidden agriculture, especially labor exchange called pelado in Kayan. From his study, it was observed that Kayanic peoples often don’t care on the intensity of their work or length of the work day, but instead are compensated only for the number of days they work. Those flexible systems are also considered to be loosely structured.

On the other hand, many studies were conducted on traditional groups, local rules, interpersonal relations, family, housing structure and so on in the region (Freeman 1957, Roussau 1977, Inoue 1995, Okushima 2006, King 2016). These studies provided us with foundations to understanding how the Dayak create organizations and groups. For example, Roussau (1977) revealed livelihood, religion, gender distinction in labor, hierarchy, the rule of land clearing, and working systems in swidden agriculture of the Balui Kayan. Freeman (1957) identified the family system of Iban, the cultural roles of their longhouses, land ownership, and household function. He regarded the longhouse as a ‘corporate group’ (Freeman 1957: 18). Tsugami (1999) also focused on the role of the longhouse. He compared the social functions of the Kayanic long house with the Japanese house, and also compared the customs of their respective inhabitants. Related to dyadic relationships and kin, Inoue (1995) also studied the working systems of the Kenyah, and his most significant contribution was to understand the effect of the penetration of the market economy to the Dayak society along the Mahakam River. Okushima (2008) studied the history, lineage, and hierarchical governance of Dayak people who moved from Apo Kayan or highland of central part of Borneo. King (2016) studied how the identity has changed in the development in Sarawak from the perspective of religion, land issuance around a border, urbanization and more.

Near the upper stream of the Mahakam in East Kalimantan, where the Bahau Dayak people reside, development projects had not been introduced because of lack of accessibility. In this article, we try to understand how local people respond to changes in their environments under exogenous development in one of the villages near the upper stream of the Mahakam in East Kalimantan where the investment of aids for development has recently begun. In order to approach this objective, we will focus on the local logic of organizing themselves, which not a stable process.

**DEFINITION AND DATA COLLECTION**

The word ‘organization’ is defined differently in each field of study. In this paper, we define organization as dyadic relationships - relationships where individual people work together for mutual benefit - group, and functionalized organization, adopting Shigetomi’s definition (1996), which is contrary to that used in the field of sociology². It is better for us to take all the manners of ties of these people into account in order to understand local logic of organizing themselves, because a dyadic relationship is a foundation of the social structure in loose societies.

The research was conducted for 340 days intermittently from October 2014 to September 2016 in LT village (114.7°E, 0.9°N) located in the upper stream of the
Mahakam river, which flows across East Kalimantan, Indonesia (Fig. 1). The population of LT village is 488 people and 123 households, but half of the population works or studies outside of the village. Data was collected by using participant observation and semi-structured interview of the entirety of the accessible villagers. Their ethnicity was a majority Bahau Dayak, so data collection was conducted by utilizing Indonesian and Bahau language. LT village is an appropriate study site for understanding how local people connect in different types of organizations and how they adapt it under environmental change by exogenous development, and this is because LT village is positioned in the Heart of Borneo, and some aids for eco-friendly development have been invested by WWF and the local government, such as agricultural development through organic cacao, clean energy, and ecotourism. On the other hand, loose and traditional organizations still remain in the LT village.

Firstly, we focus on dyadic relationships - especially food giving activities between two people - which is the most common dyadic relationship in the village. Data was collected for 54 days, from the 3rd January to the 25th of February 2016. Six types of households were selected to avoid being similar in membership, livelihood and house location. The daily food giving activities were noted everyday by one of the household members, and the study author checked it every two to three days. Six households observed in food giving activities were also alphabetized in order from A to F (Fig. 1). The distance index increases as the time it takes to reach a giving partner’s home increases. For example, if the home of a giving partner is on the same line, the index will increase from 0 to 1, if it is necessary to turn corner once to a partner’s house, the index will increase to 2, and so on. The road across the LT settlement is about 100 m, with a border between block 2 and 3. So if it is necessary to deliver foods from the beginning of block 2 to the end of block 3, the index will be 2. If bridges or an open space is crossed, the factor also increases 1 index point.

Secondly, focusing on working groups in swidden agriculture, we try to understand how and for what villagers create work groups. The data was collected from June 2015 (land clearing season) to March 2016 (cultivation season).

Thirdly, focusing on organizations introduced in order to foster development (development organizations henceforth) especially farming groups, we revealed connecting factors and disbandment factors. Interviews were conducted with WWF staff members, government officers, and villagers from October 2014 to September 2016 intermittently. Participant observation of the group activity was also conducted in LT village. Finally, analyzing the relevance of these three different types of organization and reveal how local people responded to the development (Fig. 2).

Each swidden is owned by a dyadic unit of a married couple. We gave numbers to all swiddens with the initials of the tributaries they were attached to in order to denote their location on a map.
RESULT

Dyadic relationship - Food Giving Activities

Leftover protein sources - such like fish and meat - were given or sold. It is clear that protein sources were important both for sustaining dyadic relationships through giving activities and also for the household economy (Table 1). Table 1 shows households A, B, C have enough protein sources to sell them. On the other hand, households D, E, F rarely or don’t sell protein sources but give the remainders to someone.

Household A drew income from protein sources of 3,065,000 Indonesian rupiah (Rp. henceforth), and it made up 59 percent of all income including sales of juice, sweets and income from wage labor of 2,000,000 Rp. per month. Household B drew income from protein sources of 5,835,000 Rp. and it made up for 77 percent of all income including sales of Siri leaves, village managerial work fees of 1,500,00 Rp. per month. Household C drew income from protein sources of 3,470,000 Rp. It is remarkable that household C drew more income from protein sources than household A, which catches protein sources most often. In addition, household C drew income from cacao as well. During our research, household C sold 50 kg of cacao harvested over two months and earned 1,250,000 Rp. In LT village, aside from C, other households also began to plant cacao in increasing amounts every year. Therefore, protein is still main income for household A and C but cacao also an indispensable income source.

Then what is the role of protein sources in food giving activities? In Table 2, household A gave protein sources 36 times (valued at 1,886,000 Rp.) and gave non-protein food sources 62 times (valued at 459,000 Rp.). Household B gave

| Household | Fish Catch frequency (times) | Meat Catch frequency (times) |
|-----------|-----------------------------|-----------------------------|
|           | Self consumption | Give | Sell | Self consumption | Give | Sell |
| A         | 13               | 7 | 6 | 19               | 12 | 10 |
|           | (8.5)            | (54) | (7) | (56*)           | (53) |     |
| B         | 11               | 11 | 14 |
|           | (1)             | (24) | (214.5*) | (180) |     |
| C         | 19               | 16 | 8 | 9               | 5 | 3 |
|           |                 | (2.5) | (57) | (3) | (68) |     |
| D         | 4               | 2 |
|           |                 | (1.5) | (0) | (0) |     |     |
| E         | 26               | 3 |
|           |                 | (3) | (0) | (0) | (0) |     |
| F         | 7               | 2 |
|           |                 | (3) | (1) | (4) | (39) |     |

The numbers show frequency of catching fish and meat. The numbers in the parentheses shows total amount of fish or meat given or sold in kg. *: The amount of meat given by household A and B does not include non-clear cases (two child wild boars and other two cases).
protein sources 32 times (valued at 5,122,500 Rp.) and gave non-protein food sources 20 times (valued at 175,000 Rp.). Household A was located on a property with fruit trees, so household A’s food giving activities were high in fruits in comparison to other households, so many villagers came to request fruits from them. Household B, however, held protein sources as their most important item in giving activities compared to other items as seen in Table 2. It is also worth noting that the value of the protein given very closely matched the income of the giver. From these results, it can be evinced that protein sources important to the process of creating and maintaining dyadic relationships.

Then, how is the dyadic relationship through food giving activities constructed? The ratio of a household’s giving and receiving correlates closely to the total amount of goods they harvested themselves as shown in Table 3. However, the frequency of giving and receiving in a dyadic relationship does not directly correlate with the strength between households because it fluctuates based on the amounts of food given between a few or many households.

Below, we separate the type of giving activity through all foods and also examine the factors that determined which household would be the recipient.

The meaning of giving activities is quite different whether the activity was conducted independently or requested (akee in Bahau). Here, we call the former giving activity ‘independent giving’, and the latter ‘requested giving’. The percentage of independent giving of household B is 93 (Table 4). In contrast, 67 percent of all giving activity of household C was conducted after being requested. Majority of the giving partners of household B were the elderly and households (T2, B6, MK2, PY2, MT7, and No numbers) that have blood relationship with household B. Household B gave foods in order to help the elderly or repay their past kindnesses shown to them.

While household C puts emphasis on selling rather than giving, there are households that stressed the importance of independent giving. Those households are D, E, and F which seldom acquired enough protein sources to sell. Here we look more in depth at the giving activities of households C and E. Comparing income sources beside foods, household C is wealthier than E thanks to extra income from cacao. Household E also has some income from wage labor (Rp.3,000,000/month), but it is not reliably paid every month. Knowing this, we must ask why doesn’t household C distribute their remaining food stocks even when they acquire enough protein to sell? And why does household E give away what remains of their fish and fruit? (Table 1 and Table 4)

As the Table 3 shows, household C received foods from other households only twice and it may mean people assumed household C possessed enough resources. On the other hand, household E gave and received a balanced amount, as shown in Table 3. Fig. 3 shows details regarding the giving activities of households C and E. From Fig. 3, we can see that household E tries to return the favor whenever someone gives them foods. Even if the return
quality and quantity is not equal, whether they return anything at all is important to them. This may be the reason household E often gave foods independently. In Fig. 3, for example, the first daughter of J4/MT2 (household A) often gave foods to the wife of household E, and the wife of household E also attempted to gift in return. As a result, the dyadic relationship is maintained, or even gradually becoming closer and stronger. In the case of household C, those interactions through food giving activities are very weak.

Below, we will explore factors of the dyadic relationships described above. In the LT village, a bilateral descent society, they recognize family (keluarga) as a horizontal individual connection but also, to a lesser extent vertical kin relation. Here, a border is set according to what they recognize as close relatives’ and far relatives’, and the former is simply called ‘relatives’ while the latter is called ‘non-relatives’. Their recognition of relatives is determined by blood density. They do not allow one to marry any person whose blood density is closer than third cousin. To the villagers, third cousin is still a close relative. In order to establish this border, the kinship index (degree of consanguinity + number of conjugal linkages, Kimura 1992) was used. Adoption relationships are also important for recognition of relatives in LT village. For example, a parent can go to help adopted children seed paddies. When

Table 4. Frequency of independent giving and requested giving

| Object* | Fish  | Meat  | Vegetable | Fruit  | Dish  |
|---------|-------|-------|-----------|--------|-------|
| Frequency (per recipient) | Give | Give | Give | Give | Give | Give | Give | Give | Give | Give | Give | Give | Give |
| A       | 11    | 25    | 10        | 26     | 6     | 12    |      |       |       |       |       |       |       |
|         | 3     | 29    | 4         | 3      | 6     |      |      |       |       |       |       |       |       |
| B       | 2     | 5     | 1         | 0      | 0     | 1     | 2     | 5     | 1     |      |       |       |       |
| C       | 1     | 2     | 3         | 0      | 1     | 0     | 0     | 0     | 3     |      |       |       |       |
| D       | 2     | 0     | 0         | 0      | 0     | 0     | 0     | 0     | 2     | 1     |      |       |       |
| E       | 3     | 0     | 1         | 11     | 3     |      |       |       |       |       |       |       |       |
| F       | 2     | 0     | 0         | 0      | 0     | 1     | 1     | 3     | 0     | 1     | 14    |      |       |

* Does not include ‘Others’ such as like luxury grocery items. The frequency was measured per recipient instead of per household.

Fig. 3. Detail of giving and receiving activities of household C and E.

G: Giving (G) → Receiving (R). The thickness of the arrow related with the frequency. As the frequency increases, the arrow gets thicker. M: meat, Fi: fish, V: vegetable, Fr: fruit, D: dish. **: ’Relatives come from husband’s lineage. ***: ’Relatives outside of the village’ originate from the lineage of the wife. ****: The wife of J3 was given fish for the funeral ceremony of her husband.
adopted parents suffer with food shortage, adopted children give foods voluntarily. After adopted parents have passed away, the relation as siblings between true children and adopted children will be kept. However, adoptive relationships are generally separated from ‘family’ because they don’t share blood.

In Table 5, the frequency of giving to relatives is twice as high as giving to non-relatives. However, people also give and receive from non-relatives. So there must be another factor which promotes giving food activities beside relation. Noting this, we found that the distance between the homes of giving partners was a factor. The frequency of giving and receiving has a relationship that corresponds with the distance index (Fig. 4). As the distance decreases, people tend to give foods more often.

Connecting factors for food giving activities have already been established, but as well as all of the previously established factors, villagers also follow priority for food giving. One woman told us that usually she gave food to neighbors, but did not share with her family unless they ask her for any. In LT village, rice is generally sold and seldom given. Despite this, an interviewee informed us that if someone were to ask for rice, she wouldn’t take monetary compensation, and instead would just give them rice. She explained her reasoning: “If I wouldn’t give them, how could they survive? I would feel pity (masiq’ in Bahau) for them if I don’t give”. Another interviewee explained; "When I go to give something, I won’t take money. If they wanted to buy, then I would sell. But I don’t allow my children to walk around the village to sell anything. Even for family, I won’t give if they possess (who don’t suffer for food shortage)." As these instances demonstrate, distance is more important than relationship, and even if the relative’s house is far, they give foods if they don’t possess resources enough to and come to ask.

Working group in swidden agriculture — Labor exchange

Since pre-colonial times, the Bahau have made swiddens along rivers, and they call the group of swiddens daleh’ (Fig. 5). They distinguish a daleh’ from others by appending the tributary name behind it, (for example, if daleh along Buluuq River, they call “daleh Buluuq”).

In LT villages, people have wide variety of working systems for swidden agriculture (Table 6). Among them, pela’do or labor exchange with approximately 10 persons, is the most often used as a working system between different unit of households followed by nyadui dap, or self-labor, which is conducted by a member of a household (Fig. 6).

Pela’do has been already conducted with a group of swiddens along a daleh. The connection of pela’do can be described as loose because its members do not form
permanent groups across each work term. A member can join or leave a group in each working rotation. When someone moves from one daleh to another daleh, the members of pela’do will change completely. However, as it stands currently, pela’do have been attempting to plant permanent crops. If people don’t move from daleh, the aforementioned total member rotation would not occur.

Looseness of pela’do does not rely on only its member variability, but also its rules. In a pela’do group, there is no specific leader and whether members come to work or not is important - the sentiment that you are willing to help out when you are needed matters more than the time spent or the intensity of the labor. Who specifically does the work is not kept track of, but instead the household the person came from.

Fourteen pela’do groups were observed from June 2015 (land cleaning season) to March 2016 (cultivation season). Seven of them were actively participated in the observation. Pela’do can be categorized into 3 groups according to the geographic character; with same daleh members, with members along a road, and with different daleh members. Next, we are going to reveal how the pela’do group was organized and what the connecting factors were.

**Pela’do with same daleh members**

As mentioned above, pela’do have been conducted along a daleh with swiddens for at least approximately 60 years and nowadays, many of pela’do groups are made

| Bahau | working system | contents |
|-------|----------------|----------|
| nyadui dap | self-labor | Work with a member of household |
| | labor exchange | Two to fifteen people make a temporary work group and work full days for a member, while rotating the work in each member’s swidden |
| pela’do | pusan | Pela’do within two people |
| | paam | Participate two person from each households |
| | dua ujun do | Participate two persons from each households but they bring the members on different days |
| nyuaa/mupaa | employment | The fee will be payed by rice or any other things |
| geri’do | — | Bring pela’do members to someone’s swidden and receive nyuaa for each member |
| mahaap | helping each other without payment | Help his or her relatives or friends without payment |
| | cooperation | Some villagers cooperate to help other villagers who had difficulty or whose swiddening is delayed |
| | helping for upper class people | All villagers help swiddening for chief or leader of a village, secretary, and leader of customary low group |
| ta pa pahaap | daleh member’s cooperation | Help one of the same daleh member’s work |
| ——* | seeding working system | People try to change labors but if impossible, they are not forced to come or change equal labor |

*: They call seeding nugal in Bahau but we distinguish nugal and the word of system of nugal.
along the Buluuq River (Fig. 7). Members invite other villagers to new pela’do groups very casually. Some people whose swiddens are near to one another come to converse in one another’s hut¹ in the farm or house in the village and plan to work together using the pela’do system. Next, those people look for other members who also have swiddens in the same daleh. Members of this pela’do are chosen depending on the proximity of swiddens or friendship built up during the swiddening work. Relation and friendship in the village is not as important as proximity. Friendships of the workers, or friendships between people who often work together, will build up quickly, within a year. Because of how frequently people rotate members in every work term, with there being 5 work terms to a year; cleaning land, burning, seeding, weeding, cultivation; with 4 of these terms (excluding burning) conducted by using system of pela’do. By swiddening with many people in a same daleh, the pela’do have many different membership opportunities, and it allows invited people to flexibly choose to join, not join, or withdraw.

Pela’do with members along a road

Road construction has made it easy to access the deep forest; with the intention of selling harvested cacao and fruits, villagers have started swidden agriculture or planting cacao there since 2014. People who open land along a road gather pela’do members depending on proximity of swiddens in much the same manner as Fig. 7, but in contrast to before, they cross daleh because they have no need to care about rivers (Fig. 8). When people move along the road, they ask relatives or friends in a village to move together. As a result, the pela’do members of this type have several dyadic relationships as connecting factors. When there aren’t enough hands for labor, relatives who have swiddens far away are also invited to join as a member of pela’do. This is because not as many swiddens exist along the roadways when compared to the daleh. So, when we look into the member relationships of roadway pela’do, the connecting factors are generally relations or friendships.

Pela’do with different daleh members

This type of pela’do has existed for a long time. Members of this pela’do go to work from the village instead of from huts near their swiddens, because the participants are nuclear family members who need to take care of their children and feed livestock, or sometimes who have work in the village (Fig. 9). They go to work together with a few boats because they all return to the village after working in a swidden. That’s why they continue to utilize boats and go to their work places together. However, after
Fig. 8. The map of swiddens of *pela* do members (Case 3 in July 2015 by 4 men and Case 4 observed on 13th July 2015 at J4/MT2).

Case 3: *Pela* do of big tree cutting in daleh Meoi and Mavoq along a main road conducted. **Members are underlined:** Husband of MT6 (H henceforth), Second son of MT7, MV1 H and Eldest son of MK2. Case 4: *Pela* do of Cross-cutting in daleh Merang and Meoi along a main road with 7 women. **Members are enclosed:** Wife of B3 (W henceforth), B13 W, B19 W, B4/ MR1 W, J4/ MT2 W, MT3 W and MT4 W.

Fig. 9. The map of swiddens of *pela* do members (Case 5 observed on 15th July 2015 at the swidden of B16 and Case 6 on 8th February 2016 at the swidden of MG2, 10th and 19th February 2016 at MG1). Case 5: *Pela* do of small tree cutting with a man and 4 women members who have swiddens in different dales (observed on 15th July 2015 at the swidden of B16). **Members are underlined:** Daughter of B15, Younger sister of B16, T4 Wife (W henceforth), Second son of MK2. Case 6: *Pela* do of cultivation with 3 men and 2 women (observed on 8th February 2016 at the swidden of MG2, 10th and 19th February 2016 at MG1). **Members are enclosed:** MG1 W, MG2 Husband (H henceforth), Younger brother of B7 (geri do refer the meaning to Table 7), Older brother of PY3 (geri do to younger sister’s swidden), Widow of N1 (geri do to cousin’s swidden). Additional members: MK2 Eldest son, B12 Wife’s mother, MK3 W, T3 W (geri do to mother’s swidden (MK2)), T3 W (geri do to PY3. PY3 W is the best friend with T1 W and at the same time, they are relatives), Second son of MT7, B6 W. The places of *geri* do are shown by arrows.
roadways were constructed, many of people relocated to the roadside or to Buluuq River, nearer to the road, causing a decrease in the number of people who have swiddens along the tributaries of the Mahakam River. Recently, the accessibility of a swidden has become more important for members of this kind of pelado rather than daleh. Thus, as the environment has changed, the method of organizing groups and the way of gathering member also have changed.

Above, we have explained how the system of pelado has changed over time in reaction to changes in the LT village. Next, let’s look into reasons why villagers decide whether or not to join pelado groups. The husband of B3 explained to us the merits of choosing to join a pelado were: first, working with many people decreases the intensity of the work involved, secondly, sharing work experiences with your peers and learning from them, (for example, someone may come to be able to do something they were unable to accomplish before, or a lazy worker may become more disciplined), and thirdly, share life experiences (for example, learning how to subsist off the land, how to work efficiently, and which jobs are best for them as individuals). Women express the merits as: “We feel alone if work by ourselves, but if we work together, the lively mood makes us fun! (by wife of B1, B2, B15, B18, B6 and B19).” Both of men and women said “while working in pelado, meal time and rest time are arranged. If working as individuals, we often forget the time and procrastinate or become late to take a rest and meal. It makes us tired (by wife of T1, B1, B13 and B15 husband)”. The reasons given from people who don’t join the pelado are as follows; “Because of my age, I cannot work during the day time. It is too hot for me. The start time of pelado work is late morning and ending in the early evening. If working by myself, I can start early morning, and it would still cool. If in day time, I can take a rest in a hut. Then, start working after getting less hot until night falls (MG3 husband)”. “Working myself is tiring but the hours are flexible (Jam kerjanya tidak tertentu) (PY3 wife)”. Furthermore, joining pelado is difficult for a married couple having small children, because two of them have to manage a swidden as well as cacao gathering, in addition to a husband hunting and fishing for protein sources.

Many factors are found for gathering pelado members such as whether there is room or time (including whether there are extra labor force in a household or not such like children), proximity, relations, friendship in the village, and friendship in the swiddening work. The various situations for asking for pelado bring many connecting factors. Sometimes they ask for work with the intention of joining the pelado but often they accidentally meet and talk about pelado when they visit one another’s homes with other purposes, or when they pass in front of one another’s huts.

**Development organization for commercial crops — Farming group**

In 1986, the first farming group, MM as alias, was established in LT village for wet-rice cultivation. In 2004, MM began growing rubber crops. In 2006, farming group TJ began growing rubber crops while receiving aid from a logging company. In 2010, other villagers who could not take part in MM made a separate farming group named TL and also began to grow rubber crops. In 2008, members who could not take part in MM started cultivating cacao crops with the aid of the local government, and it kept for approximately a year but ended with discord between members and the group leader. Afterwards, MM began cultivating cacao crops with the aid from the local government, and subsequently the farming group HB started growing cacao as well with the aid from WWF (Table 7). Farming groups in LT village had ended when the group lost a common goal to work towards together and lacked willingness to contribute due to a lack in geographic knitting, absence of a leader, and introducing employment working systems. Given this, what is the logic of how these organizations develop? We are going to be focusing on HB, which still active and could be observed at the time of our study.

Many of HB’s members were young and seldom had chance to receive aid. Before HB, farming group members were gathered from people who were diligent and healthy, but the HB members are intentionally gathered from people who are seldom asked to participate in farming groups. A man who gathered members said “I feel pity for them if they cannot receive aid such as technical training or material aid.”

There are two types of group activities in HB beside meetings or training trips. One is group cooperation called Royong Kelompok (RK henceforth), and small group labor exchange, similar with pelado in swidden agriculture (Fig. 10). RK is organized in a similar fashion to the previous working system in swidden agriculture known as Kerja Bakti (KB henceforth), where all members of the same daleh help one of the members work their swidden (Ta pa pahaap in Bahau) (Table 6). The difference is that the work in RK is for all farming group members, but the work in KB is only for a household who takes part in the day’s work.
In this sense, people who work in RK are forced to work but members of KB are not forced and instead consider going there as "helping." As a result, group regulation has been passed down from WWF so that people come into work. With these regulations in place, people have to pay for their days of absence. However, people familiar with the KB system are most likely to be absent from each activity. Also, leaders have been unable to execute this regulation because they were not comfortable forcing others to pay penalty fees, and felt ashamed that they were unable control them as well.

However, the idea of creating small groups seemed successful. Members easily pass their opinion among the small groups and it makes it easier to fix their schedule by themselves. In the farmer’s busy season for swiddening, or land cleaning season, weeding season and cultivation season, they put priority on swiddening, and keep small group activity on and off as necessary, although this informal dyadic relationship was not found in the small group of HB. Looking at Fig. 11, the members surrounded by dotted lines are mixed with white, black and grey. From this, it can be said that small groups were not made depending on pela’do members in swidden agriculture, but just orderly fashioned groups from river mouth to upper stream for efficiency. The organizing theory is totally different with that of pela’do, which was done so depending on friendship, relation and so on with inside dynamics. They adapt to the farming group for cacao crops but for swidden agriculture, they instead prefer to work flexibly. These working systems and organizations were totally separated so that they can realize their demand as necessary.

There are some people who have no other choice but to secede from HB or be anxious participating in HB even when doesn’t put first priority on these activities. The reasons for not participating in a farming group are as following; being forced to leave from the village by special

| Farming group | Historical flow | Project | Working system |
|---------------|----------------|---------|----------------|
| **MM**        | 1986–2002      | Wet-rice| • Cooperation  |
|               |                |         |   (location survey) |
|               |                |         | • Pela’do in daleh |
|               | 2004 established| Rubber  | • Pela’do       |
|               | 2006 activate  |         | (Land cleaning with all members) |
|               | 2007 decline*  |         | (Planting and weeding with neighbors) |
|               | 2012 broker faded out | | |
|               | 2014–2015**    | Cacao   | • Employment   |
|               |                |         |   (Putting soil into plastic bags) |
|               |                |         | • Cooperation  |
|               |                |         |   (Land cleaning of nursery) |
| **TJ**        | end of 1990 s - early 2000 s | Rubber | Received 10 seedings per household from a logging company |
| **BM**        | 2008 established| Cacao   | • Employment   |
|               | 2008 dissolution|         | (Land cleaning) |
|               |                |         | • Cooperation  |
|               |                |         |   (Vegetable farm) |
| **TL**        | 2010 established| Rubber  | Received seedings from government |
| **HB**        | 2013 established| Cacao   | • Royong Kelompok*** |
|               | 2015 activate on going |         | • Pela’do by small group **** |

Parentheses: Abbreviation. *: MM members maintain rubber by each household after 2007. **: MM members maintain cacao by each household and there were any notable activity but in December 2016, one of the member go to Sulawesi for study of planting cacao. The information gotten in the study tour was going to be shared within MM members. ***: Explained later (Fig. 11). ****: Explained later (Fig. 12). Cooperation is almost same with Royong Kelompok but here it is used separately to differentiate the degree of enforcement.
circumstances because of private reasons among family, already busy with other work and cannot focus on only cacao, want to join but are unable to due to old age, and afraid not to succeed. There are also some who prefer fishing or hunting to the cultivation of cacao. T3 husband told us that "There is no meaning to all villagers doing the same work for their livelihood, it won’t be valued. I do different livelihood, such like hunting and fishing because many others wouldn’t do it". T1 husband also chose hunting rather than planting cacao because he enjoyed hunting. Hunting was his hobby and his opinion didn’t match that of the T3 husband.

Thus, not all of LT villagers want to join to farming groups because they live with various livelihoods and the income of cacao is not as stable yet. Even if they would want to join, it is not as easy and informal as the process for joining a pela`do. Still, some people felt resistance to the tight organization.

DISCUSSION

The organization process in LT village is even more loose than that of Java, which is already considered a loosely structured society. Dyadic relationships are created when married couples separate from their parents’ home and become an independent household. They have to build up trust and affection with the relatives and neighbors by themselves so that they can fit into their society. In the LT village, dyadic relationships have been created out of sympathy or the concept of pity or ‘masi’q’. Villagers don’t make a conscious effort to create organizations or groups, but they give foods or help with work as a means of repayment, show of appreciation, or to relieve indebtedness. Those feelings appear within of their mind. The food giving activity with pity is conducted between neighbors, relatives and the elderly who don’t possess. Tsugami (1989) argues that reciprocity relationships such as giving foods or helping are stock, and people create these relationships strategically. However, the sympathy of pity has less a meaning of stock but much more of appreciation and repayment for indebtedness. Keeping good dyadic relationships consequently increases one’s access to resources (Shigetomi 1996) is not the general principle and primary merit but subsequence merit in LT village.

Dyadic relationships and their reciprocity-mindedness are applied within working groups in swidden agriculture. The working system such as rotating members frequently and moving land every a few years makes the organization loose. As the rules of pela`do are not strict, the villagers can work flexibly. The reason such loose organizations continue is that villagers don’t mind the little gap of labor exchange which is filled by the mentality of ‘help one another’ and an enjoyable time of talking and eating with members. Labor effectiveness is not enough for continuing the organization but recreation time is necessary.

Farming groups in LT village apply the traditional working system used in swidden agriculture, but informal dyadic relationships or group cannot be found in it. Under the purpose of tying dyadic relationships or building up a working group, there is an unspoken mindset of pity. In the old swiddening system of KB also, the mindset of pity is laying under the purpose of helping each other. However, the work group RK formed for conducting group tasks with incentives of material or technical aid given by outsiders. Members are forced to work towards these tasks and there is no sympathy lying under the purpose. LT villagers separate the working systems of swiddening and farming group activities, and as a result, two kinds of organizations, one loose and the other tight were created. Because of this, people can work flexibly according to their own schedule in pela`do or any other existing loose organizations before

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Fig. 11. Pela`do in Buluq River and small group activity of HB. = : Road. ○: Pela`do members (Case1). ●: Pela`do members (Case2). ◇: People who didn’t join pela`do. - - - : Small group. The owned land without any crops are not shown in the map.
CONCLUSION

After accepting organizations developed using unfamiliar processes, the villagers unconsciously introduced tight organizations into coexistence with their pre-existing, customary loose ones. Such coexistence allowed them to adjust themselves by trial and error, in which the villagers regulate themselves as they saw fit without inflexible application of any rules. This case study will surely provide implications to development projects in upper stream of Kalimantan sustainable.

In the upper stream of Mahakam, people have been shifting their livelihood from swiddening to cacao. When the reliance on swiddening wanes and cacao becomes more profitable, the necessity of pela’do in reducing the intensity of labor will no longer exist. Despite this, the ability to flexibly meet the needs of individual scheduling is still important for people who have many sources of income such as fishing, hunting and laboring in the village. In that case, the gradual application of pela’do to cacao farming is one of the adjusting work to the pace of life in the village.

According to the results of this study, the existence of two types of daleh can be expected. The first being where swiddening daleh is accomplished in unfixed intervals, and the other being cacao daleh which is more stable and less flexible over the course of 2 decades where they can harvest the cacao. So, when local governments and NGOs introduce new projects and villagers create new groups, they do better to gather members from stable daleh rather than from the unstable daleh or random people who farm in different daleh.

Because it can be expected that many development organizations beside agriculture, such as aquaculture, livestock industry and ecotourism will be introduced from outsiders, more studies of development organizations of other fields based on this study will become necessary. Furthermore, studies in different areas of the Kalimantan region, or any other areas of Indonesia will likewise be necessary. Then, finally we can formalize the dynamics of the organizational theory of Indonesia and apply it to the development aids as to assist with loosely structured societies.

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NOTES

1 Picker defined the meaning of ‘voluntary’ as the absence of ascriptive or other clear-cut formal bases for participation; the absence of formal sanctions forbidding disengagement; and the freely verbalized feeling on the part of participation.

2 In the sociological definition, the concept of the organization is an ‘organization as a group’. Regarding groups, we can categorize them into three categories depending on the scale from small, middle scale and large scale groups (Susato 1970: 229–230). Small groups are not groups with the fewest members but instead the word of small comes from characteristics of the group. The first important characteristic is the existence of relationships with dignity, second, existence of interactions between members, and finally, existence of individual impressions and perceptions between members (Aoi 1962:4). Inevitably, the number of members remains small. Research on small groups originally came from the discovery of the informal small groups in formal organizations. So the research on the formal organization and informal small groups have been stimulated by one another. Hence, this organization is recognized as one kind of group.

In 2007, 5 households had cacao farms with the total area being 4 ha, and in 2015 30 households had cacao farms with an area of 42.6 ha.

For the location of each swidden, refer to the Fig. 10. T2’s swidden is located north of T1’s swidden in Fig. 10 and PY2’s is located west of PY3’s.

Masiiq has two meanings, one is the feeling of pity which one feels towards people and the other is divine protection. Here, we use the word masiiq with the meaning of pity.

They built longhouses along rivers, but as their population increased, they moved them to other river banks where their swiddens were located. They call a group of swiddens along a river "daleh" (Okushima 2006: 113). It is clear that in the Kutai era, people had already begun to immigrate and made daleh as a farming group (Okushima 2006: 114).

Based on the data collected during an interview with an old man (64 years old), he stated that pela’do has been conducted since he was a child.

People make huts in their farms. They seldom return from
the farm to the village because their swiddens are located far from the village. More recently, some people use huts only to rest or have a meal but don’t sleep there.

9 MG3’s swidden is located west of T1’s swidden in Fig. 10.

10 Usually the local government suggests villagers to make farming groups to invest aid through the groups. The first farming group in 1986 was led by the village chief. He held meetings and discussed farming groups with villagers multiple times until all of them reached an agreement. As a result, almost all of villagers joined the wet-rice project.

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