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THE GIFT OF LAND: IRRIGATION AND SOCIAL STRUCTURE IN
A TOBA BATAK VILLAGE.

University of California, Riverside

Ph.D.

1979

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The Gift of Land:
Irrigation and Social Structure in a Toba Batak Village

A Dissertation submitted in partial satisfaction
of the requirements for the degree of

Doctor of Philosophy

in

Anthropology

by

Richard Paul Lando

December, 1979

Dissertation Committee:

Professor Eugene N. Anderson, Jr., Chairman

Professor Alan R. Beals

Professor David B. Kronenfeld

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1979

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Committee Chairman

University of California, Riverside
December, 1979

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The following work would have been impossible without the generous and continuing support of my parents Mr. and Mrs. Edward M. Lando, to whom with great thanks this work is dedicated.

A Batak proverb states:

Janji urat ni eme tu laklak ni simarlasuna
Adat na denggan na so ra sega, uhum na uli na so ra muba
Pinungka ni ompunta, angka naung matua
Asa manumpak ompunta na Martua Debata
Asa sinur na pinahan, gabe na niula, horasjolma.

The good adat law which cannot be destroyed, the beautiful customs which cannot be changed
Founded by our ancestors, all who achieved wisdom and age.
In order to support our eldest ancestor, God,
That the animlas may increase, the fruits of our agricultural labor succeed, and people may be strong.

During my research on Toba Batak traditional agriculture and social structure I lived for thirteen months in the village of Lintong ni Huta, Pohan, five kilometers west of the market town of Balige. From the villagers I learned the importance of adat or customary law as the institutional basis of Batak society. For them the 'good adat' and the 'beautiful customs' are not cultural ideals but a living tradition which structures their society and personal interaction. The Batak concept of adat ultimately became an integral part of the work which follows. I would like to extend special thanks to the following elders of the village who generously gave of their time and extensive knowledge in interviews.

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plurals, where this would not have been obvious in their original form. This is, admittedly, a clumsy convention but reduces ambiguity.

Finally I would like to thank James Armstrong for suggestions concerning the title of this work, critical reading of some of its chapters, and innumerable games of cribbage which provided welcome breaks during intense periods of work on my dissertation.

ABSTRACT OF THE DISSERTATION

The Gift of Land:
Irrigation and Social Structure in a Toba Batak Village

by
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Doctor of Philosophy, Graduate Program in Anthropology
University of California, Riverside, December, 1979
Professor Eugene N. Anderson, Jr., Chairman

Social control of irrigation has been addressed in the work of Robert and Eva Hunt (1976). Drawing on Wittfogel (1957) and others they presented hypotheses and propositions concerning the social control of canal irrigation. This work considers their propositions and more specific claims of Bennett (1976) that traditional societies lack the capacity for cooperation, social mobilization, financing, and engineering expertise to construct large irrigation works. These authors claim further that such projects are usually imposed by a supra-local political authority and that local communities willingly resign autonomy in order that construction bills and large-scale capital improvements to existing systems are financed by the outside authority. Second, Bennett

(1976) posits an evolution from the "Yemenite" water allocation type, where water rights are independent of land tenure and water is sold by timed allocation, to the "Syrian" type in which land tenure and water rights are bound together and water is proportionally allocated. Increasingly rational control of resources and the need for equitable water allocation produces this institutional progression.

Research on irrigation and agriculture in a Toba Batak village near Lake Toba, North Sumatra reveals an interesting contrary case. The villagers of Lintong ni Huta initiated construction on a major irrigation works in 1868, fifteen years before Dutch Colonial control of the area. The system was constructed entirely with local resources; financing and labor were acquired through traditional modes of cooperation and no outside engineering assistance was obtained. Administration of the system is rooted in Batak customary law, adat. A remarkably similar case of large-scale irrigation construction by a traditional society, the Bontoc of the Luzon highlands, Phillipines provides comparative material (Bacdayan 1974) which supports the main contention of this work: traditional social structures are capable of greatly expanded communal organization for specific tasks without a structural change. The prevailing wisdom concerning the necessity of state participation in irrigation construction needs to be reexamined. Batak irrigation fulfills Wittfogel's (1957) criteria for hydraulic agriculture and irrigation without the development of a managerial state organization.

A culture-specific model based on the Batak concept of adat is developed to explain the construction of the large irrigation system in

the village. Specific historical factors influencing the decision to build the system, the history of village founding, and the small internal irrigation systems in the village are all discussed as background material to the history of the large system, called Silean Banua, from its beginnings to 1971. Social change through time in other spheres of Batak society is discussed in relation to organizational changes in Silean Banua.

The Yemenite/Syrian allocation typology is considered by comparing Batak, Balinese, Northern Thai, and Bontoc irrigation systems. The typology is seen to predict nothing concerning the institutional basis of irrigation in this sample. The contrary argument is presented that the institutional basis of irrigation control in a society will be consonant with other spheres of social organization and appropriate to the culture of the individual society. General propositions concerning irrigation can result from such culture specific explanations.

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Chapter 1

In 1975 I was conducting an interview with a friend about traditional wet-rice agriculture in a small Toba Batak village in central North Sumatra. In the course of the interview I asked about a party of men I had seen working in one of the village irrigation canals, cleaning it out with hoes. I asked if they were employees of the village or of the central government, or a cooperative work party. My friend answered that they were employees of the main irrigation system in the village that irrigated most of its rice land. The structure and history of the irrigation system, and smaller subsidiary systems, in the village became the focus of the interview, and of my field research for some time afterward. I had been aware from census data that rice land in the village called Lintong ni Huta, was particularly productive. Rice yields per hectare in Lintong ni Huta were as much as fifty per cent higher than in immediately neighboring villages. People from the area, and other parts of Lake Toba as well, said that wet-rice land in Lintong ni Huta was some of the best in the area surrounding the lake. They also said that its productivity was in great part due to its secure irrigation.

The main irrigation system in Lintong ni Huta is called Silean Banua, a term in the Toba Batak language which can be glossed as 'the gift of land'. Silean Banua is noteworthy for a number of reasons. It is large in comparison to other Batak irrigation systems for which I have data; the records for the harvest year of 1973-1974 stated that the system irrigated 120 hectares of land and had a levy-paying membership of 206 individuals. It is also not a simple gravity feed system. An eight meter

high irrigation dam diverts water into a trunk canal eight kilometers in length which feeds water into the system at the southwestern corner of the village territory. Silean Banua is of interest also because it was built and is maintained solely by the village of Lintong ni Huta. It is independent of any other irrigation system in the village or neighboring villages. The trunk canal does not supply water to other irrigation systems and the run-off from the last paddies irrigated in the village drains directly into Lake Toba.

The most noteworthy feature of the system of Silean Banua is the history of its origin, construction, and development. The village of Lintong ni Huta was founded approximately 200 years ago in fairly mountainous terrain. The first inhabitants farmed only dry rice. Early in the nineteenth century the small streams that flowed through steep-walled ravines that cross-cut the village were dammed and five small irrigation associations formed which controlled these systems. Each system was controlled and administered by the descendants of the man credited with initiating construction of the system. The amount of land that could be irrigated by these small systems was limited by physical constraints of the terrain and the amount of water in the streams which supplied the systems.

In 1866 or 1867 a council of the elders of the village decided that there was insufficient wet-rice land in the village. Local sources of water could not be tapped to provide sufficient water so a river to the west of the village, higher in the mountains, was surveyed. The elders decided that if it were dammed sufficiently and a long trunk canal dug,

this would provide a large enough flow of water to clear and irrigate new terraced rice land. Construction began in 1868 and continued for fifteen years before water from the diversion dam flowed into the system in the village. At the time there were approximately 330 households in the village and the number has declined steadily over the years, mostly due to outmigration. In 1920 there were approximately 240 households in the village and the official census for 1974-1975 listed 187 households in Lintong ni Huta. The construction was accomplished entirely by cooperative labor from the village population and all financing was by cooperative financing as well. The Dutch colonial government provided no financial assistance nor engineering advice. In fact the first Dutch residency in the Balige area was established in 1883, well after construction on Silean Banua was already under way.

The system was not complete and supplying water to all portions of the village until 1924, over fifty years after it was first planned and construction began. Since that time it has been consistently improved and modified. In the early 1930's the village applied to the colonial Dutch government in Balige, the market town nearest the village, for permission to replace the log diversion dam at the source of the irrigation system with a cement dam, and for financial assistance and advice on the improvement. The log dam that was to be replaced leaked and a neighboring village received some water from off-flow of the dam, which they used for irrigation. The neighboring village complained to the Controleur in the residency office that they would lose their source of water if Lintong ni Huta cemented the dam. The Controleur found in

their favor and forbade the cementing of the dam. The people of Lintong ni Huta raised the money for the cement through cooperative financing and undertook the improvement of the dam in secret. Again the construction of improvements to the dam was accomplished through cooperative labor with the advice of local artisans. The project was a success and subsequently smaller weirs in the system were also replaced with cement ones. Large portions of the trunk canal and major canals within the village territory have been surfaced with cement as well. The charter of the association which administers Silean Banua (Silean Banua 1971:1) states that the total costs to the village for construction and capital improvements from the beginning of construction in 1868 to the year 1939 had reached 120,000 kaleng of padi (app. 1,260,000 kilograms of unhusked rice worth app. US \$263,000 in 1975) all of which was raised by cooperative financing in the village. In the 1950's the traditional administrative structure was threatened by community dissension, and the efficiency of repair and maintenance to the system suffered. In typical Batak fashion, however, a compromise was found in customary law and the administration of Silean Banua became a chartered organization with a democratically elected set of officials. The workings of the organization to the present are firmly rooted in Batak customary law.

The Origin of Silean Banua

The primary question this work will be concerned with is the origin of Silean Banua. It was built from the ground up by a village of approximately 300 households without outside assistance. As we shall see,

authors such as Ishii (1978), Bennett (1976) and Robert and Eva Hunt (1976) state specifically that a village or single community should lack the social and fiscal resources to construct new, large-scale irrigation works. The bulk of this work will be taken up with delineating what factors of Toba Batak social organization allowed a village composed of segments of nine distinct patricians to organize as a cooperative group in this undertaking. In the course of this discussion we shall examine specific historical factors which influenced the decision to build Silean Banua and the history of the small irrigation systems in the village. The question of how Silean Banua came to be gains added interest in view of the theoretical literature which states it ought not to have been built. We shall examine briefly the theoretical literature on canal irrigation which deals specifically with the question of new construction.

No work dealing with the question of social control of irrigation can avoid reference to the theories concerning hydraulic states and Oriental despotism of Karl Wittfogel (1957). The Toba Batak, as a society, do not fit comfortably into comparison with the other societies discussed in his work. They had no form of state organization, much less a hydraulic state, and their priest-king, the Singamangaraja, was not an oriental despot. Batak society was primarily kin-based. The Batak have a segmentary lineage system and the largest effective territorial unit is called by Vergouwen (1964:30) the tribal group; a large genealogical complex composed of several related patricians (see chapter three for a more complete discussion). Lance Castles (1975:75)

has written a historical work on the lack of state formation in the Toba highlands and has commented insightfully on this point:

There seems to be no geographical reason why the Batak valleys and plateaus with their extensive ricefields should not have supported states of considerable power.

He makes two points which follow this statement. The first is that viewed internally "Batak society did not need a state". The question of "need" aside, Batak social structure and customary law were effective in organizing society. It is one of the primary assertions of this work that Batak social organization had the capacity to allow people to organize and cooperate on a large scale under certain circumstances; for mutual defense or, for the case in hand, the construction of a large-scale irrigation works. This was accomplished without leaders with coercive powers or a state-level society. The managing board of a Batak irrigation organization lacks coercive powers and jural sanctions to force the participation of its members in maintenance tasks in the system. Castle's second point is that until the nineteenth century none of the neighboring peoples ever tried to conquer the Batak heart-land. The period of social disruption following a conquest of Toba by a fanatical Moslem sect called the Padris in 1825 was significant in influencing the decision to build Silean Banua. These matters will be considered in more detail in chapter four. The point remains that the Batak as a society have little relevance for the theories of Wittfogel. The problem of Silean Banua's existence also, still needs to be explained.

One point raised early in Wittfogel's work (1957:18) is important

to the discussion at hand. Wittfogel posits "hydroagriculture" as an earlier and lesser form of agriculture with irrigation, before the development of "hydraulic agriculture". It is practitioners of the latter who would be expected to be capable of building a large, artificial irrigation works:

Strictly local tasks of digging, damming, and water distribution can be performed by a single husbandman, a single family, or a small group of neighbors, and in this case no far-reaching organizational steps are necessary. Hydroagriculture, farming based on small-scale irrigation, increases the food supply, but it does not involve the patterns of organizational and social control that characterize hydraulic agriculture and Oriental despotism...If irrigation farming depends on the effective handling of a major supply of water, the distinctive quality of water--its tendency to gather in bulk--becomes institutionally decisive. A large quantity of water can be channeled and kept within bounds only by the use of mass labor; and this mass labor must be coordinated, disciplined, and led. Thus a number of farmers eager to conquer arid lowlands and plains are forced to invoke organizational devices which--on the basis of premachine technology--offer the one chance of success; they must work in cooperation with their fellows and subordinate themselves to a directing authority. (Italics supplied)

There are several points in the above quote from Wittfogel, some of which are echoed by later authors, which are important to the present discussion. The first is that of scale. If Silean Banua is "small-scale"--hydroagricultural--the fact that it was constructed with the resources of a single village would be unexceptional. The second point is that if a group of farmers wants to succeed in the construction of irrigation works they must subordinate themselves to a directing authority. Data concerning new construction are generally lacking, but this seems to hold true for most Southeast Asian societies that farm wet-rice. However, Silean Banua was built by the villagers on the basis of mutual assistance and cooperation, without subordination to a directing

authority. We shall return to this point in greater detail later in this chapter. It must first be established if Batak agriculture and irrigation are "hydraulic" rather than "hydroagricultural" and if the physical system of Silean Banua can be considered "large-scale". Wittfogel offers no ordinal measurement of scale to differentiate the large from the small; number of acres or hectares irrigated, the size of the population served by and participating in the maintenance of the irrigation system, etc. He (1957:22) does give three characteristics of society and agriculture which he describes as "paramount" in identifying a hydraulic economy. These offer some clue on whether the irrigation works of Silean Banua and the agriculture of the village are "hydraulic" or not.

Hydraulic agriculture involved (1) "a specific kind of division of labor", (2) intensified agriculture, and (3) involves cooperation on a large scale. The construction of Silean Banua fulfills two of these requirements easily. We have already noted the scale of cooperation necessary to build Silean Banua, in terms of labor and financing. Certainly the transition from dry rice to irrigated rice culture made possible by water from the system represented an intensification of agriculture as well. The third characteristic is problematic. Wittfogel (1957:23) notes that there are labor requirements for irrigation agriculture, separate from actual agricultural tasks; ditching, damming, watering, that are not present in rainfall agriculture. These preparatory operations, as he calls them, are special conditions of irrigation agriculture and in large-scale water management require a special

division of labor at a communal, territorial, or national level. Such a work pattern is absent in hydroagriculture despite the fact that hydroagriculture may involve a high intensity of cultivation in irrigated fields:

Wherever, in pre-industrial civilizations, man gathered, stored, and conducted water on a large scale, we find the conspicuous division between preparatory (feeding) and ultimate labor characteristic of all hydraulic agriculture.

It is unclear whether Wittfogel is including the concept of corvee obligations to the irrigation works in this description or not. The commonest organizational basis for irrigation systems in Southeast Asia is that of labor. A farmer owes the organization which controls the system that irrigates his paddies a certain number of days of labor, and frequently prescribed duties as well. Wittfogel subsumes this particular kind of labor under the heading of "Cooperation" (1957:25):

When a hydraulic society covers only a single locality, all adult males may be assigned to one or a few communal work teams. Varying needs and circumstances modify the size of the mobilized labor.

The Batak accomplish these "preparatory operations" without corvee or obligatory labor. Batak farmers pay levies for their water to the controlling body of the irrigation association and are liable for labor on the system at most for two or three days a year. Employees of the system, paid in rice, perform the duties of maintenance and water allocation which in other kinds of irrigation organizations in Southeast Asia are the obligatory duties of all members. Batak irrigation associations are operated more like public utilities rather than cooperative associations or the irrigating agencies of Wittfogel's hydraulic societies.

This does represent a "division of labor" at the communal level which fulfills the third "paramount characteristic" of hydraulic agriculture. Thus Batak irrigation and agriculture can be considered "hydraulic" rather than "hydroagricultural" according to Wittfogel's criteria, but without the organizational trappings of despotic societies. It is possible to say that the physical system of Silean Banua is hydraulic rather than hydroagricultural as well.

Wittfogel considers the Balinese subak irrigation societies to be examples of a "well-integrated hydraulic order" (1957:53). This hydraulic order is made up of several individually bounded irrigation systems which take water from a single river drainage. As far as a comparison can be made on the basis of existing data, Silean Banua compares favorably in size with one of these Balinese subak organizations. Geertz (1972:27) states that a subak "consists of all the rice terraces irrigated from a single major canal". Further, "this canal runs down... from a single mud and stone river dam...which is usually five or ten miles, sometimes even more upslope from the subak it serves". Silean Banua consists of the large irrigation dam some 4.8 miles upslope of the village of Lintong ni Huta. The rice terraces of the village are supplied by a single trunk canal from the dam. Geertz and Geertz (1975: 19) mention two subak, one which irrigated seventy hectares of land and had 197 members and another which irrigated 150 hectares and had 439 members. Silean Banua compares favorably with these figures, having 206 members and irrigating 120 hectares. Thus it is possible to say that the physical system of Silean Banua is hydraulic, in that it is comparable in size to one of the component subak irrigation organizations in Bali,

Bali, which Wittfogel identifies as hydraulic. Batak society fulfills the requirements for hydraulic agriculture and organization without the development of a despotic ruler, state-level organization, or managerial bureaucracies with coercive powers.

The question of the term large-scale here is important. One certainly cannot compare Silean Banua to the great irrigation systems of major river valleys in arid areas which were the focus of Wittfogel's theories. The problem is the indefinite terminology employed by Wittfogel. To call Silean Banua small-scale on his terms would imply that it was hydroagricultural rather than hydraulic. It has already been demonstrated, I think, that Batak agriculture and irrigation can be considered hydraulic according to the societal criteria posited by Wittfogel and which were discussed above. The comparison of the Balinese subak organizations to Silean Banua is also valid. No single subak, which is a bounded and independent physical system and corporate organization, could be considered large-scale on Wittfogel's terms either. What is of interest to Wittfogel is the fact that several of these organizations share water from a single large river drainage. In times of water scarcity there must be a way to equitably allocate water among all of the Subak organizations sharing water from the same river. The organizational and decision-making control over allocation on this level is what led Wittfogel to call Bali a "well-integrated hydraulic order." The river which feeds Silean Banua is not shared by any irrigation system except the fields in the valley of Meat, neighboring Lintong ni Huta, where the river flows into Lake Toba. No

instances of conflict between Meat and Lintong ni Huta over water allocation in times of scarcity were collected in oral histories; the problem of a supra-local irrigation authority never arose. Data concerning the irrigation systems nearer the Asahan plateau in Lake Toba which may more closely resemble the Balinese picture, are lacking. On the basis of the limited data at hand, cited above, Silean Banua compares favorably in size and membership to a single Balinese subak. Silean Banua is also considerably larger in size than the Batak bondar irrigation organizations for which comparable data exist. Thus in describing Silean Banua as "large scale" irrigation, I do so only in terms of the fact it may be considered hydraulic rather than hydroagricultural and that it is larger than other systems for which data exist in the Toba Batak area. I do not mean to imply it is equal in scale to the irrigation systems which form the focus of Wittfogel's theories. Many of the foregoing points will receive more complete treatment in chapter seven.

Other writers taking off from Wittfogel's theories provide more explicit pronouncements on the societal resources necessary for the construction of new irrigation works. Robert and Eva Hunt (1976) published a recent article which reviewed theories of the relationship of social organization to irrigated agriculture and irrigation management, including Wittfogel's theories. The authors compared a sample of anthropological literature which dealt with irrigation and social structure, and offered a number of synthetic propositions or hypotheses on the basis of this data. The Hunts (1976:391) distinguish five tasks in the labor

inputs of irrigation; construction, maintenance, allocation, conflict resolution, and organization of ritual. Although all of these tasks will be discussed in the chapters on the history and organization of Silean Banua, there is not enough space to discuss all of the propositions and hypotheses offered by the Hunts in light of the data in this work. We shall first focus on the issues raised by the Hunts and others concerning construction of new irrigation works and how this relates to the origins of Silean Banua.

We have already established the fact that Silean Banua fulfills Wittfogel's criteria for hydraulic systems, yet Toba Batak society lacked two of the primary elements of Wittfogel's theory which would account for its construction. As summarized by the Hunts (1976:390) these are "a particular kind of state system (managerial) with a particular distribution of power (despotism)." Wittfogel is not explicit on the necessary conditions for the construction of new irrigation works, especially at the local level. Construction itself is a noteworthy event. The Hunts (1987:391) note that in their Mexican work:

We distinguished between frequent or daily decisions and intermittent or infrequent ones. The construction of a physical system, for example, is a rare event; the allocation of water to users is very frequent (daily or hourly).

The Hunts offer a proposition concerning the "infrequent decision" of constructing new irrigation works. "New construction which is greater in scale than previous works is usually imposed by an outside agency" (1976:394). The "usually" may stem from the fact that not all of the data covered in their work support the case. They also add to this statement concerning improvement of irrigation systems (1976:395):

There is also a second, minor kind of construction which is within the means of most participants in an irrigation system: the extension and enlargement of a physical system. Canals can be widened and deepened little by little, and new ditches can be added on to the end in piecemeal fashion. This does not seem to involve extensive executive organization or a tie-in to decision-making centers.

The case of Silean Banua does not necessarily controvert these propositions. The fact that the decision to build the system was made internally rather than imposed by an outside agency would simply be another contrary case in a sample of data. At the time the decision was made there was no external agency capable of enforcing such a decision on the Batak. The scale of the secondary improvements made to the system over time, the cementing of the major irrigation dam and weirs and channels, seems greater in scale than the gradual extension of a system described by the Hunts in their second proposition. These improvements made by the village seem especially interesting in light of the fact that the "executive center of decision-making" at the time, the Dutch residency in Balige, expressly forbade rather than aided or imposed the improvements. However, the Hunts' second proposition is not stated in such a way as to predict the conditions which would be necessary for large-scale improvements to occur. They complain that "It is uncertain how this part of the construction effort is accomplished for there is virtually no information on it" (1976:395).

Other authors have elaborated on points raised in the work of Wittfogel and the Hunts and have made definite statements on the ability of village-level organization to undertake the construction of large-scale irrigation works without the assistance of a central government or

similar agency. In a recent work (1978) Yoneo Ishii discusses the relationship of developments in rice-growing to the history of Thailand. He states (1978:19) that the intent of the work is to focus on the relationship of water control and the state in Thailand's history, with reference to the ideas of Wittfogel. He discusses (1978:18) two kinds of adaptation to conditions for rice growing by Thai peasants: selecting for fast-growing rice varieties in response to the rising waters in areas of river floodplains which he calls "agronomic adaptation", and the "technological adaptation" of irrigation:

...in regions having no readily available water sources, the peasants must devote their energies to utilizing rain-water or water from distant sources and to maintaining their supplies. They must dig waterways, install water-lifting devices, build dikes, dam rivers, and construct reservoirs...the size of the work force and the amount of materials required for the remodeling of nature vary considerably with the location. If plentiful spring water is available and paddy fields can be irrigated by constructing simple dikes and ditches, locally available materials and a household or village work force will suffice to maintain water supply. But if a water supply is not close at hand, large-scale engineering works providing trunk canals and high-capacity reservoirs become necessary. Such projects are beyond the capacity of the household or village, in terms of the materials and manpower needed, and must be managed at a regional or national level. (Italics supplied)

John Bennett (1978:399) provides a more explicit statement than Ishii's but with the same conclusion; that a village-level organization lacks the capacity and resources to construct large irrigation works. In a published commentary on the Robert and Eva Hunt's article (1976) Bennett focuses on some of the propositions the Hunts offer and some of the points covered in their article. He gives special attention to the proposition quoted above that new construction of large scale

irrigation works is usually externally imposed and a companion proposition which states (1976:394) "...routine maintenance of a physical system at the local level is apparently always in the hands of the local social organization." Bennett notes (1976:399):

Well, of course. There are a number of reasons for both of these but one overriding one: cost. Local systems are usually--in tribal, peasant and entrepreneurial societies--relatively simple because they are largely labor-intensive: few local agrarian communities at any level of development can generate enough capital to afford elaborate schemes, which in water management are very expensive, not only for construction, but also for engineering expertise and maintenance. Hence if the system is to be enlarged or improved, someone else has to pay for it. I am talking not only about money, but also about knowledge, skill, techniques of social mobilization, and so on. These are all monopolies which are assembled in state bureaus and the like; the local communities simply cannot be expected to have them. Moreover, the costs of improvements of high-level maintenance can be so great that local communities hesitate to embark on them even when they might be able to manage the operation fairly well.

Silean Banua ought not to exist, or more properly the Toba Batak of Lintong ni Huta should not have been able to build it, according to prevailing thought. The problem remains, as Silean Banua exists and was built and developed in exactly the way it ought not to have been.

Bennett (1976:399) notes further in connection with construction and cost:

...some of the Wittfogelian propositions boil down to simple economic truisms: e.g., as increasing efficiency is desired in water-control systems in local communities, there is need for a supra-authority of some kind to pay the bills--not to mention political aggrandizement etc...When the people of a local community have become accustomed to having someone on the outside pay the bills, or can perceive an opportunity for getting someone to do so, they rarely pass it up, local autonomy or no. If they can get water more cheaply, they tend to put this first and worry about losing their freedom later. Here again, we don't have "culture", but simply

the structural channeling of behavior, and in all of these strongly instrumental systems we will find such channeling. Obviously one cannot always predict the course of change precisely, and of course humans act perversely from time to time, but at key levels the outcomes are remarkably similar in these water-management situations if you know where to look or what questions to ask. (Italics supplied)

Here again we run into clear exceptions to the prevailing wisdom with Silean Banua. The Batak are a remarkably independent people. The Dutch did not militarily control all of Lake Toba until 1907. The Indonesian government observed that the organization of Silean Banua was operating inefficiently and suggested to the village in the late 1960's that the organization needed reforming and suggested further that its administration be first to the central government. The people resolved the impasse in customary law which had led to the instabilities of administration, rationalized a new structure with a basis in adat (customary law), officially chartered the organization, and specifically stated in the charter (Silean Banua 1971:4) that the administration of Silean Banua would remain free of ties with the central government. The Toba Batak seem not to conform to the expectations of a tribal or traditional society. We shall return to this point in more detail in chapter seven, but behind the construction of Silean Banua is indeed "culture" instead of the "structural channeling of behavior" as Bennett states. The organization of irrigation in Toba is a microcosm in some sense of Toba Batak culture. The social mechanisms which made the construction of Silean Banua possible, the social control of irrigation systems, and other factors covered in this work operate in other spheres of Batak culture. The model which explains the capacity of the Batak

people of Lintong ni Huta to construct Silean Banua ultimately rests on one of the basic organizing principles of Toba Batak society.

This work is not intended as a presentation of the contrary case which necessarily invalidates the rule. Bennett notes (1976:400) that there is a bias in cultural anthropology towards diversity:

...the assumption that cultures always differ, a belief which reinforces the tendency to do community studies without adequate reference to the larger systems. Hence anthropological literature is slanted away from regularities even though it frequently seeks them.

The construction of Silean Banua has an analogue in the literature in the case of the Bontoc of highland Luzon, Philippines. Bacdayan (1974) reports on the construction of a large irrigation system by the people of a single village complex primarily with local resources. Accounting for the societal mechanisms in both cases, the Philippine example and Silean Banua, which allowed the respective groups to build irrigation systems which were larger than usual for the area requires culture-specific explanations. This comparative situation will be discussed in greater detail in chapter seven. However, in both cases a traditional society felt a need for increased water in wet-rice agriculture and accomplished the construction of large, artificial irrigation works through the application of factors of their social structure on a greater scale than was usual. In both cases the construction was accomplished with traditional modes of cooperation and social mobilization and local engineering expertise. A sample of two is insufficient to controvert Bennett's or the Hunts' propositions. However, the fact remains that traditional societies are capable of greater efforts of

cooperation and construction of irrigation systems than might be expected. The Hunts' complain of the quality of data in anthropological writings on irrigation (1976:390). More case studies of such examples as Bacdayan's and the present example may simply be lacking in the literature and thus not taken into account in propositions drawn from cross-cultural comparisons.

The subject of Silean Banua is in fact like a nesting box of contrary cases. The system is larger than most Batak bondar ('canal') organizations. Silean Banua's administrative and corporate structure are variant from the recognized types for the Lake Toba area. The corporate structure of the village of Lintong ni Huta, and the rest of the Pohan tribal territory where it is located, is different than the prevailing pattern in Toba. The founding of the village, and the initiation of the construction of Silean Banua took place during and in response to periods of warfare and social disruption in the late eighteenth and the nineteenth centuries. All of these factors had a direct influence on the decision to build Silean Banua, or contributed to the conditions which made its construction possible.

The explanation of how the villagers of Lintong ni Huta were capable of building this irrigation system must in great part draw on these idiosyncratic factors. Much depends on the exceptional circumstances of the time the decision was made to build Silean Banua; unsettled times and a rising population. The capacity to build the system however lies in the social structure and customary law of the Batak. Thus the model underlying the bulk of this work, to explain the origin

of Silean Banua, will be a culture-specific model of social structure developed in a historical context.

History

A historical context is important to this work for a number of reasons. Events prior to the decision to build Silean Banua influenced the settlement pattern of the village, the decision to found the village in the first place, and created the unsettled times of the mid-nineteenth century that gave impetus to the decision to build the system. The order in which the hamlets in the village were founded over time, and by whom, provides a useful picture of the growth of the village, and the growth of the powerful lineage segments in the village who controlled the small irrigation associations in the village, and ultimately were movers in the construction of Silean Banua. These same kin groups came to control the collection of the irrigation levies of the system for over fifty years.

The most important historical factors which directly influenced the founding of the village, and the founding of Silean Banua are all associated with warfare. Lintong ni Huta was founded as a result of continuing conflict between the tribal group which was based in Balige and a group further to the northwest. Lintong ni Huta and three other villages were founded as planned defensive settlements to fill the vulnerable western edge of the Balige territory with kinsmen who could defend the town of Balige and alert them to incursions of raiders from the west. In approximately 1825 a fanatical Islamic

sect known as the Padris swept out of Western Sumatra and conquered the territories of the Mandailing and Angkola Batak to the South of Toba. The armies of the Padris and Batak conscripts pushed into Toba Batak territory but got no further than the village of Sipahutar on the Humbang Plateau in the mountains above the southern shore of the lake (Castles 1975:72). Despite the fact that the Padri forces did not conquer Toba a period of social disruption followed in the wake of the Padri wars which was characterized by intensified internecine warfare and slavetaking. This period of time is referred to as the pidari times (zaman hamusuon pidari) by the Batak. The charter of the association that manages Silean Banua (Silean Banua 1971:1) states that it was the disruptions of the pidari times and the threat of famine that prompted the decision to build Silean Banua.

Finally, a historical context allows a complete view of the factors which helped to shape Silean Banua, and the changes which have taken place in the administration of irrigation over time. A synchronic study of Silean Banua would have revealed nothing of the changes in Silean Banua since the system was constructed. Changing demographic factors have radically altered the descent structure of the village and the cooperative structure kingroups had for putting on the large and expensive feasts which are an intrinsic part of customary law. Many of these changes were reflected in the instabilities of administration of Silean Banua in the 1950's-1960's and their resolution in the formation of a new chartered federation to run the system in 1971. Capital improvements were also made on the system in the 1930's which further

illustrate the capacity for cooperation and social mobilization in Batak social structure.

I also hope with this historical organization of the data in this work to answer the call for new information issued by Robert and Eva Hunt (1976:390) in the field of anthropological literature concerning irrigation. In their article the Hunts criticize the general state of anthropological literature on irrigation on three counts. They note (1976:390) that anthropological studies of irrigation tend to be highly detailed single community studies, synchronic and contemporary, and such works often relegate a discussion of irrigation to a section of a general discussion of agriculture. To provide a useful body of literature for testing hypotheses concerning social control of irrigation, they advocate pan-societal studies whose focus is the social control of irrigation in a diachronic frame.

The present work will fill the bill unconditionally on at least two counts. I shall focus on the social control of irrigation in a diachronic frame. This is, however, a community study. The Hunts note that (1976:396) community studies cannot throw light on the organization of large artificial supply systems but they can show "how local organizations are linked or related to such a larger system...". In this case the limitations of the community study are mitigated somewhat. On one hand this work will consider the history of five small, kin-based irrigation systems which were built before Silean Banua. These are small, traditional irrigation associations whose organization and size conform to one traditional type in Toba. This information will provide

a contrast to the discussion of Silean Banua whose particular organization is something of a hybrid of the reported types for the Lake Toba area. Silean Banua is however, as the Hunts put it, "isomorphic" (1976:389) with the village. No other village receives water from the trunk canal and the runoff from the last paddies irrigated at the northern boundary of the village drains directly into Lake Toba. The only outsiders who have anything to do with Silean Banua are those who farm land on a share-crop basis in Lintong ni Huta. This particular community study will provide an accurate picture of all of the phases of construction and administration of a large irrigation works in Lake Toba.

Whether this study can shed light on how several irrigation organizations on the same river drainage manage the allocation of water is problematic. Silean Banua draws water from a river several kilometers distant from the village of Lintong ni Huta and the only other irrigation system on the same drainage is the neighboring valley of Meat whose fields are irrigated by this river before it flows into Lake Toba. Data do not exist in the literature concerning irrigation systems in other parts of Toba. The examination of the social structure and customary law of the Batak, explicated below, will offer some clues to this, however. The irrigation association in the Lake Toba area takes many different forms in administration and corporate organization. The customary law of irrigation and water rights, reported by Ypes (1932:158, 288-291, 356) for various regions of Toba does not differ significantly. It is possible then to speculate on how the customary

law of irrigation might operate in coordinating the activities of several irrigation systems on a single river from the study of Silean Banua. We shall deal with this question in chapter seven. The case of general guiding principles of customary law which do not vary, and different local expression of specific customs and forms of social organization, such as in irrigation, is typical of Batak adat, which is at the heart of the social model of this work.

Adat

All aspects of the explanation of how the villagers of Lintong ni Huta achieved the construction of Silean Banua will ultimately be found in the all-encompassing concept of adat and the uses the Toba Batak make of it. Adat is difficult to translate adequately. Haar (1943:5) notes that adat can be translated as 'custom' and the strictly legalistic aspects of it as adat law. The Batak concept of the work is more inclusive. One Batak scholar (Siahaan 1963:3) says simply that adat "is an arrangement founded by people to give order to life". Bruner (1959:55) gives a comprehensive definition:

The Batak people have a more inclusive conception of their own adat; for them it includes not only inheritance, property, and marriage law, but also a value system, the procedure of each life-crisis ceremony, the entire kinship system, and the proper behavior between members of various patrilineal kin groups. Adat defines the reciprocal rights and obligations between relatives, both living and deceased. Its major social function is that it tells one Batak how to behave toward another.

The Batak conception of their adat is not that of a static ordering of customs and proper behavior. There are certain overriding principles of adat which do not change. Vergouwen (1964:140) called them

"immutable principles"; the basis of patrilineal organization, of the asymmetrical marriage system, and at a lower level, the adat of the organization of irrigation are good examples. Beneath the high-level principles, however, is a fluid and changing set of canons which may be altered by consensus of the 'place of one adat', a single village. There is wide diversity in local details of adat. Details of the procedure or feasts may vary from corporate village to corporate village. It is the elders of each village who rule on whether any attempted innovation in the process of feasts or similar details of organization is acceptable in adat, and especially whether such an innovation violates any of the basic principles of adat. In Lintong ni Huta representative elders of each of the four maximal divisions of the tribal group of the area are chosen at each adat occasion to act as raja ni horja (lit. chief of the village feast) who are given power to act as arbiters of adat. If the person giving the feast attempts an innovation in adat which the raja ni horja find unacceptable they refuse to participate further in the feast. If the feast-giver continues the practice despite their opinion he is judged to be dirurar adat ('outside of adat') and his opinion is given no weight in adat affairs, he is not allowed a place in an agenda of adat oratory, and cannot serve in any official capacity at a feast until he publically apologizes to the village and the raja ni horja. This system can work towards change as well. The village of Lintong ni Huta has judged it expedient to simplify the procedure of feasts and make changes in the important ceremonial division of meat at feasts within the past thirty-five years

(Lando 1976:8). All of these changes have been judged to be proper within the framework of the "immutable" principles of adat by consensus of the elders of the village.

It is precisely this elasticity of adat in all its facets that facilitated the construction of Silean Banua. The Toba Batak make conscious manipulations of their adat, as they conceive it, to achieve an end or in reaction to specific circumstances. Despite having a segmentary lineage system, the Batak are fanatic about keeping detailed genealogies (tarombo). This detailed genealogical tradition allows individual Bataks to establish their precise kinship relation, which forms the basis of their social interaction. These genealogies also integrate the minimal and maximal patrilineal divisions of the Batak people as descendants of a common ancestor at higher and higher levels in the genealogies. Ultimately the Batak may be viewed, and view themselves, as ^a "super-patrilineage" descended from the apical ancestor of all Bataks, Si Raja Batak (Bruner 1972:209). This particular feature of adat allowed the people of Lintong ni Huta to define themselves as fellow descendants of a single ancestor, sixteen generations removed from the villagers at the time Silean Banua was started. This charter of lineal kin connections formed the basis for mobilizing the village in the construction of the canal, and the basis of collective ownership of the canal system by the entire village. In a like manner other aspects of adat having to do with financing, cooperative labor, and taking financial responsibility for an undertaking were expanded and applied on a scale greater than was usual to meet the needs of organizing

and constructing Silean Banua. This capacity for conscious manipulation of the structure of adat accounts for the ability of the village to construct Silean Banua. We shall examine in detail the basis of each of these facets of adat and how they were applied to the construction of the system in chapter three.

It is my contention that the Batak approach to using their adat to achieve specific ends is conscious. Although the Batak imbue adat with religious significance, revere it, and refer to it constantly, their approach to the application of its details is pragmatic. Levi-Strauss has warned (1963a:282) about the pitfalls of accepting a native conscious model of social structure, etc. as they may be "biased or erroneous". He does admit that native models of marriage regulations may be more to the point than anthropological models and that "...each culture has its theoreticians whose contributions deserve the same attention as that which the anthropologist gives to his colleagues". This is nowhere more true than the case of the Toba Batak. The Batak possessed their own alphabet and had a literate tradition in pre-colonial times. Their priest practitioners (datu) were literate, helped to keep the detailed genealogies, and practiced several forms of esoteric oracle magic and kept predictive calendars based on cycles of the moon and the movements of major constellations. In the twentieth century there has been a renaissance of Batak traditional knowledge. Scholars have been publishing monographs on aspects of adat in the Batak language since the 1920's. Some of these go beyond mere description and demonstrate that the Batak are capable of analyzing and theorizing about their adat.

Levi-Strauss (1963:156) offers a model of Indonesian assymetric marriage systems based on three parts which was formalized from an apparently dual model. Mangaraja Asal Siahaan (1963:18) develops an identical model to Levi-Strauss' in his analysis of the Batak kinship system and marriage alliance system. The native metaphor of the asymmetrical alliance system is also identical to Levi-Strauss' (Lando 1978).

Vergouwen (1964:140-141) recognized the basis of adat lay in "immutable principles". He noted in the 1920's that the unchanging quality of traditional law was often expressed in aphoristic sayings (umpama) but "This principle is no longer operative, but in olden times people adhered to it, though they were conscious that its application was relative". People found that when they attended the great markets or major clan offering feasts "although their origin was the same, it was apparent that the law had pursued an individual and distinct course in the different areas." The Batak concept of adat, that it is changing and consensual at one level with immutable principles defining the appropriateness of the changes finds its best expression in the works of the Batak scholars Raja Patik Tampubolon (1960) and Mangaraja Asal Siahaan(1963). The somewhat tautological explanation of how something becomes included in the canons of adat given by Siahaan (1963:3) illustrates its consensual nature:

Adat, is the arrangement founded by people to give order to life. After such an arrangement has been common practice, it becomes like blood (internalized?), thus it becomes custom (hasomalan). Finally it is made adat. If it has been made adat, it is called (given the name of) adat. If it is already called adat, it is like a statute or law to be used and adhered to to give order to life.

An elder who often acted as an arbiter of adat (raja ni horja) at feasts in Lintong ni Huta said that the Raja ni horja had to act as guardians of adat because of occasional attempts to alter adat beyond the basic principles which guided it. If an innovation in the procedure of a feast, for example, escapes their attention and is not appropriate according to adat, another person may try to follow it. If the raja ni horja then try to forbid the practice the second feast-giver may defend himself saying "it was done at the feast of Ompu si Anu and you did not forbid it there, why do you forbid it now". A person can argue that something does not violate the principles of adat if they can cite a prior precedent where it was not judged to be outside of adat. In this way innovations in custom can be made adat.

Tampubolon (1960:9) provides the clearest expression of the concept of the unchanging or immutable principles of adat with the details of adat or everyday life adapting to the times:

What is the adat that has been changed and altered from the source of adat and customs (bona ni Adat/Istiadat), and how many parts of adat are there that are used in everyday life? Three parts may be ascertained, they are;

1. Adat from the length of adat, that is the adat and customs from the first-born ancestors which is used today; adat which says: "The first chiefly ancestor carried a staff of sialagundi wood; the adat of those that came before is followed by those that come after."
2. Adat which has become adat, that is past customs which were changed or made the way (diugari) as the result of religions, thus they were made adat, the present adat of religion; as the aphoristic saying goes:
The tree stump has been pulled out, the dam between the paddies destroyed. Statutes and customs have changed since a new religion has arrived. The pidari also changed it.

3. Adat which has been made adat, that is all of the normal practices of everyday life, all of the adat which has been added as a result of modern times; the aphorism says:

The ijuk thatch is on the framework, the rattan hanging from rafters. The intelligent one speaks well (wins the lawsuit), the stupid one (the loser) is sent to the place where slaves are sold.

This material points up several facets of adat which are applicable to the model. It shows graphically the difference between the immutable principles of adat and the adat of everyday life. The adat of irrigation conforms to this. The theory of irrigation administration is with minor variation, the same throughout Toba, the first sort of adat, mentioned by Tampubolon, the "immutable principles". General rules such as the fact that the person closest to a water source has first rights of access to it; the builder of an irrigation charges levies for the water and in turn must maintain the system, etc. exemplify these general principles (Ypes 1932:288-291). However the local organization of individual systems varies widely, according to local adat and the structure and size of the system.

The third sort of adat that Tampubolon mentions, the adat of everyday life, is the most important for understanding the capacity of adat and to be adapted according to need. Not only can facets of adat be adapted to operate on a scale for which they were not necessarily intended, such as the traditional mode of cooperative financing being expanded to raise the necessary capital for the construction of Silean Banua, but new customs can be incorporated into the body of adat. As long as these new customs which are the "adat which is made adat" do

not violate the immutable principles. The aphorism (umpama) which Tampubolon quotes to illustrate the third sort of adat is a telling one. Vergouwen (1964:140) characterizes Batak society as litigious and notes that skill in oratory and knowledge of the aphoristic sayings (umpama) which embodied concepts of traditional law were necessary in traditional courts. The message of the aphorism is that the one who is less clever in court is the loser, sold into slavery. Tampubolon is applying the aphorism to the Batak people as a whole. The Batak have for a long time felt the need to modernize and compete in the multi-ethnic national society. In the process of this they manage to maintain their culture and adat in an urban environment. The Batak suffered under the double disadvantage of being pork-eating Christians when they first migrated to the eastern lowlands of Sumatra and the provincial capitol of Medan, which is predominantly Islamic (Bruner 1961:511). As an ethnic group they have successfully entered into the professions, the army and police, and the civil service. In doing so they have taken adat with them. The number of adat books published in the 1960's was in part a response to the need of the anak ranto ('migrants') to know the proper adat for the procedure of feasts to be carried on away from the homeland and without resident adat specialists. Some Batak scholars see the upholding of Batak adat in the migratory community as a way for the Batak people to progress. Hutagalung (1963:8-9) views the original form of Batak marriage adat as compatible with the "Christain formula" and that if the Batak people hold fast to the sanctity of marriage it will be the 'road to progress' (dalan tu hamajuon). Guided by the straight

raad of adat in marriage:

May our numbers increase in the future that we may not be considered a small descent group (minority). May our people become a kindred of a large descent group (majority). That the message of the aphorism may be realized: let the one become eleven.

The urban Batak have manipulated adat to their own ends so that instead of lessening in force, it has strengthened. Bruner (1970:132) reports that:

The urban Batak form a single kinship community, and the sense of ethnic identity is stronger among Toba Batak in the city than in the village.

The range of the kinship system has been extended more widely in the city to encompass a larger number of more distantly related persons.

and other findings which indicate that adat adapts in various ways to bind people together in the urban environment. Elsewhere Bruner (1972: 222) gives a general statement which embodies the expression of the adaptability of adat:

...a Batak is a Batak, and though he may migrate from the village to the city he does not change his basic self or his ideology en route. In areas where he is given choice he creates social structure based upon the conceptual equipment available to him. Naturally he preserves the familiar at the same time that he adapts to the new situation.

Despite the fact that urban Batak find some of the obligations of adat burdensome in terms of time and finances, and wish that adat could be simplified:

...all Batak insist that the essentials of the adat be maintained and the vast majority fully participate in the adat life. (Bruner 1961:513)

Bruner (1972) cites one example of the adaptation of adat to need

which parallels the use of adat in mobilizing the entire village to construct Silean Banua. We noted earlier that the potential exists in the Batak genealogies to define a collectivity at any level of the genealogies, defining all of the participants as lineal kinsmen on the basis of common descent from a designated individual. The tribal groups referred to earlier among the Batak are genealogical complexes made up of a number of patrilines putatively descended from a single individual. These tribal groups were primarily territorial groups who usually co-operated as a totality only for mutual defense of the territory. Lintong ni Huta was settled by segments of nine patrilines of the tribal group of the territory. Although the birth order of the founding ancestors of these patrilines as grandsons of the tribal ancestor is used as an organizing principle for certain purposes in adat, the fact of common descent from the tribal ancestor is seldom used as a factor to mobilize the village population for any purpose. The unsettled conditions of the nineteenth century, drought, and the threat of famine created unusual and urgent circumstances. The villagers met this by mobilizing as a body with the organizing principle of common descent from the tribal ancestor being used in a way it had not been in the past. Bruner (1972:216-220) describes a situation which carries this possibility of defining a group on the basis of common genealogical connections carried to its ultimate possibility. Bruner reports that in the early 1950's the few Toba Batak and other Batak living in the Javanese city of Bandung did not feel safe in the post-independence era because of fanatical Islamic activity in the area, and mistrust of

all Batak on the part of the predominantly moslem Sundanese majority in the city. The Batak in Bandung formed an ethnic association called Pardomuan (meeting) which included representatives of all six of the Batak linguistic and ethnic subgroups. Bruner (1972:216) observes:

Its (the ethnic association's) uniqueness stems from the fact that members of all Batak subgroups...who were living in Bandung formed a single association. I believe it to be one of the few times the category Batak became a corporate group.

Bruner (1972:217) reports that the organization defined themselves and the pinompar ni Si Raja Batak ('descendants of Si Raja Batak), and listed their ancestral home (bona ni pasogit) simply as the Sumatran Highlands. There is no evidence that the association performed any of the functions of a kingroup. But the organizing principle of the association is found in adat and the genealogies. They did not simply define themselves as ethnically Batak, but as descendants of the ultimate ancestor of all Batak.

This example illustrates the principle of adat which is basic to all facets of the construction and organization of Silean Banua; finding a precedent in adat on a small scale and applying it at whatever level is necessary within the framework of kinship. A minimal lineage segment from Lintong ni Huta might define themselves as pinompar ni Ompu Tagururaja Simanjuntak (descendants of Ompu Tagururaua [of the patri-clan] Simanjuntak) and list their bona ni pasogit (lit. 'place of the ancestral spirit offering'--ancestral home) as their village of origin. The Batak of Bandung took two facets of identification important to Bataks, kinship and place of origin, and expanded them; a kinship group which included all of the Batak people, and the Sumatran highlands

as the ancestral home, rather than a single village. Each aspect of organization and construction of the system of Silean Banua which is anomalous in light of the expectations of a village to achieve such construction can usually be analyzed in such a way. An aspect of adat which is unexceptional at the level it is usually applied becomes exceptional when it is applied for a special purpose, or in reaction to special circumstances.

Constant reference will be made to adat as it has been described here in the chapters which follow. Adat formed the basis for Batak society, not just irrigation. In the history of Silean Banua adat was not only the basic organizing factor for facets of the construction of the system, but its administration as well. The size of Silean Banua and the fact that the entire village of Lintong hi Huta cooperated in its construction and financing meant that the entire village held rights to the system, rather than a single kin group which is a commoner pattern. An administrative structure was devised which does not adhere to any described type of irrigation association, but which is patterned on the traditional model. This subject will be treated in greater detail in chapters five and six. But here we have an example in irrigation of a particular form of organization which does not conform to a common model, but whose basic form is consonant with the higher-level, immutable principles of the adat of water rights and irrigation. As we shall see in chapter six, radical changes in other spheres of social organization in the village were reflected in the organization of Silean Banua, which eventually caused an impasse in the running of the organization.

Changes were made in the administration of Silean Banua, and the organization of adat feasts and cooperative associations in the village, which were radical in form, but preserved the basic structure of adat in the village.

Water Allocation: the "Syrian" and the "Yemenite"

The second question concerning Batak irrigation organization which will be discussed in this work is based upon a typology of water allocation systems developed by Robert Glick (1970:230). He differentiates between two types of cultural water distribution systems which he calls the Syrian and the Yemenite. The Syrian system is "characterized by proportional distribution of water" and "...water rights are inseparable from the land". In the Yemenite system water distribution is "...based on fixed time measurement units and associated with the sale of water". Rights to water are separable from land tenure. Bennett (1976:398) offers comments on Glick's typology:

The two approaches have displayed an institutional progression because the underlying problem is a physical and instrumental one--the fluid nature of and absolute need for water. Hence, increasing population plus increasing rational control of resources in order to maintain the equity of allocation of water in this population means that systems tend to evolve from the Yemenite towards the Syrian--that is as long as land tenure remains in private hands.

The Yemenite typology of Glick's is derived from the model of the Saharan oases where water is a decidedly scarce commodity. The continuous irrigation requirements of wet-rice would make the sale of water by timed allocation impracticable. Timed allocation of a sort occurs in the irrigation systems of wet-rice societies in times of

water scarcity; but this contingency basis of water allocation seems not to change the basic form of irrigation organization. The jural distinction of the inclusion of water rights with land tenure, or making them separable from land tenure is not significant in terms of a predictive value concerning the institutional base of irrigation organization in any society identified according to the typology. We shall investigate the differences in irrigation organizations by comparing Batak bondar irrigation organizations with those of the Bontoc and Ifugao of highland Luzon, another traditionally organized tribal people; the Balinese subak organizations; and irrigation systems in the Chiangmai region of northwestern Thailand in light of this typology. The Lanna Thai peoples and the Balinese historically had a state-level organization. The Batak and Philippine people had a modified Yemenite allocation system; which identification I base on the fact that for both land tenure was separate from rights to water, but in neither society is water sold nor commonly allocated by timed units. The Balinese and Thai have a Syrian type of water allocation.

The distinction which arises out of this comparison is the difference in the way in which labor is obtained to organize the allocation of water and to maintain the physical system of the irrigation canals and weirs. In wet-rice societies with a Syrian allocation system, labor on the irrigation system is compulsory if a farmer farms land watered by it. Consonant with Glick's typology, the amount of labor owed by an individual is proportional to the amount of land farmed. In the Batak and Bontoc cases the compulsory aspect is lacking. A Batak farmer need

not pay irrigation levies to an established irrigation organization if he can find another way to irrigate his paddies (Ypes 1932:290). For the Bontoc, one must labor on the system if one is to receive water but the aspect of compulsory participation is lacking (Jenks 1905:92).

Wittfogel (1957:18) insisted that "A large quantity of water can be channeled and kept in bound only by the use of mass labor; and this mass labor must be coordinated, disciplined, and led". Writers on examples of irrigation organization (cf. Potter 1976, Ishii 1978) often make general statements of a similar nature; that cooperation for maintenance of an irrigation system is necessary for wet-rice agriculture, and that there needs to be leadership with sanctions to enforce participation in these necessary tasks for the efficient running of an irrigation system. In the Thai and Balinese examples there is an irrigation board of bureaucracy which dictates prescribed duties and contributions to the members of the irrigation system and has sanctions in the way of fines and even corporal punishment to enforce participation. For the Batak and Bontoc the systems are different, but in neither case do bureaucracies with jural sanctions to enforce participation in irrigation labors develop.

In Batak irrigation organizations it is the responsibility of the controlling kingroup or body which holds the proprietary rights to maintain the system, not the levy-paying membership. The controlling board pays young men to see to the daily maintenance of the system and water allocation; the elders organize their labor, supervise the system, and adjudicate disputes as they arise. The levies which the

customers pay are not remuneration for water as a commodity, but for the services of the owning lineage or board in maintaining the system. The general membership of the organization was expected to labor on the system only once a year for a major cleaning of the canals and repairs to the irrigation weirs. The controlling board of an irrigation system had no jural sanctions to enforce participation in this work; only limited economic sanctions. This particular fact of organization is consonant with other spheres of Batak social organization. The characteristic way in Batak society in which a group of people achieves a goal is through consensus and cooperation rather than coercion. Batak chiefs who wielded wide-ranging power did so through personal ability, influence, and the evidence of the spiritual power of chieftanship (sahala harajaon) Vergouwen 1964: 131), rather than absolute authority vested in their office. Similarly the irrigation board had no coercive sanctions and the institutional basis of irrigation can be found in adat, similar to the organization of other kinds of groups with a common purpose.

The Bontoc and Ifugao of highland Luzon in the Philippines have engineered astonishing terraces on steep mountainsides for the cultivation of irrigated rice. Barton (1922:410) reports that the irrigation of the Ifugao is accomplished generally by small gravity-feed systems supplied by streams or springs. Jenks (1905:91-93) describes more complex systems built by the Bontoc, some involving large diversion dams, secondary weirs, and log flumes to deliver water to the rice terraces. In both societies water rights are not tied to land tenure, as in the Yemenite type. Barton (1919:60) reports that any Ifugao who constructs

an irrigation system may sell shares in it and that "the ditch thus shared with others becomes an equal burden as to its upkeep". Jenks (1905:92) reports for the Bontoc:

All dams and irrigation canals are built directly by or at the expense of the persons benefitted by the water. Water is never rented to persons with sementeras (rice terraces) along an artificial waterway. If a person refuses to bear his share of the labor of construction and maintenance his sementera must lie idle for lack of water.

Jenks does not discuss the social control of irrigation. Bacdayan (1974:248) reports that the basic unit of social and political cooperation in Bontoc society is the dap-ay or men's house organization. These organizations are responsible for various spheres of community activities including the maintenance of the irrigation systems for the terraces surrounding the four villages of the community. Bacdayan stated that these men's house organizations each went about their community duties in a spirit of friendly competition, trying to outdo each other in the efficiency with which they acquitted their assigned tasks. Each men's house organization had sanctions such as fines at their disposal if a member shirked his assigned duties. There was no mention of an irrigation board that assigned duties. Decision-making was carried out within and between the men's house organizations. As with the Batak, the way in which the community achieved both construction and maintenance of irrigation was through a form of cooperation, although on a different basis than adat.

The picture is different in the Balinese and Thai examples chosen for comparison. Ishii calls the irrigation systems of the Chiangmai region "quasi-hydraulic" (1978:19). We have already noted that

Wittfogel (1957:53) called the Balinese irrigation systems a "well-integrated hydraulic order". In both cases participation in irrigation activities is compulsory, based upon farming land irrigated by an irrigation system. In both cases there is a bureaucracy which manages the irrigation systems and has sanctions in the form of fines and other punishments to enforce the participation of the members. Geertz (1972:29), Grader (1960:269), and Boon (1977:37) all report that membership in a Balinese subak organization is based upon farming land in the system. A farmer owes prescribed maintenance duties to the organization as well as participation in offerings to irrigation altars and temples associated with the subak organization. Grader (1960:269) lists a series of fines and punishments which can be exacted from people for non-performance of duties. The situation is similar in the irrigation systems of northeastern Thailand. Membership in the irrigation organizations which manage the interlocking, complex canal systems fed by diversion weirs on major rivers depends upon farming land watered by the system (Donner 1978:753; Potter 1976:88). The individual farmer owes twenty to thirty days of labor a year to the system and contributes material for the reconstruction of the diversion weir each year. Non-performance of these duties can result in fines and repeated offenders are taken to the district officer for punishment. The amount of labor, material, etc. that any individual owes is proportional to the amount of land farmed in the irrigation system.

The contrasts between these four societies, the Balinese, Thai, Batak, and Bontoc in their irrigation organization is in part derivable

from Glick's typology. The two tribal societies, Batak and Bontoc, have systems in which water rights are not tied to land tenure, as in the Yemenite type. For the state-level societies, the Thai and Balinese, land tenure and water rights are inseparable, which is consonant with the Syrian type. However, as noted above the distinctions of the typology predict nothing concerning the institutional bases of irrigation in any single society, in this limited comparison at least. The conditions of the typology are also incompletely met in some of the societies in this comparison as well. For example, water in the Syrian type allocation system is distributed proportionally. For the Thai irrigation systems and the Balinese subak organizations the amount of labor an individual owes to the system is calculated proportionally according to the amount of land farmed that is watered by the system. In the Batak case the individual member pays levies in rice rather than laboring on the system; but the payment is still proportional. Levies at present are calculated by a fixed formula of a given amount of rice owed per unit of land irrigated by the system. In the past the amount of seed rice required to sow a plot was paid as levies; but this was still a proportional payment. The distinction of Yemenite/Syrian also does not predict that labor will be the medium of exchange in societies with a Syrian allocation system, and levies in rice or something else for societies with the Yemenite system. Jenks' statement, quoted above, is emphatic on the point that water is not rented in Bontoc irrigation organizations and if one does not labor on the system, one's terraces receive no water.

The problem may be that like Wittfogel's theories, Glick's typology is better suited to considering irrigation in arid areas. We have already raised the point that the sale or distribution of water by fixed time units, a feature of the Yemenite type, is unsuitable in general to the irrigation needs of wet-rice. Again the dichotomy does not predict that water allocation will be equitable in a society with a Syrian system and less suitable in one with a Yemenite system, or vice versa. It could be inferred from Bennett's statement quoted above that the equity of allocation ought to be greater in a society with a Syrian allocation system, since he posits an evolutionary progression from the Yemenite to the Syrian. In the comparison at hand it can be seen that no society on either side of the distinction has a monopoly on equitable water allocation system. There is not even uniformity in this in each society in the comparison.

Jenks (1905:93) notes that in times of water scarcity in the Bantoc region each farmer must guard his water inlet to see his fields are adequately irrigated during his allotment of irrigation time, and see that no one tries to divert water from his fields upstream. Conflict frequently broke out over water theft and resulted in clubbings and loss of irrigation privileges for offenders. In the Botoc village community studied by Bacdayan (1974:250) the people had agreed that a number of men of good character and dependability would act as water distributors during the times of water scarcity in the dry season, which coincided with the peak irrigation needs of the rice crop. Bacdayan felt that this institution obviated the need for individuals to guard their

irrigation inlets and reduced water theft and conflict. No instances of conflict or water theft were noted in the oral histories of Batak irrigation systems. Potter (1976) reports that there was frequent conflict at every level of segmentation of the large irrigation system he studied in the Chingmai region of Thailand. One village would try to divert water during the night that rightly belonged to another village downstream during times of water scarcity. Acrimony between two villages was so great that some farmers withdrew from one major system and joined another. Boon asserts that it is the ritual cycle and religious basis of irrigation in Bali which is the "fine-tuning" mechanism which causes individual subak organizations to stagger planting schedules and other means to equitably share water on a major river drainage during times of scarcity (1967:109).

The problem we must return to is the assertion by Bennett (1976: 398) that there is an institutional progression in the two types; that systems will evolve from the Yemenite to the Syrian system of allocation. The cause of this is "physical and instrumental"--increasing population and increasingly rational control of resources in order to maintain equity of water allocation will cause the evolution from one system to the other. Tied with this assumption is the assertion by many authors, already cited, that there needs to be a bureaucracy with sanctions to enforce participation in maintenance tasks as, in Wittfogel's words, the mass labor for irrigation tasks must be "organized, disciplined, and led" (1957:18).

This comparison will be continued in more detail in chapter seven.

The Batak and Bontoc cases will provide interesting contrary cases to this prevailing wisdom. Both organize irrigation efficiently on the basis of traditional modes of cooperation rather than with the development of a Wittfogellian irrigation bureaucracy. In the end we shall also return to the question of new construction. The Batak and Bontoc cases show that two societies were capable of constructing large, artificial irrigation works entirely with traditional modes of social mobilization and cooperation--one hundred years apart in time, and with entirely different cultural bases for this cooperation. Data concerning the attempts of the Thai government to get local cooperation in constructing concrete diversion weirs, instead of the traditional kind which is destroyed by the river each year at flood stage, will be presented from the works of two authors, Potter (1976) and Moerman (1968). The tribal societies have successfully constructed irrigation systems with traditional means while the active attempts on the part of the Thai government to stimulate local activity have been less successful according to data in the works cited.

The limited sample of two societies is insufficient to controvert statements concerning the capacity of traditional societies to achieve new construction cited earlier. It does point up however that peasant or traditional social organization is capable of mobilizing greater resources than is ordinarily expected. The Bontoc and Batak cases also show that irrigation under a "Yemenite" system is no less equitable or rational than under a Syrian allocation system. The Hunts (1976:380) point that new construction of irrigation works is an "infrequent"

decision while water allocation is a "frequent" decision is applicable here. The allocation of water as a daily concern must have some institutional basis for its control--and there is no reason to suppose that irrigation in any single society should develop a special form of control or organization separate from other forms of social control or institutions. Explanations of the basis of irrigation and water allocation will as a result tend to be culture-specific.

Glick's typology isolates a distinction--the connection between land tenure and water rights--which may hold true cross-culturally. State level societies may tend to have Syrian allocation systems and traditional societies may have Yemenite allocation systems. The brief comparison here and the more detailed comparison in chapter seven will demonstrate that traditional modes of organization can achieve as equitable and rational distribution of water, or perhaps more so, than state-level societies--at least in our limited sample. The comparison of the construction of Silean Banua, and Badaysn's data from the Botoc, will show that once the culture-specific mechanisms of social mobilization and cooperation have been accounted for, the general analysis remains that traditional systems can accomplish tasks on a greater scale than usual without a change in structural form.

The discussion of Batak society, adat, and the building of Silean Banua will demonstrate this in detail. The model of adat developed earlier in this chapter will, I think, adequately explain how the Batak accomplished the building of Silean Banua. It will also explain the basis of Batak irrigation organization and how this is consonant with

other forms of social organization. Before embarking upon the detailed explanation of the background material on Batak social organization and specific historical data necessary to understand the background of Silean Banua, the following chapter will provide an introduction to the village of Lintong ni Huta, its people, something of its daily life, and the cycle of wet-rice agriculture which depends upon Silean Banua for its irrigation.

Chapter 2

INTRODUCTION

This chapter will introduce the village of Lintong ni Huta. We shall discuss briefly the physiographic setting of the village, the settlement pattern of the hamlets which make up the village, and the houses and daily life of the inhabitants. Institutions that are characteristic of the village, such as its thrice-weekly market, and brief characterizations of some of the villagers will also be presented. Finally the various stages of the harvest year for the cultivation of irrigated rice will also be described.

All of this will serve as an orientation to the people of Lintong ni Huta, the place, and to some aspects of Batak culture before embarking on the history and background discussion of Silean Banua. As we shall see the agricultural prosperity of Lintong ni Huta rests on the secure irrigation provided by Silean Banua. The rhythm of daily life in the village is dictated by the needs of the growing rice and its cycle from preparation of the soil to harvest. Irrigation has also influenced the placement of hamlets in the village. As irrigation developed in the village in the nineteenth century new hamlets were founded near the rice land which came under irrigation as a result.

Primarily this chapter provides background material so that the kingroups and hamlets that are discussed in connection with Silean Banua are not merely ethnographic labels. The brief picture of Batak life in this chapter will help to flesh out the discussion that follows with an understanding of the particular locale and people.

The Setting

Lintong ni Huta is situated five kilometers east of Balige on the south shore of Lake Toba. Lake Toba is a long, narrow volcanic lake in the mountainous central portion of North Sumatra. The lake was formed when the crest of a volcano collapsed in an enormous explosion. The crest of the volcano is still visible on the island of Samosir. Samosir was originally a peninsula but was separated from the northwestern shore of the lake by the excavation of a short canal during the Dutch colonial regime. The precipitous walls of the volcanic caldera surrounding the lake rise as high as 1500 feet in places (Vergouwen 1964:4). In parts of Toba, such as on the western shore, human habitation is confined to small valleys and recesses in the steep caldera walls. Balige, from which Lintong ni Huta's settlers originated, is situated on the westernmost extent of an area of Toba called Toba Holbung on the lake's south shore. Toba Holbung is described as "a broad fertile, thickly populated lake shore plain between Balige and Porsea" (Vergouwen 1964:4). Balige is a mercantile and educational center and historically the major town of the Pohan tribal group area, of which Lintong ni Huta is a part. To the east of Porsea on the other end of the Holbung plain is the mountainous region of Uluan. Unlike other parts of the lake shore, the Holbung plain slopes gently down from the steep mountains south of it. South of Porsea is the Asahan Plateau, and south and west of Balige the mountains rise sharply towards the Humbang Plateau and the Silindung Valley.

Lintong ni Huta is situated on a spit of land that juts out into

the lake to the west of Balige called Tuktuk Tarabunga ('the cape, peninsula of Tarabunga'). Balige is at the level of the lake, and the terrain rises precipitiously from that point. Although the three villages on the Tarabunga peninsula are only three to five kilometers from Balige, they are 100 meters higher in elevation. Small streams flowing off the slopes of Dolok Tolong, a mountain that dominates the landscape above the village of Lintong ni Huta, flow through narrow, steep-walled ravines that cross-cut the entire Tarabunga peninsula. These streams were dammed and small irrigation systems built shortly after the founding of the village in the late eighteenth century. The flow of water in these small systems was limited and the resources of the kin groups that controlled them insufficient to construct dams higher up on the mountain so that the capacity of the systems could be increased. When the decision to build Silean Banua was made, a watercourse eight kilometers to the southwest of the village had to be tapped to provide sufficient water to expand irrigation in the village.

The territory of two other villages, Tarabunga and Hinalang, takes up the eastern half of the Tarabunga peninsula. Lintong ni Huta is situated on the eastern half. The main highway from east to west Sumatra enters the town of Balige after having skirted almost half of Toba's eastern shore. The highway turns west away from the lake past Balige and skirts the southern boundary of the village along the slopes of Dolok Tolong.

If one looks at the map of the kecamatan of Balige (Ind. 'administrative subdistrict') in the police station in the town of Balige one

sees that the entire area is divided into kampung ('village') units, the smallest administrative units in the governmental hierarchy. Lintong ni Huta is one of these kampung units situated near the western boundry of the subdistrict of Balige. Lintong ni Huta was a discrete social unit, a horja (see chapt. three), before the establishment of Dutch hegemony in the area. The Dutch administration recognized it as an administrative unit and the Indonesian government followed suit after independence. The territory of Lintong ni Huta is slightly wedge-shaped with the small end of the wedge fronting on the shore of Lake Toba. The southern boundary of the village runs along the foot of Dolok Tolong near the main highway and rises higher on the slopes of the mountain near the northwestern corner of the village territory. On the east Lintong ni Huta is divided from the neighboring village of Hinalang which also fronts on the main highway, by one of the stream-cut ravines on the Tarabunga peninsula. On the west a low hill rises behind the oldest hamlets in the village forming a natural boundary between Lintong ni Huta and the neighboring valley of Meat. The floor of the valley of Meat is at the level of the lake, 100 meters below Lintong ni Huta. Lintong ni Huta's short northern boundary fronts on the lake and then crosses some open, uncultivated land and blends with the eastern village boundary separating the village from the neighboring village of Tarabunga.

The Village

Lintong ni Huta is not a village in the strict sense of the word.

It is an area of terraced riceland, grassland, dry gardens, and stream-cut ravines. Thirty-eight small hamlets (huta) are interspersed among the rice fields and stretched out along the main highway and the branch road (jamlan simpang) that cuts north from the main highway near the southwestern corner of the village territory. These nucleated hamlets and the territory surrounding them comprise the administrative village complex of Lintong ni Huta. To the untutored eye the hamlets melt into one another along the highway and no fences or discernible artificial boundaries proclaim the end of the one village and the beginning of another. To the people of Lintong ni Huta the boundaries are distinct, both physiographically and culturally.

Besides the physiographic features which divide Lintong ni Huta from its neighbors, there are non-tangible boundaries which define it as a distinct social entity. Lintong ni Huta is a place of one adat. It was noted earlier that adat has certain overriding immutable principles but a wide variety of local expression. The procedure of feasts, of traditional dancing (manortor) the ceremonial division of meat (jambar), and other details of adat in Lintong ni Huta differ even from the immediately neighboring villages. Lintong ni Huta also has its special, history of founding that sets it apart from the older villages near Balige (see Chapter four).

The frequent internecine warfare, that in part prompted the founding of Lintong ni Huta, meant that settlement in the village tended to be in small defensive hamlets built near the rice land farmed by the inhabitants rather than in nucleated village settlements. Some of the thirty-eight

hamlets that comprise Lintong ni Huta were built as long as seven generations ago, others date from as late as the 1930's. Many of these hamlets (huta) are traditional walled hamlets with only a few households. Others have knocked down part of the earthen walls to allow the hamlet to expand. A few near the main highway have grown up haphazardly, according to no traditional pattern.

A traditional Batak hamlet was often built in the middle of irrigated rice land and the only access was a narrow footpath along the bunds of the rice terraces. Any stranger approaching the hamlet could be seen from a long way off. The walls surrounding the hamlet were made of piled earth several feet thick and often ten to twelve feet high. Thickets of thorn bamboo (bulu duri) were planted on top of the walls as a further defensive measure and the bamboo provided the inhabitants with materials for animal pens and other purposes. A hamlet had one or at most two entrances during the dangerous times of internecine warfare. One faced on the main access path and the second led to the pansur, the spring or well that provided drinking water for the hamlet.

The houses in a Batak traditional hamlet are arranged in two rows facing each other across the alaman, an open dirt courtyard where women unroll mats to dry rice and the enormous number of guests that attend any major feast in the hamlet are seated. Houses may be modern wooden structures built on a concrete slab, older houses built on pilings above the ground but in imitation of European architecture, or the characteristic Batak adat house.

The adat house is one of the most cited identifying characteristics

of Batak culture. In precolonial times it was assembled without nails, being tied together with rattan and palm-fiber twine. It is oblong, with a plank floor built on pilings five to seven feet off the ground. The walls flare out at an angle from the floor and have small, shuttered windows spaced along the sides of the house and on either side of the door. Smaller houses and what were formerly granaries, called sopo, are entered through a door cut in the front wall of the house. Larger houses called ruma have a door cut directly into the floor near the front wall of the house. The most unique feature of a Batak house is the saddle-shaped roof which flares up to a sharp peak at either end of the house, approximately twenty-five feet above the ground. The front of some Batak houses is carved with nonrepresentational, curvilinear decorations, masks of protective spirit figures, and painted scenes of warriors and other subjects. The carvings and masks are painted with the Batak sacred colors of red, black, and white. The art of the carver was greatly admired and the formula for the paints jealously guarded. The colors on some houses still appear unfaded after 90-100 years.

The area below the peak of the roof in the front of the house forms a small gallery, accessible from the inside, where musicians sit to play for dancing at major feasts. Many older adat houses have a forked stick nailed to the front of the gallery which supports a pole to which the drums of a Batak musical ensemble are tied. This signifies that a major feast has taken place at the house. A similar gallery is built on the inside of the house at the same level which forms a loft or balcony over the front entrance. This loft is often used to store the all-important

bahul, a round, flexible, flat-bottomed container made of twined pandanus leaf which is used to store unmilled rice in a Batak household. A large bahul may be one-and-a-half to two meters in diameter and the sides, when it is full, may stand one-and-a-half meters high, and it can store several hundred kilograms of rice. For ratproof storage the loose material at the top can be folded over and sewn with twine, or the sides can be rolled down as the stored rice is used.

The main form of an adat house is often undivided. Small bedrooms may be partitioned off with plank walls at the front or back of the house. More frequently the only separate room is the kitchen. Poorer houses have no furniture; pandanus leaf mats (amak) of various sizes serving for entertaining guests, sleeping, sitting, etc. More affluent homes may have a large wooden wardrobe for storing clothes, a rattan settee and chairs around a small table, a plain wooden dining table and chairs, or a large plank bed with kapok mattresses. More recently available consumer goods which mark a house as well-to-do are treadle sewing machines, cassette tape recorders, pressure lanterns, and Honda motorcycles or Vespa motor scooters. The walls of the main room are often decorated with snapshots of children, formal portraits of grandparents, and advertisements cut out of illustrated magazines.

The kitchen is usually a small room added on to the main structure of the house. Cooking is usually done on a small, raised hearth which burns firewood as the commonest fuel. In older houses one can still see the dalihan na tolu, three stones on the hearth arranged in a triangle to support a hudun, a round-bottomed clay pot used in the past

to cook rice. In the past up to four families might inhabit an adat house and the hearth was the focal point of a nuclear family. The three stones have been replaced by an iron grate and the hudun is now an aluminum rice pot. Every hearth also has a kuali ('Chinese wok') and a grinding stone (gilingan) for grinding condiments such as chiles and shallots to a paste to add to sauces. Enameled dishes and cups, as well as glasses for coffee and tea, are kept on an ingenious metal or wooden rack where they can be placed wet from the dish pan and drain where they are stored. An assortment of baksets holds condiments, manioc, and salted dried fish called gulamo, the commonest form of protein in a Batak meal. A covered tin, plastic pail, or wooden chest holds the all-important supply of freshly milled rice. Kettles and buckets hold the supply of drinking water brought fresh from the spring each day. The back door of the kitchen may open directly onto the hamlet walls, or a small fenced kitchen garden in which the wife of the family grows manioc or sweet potatoes, condiments, a banana plant or two, and a mango or other fruit tree.

The tall pilings on which an adat house is built form a corral for the family water buffalo, and provides storage for the larger agricultural implements. The Batak places an emphasis on producing large families and many of the decorative features of an adat house are concrete prayers for fertility. A carved decoration (dila payung) hanging from the tall peak of the roof is often obviously phallic, expressing a hope for many sons. Carved wooden breasts placed on either side of the main entrance, called bagot ni ruma express a hope for many daughters.

The Batak huta is a special entity which is more than a place of

residence. Inhabitants of a hamlet refer to each other as dongan sahuta ('companions of one hamlet') and cooperate in many activities requiring personal and material assistance. A person giving a major feast can request or require assistance in financing (guguan) for the feast, donations of cooked rice, or the loan of equipment and labor from his kinsmen or members of voluntary associations to which he belongs. However, it is the dongan sahuta who are often the first consulted and give major assistance. Each household provides a donation of cooked or uncooked rice and loans mats for the guests to sit on. The men of the hamlet assist in the slaughter of the animals and the preparation of the meat dish for the feast, and also serve the meat to the guests. The women of the hamlet serve the guests their rice, assist in cooking and clean-up, and are on call for any task. The unmarried teenagers of the huta assist in the same tasks, and also go to the spring for the drinking water.

The hamlet is also the commonest base for cooperative labor parties. This is especially true for women who have married into Lintong ni Huta from outside the village. Their dongan sahuta become the people with whom they cooperate in transplanting rice or weeding the paddies, gossip with after work, and walk to church or go to market with. In case of a death or sickness in the family the dongan sahuta are the first to maningkir na mate ('visit the dead') or mamereng na marsahit ('see the [person who is] sick'). Neighbors help prepare coffee and tea for the visitors and loan glasses and cups.

Toba Batak have strong emotional ties to their birthplace. There are several phrases with connotative significance which refer to a man's

birthplace. Bona bulu 'the place of bamboo' refers to the bamboo that grows on the top of hamlet walls. The most frequently heard phrase is bona ni pasogit ('place of the ancestor spirit offering') which emphasizes the importance of the natal hamlet as the place of one's lineal ancestors. The natal hamlet is also sometimes referred to as the bona ni pinasa ('place of the jackfruit tree'), a large fruit (Artocarpus integrifolia) favored by the Batak. Warneck (1906:149) notes that a hamlet so called was the place of origin of a large patrilineal kin group and that "only rich men plant such (jack-fruit) trees as they intend to remain in one place." In the twentieth century the way to wealth and success has been through education and outmigration, rather than remaining in the Toba heartland to farm. Despite this many wealthy urban Batak retain close ties with their natal hamlets. They contribute to the financing for, and frequently attend major feasts given by their kinsmen. They contribute money for the upkeep of the village church and frequently bring their children home to be baptized there. It is not uncommon for a wealthy migrant Batak to build an elaborate, expensive home in his natal hamlet. He may visit it only one or two weeks a year, or never live in it at all, but it stands as a kind of insurance should his fortunes in the city fail, and as a testament to his hamlet-mates that he remembers his place of origin and its attendant responsibilities. Poor relatives are often allowed to live in the house rent-free or for a nominal rent, and they frequently share-crop the rice land owned by the wealthy migrant as well. No matter how far away a migrant moves he seldom sells or gives up rights to wet-rice land he has bought

or inherited, but usually rents it out to relatives in the village.

Another reason a migrant may build a home in his natal hamlet and retain rights to his wet-rice land is an intent to retire there. Many retired civil servants cannot get by on their pensions in Jakarta or Medan and return to the bona ni pasogit. In their family houses they can live comfortably on their income from rented rice land and their pensions. Many develop a belated interest in adat affairs in the village and may become elders of the church. One retired district supervisor who lived in my hamlet said that people got "old quickly" in the city and it was much healthier to retire to one's natal hamlet.

Lintong ni Huta consists of thirty-eight of these hamlets. Some retain their traditional form with the defensive walls intact and several adat houses still standing. The inhabitants of other hamlets have knocked down the defensive walls to allow the hamlet to expand beyond its original extent. Others have simply lowered the walls and cut new entrances to allow easier access to the road, farm land, and the spring. Some hamlets have as many as twenty to twenty-five houses in them while others have only one house.

Most of the hamlets in Lintong ni Huta are situated near the two roads in the village large enough for vehicular traffic. The largest is the main highway across Sumatra that skirts the village's southern boundary. Near the southwestern corner of the village a small branch road (jalan simpang) cuts off north and curves through the village towards the neighboring village of Tarabunga. Up until the late 1950's it was only a wide footpath. The government widened it but it was only a

dirt road, heavily rutted in places, and suitable only for motorcycles and four-wheel-drive vehicles. As part of a program to develop the scenic resources of Lake Toba the government paved the branch road for a distance of approximately two kilometers in 1975 to allow access to the headland of the Tarabunga peninsula. This point commands one of the finest views of the western shore of Toba. Few tourists ever used the road but the villagers were pleased as it made it easier for rice merchants to drive to the rice mills of Lintong ni Huta and Tarabunga where the people most often sell their rice.

The People, Markets, and Daily Life

The best way to introduce the specifics of the village, hamlet life, and some of the people and institutions in Lintong ni Huta is to describe it from the point of view of a stranger approaching the village for the first time. Points of interest, important hamlets, and features of the landscape will be presented in the order they would be encountered when approaching Lintong ni Huta in a vehicle along the main highway and then turning north on the branch road. Activities associated with specific places, such as the thrice-weekly market in the village, will be described at the appropriate point in the narrative sequence.

Lacking private transportation, the only way to get to Lintong ni Huta from Balige is by oplet, a kind of mini-bus, or to walk. Oplets are usually modified Mitsubishi mini-pickup trucks with the back covered with a shell and benches built in. Lintong ni Huta is only five kilometers along the main highway west of Balige, but the road is winding

and the rise in altitude sharp enough as the road skirts the lower slopes of Dolok Tolong that it is a tiring walk. Oplet drivers prefer longer distances fares than Lintong ni Huta, and it is often difficult to get an oplet except on Friday, which is market day in the great market in Balige. Oplets make special runs from the surrounding villages on market day and the fare is lower than on other days of the week. The only disadvantage is the crowding. Oplets can hold eight to ten adults safely. On market day they depart from the rear of the market with as many as twenty-three adults and children crammed into the cab and rear of the minibus by the driver's assistant. Women have market purchases in baskets balanced on their laps, outraged-looking chickens with their legs bound are tucked under the seats, and baskets of redolent salted, dried fish are lashed to the roof along with trussed pigs that urinate over the edge. As the overloaded oplet pulls away from the market the driver's assistant leaps onto the back and yells "ongkos, ongkos" ('fare'). Old women dig into camisoles for their boodle bags and count out the fare in large five-rupiah coins.

The road rises out of Balige past gently terraced fields that signal the end of the Holbung plain. The road is lined on either side with diffuse modern hamlets that lack the traditional defensive walls. Interspersed among the houses are occasional rice mills with smooth concrete drying floors in front where unmilled rice is spread out to dry during the warm hours of the afternoon. Here and there one also sees men seated at long tables in their favorite lapo ('coffee shop') drinking tall glasses of milky, white tuak ('palm toddy') or steaming glasses

of heavily-sweetened tea or coffee while discussing the day's events.

It is impossible to tell when one has entered or left the boundaries of one village or another from gaps in the hamlets facing the road. Some but not all villages have a church building of the Huria Kristen Batak Protesten (Batak Christian Protestant Church) or one of the smaller demoninations represented in the predominantly Christian Toba area. Hinalang and the village of Tarabunga on the Tuktuk Tarabunga (Tarabunga peninsula) have their own churches. The people of Lintong ni Huta prefer to attend the old and well-established church in Tampahan one-and-a-half kilometers to the west of the village. The highway approaches the foot of Dolok Tolong, the entire Tarabunga peninsula is visible to the north. Almost every hillside has been terraced for irrigated rice cultivation and patches of greenery, trees, and the traditional hamlets set like small islands in the midst of the paddies are visible. The development of Silean Banua has had a significant effect on this extension of wet-rice cultivation. The landscape apparently looked profoundly different when the Count von Brenner passed along the same path in 1886:

Our path snaked its way between the Tarabunga peninsula and Dolok Talong (sic) towards the plateau, which here is generally and correctly called the steppe, for as far as the eye can reach one sees nothing except lalang grasses and low ferns out of which here and there a hamlet stands out which lends the stamp of occupation to the otherwise monotonous scenery. (Brenner von Falsach 1894:136).

The first of the hamlets of Lintong ni Huta is Sukaramé. This is a hamlet of approximately thirty households that has grown up along the highway since the 1930's. Many people moved to Sukaramé from the interior hamlets of the village to be near the main road. A few hundred meters

up the main road is Lumban Panggabean. This was originally a traditional hamlet with defensive walls but has far outgrown its original extent and the houses have spilled out in an uneven line along the main road. It is a focal point for the eastern hamlets of the village. Several of the footpaths that lead from the interior of the village to the main highway go through Lumban Panggabean. It also has the most convenient rice mill for the hamlets in this part of the village. The noisy diesels that run the milling equipment in the Gelingen Padi Km 109 start up early in the morning and are busy again late in the afternoon after the days agricultural labor is done. Women or children home from school bring one to five kaleng (a liquid measure equal to 20 liters. A kaleng of unmilled rice weighs app. 10.5 kilograms) of padi ('unmilled rice') to the mill in gunny sacks or plaited pandanus-leaf sacks called tandok. They carry the freshly-milled, polished rice and the bran from the milling process, saved for pig and duck food home in separate sacks. Several adat houses in the area still have fine rice mortars of dressed volcanic stone, called losung batu, by the front door where young women used to husk the rice by pounding it with long poles. People now universally prefer the convenience of machine milled and polished rice. This represents an unfortunate trend in health for the area. A mission physician (Winkler:1925:51) noted in the 1920's that the only cases of beriberi he treated in the Lake Toba area were Coastal Malay people who ate milled rice instead of that pounded in the losung, which retained most of its vitamin content.

A few hundred meters past Lumban Panggabean a road branches off

the main highway which runs nine kilometers to the top of Dolok Tolong. The government was in the process of installing a microwave station on the top of the mountain in 1974. Some elders had protested the installation as they feared it would disturb a famous spring which was thought to have powers of augury. If a person visited the spring and found clear water he or she was guaranteed good fortune. If the water were muddy, or the spring dry, unfortunate occurrences might follow. Since the construction of the road to the top and the building of the relay station, the spring has been more often empty than in the past. Both times I visited it during my field residency it was empty.

Past the access road to the top of the mountain there are few houses. The slopes south of the road are steep and the land north of the highway slopes even more steeply towards the lake at this point. A bridge crosses a deep ravine with a stream that feeds some of the small irrigation systems in the village a kilometer past the hamlet of Lumban Panggabean. Just across the bridge on the south side of the road is the large traditional hamlet of Dila ni Tano. On the north side of the road is the lapo sigiringgiring ('coffee shop of the sound of the bell') so called because the sound of the church bell from the church in Tampahan a kilometer further to the west is audible in the lapo. Churchgoers who stop for a cup of coffee at the lapo know they are late if they hear the bell signalling the beginning of services.

The widow Marpaung who runs the lapo is typical of Batak women. She is short, not much over five feet tall, thin and has the distinctive facial characteristics of the Batak; a strong jaw, prominent cheek

bones, and generally robust facial bones. Her black hair is drawn back in a chignon, denoting her status as a married woman. Her lips and gums are stained red and her teeth black from years of constant betel chewing, characteristic of women of her generation. Despite being in her fifties, she goes about the endless labor of running the lapo and farming rice land tirelessly. At any time of the day she can be seen working in the fields if the agricultural cycle demands it, drawing water, scaling and cooking fish, and serving guests food and drinks with endless good humor until the lapo closes about 10:00 PM. She was born in Lintong ni Huta and married a man of the Butarbutar lineage from SiGaol. They eloped to the provincial capital of Medan as he couldn't afford the brideprice her parents demanded. With no prospects of farm land being available in SiGaol they returned to Lintong ni Huta and established the lapo. Over the years they expanded the building and bought riceland in Lintong ni Huta to provide rice for their own consumption and to avoid having to purchase rice to serve in the lapo. She runs the lapo successfully with the assistance of the four youngest of her ten children. Toba Batak society is overtly male-oriented and customary law denies women virtually any rights. Despite this, Batak women are independent, outspoken, and often more economically adept than their male counterparts. The widow Marpaung's husband died in early 1974, but by 1975 she had expanded the family rice land holdings and had a new and larger lapo built next to the old one with family living quarters upstairs. She also began serving more kinds of food in an attempt to bring in the bus and long-distance trucking trade which usually stopped at the numerous similar establishments in Balige.

Just beyond the lapo the branch road turns north off the main highway. It goes in a gentle curve towards the headland of the Tarabunga peninsula. The trunk canal of Silean Banua enters the village in the northwestern corner of the territory near the juncture of the highway and the main road. From there it runs under the road in several places and branches into its three main talpang or divisions to irrigate fields in all parts of the village. Another canal that flows to Tarabunga parallels the road providing a convenient place to wash clothes and dishes and to bathe children. The branch road passes several of the oldest hamlets in the village still surrounded by their thick earthen walls with sugar palms, fruit trees, and banayan trees growing everywhere.

The Village Market

About half a kilometer down the branch road from the highway there is a widening in the road with a few businesses which might be called the public center of Lintong ni Huta. On one side is a small building which is the office of the village headman (kepala kampung) where the villagers come to pay land taxes, obtain identification letters, and to receive their fertilizer allotments from the government. On the other side is another lapo, smaller than that of the widow Marpaung. A small store sells household necessities and serves as a lapo of sorts for the owner's friends. This widening in the branch road is also the site of the onan tambak ('market of the funeral monument') which is held three times a week.

The Batak have long had a cycle of great markets (onan) which are usually held once a week in the major towns of the tribal group areas. Balige is one of these as is Siborongborong, fifteen kilometers to the west in the Silindung Valley. These market days were one of the few occasions that people from widely separated areas could meet safely as the adat of the 'peace of the market' (sangsi ni onan) forbade violence of any sort during, approaching, or leaving the great market. Each locality also developed onan manogotnogot ('daily markets') where only a limited range of household necessities was available and the fishermen in the villages near the lake could sell their catches. The onan tambak in Balige is the largest and best established of these daily markets in the area. It draws shoppers from Tarabunga to the east and women come from the other villages of the region of Tampahan, Meat in the valley of Meat, Gurgur, and Tangga Batu to sell goods and purchase fresh fish.

Most often the women who sell goods at the onan tambak are part-time merchants who do not follow the round of major markets within a 100 kilometer radius of Balige as do the full-time partigtiga ('traders'). Women from Onan Tampahan near the church and the villages of Gurgur and Tangga Batu to the west bring manioc and sweet potatoes, the leaves of these tubers, Chinese cabbages, mustard greens, and other produce they have grown in their own market gardens to sell. The wives of fishermen from the valley of Meat and from Taragunga come with fresh ikan Jahir (Tilapia mosambica), a small fish introduced into Lake Toba in the past thirty years to improve the sparse fisheries. The women of Lintong ni Huta no longer tend their own kitchen gardens, for the most part, nor

raise produce for sale. Those who sell commodities at the onan tambak usually buy condiments such as ginger root, turmeric, chiles, onions, tomatoes, and limes, or the necessities for betel chewing at the market in Balige and resell them for a modest profit. There are also very few fishermen still active in Lintong ni Huta.

Usually the first person to set up in the market is Ompu Marsae boru Simaremare. Ompu Marsae is her teknonym, indicating that she is ompu ('grandparent') and the name of her first grandchild was Marsae. Simaremare is her lineage (marga) name and she is a boru ('daughter') of that marga. She is a woman of infinite good humor and likes the central position her early setup provides to chat with friends, observe what is going on, and to sell hungry shoppers her freshly-made fried snacks of grated manioc and palm sugar. Ompu Marsae is a widow like the proprietor of the lapo sigiringgiring but her story exemplifies another characteristic of Batak culture.

In Batak custom it is anomalous for a widower to remain unmarried, while widows at present almost never remarry. Older men frequently marry a woman several years their junior as their second wife to care for them in their old age. Ompu Marsae is one of these panoroni, a word in Batak which means 'replacement wife'. Panoroni are second class citizens with inferior rights in customary law compared to first wives, and their children often inherit less than their half-siblings as well. Ompu Marsae was not born in Lintong ni Huta, unlike the widow Marpaung, and has no lineal kinsmen in the village on whom she can rely for assistance, and through whom she can get access to wet-rice land to share-crop. Her

husband's kin have not been forthcoming with assistance and like many panoroni she must rent land where she can get it and work in other people's fields and do other things to augment her meager income. She rents a small amount of rice land but farms a large dry garden of almost two-fifths of a hectare in which she grows manioc, sweet potatoes, chiles, bananas, and onions and other condiments for sale at the onan tambak.

The onan tambak begins about 6:00 AM. Ompu Marsae lays down her plastic tarps in the middle of the branch road with baskets of manioc, an enamel bowl full of fried snacks still hot from the oil, little piles of chiles and ginger root arranged in front of her, a few limes, and bound bunches of betel leaves, areca nut, and moist, coarse-cut tobacco from the island of Samosir to chew with the betel. She prepares a chew of betel and greets the early arrivals to the market. The first to arrive are vegetable sellers from Tangga Batu and Gurgur. They come balancing heavy baskets on their heads full of manioc, sweet potatoes, mustard greens, and other vegetables. The vegetable sellers arrange themselves on both sides of the road approaching the market and arriving shoppers have bunches of manioc leaves held up for their inspection or cloths are pulled aside from baskets to display especially large manioc. The women from Tangga Batu and Meat and the wives of the few active fishermen in Lintong ni Huta appear with their husbands' catches still flopping in buckets and enamel pans. They arrange themselves in a semi-circle at the end of the market place and the complex bargaining for the Tilapia begins, based on size and color. The larger fish that are caught by net are sold by the fish--the darker the color and larger the

higher the price. Small fish that have been caught in fish-traps are measured out by the soup plate full. Occasionally the fishwives bring some of the native fish from Lake Toba which are favored and bring a higher price than the introduced Tilapia. Last of all the women of Lintong ni Huta arrive and set up in the middle of the market to resell the goods they have bought in Balige. Some traders sell more specialized goods; one old woman from Lintong ni Huta sells the commonest and cheapest kind of salted, dried fish, a trader comes from Tampahan sometimes to sell cooking oil, a partuak sells the milky-white palm toddy from a palm-oil tin, and occasionally, a seller of children's clothes or yard goods and sarongs tries her luck.

The market is in full swing by 7:00 AM. Women come in groups up the main highway, from the interior hamlets and those along the main road, and from Tarabunga. They circulate through the market fingering vegetables and condiments, bargaining, and chatting over snacks. Women who arrive late are greeted with a good humored "ba tarlambat ma hamu, nunga ginjang ari" ('you're late, the sun is already high'). By 9:00 or 9:30 the trading is over and the various traders pack up their wares to return to their home villages. The onan tambak in Lintong ni Huta was not one of the "regulated markets" (onan na marpatik) such as the great market in Balige but what Vergouwen (1964:120) calls a "morning market" (onan manogot-nogot). It is however greater in scope than the general morning market. There is, for example, in Meat a market which meets for an hour each morning where women from the villages in the valley sell produce, fish, and the barest necessities. The scope of the onan tambak

and the fact that it draws traders from all the villages of Tampahan, the greater region of which Lintong ni Huta is a part, and Tarabunga as well, is an indicator of the prosperity of the village. Much of Lintong ni Huta's prosperity is due to the productivity of its rice land, irrigated and created by Silean Banua. Many of the traders in the onan tambak indicated that rice yields were higher in Lintong ni Huta than in Gurgur or Tangga Batu to the west. The villagers of Lintong ni Huta were prosperous enough, and had a secure enough rice crop to purchase vegetables and other produce which they had formerly grown in their own dry gardens. Many of the women from Tangga Batu and Gurgur who dealt in tubers and vegetables stated that without their secondary cash-crop farming and trading in the morning markets they could not make a living.

The Eastern Village Boundary and the Lake

A stranger leaving the onan tambak would see the oldest hamlets in Lintong ni Huta on the west side of the road, including the first hamlet founded in the village, Huta Bagassan. To the east of the road some of the most productive rice land in the village slopes gently towards one of the numerous ravines that cross-cuts the village. One elder stated he would not sell his seven rante (.28 hectare) in this area for any number of kaleng of rice. The road curves sharply to the east and skirts the 100 meter cliffs above the lake that form the northern boundary of the lake. This part of the road affords the visitor one of the finest views of the west shore of Lake Toba as far as the sacred mountain of Pusuk Buhit where the progenitor of all Batak, Si Raja

Batak, had his first village of Sianjurmulamula.

Directly below the road at this point is the small lagoon of Pakodian. On the steep hillsides descending to the lake one can see dry gardens still maintained by some of the villagers near the cliffs. The dry gardens give way to terraced rice land as the slope becomes less steep. The land is still farmed despite the fact that fertilizer, seed, and implements must be carried down steep paths to the rice land and the harvest carried out the same way. Pakodian was also the site of two hamlets which have been abandoned for more than thirty years.

The road continues for some distance along the cliffs and then turns inland towards the village of Tarabunga. The land on either side of the road is hilly grassland used by the inhabitants of the last three hamlets in Lintong ni Huta as pasture land for their numerous water buffalo. The area is also the tambak for the northern hamlets of the village. The word tambak in the Batak language originally meant a hilly burial ground planted with trees, but the meaning has been extended to include the elaborate cement funerary monuments the Batak build. The Batak practice the custom of disinterring their dead after twenty-five or more years of burial, packing the bones in small coffins, and placing them in these large monuments during an elaborate three day feast. In the past this custom (mangongkalholi) was reserved for rajas and wealthy people as the receptacle for the bones was made out of hollowed-rock. The introduction of cement in the twentieth century has revolutionized the custom and most of Toba is now dotted with elaborate monuments. There are itinerant craftsmen (tukang semen) who occasionally lay concrete

slabs for houses, but mostly specialize in constructing these monuments to order. To reinter one's parents and grandparents during a mangonq-kalholi feast is now considered the final part of the adat na gok ('the full adat') which dutiful sons celebrate for their parents who have lived to see their grandchildren (sarimatua). The area around the monuments is dotted with the graves of those awaiting reinterment.

The end of the tambak marks the northern boundary of Lintong ni Huta. The headland of the Tuktuk peninsula juts further out into the lake giving a view towards Balige to the east, the west shore of the lake, and parts of the south shore of Samosir. When the government paved the branch road in 1975 negotiations began with the elders of Lintong ni Huta and Tarabunga for permission to build a hotel on the tip of the peninsula beyond the tambak of Lintong ni Huta. The elders refused as they feared that the presence of foreigners would make the villagers envious of their wealth, the power of adat would be lessened, and that orang hipis ('hippies') would corrupt the morals of the young people.

Hamlet Life

Life in a Toba Batak hamlet has a cyclic regularity. There are certain daily tasks which never change, but the rhythm of hamlet life revolves around the agricultural cycle. Much of the labor in wet-rice agriculture is performed by individual farm families. Heavy labor such as hoeing and weeding, or that which must be accomplished quickly, such as transplanting or harvest, orders the existence of the hamlet

during that part of the harvest year. Work parties of men or women form to work cooperatively (marisalap ari) in each others' fields, or for pay. Women often speak of having a wedding feast for a daughter or visiting a relative in East Sumatra dung sidung marbabo ('after weeding is finished') or defer something important until after harvest. Major feasts most often occur in the fallow period after harvest in June or July, or in the period between the last weeding and harvest.

A Batak hamlet begins stirring at dawn. The women are up lighting fires to cook rice and heat water for tea or coffee. The black, bristly Southeast Asian pigs, that almost every household raises for market, begin nosing their troughs expectantly as the women of the hamlet descend the wooden ladders from the kitchen to feed them. Calls of hurje, hurje are heard that bring laggard pigs to the troughs to receive a mash of rice bran (dodak) recovered from the milling process, water, and kitchen slops. Milled rice is tossed in basketry trays to winnow out the cracked and poorly-milled grains and then put on to boil. After a light breakfast young boys and old men lead the water buffaloes out from under the adat houses where they are corralled and drive them to pasture. Before 8:00 AM the younger children troop off to elementary school in Tampahan up the main highway and some of the older children go to the various specialized middle and upper schools down the highway towards Balige in the educational complex of Saposurung. If it is a market day the women go to the onan tambak, or to Balige if it is Friday. The men gather in the hamlet courtyard to form work parties if group labor is required by the agricultural cycle, or they go to their fields individually. By

9:00 AM the women are back from the daily market in Lintong ni Huta and begin preparing the midday meal to take to their husbands in the fields. If it is time for transplanting the seedling rice or weeding, primarily women's work, they go to the fields themselves for a half day's labor leaving the children in the care of their older siblings, old people, or their husbands.

By noon the hamlet is almost deserted with everyone out in the fields, away on errands, or at work in town. In the early afternoon the younger children come home from school. The women take their younger children and babies to the spring to bathe, wash clothes, and get drinking water. Major and minor irrigation canals are convenient to any hamlet but the Batak prefer to get drinking water and bathe at springs they have tapped themselves. A hole is bored into the hillside below a rice terrace and the water that seeps out is clear. Many of these springs have been improved with stone and mortar enclosures for privacy and pipes for the flow of water. A trip to the pansur ('spring') is a social occasion and maximum utility is made of the occasion as well. Two or three women will go together with their children and squat on the rocks washing clothes while the children bathe, play, and spread the clean laundry out to dry on the grass and bushes. The women bathe, dishes are frequently washed at this time as well, and everyone who is capable of balancing a container on the head takes a bucket or kettle of drinking water back to the hamlet. Children start with a kettle balanced on the head held with one hand, but by age seven or eight they can balance a twenty-liter bucket of water with ease while making their way on the steep path back to the hamlet.

In the mid-afternoon the women take a light meal of lampet, steamed cakes made of rice flour and grated coconut, and sweet coffee to the men in the fields. If the women are working in the fields, they return to the hamlet at this time to bathe and prepare for the evening meal. In clear, warm weather the women roll out pandanus leaf mats in the hamlet courtyard to dry stored rice in the sun (manjomur). Unmilled rice can be stored up to a year but must be periodically dried in the sun to prevent spoilage from dampness. A gunny sack full of rice is spread carefully on the mat and the owner rests in the shade of an adat house chatting with neighbors and throwing an occasional stone at chickens and pigs that get too near the drying rice.

In the late afternoon the older children return from school and some go to help in the fields. The old men bring in the water buffalo from the fields and let them rest in the hamlet courtyard before returning them to their corrals. The young children treat the docile animals like playground equipment, turning somersaults over them, pulling their tails, and riding the young bulls around the hamlet. Teenaged boys take sickles and gunny sacks to the stream beds to cut grass for the buffaloes' evening fodder. The diesels at the three rice mills in the village start up and people bring sacks of rice still warm from sun-drying to be milled. Women and young girls go around the hamlet and surrounding areas with baskets and scoops picking up the pig and buffalo manure which is carefully dried and burnt to make a fertilizer called sirabun. This is applied to the fields periodically along with chemical fertilizers. People who have been working in the fields go to the

pansur to bathe and wash their work clothes and agricultural implements. Fires are kindled on the hearths to cook the evening rice. The pigs are fed their evening mash and the ducks make a quacking exodus from the streams and fields where they have been foraging to the safety of their pens as the sun sinks. The men, in fresh clothes with sarongs draped casually about their shoulders, congregate on doorsteps in the hamlet to smoke and talk while the women prepare the evening meal.

The evening meal is usually the largest of the day and is eaten after sundown. The entire household gathers in the kitchen and sits on mats. Christian families say grace and the wife and teenage daughters of the family serve the most important component of the meal, copious quantities of rice. To a Batak a meal is not a meal without rice. A group of unmarried girls requested an "American meal" from me during my field residency. They ate large quantities of beef (waterbuffalo) stew with potatoes, bread, fruit salad, and vegetables. Their older brother told me with amusement that when they returned home they had each eaten a bowl of rice because they still felt na male ('hungry') because the American meal lacked rice. The accompanying meal dishes at a Batak family meal are usually fried gulamo (salted, dried fish) or fried fresh fish usually Tilapia, and a vegetable which is most often manioc leaves cooked with turmeric. This is occasionally augmented with fried duck eggs, additional vegetables, or Chinese goldfish that people raise in the rice paddies after harvest. The Batak usually get meat or chicken only at festive occasions or major feasts. Talking is minimal in a Batak household during a meal. Food is believed to be nourishing to the

spiritual essence as well as to the body and eating is almost a ceremonial act which requires silence to be most beneficial.

After dinner the family usually breaks up. Younger children drift off to bed as they get sleepy, wrapping up in sarongs, blankets, and mats. The men may go to the lapo for some coffee or a glass of palm toddy, read the newspaper, and discuss the news and happenings of the village. Women may visit neighbors or stay home to mend and see to other household tasks. Children and teenagers in middle and upper school congregate in the house of a friend and do homework around a single kerosene lantern. The most active people in the hamlet are the unmarried young men and women. Evening is the time to go martandang ('visiting') to court a prospective bride. Young men usually go to other villages. Most of the prospective brides in a man's own village are lineal kinsmen or members of wife-taking affinal patriclans, both of whom are forbidden marriage mates.

The young man and a younger, adolescent companion (dolidoli parsi-ajar) go to the house of the girl the young man may have met at church, a feast, market day in Balige, or who is a preferred marriage mate of his mother's patriclan. The young women of the village frequently meet at the house of a friend to embroider and wait for young men to come martandang. Formal courting used to entail the reciprocal improvisation of quatrains of poetry (pantun), conventional riddling (torhan), and other word games between the young men and women. Such linguistic virtuosity in these games was once greatly admired, but is now a thing

of the past. Young men of marriageable age who can't raise the money for brideprice (sinamot), who must wait for an elder sibling to marry first as adat demands, or who haven't married for other reasons usually work family rice land and eat in their parental homes but seldom sleep there. In the past they would sleep in the open rice granaries (sopo) which were once a common feature in traditional hamlets. If they don't go out courting they usually take their sarongs and blankets to the house of a widow with a dependent son living at home. They sit on mats and play dominoes or card games, sing popular songs to the accompaniment of a cheap guitar, or talk and joke before going to sleep. By 10:00 or 11:00 p.m. everyone is in bed and asleep until sunrise and the cock's crow starts the cycle over again.

The Agricultural Cycle

The rhythm of life in a Batak village is finely attuned to the needs of the all-important rice crop. Of the inhabitants of Lintong ni Huta only those people too old to farm and one professional couple, a nurse and technical school teacher, did not actively farm rice. Other married couples who were both employed attempted to farm two or three rante (.08-.12 hectare) of share-cropped land to help supply the family's subsistence needs. For most of the inhabitants of the village the overriding concern is to farm enough land, put together from inherited and purchased holdings, land gifts from wife-giving affines, and share-cropped land to grow a sufficient crop of rice for a family's needs with enough surplus to sell for the other necessities of life. The

village headman and other elders admitted that this preoccupation with rice causes the farmers in Lintong ni Huta to ignore opportunities to increase their cash income by growing fallow-season crops, or putting a portion of the paddies into vegetable production for market. For most people work in dry gardens is 'secondary labor'; the yield from the wet-rice land is what is important.

Agriculture has undergone a great deal of change in Lintong ni Huta in the past one hundred years, most of it due to the water supplied by the system of Silean Banua. At the time of its founding Lintong ni Huta had only dry-rice fields. Sometime before construction began on Silean Banua in 1868 the small watercourses in the ravines that cross-cut the village territory were damned and weirs were built to form five distinct small irrigation systems. The area that could be turned into irrigated rice land with the water from these systems was limited but it was the start of irrigated rice agriculture in the villages. At this time the people of the village grew slow-maturing red rices with a growing season of 7 1/2 to 8 months. They also practiced broadcast seeding; sowing the seed rice directly in the paddies and practicing a limited kind of transplant technique (mangarak) by evenly spreading the seedling rice around the paddies after it had matured after approximately one and a half months. In the late 1930's the Dutch introduced nursery-bed transplant techniques (marsuan) which became the universal practice in the village five years after their introduction.

By the late 1920's Silean Banua was flowing securely and most of the terraced rice land that was cleared with the water from the system

had been completed by that time. In the 1930's and early 1940's people began experimenting with alterations in agricultural techniques as a result of the secure flow of water in the irrigation system. The steepness of the terraces in most parts of Lintong ni Huta and their narrowness makes the use of a plow pulled by water buffalo difficult. Normal practice was to begin drying out the paddies prior to harvest and leaving the fallow paddies dry until a month before preparation for sowing the next crop. While the paddies were still dry they were first plowed, then irrigated, and then hoed. With a secure irrigation system, people began irrigating the paddies directly after harvest and left them flooded throughout the fallow season. They found that the soil remained soft enough to eliminate plowing and allowed them to do the first turning of the soil at the time of hoeing. One farmer admitted that plowing was more efficient in breaking up the weedy fallow paddies and made hoeing easier, but only if the paddies were broad and flat and one had access to enough water buffalo for plowing. Water buffalo tire easily and work only half a day, especially at plowing which is the most strenuous task for which they are used. To rent the services of a buffalo one must pay the same amount as the wages of an adult male agricultural laborer, and see to the pasturing of the buffalo as well as other related tasks.

The most radical innovation in agriculture in the village came in the late 1940's or early 1950's. Long grain white rices that matured in only five-and-a-half to six months were introduced from lowland East Sumatra and have completely supplanted the red rices. These rice

varieties do not require a second weeding because of the shorter maturation time and they can be threshed on a threshing frame called a flail (bantingan) by beating the heads of the rice against the frame (mambanting). The grains of rice in the panicle of the red rices could not be dislodged by this method and had to be threshed by the old, slow, and painful method of threshing with the feet (mardege). Beginning in 1971 some farmers in the village experimented with the rice variety put out by the International Rice Research Institute called IRRI-8, one of the "green revolution" rices. Disappointing results in the experimental plots and the high cost of fertilizer and labor for a second crop did not encourage its permanent inclusion among the regular varieties of rice the people plant (Lando 1977). In 1975 the people of Lintong ni Huta commonly grew only one crop of a rice a year. The period of peak activity is from early fall when the soil is prepared and the nursery beds laid out until harvest in the first two weeks of June.

The first task of the cycle is to irrigate the fields (mandabu aek) directly after harvest in June. The small canals that feed water into the individual paddies and drain them must be cleaned and the flow of water regulated. At this time an industrious farmer will build up the bunds around the paddies (mambatange) by hoeing fresh mud up and over the bunds from the paddies. Some people plant fingerling gold fish in the flooded paddies at this time to mature until the time of transplanting. The practice of limited fish farming was introduced in the village approximately thirty years ago. Young gold fish of various sizes are sold by itinerant traders in June and are available year round in the market

in Balige. People see only a small percentage of the fingerlings they plant in the fields grow to eating size. Fingerlings are lost because of lax water control, ducks who forage in the fallow paddies, and fish theft just before the farmer intends to harvest the fish. Many farmers stated they were going to give up planting fish (mambahen dengke) in the paddies because of the increased incidence of thievery. The fish must be moved from plot to plot during the phases of working the soil prior to transplanting. People begin taking a few fish home from the fields each evening after work after the fish have reached minimum eating size, approximately fifteen centimeters. The fish seldom achieved a length of greater than thirty centimeters before they were all harvested just before transplanting began. One enterprising person in the village brought the smallest size fingerlings up from Pematang Siantar in East Sumatra, obtained from kinsmen who had migrated there. He parcelled them out to other kinsmen in Lintong ni Huta who released them in their paddies for two months until they had reached premium planting size (approximately five to six centimeters in length). They were then netted from the paddies and transported back to East Sumatra for sale to farmers there. This limited hatchery business kept the profits entirely among a group of close agnates in Pematang Siantar and Lintong ni Huta.

At the end of August or the beginning of September hoeing (mangombak) begins. This is sometimes called 'turning over the land with a hoe' (mangombak balik). A team of workers advances across a paddy digging broadbladed hoes (ombak) into the soil in unison, turning over the earth, and advancing again. Occasionally a three-pronged hoe, like

an oblique pitchfork, is used. This tool was once made of the hard interior wood of the aren palm, a smooth-grained black wood called pangkok. Pangkok is still used to make the teeth for locally-made rakes and harrows. Local blacksmiths now produce the steel-pronged hoes, called hudali. Many Batak claimed this is an invention unique to the Lake Toba area. The fields must be drained for hoeing and any gold fish is moved to a separate paddy which remains flooded until hoeing is completed. Once hoeing is completed the fields are flooded again and left for two to three weeks.

The next phase of the agricultural cycle is to harrow (mangisir) the hoed paddies and to specially prepare the nursery bed (same) for the seedling rice. The Batak harrow (sisir) looks like a giant rake with teeth thirty to forty-five centimeters long that is drawn through the fields by one or two water buffalo. The first harrowing is done at the end of September. At this time the nursery bed is also prepared. A corner of one paddy in a field is walled off with temporary bunds (batang) and finally harrowed. The bunds are built up, the soil hoed until it is smooth, and raked with a hand rake (rogo tangan). The final stage is to smooth and even out the soil with a tool called a durung wich looks like a large hoe with a wide wooden plank attached to the handle in place of a metal blade. The people of Lintong ni Huta claim the durung as a local invention which came about as the result of the softness of the soil in the village fields after they bagen irrigating the year round. The word durung originally meant a kind of fishing net and the application here is puzzling. Harrowing is repeated in the middle of October.

About the time of the second harrowing the seed rice is planted in the nursery beds. The seed is soaked under water for two nights and days and then left covered in a gunny sack for two more days. It is then sown in the nursery bed. Water control in the nursery bed at this time is crucial. The water must be moving slowly through the bed but not fast enough to dislodge the sprouting rice from the soil. After four days the nursery bed must be periodically dried out and fresh water added. If too much water is released at this time the seedling rice can be attacked by birds. While the nursery bed is growing the final preparations of the fields for transplanting are done. After the second harrowing, the sides of the bunds are scraped (manasape) to remove weeds and grass with a hoe or a special tool which is locally made called a sasap. It has a spatulate blade and a long handle. The bunds are again smoothed over with fresh mud from the paddies.

The final harrowing is done with a different kind of harrow. The ordinary harrow is a meter-and-a-half in width and has large, widely spaced teeth. Traditionally the fields were raked with a hand rake after the second harrowing with an ordinary harrow. The hand rake was adapted to make a 'rake harrow' (sisir rogo), which is two meters wide and has a large number of short teeth (eight to ten centimeters). The rake harrow is also drawn by one or two buffaloes and the fields are harrowed once or twice in this manner. The final preparation is to make sure that all weeds and grass have been worked into the soil and to smooth and even it out with the hoe-like durung (mandurung).

Fertilizing strategies vary greatly from farmer to farmer in the

village, but the time of soil preparation requires some applications of fertilizer. The farmers receive a limited amount of tri-sodium phosphate fertilizer called TSP and a urea fertilizer, called Urea, from the government at subsidized prices on credit, which they pay at harvest time. Most farmers in the village fertilize the fields with TSP at the time of rake harrowing. A very few farmers in the village work untreated manure (lalang) into the soil with a harrow at this time also. Farmers who can afford it treat the nursery bed with a fertilizer obtained only in the market called JetA, which is thought to promote vegetative growth in the seedling rice. Those farmers who still made the fertilizer called sirabun from burnt manure also applied it to the nursery bed at this time. One farmer stated it helped to keep down insects. Farmers who couldn't afford the market fertilizer treated the nursery beds with a small amount of Urea.

Once the seedling rice has been in the nursery bed for forty to forty-two days transplanting (marsuan) begins. This is a time of intense activity as it must be accomplished quickly so that the crop will mature evenly and the seedling rice doesn't remain in the nursery bed too long. Transplanting is traditionally women's work and teams of women work in each other's fields on a cooperative basis or for wages. The rice in the nursery bed is uprooted and separated into clumps (tutum) which are bound with a piece of grass and transported to the waiting paddies. A team of women backs shoulder to shoulder across the paddy as each woman separates four to six stems of rice (sansuan) from the clump of seedlings in her left hand and imbeds it in the mud a handsbreadth from the

neighboring seedlings. The women are remarkably fast and accurate at this task. One woman was timed and capable of planting seventy-two sansuan per minute with each transplant eighteen to twenty-two centimeters from its closest neighbor. Transplanting usually takes place at the beginning of November.

After transplanting the rice is left to grow for one month. Irrigation control is important at this time. The water level must be kept low and the movement of water through the terraces slow enough so that it does not dislodge the transplanted seedlings before they take root. One month after transplanting, the first weeding takes place (marbabo). Weeding, like transplanting, is traditionally women's work. A team of women advances through the paddies pulling weeds by hand or using a small hand hoe. The weeds are thrown onto the bunds and are taken back to the village for buffalo fodder. While the women are weeding, the men and teenage boys cut the grass growing on the sides of the bunds (mangarambas). The grass is left to dry on top of the bunds and put back into the water to help fertilize the soil. An application of Urea fertilizer is made after the end of the first weeding.

Once the weeding is completed the period of intense labor in the agricultural cycle is through until harvest begins. Some people weed a second time one month after the first, but it is not common and usually an individual effort. During February, March, and April little labor is necessary in the fields. People hold weddings and other feasts at this time that they do not wish to defer until after harvest. In late March people begin preparing for harvest. Agricultural tools are repaired

and stored, women gather to mend the pandanus leaf mats that are used for many stages of the harvest labor, and the entire family gathers, splits, and stores enough firewood for cooking to last through the harvest.

Harvest (panen) begins anywhere from mid-May to early June depending upon the variety of rice being harvested and when it was planted. For a farmer, who works a hectare or more of land, harvest can last up to two weeks. The entire family works. Children away at school or collateral kinsmen not involved with their own harvest come to stay in the village and help. Harvest in the village is the only time that itinerant agricultural labor is available. A large number of people from the Silindung Valley approximately thirty kilometers to the west of Lintong ni Huta come to the village and then follow the harvest cycle across the south shore of Lake Toba.

The Batak harvest rice with a sickle (sabit) rather than the rice knife (aniani). They agree that less rice is lost using the rice knife but feel it is too time consuming and that they lack sufficient labor resources to use it. They also prefer the speed and ease of harvesting with a sickle. The rice is cut a few centimeters above the level of the water in the paddies and laid behind the harvester on the stubble. After the paddy is harvested the rice is laid on a mat to dry for up to three days before threshing. In the past the Batak threshed by foot (mardege). A frame with a cross strut, like a ballet barre, was set up and two or three threshers rubbed bundles of rice between a mat and their feet and passed the bundle to the next thresher. The varieties of white rice now common in the village can be threshed on a threshing

flail (bantingan). A rectangular frame of wood is built and set on wooden legs at waist height. Slats of split bamboo are nailed on it with a few centimeters' space between them. A bamboo framework is built above that and draped with tarps to prevent loss of grain during threshing. A team of five or six people is most efficient. One person separates small bundles of rice from a pile next to the flail and hands it to the first thresher. he or she beats the rice heads against the flail and passes it to the next thresher in line. The last person grinds the threshed bundle underfoot as in mardege and throws the straw in a pile off the mat. The rice is winnowed in the field to remove the largest chaff. The rice is carried in sacks from the fields to the waiting bahul ('storage container') in the farmer's house.

SUMMARY

This chapter has served to introduce the village of Lintong ni Huta, its people, and their agriculture. In part this chapter sets the stage for the discussion of the history of irrigation in the village, and especially Silean Banua, and shows the impact that the development of irrigation has had on Lintong ni Huta. In a direct way irrigation shaped the village over time. The first hamlets in Lintong ni Huta were placed in territories allotted to the maximal kin groups which first settled the village so as to take advantage of natural water sources and later the development of the small irrigation systems in the village. The succeeding hamlets built by descendants of the original settlers spill out in irregular lines along the riceland to the northeast of the first

of the first hamlets in the village. They parallel the village boundaries and the branch canals of the system of Silean Banua, and the small irrigation systems. Secure irrigation has also contributed greatly to the prosperity of the village. Rice yields are greater than in neighboring villages, and as we have seen the onan tambak is a well-established morning market which draws traders from all over the region of Tampahan. At the time of my field residency rice land in Lintong ni Huta was attracting young married couples to the village who had tenuous kin connections in the village to claim priority to share-crop land. Young men from other villages chose forms of uxorilocal residence after marriage to make an attempt at farming in the village rather than in their own villages or face an uncertain future in one of the cities.

In the first chapter of this work the basic problem of how irrigation, and especially the large, artificial system called Silean Banua, developed in a Toba Batak village was presented. In this chapter we have peopled the village and presented a brief picture of its appearance, topography, and the daily life of its inhabitants. Special attention was given to the agricultural cycle and some of the changes in it over time that have been made possible as a result of secure irrigation. In the explication of the event of founding Silean Banua this chapter has presented part of the journalistic Who and Where. The chapters which follow will present a step by step background of how this village and its irrigation systems came to be; the external forces which prompted the founding of the village and Silean Banua and the aspects of Batak social organization which facilitated the construction of Silean Banua.

Chapter 3

We will be concerned in this chapter with the structure and mechanics of Toba Batak kinship and how it relates to the building of Silean Banua. At a general level, knowledge of the kinship system is necessary to understand the entire society. The Toba Batak were, and for some purposes still are, an emphatically kin-based society. Kinship, real or fictive, governs interpersonal relations and in the past carried weight in governing villages and markets and in the control of corporate resources. Territorial, ceremonial, and corporate groups were, for the most part, defined by patrilineal relationships between the participants. The Batak as a people view themselves as being descended from a single ancestor, Si Raja Batak, and have ramified into a number of exogamous, named patricians (marga). Detailed genealogies chart not only relationships between individuals and lineages within the individual patricians, but between the maximal divisions of the Batak people as a whole. The patrilineal groupings are bound together by an asymmetrical exchange marriage system. For any individual male Batak the social world is divided in three parts; his own localized segment of his patrician (dongan tubu), the clans from which men of his lineage took wives (hulahula) and the clans into which women of his lineage married (boru). The Batak symbolize these as the daliha na tolu, three hearthstones arranged in a triangle to support a cooking pot. The direction of marriages must never be reversed. If a lineage has given women in marriage to another lineage it forms a wife-giving/wife-taking relationship which continues

through time. Members of three maximal subdivisions of the Simanjuntak patriclan acknowledge as their apical ancestress a woman of the Sihotang clan. When the Sihotangs dedicated a monument to their founding ancestor they invited the wealthy and numerous Simanjuntak clan as the senior wife-taking affines in the genealogies. Eight boatloads of Simanjuntaks answered the invitation and Simanjuntak men were heard to address Sihotang women as mother's brother's daughter despite the fact that the marriage which created the affinal relationship was fifteen to seventeen generations removed from the participants.

At a specific level a knowledge of the kinship system is necessary to understand the way in which the cooperation to build Silean Banua was achieved and the basis of its administration. Kinship often defines the limits of membership, the rights, and the responsibilities and obligations of a group of people engaged in a common undertaking or the administration of a corporate resource. We noted in chapter one that the presumption of common descent allowed the village of Lintong ni Huta to define itself as a group bound by more cohesive ties than common residence; those of kinship. This allowed the application of aspects of adat for the financing, labor, and administration of Silean Banua that were commonly used by patrilineal descent groups for projects of a lesser scale than the construction of a large irrigation system.

The building of Silean Banua was the outcome in part of predictable events. A number of small irrigation organizations existed in the village whose collective capacities were insufficient to irrigate enough wet-rice land for a growing population. A need was felt for a

village-wide irrigation system. Aspects of adat applied on a larger scale than was usual achieved the means for the construction. A number of idiosyncratic historical factors also directly influenced the evolution of Silean Banua; the particular history of the founding of the village, intermittent conflict at the time of the decision to build the system, the varying fortunes over time of the descent groups who were directly involved in the construction and administration of Silean Banua. An understanding of the kinship system will explicate these events as the history of Silean Banua, like Toba Batak society, is bound together by the recurrent theme of descent and affinal relationships.

One fact to emphasize here is that the social organization in Lintong ni Huta is a localized type. Land controlling groups, ceremonial organizations, and individual customs are subject to wide variation in the Toba Batak territory. This point is important in general for this discussion. The corporate structure and village organization of Lintong ni Huta were influential in the way in which cooperation to finance and build Silean Banua was achieved. Had the social organization of the area resembled the prevailing pattern in other areas of Toba, the history of Silean Banua might have been radically different--or it might never have been built. Much in the following discussion of kinship will focus on how the local type of social organization in Lintong ni Huta differs from other parts of Toba and how this influenced the evolution of the village and the organization of Silean Banua.

The Batak recognize the wide variation in their adat and an oft-quoted aphorism states:

Ia muba hape dolok, muba do duhutna
Ia muba hape Huta, muba do uhumna.

As there are other mountains with other kinds of vegetation,
 In other villages there are other customs.

We noted in chapter one that there are certain unchanging principles of adat which prevent local variation in custom from becoming ungovernable chaos. One of these "immutable principles" of adat, the kind that Tampubolon (1960:9) called the "adat from the length of adat" is the structure of the kinship system and the nature of affinal relationships. The kinship system is the framework on which are hung the varying forms of corporate and religious organizations, and ultimately the historical details which form the basis of this work.

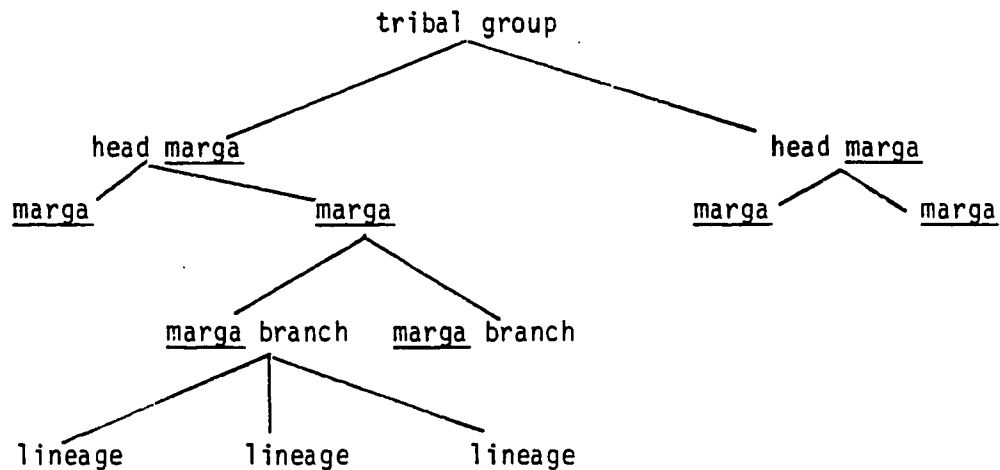
Kinship, Descent, and Labels: The Tribal Group

When asked, almost any Toba Batak would reply that the basis of Toba Batak society was the daliha na tolu, the Batak conceptualization of the asymmetrical marriage system. The Batak place great emphasis on affinal ties in some situations. However, the strongest thread which binds together components of society is that of common descent. Keuning (1958:8) has cogently stated the general case:

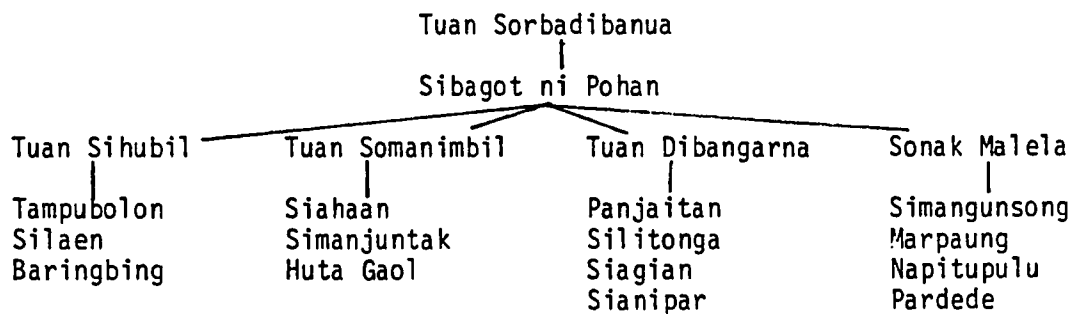
In Toba Batak society...the kinship system with its interwoven bonds of affinal relationships was and is of primary importance. The genealogical principle of this society, its unilateral patrilineal form and the asymmetrical connubium that links the patrilineages to one another commands our attention in the first place. Other factors--such as common location in one territory, common interest in secular and sacred affairs--in most cases are the direct outgrowth of the bonds of kinship.

Common descent including affinal ties forms the basis for inter-personal behavior and group formation among the Toba Batak. Two Batak

who are unacquainted will exchange clan names and by tracing genealogical connections will establish a kinship relationship and address each other by the appropriate kinterms. Membership in groups which owned land, controlled irrigation, met for ceremonial reasons, or residence in a particular hamlet or village usually rested upon kinship as a prime prerequisite. Unfortunately, precise labels do not exist for cut-off points in the segmented patriline of the Toba Batak. Detailed genealogies exist which theoretically allow any Toba Batak to trace a patrilineal connection with another (for a more complete discussion of the genealogies see chapter four). Within this ramified patrilineal tree, which now encompasses a people numbering in the millions, there are very few labels or native terms defining descent group segments which conveniently correspond to anthropological labels such as lineage, sib, etc. Vergouwen (1964:16) provides a useful set of terms which are, however, context-dependent. Any understanding of Vergouwen's labels requires a comprehension of the word marga. Marga is a word deriving from Sanskrit which denotes a patrilineal segment of indeterminate size. Vergouwen (1964:30) notes that his use of the word..." does not conform to the Batak idiom in which the meaning of the word is indefinite". Warneck offers the translation of marga as Stamm in his Batak-German dictionary (1905:126), whose meanings in German which could pertain to kinship include "family, clan, and tribe". Vergouwen's labels for Batak patrilineal segments in the social structure serve as a useful introduction to a social world where there are few concrete definitions. His scheme can be diagrammed as follows:



According to Vergouwen's schema the maximal geneological unit, the tribal group, divides into head marga which in turn branch into marga per se. Margas are composed of marga branches which in turn are composed of lineages. In order to place these in an understandable context, it is useful to quote part of a genealogy to illustrate the labels.



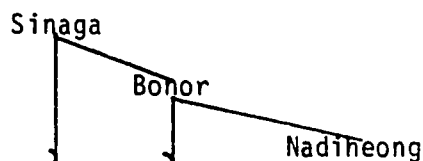
Tuan Sorbadibaunia is putatively in the fourth generation after Si Raja Batak, the first ancestor of all of the Batak people. Si Bagot ni Pohan is the first of Tuan Sorbadibanua's seven sons. Sibagot ni Pohan and his brothers are each acknowledged as the apical ancestors of major genealogical complexes, and these divisions correspond to the label 'tribal group'. For the groups founded by the sons of Tuan Sorbadibanua the order of generational removal from the present is approximately

eighteen to nineteen generations. This cannot be taken as a generalization, however, as other tribal groups recorded in the genealogies may have a greater or lesser age. These ancestors do, however, serve as markers of genealogical segments which are significant to the Toba Batak. If one asked a resident of the south end of Lake Toba to which great complex his marga belonged he might answer masuk Pohan do ('it enters [belongs to] the Pohan group'). In the days of frequent internecine warfare the tribal group formed the boundaries of mutual defense for its constituent margas. For the purposes of this work the concept of the tribal group is of importance. The genealogical structure of the Pohan tribal group and its constituent margas formed the organizing principle for the administration of the village of Lintong ni Huta and the basis on which sections of the village territory were apportioned to the settlers who founded hamlets in the village. Positions of importance at feasts and the symbolic division of buffaloes at major offering feasts are made on the basis of the division of the Pohan tribal group into four subdivisions, based on the descent of the margas of the group from the four sons of Si Bagot ni Pohan. The importance of the descent principle in the Pohan tribal group also facilitated the cooperation necessary to build Silean Banua. The villagers could and did define themselves as a single group, the pomparan ni si Bagot ni Pohan ('descendants of Si Bagot ni Pohan').

The Margas

The marga is a more difficult to define genealogical unit than the

tribal group of which it is a part. Vergouwen (1964:19) states that a man's marga ascends "15-20 generations, that is to at least four centuries ago." Beyond this notation of generational depth the rules which define a marga and marital exogamy attending it are variable in the Lake Toba area. In some areas the marga has ramified while others have remained intact patrilineal since their founding by their apical ancestors. One important factor in identifying a marga is its name. Each Toba Batak carries his marga name like a family name coupled with a Christian or personal name. In some cases where the segments of a parent marga have become independent and taken on individual names as well, a man may identify himself by the name of the smaller or larger branch. A member of the Nadiheong marga, for example, could also identify himself as a member of marga Bonor, the marga from which Nadiheong branched off. A member of either marga could identify themselves as Sinaga, the most senior marga stem from which both branched off.



Nadiheong and Bonor are independent margas in their own right. Members of all three margas might intermarry, depending upon the local interpretation of the exogamy restrictions. In the area near Tarutung marriage restrictions have been interpreted such that members of named branches of the same 'head' marga may intermarry, such as a Nadiheong woman with a Sinaga man in the above example. In North Samosir, however, intermarriage between branches of the same head marga constitutes

incest (Vergouwen 1963:31).

The matter of marga name is important in the Pohan tribal territory. Vergouwen makes special note of this area:

In respect to tribal groups such as these (Pohan) one can only say that within them a unit which has acquired its own commonly used name has become a marga.

If the Pohan tribal group had followed the pattern described above (see genealogy) the four sons of Si Bagot ni Pohan would form the 'head' margas and the next generation the marga branches. This is not the case. Si Bagot ni Pohan and his four sons are recognized as important ancestors and referred to often, but, in the area of Lake Toba, no one carries the name Sihubil or the other three brothers' names as marga names. Tampubolon, Baringbing, etc. are the founding ancestors of margas in the Pohan tribal group. Each marga of the Pohan tribal group, Tampubolon, Simanjuntak, etc. has also remained intact. There are numerous maximal and minimal genealogical divisions in each marga, but none have taken a new marga name in the tribal group area. No member of a marga could marry another who carried the same marga name, regardless of the genealogical distance between them.

The marga as a whole may be a territorial, land-controlling, or ceremonial group, but the pattern is not consistent in all of Toba. In some areas the individual margas are concentrated in their own territories within the greater tribal group or "head marga" territory. In the Pohan tribal group territory segments of each constituent marga of the tribal group have spread throughout the territory and founded hamlets in separate villages. A legal aphorism states marga nampuna tano do

('the marga owns the land') but in actuality it is the localized segment of the marga which controls land in most cases. The marga may act as ceremonial group, when a major descent feast is celebrated for example. The expense of assembling representatives of all of the marga branches and their attendant affines makes such feasts very rare occurrences. The Sihotang marga dedication feast cited at the beginning of this chapter brought marga branches and attendant affines from all over Sumatra together and from Java and beyond and involved the feeding of five thousand people as well as other expenses.

The marga marks the extent of effective agnatic kinship for the Toba Batak. Lineal kinterms are used in address between members of the same marga (dongan samarga) and a request for mutual assistance from a marga mate will usually be honored. Membership in the same tribal group, unless that distinction is especially pertinent at a given time, is unimportant. The marga is viewed as the unit which propels the system of asymmetrical marriage, the dalihan na tolu (Siahaan 1963:19). One Batak scholar (Hutagalung 1961:33-34) gives two reasons (alana) for the establishment of margas by Si Raja Batak, the first Batak ancestor. The first was to establish the 'borders' which defined incest, to avoid endogamy (nb. in the Batak text Hutagalung used the Dutch word endogamie). A man could not marry a member of his own marga so the margas had to proliferate in order that there could be the (proper) taking of wives in Batak society. The second reason for the existence of margas is to preserve descent groups as unified bodies. Hutagalung says that the branching of margas may be viewed as destroying the unity of people,

but:

'If people who are members of one descent group are separated (marsirang) by the proliferation of margas (ie. one marga that branches into two new ones) the margas come together within the single ethnic group (hasukuon) of the Batak people.

The role of patrilineal descent in arranging inheritance, the succession of government, or the control of corporate resources is mentioned in the writings of native scholars but does not receive the emphasis that the abovementioned function of the margas does. The margas form the boundary of agnatic descent and exogamy. The principle of common descent, being of one marga, forms the charter or organizing principles of these other attributes; the formation of corporate groups etc. for the smaller segments of a marga. The marga as a whole does not act as one in the asymmetric marriage system. A Simanjuntak may marry a Tampubolon woman, but this does not create a wife-taking/wife-giving relationship which is binding upon the entire Simanjuntak marga, only upon the man's immediate descent group. Another segment of the Simanjuntak marga might give women in marriage to a segment of the Tampubolon marga. As long as neither group attempted to reverse the direction of the marriage relation, the principles of the asymmetric system would not be violated.

The Lineage and the Sapanganan

The smaller segments of the marga are as difficult to define accurately for the Toba Batak as the marga itself. Vergouwen equates the term lineage with the Batak term saompu (1964:32). This is a difficult term to gloss. Saompu means 'of one ompu'; ompu means variously grandfather, great grandfather, forefather, and ancestor (Vergouwen 1964:33). Potentially any ancestor in the genealogy short of the marga founder can be

the ompu parsadaan, the single ancestor who is designated as the focal point of the 'lineage'. When a Toba Batak is referring to a group of agnates as hita nasaompu ('we the descendants of one ancestor') he might be referring to a minimal marga segment four generations removed from the speaker, or a major lineage twelve generations in depth. Vergouwen noted in his discussion of the marga (1964:31):

Whether a man reckons himself as belonging to a greater or smaller unit depends upon whether a further distinction is pertinent at the time.

Keuning recognized a similar state of affairs in his discussion of Batak marga segments (1958:4):

One meets with all kinds of gradations here--the lineages overlap and it depends sometimes on special circumstances which group appears strongest as a unit.

Since it is not of any fixed size, the lineage is defined according to the needs of the occasion or undertaking. As we shall see in chapter five, control of the small irrigation systems in the village of Lintong ni Huta has remained with the patrilineal descendants of the putative founders of these bondar or irrigation organizations. The group controlling one of them might identify themselves as nasaompu pomparan ni Raja Ampanansir ('we of one ancestor, descendants of Raja Ampanasir') in relation to the control of the irrigation association. They also identify themselves as part of a larger descent group within the Simanjuntak marga in connection with ceremonial affairs. The definition of a group depends entirely upon the distinction which, in Vergouwen's words, is "pertinent at the time in question."

This potential was clearly recognized by Vergouwen:

...every father who has had more than one son becomes a sharply defined joint in the genealogy of his patrilineal group. From him two or more groups of descendants have sprung, each of which has its own identity...In the same manner each of his sons again forms the core of a smaller lineage.

One way in which the genealogical welter of individuals is kept in order is by a graded series of 'eating communities' (sapanganan: lit. 'those who partake of the same meal').

Any ceremonial occasion for which an animal has been slaughtered for meat requires that certain portions of the animal be reserved and distributed in a prescribed way to lineal and affinal kin of the family holding the feast. This ceremonial division of meat (jambar) is an important event in the feast and accurately catalogues the affinal and lineal kin connections of the participants. These 'eating communities' are arranged in a graded series depending upon the type of animal slaughtered for the feast and the nature of the feast itself. In order that no mistake be made in the carrying out of a feast an individual must have conscious knowledge of the number of generations of lineal kin who have rights to a portion of meat of the animal to be slaughtered. If a pig is to be slaughtered, the feast giver is obliged to call to the feast his sapanganan daludalu ('those who partake of a meal of a pig'), the number of his agnates who have rights to a share of the pig. This usually encompasses a lineage segment of six to seven generations in depth. Smaller and larger sapanganan exist which include as few as four generations of individuals to as great a kin group as a marga or an entire tribal group.

The concept of the 'eating community' is important, as it gives

ceremonial reinforcement to the definition of a collectivity on the basis of patrilineal descent. The system also means that lineal kin are constantly reminded of their genealogical connections by invitation to each other's feasts and the recapitulation of the genealogical relationships of the participants in the ceremonial division of the meat. One Batak scholar (Hutagalung 1961:31-32) views the sapanganan as a system which telescopes from the basic unit of Batak society, the nuclear family (saripe), to the entire Batak people. In the past the whole family ate from a single wooden plate (sapa bolon) and that this was a 'great symbol of the family' (tanda bolon ni hasaripeon). Hutagalung's description of the origin and arrangement of the 'eating communities' is worth quoting in full:

It is true that after people (Batak) began to increase in number, in the hundreds and then in the thousands it was impossible for them to eat at a single meal. Because of this people established a system of eating communities from the smallest to the largest upwards to include the Batak people as a whole, which shows the firmness of the (institution of) the family, the basis of genealogical descent. There is a community which shares a chicken (app. four generations in depth), there is the community which shares a pig (six to seven generations in depth), a cow (app. 10 generations), a buffalo (12-13 generations), among some a horse, one horja ('offering community' or 'corporate village' see discussion below), one bius sacrificial community, one entire marga, and further above that (in the genealogical structure).

The sapanganan in some sense puts the theory of Batak kinship into practice. An individual is aware of his genealogical connections and his potential membership in an ever widening circle of patrilineal kin. However, the 'eating communities' throw this into action: The lineal and affinal kin ties of local groups, in hamlets or villages, will be constantly reiterated in the ceremonial division of meat at feasts. The

more distant relationships will be brought into relief when the local groups come together for one of the major sacrificial feasts over a buffalo. More importantly these graded series of sapanganan provide a context to bring together increasingly large numbers of people together in a formal context wherein they can identify as a collectivity, beyond the bounds of the minimal kin group, the local residence group, and even beyond the bounds of the marga.

Silean Banua was built by individuals of localized segments of at least seven separate margas. The only common descent for all of these margas is at the tribal group level. When Silean Banua was in the planning stages a marrapot ('gathering, meeting') of the elders of Lintong ni Huta was called. At this occasion cooperation could be enhanced both by the appeal to common tribal group kinship of the participants, and the fact that the meeting took place with the slaughter of a buffalo. In the description of the graded series of the 'eating communities', one of the larger ones encompasses an entire horja. In the common use of the word a horja is a major feast requiring the slaughter of a buffalo, and is also applied to the large kin group which celebrates these feasts. In Lintong ni Huta and the Pohan tribal territory it describes the specific kind of corporate group that the village is, a type outside of the norm for Lake Toba. The nature of corporate holdings in a horja as it exists in the Pohan tribal group would also have promoted the cooperation necessary to undertake a project the size of Silean Banua.

The Corporate Groups

In order to describe the nature of corporate holdings in the Pohan Tribal territory and its advantages in facilitating the construction of Silean Banua, it is necessary to describe the more common system with which it contrasts. The key corporate resource which confers wealth, prestige, and power on a marga is land, and the historical precedent of having cleared and settled the land. The common pattern in Toba is for a marga or a major marga branch to live in a common territory. In such a situation the marga is known as the marga raja, the chiefly or ruling marga. The ruling marga controls title to land within its territory and the small and great chiefs of the area are all of the ruling marga as well. The members of the ruling marga also margolat, have title to a piece of land they can dispose of, pass in inheritance to their sons, or settle on their daughters as a marriage gift, and mortgage in loans (Vergouwen 1964:114). Individuals or segments of other margas living in the territory of the ruling marga usually have only usufruct rights to land. This right to the land passes in inheritance to the descendants of the original holders of the rights, but they have none of the prerogatives of the member of the ruling marga. This inferior status is reinforced by the appellation boru which is given to such in-dwelling groups within the ruling marga territory. Boru means 'wife taker'. In the Batak marriage system the affinal relation is unequal. The 'wife-givers' (hulahula) are considered ritually superior to their 'wife-takers' (boru) and are always respectfully addressed and receive gifts greater in value than they give to their wife-takers. This inferior

status in relation to land was often reinforced by establishing a wife-taking relationship between the ruling marga and its in-dwelling boru margas. Two brief descriptions of the relationship between the ruling marga and the in-dwelling 'wife taker' margas (Hutagalung 1961:31-32; Hutagalung 1963:21-22) in the works of Batak native scholars graphically characterizes the marga raja and the position of the wife-taking margas viz. the ruling marga:

Each marga has its own land or territory (margolat). Within its own territory it is independent and sovereign. The marga which possesses the land (pargolat) is called the marga raja ('ruling marga'); other margas which take shelter (within the territory of the ruling marga) are called marga boru ('wife taking marga') or boru di ampuan ('wife-takers in the womb' lit.--'wife takers who are interceded for'). The wife taking marga of long tenure (in the territory of the ruling marga) comes to be called the boru na gojong ('the wealthy wife takers'). The wife takers receive power (sahala) and rest in the shade of the ruling marga.

The ruling marga is the greatest marga that governs the common people in a locality. From this marga is chosen the person who will be chief of the area (raja panggomgomi)...all inhabitants of the area who are not of the ruling marga (marga raja) are called boru, marga boru ('wife-takers', the wife taking marga). For example: if the Hutagalung marga is the ruling marga in a place and the Simatupang marga lives there, the Simatupang marga is considered a 'wife-taking' marga. If the Simatupang marga cleared the agricultural land together with marga Hutagalung, and a Simatupang man married a woman of marga Hutagalung, they (Simatupang marga) are considered the boru na gojong, both margas have title to land (margolat), both have title to land outside the village (marpar-talian), their rights are the same within the customs of the ownership of land. However the position of village chief (raja huta) is the prerogative of the ruling marga.

In this case, one marga within a territory is always the superior one, in land rights as well as in temporal power. In cases where the 'wealthy wife-takers' (boru na gojong) have land rights similar to those of the ruling marga, they are still in an inferior position as wife-takers and have no access to temporal power. Although the affinal tie

is important and imbued with great significance. as we have seen ties based on common descent receive greater emphasis in the Toba Batak area.

In the Toba Holbung area, a subdivision of the Toba Batak territory which encompasses most of the Pohan tribal group, a different corporate group organization exists. the horja (lit. 'sacrificial community'), hereafter glosses as 'corporate village'). Vergouwen says briefly (1964: 119) of the horja:

...the rather large horja is a genealogically pure unit as well as being a sacrificial community and corporate community. It is true that related horja lie beside it but not always in such a way that the nearest kinsman are always the closest neighbors. In Toba Holbung the large fragments of the marga(s) of the Pohan tribal group have spread like spots over the entire ancestral territory without uniting into a buis. The result is that they form the most distinct communities and the most distinctly defined land-controlling groups.

Vergouwen has here isolated the essential features of the corporate village (horja) of the Pohan tribal group as they differ from the more common 'chiefly marga' system described above.

The first is the fact that the corporate villages of the Pohan tribal group are "genealogically pure units". The Batak often travel great distances to court wives. In a village with a marga raja and in-dwelling wife-taking affines the village might consist of marga segments from different tribal groups or head margas. In villages in the Pohan tribal group territory individual segments of some number of the constituent margas of the tribal group have settled the village territory together. Segments of any individual marga of the tribal group are spread throughout the territory. In some villages or localities they may be numerically superior or a minority, but most marga segments of the

Pohan tribal group will have equal land rights in the villages where they are represented. Lintong ni Huta, for example, was settled by segments of eight and possibly ten of the fourteen margas of the Pohan tribal group, each of whom received rights to land in the village. None had only usufruct rights as would a wife-taking marga segment in a marga raja village. When Vergouwen says that villages (horja) in the Pohan tribal group were genealogically pure he meant that in general segments of margas from another tribal group were not represented. He may also have been referring to the fact the genealogical relationship between the margas of the Pohan tribal group is a conscious factor in the administration of the villages, and was important in the founding of Lintong ni Huta and its neighboring villages in the western extent of the tribal group territory.

It is the corporate nature of the horja which sets it apart from the chiefly marga model, and at the same time emphasizes the importance of the "genealogical purity" of the village. The rights to land are equal among all marga segments in the corporate village, if they were present at the time of the settling of the village. One elder of the village of Lintong ni Huta stated rap hita pomparan ni Si Bagot ni Pohan margolat dison ('all of us who are the descendants of Si Bagot ni Pohan together have rights to land here'). Hutagalung (1963:22) noted that in limited cases the 'wealthy wife-takers' (boru na gojong) might have equal land rights with the ruling marga if they settled the land at the same time. But they were still in the inferior position of being institutionalized wife-takers. In the Pohan tribal group corporate

villages there was no chiefly marga per se. In any given corporate village, one segment of a marga might obtain a dominant position by virtue of greater wealth and numbers than the other marga segments in the village, and the position of area chief (raja panggomgomi, raja gomgoman) might accrue to them. The title would be inherited in patrilineal succession, but the raja would not have the power over land or the superior position as wife-giver to the institutionalized indwelling wife-taking margas that a true raja in a chiefly marga would have.

This particular distinction is, I think, important. Batak chiefs had little in the way of vested authority. Influential chiefs who wielded a wide-ranging authority over large groups of people did so through personal ability and a possession of acknowledged sahala harajaon the power of essence of chieftanship. Batak customary law and aphoristic sayings emphasize the importance of obeying the will of the chief and that such obedience will bring prosperity to the region (Vergouwen 1964:131). However the chiefs did not have a great deal of coercive power. To build a system the size of Silean Banua required more than the coercive power of a raja. The relations between the constituent marga segments of the village of Lintong ni Huta were, in customary law, equal. All had title to land (pargolat), and none were the institutionalized 'wife-takers' of a chiefly or ruling marga. Although there was a chief of the area, arbitrations in customary law were handled by representative elders of the lineages of the tribal group, one for each of the four sons of the tribal group founder Si

Bagot ni Pohan. This division of four of the margas of the Pohan tribal group is also a recurring organizational factor in Lintong ni Huta. When all of the margas resident in Lintong ni Huta are acknowledged at a feast, it is usually according to their descent from one of these four sons, Tuan Sihubil, Tuan Somanibil, Tuan Dibangarna, and Raja Sonak Malela. At major feasts where a buffalo is slaughtered symbolizing the collectivity of the corporate village, individual margas receive meat from a haunch or foreleg according to their descent from these individuals and each subgroup of the tribal group is referred to as 'one-quarter of the buffalo' (sanghae ni horbo).

This last point emphasizes the final characteristic of the horja or corporate village; that it was also a sacrificial community. At any major feast where a buffalo was slaughtered, all of the constituent margas of Lintong ni Huta had to be recognized in the ceremonial divisions of meat. The word horja itself can denote a corporate village and also a major kind of feast and sacrificial or eating community.

The aspect of religion is important. Vergouwen noted (1964:117) that of the three "motifs" which served to unify or define groups in Toba Batak society, genealogical connections, religion, and territoriality, religion was the second most important and the genealogical motif the most important. We have already established the genealogical nature of the corporate village. It also formed one kind of religious community in that it was a 'sacrificial community of a buffalo' (sahorja horbo). Within the religious sphere it is necessary to take issue with Vergouwen's assertion (1964:119) that the corporate villages of the Pohan

tribal group did not unite into a kind of sacrificial community called a bius.

The bius was a specific kind of offering feast and sacrificial community which Vergouwen notes (1964:73) "did not embrace a genealogically pure group of agnates but a geographic region and all of its inhabitants." He contends that the strongest bius communities formed where segments of margas were dispersed in pockets throughout the tribal group territory. This is precisely the way in which the corporate villages of the Pohan tribal group are formed. A later author, Castles (1975:69), notes that the bius as an institution had "considerable continuity" and implies that the "Balige-type horja" (Balige = principle town of the Pohan tribal group) were less stable and apt to split. Despite the assertions of these authors bius communities did form in the Pohan tribal group. Ypes (1932 fig. 2) lists two bius communities for the southwestern extent of the Pohan tribal territory, one of which included the village of Lintong ni Huta.

The importance of the presence of bius organizations in the Pohan tribal territory lies in their territorial or geographic character and in the frequency with which the ceremonies were celebrated. All of the inhabitants of a bius area were included in the sacrificial community, regardless of their genealogical connections. The bius feasts were held annually or biennially and included not only veneration of the ancestral spirits of the genealogical community involved, but also of the major gods and spirits of the Batak religion. Individuals not descended from Si Bagot ni Pohan would have been included as full members in the bius

ceremonies. The bius ceremonies were important for a number of reasons. They brought the third "motif" of territoriality into play in uniting and providing stability for the corporate village community. At the division of the buffalo for the feast the tribal group connections of the constituent corporate villages making up the bius community were emphasized and the division of the tribal group into four descent groups symbolized in the division of the quarters of the buffalo.

All of these factors served to make the corporate villages of the Pohan tribal group what Vergouwen (1964:119) called "the most distinct communities and the most distinctly defined land controlling groups." As a community a village such as Lintong ni Huta embodies all three of the "motifs", genealogical, territorial, and religious which Vergouwen (1964:117) identified as unifying or defining factors of a social group in Toba Batak society. They are distinct territorial groups. The constituent descent groups in the village acknowledge common agnatic descent and are not bound by institutionalized affinal relations as in a marga raja village. The lack of the superior-inferior status relationship implicit in Batak affinal relations would serve to promote cohesiveness. The village itself formed one kind of religious sacrificial community and, a factor which Vergouwen did not take into account, the Pohan tribal group villages united in bius communities as well. The equal corporate status of all of the descent groups in an individual village, the fact that all held equal title to a segment of land in the village territory, would also have made it a more "distinct" land controlling group. We noted that in a marga raja village only the ruling

marga had ownership rights to land (pargolat) and the indwelling wife-taking margas received only usufruct rights to land. This system also had exceptions when the senior wife-taking affines, the 'wealthy wife-takers' (boru na gojong) settled the village at the same time as the marga raja.

These distinct features of the village organization in the Pohan tribal group territory would have created a context for the cooperation necessary to build Silean Banua. The equal corporate status of the constituent descent groups in a village, and the lack of institutionalized affinal relations among them, would have meant that no descent group was inferior in adat to another. The only difference would have been differential wealth and numbers of people in the various descent groups which comprised a village. Unity in the village was crucial to organize the construction of Silean Banua. It was not a gradual accretion of small irrigation systems growing together over time, but a project conceived and executed by the inhabitants of the village of Lintong ni Huta from the ground up. To build the system required the mobilization of large amounts of labor for the construction of the feeder canal and the major irrigation dam. Financing had to be raised to purchase tools, materials, and to pay for feeding the people who labored on the system. No single marga segment in Lintong ni Huta was wealthy enough to back the system financially by itself, nor did any kin group have sufficient numbers to construct the system itself. Financing for the system was obtained by collective contributions from all of the households of the village. Labor for the construction of the

system was arranged through application of the principles of cooperative agricultural labor. The principles of ownership and the eventual administrative structure of the irrigation system also had precedents in the organization of the traditional Batak irrigation organization (bondar). These traditional modes of obtaining labor and financing and the structure of irrigation organizations were applied with typical Batak ingenuity on a larger scale than was usual to meet the needs of constructing Silean Banua. Underlying all of this however, was the consensus of the entire village to cooperate as a single body, contributing rice from the harvest as needed to finance the system and laboring cooperatively for fifteen years before the first water from the system reached the rice fields in the village.

This consensus is remarkable in a society lacking leaders with coercive power to mobilize labor or exact taxes and which frequently exhibits the tendencies to factionalism which are inherent in a segmentary lineage system. The people of Lintong ni Huta did not simply form a voluntary association to build Silean Banua. They could and did identify themselves as a territorial and residential unit. The religious basis for collectivity could be found in the fact that the village was one sacrificial community (sahorja). But the most compelling factors for this level of cooperation came from the peculiar corporate and genealogical structure of the "Balige-type horjas" of which Lintong ni Huta was one; the fact that all of the inhabitants could identify as lineal kinsmen, and the equal land holding status of all or marga segments in the village. Since all of the marga segments in the village

were pargolat, held title to their land, it was of equal advantage to all to improve the land with secure irrigation. Under the marga raja system the inferior wife-taking margas in the village would only have been enriching the ruling marga in agreeing to build such an irrigation system, since they had only usufruct rights to land, most often.

We have, thus far, discussed the territorial, genealogical, and religious characteristics of the corporate village type known as a horja and how these created a context for large-scale cooperation by the village population of Lintong ni Huta that allowed for the construction of Silean Banua. Once the consensus was achieved to embark on the construction of Silean Banua the practical considerations of financing the labor for construction and settling on a corporate and administrative structure for the running of the canal system remained. The Batak found organizational precedents for these needs in customary law and applied them in expanded or altered form to Silean Banua as needed. Each of these precedents and the manner in which they were applied in Lintong ni Huta will be discussed briefly below.

Organizational Structure: The Bondar

The organizational precedent for Silean Banua was the traditional corporage group which controlled irrigation systems, the bondar ('canal'). Vergouwen (1964:345) says briefly that the bondar organizations were of two types. Some were voluntary associations or corporations with their own internal rules, organization, and administration. In other parts of Toba:

The water interests go together with the other interests of the ruling lineage in village and territory so much so that sometimes a close and independent unit based upon common water interests is hardly to be discerned, and the administration of the water for a good part coincides with that over land and people.

Silean Banua was neither one nor the other. It could not be the second sort primarily because Lintong ni Huta lacked a "ruling lineage" (marga raja). Silean Banua was neither financed nor constructed by any single kingroup within the village so that control of the system and its irrigation levies did not accrue to any group as a result of ownership of the system. However the organization of Silean Banua was not of the first type described by Vergouwen either. Since Silean Banua was independent of connections with any other irrigation systems: the administration of water interests in Lintong ni Huta did go together with the administration of the village. However it had no connection with any central power structure. Silean Banua became a kind of hybrid of the two organizational types. It was an independent corporate group with its own "internal organization, legal rules, and administration." But its "owners" were the people of Lintong ni Huta who helped finance and construct it. The village in theory was not only definable as a single sacrificial community, corporate entity, and a group which recognized a common bond of lineal kinship between all of its inhabitants, but a single irrigation group as well. Administration of the system however became the prerogative of three kin groups in the village. Despite the fact they did not own "own" the system, as was the case of the small kin-based irrigation systems in the village (see chpt. five), these kin-groups had the responsibility of maintenance of the system and the right

to collect irrigation levies from all users of water from the system. This right to administer the system and collect levies became theirs as a result of their participation in the financing of the construction of the irrigation system.

Labor and Financing: Guguan, Suhut, and Marisalap Ari

The construction of Silean Banua required almost fifteen years of arduous labor before the first water flowed through the feeder canal to the village. All of this labor was organized and mobilized through an expansion of the concept of 'cooperative labor' (marisialap ari lit. 'fetch the day'), the commonest form of agricultural work groups. Under the system a group of men or women would agree to work in each other's fields in rotation at tasks which were better accomplished by group rather than individual effort, such as turning the paddies over by hoe or weeding. The person whose fields were being worked in for the day was responsible for providing rice, fish, or meat, and vegetables for the main meal of the day and a snack such as steamed rice-flour cakes later in the day. In addition, drinks, coffee and tea at present, as well as betel, now tobacco, had to be provided to the workers. This simple system worked well for a labor group for five or six men or women. But the logistics of feeding a large labor group constructing the canal system required an adjustment in the system. No single person in the labor group had sufficient resources to provide a meal for a construction party. The problem was solved by the agreement of three wealthy and powerful kin groups in the village to become suhut to the

construction of Silean Banua.

The definition of the word suhut in Warneck' Batak-German Dictionary (1908:197) is worth quoting in full:

Suhut: the person who underwrites a war, feast, or offering and takes responsibility for it: the manager or director; this person must also assume any eventual loss.

A group of brothers might jointly finance and undertake a funeral feast for their father, but one would be designated suhut. The feast would take place at his house; he would be responsible for obtaining the animal to be slaughtered, the rice for the guests' meal, the labor for preparation and serving of the food, the loan of sufficient mats for seating, and be responsible for the expenses of the feast not covered by the original contributions of his kinsmen. Similarly a person might agree to underwrite and organize a major offering to an ancestral spirit or a raid on neighbors during the times of warfare, and would carry similar responsibilities. Under the cooperative labor system the person whose fields were being worked in for the day was said to be suhut to the labor group; providing food and drink and other necessities.

The groups who agreed to be suhut to the construction of Silean Banua were undertaking a great burden of responsibility and financial outlay. They agreed to feed the laborers on the system for the duration of the construction. They also agreed to provide feast animals for any assemblies of the elders (martonggo raja) to make decisions concerning the system or offering feasts in connection with the project. In return for this outlay and responsibility for the construction of the system, the kin groups who were suhut became administrators of the system of

Silean Banua. They received the right to collect the irrigation levies of the system and had the responsibility to maintain the system; to keep the canals free-running, repair the minor weirs, and to make sure that levy-paying members of the association received water adequate to the needs of the growing rice.

This particular arrangement is significant. The people who labored on the canal system were not working in each other's fields for two weeks out of the harvest year, but for fifteen years. They also were not receiving the immediately tangible benefit of each other's labor, a well-hoed field or a neatly weeded paddy of growing rice. The outcome of the labor was an irrigation system that would allow most of the inhabitants of Lintong ni Huta to transform dry or rain-catch rice land into irrigated fields. Each achieved a share in this important corporate resource. Yet in the traditional administration of irrigation systems in the area, maintenance of the system was not a collective undertaking but the responsibility of the owners or holders of the proprietary rights of the irrigation system. Without holding actual title to the system of Silean Banua the three kin groups who acted as suhut to the construction of the system received all of the benefits and responsibilities of collecting levies and maintaining the system. This profitable situation continued unchanged for the three suhut groups for more than fifty years.

Thus by the alteration and application of the relatively simple system of cooperative labor and the concept of 'responsibility' or suhut the people of Lintong ni Huta achieved a means to undertake and underwrite the construction of Silean Banua. Later in the history of Silean

Banua it became necessary or desirable to replace the major irrigation dam with cement and to cement up many of the primary channels and weirs of the system. These capital improvements were not the responsibility of the groups which administered the system. They had rights to the levies as recompense for acting as suhut to the construction, but they did not own the system. The cost was borne by the "owners" of Silean Banua, the entire village. The financing of such improvements was collected by an application of the concepts of guguan, margugu ('contributions, to contribute'). Any major life crisis feast, a funeral or wedding, etc. is beyond the financial capability of a single family. The financing of such undertakings is a cooperative affair. The suhut family agrees upon the amount of the contributions by their core lineal kinsmen and lesser contributions by more distant lineal kin. In doing so they are not creating debts but are calling in obligations from their kinsmen. In the past they have also been called upon to contribute (margugu) to similar occasions. This cooperative financing does not levy absolute amounts on all participants; the amount expected is adjusted according to the wealth of each individual. Such cooperative arrangements with kinsmen, hamlet-mates, and others exist to provide all of the necessities of a major feast. This particular system was simply applied to Silean Banua. When capital was needed for improvements to the system, each villager was expected to margugu ('contribute') to pay for materials, tools, the time of craftsmen etc. for improvements to the system. The success of this can be seen in the estimation of the elders of Silean Banua (Silean Banua 1972:1) that cooperative financing of the

improvements to the system over time had totaled an amount of rice worth more than a quarter of a million dollars U.S. in 1975.

In this chapter we have laid the framework for the history of Silean Banua. The explanation in this chapter of the kinship system the nature of village organization, and the social mechanisms of financing, administrative organization, and labor applied to the construction of Silean Banua is a partial approach to the journalistic how of the subject of this work. The specific background events, the personalities, and the temporal sequence of events in the construction and evolution of Silean Banua will be considered in succeeding chapters. All of this must hang, however, upon an understanding of the social milieu of the events. As was stated earlier, the kinship system is the base upon which is formed the corporate, territorial, and religious organization of the Toba Batak. Similarly the information in this chapter is the base upon which to build the rest of this history and analysis. The particular organization of the horja or corporate village created a cohesiveness, a context for cooperation of achieving concensus to build the irrigation system. The conscious manipulation of social structure and aspects of customary law of which the Batak are capable provided the organization of the construction. The next step in the history is to describe specific historical events and the background of the founding of Lintong ni Huta which gave impetus to build Silean Banua.

Chapter 4

This chapter will provide specific ethnographic and historical background material which is necessary to set the stage for the history of Silean Banua. The first subject to be discussed is Batak genealogies (tarombo). In the first chapter it was posited that aspects of adat could be expanded to a greater extent than was common, or a collective group of individuals could be identified for purposes of adat for a specific purpose, or in response to outside circumstances. The principle behind this is genealogical reckoning. A group of Batak acts most effectively together if they have the charter of common descent to bind them together. The genealogies must be consulted to find the ompu parasadaan, the 'unifying ancestor' for whom all can claim common descent, and that presumption of common descent becomes the charter for collective action. We have already noted that the charter of common descent for the entire village of Lintong ni Huta from the tribal ancestor Si Bagot ni Pohan allowed the constituent marga segments of the village to cooperate in the construction of Silean Banua. Bruner's example (1972: 223) of the ultimate extension of this principle, the early 1950's ethnic association of all Batak peoples in Bandung who used the principle of common descent from the apical ancestor of the entire Batak people as the basis of their unity, was also cited. In the first section of this chapter the genealogies will be examined in some detail; their relevance to adat and social structure, the method of keeping them, and their historical veracity and usefulness in the discussion of Silean Banua.

The second subject to be covered in this chapter is the specific historical background of Silean Banua; the warfare and unsettled times of the late 18th century which gave impetus to the founding of the village of Lintong ni Huta, and the pidari times which were an influential factor in the decision to build Silean Banua. The village of Lintong ni Huta were not founded as a result of casual pioneering, but through conscious decision by the elders of the Pohan tribal group in Balige. They sought to fill the western edge of their territory with defensive villages to curb incursion by raiders from a neighboring tribal group located on the west shore of the lake, and related margas who raided from the southern shore of Samosir Island. Territory in the new village was allocated to individuals from the various margas of the Pohan tribal group according to the genealogical structure of the group. This specific allocation of territory and the horja structure of Pohan villages in general created a situation where preeminence in the village went to the marga segment who produced the greatest number of offspring in the first generations after the founding of the village and who founded hamlets of their own in their genealogical territory. Warfare and unsettled times were also behind the decision to build Silean Banua. The charter of Silean Banua (SileanBanua 1971:1) states that construction of Silean Banua commenced in the pidari times, and mentions raids from neighboring groups and defense of the system as problems that were dealt with. Castles (1974:75) stated that one of the reasons for a lack of state formation in Toba Batak society was the fact that there had not been an attempt to conquer the Toba heartland until the 19th century.

While a state did not result from the Padri wars and the unsettled times that followed, it gave impetus to the construction of Silean Banua. This threat from the outside was one of the idiosyncratic factors which may have caused the villages of Lintong ni Huta to apply their adat on a larger scale than before to build Silean Banua.

The final subject to be covered in this chapter is a natural outgrowth of the first two, the history of the founding of the village and the order in which the hamlets which make it up were founded. We have already noted that influence in Lintong ni Huta was not gained through genealogical precedent in the beginning. Each kingroup had its own golat of territory in the village already assigned at the time of founding. Precedence belonged to the early settler with wealth and a large number of sons who subsequently founded hamlets of their own. The layout of the hamlets of Lintong ni Huta provides a structural map of the genealogical makeup of the village. The order of founding of the hamlets of the most numerous and influential marga, the Simanjuntaks, also provides a map of their most wealthy and influential lineages in the village. Those marga segments that came to found several hamlets, gain wealth as minimal kin groups, and gained influence in the village provided the groups of individuals who acted as suhut ('took responsibility') for the construction of Silean Banua and had rights to the irrigation levies from the system for over fifty years. The history of the minor irrigation societies and Silean Banua in succeeding chapters will build on the basic historical material presented in this chapter.

The Genealogies

The word tarombo in the Batak language means fairly strictly 'genealogical descent', but the lengthy and elaborate genealogies kept by every Toba Batak marga are called tarombo as well. Adat specialists in each marga frequently keep detailed genealogical records of their lineages within the marga. Large and wealthy margas may also bring out published genealogies of the entire marga which bring together these localized traditions. There are also several works in the Batak language which attempt to bring together the genealogical traditions of one of the great tribal complexes of the Batak (Siahaan 1941), or of the Toba Batak people as a whole charting the branching of individual margas, the birth order of marga ancestors in the tribal groups, and the descent order of all from the first ancestor Si Raja Batak (Hutaglung 1961; Tampubolon 1963).

These tarombo are more important to the Batak than simple rosters of ancestors. Genealogical precedents substantiate claims to inheritance of property and limited succession to titles, but more importantly they provide a map of interpersonal relationships for the Batak people. Upon meeting, two unacquainted Batak will martarombo ('establish genealogical relationships) in order to discover the nature of the kinship relation (partuturan) between them. Vergouwen noted in 1933:

The ordinary Batak has a marked partiality to 'martuturtutur' = trace the family links (partuturan) when he meets another Batak; to establish whether one is kinsman of the other; whether they have later become affines by some marriage; and how they should address each other as a consequence.

Batak usually address each other by kinterms established as a result of

this martarombo and martuturtutur, regardless of how attenuated or removed in time the kinship connection is. An airport customs agent who discovered I spoke Batak asked for my fictive marga connection and minimal lineage descent and addressed me as tulang ('mother's brother') throughout the rest of the conversation as a result. The genealogies give the individual Batak a map of his or her place in an ever larger group of lineal kin, and finally in the "super-patrilineage" of the Batak people as a whole.

The ordering of adat is found in the genealogies; the type of parsaoran ('interaction') between individuals of minimal or maximal kingroups is governed by the nature of the kinship relation, affinal or lineal, between them, recorded in the genealogies. The importance the Batak place on the genealogies as the basis of adat is best illustrated by these extracts from the works of Batak scholars:

From the adat of the Batak people, their statutes and judgements, the life of tarombo ('genealogical descent') of the life of the Batak; that which places in order the inheritance of property and the arrangement of the feasts of the Batak (Tampubolon 1964:65).

Tarombo ('genealogical descent') is the torch of the establishment of the beautiful adat, the good customs...What is the importance of genealogical descent? Genealogical descent or kinship relations (tarombo manang partuturan) is the beginning of adat (Siahaan 1963:9).

(Genealogical descent is that) which ties together the ordering of generation to generation in continuation, (which records the order of) the founding of margas. Through many generations. It regulates the ordering of the generations like the steps of a house ladder (Hutagalung 1963:48).

Of little worth in the eyes of the Batak is the person who does not know his marga name and descent; he is reckoned to be an insane person. Almost the same in people's eyes is to meet a person who does not know the margas of his wife-giving affines (parhulahulaon) or his wife-taking affines (parboruon) (Hutagalung 1961:2).

The importance of the genealogies to the Batak is evinced by the continuing high level of genealogical recall among individual Batak, as well as by the wide range of genealogies published in the twentieth century. Most young men in Lintong ni Huta could name their patrilineal ancestors for five to six generations back, and the primary affines in each generation as well. Adat specialists frequently kept written records of the detailed genealogy of their minimal lineage and frequently could elucidate the major divisions of their entire marga as well. Vergouwen noted similarly:

The historical knowledge that the Batak have of their own descent goes far back into their past. This applies to individuals as well as to groups. Anyone whose forefather was not snatched from the bonds of his kinship group... during the turbulent pidari times that preceded the coming of the Dutch government, and who knows something of the facts, can enumerate without fault, six, eight, or even ten or more generations of the ascending line of his agnates. Within the narrower kinship group...everyone knows precisely the relationship of its members. The mutual connections of lineages is generally well-known to all though the particulars may not be known to everyone.

The problematic word in the quote from the work of Vergouwen is "historical". Anthropological literature is generally negative on the reliability of traditional genealogies as genuine historical documents. Myer Fortes (1960:174) has warned:

If there is one thing all recent investigations are agreed upon it is that lineage genealogies are not historically accurate. But they can be understood if they are seen to be the conceptualization of the existing lineage structure viewed as continuing through time and therefore projected backwards as pseudo-history.

The idea that genealogies are simply charters for the existing structure and have no historical reliability is found in the writings of other Africanists as well. Evans-Pritchard writes that Nuer time-reckoning is

"a conceptualization of the social structure, and the points of reference are a projection into the past of actual relations between groups of persons". Irvine (1978:651) cites a similar argument of Laura Bohannon's that Tiv genealogies are "only a charter for current political relationships and therefore have no historical accuracy".

It is possibly the nature of genealogical recall, oral tradition, and the putative number of generations in the African genealogies that cause these scholars to be mistrustful. Fortes (1960:168) reports:

...lineage systems in Africa, when most elaborate, seem to have a maximal depth of 14-16 putative generations. More common though is a count of five or six generations of named ancestors between living adults and the quasi-mythological ancestor.

Evans-Pritchard (1940:199) gives the depth of Nuer genealogies as twelve generations and notes "There is no reason to suppose that the Nuer came into existence twelve generations ago". Ben Blount (1975) also gives support to the mistrust of African genealogies in his work on the Luo. He noted (1975:119) that the Luo had been recognized as an "exemplary lineage-based society" and that an individual's social position and rights were based upon a genealogical charter. A Luo tribesman's "rights, duties, and obligations as a member of society were given overt structure by virtue of membership in successive levels of genealogies". In his fieldwork Blount could not piece together a comprehensive genealogy of a single clan from data obtained from several elders of that clan. He found (1975:120) that his informants could remember only three to eight generations of their ancestors in the genealogy despite the putative depth of approximately twelve generations of the clan. A meeting was held where the elders of the clan decided in conference upon the actual

eldest ancestors in the incomplete genealogies. Blount writes (1975: 118) "in effect the genealogies as history were created by the elders in competition, cooperation, and occasionally by bias within a framework of Luo social interaction".

Against such evidence why should the Batak genealogies be given more weight than other traditional genealogical materials? Irvine (1978:652) challenges the universal application of such arguments as Fortes' to the genealogies of traditional societies and poses a cogent set of questions concerning the assessment of genealogical materials:

One set (of issues) concerns the historian's effort to extract historical information from oral materials. Are there certain kinds of social conditions that promote greater accuracy in an oral tradition than others, and if so, what are they? Another set of issues concerns the role that a society's past plays in its present. To what extent does genealogy, that is to say past relations of kinship and marital alliance, determine social relationships in the present?

She demonstrates in her article that the genealogies of the Wolof tend to be more accurate than most African materials for a number of reasons based upon a class of genealogy/historians who kept them, and the use which the Wolof make of the genealogies. She also offers historical materials which tend to corroborate the accuracy of the genealogies.

There are a number of factors which would tend to make the Batak genealogies more trustworthy than the African materials. The first of these is the fact that Batak genealogies were not strictly oral tradition. The Batak were literate and recorded magico-religious lore and other materials in bark-leaf books called pustaha written in their own script. The datus (priest and medical practitioners) were among the most literate of people in pre-contact times and assisted in keeping the

genealogical records (Vergouwen 1964:19). The Count von Brenner (Brenner von Falsach 1894:299) noted in his expedition account that half of the men he met in 1886 were literate in the Batak script. In some areas, such as Northeast Samosir sub-branches of tribal groups, or indwelling wife-taking affines, had the responsibility of keeping genealogical records for the entire tribal group (Vergouwen 1964:20).

Another factor which lends credence to the veracity of Batak genealogies is the number of generations they record. Fortes remarked that African materials "when most elaborate" had a maximal depth of fourteen to sixteen generations. Batak margas tend to have a greater generational depth than these figures, and genealogical connections above the marga level are charted as well:

A man's marga probably ascends for 15-20 generations, that is to at least four centuries ago. The meeting point of a man's marga with its companion marga in one tribal group lies some generations earlier and then the connections go further back still to the earliest known times until they are lost in legend (Vergouwen 1964:18).

The distance between an individual alive today and the first ancestor of all the Batak peoples is twenty-six to thirty generations in all, depending upon the source one consults. In these genealogies there is no vague, unknown space between a founding ancestor of a marga or tribal group and the actively recalled genealogical traditions. Vergouwen points out that the knowledge of lineage connections is not uniform throughout the Toba area. The genealogical traditions are well-known and distant connections recalled in areas where a tribal group has remained undispersed in the same territory for generations and the branches of the group have interacted frequently. He does note however

(1964: 10) that frequently locally kept traditions which have been separated by time and space can be reintegrated when the opportunity arises. Simanjuntak (1964:194) reports that an individual in the fifth generation after founding of the Simanjuntak marga followed uxrilocal residence and moved to Samosir Island. His descendants remained there and took a new marga name, Sinurat. In 1930, approximately eight generations later, representatives of the entire Sinurat marga returned to the natal village of their marga founder to reestablish ties with the Simanjuntak marga and affirm their descent as a marga branch from the senior marga. Vergouwen (1964:19) reports of a similar reintegration of local traditions at a great feast held by the Hutagalung marga in 1929. Hutagalung (1963:53) mentions the same feast. He reports that the lineages of the marga were inspired by a genealogy of the Batak people published by one of their margamates in 1926. The entire marga met for a feast in the Silindung valley which lasted four days and nights and whose sole purpose was to "clarify the genealogy". Hutagalung notes amusingly, "J. C. Vergouwen obtained much raw material from that great feast which he wrote in his book".

Another "social condition" which would contribute to the accuracy of Batak genealogies is the detailed depth of recall required by adat so that life-crisis feasts can be carried out properly. Feasts are graded according to the animal slaughtered at the feast; i.e. a feast is called pinahan lobu ('penned animal') if a pig is to be slaughtered and sigagat duhut ('ruminant') if a cow or buffalo is to be slaughtered. Adat demands that the proper 'eating community' (sapanganan) of the animal

involved must be invited to the feast, lineal kinsmen and the attendant wife-giving and wife-taking affines (hulahula and boru) in each ascending generation. The Batak view their asymmetrical marriage system as the dalihan na tolu, three hearthstones arranged in a triangle to support a cooking pot, with each stone symbolizing lineal kin, wife-giving affines, or wife-taking affines. For an adat occasion to be complete all three classes of kin for the proper number of generations back in time must be invited. If the adat feast is a wedding, a pig is slaughtered, and the parents of the groom are suhut ('feast-givers') to the feast, the groom is the focal person of the feast. His sapanganan daludalu ('eating community of a pig') must be invited, agnates for six to seven ascending generations and the attendant affines, and the most important wife-giving affines and the most honored with gifts are the parents of the bride. If a family is holding a funeral feast for a male grandparent and slaughter a buffalo as adat demands for such a great feast, the deceased is the focal person of the feast. The compass of lineal kin and affines to be invited to the feast must be counted genealogically back from the deceased in this case, not from the living suhut family. A group of kin ten to eleven generations in depth from the deceased must be called to the feast, and the most honored wife-giving affines are those of the wife and mother of the deceased.

All of these lineal and affinal relationships are recalled and symbolically represented in the ceremonial division (parjambaran) of portions of the animal slaughtered for the feast. Each attendant kin group at a feast knows its relation viz. the suhut ('feast-giving')

family in the context of the specific feast and watches carefully to see that it receives the named portion (jambar) of the animal which is its due according to adat. Mistakes in the process of the division of meat sometimes led to physical violence at major feasts and the expulsion of some parties from the village in the past (Siahaan 1955:44).. To be called to a feast when a kin group had a right to a piece of the animal was a binding responsibility to attend as much as it was the responsibility of the feast-giving family to provide the proper jambar ('share of the animal'). To not attend when called or to provide the wrong jambar was the occasion of acrimonious oratory in which the offending parties were denounced for their lapses in the statutes and judgments of the Batak, for "forgetting adat" (Siahaan 1955:45). Thus detailed genealogical knowledge of a wide range of kin was necessary for the proper procedure of feasts, which is a major component of adat. This factor would have promoted accuracy at the local level especially, since lineages would keep track of these relationships for the purposes of feasts. When a major feast is planned, a formal planning session is held to work out finances, cooperative labor and contributions, and the genealogical experts of the marga are consulted to recall and detail the pertinent relationships for the feast and to set the order of the jambar ('divisions of meat'). These continuously well-kept local traditions could be reintegrated at any time where time and circumstances allowed, such as at the great Hutagalung marga feast noted above.

One last problem to discuss is the veracity of the entire structure, even accepting the fact that the local traditions are conscientiously

recorded. There is a suspicion that people are selective in choosing which ancestors remain in the genealogies, and which drop out. Evans-Pritchard (1940:198) has stated that in theory one should see in a segmenting system that clans ought to be further and further removed from the founding ancestor and individuals in lineages further removed from each other through time. This does not occur among the Nuer:

In theory every man is a potential founder of a lineage, but, in fact, lineages spring from very few names. The others, for one reason or another, drop out, so that only certain lines of descent are remembered.

The Batak do not follow the Nuer practice, and indeed fulfill the theoretical expectation of segmenting systems in their genealogies. It is one of the basic contentions of this work that the adaptability of adat rests on the possibility of defining a descent group at will from the genealogies. For purposes of common reference, prestigious ancestors who held important titles, founded hamlets, cleared and established title to wet-rice land etc. are most commonly invoked as the 'unifying ancestor' (ompu parsadaan) of a descent group. But these are not the only individuals who remain in the genealogies. Local traditions are comprehensive and individuals who might be expected to drop out of their genealogies through time, men who died childless or without male heirs, or individuals who migrated to another area are remembered and recorded in the genealogies. A published genealogy (Simanjuntak 1965) of three of the four maximal divisions of the Simanjuntak marga covers sixteen generations and is 424 pages long.

Added to this pre-colonial literate tradition, well-kept local genealogies, and their acknowledged importance, is the continuing

passion of the Batak to maintain their cultural integrity and to keep their genealogical traditions, feasts and customs, and adat viable in modern times. Numerous works in the Batak language have been published within the past forty years which systematically describe and record, and in some instances attempt to analyze, Batak adat and material culture. Evidence indicates that these are not simply personal recollections of adat, but compilations from diverse sources. One prolific scholar (Siahaan 1963:5-7) cites at least forty-seven elders who were consulted in the course of writing a book on Batak kinship and affinal alliances. Many of these works contain an attempt to synthesize a genealogy of the entire Toba Batak people. They chart the genealogical links from the first ancestor Si Raja Batak through the first ancestors of the great genealogical complexes, tribal groups, and the founding ancestors of individual margas. These comprehensive genealogies are the ultimate developments in the ongoing attempts to integrate all of the local traditions of the taronbo into one.

Attempts to synthesize a single genealogy of all of the Toba Batak margas have appeared in the 20th century. The hostile conditions of the 19th century helped to keep the local traditions separate:

Naturally only a few Batak have a knowledge of the entire social structure of their society. In the Pidari times the facts could not be obtained because of the dangers and difficulties of travelling through the whole countryside where one was not safe outside one's own ancestral area. Even at the present time [1933] it is difficult, in a country with so many out-of-the-way places, to get to know more than the main genealogical outlines. (Vergouwen 1964:20).

Lance Castles (1975:68) avers that the cessation of internecine hostilities, brought about by the establishment of Dutch hegemony over the

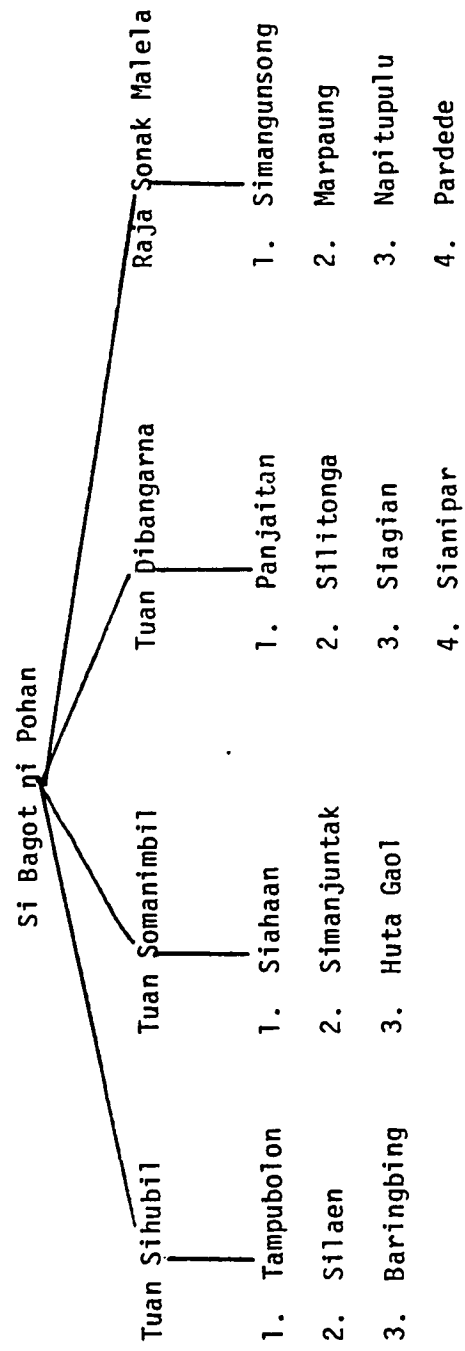
entire Toba area, was necessary before pan-Toba Batak genealogies could be developed:

To begin at the top, the Bataks, or at least the Toba Bataks, had a consciousness of themselves as a people and a genealogical system, the descendants of their eponymous ancestor Si Raja Batak. However, while the Batak always had an extraordinary genealogical knowledge concerning their own parts of the system, the possibility of seeing Batakdom as one huge family had to await the conditions of colonial rule, which made it possible to reintegrate the genealogical traditions which distance had separated.

These pan-Toba Batak genealogies make clear the descent relationships between marga founders, at a higher level tribal group founders, and the ancestors of the major genealogical complexes back to Si Raja Batak. The charting of these genealogically distant relationships helps to explain two factors crucial to the development of Silean Banua. These are the reality to the Batak of the Pohan tribal group as a descent group, which had a direct influence on achieving cooperation to build Silean Banua, and the structural distance between the Pohan tribal group and the Lontung margas whose intermittent conflict led to the decision to found the village of Lintong ni Huta.

All of the margas of the Pohan tribal group believe themselves to be descended from Si Bagot ni Pohan (see fig. 1). Each of these margas has a genealogical depth of approximately seventeen generations and Si Bagot ni Pohan was, putatively, the grandfather of the marga founders. He is not, to margas descended from him, a mythical clan ancestor from whom they know themselves to be descended but to whom they cannot trace direct genealogical links, despite the removal of nineteen to twenty generations from the present. Any individual in the tribal group could, with the assistance of adat specialists, trace his or her ancestry

FIGURE 1



through the genealogies and ultimately to Si Bagot ni Pohan himself. The fourteen margas of the Pohan tribal group divide into four groups, depending upon which son of Si Bagot ni Pohan they are descended from (see fig. 1). This division of four is an organizational principle which can influence the interaction of kingroups or individuals. There are four adat elders who attend each feast as representatives of the entire tribal group in Lintong ni Huta, chosen from each of the four groups of margas descended from Si Bagot ni Pohan's sons. Land in Lintong ni Huta was apportioned on this principle of four as well. The great bius ceremonies were divided among the four descent groups, each being called sanghae ni horbo ('one quarter of the buffalo'). When the lineal aspect of the relations between the margas of Sibagot ni Pohan is emphasized, two individuals will address each other by elder-younger sibling kinterms, depending upon the birth order of the sons of Si Bagot ni Pohan from whom they are respectively descended. Thus while the level of cooperation achieved by the people of Lintong ni Huta to build Silean Banua was unusual, the reality to them of their common descent from Si Bagot ni Pohan and identifying themselves as such was not unusual.

The genealogies also help to explain an influential factor in the founding of Lintong ni Huta; warfare between the Pohan tribal group and the margas of Lontung. The margas to the west of the Pohan tribal territory, and on the southern end of the island of Samosir were members of the Lontung descent group, one of the oldest genealogical complexes in the territory. The continuing and often large-scale warfare between the Pohan tribal group and some of the Lontung margas in the eighteenth and early nineteenth centuries led directly to the decision to found

Lintong ni Huta. The margas of Lontung are descended directly from Guru Tateabulan or Raja Ilontungon, as varying sources have it, a son of Si Raja Batak, and the Pohan tribal group is ultimately descended from Si Raja Batak's other son. This genealogical distance between the two groups helps to explain the continued, unabated warfare between them. There was small-scale conflict and raiding, even between localized segments of the same marga in the past. But sources of mediation were readily available and such conflict rarely continued unchecked. With the Pohan tribal group and the Lontung margas there could be no kin of affinal group to act as mediators and the defensive measures, such as founding Lintong ni Huta, were necessary. There is no sure date for the cessation of hostilities. Tampubolon (1964:213) says only that the opponents became "tired of anger, peace came, and their hearts softened towards one another." The background of the fierceness of this conflict and its continuation can be understood through consulting the genealogies.

Published genealogies of the Batak peoples as a whole have a long history in the works of European scholars, and works by Batak scholars date back to 1926. Von Brenner (Brenner von Falsach 1894:204) published a partial genealogy of the Tuan Sorba di Banua complex in 1894. It is interesting that most of the published Batak scholars derive from tribal groups in this major genealogical complex, especially from the Pohan tribal group. Vergouwen made special note (1964:18) of the accuracy of genealogical knowledge in this group:

Within the great complex of Tuan Sorbadibanua the classification of the tribal groups is not only clearly established but a number of historical details are also known about them.

J. Warneck (1905:248-252) published a comprehensive genealogy in his Batak-German dictionary, but this was largely erroneous and has been repudiated by later scholars. Ypes (1932) published a radically different genealogy in 1932 in his work on Toba Batak land adat. Vergouwen published a similar genealogy in 1933 (1964:5-8) which he stated agreed in outline both with Ypes' and with one of the first published genealogies of all of the Batak people by a native scholar, the Pustaha Taringot tu Tarombo ni Bangso Batak (1926--'Book Concerning the Genealogy of the Batak People') by W. M. Hutagalung. Vergouwen and Hutagalung's genealogies have set the pattern for most later works. Another scholar of the Hutagalung marga (Hutagalung 1963:54) criticizes the genealogy in Warnecks' dictionary. He states that the 1926 genealogy of his margamate was "noticeably clearer" as a collection of all of the local genealogical traditions of the Batak people. He also praises Ypes' and Vergouwen's work (1963:54):

I am not wrong if I testify to the fact that all of the books mentioned (Ypes 1932, Vergouwen 1964: Hutagalung 1926) may be said to be the source of (genealogical) knowledge in our culture, the clarifiers for those who come after them.

There are other complete genealogies in the words of Batak scholars (see Hutagalung 1961; Tampubolon 1964:122). These agree essentially with the works of the foregoing scholars.

These local and pan-Batak genealogies provide not only a structural map of relationships between individuals, lineages and margas, and the larger genealogical groups but also provide a possibility of dating historical occurrences. They are also useful sources of historical (or quasi-historical) materials as well, since they often contain stories of

the deeds and exploits of these distant ancestors. Vergouwen notes:

Many of these stories contain a kernel of historical truth, others only the local versions of Indonesian tales. And the more recent the stories are the more likely they are to have some truth in them. In many of these tales much is ascribed to individuals that should undoubtedly cover whole periods, particularly where very ancient history is concerned, and the reducing of [the founding of] 'head' marga and tribal groups back to one person is often founded on a naive tendency to give things a concrete base.

In his Tarombo Tuan Sorbadibanua ('Genealogy of [the descendants of] Tuan Sorbadibauna) Mangaraja Asal Siahaan (1941:25-29) gives a historical narrative of some of the deeds and part of the life of the ancestor of the entire Pohan tribal group, Si Bagot ni Pohan. Tampubolon (1964:161) records much the same material; how Si Bagot ni Pohan founded the town of Balige, how he originated local institutions of adat, etc. These stories concern an individual nineteen to twenty generations removed from the present and have a definite mythic quality about them. The tendency to credit the founding of a major genealogical complex or a town to one person occurs frequently in historical tales and in the genealogies. In this there may well be the "naive tendency to give things a concrete base" (Vergouwen 1964:21). Or, in an attempt to find a source for an extant structure the genealogists may have, in Myer Fortes' words, taken the concept of a single founder and "projected it backwards as pseudo-history". It is difficult to tell at what point the genealogies become "lost in legend", and how much of a "kernel of historical truth" there is in legends and accounts of the distant past.

For the historical time frame in this work the genealogies and oral accounts are probably a good deal more accurate. Lintong ni Huta was

founded approximately seven to nine generations ago, depending upon whose perspective one is counting from. The information contained in the Simanjuntak marga genealogy (Simanjuntak 1965) becomes more detailed through time. The marga of men's wives and the names of their daughters and the margas into which they married are not systematically included until nine to ten generations ago. This may reflect a tendency to keep more detailed information and greater care given to the genealogies through time. It may also have to do with the fact, discussed above, that detailed information concerning affines is needed for the correct procedure of adat feasts up to approximately ten generations beyond the oldest living individual. Based on this it would be predictable that such information would appear for the requisite number of generations in the genealogies and then drop out as its importance lessened. Within this span the history of the founding of Lintong ni Huta is probably accurate, at least in outline, and the history of Silean Banua more accurate still, as it is more recent.

The genealogies do provide a relative time frame for historical occurrences. The genealogies divide the Batak people in generational strata. Most Batak know the number of their generation (sundut) in removal from the marga ancestor. The marga ancestor is number one and the generations are numbered successively from that point. This allows a relative dating of occurrences by finding the generational stratum of the personalities involved in marga genealogies. For example, Tampubolon (1964:213) states that the hostilities that led to the founding of the village of Lintong ni Huta occurred "in the generation of Ompu Sotarduhit (sic) Simanjuntak Sitombuk in Tarabunga". The Simanjuntak

genealogy (1965:194) lists an Ompu Tarduhir of the Sitombuk marga division who lived in Tarabunga eight to nine generations ago, which gives a relative time frame for this and other occurrences which have pertinence to the history of Silean Banua.

Ethnohistory and the Data

Despite what we may say about the veracity of the genealogies and the accompanying historical materials, or what uses may be made of them, the fact remains that they are all ethnohistory. Published accounts in the Batak language, unpublished materials, and oral accounts obtained from inhabitants of Lintong ni Huta form the basis for the conclusion of this chapter and the following two chapters. Some skepticism is necessary in using these materials. Robert Lowie (1917:166) gives the following opinion on ethnohistorical materials:

...aboriginal history is only a part of the hodgepodge of aboriginal lore which embraces primitive theories of the universe generally, and that its a priori claim to greater respect on our part are nil. Such claims must be established empirically if at all; but, so far as my experience extends the empirical facts are diametrically opposed to such claims. The primitive tribes I know have no historical sense; and from this point of view the question of whether they retain the memory of actual events, while interesting in itself, is of no moment to our present solution.

There may exist exceptions to Lowie's generalization. Irvine (1978:668-669) cites corroboration of the accuracy of Wolof genealogies in traveler's accounts and nineteenth century historical sources. These Wolof genealogies are oral materials. The single fact that the Batak genealogies and some of their historical materials have a literate tradition increases, I think, the probability that there is some historical fact

in them. But the problem remains of how to deal with potential inaccuracies and bias in the materials.

Fenton (1978:927) cogently notes that a person dealing with ethno-historical materials must:

...control the techniques of historiography. He must learn to evaluate the authenticity of sources, to interpret the document beyond what it says, and to learn something of the writer's culture and history.

He also suggests that something like "surveyor's triangulation" is necessary in perceiving rival interests in a problem. Although Fenton is here referring to ethnohistorical concerns of a greater scope than localized history in one culture, his suggestions are still applicable. Just as a scholar must know something of Toba Batak culture in general to write about it, it required knowledge and observation of the interaction of the marga segments of Lintong ni Huta to evaluate accounts of village and hamlet founding, and divergent accounts of the influential groups in the establishment of Silean Banua. The "surveyor's triangulation" technique was necessary when a person attempted to aggrandize the role and prestige of their ancestor in an account of the history of Silean Banua. The same problem is present when dealing with Batak history in general.

This can be seen in a comparison of a Western and a Batak account of the same event. Lance Castles (1975:73) reports that the Singaman-garaja XII Ompu Pulobatu, the last priest-king of the Toba Batak:

...succeeded his father about 1875 and had carried on an obstinate though not very effective resistance to Dutch rule for three decades.

...His opposition reached a peak in 1883 when he assembled several thousand warriors in an effort to capture the government office at Balige, and put a price of 300 Spanish dollars on the Dutch district officer's head. This ill-organized host was quickly dispersed however and Singamangaraja was himself wounded.

The "not very effective resistance to Dutch rule" of the Singamangaraja earned him the title 'hero of the revolution' in Indonesia. The war in Balige warrants a two-page description in Tampubolon (1964:220-222) which tells glowingly of the bravery and magnificance of the Singamangarsja and praises his ability to mobilize such a great number of warriors. The direct outcome of the conflict and the fact that the Singamangaraja was wounded are not mentioned in this account. Thus depending upon the ethnic group of the writer and his individual bias concerning Indonesian history, the Singamangaraja either led an "ill-organized host" that was "quickly dispersed" or (Tampubolon 1964:221):

He carried a flintlock in his arm, he was in the midst of it, at the head of battle; he was sitting on a horse, a horse white as cotton -- the great horse of the kingdom; he carried a double-bladed sword the sacred parang.

The Singamangaraja was probably able to assemble such a large group of warriors only as a result of the extraordinary threat of military advance from outside the area. His control of religious affairs was not acknowledged by half of the Batak margas, the Lontung group, and he appears to have had little temporal power even in his own marga territory (Castles 1975:74). Batak writers such as Tampubolon (1964) tend to aggrandize the past and project the power and prestige given to the last Singamangaraja, as a result of thirty years of intermittent guerrilla warfare with the Dutch, to earlier Singamangarajas, which they in all

probability lacked. Castles states on this subject:

Recent Batak writers about the Batak past often present the Singamangarajas as a real royal dynasty, in effect completing in the mind a transformation which only occurred belatedly and partially in reality (1975:75-75).

In this case the Batak historians have done what Myer Fortes warned was a tendency of genealogies; they have taken an existing structure and attempted to project it backwards as pseudo-history.

The following accounts of warfare, the background of the founding of Lintong ni Huta, and the history of irrigation in the village have been assembled from diverse sources and I have attempted to bring to bear the kind of critical acuity that Fenton thinks ethnohistorians should have. It does not matter, on one level if a single ancestor, or a group of agnates, founded a hamlet or singlehandedly constructed an irrigation system. The fact that one ancestor is credited with doing so is the charter for his descendants to claim rights to prestige in the hamlet, control of a small irrigation system, or rights in the administration of Silean Banua. Most of the materials recounted here are recent enough that there must be more than a mere "kernel of historical truth" in them. Even without the accuracy expected in Western historiography it is possible to construct from oral accounts a fairly accurate history of the founding and expansion of the village, the development of small-scale irrigation in the village, and finally the history and development of Silean Banua.

The Pidari Times and the Lontung Wars

The Toba Batak have been characterized as a violent and bellicose

people, a stereotype which still persists in Indonesia. Periods of warfare played a specific role in the decision to found the village of Lintong ni Huta, and subsequently in the decision to found and construct Silean Banua. An indeterminate period of time during which there was internecine warfare in the Lake Toba area is referred to as the pidari times. The charter of Silean Banua (1972:1) states that the decision to build Silean Banua and the beginning of construction occurred during the pidari times. This allows a specific date of 1868. But it is unclear as to the exact extent of the pidari times, or the derivation of the word.

Vergouwen mentions the pidari times often in his ethnography but says little of them specifically except that they were a time of violence, slavetaking, and warfare during which it was unsafe to leave one's home territory. All of this "...preceded the coming of the Dutch government..." (1964:20). The entry in Warneck's dictionary (1905:148) is equally ambiguous:

pidari (from Padri?), the old state of affairs of the Batak where war always prevailed; the time of the rule of force.

Some evidence indicates that the pidari times was a period of intensified conflict and the breakdown of adat governing warfare in the 19th century. It is possible that the name pidari derives from the Padris, the fanatical muslim sect that swept out of West Sumatra in 1825 and conquered most of the residency of South Tapanuli. The Padris made sporadic forays into Toba Batak territory and came as far north as the village of Butar on the Humbang plateau above the lake. Castles (1975:71) feels that the Batak chiefs may have used the situation to war against

their neighbors more fiercely than adat permitted. If the name of the pidari times does derive from the word Padri, the pidari times would encompass the period from approximately 1830 to the establishment of the Dutch Residency in Balige in 1883. Vergouwen is vague about the exact extent of the pidari times, but his various mentions of it (1964) imply that it was a temporary disruption of an established order. Castles (1975:75) concurs:

The picture of lawlessness and brutality which emerges from some missionary accounts is probably no indication of the situation before the Padri incursions. The impressions of Silindung given by Burton and Ward is rather an idyllic one, cannibalism aside. Certainly there was the constant rivalry and frequent disputes leading to wars. But the ferocity of the wars was limited by tabus and resources for arbitration were abundant.

A Batak scholar and elder (Tampubolon 1964:169) feels that the pidari times were less a definite span of time than a state of affairs extending generations into the past. Tampubolon's description of the pidari emnity (hamusuon pidari) is close to the definition quoted from Warneck's dictionary. Tampubolon admits that there have been quarrells since the beginning of humanity, but those a matter between individuals:

However the pidari emnity is not like that. Peoples are enemies against peoples, ethnic group against ethnic group, marga against marga, village against village, region against region. The emnity speaks the words of war...

According to Tampubolon the pidari emnity extends back to the time of Tuan Sihubil, the eldest son of Si Bagot ni Pohan, about seventeen to eighteen generations before the present. Because of the threat to the Pohan territory, Tampubolon credits Tuan Sihubil with originating defensive measures that characterize most Toba Batak hamlets:

He (Tuan Sihubil) established watchposts at the north and south (of the Pohan tribal territory). He took defensive measures in the hamlets, had their walls raised and thorn bamboo planted on top, and strengthened the bolts on the hamlet gates.

The enemies that made these defensive measures necessary were the Lontung margas. At this juncture Batak history in Tampubolon's work has been projected backwards in time. The conflict with the Lontung margas took place approximately eight to nine generations ago. It seems unlikely that it would have gone on unchecked for several hundred years. Tuan Sihubil was the father of the Tampubolon marga founder and Tampubolon was attributing to his marga ancestor the credit for originating defensive measures common to walled hamlets in all parts of Toba. The "kernel of historical truth" is present in Tampubolon's account. He does state that the continuing conflict with the Lontung margas prompted the elders of the Pohan tribal group to take collective action. They sent settlers out to found four defensive villages in the western extent of the tribal territory. One of these was Lintong ni Huta (Tampubolon 1964:169).

The reasons for the conflict and the form it took are partially topographic and genealogical. The Pohan tribal territory is at the western edge of the Toba Holbung plain which was described in detail in Chapter two. Most of the territory around Balige is part of the gently sloping plain which spreads along the southern shore of the lake. West of the Tarabunga peninsula, on which Lintong ni Huta is located, the land rises sharply in elevation towards the mountainous Humbang plateau and the Silindung Valley to the south and west. The Pohan tribal group is part of the greater genealogical complex descended from Tuan Sorbadibanua.

Si Bagot ni Pohan and his seven siblings and half-siblings are credited with each founding a major tribal group. Stories exist (Siahaan 1941; Tampubolon 1964) telling how Si Bagot ni Pohan, as eldest, instructed his siblings to disperse and establish their territories along the Toba Holbung plain and in the mountains to the south. Si Bagot ni Pohan chose to found Balige and his territory at the western end of the plain. Thus the Pohan tribal group's neighbors to the east, south, and on the Humbang plateau were all part of the Tuan Sorbadibanua complex. These tribal groups maintained a tentative alliance. The bulk of the soldiers that fought with Singamangaraja XII in Balige in 1883 were drawn from the Toba Holbung area. The only unrelated neighbors of the Pohan tribal group lay to the west on the west shore of the lake and to the north of Balige across the lake on the southern end of the Island of Samosir. These were the Lontung margas, whose genealogical removal from the Pohan tribal group has already been discussed. Balige was vulnerable to attack from the west through what was then empty land and from the lake. Raiders from Muara, a large town on the western shore of the lake, crossed the open ground to raid villages on the western periphery of Balige. Canoes from the island of Samosir landed in the Meat Valley on the western side of the Tarabunga peninsula and raiders attacked Balige overland from there.

The time at which the conflict between the Pohan tribal group and the Lontung margas intensified is uncertain. Tampubolon states (1964:213):

The war of the pidari emnity, according to the genealogy of Si Bagot ni Pohan was in the generation of...Ompu Sotarduhit (sic) Simanjuntak (of the genealogical division of) Sitombuk in Tarabunga...All of the margas of Pohan shared in the building

of a defensive fortification against the margas of Lontung.
(from that time til now is approximately 6-7 generations;
6-700 years).

Tampubolon has here merged the pidari times with the Lontung wars and gives a fairly excessive estimate of time. However, the Simanjuntak marga genealogy (Simanuntak 1965:194) lists an Ompu Tarduhir I who lived approximately ten to eleven generations ago, and his grandson Ompu Tarduhir II both of the Sitombuk division of the Simanjuntak marga, and both originally lived in Tarabunga. Ompu Tarduhir II is probably the one that Tampubolon is referring to; his direct descendants helped to settle the Simanjuntak territory in Lintong ni Huta. Taking into account overlapping lifetimes, the events concerning the founding of the village probably occurred slightly more than 200 years ago.

The reaction of the elders of the Pohan tribal group in Balige to the intensification of the conflict with the Lontung margas was to found four defensive village settlements. One was to be founded in the valley of Meat to cover the area where canoes from Samosir landed. Lintong ni Huta was planned to cover the western half of the Tarabunga peninsula and to guard the territory between the lake and the valley of Meat and the foot of the mountain Dolok Tolong. Two other settlements were placed away from the lake near the westernmost edge of the Pohan territory, Tangga Batu and Gurgur. All four of these villages are referred to as Tampahan, a word deriving from talpak or partalpahan, meaning 'end' or 'border'. Representative segments of the margas of Si Bagot ni Pohan were sent to found these villages. They were not equally represented in all of the villages but "each marga descended from Si Bagot ni

Pohan had its golat ('territory') in the region of Tampahan" (Simanjuntak 1965:199).

The Simanjuntak genealogy gives a succinct account of these events (1965:199):

As the enmity between the descendants of Si Bagot ni Pohan who lived in the territory of Balige, against the descendants of Lontung became more constant, because of the boundary lands, raiders of Lontung from Muara and the island of Samosir often came to fight (against the) territory of Balige.

Because few people yet resided in the empty land which is presently Tampahan, all of the raiders came from there. Because of this it was not peaceful there even though there were a few people who lived there.

Approximately in the nineteenth century it was concluded by a council of the descendants of Si Bagot ni Pohan in Balige that in order to prevent raiders of the enemy coming from the empty border land with Lontung, it should all be inhabited; each of the margas of the descendants of Si Bagot ni Pohan should send part of their descendants to found villages there.

[...a paragraph follows detailing which margas and marga segments went to which village.]

After the descendants of Si Bagot ni Pohan that lived in Tampahan became numerous, the raiders of Lontung did not come. After that peace was made and strengthened by the establishment of affinal relationships, and a boundary was established between the lands of Sumba and Lontung.

It was noted above that each marga of Si Bagot ni Pohan had a golat in the four villages of Tampahan. As was discussed in chapter three, the horja village organization of the Pohan tribal group is based upon the fact that the constituent marga segments of a village are equal pargolat, holders of permanent title to the land. In the case of Lintong ni Huta the largest golats of territory were apportioned to the Tuan Somanimbil and Raja Sonak Malela (see fig. 5) subdivisions of the

Pohan margas. But all had a golat in the village. Those Pohan margas not represented in Lintong ni Huta predominated elsewhere. The Siahaan marga has not been influential nor numerous in Lintong ni Huta, compared with the dominant margas. But one researcher (Cunningham 1958:63) has called it the marga raja of the village of Meat. The special circumstances of the founding of the villages of Tampahan emphasized the tribal group structure over the individual marga. This coupled with the corporate structure of a "Balige type horja" deemphasized the importance of the individual hamlet.

The hamlet (huta) had more autonomy in other parts of Toba. Castles (1975:67) states that "The huta must be the starting point for any discussion of Batak political institutions." The hamlet is and was definitely the focus of residential life for the Batak and a number of institutions revolved around common residence in one hamlet. Vergouwen (1964:115) has discussed the exaggerated impression some scholars have given of the independence of the hamlet:

Some writers on the Batak have gone so far as to say that the huta is a small independent republic whose raja need brook no outside interference in its affairs. This is not admissible. The huta is always a part of a higher community from which, in the pidari time, it could not dissociate itself other than at the cost of great danger to its own existence. It is a cell of a political organism which was formed by the marga and tribal group, but a cell with political life.

Power in Lintong ni Huta did not derive from the simple fact of founding a hamlet. Influence in the village accrued to those kin groups whose men pioneered a number of hamlets in the village, some of which formed spatial clusters of kinsmen. The most influential kin groups in the

village were also those who were the first to develop small-scale irrigation in the village. Portions of the marga segments that controlled irrigation in Lintong ni Huta became the influential suhut kin groups in the establishment of Silean Banua. The history of the founding of the various hamlets which make up Lintong ni Huta will illustrate the base of power and wealth from which these influential groups built.

The Founding of Lintong ni Huta

The growth of the village of Lintong ni Huta through time mirrors in part the growth of the wealthy and influential marga segments and minimal lineages who came to control Silean Banua. Those descent groups were large, had founded a large number of hamlets in the village in three generations after its founding, and also controlled the small irrigation system in the village. The construction and development of the small irrigation systems in the village occurred most probably in the second generation after its founding and the placement of some of the later hamlets to be founded in the village was probably influenced by the development of wet-rice land irrigated by these small systems. However, the history of the development of small-scale irrigation must be treated here as a separate subject. (see Chpt. 5)

The simple fact of producing a large number of sons seems to have insured success to the large descent groups in Lintong ni Huta. One of the first settlers in Lintong ni Huta produced seven sons. The descendants of the most prolific of them, the second son, came to found twenty of the thirty-eight hamlets in Lintong ni huta, controlled political

power in the village in the nineteenth century, and controlled two-thirds of the levies of Silean Banua as well as four of the six small irrigation systems in the village. To be one among many sons in a new village would have been a great incentive for a man to found a new hamlet. The Batak favor primo-ultimo geniture. The eldest son tends to inherit a greater amount of land, in the past he succeeded to the father's title if he had sufficient ability, and is the power in the family after the father's death. The youngest son tends to remain at home, care for the parents in their old age, and usually inherits the house. The eldest and the youngest sons are terminologically distinct from the other siblings. The eldest is called siahaan or siangkangan and the youngest siampudan or siagian. The silitonga, literally meaning 'those in the middle' or 'those in between', inherited some of their father's land and property but in general had to seek their fortune where they could find it. This inheritance picture was further complicated when a man had sons by multiple wives. Brothers born to the same mother in such a situation were closer than with their half-siblings. They interact ceremonially as a group and there is sometimes differential inheritance between sons born to the senior wife and those born to subsequent wives.

Founding a hamlet was one way to improve one's fortunes despite the hard work involved. The si pungka huta ('hamlet founder') was acknowledged as the raja huta ('hamlet chief') and the title remained the prerogative of his descendants. He and his descendants had the right to say who might establish residence in the hamlet, controlled certain

hamlet resources, such as the bamboo that grew on the hamlet walls, and rights to pasturage in grassland within the hamlet territory, and rights to larger areas of dry garden land than other inhabitants. The genealogies of hamlet founders from the Simanjuntak marga (fig. 2) shows that they were predominantly from the 'middle sons'.

The descent structure of the Pohan tribal group was the controlling factor in the apportionment of territory in Lintong ni Huta, and the other villages of Tampahan. Territory was allotted on the basis of the four subdivisions of the tribal group. As was noted above not all marga of the tribal group are represented in each village. Some margas also predominate in one of the villages of Tampahan. Simanjuntak is numerically the predominant marga in Lintong ni Huta but a minority in the other villages of Tampahan. In Lintong ni Huta it would appear that the divisions of Sonak Melela and Tuan Somanimbil were favored in the apportionment of territory. A wedge of territory forming almost a fourth of the village was allotted to the margas of Sonak Malela, and representatives of all four of those margas founded hamlets in the territory. Of the three margas of the Tuan Somanimbil division, Simanjuntak predominated. Members of that marga founded more than half of the hamlets in the village. Siahaan is minimally represented and members of the Huta Gaol marga did not settle in the allotted golat. Only Tampubolon of the Tuan Sihubil margas is represented in the village. The Panjaitan and Siagian margas founded hamlets in a small golat of territory in the northwestern edge of the village.

Any discussion of the founding of hamlets in Lintong ni Huta must

initially concern the Simanjuntak marga. In the first three to four generations after the founding of the village, sons of this marga established more than half of the hamlets that comprise Lintong ni Huta. Individuals from at least four established descent groups within the Simanjuntak marga settled in the village at the time of its founding, but all of the hamlets founded by Simanjuntak men were founded by descendants of one man, Ompu Tagururaja Simajuntak. Ompu Tagururaja is credited with being the first settler in the village, especially by his descendants. One elder and descendant of Ompu Tagururaja stated that Ompu Tagururaja founded his hamlet Huta Bagassan and "called the sons of Si Bagot ni Pohan from Balige to their golats of land to make the village of Lintong ni Huta." Ompu Tagururaja established his hamlet on the western edge of the village below a low hill that separates Lintong ni Huta from the neighboring village of Meat. Its name is terminologically distinct from the other hamlet names in the village which lends credence to its claim to being the first hamlet in the village. Most hamlets in Lintong ni Huta have the word Lumban or Sosor in their name. Lumban indicates a well-established hamlet. Sosor usually indicates a newer or more recently established hamlet. These words are coupled with an identifying term to make up the hamlet name. It may simply be the name of the marga that founded the hamlet, such as Lumban Napitupulu; names of trees or natural features such as Lumban Hariara ('Banyan tree hamlet'); or descriptive words such as Lumban Tongatonga ('hamlet in the middle'). Ompu Tagururaja's hamlet was called Huta Bagassan ('inner hamlet') which signifies its position as the oldest hamlet in Lintong ni Huta.

The history of the hamlet founding of the Simanjuntak marga must of necessity plunge the reader into the labyrinthine pathways of the lineage genealogy. This genealogy, in its outline form, or with details, is a self-evident structure to the villagers, constantly referred to at feasts, used to identify kinsmen, etc. and presents no confusion to the participants. To western eyes even a schematic diagram of a minimal lineage segment genealogy is daunting. The descent groups which derive from Ompu Tagururaja Simanjuntak are not difficult to unscramble from the genealogies but the selective factor of Batak kinship makes keeping them straight for the purposes of this work somewhat confusing.

We noted early on that a Batak identifies himself as part of a lineal kin segment of greater or smaller size depending upon what level of distinction is pertinent at the time. The descendants of Ompu Tagururaja in Lintong ni Huta can and do identify themselves as a single descent group, an 'eating community of pig' (sapanganan daludalu). They cooperated as a group in 1975 to assist the descendants of Ompu Tagururaja's elder brother in an especially large descent feast. But for different purposes a Simanjuntak in Lintong ni Huta might define himself as belonging to a lineage segment descended from an individual in any of the next three descending generations from Ompu Tagururaja. The following account of hamlet founding will divide the descent groups in the generations following Ompu Tagururaja Simanjuntak according to divisions which have significance for the control of irrigation. This principle cannot be adhered to without exceptions. For example, one descent group which controlled one of the small irrigation systems in the

village could not agree as a group to become one of the suhut ('financially responsible') groups for the construction of Silean Banua, and only a small segment of the larger descent group became a suhut group in the end.

Ompu Tarubar

Ompu Tagururaja had seven sons, only two of whom produced descent groups of any size or prominence in the village. Ompu Tagururaja's eldest son was Ompu Tarubar. There are no mentions in the oral accounts of village founding that Ompu Tarubar founded his own hamlet. As Ompu Tagururaja's eldest son he probably inherited the title of hamlet chief ('raja huta') and remained in Huta Bagassan. Since Ompu Tarubar was the eldest son of Ompu Tagururaja his descent group should have had more influence and prestige than it does. The Batak connect the production of large numbers of children, and especially sons, with possession of sahala, a kind of spiritual essence akin to the Polynesian mana. Ompu Tarubar had only one son, Raja Parhudagar. The descent group did control one of the small irrigation systems in Lintong ni Huta, but had no role in the founding of Silean Banua.

Raja Parhudagar founded his own hamlet named after himself, Lumban Parhudagar. This was close to the boundary between the territory of the Tuan Somanibil and Sonak Malela golat's in the village. It is of interest as it was one of the hamlets burned to ground by the Dutch soldiers in retribution for the assistance Lintong ni Huta gave the Singamangaraja in the war in Balige in 1883. The houses in it burned

SIMANJUNTAK MARGA HAMLET FOUNDERS

Descent Group of Ompu Tarubar

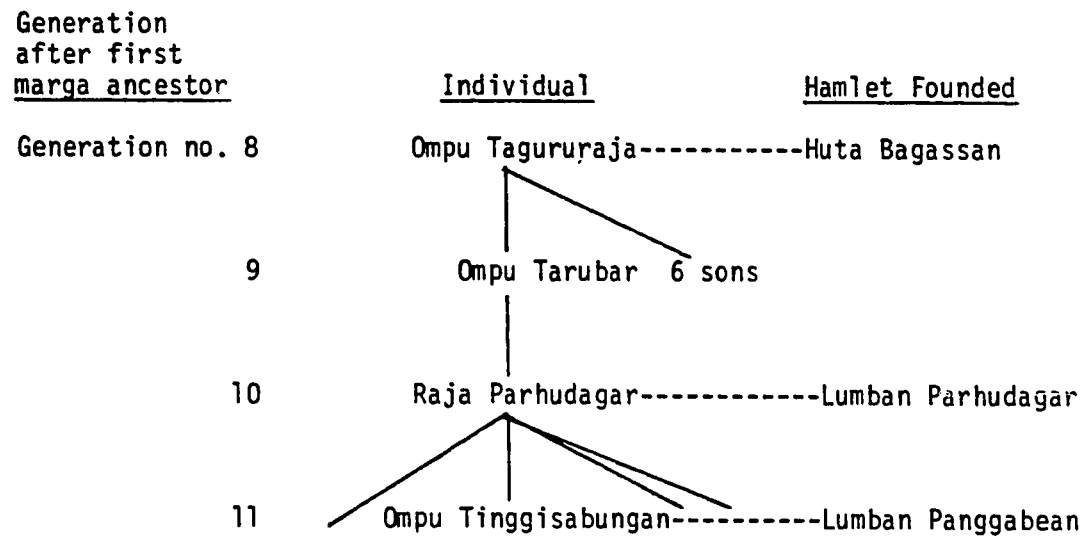


Figure 2

down a second time and at present it has only one house in it. A son of Raja Parhudagar, Ompu Tinggisabungan, founded the third hamlet in the descent group, called Lumban Panggabean. This third hamlet was founded near what is now the main highway between East and West Sumatra. Lumban Panggabean has become a prominent hamlet in recent times as a result of its location on the highway. Many of the footpaths from the interior hamlets to the main road go through the hamlet and it has a rice mill which is most convenient for the southeastern third of the village.

Ompu Baritalaut and Company

If production of a large number of descendants is a sign of possession of sahala harajaon ('spiritual essence of chieftanship'), Ompu Tagururaja's second son, Ompu Baritalaut inherited it. He had five sons himself and two of his more prolific grandsons sired twelve and fourteen sons respectively. His large descent group controlled four of the six small irrigation systems in the village, founded twenty hamlets through four generations, and two segments of his descent group became suhut ('financially responsible') groups for the construction of Silean Banua. Two of his descendants were also holders of the title raja ihutan ('chief to be followed'), an office created by the Dutch and the closest thing to a chief of the entire village the village had. There is a potential for cooperation in Batak social structure, but the possibility for fractionalism and fragmentation is equal or greater. The descent group of Ompu Baritalaut as a whole seldom cooperates for ceremonial or other purposes. The functional descent groups who cooperate

in ceremonies, the administration of the small irrigation systems, and mutual assistance in other matters derive from the sons of Ompu Baritalaut, or in some cases his grandsons. Ompu Baritalaut is not credited with founding a hamlet of his own and presumably remained in Huta Bagassan, the hamlet of his father. He is credited with constructing four small irrigation systems and giving them to four of his five sons. This aspect of his prodigious activities will be discussed in chapter five. To discuss the hamlet founding activities of his numerous descendants it is necessary to discuss the descent groups which derive from his sons, and in some cases grandsons, in genealogical order.

Ompu Pulo Morsa

Ompu Pulo Morsa was the eldest son of Ompu Baritalaut. His descendants control one of the small irrigation systems in the village. Beyond the administration of the irrigation association, the descent group does not cooperate as a whole. Ompu Pulo Morsa's third son was one of the most prominent individuals in the mid- to late nineteenth century in Lintong ni Huta and the size and importance of his own descent group warrants separate discussion. This third son, Ompu Sotaronggal, and his sons founded six hamlets and a portion of his descent group became one of the suhut ('financially responsible') groups for the construction of Silean Banua.

The hamlet founding activities of Ompu Pulo Morsa and his first, second, and fourth sons were modest. Ompu Pulo Morsa or his fourth son founded the hamlet of Lumban Hariara, oral accounts differ. The other

SIMANJUNTAK MARGA HAMLET FOUNDERS

Descent Group of Ompu Pulo Morsa

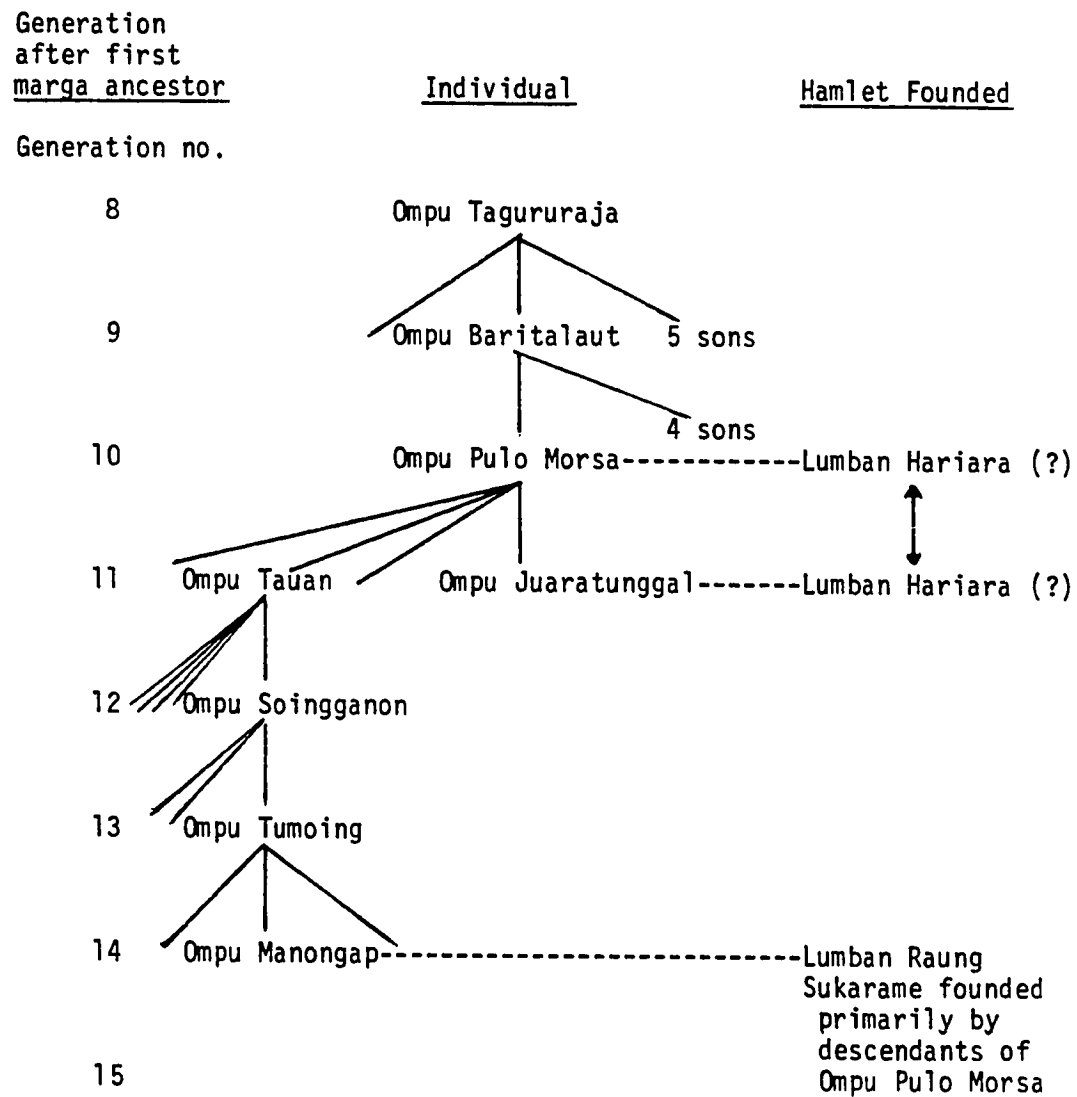


Figure 3

hamlet founding by any of Ompu Pulo's descendants, beyond the descent group of Ompu Pulo's second son, established a small hamlet, Lumban Raung, in the southeastern corner of the village in order to be near the main highway. Various people from the interior hamlets of that corner of the village followed suit and a diffuse settlement of houses called Sukarame has grown up. It exhibits none of the characteristics of a Batak huta; a common courtyard (alaman), walls, a common spring (pansur), nor does it have a single acknowledged founder (si punga huta). The descent group of Ompu Pulo predominates, including part of the descent group of Ompu Sotaronggal, and the inhabitants do carry on the adat of intra-hamlet cooperation (adat pardongan sahuta).

Ompu Sotaronggal

Ompu Sotaronggal was the third son of Ompu Pulo Morsa and a grandson of Ompu Baritalaut. He was a powerful and prolific man, the holder of sahala harajaon ('essence of chieftanship') par excellence. He was the raja ihutan ('chief to be followed') of Lintong ni Huta and fathered twelve sons by five wives. He and his sons are credited with founding six hamlets in Lintong ni Huta. The fact that sons born to different wives of same man tend to form separate groups based upon being born to the same mother, discussed above, is well illustrated by the descendants of Ompu Sotaronggal. Just as the descendants of Ompu Pulo are fragmented as a descent group, the twelve sons of Ompu Sotaronggal could not reach agreement on matters of import while they were alive. Some founded hamlets at the opposite end of the village from that of their father and

SIM'ANJUNTAK MARGA HAMLET FOUNDERS

Descent Group of Ompu Sotaronggal

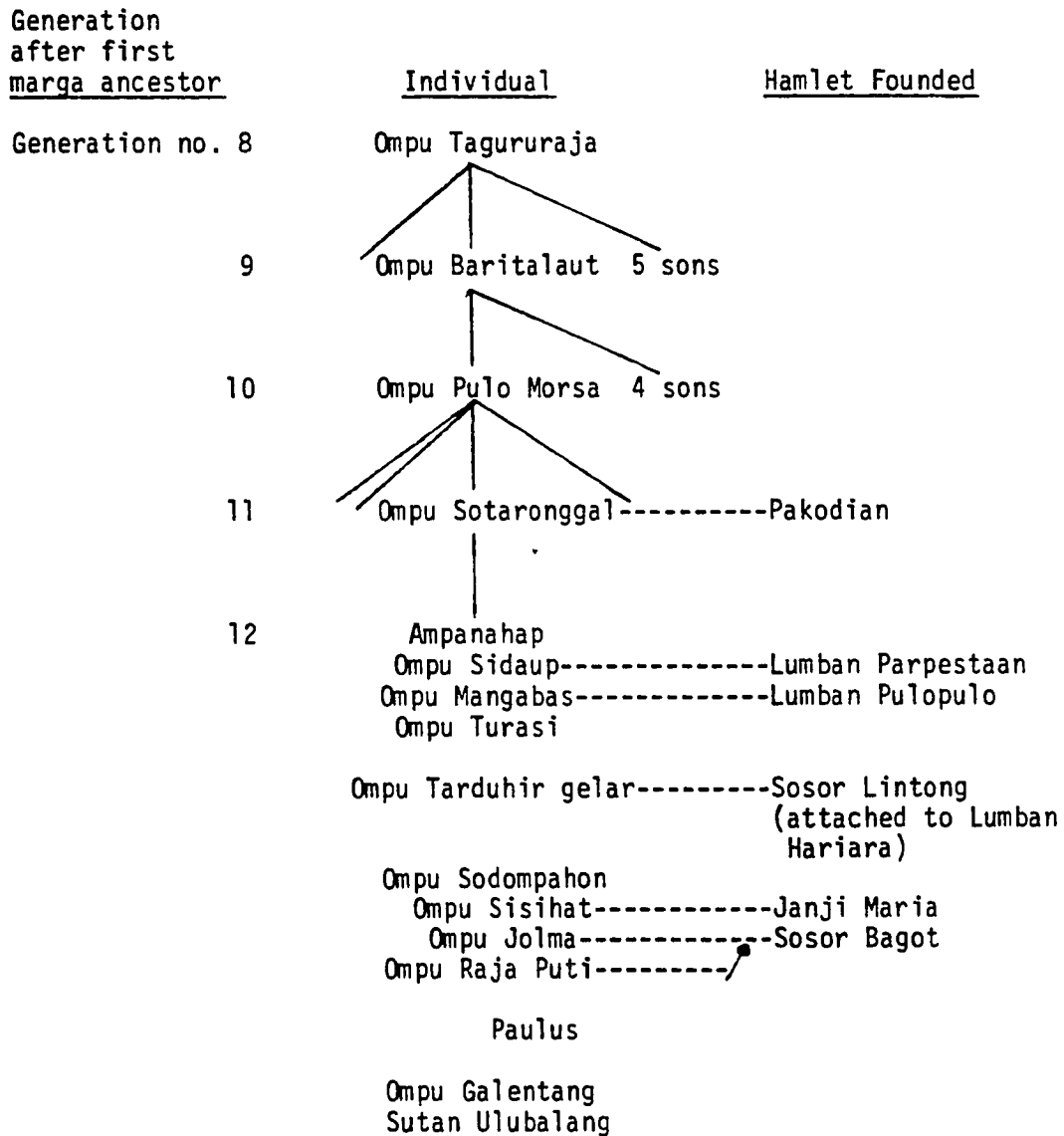


Figure 4

only one group of brothers, born to Ompu Sotaronggal's third wife, became suhut for the construction of Silean Banua.

Ompu Sotaronggal himself founded the hamlet of Pakodian in the small lagoon or inlet of the same name 100 meters below the level of the village at the level of the lake. At the time of its founding this was an advantageous location for a hamlet. It was the only portion of the village territory at lake level, and thus convenient for fishing. The few active fisherman in Lintong ni Huta at present still store their nets and canoes in the lagoon of Pakodian. One of the streams which cuts through Lintong ni Huta drains through the inlet and a small amount of irrigated rice land could be made, and dry gardens established further up the hill. Its disadvantage was its remoteness from the village. As access to the main highway and the schools in Tampahan and Balige became desirable the long climb from Pakodian and its neighboring hamlet Jonggi ni Huta became inconvenient and they were abandoned more than thirty years ago. The discussion of the hamlet founding by Ompu Sotaronggal's sons will be organized according to their birth from his five wives.

Ompu Sotaronggal's first wife of the Marpaung marga had four sons. Two of them founded hamlets of their own. The second son, Ompu Sidaup, founded a small hamlet, Lumban Parpestaan, which is behind another hamlet founded by sons of the third wife, set back from the market place, the onan tambak. The third son founded a hamlet, Lumban Pulopulo, at the opposite end of the village from Ompu Sotaronggal's hamlet. The attraction of this location for founding a hamlet may have been the small irrigation system which was controlled by all of the descendants of

Ompu Pulo Morsa. The system irrigates land near Lumban Hariara, Ompu Pulo's hamlet, and its natural drainage is at the southeastern corner of the village where Ompu Mangabas, the third son of Ompu Sataronggal located his hamlet. His descendants in the hamlet of Lumban Pulopulo are prominent in the continuing administration of this irrigation system (see chapter five).

The second wife of Ompu Sataronggal had only one son, Ompu Tarduhir gelar. He built a hamlet called Sosor Lintong whose walls adjoin those of Lumban Hariara, the hamlet built either by Ompu Pulo Morsa himself or a brother of Ompu Sataronggal. This is not an unusual occurrence; there are two other examples of separate hamlets with adjoining walls in Lintong ni Huta. Since he had no full siblings on whom to count for assistance Ompu Tarduhir gelar may have cast his lot with the other descendants of Ompu Pulo by building his hamlet onto the wall of Lumban Hariara. Or he may have located it there to be near rice land watered by the irrigation system controlled by all of the descendants of Ompu Pulo.

The four sons born to the third wife of Ompu Sataronggal formed one of the most influential descent groups in Lintong ni Huta. They alone among all of the descendants of Ompu Pulo Morsa or Ompu Sataronggal became a suhut group for the construction of Silean Banua which is an indicator of the wealth they controlled as a single sibling group. They founded two hamlets, one near the center of the village. A descendant of the eldest brother of this sibling group, Ompu Sodompahon, stated that Ompu Sodompahon among the sons of Ompu Sataronggal was the designated heir of the title Raja Ihutan from his father but refused the title,

because of its connections with the Dutch colonial administration. He became instead one of the sacrificial parbaringin priests, the direct religious representatives of the priest-king Singamangaraja. This assertion must be accepted somewhat sceptically. The second son in the sibling group, Ompu Sisihat, founded his hamlet Janji Maria in the extreme southeastern corner of the village territory. It is directly adjacent to Lumban Pulpulo, the hamlet founded by the half-sibling of Ompu Sisihat. The descendants of Ompu Sisihat in Janji Maria and the descendants of Ompu Mangabas in Lumban Pulpulou predominate in the administration of the small irrigation system which is the inheritance of all of the descendants of Ompu Pulo. The second and third sons in the sibling group founded the hamlet of Sosor Bagot not far from the market place, the onan tambak. The sources of wealth which enabled this sibling group, the pomparan ni Ompu Sotaronggal tubu ni boru pardede ('descendants of Ompu Sotaronggal born to the wife of the Pardede marga') to become a sponsoring group for the construction of Silean Banua are not clear. A descendant of the group claimed that Ompu Sotaronggal had proprietary rights to the small market (onan manogot-nogot) held at the onan tambak and these rights passed in inheritance to the sibling group. As descendants of Ompu Pulo Morsa they had access to water from his irrigation system to develop irrigated rice land. Nonetheless they managed to sponsor the construction without assistance from their half-siblings or other descendants of Ompu Pulo Morsa and maintained the administration of their portion of the system of Silean Banua and collected levies for more than fifty years.

The sons born to the last two wives of Ompu Sotaronggal are not credited with founding any hamlets.

Ompu Tahigumiling

Ompu Tahigumiling, the third son of Ompu Baritalaut, exemplifies the problems of a Batak with few sons or a small descent group in this pioneering situation. Unlike his prolific elder brother, Ompu Pulo Morsa whose descent group was discussed above, or his younger brother, Ompu Mallogon whose descent group was even more prolific, Ompu Tahigumiling had only one son with children. He founded a substantial hamlet, Lumban Sibuntulan, in the middle of Lintong ni Huta. Like his other siblings he also putatively received an irrigation system from his father Ompu Baritalaut. This irrigation system had one of the largest infrastructures of the six small systems in the village. The maintenance of the system became too much for the small descent group which derived from Ompu Tahigumiling and it was absorbed into the system of Silean Banua in the 1940's or 1950's. Security and wealth, especially in early to mid-nineteenth century in Lintong ni Huta, derived from being part of a na balga partubu ('large descent group').

Ompu Mallogon

Ompu Mallogon was the third son of Ompu Baritalaut. He also produced a large and influential descent group in the village. He and his descendants are responsible for founding ten hamlets in Lintong ni Huta and controlled one of the small irrigation systems in the village.

SIMANJUNTAK MARGA HAMLET FOUNDERS

Descent Group of Ompu Tahigumiling

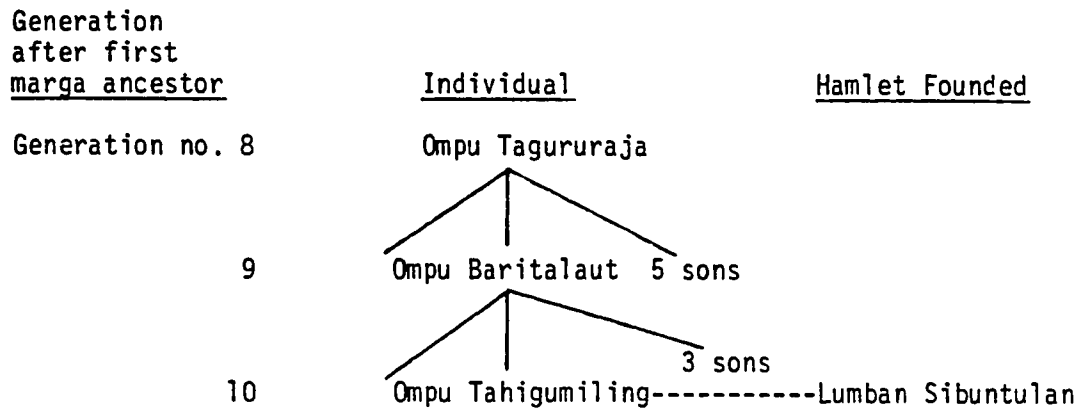


Figure 5

Unlike the descent group of Ompu Pulo, the descendants of Ompu Mallogon have not fragmented. The entire descent group agreed to be a suhut ('financially responsible') group for the construction of Silean Banua and they still maintain a kin-based mutual assistance organization for financing of feasts and other purposes. Ompu Mallogon had three sons. The eldest son, Ampanansir outdid Ompu Sotaronggal and fathered fourteen sons on four wives. Despite the numerical predominance of this group, the descent groups of Ompu Mallogon's other two less prolific sons founded four hamlets and were influential in politics in the village. The hamlets of Ompu Mallogon and his descendants exemplify the point that the geographic location of hamlets reflects the descent structure of the founders. Ompu Mallogon founded his hamlet Lumban Tongatonga, not far from Lumban Hariara in the western portion of the village. The hamlets of his first son's descent group radiated east of the hamlet of Lumban Tongatonga, filling up the central portion of the village. The substantial hamlets founded by his second and third sons spread out along the northern boundary of the village. The sons of Ompu Mallogon will be considered in birth order.

The eldest son of Ompu Mallogon was Raja Ampanansir. Raja Ampanansir and his fourteen sons almost singlehandedly populated the interior of Lintong ni Huta. There is no record that Raja Ampanansir founded a hamlet himself, and as the eldest son probably remained in the hamlet of Lumban Tongatonga I. The sibling group born to Raja Ampanansir's first wife of the Pakpahan marga was the most active in founding hamlets. The second son Ompu Marjaga founded a hamlet called Sosor Tongatonga in

SIMANJUNTAK MARGA HAMLET FOUNDERS

Descent Group of Ompu Mallogon
Son no. 1 Raja Ampanansir

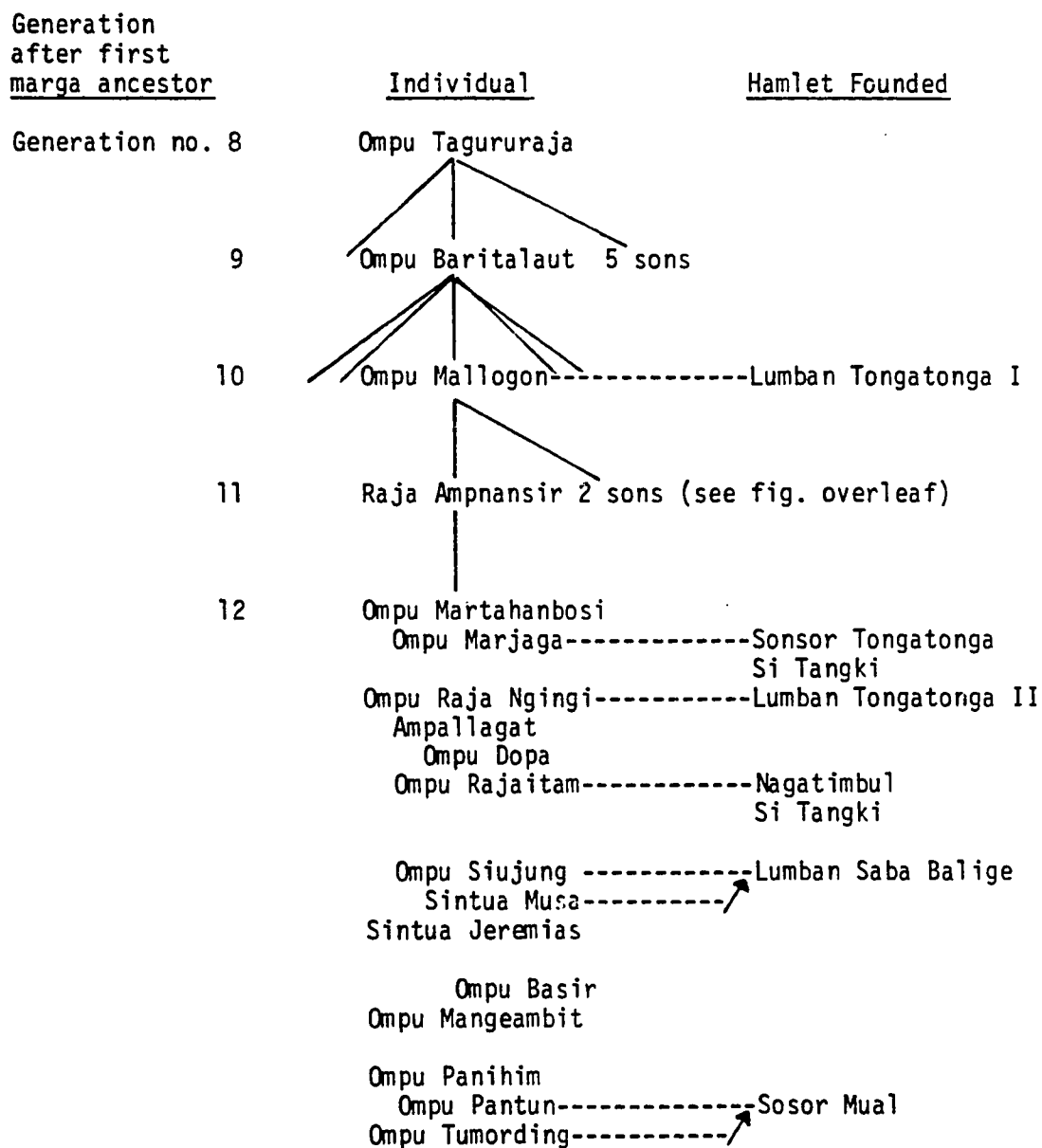


Figure 6

SIMANJUNTAK MARGA HAMLET FOUNDERS

Descent Group of Ompu Mallogon
 Son no. 2 Guru Tumindi and Son no. 3 Guru Sobalosan

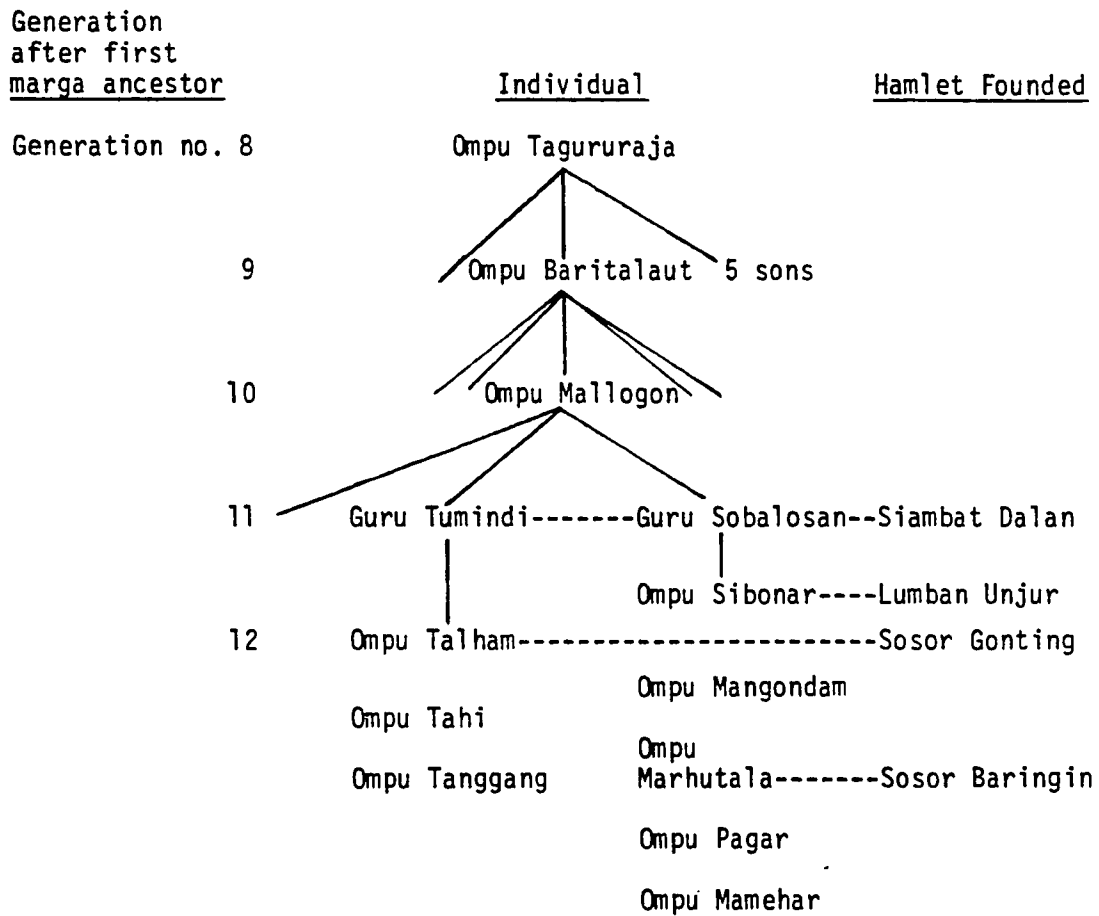


Figure 7

the eastern central portion of the village. The youngest brother of this sibling group, Ompu Rajaitam, founded another hamlet called Naga Timbul slightly to the north of Sosor Tongatonga. These two hamlets together with the lone hamlet founded by Ompu Tahigumiling, Lumban Sibuntulan, are referred to collectively in Lintong ni Huta as si Tangki ('bark cloth'). The third son of Ampanansir, Ompu Rajangingi, built a separate hamlet which shared a common wall with that of his father. This hamlet was administratively separate from the parent hamlet but was called Lumban Tongatonga II.

The numerous remaining sons of Raja Ampanansir founded only two more hamlets. Ompu Siujung and Sintua Musa, the seventh and eighth sons, founded the hamlet of Lumban Saba Balige which is located directly below Lumban Panggabean near the eastern boundary of the village. Ompu Pantun and Ompu Tumording, the thirteenth and fourteenth sons of Ampanansir, established the hamlet of Sosor Mual close to their father's hamlet in the western central portion of the village.

The brothers of Raja Ampanansir, the second and third sons of Ompu Mallogon, Guru Tumindi and Guru Sobaloson founded a hmalet jointly called Siambat Dalan near the northern boundary of the village. This hamlet has become closely allied with that of the Tampubolon marga which is directly adjacent. This alliance continued the next generation. The eldest son of Guru Tumindi, Ompu Talham, and an individual of the Tampubolon marga jointly founded the small hamlet called Sosor Gonting in the extreme northeastern corner of the village. This hamlet has been called a "watchpost" of defensive outpost to guard against raids from the

neighboring village of Hinalang. Lintong ni Huta and Hinalang were neighbors but did not interact ceremonially. The villages argued over water rights and there were some small raids between the villages. The eldest son of Guru Sobalosan, Ompu Sibonar, established a small hamlet, Lumban Unjur, near the hamlet of his grandfather Ompu Mallogon. The last individual in this descent group to found a hamlet was the third son of Guru Sobalosan, Ompu Marhutala. The hamlet he founded slightly to the east of his father and uncle's hamlet was called Sosor Baringin. It has grown into one of the largest hamlets in Lintong ni Huta. Despite his inferior descent position in the descendants of Ompu Baritalaut, Ompu Marhutala was the second Raja Ihutan ('Raja to be followed') in the village. How the title accrued to him is uncertain. There is only the statement by the descendant of Ompu Sotaronggal that after Ompu Sotaronggal, the first Raja Ihutan in the village, no one in his descent group wanted the title and it moved to an heir of Ompu Mallogon. Ompu Marhutala must have had sufficient wealth and ability to deserve the title since his descent position does not warrant the inheritance of a title. There is some evidence from oral accounts he was an influential figure in mobilizing the entire descent group of Ompu Mallogon to participate as a suhut group in the construction of Silean Banua.

The Other Simanjuntaks

Besides the pioneering activities of these descendants of the first and third sons of Ompu Tagururaja, the first Simanjuntak in Lintong ni Huta, there is only one other hamlet founded by a Simanjuntak. The

SIMANJUNTAK MARGA HAMLET FOUNDERS

Descent Group of Ompu Tagururaja

Generation
after first
marga ancestor

Individual

Hamlet Founded

Generation no. 8

Ompu Tagururaja

9

5 sons

Ompu Siamun

Lumban Mangihuri
(Attached to
Lumban
Panjaitan)

Figure 8

sixth son of Ompu Tagururaja, Ompu Siamun is credited with founding a small hamlet called Lumban Mangihuri. This hamlet is close to Ompu Tagururaja's hamlet, Huta Bagassan, but its walls adjoin those of the hamlet founded by the Panjaitan marga. This is a curious situation as the Panjaitan Marga is not even of the same subdivision of the Pohan tribal group as the marga Simanjuntak. The inferior position of the hamlet is reflected in the name, Lumban Mangihuri, which may best be glossed as 'the hamlet which follows', or 'the hamlet in the rear'. One oral account stated that a member of one of the small descent groups of the Simanjuntak marga, not descended from Ompu Tagururaja jointly founded Sosor Baringin with Ompu Marhutala, the second Raja Ihutan. This individual was from the descent group of Ompu Jumorong, an individual higher in the genealogies than Ompu Tagururaja. Ompu Jumorong also probably lived in Tarabunga and some of his descendants moved to Lintong ni Huta after its founding. The individual who assisted Ompu Marhutala in founding Sosor Baringin is probably Ompu Mamijor, a descendant of Ompu Jumorong in the same generational stratum as Ompu Marhutala.

Other Margas of the Tuan Somanimbil Subdivision

Although it might seem so, the history of hamlet founding in Lintong ni Huta is not exhausted with the activities of the Simanjuntak marga. The two other margas in the Tuan Somanimbil division of the Pohan tribal group Huta Gaol and Siahaan are minimally represented in the village and each has a single hamlet named after it. Lumban Siahaan is

an old hamlet located near the first Simanjuntak hamlet in the village. The Siahaan marga is senior in birth order in the Somanimbil division and an elder of the marga sometimes serves as an arbiter of adat (raja ni horja) at feasts for the Somanimbil division. They usually must defer to the overwhelming numerical superiority and wealth of the Simanjuntak marga. It is uncertain how close in time the Siahaan marga hamlet was founded to the first hamlets of the Simanjuntak settlers. The Huta Gaol marga is a recent arrival. Their hamlet consists of three European style houses near the main road. They had no influence in village administration nor irrigation affairs. One other small hamlet, Lumban Sigalagala, was founded by members of Siahaan marga on the slopes of Dolok Tolong above the village proper. The hamlet is isolated and its inhabitants have seldom participated in adat affairs in the village.

The Margas of Sonak Malela

The second largest golat of territory in the village was apportioned to the margas of the fourth subdivision of the Pohan tribal group, those descended from Raja Sonak Malela. The age and position of hamlets founded by segments of all four margas of the division, Simangunsong, Marpaung, Napitupulu, and Pardede would indicate that they settled their respective hamlets close to the founding of the village by the first settlers. The individual who settled the first Napitupulu hamlet in the village is roughly a contemporary of Ompu Tagururaja, the first Simanjuntak settler. The positioning of the four oldest hamlets of the Sonak Malela division

mirrors the descent order of the four margas. The hamlets of the Simangunsong and Marpaung margas are on the west side of the branch road. The hamlets of the youngest two margas, Napitupulu and Pardede are on the east side of the branch road near the main road. They share a common wall which is interesting in terms of the descent structure of the two margas. Some genealogical sources list the founding ancestor of the Pardede marga as a son of the first ancestor of the Napitupulu marga, rather than as a son of Sonak Malela himself.

The hamlet of the eldest marga of the Sonak Malela division, Simangunsong, has never been large. It is of the same age as the rest of the Sonak Malela marga hamlets and the marga had prominence in adat affairs in the past. A member of the Simangunsong marga was the village headman for the Sonak Malela hamlets in the period prior to World War II. The last family of the marga moved out of the hamlet during my field residence and it was deserted thereafter. The second in birth order of the Sonak Malela margas, Marpaung has a large and well-established hamlet. They have not been prominent in adat affairs in the village, nor did they participate in irrigation planning. The youngest marga in the birth order of descent from Sonak Malela is Pardede. Like Marpaung, they have an old and well-established presence in the village but have remained a partubu na metmet ('small descent group') in the village and founded only one hamlet. It is the Napitupulu marga that has become the second most prominent marga in Lintong ni Huta. Descendants of the first ancestor of the Napitupulu marga in Lintong ni Huta founded four hamlets, constructed one of the small irrigation systems in the village, and a

NAPITUPULU MARGA HAMLET FOUNDERS

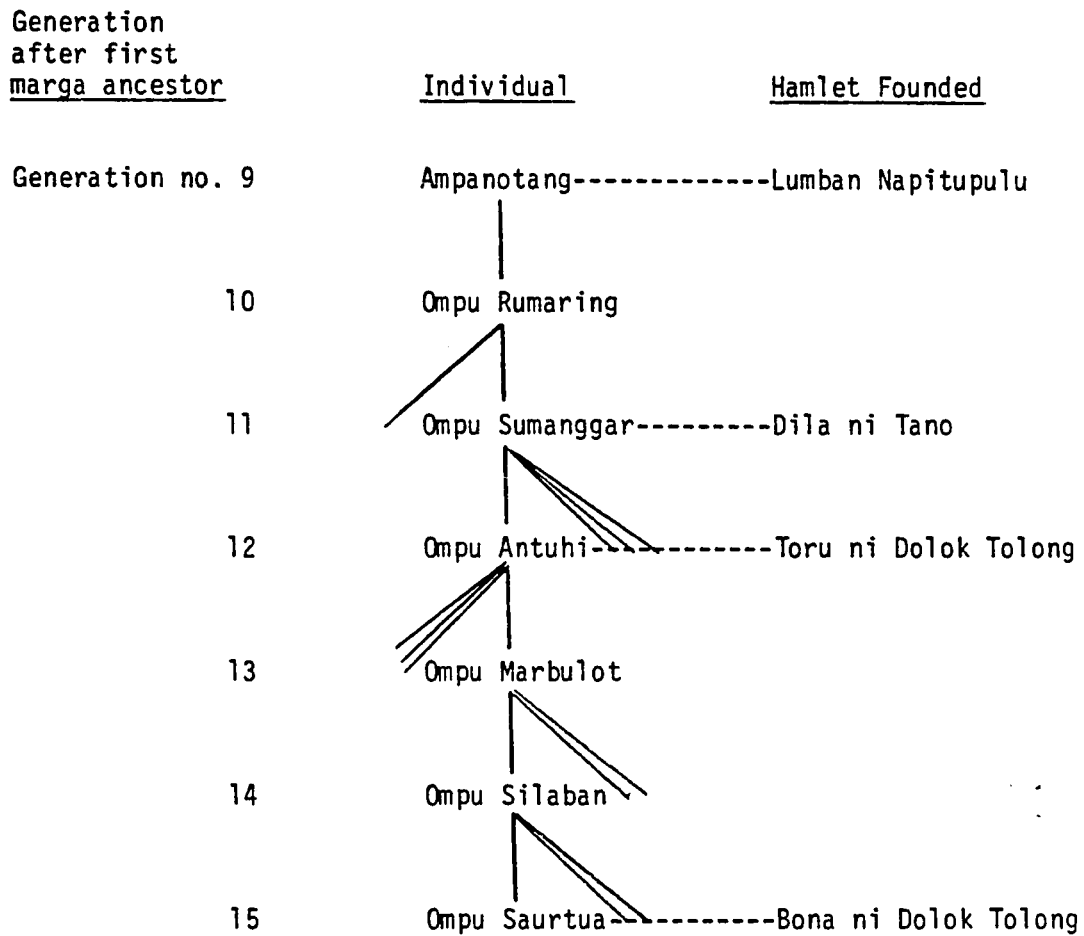


Figure 9

a segment of the marga became the third Suhut group for the construction of Silean Banua.

The first hamlet was founded by the ancestor of all Napitupulu in the village, Ampanotang. His hamlet, Lumban Napitupulu, is directly adjacent to Lumban Pardede near the point where the branch road leaves the main highway. It is interesting that the group of his descendants that built other hamlets and founded the small irrigation system controlled by the marga did not become the suhut group for the construction of Silean Banua. Ampanotang had only one son who in turn had two sons, Amparondaga and Ompu Sumanggar. The descent group of the elder, Amparondaga, remained in Lumban Napitupulu, founded no other hamlets, but a portion of that group became suhut for Silean Banua. Ompu Sumanggar, the younger of the grandsons of Ampanotang, founded the large hamlet of Dila ni Tano. It is not far from Lumban Napitupulu and its southern wall fronts directly on the main highway. The entire marga segment cooperated in the building of the small irrigation system of the Napitupulu marga, but Ompu Sumanggar was suhut and his descent group has retained proprietary rights to the system (see chapter five). The eldest son of Ompu Sumanggar, Ompu Antuhi built a small hamlet south and east of Dila ni Tano on the slopes of Dolok Tolong, called Toru ni Dolok Tolong. A grandson of Ompu Antuhi built a similar establishment with one house, but that qualifies as a hamlet, further south on the main highway.

The Margas of Tuan Sihubil and Tuan Dibangarna

The last margas represented in Lintong ni Huta, Tampubolon and

Panjaitan, each have a well-established hamlet named after their respective margas, and an important place in adat in the village. There is an old hamlet named after the Siagian marga near the oldest hamlets in the village. At the time of my field residency it was inhabited only by two elderly widows, both widowed twenty years or more and neither of whom had been married to men of the Siagian marga. The Panjaitan marga is the sole representative of the Tuan Dibangarna division of the Pohan tribal group descent structure. As a result of this, a man of the Panjaitan marga is always included as one of the four arbiters of adat (raja ni horja) present at a feast. The Panjaitan hamlet is old; a funerary monument to the founder of the hamlet (sipungka huta) and first settler of the marga in the village is to an individual six-seven generations removed from the present in the genealogies. This would make him roughly a contemporary of Ompu Tagururaja, the first Simanjuntak settler in the village. The Panjaitan hamlet is in a small golat given to the margas of Tuan Dibangarna in the extreme northwestern corner of the village. The Panjaitan marga has not been influential in the village in positions of power or in irrigation affairs. An elder of the marga said that in addition to the three established suhut groups, two from the Simanjuntak marga and one from the Napitupulu marga, for the construction of Silean Banua there had been a fourth. When I asked who, he answered defensively, all of the rest of us in Lintong ni Huta.

The Tampubolon Marga is similarly the sole representative of the descendants of Tuan Sihubil in the Pohan tribal group descent structure.

An elder of Tampubolon always serves as a raja ni horja ('arbiter of adat') at village feasts. The Tampubolon presence in the village probably postdates the founding of the first hamlets in the village by a generation, or possibly two. The Tampubolon hamlet is built directly adjacent to the hamlet Si Ambat Dalan on the northern boundary of the village. Si Ambat Dalan was founded two to three generations after Ompu Tagurujaja Simanjuntak founded the first hamlet in Lintong ni Huta. It is not clear if the Tampubolon marga received its own golat of territory or not. They have allied themselves with the hamlet of Siambat Dalan for purposes of intrahamlet cooperation in the holding of feasts etc. Tampubolon men of the hamlet favor marriages with Simanjuntak women as well. Of eight Tampubolon men living in the hamlet at the time of my field residency, or whose widows still inhabited their deceased husband's houses, four had married Simanjuntak women, one of whom had been born in Si Ambat Dalan. During the structural reorganization of Silean Banua in the 1950's (see chapter six) Lumban Tampubolon also allied itself with Si Ambat Dalan. A small hamlet of two houses, Sosor Sibulele, was established in the extreme northeastern corner of the village in the late 1930's by men of the Tampubolon marga. For all cooperative purposes it is still bound to Lumban Tampubolon.

CONCLUSION

This chapter has laid out in some detail the diverse threads of historical influence which led directly and indirectly to the founding of Silean Banua. Primary among these was warfare and the unsettled

social conditions which followed it. The continuing conflict with the margas of Lontung in Muara and on the Island of Samosir led the elders of the Pohan tribal group to found four defensive villages to block these raids in the westernmost extent of the territory, a region called Tampahan. One of these planned settlements was the village of Lintong ni Huta. The time of warfare and unsettled conditions called the pidari times, a period most probably following the Padri wars of the 1820's and continuing to the 1880's, prompted the elders of Lintong ni Huta to undertake the construction of Silean Banua to insure a food supply for the village with an easily defensible water source.

One of the key problems in undertaking construction of Silean Banua was to find individuals or kingroups with sufficient resources to act as suhut for the construction of Silean Banua. The suhut ('financially responsible') were bound to pay for part of the provisioning of the laborers during the construction and were host to the planning sessions of the elders concerning the progress on the system. The groups which became suhut for the construction of Silean Banua were those with substantial holdings in the village, controlled positions of power, and had sufficient wealth to undertake the responsibility.

The history of the founding of Lintong ni Huta in the conclusion of this chapter has charted the sources of wealth and influence which enabled the suhut groups to finance the fifteen years of construction of the system. Positions of power, control of resources and hamlets, but especially numbers of descendants were the key factors. Control of small-scale irrigation will be discussed in the next chapter. The greater

the size of the descent group the greater the potential in cooperative undertakings. Vergouwen (1964:33) noted that a man who is part of a large descent group (na balga partubu) is reckoned more fortunate than a member of a small descent group (na metmet partubu). An aphoristic saying states:

molo otik saompu, sor-ni-arina ma i
molo godang saompu, godang ni tuana ma i

'If the lineage is small, it has misfortune
 If the lineage is large, great is its fortune.'

Each of the descent groups or marga segments that became suhut to the construction of Silean Banua were large in numbers, and came from a group that had founded several hamlets in the village. The descent group of Ompu Mallogon Simanjuntak controlled ten hamlets. In the generation in which the decision was made to build Silean Banua his descent group numbered twenty-two men, and fifty-one sons were born to them in the next generation. The sibling group from among the descendants of Ompu Sotaronggal Simanjuntak that served as one of the suhut groups for the construction of Silean Banua numbered only four individuals. They did, however, control the rights to the market of the onan tambak in the village, had founded two hamlets, and one was a parbaringin priest in the village, a position of great importance in the pre-Christian religious life. Among them they fathered twenty sons in the next generation. The suhut group from the Napitupulu marga was nowhere as prolific as the two Simanjuntak groups. However the Napitupulu marga was still the acknowledged power in Lintong ni Huta after the Simanjuntak marga. The entire marga segment founded four hamlets

in the village and controlled one of the small irrigation systems.

The source of much of the historical materials in this and the following chapters, and the control on the individuals involved and the sequence of events is the complex genealogies kept by each marga which are integrated at higher and higher levels in the published works of Batak scholars. The genealogies reveal the structure of the descent groups which were important in the history of the village and the guiding principle of the administration of Lintong ni Huta. The genealogical structure of the Pohan tribal group is reflected in the ordering of ceremonies, the relations between the groups of margas descended from Si Bagot ni Pohan, and was the basis of the apportionment of territory in the village at the time of its founding. The source of wealth of the suhut groups for the construction of Silean Banua may ultimately find its source in the large and favorably located golats of territory allotted their subdivisions, the Tuan Somanibil and Sonak Malela marga groups, of the tribal group in the founding of the village. It was noted in chapter three that each of the four subdivisions of the Pohan tribal group are referred to as 'one quarter of a buffalo' (sanghae ni horbo) in the context of the great bis sacrificial ceremonies, which symbolizes the genealogical structure of the tribal group. Within this structure the Tuan Somanibil and Sonak Malela divisions from 'one half of the buffalo' (sambariba horbo). This may have been the structural reasoning behind the majority representation in the village of the margas of these two divisions. Our understanding of the historical and structural background of the events recounted

in this work must ultimately derive from the tarombo (the genealogies). Some Batak scholars (Siahaan 1963; Hutagalung 1963) view the genealogies as the source of adat and ordering of the structure of the Batak people.

Thus far we have introduced the village and its people and presented the historical background and the details of adat and other ethnographic data which have bearing on understanding the construction of Silean Banua. In the following chapter we shall examine the history and structure of the small-scale irrigation systems in the village. Control of these systems added to the wealth and prestige of those who became the suhut groups in the village. The organization and adat of these systems is also the source of the organizational structure and adat of Silean Banua, but expanded to reflect the structure of the entire village rather than the single kin groups which controlled these small systems.

Chapter 5

This chapter will deal with the history of the small irrigation systems (bondar) in Lintong ni Huta. A detailed examination of these systems helps to understand the precedents in adat in the organization of Silean Banua, and part of the source of wealth of the suhut groups ('financially responsible') who helped to finance its construction. The corporate organization of Silean Banua does not conform strictly to the types of irrigation organizations described for the Toba Batak (Vergouwen 1964:344-345). This does not violate adat in any way. The adat of water rights described by Ypes (1932) concerns rights of access to water sources, the construction of irrigation systems, the administration and maintenance of irrigation systems, etc. The corporate organization of irrigation systems was an idiosyncratic matter of the locality. The small irrigation systems in Lintong ni Huta provided the precedents of local adat for the organization of Silean Banua. They conform in general to the principles of irrigation adat described by Ypes but as in all matters of adat there is a slightly different local expression. Control of these small systems was also part of the wealth of the descent groups that eventually became the suhut groups for the construction of Silean Banua. In chapter four the hamlet founding and expansion of these influential descent groups was presented. The history and social organization of these small irrigation systems will complete the background of their wealth and influence. Detailed knowledge of all of the sources of wealth of the suhut groups is lacking. It is certain that each suhut group controlled, or derived from a descent group that controlled, a

small irrigation system and farmed wet-rice land irrigated by that system.

Another matter which has affected Silean Banua, which is mirrored in miniature in the small irrigation systems, is demographic and social change. The Batak have been migrating out of the Toba heartland since the early twentieth century when the Dutch imported Toba Batak to the estate areas of East Sumatra to build irrigation systems. The indigenous Simalungun Batak were mostly swidden cultivators and lacked the requisite skills (Cunningham 1958). Since that time the Toba Batak have steadily migrated to cities in North and East Sumatra and to other islands as opportunities expanded. The picture was complicated by a one-time massive migration in the early 1950's. Shortly after independence the Indonesian government revoked leases to the great European-managed rubber, oil-palm, and tobacco estates in East Sumatra. Squatters of all ethnic groups in Sumatra streamed into the area to claim land and found new farms and villages. Entire hamlets in the valley of Meat, neighboring Lintong ni Huta, and in the area of Si Gumpar near Laguboti approximately 20 kilometers to the west of Lintong ni Huta were virtually abandoned (Cunningham 1958; Toenggoel Siagian: personal communication). The impact of this out-migration on adat and local social organization in Lintong ni Huta was profound. Entire descent groups left the village and it became impossible to maintain many of the kin-based mutual assistance organizations for financing feasts, providing assistance and materials for feasts, and maintaining the small irrigation systems, and Silean Banua according to past adat. The general adjustments in adat organizations in the village are reflected in the changes

which took place in the irrigation associations. The minor adjustments in adat which the small irrigation systems made presage the instabilities which plagued the organization of Silean Banua from the late 1950's until 1971 when they were resolved in adat.

Irrigation in the Village

According to Bennett (1976:399) local organization should lack the engineering skills to undertake the construction of large scale irrigation works. In the Toba Batak case these are not as he states "monopolies" which are "assembled in centralized state bureaus and the like". Keuning (1958:2) noted generally "Wet rice cultivation is highly developed in Toba and Silindung, where long and well-maintained irrigation ditches have been known for centuries." The people of the village stated that all aspects of water management from drilling into bedrock to provide sources of clean drinking and bathing water for the hamlet pansur to the devices for diverting and raising the level of water in irrigation systems was part of the parbinotoan ni angka ompu jumolo tubu ('knowledge [science] of the ancestors that came before'). Ypes (1932:219) uses the term pande aek for the official of an irrigation organization who is in charge of day-to-day maintenance of the system. Pande aek may be glossed as 'water technician' or 'irrigation technician'. Tampubolon (1964:164) does not place the pande aek as a lowly employee of an irrigation association but as one of the 'eight chiefs' (raja na ualu). The pande aek was one of the secondary officials in a horja village in charge of agriculture, irrigation, and agricultural labor. The

Batak must have had a high level of indigenous engineering skills to have designed and executed the irrigation systems in the village, to say nothing of a system the size of Silean Banua.

According to oral accounts the six small irrigation systems in the village were built in the first or second generation after the founding of the village. These small systems varied in complexity from a small gravity-feed system at the southwestern corner of the village to a system irrigating fields in the central portion of the village that had a feeder canal one kilometer in length and several diversion weirs to raise the level of the water. Before discussing the individual histories of these systems, some general background material on the general organization of irrigation in Toba and the concept of ownership is necessary.

Vergouwen has reported (1964:345) that in some areas of the Toba heartland the bondar ('canal') organizations were independent groups with their own internal organization, legal rules, and administration. In contrast to this independent association type:

The water interests go together with the other interests of the ruling lineage in village and territory, so much so that sometimes a close and independent unit based upon common water interests is hardly to be discerned, and the administration of the water for a good part coincides with that over land and people.

The irrigation organizations in Lintong ni Huta are formally neither one nor the other. They are controlled by lineal descent groups so that they are not strictly independent corporations such as the first type of bondar organization described by Vergouwen. Lintong ni Huta lacked a ruling marga (marga raja) and control of the irrigation systems did not coincide with the sphere of influence of any single hamlet chief

(raja huta). With two exceptions the kin group that controlled each of the small irrigation systems was spread out in more than one hamlet. It could not be said that in the case of irrigation systems in Lintong ni Huta that the administration of water coincided with that over land and people either. Any tendency towards this was prevented by the fact that proprietary rights to the system were not inherited by any individual. Each system in the village became the joint property of the descendants of the man credited with initiating construction of the system. The office of administrator of the system (panitia, Ind.) rotated each harvest year. Ypes' various descriptions of water rights in different parts of Toba (1932:219-220, 288-290, 365) indicate that the office of administrator of the canal system (raja bondar - 'canal chief') had wider ranging powers than was the case in Lintong ni Huta and that the office or the rights to the office was hereditary.

The type of ownership of the irrigation systems is a fine but important distinction. Oral accounts covering at least five of the six systems in the village indicate that the irrigation systems were given as panjaeon property to the sons of the putative founders of the system. After marriage a Toba Batak usually follows patri-virilocal residence and lives in his parental household as a dependent, often until the birth of the first child. At that time he 'sets up independent house-keeping' (manjae), moving to a new house or in multi-family adat houses his wife cooks at a separate hearth. At that time they receive panjaeon gifts from his and the bride's parents; wet-rice land, household goods, seed rice etc. As such these irrigation systems were not classed as

inherited property (teanteanon) which would imply that rights to the irrigation system should pass to one individual in each generation. Each of these irrigation systems has become the joint property of all of the descendants of the individual who founded them or who received them as original panjaeon property. As such they are governed by the principle of hatopan ('joint ownership') in adat. Batak frequently enter into formal agreements of joint ownership of houses, water buffalo, and other forms of property in order that the joint owners might share in each others' prosperity, or that inherited property might not be divided (Vergouwen 1964:320). Most of the presumptive founders or recipients of these irrigation systems had numerous heirs in the generations that followed them. It was to the advantage of the descent groups that derived from these original owners of the irrigation systems to organize them under the precedent of joint ownership rather than to have the proprietary rights to the system pass to one individual in each generation. Efficient maintenance of the system was to the advantage of all and the adat of irrigation organizations places the responsibility of maintenance on the owner or owners of the system. It was more efficient to place administration of the system as one more responsibility of the entire lineage (saompu) that derived from the first owner of these systems.

An irrigation system was potentially a profit-making enterprise and enriched the owning or controlling body in a number of ways. Foremost among these was the creation of wet-rice land. The Batak method of clearing wet-rice land was to dig rough terraces in a hillside and to

run large quantities of water over them. After this the final bunds were built, and the feeder and drainage canals for the terraces constructed. Descendants of the owner of the canal system, lineal holders of hatopan shares, could use water to clear their wet-rice land without charge. Excess water from the system could be used by people who were not of the owning lineage, essentially customers of the system. A customer who used water from an irrigation system to clear new wet-rice terraces in this manner had to give one-quarter of the holdings to the irrigation association in payment, or redeem the value of the land in a payment of unmilled rice (padi). Land acquired in this manner was held in trust by the irrigation association. It could be rented out and the land rent added to the irrigation levies or more commonly it was rented to a young man of the owning lineage who was recently manjae ('set up independent housekeeping') and lacked enough wet-rice land to meet his subsistence needs. Young men in this situation were also usually those picked as the employee of the system who had the responsibility of day-to-day maintenance. The administrator of the system who oversaw the maintenance and the collection of the levies from the customers of the system also received a share of the levies as recompense for his efforts. Most systems required the labor of the customers for a yearly cleaning and dredging of the canal, in addition to the payment of levies for the use of water from the system. The hatopan shareholders had to act as suhut in a small feast to repay the customers who labored on the cleaning of the canal. These organizational aspects of the irrigation associations will be expanded upon in the discussion of

the individual irrigation systems in the village.

These principles of irrigation organization are important as each provided a pattern for the later organization of Silean Banua.

The Individual Systems

In chapter four most of the active personalities involved in founding the small irrigation organizations in Lintong ni Huta were discussed. (see genealogical figures 2-8) Most of the descent groups active in founding hamlets in Lintong ni Huta also controlled one of the small irrigation systems as well. Five of the small systems are controlled by descent groups of the Simanjuntak marga in the village, one by a descent group of the Napitupulu marga. As with the history of hamlet founding in the village, this history of the individual irrigation systems will be dealt with in genealogical or birth order of the individuals involved.

Bondar Parhudagar

The founding of irrigation systems, as with hamlet founding, was the province of the eldest two sons of the acknowledged first Simanjuntak in Lintong ni Huta, Ompu Tagururaja. (see fig. 2, chpt. four). His first son, Ompu Tarubar, putatively constructed the irrigation system called Bondar Parhudagar and gave it to his only son Raja Parhudagar as a panjaeon gift ('setting up independent housekeeping'). It is questionable whether Ompu Tarubar constructed the system himself. The various small irrigation systems in the village may have been started

by the individuals the oral histories indicate and expanded in later generations as more hamlets were founded by members of the descent group. Bondar Parhudagar has its source in a small stream which flows off of the slopes of the mountain Dolok Tolong. The system waters rice-land around the hamlet of Lumban Parhudagar and flows through one of the numerous ravines that cross-cut the village and irrigates wet-rice land below the hamlet of Lumban Panggabean. As noted in chapter four the oral accounts do not indicate that Ompu Tarubar founded a hamlet of his own while his only son, Raja Parhudagar, founded the hamlet of Lumban Parhudagar. Lumban Panggabean was founded a generation later by one of Raja Parhudagar's sons. The system could have been built by Raja Parhudagar or his father Ompu Tarubar and expanded over time to meet the needs of the growing descent group.

Raja Parhudagar had four sons. As with other systems in the village bondar Parhudagar did not become the inherited property of any one of them, but was declared to be held in joint ownership (hatopan) by all of his descendants. In 1975 descendants of only two of Raja Parhudagar's sons were living in Lintong ni Huta. All of the descendants of the third son moved to East Sumatra. The fourth son had only one son who died without male heirs.

The principles of organization of bondar Parhudagar are simple and have remained relatively unchanged through time. The system is small and the descent group of Ompu Tarubar has never been large. Thus it provides a fairly good pattern for the original organizational rules of the small-scale irrigation systems in the village.

Only male heirs of Raja Parhudagar Simanjuntak had proprietary rights to a share of the system (hatopan), a share of the irrigation levies, or to hold office in the system. Any person who owned and worked land, or worked land on a share-crop basis (mamiola pinang) irrigated by the system paid irrigation levies (upa bondar) to the system. A person who owned land watered by the system but did not actively work it owned no levies to the irrigation association as long as the system was not tapped to irrigate a crop of rice.

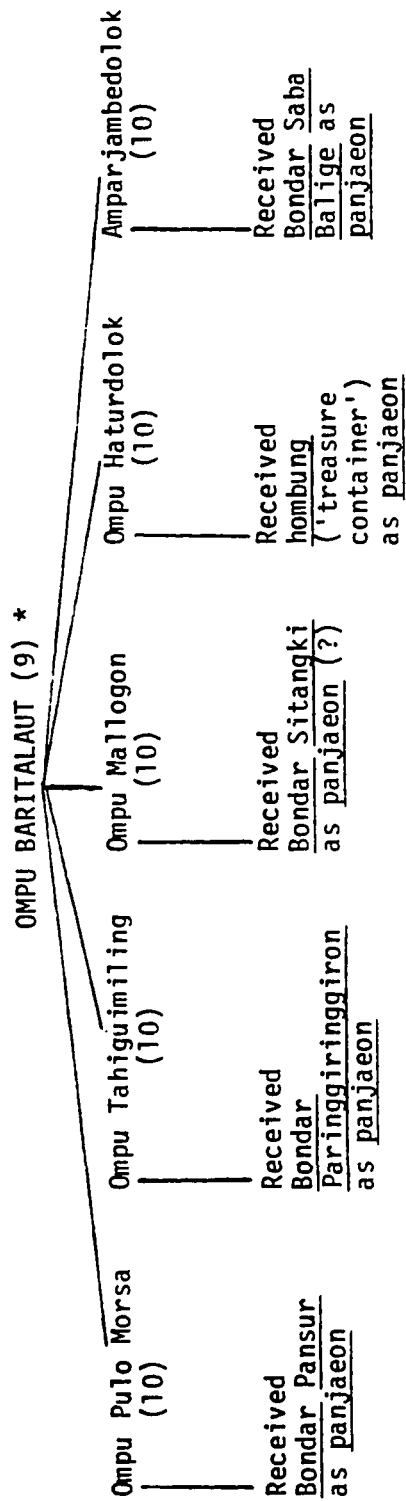
Levy-paying customers were expected to participate in a yearly cleaning of bondar Parhudagar. Otherwise maintenance was the responsibility of the controlling body. A young, industrious man who was recently married and had set up independent housekeeping was chosen as parhara ('caretaker', lit. 'one who calls people to work'). He had to inspect the canal frequently to see that it was free-running, take care of minor repairs to bunds and weirs, and to help organize the yearly cleaning and dredging of the canal system. Customers were expected to maintain the feeder and drainage canals for their own paddies. The work of the parhara was directed by an official of the system called the raja bondar ('canal chief') in the past, now called the panitia (Ind., 'committee'--here 'supervisor'). He directed labor on the canal system, saw to the collection of the irrigation levies, and directed the yearly cleaning of the system. He had to be an elder (panunggane) of the lineage and be knowledgeable in adat and the lineage genealogy. The parhara and the supervisor were paid for their services with a portion of the irrigation levies. They were elected each year at a meeting of

the owning lineage and the levy-paying customers after harvest.

In principle the office of parhara should rotate yearly among the descent groups of the four sons of Raja Parhudagar. Demographic changes have brought about changes in adat. Two of the four descent groups are no longer represented in the village. The descendants of the eldest son, Ompu Rumagaja, have never been numerous and in 1975 there were only three adult men descended from him residing in the village. The descent group of the second son, Ompu Tinggisabungan, is large and there are several of his descendants still living in the village. It was decided as a result of this imbalance, that the office of parhara should be held by a son of the larger descent group two years out of three. The precedent in adat is simply that of the weight of the majority prevails. One elder put it "tumorop do hami gomparan ni Ompu Tinggisabungan" ('we the descendants of ompu Tinggisabungan are more numerous').

Bondar Parhudagar is a small system with total levies of only twenty-five kaleng of padi (1 kaleng = 20 international liter or app. 10.5 kg.--262.5 kg.). The general adat of figuring irrigation levies in the past was to collect from the farmer an amount of padi equal to that necessary to sow a plot irrigated by the system. If a farmer sowed a kaleng of seed rice in his plot he paid an equal amount as upa bondar ('irrigation levies') to the system. The levies were collected after harvest.

People who pay levies to Bondar Parhudagar live in the hamlets of Lumban Parhudagar, Lumban Panggabean, Huta Bagassan, and Lumban Panjaitan.



See Individual Genealogies

* Numbers in parentheses refer to generational strata in the Simanjuntak lineage genealogy. i.e. The founding ancestor of the lineage, Raja Mardaup is considered to be generation 1, his sons generation 2, etc.

Figure 9

The Irrigation Systems of Ompu Baritalaut

The hamlet founding activities of the large descent group derived from Ompu Baritalaut Simanjuntak have already been recounted in chapter four. His descendants not only founded the majority of the hamlets in Lintong ni Huta but controlled four of the six small irrigation systems in the village as well. All of Ompu Baritalaut's descendants aver that he personally constructed, or organized construction, on all four of the irrigation systems in his descent group and gave them to four of his five sons as panjaeon ('independent housekeeping') property. Another son received a hombung, a container for valuable objects fashioned from the trunk of a single tree. It is highly doubtful that Ompu Baritalaut could have accomplished this. Some of the systems irrigate fields around hamlets founded by his grandsons. It may be an attempt to honor a revered ancestor by ascribing construction of all four systems to Ompu Baritalaut. Classing the systems as panjaeon property may also act as a charter for the systems to be held in joint ownership by the descendants of each of Ompu Baritalaut's sons, rather than having them classed as inherited property. These four systems have had varying fortunes due to the demographic change in the village and the construction and subsequent improvement of Silean Banua.

Bondar Pansur

The first irrigation system completed was called bondar pansur ('spring, drinking water source') which Ompu Baritalaut gave to his eldest son Ompu Pulo Morsa. The source of water for the irrigation

BONDAR PANSUR

Ompu Baritalaut (9)

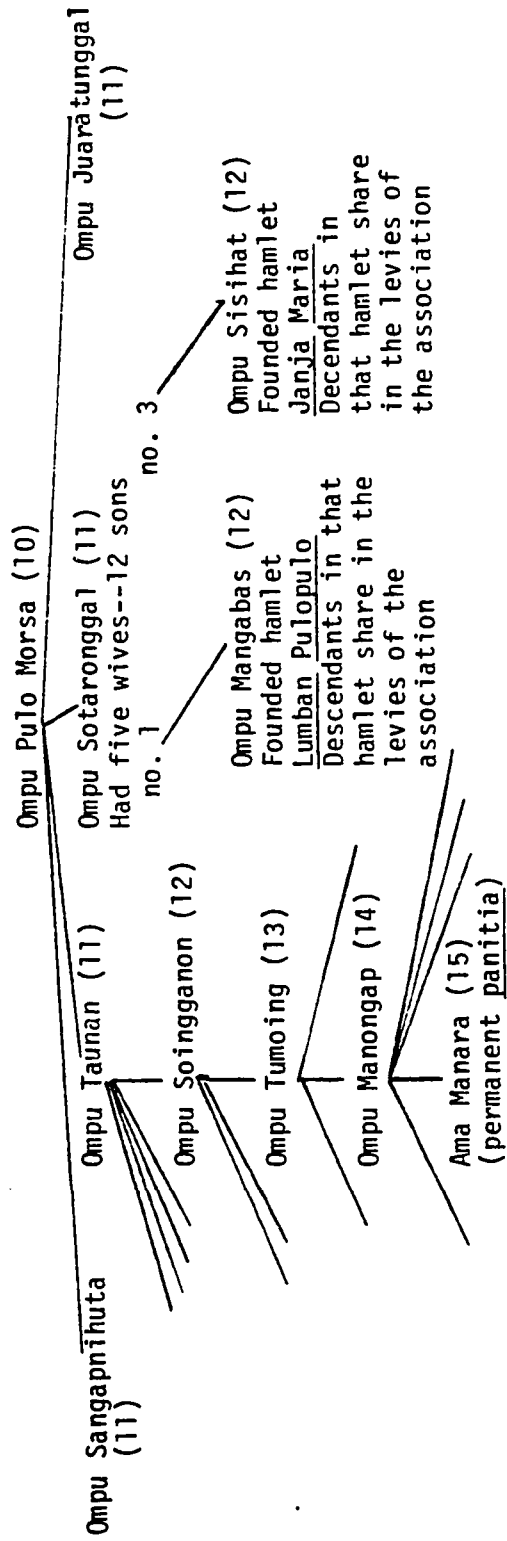


Figure 10

system was the same stream flowing off the slopes of Dolok Tolong that fed bondar Parhudagar.

The basic organization of bondar Pansur was the same as that described for bondar Parhudagar. The system became the joint property of all of the descendants of Ompu Pulo Morsa and only his descendants could hold positions of responsibility in the system or receive a share of the levies. There was a paid parhara whose duties were to maintain the system on a day-to-day basis. There was no formal 'supervisor' of the system. All of the responsible elders in the descent group acted as administrators of the system. The method of reckoning levies was the same and customers of the system owed the owning body a debt of labor on the yearly cleaning of the system only.

The organization of the yearly cleaning of the system illustrates one of the basic organizational principles in the construction of Silean Banua, cooperative labor and the responsibilities of the suhut groups. The levy-paying customers of an irrigation system who were not of the owning lineage had already paid for the services of the parhara and supervisor of the irrigation system with their levies. They acknowledged a debt of labor to the system for the yearly cleaning but would not labor without being provisioned. The owning lineage of the system had to act as suhut to a small feast, slaughtering a dog, pig or buffalo depending upon the size of the work force, and providing rice, betel, and drinks. The feast was usually held near the banks of one of the canals before work began.

This was the relationship of the suhut groups for the construction

of Silean Banua to the horja. They had to provision the work force for the construction of the irrigation system in a like manner for the beginning of large cooperative efforts and to provide the feast at all planning sessions. The key distinction was in the fact that the suhut groups for Silean Banua did not acquire actual ownership of the system, unlike the controlling lineages of the small irrigation systems. They acquired rights to levies from the system and positions of responsibility in the administration of the system, and all of the attendant responsibilities as well. The system of Silean Banua remained the collective property of the entire horja of Lintong ni Huta. The special position of the suhut groups was based upon the consent of the horja and recompense for their financial outlay during the construction of the system.

The work on the yearly cleaning also is a good illustration of one of the tacit but guiding principles of adat in Toba reciprocity: Molo adong na nilehon inkgon ro balosna, "if something is given something must come in return". The meat given to the laborers by the owning lineage was recompense for their efforts. The only excuse for not participating in the cleaning of the canal was illness. Each person who did not appear for labor on the system was visited by the elders of the owning lineage to find out why he did not participate. The elders took some of the meat from the feast with them to offer to each non-participant. If he accepted the meat it created a debt (utang) of labor to the system. The delinquent was bound to redeem the debt with the price of a day's paid labor in unmilled rice. If he refused to pay the debt the hatopan lineage could confiscate his rice pot or other property

with impunity until he paid. If the delinquent did not accept any of the meat the owning lineage could take no action. However, community disapproval was a strong sanction because failure to acknowledge the debt of labor to the irrigation system was a lapse in adat.

The new parhara was chosen at a meeting (rappot) of the owning lineage and the customers of the system. This occurred in the third lunar month (Sipahatolu--June), after harvest when the levies were paid and the retiring parhara received his share. In the past the office of parhara went to a member of the descent group of each of Ompu Pulo Morsa's four sons in rotation. The systematic outmigration of men from the village has depopulated the descent group of Ompu Pulo Morsa, as it did that of Raja Parhudagar. The reorganization in adat of the irrigation system has been far more radical.

In 1975 all of the male descendants of Ompu Sangapnihuta, Ompu Pulo's eldest son had left the village. Only two descendants of son number two, Guru Tauan, an elderly man and his son, remained in the village and farmed land irrigated by the system. Similarly there was only one descendant of son number four, Ompu Juaratunggal remaining in the village. As we have seen (chpt. four) the descent group of Ompu Sotaronggal is large and scattered throughout the village. Participation in the running of the system is limited to those who actively farm wet-rice land irrigated by the system. This effectively limits the administration to the descendants of Ompu Sotaronggal in the hamlets of Lumban Hariara, Lumban Pulopulo, Janji Maria, and Sukarame. Because of the depleted numbers in parts of the descent group of Ompu Pulo, the

elders of the system decided to change the adat of the group in 1952. The changes made in the administration of Bondar Pansur presage changes which were effected in Silean Banua. Some of these changes were in response to the same circumstances that caused the reorganization of Silean Banua.

The office of parhara no longer went to a descendant of each of the four sons of Ompu Pulo Morsa in rotation. Each household of all of the descendants of Ompu Pulo still active in the irrigation association had rights to the office in rotation. If the head of the household or an unmarried son did not want the office, or was incapable of taking it, the next family in rotation was given the opportunity. There are no formal 'supervisors' of the system but one man with a superior education and an interest in adat takes care of the books and acts as a kind of unofficial permanent panitia. The method of figuring levies for the system was also changed. In the past it had been the same as for bondar Parhudagar, the amount of seed rice put out in a plot watered by the system was collected as levies. A new method of charging a fixed amount of padi per unit of land watered by the system was instituted, which has become common practice for most of the other small irrigation systems and Silean Banua. If a farmer was a descendant of Ompu Pulo Morsa, he or she was charged two tumba of padi per rante of land ($2.1 \text{ kg}/.04 \text{ hectare} = 52.5 \text{ kg/hectare}$). Land farmed by a customer of the system is levied at three tumba of padi per rante of land ($3.15 \text{ kg}/.04 \text{ hectare} = 78.75 \text{ kg/hectare}$). Descendants of the founder farming land watered by the system live in Lumban Raung, Lumban Panggabean, Lumban Pulopulo,

and Janji Maria. Levy-paying customers live in Lumban Si Buntulan Sukarme, and hamlets in the immediately neighboring village of Hinalang.

Bondar Paringgiringgiron

The second of the canal systems reputedly founded by Ompu Bari-talaut Simanjuntak was bondar Paringgiringgiron, which he gave to his son Ompu Tahigumiling. The fate of this irrigation system exemplifies the problems of a na metmet partubu ('small descent group') in Toba. The system is a casualty of the outmigration of young men in the village and the development of Silean Banua; it has been defunct since the mid-1950's. Bondar Paringgiringgiron had the most complex infrastructure of any of the small systems in Lintong ni Huta. Its feeder canal was one kilometer in length and a system of large and small weirs was necessary to raise the water to the level of the hilly land in the center of the village. The sources of water for the system were drainage from the pansur ('spring') that provided drinking water for Lumban Panggabean and small streams flowing off the slopes of Dolok Tolong. The primary weirs were made of the hard interior wood of the aren balm (bagot) and the smaller weirs of bamboo, each of which had to be replaced every few years.

The descent group of Ompu Tahigumiling has never been large and as more young men migrated to the cities it became difficult to muster enough workers every year to maintain the weirs and feeder canal. At the same time the system of canals and weirs belonging to Silean Banua was being improved. The main weir of bondar Paringgiringgiron was

BONDAR PARINGGIRINGIRON

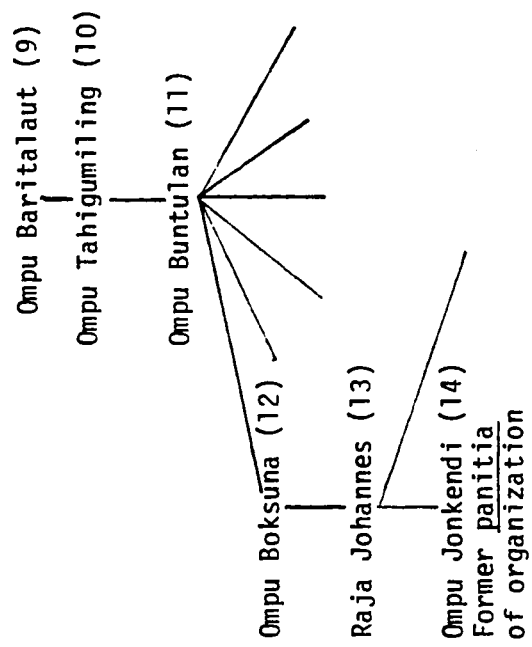


Figure 11

considered crucial to the development of Silean Banua. The descendants of Ompu Tahigumiling agreed to the incorporation of the system into the main irrigation network because of their depleted numbers and the difficulty of maintaining the system. All but the smallest canals of the system are now administered by Silean Banua's controlling board and the primary network of weirs was replaced with cement. When the system was still maintained by the owning lineage, it irrigated approximately twenty hectares of land in the central portion of Lintong ni Huta.

The organization of bondar Paringgiringgiron was similar to that of the first two systems discussed in this chapter but differed in detail. Of the small irrigation systems in the village it best conformed to the pattern of bondar organization described by Vergouwen (1964:345) where the administration of irrigation coincided with that of land and people. The fields irrigated by the system centered around Lumban Sibuntulan, the hamlet founded by Ompu Tahigumiling and most of his descendants lived in that hamlet. The saompu lineage deriving from Ompu Tahigumiling included administration of the irrigation system as one more fact of their activities as a cooperative kin group.

As a result of this the organization of the association was more informal than the other bondar associations. There were no formally elected supervisors. One elder stated sude ma hami panitia hian ('we were all panitia'). The parhara had to be a descendant of Ompu Tahigumiling and was chosen in the same way as for the other irrigation associations. He was not changed every year, however. If there were no eligible young men who wanted the position or the work of the incumbent

parhara particularly pleased the organization he might hold the office for up to three years. Because there were no formal supervisors the duties of the parhara included organizing the yearly cleaning and repairs of the canal system and collecting the levies, as well as the usual routine maintenance.

The irrigation levies were reckoned in a way different from all the other organizations in Lintong ni Huta, but which was used in other parts of Toba (Ypes 1932:388). For every fifty kaleng (525 kg) of padi harvested from a plot irrigated by the canal system, the farmer paid one kaleng (10.5 kg) in levies to the system. One kaleng per fifty kaleng of harvested rice was the minimum levy, additional fractions were up to the individual farmer. Generosity in the levies was thought to give the parhara an incentive to work industriously. One elder stated "one must add to the levies tumba by tumba (2 liters of padi = app. 1.05 kg) so that the water will be clear". Aek Sitiotio ('clear water') indicated a well-maintained system and had symbolic importance as well.

When the system still functioned, it irrigated fields farmed by seventeen households in the three hamlets of Si Tangki, one in Huta Bagasan, and one in Lumban Panggabean. The levies of the system totaled approximately seventy kaleng (735 kg) of padi of which the parhara received a substantial percentage.

Bondar Sitangki

Bondar Sitangki is the third irrigation system putatively constructed by Ompu Baritalaut Simanjuntak and given to his third son Ompu

Mallogon as panjaeon property ('independent housekeeping'). This is highly unlikely. Proprietary rights to the system are the sole possession of the descent group of Ompu Mallogon's eldest son Raja Ampanansir. Either Ompu Mallogon himself initiated construction of the system and gave it as panjaeon property to his eldest son, or Raja Ampanansir and his fourteen sons constructed it themselves. This seems likely as the system receives some water from the main trunk canal of Silean Banua, as well as independent water sources, and the system of Silean Banua did not begin to flow until 1883. Some informants stated that there was another irrigation system controlled by the descent group of Ompu Mallogon called bondar Siger. It had been defunct for more than thirty years and no details of its organization or history were recorded.

The organization of bondar Sitangki is similar to that of the other systems in Lintong ni Huta. The descent group of Ampanansir and the levy-paying customers elect two supervisors (panitia) and a parhara each year. Their duties are the same as in other systems. The reckoning of irrigation levies was the same as the other systems in the past but farmers are now charged three tumba of padi per rante of land watered by the system (3.15 kg/.04 hectare or 78.75 kg/hectare). The panitia are each paid ten kaleng of padi (105 kg) a year and the parhara receives sixty kaleng (630 kg). The system irrigates land farmed by inhabitants of virtually all of the hamlets founded by Ampanansir's fourteen sons (see chapter four).

The organization of bondar Sitangki is unique among the irrigation organizations of Lintong ni Huta in allowing 'indwelling wife-taking

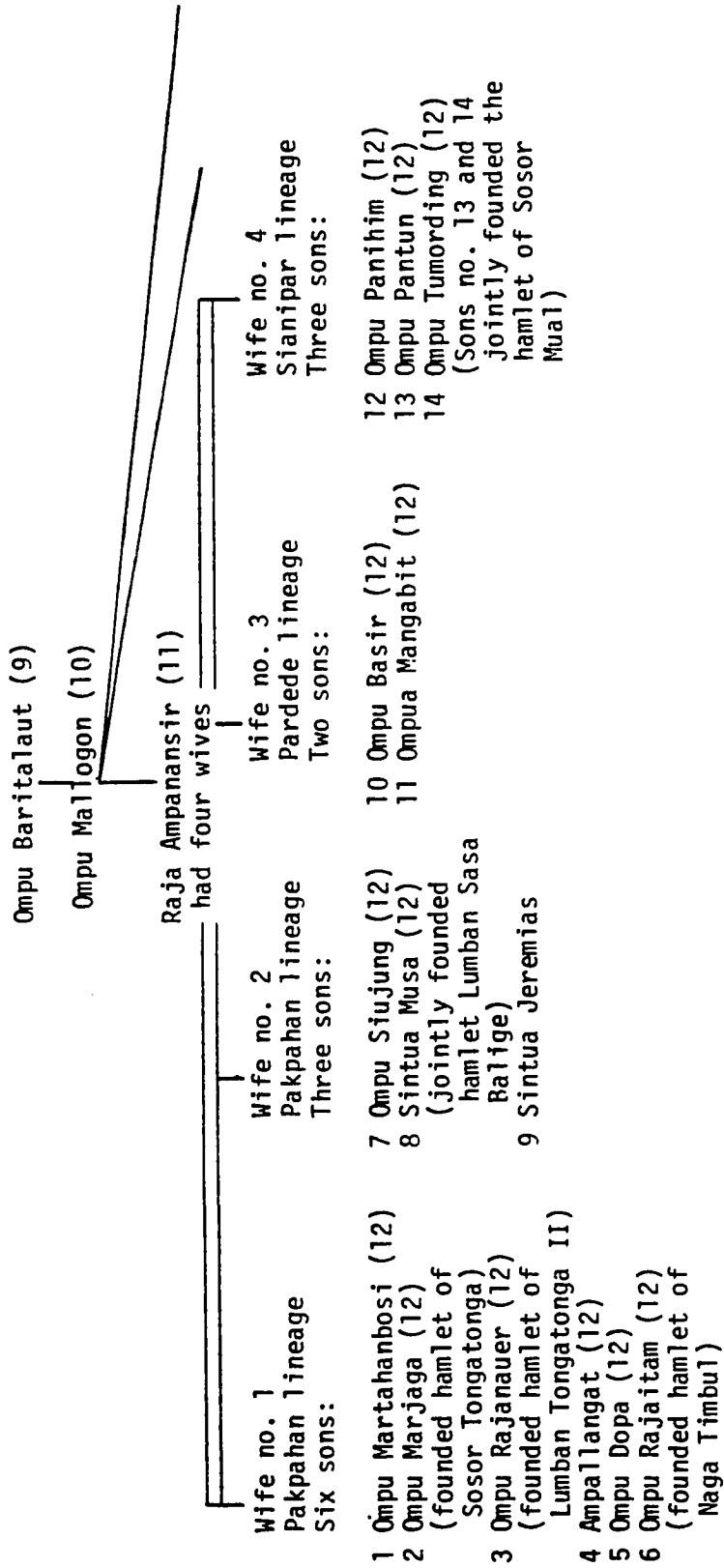
BONDAR SITANGKI

Figure 12

affines' (borugomgoman) to hold paid office in the system. These could have been men of other margas of the Pohan tribal group living in the village who had married a woman of the descent group of Ampanansir, or a man from outside the village who had chosen uxorilocal residence. The fact that bondar Sitangki was the only system in the village that recognized the rights of this class of affines to hold office or have rights to the system helps to point up the emphatic descent orientation of the horja village. In a village with a 'ruling lineage' (marga raja) structure there are institutionalized marriage relations between the marga raja and the other margas in the village who become institutionalized wife-takers (boru). No such institutionalized wife-taking/wife-giving relationship has developed between the margas in Lintong ni Huta. The 'indwelling wife-taking affines' (boru gomgoman) of the village are recognized in ceremonial meat division (jambar) at major descent feasts but have no institutionalized role in the village. Ampanansir's descent group has extended a right to boru ('wife-takers') that probably would be more common in other regions of Toba.

Bondar Saba Balige

The fifth irrigation system controlled by a descent group of the Simanjuntak marga is called bondar Saba Balige. According to tradition this was the fourth bondar constructed by Ompu Baritalaut and given to his fifth son Amparjambe Dolok. It is one of the smallest irrigation systems in the village. There is no formal organization per se nor are there any elective offices. In 1975 there were only three adult men

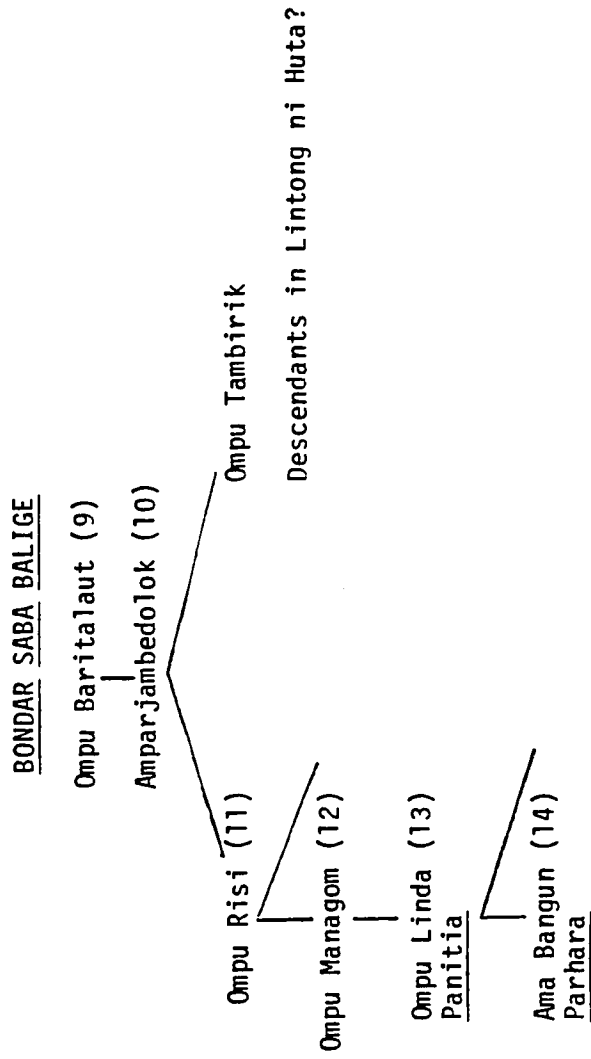


Figure 13

residing in the village who were lineal descendants of Amparjambe Dolok. One elderly man and his married son oversaw the system one year and a neighbor and kinsman in the same hamlet took care of it in alternate years.

Irrigation levies in the system are figured in the old way; the amount of seed rice for a plot is given as levies. This averages to two-and-a-half tumba/rante of land ($2.625 \text{ kg}/.04 \text{ hectare} = 65.625 \text{ kg/hectare}$). In 1975 the levies totaled approximately forty kaleng (420 kg) of padi. People who pay levies to the system were expected to assist in the yearly cleaning. This has ceased to be a formal occasion since the number of Amparjambedolok's descendants has declined. The younger men and boys in the two families that control the system generally perform this task themselves to avoid the expense of slaughtering a pig or dog and preparing rice to feed the customers of the system who would assist in the cleaning.

The system received most of its water from the spring below the hamlet of Lumban Panggabean and irrigates fields below that hamlet and the neighboring hamlet of Lumban Saba Balige. In 1975 eighteen families were levy-paying customers residing in Lumban Panggabean, Lumban Raung, Sukarame, Janji Maria, Lumban Pulopulo, and Siambat Dalan.

Bondar Napitupulu

Bondar Napitupulu was the only irrigation system in the village not controlled by the Simanjuntak marga. The account of the construction of this system conforms most to the description of the adat of bondar

BONDAR NAPITUPULU

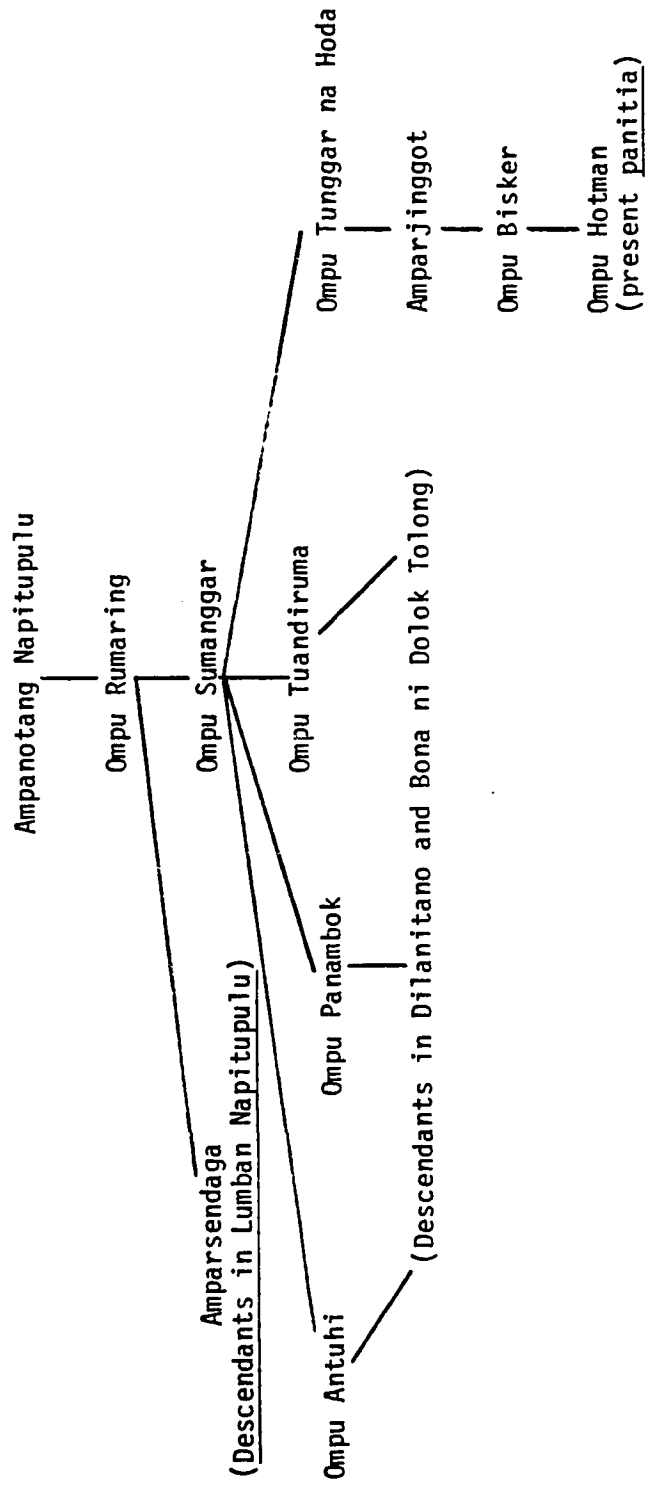


Figure 14

construction in Ypes' work (1932:288). Bondar Napitupulu was begun in the second generation after the village founding. All of the households of the Napitupulu marga cooperated in the construction of the system, but one man, Ompu Sumanggar, served as suhut for the construction. His descendants have retained control of the system to the present day.

The system is relatively small. A short feeder canal channels small streams running off the slopes of Dolok Tolong into fields directly below the hamlets of Dila ni Tano and Lumban Napitupulu. There is only one diversion weir and the final drainage of the system is only a few hundred meters from the source of the system. The irrigation system has no formal organization. The descendants of Ompu Sumanggar form the larger of the two major Napitupulu descent groups in the village. The administration of the irrigation system is but one of several cooperative undertakings of the saompu lineage. Rather than formalize the organization and the selection of a parhara, the lineage has given rights to the levies and the responsibility for maintenance of the system to one household. The payment given to the head of this household is not called upa bondar ('irrigation levy') but upa loja ('labor wages'). The minor terminological distinction is significant. The man who takes care of canal maintenance is being paid directly for his services with no intervening administrative body collecting levies. No other member of the lineage receives any part of the revenues of the canal and the office is permanent.

In 1975 control of the canal system had been granted to one of Ompu Sumnaggar's descendants living in Dila ni Tano. He has sole control of

the system and responsibility for maintaining it. The levies for the system are reckoned in a unique manner. The supervisor of the system sets an arbitrary amount for an individual farmer's levy, based on the size of the plot irrigated by the system and the farmer's wealth. The supervisor collected approximately fifteen kaleng of padi (157.5 kg) in 1975. This system is possible only because all of the levy-paying customers are of the descent group of Ompu Sumanggar Napitupulu. Unlike the other small irrigation systems in the village, there are no outside customers.

The organization of Bondar Napitupulu had no formal adat for a yearly cleaning of the system. The supervisor stated that the system is small and the yearly cleaning of the system had never been a formal matter as with the other systems in the village. He could clean the canal system himself or call for a cooperative effort as he saw fit. He emphasized that a formal organized cleaning and repair was necessary only for the larger irrigation systems with large infrastructures, and where the controlling descent group had dispersed to several different hamlets in the village. He cited the case of bondar Paringgiringgiron which had broken down and been absorbed into the system of Silean Banua because of the inability of the descent group of Ompu Tahigumiling to maintain it.

SUMMARY AND CONCLUSIONS

The historical material in this chapter completes the background data necessary for the history of the construction of Silean Banua.

The ability of the individual descent groups who became suhut for the construction of Silean Banua to do so, lay not only in their numbers and wealth, but also in their control of the small irrigation systems. The description of the adat of bondar systems also sets the patterns for the organization of Silean Banua was basically the same as that of the small systems. The material in the next chapter will show how aspects of the adat of the small bondar organizations was expanded or adapted to the requirements of the larger irrigation system.

The other point raised in this chapter, the systematic depopulation of the village through outmigration and its effect on the irrigation systems, is important for the discussion of Silean Banua. The structure of Silean Banua was threatened because of the lessening of the power of the original suhut groups and the formation of new alliances in adat in the 1950's as entire descent groups left the village. The fate of the most elaborate of the small systems maintained by a small descent group that became incapable of managing it was to be absorbed into Silean Banua. Other systems have become almost defunct, managed and maintained by the remnants of the descent groups that controlled them. Those systems with sufficient personnel to maintain them, notably Bondar Pansur and Bondar Parhudagar, have had to make adjustments in the rotation of offices in the systems. The effect has been to nullify the details of the old structure, such as offices rotating in strict sequence according to the birth order of the sons of the founder, but to maintain the basic descent structure of the irrigation associations. Similar adjustments in other kinds of adat groups have taken place. As

entire descent groups became sufficiently diminished in numbers to be unable to continue the mutual provision of finances, labor, and materials for major feasts various kinds of mutual assistance organizations developed based on residence, and voluntary association developed. The genealogical relationships of the participants are still the overt organizing principle however. This maintains the outward and overriding form of adat while adjusting the internal organization to fit necessity and zaman moderen ('modern times'). All of these changes intruded into the organization of Silean banua. The reorganization of Silean Banua in 1971, to a chartered, democratic association, is comprehensible only in light of changes in other spheres of the village. The course taken by some of the small irrigation associations provides many of the precedents. The others will be discussed in the course of the conclusions to chapter six.

Chapter 6

This chapter will be concerned with the history of Silean Banua itself. The points of adat and historical factors treated in preceeding chapters will be considered in the course of the description as they apply to the development of the large irrigation system. One of the most important factors in this regard is the strength of the lineal principle in Toba Batak kinship which united the villagers as a single unit under the presumption of common kinship at the tribal group level. Other matters of adat such as common financing (guguan), the adat of suhut, cooperative labor (marsialap ari), and other factors of adat in the organization and administration of the small irrigation systems, or other spheres of Toba Batak society, will be discussed as they were applied in the building of Silean Banua.

The most important point will be the basic social model of this work, that the details of adat are adaptable and can change within an overriding and unchanging framework of general principles. This can be seen in part in the expansion of some principles of adat to achieve the construction of Silean Banua. There were radical changes in the organization of Silean Banua in the period between approximately 1950 and 1971 when the organization of Silean Banua was formally chartered according to democratic principles. This came about in response to depopulation of the village as a result of outmigration, which also altered factors of adat in other spheres of Toba Batak society. The diachronic framework of this work allows a view of these changes in the light of past traditions and the history of the village prior to the construction of Silean Banua.

The outmigrations that caused bondar paringgiringgiron to become defunct had a different effect on Silean Banua. The village population was sufficient, and the system crucial to village survival, so that it did not succumb to insufficient maintenance. Serious alterations in its administration occurred which caused an impasse in adat for fifteen years which did threaten the maintenance of the system. The original suhut groups for the construction of the system had held rights to the levies for almost seventy years by 1950 and the suhut groups were depleted in numbers as well. A number of smaller descent groups in the village could not maintain the cooperative activities of providing personal and material assistance for feasts as kingroups alone. A number of marga segments and descent groups of the larger margas banded together, sometimes across marga lines, to form golongan ('groups'), voluntary associations which performed the functions that the saompu lineages had in the past. Some of the more influential golongan refused to recognize the exclusive rights of the suhut groups to the irrigation levies, collected levies for their own areas and nominated young men of their group as parhara for the system. This represented an impasse in adat and the maintenance of the system suffered as well. The entire matter was resolved by a radical reorganization of the system's administration. This did not violate the general principles of adat which are, as Vergouwen (1964:140) puts it, "immutable" but is an example of the 'adat which is made adat' (adat na niadathon) which must change as a result of zaman moderen ('modern times') (Tampubolon 1960: 9). These particular changes in the last thirty years of the history

of Silean Banua will be given special attention in connection with the development of the goiongan.

The Beginnings of Silean Banua

The charter of the association of Silean Banua (Silean Banua 1971: 1) states that during the pidari times the people of Lintong ni Huta were threatened with famine because of uncertain rainfall. The elders of the horja saw that the dry rice land in the village not irrigated by the extant small systems could be converted to irrigated rice with a village-wide system. Watercourses that flowed through Lintong ni Huta were too small to provide sufficient water. A survey was made of the river that ran from the village of Tangga Batu at the extreme western boundary of the Pohan tribal territory to the valley of Meat. The elders decided that if the river were dammed high enough in the mountains, sufficient flow could be obtained to irrigate the entire village. A feeder canal eight kilometers in length was necessary to deliver water to the northwestern corner of the village territory. The success of the project was guaranteed by one of the most powerful forms of Batak oracle magic.

The river that Lintong ni Huta wished to tap was outside of the village territory. Tangga Batu and Lintong ni Huta were both part of the defensive region of Tampahan and had been founded at the same time. All of the marga segments of Tangga Batu were similarly of the Pohan Tribal group. The adat of water rights allows one horja to petition another for rights to tap a watercourse outside of the petitioner's

territory, as long as downstream water level is not adversely affected (Ypes 1932:289).

Deliberations concerning the feasibility of construction began in 1968 but the actual labor did not start until 1870. The charter of Silean banua (1971:1) states:

All of the inhabitants of Lintong ni Huta were unanimous in their resolve to begin digging the canal under the direction of the elders descended from SIBAOTNI POHAN, despite the fact it was difficult to obtain iron tools (the Dutch were not yet present) for digging and the inhabitants could not pay attention to the threat of attacks from outside villages.

The history section of the charter is not clear on the organization of the construction. Oral accounts are clear on the kingroups that acted as suhut for the construction of the system. The charter contains the information that the elders decided to form the office of raja bondar who would watch the canal and "guarantee its flow" (Silean Banua 1971: 1). In other parts of Toba the raja bondar ('chief of the canal') is usually the head of the suhut lineage that initiates construction (Ypes 1932:288). The terminology in Lintong ni Huta is loose; the young man in charge of physical maintenance of the canal is sometimes referred to as the raja bondar but more commonly by the title of parhara (see chapter five). The elders chosen each year to direct Silean Banua were usually referred to as panitia, the Indonesian term meaning 'committee'. It is not certain if the elders of the three original suhut groups who collected the levies in the past were referred to as raja bondar.

The charter states only that office of 'watchman' of the system was divided into three talpang or territories: 1) Talpang Nasagkae;

2) Talpanḡ Lumban Bagassan; 3) Talpanḡ Lumban Tongatonga. (Silean Banua 1971:1). These three territories refer to the original golāt allotments or the hamlet territories of the three lineages that became suhut for the construction. We have already traced the history and genealogy of these groups in the history of village founding in chapter four and the discussion of the small irrigation groups in chapter five. Talpanḡ Nasangkae refers to the territory of the golāt granted to the margas of the Sonak Malela subdivision of the Pohan tribal group. The suhut group from this territory was the pomparan ni Ompu Pasang Napitupulu ('descendants of Ompu Pasang Napitupulu') who lived in the original Napitupulu marga hamlet. This territory comprised roughly the southern one-fourth of the village. The second territory, Talpanḡ Lumban Bagassan, refers to the territory of the first hamlet in the village. The suhut group for this territory was the pomparan ni Ompu Sotaronggal Simanjuntak tubu ni boru Pardede, ('descendants of Ompu Sotaronggal Simanjuntak born to his wife of the Pardede marga'). This territory comprised the central third of the village including most of the original golāt of land granted to the margas descended from Tuan Somanibil of the Pohan tribal group. The four brothers of this sibling group did not live in Huta Bagassan but the name of the territory emphasizes it as the village of the first Simanjuntak ancestor in the village. It was noted earlier that the logical descent group to act as suhut would have been the descendants of Ompu Pulo Morsa Simanjuntak (see chapter four, fig. 3) but that this group lacked cohesion. Even all of the sons of Ompu Sotaronggal born to his different wives could not agree on terms to

act as suhut and in the end it was only the sibling group born to Ompu Sotaronggal's third wife of the Pardede marga who became suhut. The territory would probably have been named after Ompu Pulo Morsa's hamlet, Lumban Hariara, had the entire descent group acted as suhut. The third territory, Talpang Lumban Tongatonga, is that of the pomparan ni Ompu Mallogon Simanjuntak ('descendants of Ompu Mallogon Simanjuntak'). Unlike the descendants of Ompu Pulo Morsa, the large descent group of Ompu Mallogon cooperated as a suhut group for the construction of Silean Banua. Lumban Tongatonga was the hamlet founded by Ompu Mallogon. The territory of this portion of Silean Banua comprised roughly the northern third of the village including the small golats allotted to the Tuan Dibangarna and Tuan Sihubil subdivisions of the Pohan tribal group.

The organization of the construction of Silean Banua required some adjustments in the usual procedure. Ypes' description of the establishment of an irrigation system (1932:288) is applicable to the small irrigation systems in the village. An individual or descent group organizes and acts as suhut for the construction of an irrigation system. They become owners of the system and rights to the levies are theirs in perpetuity, as well as offices of responsibility. Access to the levies or to offices of the system is gained only through descent from the founder(s). The construction of Silean Banua was too large an undertaking for the three descent groups to provide all of the financing. They acted as suhut for planning sessions or any gathering requiring the presence of the elders of the village. They paid for animals slaughtered at the opening of labor on the system

and partially provisioned the workers during the construction. The other financial outlays during the construction and subsequent improvement of the system were met through cooperative financing. Each household in the village agreed to contribute (margugu) to a general fund to buy tools, pay for materials, and any other needs of the system during and after construction. As such the irrigation system became the collective property of the village, not of the suhut groups as was usually the case. Besides this application of the adat of financing (guquan) to the system, the construction was organized under the adat of cooperative labor (marsialap ari).

As a result of the cooperative financing and labor by the entire village population, Silean Banua was the collective property of all of the inhabitants. The suhut lineages had all of the rights and obligations of the kin groups that controlled the small irrigation systems with this one crucial exception. When a person used water from the small systems to clear new rice terraces, the water had to be redeemed with a payment equal to one-quarter of the value of the new terraces, or one quarter of the area of land cleared became the property of the lineage that controlled the irrigation system. Since all of the villagers owned the proprietary right to Silean Banua it was not necessary for them to redeem the water used to create new rice terraces as the capacity of Silean Banua expanded. In all other aspects Silean Banua's organization was the same in adat as the small systems. The three suhut each nominated a young man as parhara to maintain the system in the three talpang or territories. The suhut groups also had exclusive rights to the irrigation levies from the

farmers in the three territories.

The Construction of the System

Construction of Silean Banua commenced once the river from Tangga Batu had been surveyed and the organizational structure of the undertaking agreed upon. The success of the undertaking was guaranteed by the debata ni parmanuhon, one of the most powerful forms of Batak oracle magic. Construction began in 1870 and the first water in the system did not reach Lintong ni Huta until 1885. The reasons for the long construction time are not given in the charter. Large-scale construction could probably only have taken place during slack periods in the agricultural cycle. The varieties of rice grown in the nineteenth century in the village were long-maturing varieties requiring seven-and-a-half to eight months. This effectively left a three month fallow season and the period prior to harvest when the rice was ripening for concerted work on the system.

The late 1870's were also turbulent times in the area. The Dutch were trying to consolidate their military control of the entire Lake Toba region and the Singamangaraji XII was carrying on armed guerilla resistance. Battles between the Dutch and the forces of the Singamangaraja were fought at Tangga Batu in 1880 and the Singamangaraja besieged the Dutch residency at Lumban Gorat in Balige in 1883 (Tampubolon 1964:221) Lintong ni Huta provided some assistance to the Singamangaraja and some hamlets were burned in retaliation by the Dutch after the defeat of the Singamangaraja in Balige. The Dutch also confiscated livestock and crops in the Balige area as further

retribution for supporting the rebellion. This was also the time of missionizing by the Rhenish Mission Society (Rheinische Missionsgesellschaft) and the missionary Kaiser was established in Onan Tampahan, one kilometer to the west of Lintong ni Huta by 1885. All of these factors could have slowed the work on the irrigation dam and feeder canal to the village.

The building of the canal system also required an enormous amount of labor. The feeder canal was eight kilometers long and parts of it were cut into solid rock on the slopes of the steep ravines in the mountains between the irrigation dam above Tangga Batu and Lintong ni Huta. A large dam was also built to raise the water level sufficiently to reach the village. The original irrigation dam was twelve meters high from base to top and seven meters wide at the top. It was made of twenty-two logs held in place by a tongue and groove system. Holes were drilled into the rock walls above the river to hold the logs in place. Informants who remembered the maintenance of the dam before the logs were replaced with a cement dam stated that it took a minimum of twenty men to carry one of the logs.

The main feeder canal entered the village territory at its northwestern corner and split into three branch canals which irrigated land in the three talpang or territories of the suhut groups. Each suhut group was responsible for the maintenance of the canal system in their territory and the collection of levies. Each parhara took care of the area watered by the branch canal in his territory only. The three parhara cooperated only for maintaining the feeder canal and

minor repairs to the dam. The job of parhara in the late nineteenth century must have been difficult. The historical section of the charter (1971:1) states that the flow of water was "occasionally broken off and not yet perfect." The seal of the dam between the logs was not complete and water was lost to leakage. The narrow feeder canal was often blocked by landslides in the steep ravines between the village and the irrigation dam. There were also occasional hostilities with neighboring groups to contend with. The parhara was responsible for all of this. He received a substantial percentage of the irrigation levies collected in his territory as payment for his services.

The three suhut groups cooperated only for the yearly cleaning of the canal system, maintenance of the dam, and emergency repairs. As with the small irrigation systems, all of the customers of Silean Banua were expected to participate in a yearly cleaning of the canal. The suhut slaughtered a buffalo or a cow and held the necessary meal. Before substantial cementing of the feeder canal and the large irrigation dam and smaller weirs in the village, the people of the village had to participate in the replacement of the weirs and dam and were on call for emergency repairs to the system. The large logs of the major irrigation dam lasted a maximum of five years and sometimes had to be replaced after three years. A bamboo clapper was kept in the market place and the villagers were expected to respond immediately to assist in emergency repairs if the clapper was rung.

The system of Silean Banua was slowly expanded and improved. With the improvement of irrigation the amount of wet-rice land in the

village was constantly expanding. The village headman said that people were still clearing and terracing new rice fields using water from Silean Banua until 1930. The charter of Silean Banua (1971:1) states that the system was flowing well by 1924, but not satisfactorily. The elders of the village felt that if the dam at Balanpinang above Tangga Batu were replaced by a cement dam, the leakage from the log dam would be stopped and the volume of water in the system increased.

The elders applied to the colonial administrator in Balige for permission to build the cement dam. An objection was raised by the neighboring village of Hinalang. Leakage from the log dam which did not enter the feeder canal had been tapped by the village of Hinalang for limited irrigation. The elders of Hinalang argued that agriculture in the village would suffer if Lintong ni Huta were allowed to cement the irrigation dam and eliminate the leakage. Despite the fact that Hinalang had no rights in adat to the water, the regional administrator found in their favor and forbade the cementing of the dam.

The people of Lintong ni Huta decided to defy the orders of the regional administrator and began what one elder called a "guerilla action" to cement the dam without the knowledge of the Dutch. The adat of guguan was called into play to raise the necessary funds for materials. Each family was assessed for a contribution of padi according to the amount of land they farmed. In this way 1500 kaleng of padi (app. 15,750 kilograms) was raised. The cement dam was constructed entirely with cooperative labor and local engineering skills.

The suhut groups organized and provisioned the workers as for the initial construction of the system. When the cementing was complete the village invited the regional administrator to see the dam. As one elder put it "When he saw it was finished he couldn't forbid it." The colonial administration belatedly admitted that Hinalang had no rights in adat to water from the system and offered technical advice on how the cementing of the dam and other parts of the system could be improved.

The people continued to replace the perishable wood and bamboo weirs with cement and to improve portions of the major canals. In 1934 the mouth of the feeder canal was lined with rock, without cement, for a length of twenty-five meters. This required three-and-a-half months of cooperative labor. The rocks were washed away in a flood during the wet season a year later. The village decided that more permanent improvements were necessary. Six portions of the trunk canal were cemented including the mouth of the canal below the dam. The dam was enlarged so that the walls were eight meters high, four meters thick at the base, seven meters wide at the top and one meter and forty centimeters thick. These improvements were completed in 1939 at a cost of 5000 kaleng of padi (52,000 kg) and several months of cooperative labor. Internal improvements continued into the 1950's. Weirs in the village were cemented and the entire length of the small irrigation system bondar paringgiringgiron was incorporated into Silean Banua. The charter of Silean Banua (1971:1) states that the total financing necessary for the construction of the system from the

beginning of construction to the final cementing of the dam at Balanpinang in 1939 totalled 120,000 kaleng of padi (1,260,000 kg, worth approximately US \$263,000 in 1975). This estimate did not include the value of the labor involved nor the price of tools.

The Social Control of Irrigation: Divisions and Reorganization

The social control of irrigation in Lintong ni Huta remained essentially the same from 1855 until well into the twentieth century. The original suhut groups retained rights to the irrigation levies. The elders of each group acted as an informal supervisory group in their own territories, collected levies, adjudicated any disputes which occurred, and directed the labor of their parhara. The three groups cooperated in the yearly cleaning of the canal, and acted as hasuhuton for the meals opening the major labor on improvements in the 1930's. The parharas also acted as watchmen for the village during their work on the main canal outside the village, calling the men of the village for defense against raids.

The levy-paying customers of Silean Banua had the same responsibilities to the system as they had to the small irrigation systems. Their labor was required for large-scale repairs to the system. Non-participation in such labor required a payment in padi to the suhut groups to redeem the debt of labor. The people also paid irrigation levies to the system; the amount of seed rice necessary to plant a field irrigated by the system equalled the levy. The village technically owned Silean Banua, however, not the suhut group. The villagers

and their ancestors had labored on construction and improvement of the system and they had been assessed several times for contributions for capital improvements to the system. The only tangible reward the villagers received was to be able to use water from the system to clear wet-rice land without payment to the suhut groups.

The suhut groups had been granted the benefits and responsibilities of administering Silean Banua in return for their expenditure during the construction and improvements to the system. As individuals they held no greater share in the system than any other villager. Their rights to the levies of the system had not been granted in perpetuity. The gradual depopulation of the village in the post-independence era, which caused problems in the small irrigation systems in Lintong ni Huta, caused problems in Silean Banua. Three new suhut groups emerged who challenged the exclusive rights of the original ones to collect levies. They named their own parharas and carved their own small territories out of the original three. The emergence of these new groups and the eventual resolution in adat of the difficulties caused by them in the administration of Silean Banua parallels a similar development in adat in Lintong ni Huta, the golongan ('groups'). The composition of the challenging suhut groups in Silean Banua and the problems in the adat of irrigation can best be understood by first examining the golongan; they represent a pragmatic adjustment in adat which is a radical change but does not violate the overriding principles of adat.

The Golongan

Each major life-crisis event in a Toba Batak family should ideally be attended by a large adat feast. Because of the range of lineal and affinal kin which adat demands must be invited, and the subsidiary guests each kin group brings, these affairs are large. A small, formal elopement wedding (mangalua) in my hamlet, given by an impoverished family had 350 guests. A major ancestor reinternment feast in the village (mangongkal holi) took four days of preparation during which forty to eighty kinsmen and hamlet-mates were fed daily and during the three days of the feast 800 guests were fed the first day, 500 the second, and 1300 the third. The logistics of putting on these feasts requires a microcosm of the organization required for building Silean Banua. The enormous costs are shared out through the adat of financing (guguan). Siblings of the feastgiver form a suhut group and share the major financial burden among themselves. More distant lineal kinsmen in the saompu lineage are asked to contribute (margugu), sometimes a set amount, or more or less than the set amount, according to their wealth. Loan of mats and dishes, contributions of rice to feed the guests, and labor were obtained from hamlet-mates and from lineal kinsmen. The adat of co-residence in a hamlet (adat pardongan sahuta) required these contributions. In the past the lineal principle was operative here; most hamlet mates were descendants of the founder or siblings who founded the hamlet. Lineal kinsmen who lived outside the hamlet of the feastgiver provided similar assistance and were organized as the 'secondary suhut' (suhut paidua).

The genealogies were important in determining the secondary suhut. If a group of brothers were burying their father they would be the primary suhut group, sometimes called hasuhutohon. They could request the assistance of the descendants of all of their father's siblings as secondary suhut for the general feasts. The compass of lineal kin to be included as secondary suhut for the feast can be increased by defining the primary focus of the feast higher in the genealogies. The Batak may do this consciously for practical reasons. The group of brothers who gave the large reinternment feast mentioned above were wealthy migrants who had returned to Lintong ni Huta to give a large-scale feast for the reinternment of their parents. The number of guests necessitated a great deal of material and personal assistance, and the descent group of their father still resident in the village was small. The sibling group consulted genealogical specialists and discovered that the ultimate ancestor of their localized descent group in Lintong ni Huta had never been reinterred in a feast. By including the remains of this person and other lineal kinsmen in the reinternment they were able to recruit the assistance of the descent group of their ancestor's younger sibling. He was Ompu Tagururaja Simanjuntak and seven generations removed from the present. By pushing the focus of the feast seven generations up the genealogies, the suhut group was able to recruit almost every member of the dominant Simanjuntak marga in Lintong ni Huta, most of whom are descended from Ompu Tagururaja, as secondary suhut. Manipulations of adat in such cases are not uncommon.

The steady depopulation of the village has greatly altered the capacity of lineal descent groups to provide this kind of mutual assistance as it has caused alterations in the operation of the small irrigation associations. The financial picture of arranging feasts is the same. Despite distance Toba Batak maintain close ties. A migrant Batak in Jakarta might be asked to margugu ('contribute') to the cost of his brother's daughter's marriage in the Toba heartland. Traditional gifts in exchanges between kingroups are frequently mailed and presented by a proxy at the proper time in the feast. The material assistance and labor for giving a large feast, however, cannot be obtained from lineal kinsmen alone as in the past. For this purpose the institution of golongan ('group') has grown up.

Golognan are essentially voluntary associations which have taken over the duties of mutual assistance in feasts once carried on by the localized lineage. In Lintong ni Huta some are primarily kin-based with the addition of members of other margas. Others are based on common residence in a hamlet, or a coalition of two or more neighboring hamlets. Some are amalgamations of unrelated marga segments, none of whom is capable of carrying on the activities of an independent kin group on its own. Membership in a golongan is not inherited, nor is it necessarily based on kin connections. A person may change membership in a golongan at will, as long as the new golongan is willing to accept this.

Edward Bruner reported the breakdown of the kin group as the main provider of assistance at feasts in 1959 (62). He calls the

golongan adat groups:

As the adat is sacred and must be performed to assure the continuity of Batak society, a new social group has arisen called the adat group...The new adat groups are not based upon patrilineal descent; some are based upon residential proximity, others are purely voluntary associations. The outside perimeters of the lineage are still intact, in that the members of any adat group are recruited from the same village area, but the inside boundaries are not. A son does not necessarily assume membership in the adat group of his father, nor do two brothers necessarily belong to the same association....Traditionally a process of lineage fission was evident in Batakland; when a descent group became too large it would split in two. But the new associations are not kinship groups. As Batak society is based upon the lineage principle this new development could destroy the entire fabric of the social structure.

Bruner's description of the golongan is astute but his assertion that their development could destroy the fabric of Batak society is not, I think, entirely correct. The lineal principle is still pre-eminent in the formal adat sector. The genealogical and affinal relations of kin groups at a feast are honored in the traditional exchange of gifts, ceremonial division of meat, and the agenda of adat oratory. The delicate matter of financing the feast is still carried on in the same way; the mails can unite dispersed kin groups with money orders for this purpose. The lineal principle as the basis of immediate, practical assistance for provisioning and carrying out a large feast has become impractical, however. The feast-givers could not muster sufficient lineal kinsmen to provide the assistance necessary for giving one of these major adat feasts. The voluntary association structure of the golongan simply replaced this segment of the cooperation between kinsmen for giving a large feast. Without this kind of adaptation the entire feast structure, which is a crucial component of adat, might have broken down.

This adaptation is explained by the social model of the work. In this case a challenge appeared to the continued maintenance of adat, represented by the feast structure in this case. A new principle had to be found to mobilize labor for the feasts since the lineal principle and affinal relationships were no longer effective in providing such assistance. Again, a precedent in adat was taken and applied on a different scale, and in this case for a different purpose than was usual. The Batak commonly formed voluntary associations in the past for specific purposes (Vergouwen 1964:343). In areas where an irrigation system crossed village and descent group boundaries the governing board and membership were organized under the principle of voluntary associations rather than kinship or common residence. This particular case again demonstrates the adaptive quality of adat. The overall structure of the organization of feasts has remained the same but one component has changed. As Bruner (1959:62) puts it, the outside perimeters have remained the same, but the inside boundaries have changed. These changes in the structure have not been pleasing to all parties. Disagreements have broken out in cases such as when a member of a golongan, rather than the designated lineal kinsman of the feast-giver, was chosen to be principle orator for the feastgiver. The rationalization of the golongan structure in adat has also caused problems in the ceremonial division of meat (jambar). But in general the structure is acceptable in adat to the villagers.

This digression into the structure of the golongan is necessary to understand the reorganization of Silean Banua. Many of the facets of

the development of the golongan parallel the developments in Silean Banua. The restructuring of Silean Banua, as with the golongan, also left the outside boundaries of the social organization of the system intact while the internal boundaries shifted radically. The data are uncertain but it is probable that more than one of the large golongan in the village became disruptive suhut groups in Silean Banua in the 1950's. This alteration in adat; the organization of the golongan to insure the carrying out of major feasts may also have been a necessary prior condition to the changes in the administration of Silean Banua. Tampubolon (1964:65) emphasizes that it is the genealogies which put in order the great feasts of the Batak. It is a major innovation in adat to establish a functioning group not bound by the lineal principle to insure the practical maintenance of the feast structure. In the past the agnates of the feast-giver usually slaughtered the meat animal, prepared the meat dish, and served the meat at feasts. Their ceremonial share of the animal at the formal division of meat (jambar) was the spine with ribs attached called the panamboli ('slaughterer's piece'). This symbolized the branching of many lineages from the main marga stem and emphasized the participation of the feast-giving family's lineal kinsmen in that portion of the feast. The panamboli is now shared between the lineal kin of the feast-giving family who have acted as secondary suhut in the feast, and the golongan.

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The reorganization of Silean Banua involved not only groups made up of unrelated descent groups, but the fissioning of some of the original suhut groups. If the external boundaries of the social group using Bruner's terms, the village and Silean Banua, remain intact these may correspond to the immutable principles of adat. The internal changes in the suhut group makeup and other factors of adat may seem radical. But in terms of adat they are the adaptations to changing social conditions which become the adat na niadathon, adat which has been made adat.

The primary organizing principle for the golongan seems to have been common residence or propinquity. Large hamlets have become golongan unto themselves and the adat of common residence in a hamlet (adat pardongan sahuta) has expanded to include the duties formerly performed by the lineal kinsmen who acted as secondary suhut. Small hamlets near each other have also banded together to form golongan. In some cases this involves alliances of margas not related in the same subdivision of the Pohan tribal group. In one case the alliance is a marriage of convenience between two margas who had no other options.

The Golongan

The following are descriptions of golongan put together from variant accounts, more golongan may exist in Lintong ni Huta and the organization of some may be different than the descriptions given here.

1. Lumban Panggabean--This hamlet contains mostly the descendants of Ompu Tarubar Simanjuntak with Simanjuntak from other minor descent lines.

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1. Lumban Panggabean--This hamlet contains mostly the descendants of Ompu Tarubar Simanjuntak with Simanjuntak from other minor descent lines. We noted earlier that the descent group of Ompu Tarubar was small directly after the founding of the village but has increased in size in recent times. Lumban Panggabean is one of the largest hamlets in the village now. The golongan is sometimes called golongan sabungan

after Ompu Tinggi Sabungan, the founder of the hamlet and the descendant of Ompu Tarubar whose large number of sons and their descendants dramatically increased the size of the descent group.

2. Sukarame--This large and diffuse hamlet contains primarily descendants of Ompu Pulo Morsa Simanjuntak. Because of its size and the kin connections of the descent group, people from the nearby hamlets of Lumban Raung, Janji Maria, Lumban Pulopulo, and possibly Sosor Gonting cooperate as well.

3. Lumban Panjaitan and Lumban Pangihuri--The Panjaitan marga is large enough to be self-sufficient as a cooperative group in the village. Lumban Pangihuri adjoins the walls of the Panjaitan hamlet and is inhabited by Simanjuntak of a small descent group.

4. Sosor Baringin and Lumban Tampubolon (Possibly also Siambat Dalan)--The primary Simanjuntak descent group in this golongan is that of Ompu Mallogon. This three hamlet bloc forms a powerful and efficient cooperative group. They were almost certainly one of the breakaway groups in Silean Banua.

5. Huta Bagassan and Sosor Bagot This group includes primarily the descendants of Ompu Baritalaut Simanjuntak with a large percentage coming from the descent group of Ompu Pulo Morsa. Sosor Bagot was founded by the sibling group that was one of the original suhut groups for Silean Banua.

6. Lumban Marpaung and Lumban Napitupulu--The Napitupulu marga in the village has split into two distinct descent groups. Those in Lumban Napitupulu are part of the original suhut groups for Silean Banua. The

Marpaung marga is allied to Napitupulu as part of the Sonak Malela subdivision of the Pohan tribal group.

7. Dila ni Tano and Huta Gaol--The members of the Napitupulu in descent group in Dila ni Tano and other small hamlets are numerically superior to those in Lumban Napitupulu but did not participate as suhut in the construction of Silean Banua. The three small households of the Huta Gaol marga are near the hamlet of Dila ni Tano and their inclusion in the golongan is a marriage of convenience.

8. Golongan Si Tangki--The interior hamlets of Lintong ni Huta were mostly founded by descendants of the first son of Ompu Mallogon, Raja Ampanansir Simanjuntak. The three central hamlets of the village, Lumban Sibuntulan, Naga Timbul, and Sosor Tongatonga apparently cooperate as a golongan. Lumban Sibuntulan is of another Simanjuntak marga descent group. The status of the other hamlets founded by Ompu Mallogon's descendants is uncertain.

9. Pardede and Siahaan--The formation of a golongan between these two margas in the village is another marriage of convenience. They are not of the same subdivision of the Pohan tribal group, nor are they territorially contiguous. They have also not allied with neighboring hamlets and both are too small to function independently as golongan.

The New Suhut Groups

The reasons for the formation of the new breakaway suhut groups in Silean Banua are many. Primary among them is the social reorganization that came about as the result of outmigration. The original

suhut groups of the system were as hard pressed as other descent groups in the village to maintain their integrity. The descendants of Ompu Pasang Napitupulu, as we have seen, allied themselves with the Marpaung marga in the Village to form a golongan. The members of the descent group of Ompu Sotaronggal born to his wife of the Pardede marga allied with the golongan based in Huta Bagassan. For reasons to be discussed below, the descent group of Ompu Mallogon fissioned, despite the fact it was large enough to maintain the activities of a kin-based cooperative group. While the fortunes of the original suhut groups were waning, some of the golongan which formed were stronger than any of their constituent kin groups had been while independent. Coupled with this tendency was the feeling by many who were not of the original suhut groups that others in the village deserved a share in the levies of the system.

The original suhut groups in the village represented only two of the four subdivisions of the Pohan tribal group. Although the Pan-jaitan and Tampubolon margas are small compared to the Simanjuntak in the village, they are important in adat affairs. Several descent groups of the Tuan Somanibil and Raja Sonak Malela subdivisions of the tribal group in the village were also not represented in the original suhut groups. The original suhut groups had had exclusive control of the levies for approximately seventy years by the early 1950's. The other people in Lintong ni Huta may have felt that after the amount of time that had passed, and after the capital improvements to the system in the 1930's for which they had all been assessed, the suhut groups had been repaid for their original expenditures and other groups had rights to

the levies as well.

Three new suhut groups formed that cut into the territories of the original suhut groups. Two accounts of the split in the administration of Silean Banua were obtained which do not agree in all respects. One elder was of the Simanjuntak marga and descended from one of the original suhut groups. The other was of the Napitupulu marga, but not of the descent group that acted as suhut to Silean Banua. Both were concerned with the problems of adat in the village and the rights of the original suhut groups. When asked to name the three breakaway groups and their constituent descent groups or marga segments, the accounts of the two elders agreed in only one instance. The data are inconclusive and the charter of Silean Banua is of no help in resolving the discrepancies. The five possible groups will be discussed below.

The one new suhut group on which both accounts agreed was formed by alliance of the Tampubolon marga with a segment of one of the original suhut groups, split off from the descendants of Ompu Mallogon. This split is logical for a number of reasons. We noted earlier that the descent group of Ompu Mallogon was one of the largest in the village. The descendants of the fourteen sons of Ompu Mallogon's first son, Raja Ampanansir, were prominent in the descent group and they controlled the small irrigation system putatively given to all of the descendants of Ompu Mallogon (see Chapter five). Raja Ampanansir may have been one of the influential individuals behind the construction of Silean Banua. His name is frequently mentioned in connection with the descent group of Ompu Mallogon and their participation in the construction as suhut.

In the twentieth century the descendants of Ompu Mallogon's second and third sons have prospered. Their hamlets, Siambat Dalan and Sosor Baringin, are large and they have allied with the Tampubolon marga in a neighboring hamlet to form a three-hamlet golongan which is one of the largest and most cohesive in the village. The two hamlets of Siambat Dalan and Sosor Baringin had thirty-one occupied households in 1975 and Lumban Tampubolon added seven more. The split in the descent group of Ompu Mallogon can be explained partially by the tendency of Batak descent groups to fission when they become too large (Bruner 1959:62). The descent group of the first son of Ompu Mallogon lives primarily in the central portion of the village, while the golongan of the second two sons is on the northern village boundary. The three hamlets, including Lumban Tampubolon, are contiguous as well. This group decided to break away from the original suhut groups. They named their own parhara whom they sent to maintain the part of the canal system of Silean Banua in a small territory carved out of both the central and western territories or talpang of the original suhut groups. People whose fields were in the new territory were impelled to pay levies to the new suhut group rather than the established ones.

There are four possibilities for the other two groups. None forms as discrete a territorial group as the golongan discussed above. It is also difficult to resolve the conflict in the data. The second and third new groups mentioned by the elder of the Napitupulu marga include other segments of the Simanjuntak marga, and pointedly do not include any mention of his own or the other margas of the Raja Sonak Malela

subdivision of the Pohan tribal group. The other elder, of the Simanjuntak marga, mentions segments of Sonak Malela margas and others in the breakaway groups he identifies, but includes no descent groups of the Simanjuntak marga.

The first group mentioned by the elder of the Napitupulu marga was made up of an alliance of the golongan sabungan and the Panjaitan marga. The golongan sabungan was the first identified in this chapter (see pg. 245). As descendants of Ompu Tarubar they were unrepresented in Silean Banua and had no positions of power in the village beyond control of the hamlet of Lumban Panggabean. They would be a likely breakaway group as the descent group of Ompu Tarubar had increased in numbers in the late nineteenth and early twentieth centuries and Lumban Panggabean had become an important hamlet. The inclusion of the Panjaitan marga in this group seems problematic. Their presence in the group would enhance its claim to legitimacy as the Panjaitan marga is the representative of the Tuan Dibangarna subdivision in adat in the village, and were unrepresented in the administration of Silean Banua. The Panjaitan hamlet is almost a kilometer distant from Lumban Panggabean, however. Without any territorial continuity between the two hamlets it would have been difficult for the group to establish their own territory within the network of canals of Silean Banua to administer and to collect levies from. Both groups are likely candidates to have wanted a hand in the administration of Silean Banua. One Panjaitan elder noted that all of the village not represented in the original suhut groups should have had equal status in Silean Banua since they financed the

cost of the system and constructed it cooperatively. The alliance between them in this particular case seems unlikely.

The second breakaway group mentioned by the elder of the Napitupulu marga consisted of the descendants of Ompu Pulo Morsa Simanjuntak in the southeastern corner of the village and some in the hamlet of Huta Bagassan. This group is also a likely candidate for one of the breakaway groups. The descent group of Ompu Pulo Morsa was of roughly equal size as that of Ompu Mallogon, but could not agree on terms to act as suhut for the construction of Silean Banua in the 1880's. In the end it was only one sibling group among the sons of Ompu Sotaronggal. Only descendants of Ompu Mangabas in the hamlet of Janji Maria would have been involved in the original suhut group. The rest of the descent group in the southeastern corner of the village would have been unrepresented. The golongan involving the hamlets in this part of the village has some members in Huta Bagassan, but they could not have participated in the breakaway irrigation group if they did not farm land in the southeastern corner of the village. On other grounds this group is a likely candidate for one of the breakaway suhut groups. They are a territorially contiguous group of hamlets. Had they created their own territory it would not have encroached on that of the descent group of Ompu Sotaronggal, avoiding an affront to close lineal kinsmen.

The first breakaway group identified by the elder of the Simanjuntak marga consists of all of the margas of the Sonak Malela subdivision of the Pohan tribal group, except Napitupulu, together with the Siahaan marga. This group is also likely. The other margas of the

Sonak Malela subdivision are envious of the preeminent position of the Napitupulu marga in adat in the village. The Simangunsong marga is senior in birth order and a man of that marga held the position of village headman of the Sonak Malela hamlets in the 1930's. But the Napitupulu marga is numerically superior, more wealthy, and always has predominated in irrigation affairs. The Siahaan marga is similarly dominated by its younger sibling marga Simanjuntak in adat affairs in the village. The Siahaan hamlet borders on the territory formed by the hamlets of Lumban Simangunsong, Lumban Marpaung, and Lumban Pardede. The Siahaan and Pardede margas have also allied to form a golongan in the village. The group might also have had a precedent in adat to carve out their territory in Silean Banua. The Talpang Nasangkae controlled coincided roughly with the original golat of territory granted to the margas of Sonak Malela at the founding of the village. This precedent in adat might have leant some credence to the rights of the breakaway group. The split would have caused problems in adat for the Sonak Malela margas in the village and the removal of a large amount of territory from the original talpang would have greatly reduced the levies of the original Napitupulu suhut group.

The final group identified as one of the new suhut groups by the elder of the Simanjuntak marga seems less probable. He suggested that the third breakaway group was made up of the Parjaitan marga, together with the Huta Gaol marga and the descent group of the Napitupulu marga not included in the original suhut. This alliance would have been difficult for a number of reasons. The group does not form a contiguous territory. The Panjaitan hamlet is approximately one-half

kilometer from the Napitupulu hamlet of Dila ni Tano. The descendants of Ompu Sumanggar Napitupulu, the descent group not included in the original suhut, and the Huta Gaol marga form one golongan. They do not however cooperate in adat affairs with the Panjaitan marga. One other problem is the fact that if both breakaway groups identified by the elder of the Simanjuntak marga were correct, it would have meant a three-way split in the Sonak Malela territory of Silean Banua, a situation which could not have continued for fifteen years.

It is difficult to say with any certainty what the composition of the three new groups in Silean Banua was. A group composed of the descendants of Ompu Mallogon's second and third sons, split from the original suhut group, allied with the Tampubolon marga, seems almost certain. It also seems likely that the Panjaitan marga was involved in the breakaway groups. They are a well-established marga in the village and their inclusion would mean that all four of the subdivisions of the Pohan tribal group were represented in the administration of Silean Banua. The size, wealth, and prestige of the descent group of Ompu Tinggisabungan Simanjuntak in Lumban Panggabean makes them a likelier candidate for an alliance with the Panjaitan marga than one of the Sonak Malela margas. The three remaining possibilities are equally likely to have been the third breakaway group.

The splitting of these groups was serious enough that it was not resolved in adat for approximately fifteen years. Normally an affront to the established adat of Lintong ni Huta is judged by a group of elders from the four subdivisions of the Pohan tribal group called the

FIGURE 15

New Suhut Groups identified by the elder of the		
<u>Original Suhut Groups</u>	<u>Napitupulu marga</u>	<u>Simanjuntak marga</u>
1. Descendants of Ompu Mallogon Simanjuntak	1. Part of the descent group of Ompu Mallogon the Tampubolon marga.	1. same
2. Descendants of Ompu Sotaronggal Simanjuntak, born to his wife of the Pardede marga.	2. Descendants of Ompu Tinggi-sabungan Simanjuntak and the Panjaitan marga.	2. Simanungsong, Marpaung and Pardede margas (Sonak Malela) Siahaan
3. Descendants of Ompu Pasang Napitupulu	3. Descendants of Ompu Pulo Morsa Simanjuntak in Lumban Pulopulo and surrounding hamlets.	3. Descendants of Ompu Sumanggar Napitupulu Huta Gaoi and Panjaiton margas.

raja ni horja ('chiefs of the village'). The elders are considered the guardians and arbiters of adat and attend each adat occasion to insure that no improper precedent in the procedure of feasts is introduced. If they judge an attempted innovation improper the perpetrator must retract it and admit his mistake. If he refuses to submit to the judgement of the elders he is considered to be diruar adat ('outside of adat'); his opinion no longer carries weight in adat and his presence at adat affairs is disregarded, regardless of his wealth, prestige, or adat knowledge. Although this is the only sanction the raja ni horja have at their command it is a serious one. Such judgments would have been difficult to level against entire descent groups in the case of Silean Banua. To have judged entire descent groups to be outside of adat would have split the village.

The general opinion of the village concerning the split in Silean Banua is equally hard to assess. One elder descended from one of the original suhut groups stated that the village "rejected" the three new groups. There was no concerted action to rectify the situation however. There had never been any cooperation between the original suhut groups except in matters of major repairs, maintenance, and improvements to the system. By the 1950's most of the major weirs and channels had been lined with cement so that major cleaning of the canal and repairs was no longer necessary. Each new suhut group sent their parhara to work in the territory they had claimed and cooperation between the groups was not as important as it had been in the past. One elder stated that the split was a lessening of the force of adat, because "people who wanted

to go along with this or that group paid levies to them rather than to the established suhut". The principle of choice of membership was present in the organization of the golongan as well, so that it was not as much a lessening of the force of adat but a change which all did not find entirely satisfactory.

The proliferation of suhut groups caused problems not only in adat but in the practical administration of the irrigation system as well. With six parhara doing the work formerly done by three, the pay any one received was severely reduced. The pay of the parhara had to be supported entirely from levies and each suhut group was now collecting half or less of what the original groups had received. One elder said of the position of parhara before and after the split:

This (being a parhara) was an honor as the person had to watch over the rights of our ancestors. Now (after the split) it was not. Only people in the village who did not have enough sawah (wet-rice land) wanted the position because it was work like a coolie. If a man went to work every day for forty kaleng (420 kg of padi/year) people said he was weak.

The maintenance of the system began to suffer. Any matter requiring cooperation between the suhut groups was left unattended as there was no agreement in adat on the formal status of the new groups. The six parhara were also not receiving enough pay to encourage them to work as hard as the original parharas had. The prestige of irrigation in the village also suffered. At the ceremonial division of meat (jambar) at major feasts the suhut and parhara of Silean Banua were usually honored with a portion of the buffalo. During the time that the administration of the system was divided six ways there was disagreement at feasts over who was the legitimate recipient of the share given to the irrigation

workers.

The elders of the village recognized that something had to be done to improve the status of Silean Banua. A letter from the Assisten Wedana, the head of the subresidency (kecamatan) of Balige, also suggested that all of the irrigation organizations in Lintong ni Huta ought to be consolidated into one organization. A meeting was called in July of 1971 to discuss the options in reorganizing Silean Banua. The overall conclusion of the meeting was that Silean Banua had never received assistance from the government and that the organization should not in the future be tied to the regulation of the government. The problems of the system were to be solved internally, within the framework of adat (Silean Banua 1971:1-2).

The results of the meeting became the basis for the new chartered organization of Silean Banua. The charter of the system recognizes the legitimacy of the new suhut groups. A formal supervisory organization was instituted. In the past the elders of the suhut groups had informally supervised the work of the parhara. A board of directors was instituted and panitia or 'committee' members who would formally run the organization for their tenure of office and direct the labor of the panhara. The structure of the six groups has been incorporated into the formal federation of the Silean Banua. There are six offices on the board of directors', chairman, vice-chairman, two secretaries and two treasurers. In addition there are six panitia who assist with administration and direct the parharas. Elections are held every two years. According to the charter any citizen of Lintong ni Huta can be elected

to the board of directors or the panitia if he is over thirty-five years of age. In practice two members of each suhut group are elected to the board and as panitia. Each of the six groups nominates a young man as parhara to be approved by the electorate. After the election three of them work one year, and three the next.

The federation of Silean Banua did not represent a radical departure from or innovation in adat. The definition of membership in the system, the collection of levies, and the duties of the parhara are the same adat which governed Silean Banua and the small irrigation systems before the chartering of Silean Banua. Other changes in the system reflected adjustments in the organization of the small irrigation systems which had taken place in the 1950's. The method of reckoning the irrigation levies was changed to the system used by the organization of bondar pansur. Instead of paying an amount equal to the seed rice sown in a plot irrigated by Silean Banua, farmers were now charged two tumba of padi per rante of land irrigated by the system ($2.1 \text{ kg}/.04 \text{ hectare} = 52.5 \text{ kg/hectare}$). Changing land-use patterns were also taken into account in the new organization. People in the neighboring villages of Tarabunga and Hinalang have bought or sharecrop land in Lintong ni Huta. People living outside of the village are charged double the normal levies.

The chartering of Silean Banua resolved all of the instabilities caused by the breakaway suhut groups. The inclusion of these groups recognized a broader participation by villagers in the administration of the canal system that the labor and rice of their ancestors and themselves

had built. The central administration also assures that the system is efficiently maintained and has assets from profits, after salaries are paid from the irrigation levies, to pay for tools and materials for repairs. The parhara are each paid 150 kaleng of padi (1575 kg) and the board of directors and panitia are remunerated also. The work of the parharas is centrally directed rather than each working alone in the territory of the suhut group that paid them. The secretaries keep careful accounts of the amount of land farmed by each member of the system irrigated by Silean Banua and the treasurer keeps accurate books of the levies and expenditures and must submit a financial report to the general membership each year.

The federation of Silean Banua in this way preserved its independence as a village owned and operated irrigation system. The village headman brought up three points at the organizational meeting in 1971 which approved the draft of the charter:

- a. There is a suggestion that we immediately federate, but should not be tied to the regulation of the government.
- b. Must the small irrigation systems in Lintong ni Huta join in the federation?
- c. The association requests an organization which is a federation of six groups. Finally the association asks for the plans already considered by the village headman and the panitia. (Silean Banua 1971:6).

The elders of the village went to lengths to comply with the suggestion that the organization of Silean Banua should federate but remain free of outside control. The small systems were not incorporated into Silean Banua as to have done so would have abrogated the proprietary rights of the owning lineages in adat.

The status of Silean Banua in 1975 was secure. The system had had elections twice and the transfer of power had occurred without incident. The three parhara could be seen going to work on the system in various parts of the village most every day, especially in times of slack agricultural labor. Some of the elders in the village said privately that the new federation had lessened the force of adat in the village or changed the intent of the organization as it had been founded by their ancestors. One elder complained that the greatest honor should be given to the original suhut groups because they had put the greatest amount of energy (tenaga) into the project. "But", he stated "all of that has been forgotten now and all is demokrasi".

CONCLUSION

In this chapter we have completed the history of the development of irrigation in Lintong ni Huta. The historical material in chapters four and five provided the specific background material. Conditions which would have promoted the decision to construct Silean Banua and that earlier led to the founding of the village of Silean Banua were presented. From the history of the founding of the village and the small irrigation systems it was possible to see both the limits of the small systems and the origins of the dominant position and wealth of the original suhut groups in the village. The material in chapter three discussed aspects of Batak social structure and customs which would have facilitated the building of Silean Banua; financing and labor, the capacity of the kinship system to allow people to define a collectivity to facilitate cooperation, and the adat of suhut. All of this

material provides only superficial answers to the questions posed in Chapter One, ie. how the village of Lintong ni Huta achieved the construction of Silean Banua and devised an administrative structure which has run it for over one hundred years. The underlying thread which ties all of these separate aspects of the answer together is adat--not simply adat as customary law, but the Batak adat, an all-encompassing social system in which is embedded most of the rules governing human interaction from kinship to formal law.

The tripartite view of adat propounded by Tampubolon (1960:9) was discussed in chapter one. The first and most important type of adat is unchanging; immutable principles of organization which guide lower-level structures and define them as appropriate in adat and Batak. There was the second kind, the adat of the religious sector which had undergone wholesale change as a result of new religions. At the lowest level was the 'adat which was made adat', details of social organization which were interpreted differently in separate locales, or adapted and changed in response to changing conditions. Any change was acceptable as long as it did not violate the basic principles of adat. This adaptability of adat helps to explain how some precedents in adat, such as cooperative financing, could be expanded or applied on a greater scale than was usual. More importantly it was this capacity of adat to change which helped to preserve Silean Banua through changing social conditions and threats to its stability as an organization.

The emergence of the breakaway suhut groups in Silean Banua in the 1950's threatened the stability of irrigation in Lintong ni Huta. The

existing social control of irrigation was no longer viable because of depopulation of the village which had profoundly affected other spheres of adat in the village. The structure which emerged did not please all parties and some of the adjustments in adat were radical. But the immutable principles of adat had not been violated. The adat of water rights remained intact and most importantly the system remained an organization independently controlled by the village. As Bruner (1959:62) noted of a golongan, the outside perimeters of Silean Banua are still intact, the inside boundaries have shifted radically. This same tendency is reflected in other spheres of adat. In the golongan which are hamlet-based any resident can participate. In the golongan of the hamlet of Huta Bagassan an Ambonese married to a Batak woman who was not born in Lintong ni Huta participates in golongan activities. They would assist him as well should he ever celebrate an adat feast, despite the fact he is not Batak. We noted in the historical section that the peace between the margas of Lintong and those of Pohan was partially effected through affinal exchanges. There are several men now resident in the village from Muara and Samosir or descended from men from Muara who married into Lintong ni Huta. As a result the division of goods and meat at feasts now goes beyond the Pohan tribal group and recognizes Lontung and all Batak.

With the history of Silean Banua in this chapter, the purely Batak portion of this work is complete. We have covered the social and historical background which explains the capacity of the village of Lintong ni Huta to construct and maintain Silean Banua. In the concluding

chapter of this work the irrigation organization of Lake Toba will be compared briefly with that of other Indonesian and South East Asian societies. Finally one other case in the literature of a traditional society that tried to construct a large-scale irrigation works at the village level will be reviewed and compared with the history of Silean Banua.

As we shall see in chapter seven, the general conclusions concerning the construction of Silean Banua are echoed by another anthropologist analyzing a similar case. Bacdayan (1974) reports on the success of a village community of Bontoc in highland Luzon in constructing a large-scale irrigation works similar to Silean Banua. He notes (1974:258) that the expansion of the irrigation system constructed by the people of the village community represented an example of the flexibility of traditional Bontoc social structure in achieving traditional tasks on a greater scale than usual "without a change in structural form". The parallel with the case of Silean Banua is striking.

Chapter 7

INTRODUCTION

In this chapter the two questions raised in this work will be considered in more detail in a comparative context. The first question concerned the capacity of a traditional society, the Toba Batak, to construct a large, artificial irrigation works in the face of the pronouncements by the Hunts (1976), Bennett (1976), and Ishii (1978) that village level or peasant societies should not have the resources to accomplish this. The second question concerned the institutional basis of water allocation systems derived from Glick's typology of the "Yemenite" and "Syrian" water allocation systems.

The first question, and its explication, have claimed the bulk of this work. Chapters two through six have presented material which makes a strong contrary case to the proposition of the Hunts' (1976: 395) that new construction of irrigation works is usually imposed by an outside agency-and Bennett's assertion (1976:399) that peasant societies should lack the capacity for financing, cooperation and social mobilization, and the engineering expertise to construct large irrigation works without outside assistance and direction. Chapter three explained the basic factors of Batak social organization and kinship which facilitated the cooperation and mobilization of labor, as well as financing, to construct Silean Banua. Chapter four presented specialized historical information which had bearing on the construction of Silean Banua, as well as a history of the founding of the village of Lintong ni Huta. From this history as well as the material on the small irrigation

systems in the village, presented in Chapter five, it was possible to see the sources of wealth and influence of the kin-groups who helped to finance the construction of Silean Banua and controlled its levies for over sixty years. Finally Chapter six presented the specific history of the construction and development of the system. Special attention was given to the radical reorganization of the administration of the system and its concomitants in other reorganizations in the social structure of the village.

The explanation and material in these chapters all hinges on the comprehensive model of Batak adat developed in Chapter one. Adat is the basis of Batak society. Imbedded in it are kinship and social structure, the rules governing proper behavior between individuals, laws and customs, and the reciprocal rights and obligations between groups. We have seen those particular factors of adat which gave the villagers of Lintong ni Huta the specific capabilities which Bennett stated they should lack. The particular adaptability of adat was illustrated by the reorganization of Silean Banua in 1971. The new administrative structure which was instituted was a radical change from the traditional organization, but reflected other contemporary tendencies in Batak society and left the irrigation organization an intact structure within the governing rules of adat.

The question of whether traditional societies have the capacity for the construction of irrigation works will be considered in a comparative context at the end of this chapter. The construction of Silean Banua will be compared to some data on attempts by the Thai government

to institute construction of concrete diversion weirs in irrigation systems in the Chiangmai region of Northern Thailand (Moerman 1968, Potter 1976). A case very similar to the construction of Silean Banua will also be presented. Bacdayan (1974) has reported on the successful construction of an irrigation works with a twenty-five kilometer long feeder canal and an irrigation dam by a Bontoc village community in highland Luzon, Philippines. As with Silean Banua the entire project was accomplished with traditional means of cooperation and social mobilization, and with native engineering skills; the Philippine government however did provide some financial assistance. Bacdayan concludes (1974:258) that Bontoc social structure is capable of incorporating communal tasks, such as the construction of a large irrigation works, without a structural change. For the Bontoc the basis of socio-political organization is an institution called the "men's-house organization" (Bacdayan 1974:248) and the ability of the Tanowong villagers to build their irrigation system stems from the organizational capacities of this institution; just as the capacity for the villagers of Lintong ni Huta to build Silean Banua stems from adat. When the culture-specific explanations of the two cases are accounted for, the history of new construction in both societies is remarkably similar.

This comparison of two cases of successful large-scale construction by traditional societies not only provides strong contrary evidence to the propositions of Bennett and the Hunts that they ought not to be able to achieve this, but lends credence to one of the arguments of this work concerning the social control of irrigation. That is that any

explanation of the institutional basis of irrigation control will tend to be culture-specific. Batak adat must be understood to explain the construction of Silean Banua, or the particular social organization of irrigation associations. The same is true of the Bontoc case. However, as the Hunts (1986:390) pointed out, new construction is an "infrequent decision" in irrigation management. Water allocation is an "hourly or daily concern" which is a crucial, "frequent" decision.

The Hunts, and in more detail, Bennet (1976:399) discussed Robert Glick's typology of water allocation systems, the "Syrian" and the "Yemenite" (1970:239). In the Syrian water allocation systems water rights were tied to land tenure, and allocation tended to be proportional to amount of land. In the Yemenite system water rights were separable from land rights and water was sold, most often by a timed allocation system. Bennett posited an institutional progression from the Yemenite to the Syrian in the organization of irrigation as control of resources becomes more rational and the need for a more equitable allocation of water develops. Our application of this typology to a limited sample of societies that farmed irrigated rice in Southeast Asia (the Batak, the Bontoc, the Balinese, and the groups in the Chiangmai region of Northern Thailand in a brief comparison) in Chapter one revealed that little of interest could be derived accurately from the dichotomy. The Batak and Bontoc were characterized there as having "modified Yemenite" type of irrigation organization on the basis of the fact that in both societies water rights do not appear to be tied to land tenure. The Thai and Balinese irrigation organizations were typed

as Syrian since in both societies water rights are tied to land rights and in both water allocation is proportional. The second condition of the Yemenite type is not found in either Batak or Bontoc irrigation organization; timed allocation and the sale of water. The question of whether water rights are jurally tied or not tied to land tenure is not necessarily the more important of the conditions of each type. The Batak could be characterized as Modified Syrian on the basis of the fact that allocation of water in a bondar organization is basically proportional. The Bontoc data are not clear on this particular point. On the basis of the first condition concerning land tenure and water rights, the "modified Yemenite" type societies were the tribal, non-state societies while those with a Syrian water allocation system had historically a small-scale state organization. Nothing could be said concerning the institutional basis of irrigation organizations and water allocation in the four societies, from this campaign, however.

We shall pursue this comparison in greater detail in this chapter. Potter (1976:78) provides a statement concerning the irrigation system he studied in northern Thailand which is useful in orienting the following discussion:

Irrigation system Y...supplies water to approximately 6500 villagers. Without such a system agriculture as the villagers know it would be impossible. If the irrigation system is to operate effectively there are certain yearly tasks that must be carried out and to carry out these tasks the villagers have to organize themselves. The first task of the peasants and their leaders is to maintain the physical structure of the system: the weirs and canals.

Wittfogel (1954) and others posit that there must be leadership for irrigation organizations with sanctions at their command to channel,

discipline, and lead the mass labor needed for the crucial maintenance of the irrigation systems. The Batak will be compared to the other three societies in this limited sample and it will be demonstrated that no regularities in irrigation organization seem to derive from the Yemenite/Syrian comparison. For the Thai, Balinese, and the Bontoc a member of a system must provide labor for maintenance of the canals and weirs in return for access to water. The Batak customer in a bondar organization pays irrigation levies for access to water. But it has been noted that this is not interpreted as the sale of water; the customer is paying for the services of paid employees who see to the day-to-day maintenance of the system not for water as a commodity. The customer must labor on the system only for a yearly cleaning of the canals and repairs to the weirs which Potter (1976:98) notes is one of the most prominent tasks of maintenance. Despite the fact that for the Thai, Bontoc, and Balinese labor is the debt owed to the system by the individual member of the system, there seems to be no regularity to how the labor is organized and the performance of duties enforced. The Thai and Balinese have irrigation bureaucracies to oversee the irrigation systems. Both Geertz (1972) and Boon (1977) see the ritual component of the Balinese irrigation organizations as its most important institution and sanction. Boon (1977:108) states specifically that a centralized, governmental planning bureau probably could not do as well in fine-tuning the allocation of water in Bali as the ritual cycle. Potter (1976) and Moerman (1968) both give the impression that traditional modes of cooperation were breaking down in the Thai irrigation

organizations they studied. Potter gives the impression that irrigation could not run efficiently with strictly local control, and intervention by the central government is necessary. For the Bontoc the men's house organizations provide the labor of their members for other communal activities than irrigation maintenance and a separate bureaucracy for irrigation control does not develop, at least among Bacdayan's villagers (1974:249).

The figure below will present the factors of irrigation organization which are compared in the four societies. Although the Balinese and Thai irrigation organizations have fines for non-performance of duties, these are not here interpreted as economic sanctions but as jural sanctions. The Thai and Balinese bureaucracies can impose these fines on members as punishment for not participating in prescribed irrigation tasks. The Batak irrigation organization could act against a customer of the system only for non-payment of debts to the system. A customer could be fined for non-participation in the yearly cleaning of the canal, for example, only if a symbolic debt to the system were established; thus the sanctions the Batak bondar organizations had at their commands are here interpreted as economic sanctions as such sanctions were included in the adat of debts, not as powers of the system. This figure will indicate the presence or absence in each society of the following features, including the conditions of the Yemenite/Syrian typology: 1. Water allocation is proportional (PA). 2. Water allocation is characteristically by timed units (TA). 3. Water rights are separable from land tenure (WR/LT). 5. An irrigation bureaucracy

developes (B). 6. Economic sanctions exist to enforce participation in irrigation tasks (ES). 7. Jural Sanctions exist to enforce participation in irrigation tasks (JS). 8. The irrigation organization is a corporate group (CG). 9. The irrigation organization is a ritual organization (RO).

Figure 16

	<u>PA</u>	<u>TA</u>	<u>WR/LT</u>	<u>WR/LT</u>	<u>B</u>	<u>ES</u>	<u>JS</u>	<u>CG</u>	<u>RO</u>
Batak	x			x	x	x		x	
Bontoc	?			x		?		?	
Balinese	x		x		x		x	x	x
Thai	x		x		x		x	?	?

As can be seen from the figure, there are no regular splits between the Batak and Bontoc on one hand and the Thai and Balinese on the other for individual or contrasting pairs of features except in the question of land tenure and water rights from Glick's typology. In the discussion that follows each of these factors will be explained and it will be seen that the particular form the social control of irrigation takes in each society is consonant with other institutions of each individual society. Potter (1976) provides a useful concept for orienting the discussion of the form of irrigation organizations and bureaucracies.

Potter has observed that irrigation systems have a segmentary

nature. The system he studied in Thailand branched into smaller segments at four levels below the major irrigation dam. Each of these branchings defined smaller functional units and smaller social units whose responsibility it was to maintain them. For the large system he studied an entire region was responsible for the system as a whole, and communes, villages, and groups of farmers whose paddies were adjacent were responsible for the successively smaller segments. There is a similar division of responsibility in the Balinese organizations as well. Potter (1976:96) notes:

The process of group formation in systems based upon segmentary opposition is the same whether it is based upon the common descent of blood through the generations or shared irrigation water through a branching canal system.

Again where a segmentary bureaucracy, with offices and social groups responsible for the maintenance of parts of the irrigation system, can be appropriate for other societies, it is not for the Batak. Batak social organization is segmentary and we have noted throughout this work that the presumption of common descent is the commonest basis for collective action. However, it would be virtually impossible to find a situation or locale in Toba where the inhabitants' descent structure and its branches would correspond to the segmentary structure of an irrigation system. The imperative fact remained that an irrigation system must be maintained in order to insure productive agriculture. But for the Batak the formation of work groups to maintain the canals and dams on the basis of segmentary opposition of parts of the irrigation system was inappropriate. Another culturally appropriate

system was necessary.

The term culturally appropriate is, I think important here. The seemingly trivial fact that the institutional structure of irrigation will reflect values in other spheres of society explains much in the case of Silean Banua. Many of the features of Silean Banua and other Batak bondar organizations which are apparently anomalous in comparison with other societies can be seen to be culturally consistent with other institutions of Batak culture. Reference to the model of adat will be made in expanding this point in the following discussion, especially in connection with the Balinese subak organizations. At the local level this social organization allowed the inhabitants of Lintong ni Huta to achieve large-scale new construction with local resources, and has proven to be responsive to social change. The questions of social change and new construction will be given more attention in the discussion of the Thai irrigation organizations.

The Subak Organizations of Bali

The physiographic picture of sources of water suitable for tapping for irrigation systems in Bali and the area in which Lintong ni Huta is located is similar. Geertz (1972) and others describe deep river-cut gorges with streams and rivers flowing through them off the high volcanic mountains towards the sea. In order for these watercourse to be diverted for the irrigation of rice terraces they must be dammed some distance upstream from the area they are to irrigate. The social body which controls these irrigation systems in Bali is the subak, a word

Geertz (1972:27) says can be "translated well enough, if awkwardly, as the 'irrigation society'." In certain organizational characteristics as well as size and number of members the subak organization is roughly comparable to Silean Banua.

The subak is a "differentiated, corporate, self-contained social organization" whose only purpose is the management of irrigation in the paddies watered by the individual system (Geertz:1972:27). Membership in the system is dictated solely by owning or tenant-farming land within the boundaries of the subak. Kinship, residence of other factors had nothing to do with belonging to a subak. In these respects the subak is something like one type of bondar organizations in Toba. Some are independent corporate associations which are not controlled by individual kingroups or villages. Membership in these systems is similarly dictated solely by working land watered by the system. One such system is located in the area of Si Gumpar, approximately twenty kilometers east of Lintong ni Huta. It is fed by water from a river which flows off the Asahan Plateau above the Toba Holbung plain. This organization was administered by a committee of directors and membership in it cross-cut kinship group and village boundaries. Obligations to the system sometimes took precedence over kinship or hamlet responsibilities (Toenggoel Siagian: personal communication). Here the similarity between the two stops.

The subak was not a land-owning unit, while the Batak bondar organization can acquire title to land if water from the system is used to clear new rice terraces. More significantly the subak was a ritual

unit as well as an irrigation controlling group. Members of a subak were responsible for the maintenance of and offerings at small temples or offering altars in the fields, a temple at the head of the rice fields irrigated by one subak, and for a major irrigation temple which was frequently founded and maintained by more than one subak (Grader 1960:274-275). Subak obligations were divided into sacred and profane sectors and a board of officials took care of the practical management of the organization while temple officials saw that the religious obligations of the membership were fulfilled. The sacred side of the subak was the primary sanction, together with fines, for shirking subak duties:

The sacred aspect of the irrigation society is what gives it its strong authority over its members, for any transgression or omission is felt to be supernaturally threatening to all its members and its crops. (Geertz 1972:19)

Boon (1978:39) views the ritual element in the subak organizations as important, but from a different point of view.

In Bali the ritual component is as critical as the labor component. And it is the ritual component, which the Balinese themselves view as indispensable; that lends a cottage-industry quality to wet-rice production...The time consumed by the preparation of a religious offering probably approaches that consumed by manual labor, once terracing has been completed.

Complementing the temple organization is the formal board of directors of the subak. There are an irrigation head and an assistant, criers who oversee the labor, and assistant criers if the subak is large (Grader 1960:273:274). It is not clear in Grader's essay (1960) but may be inferred that the areas of responsibility of the criers

correspond to areas of the irrigation system watered below a secondary or tertiary diversion weir. This would correspond to Potter's description of irrigation systems, and additionally the irrigation bureaucracies as segmentary. Members of the subak are assigned work and pay cash levies as well according to the number of irrigation inlets which irrigate fields worked by them within the subak boundaries.

These further similarities and differences of the subak organizations and Silean Banua are clear. Both are corporate organizations whose sole purpose is the management of irrigation. In both there are officials who manage the system and have responsibility for lower-level concerns. It is an interesting parallel that Grader (1960:270) translates the term for the office jurus arah as crier. His duties are similar to that of the Batak parhara whose office may be translated as 'one who calls people to work'. These are, however, only superficial similarities. There are pronounced differences in the institutional structures of the two organizations which can be traced to cultural differences and possibly the different levels of water allocation control needed in the two societies.

We have already seen that for the Batak water, in adat, is separable from land tenure, consonant with the Yemenite typology of Glick. However, it is not water which is sold, as in the Saharan oases. The irrigation levies compensate the managing body of the irrigation organization and its employees for maintaining the system. The parharas did most of the work and did not, as the Balinese criers, direct the work of others except at the yearly cleaning of the canal system.

This major task is the most prominent in the maintenance of an irrigation system. For a Thai or Balinese it represents only a small portion of the duties they owe to their irrigation organizations; for the individual Batak it was the only duty. The Balinese subak board had jural sanctions to enforce the participation of the members in their prescribed duties. Grader (1960:279) lists a series of fines of increasing amounts for transgressions ranging from being late to work to refusal to participate in any required duties. In Toba the chief of the irrigation association could not force a member to work on the yearly cleaning of the irrigation canal. If the non-participant did not accept some of the meat prepared for the workers when visited by the irrigation officials after the cleaning, they could not apply any of the limited economic sanctions at their command to the delinquent. If a farmer refused to pay irrigation levies after receiving water from a bondar system, however, he could be taken to adat court immediately.

Seasonal scarcity of water and high demand make a mechanism for regulating water use between subak on a large river drainage imperative. The institutional structure devised to implement irrigation can also be viewed as culturally appropriate and consonant with other spheres of Balinese culture. Each subak must have a way of managing its own resources and channeling the labor of its members. At a larger scale, a number of subaks receiving water from the same major river drainage must cooperate in the equitable division of water so that the crops of the subak at the headwaters of the system and those at the final

drainage receive enough water in times of scarcity. The ritual component of the system is inherent in both of these problems. Membership in the subak and its associated irrigation temples was no different from other obligatory services the individual Balinese owed his king, the hamlet council, and other temple organizations. Although Boon and Geertz, cited above, disagree on the role of the ritual component in providing an institutional base for the subak organizations, they do agree it is the basic cultural factor. For managing the flow of water in a large drainage involving many subak organizations Wittfogel (1957:53) states that it was a functionary of the small Balinese kingdoms that gave orders concerning the timing of water use in the individual subaks. Boon (1978:108) on the other hand implies that the ritual cycle followed by the temple organizations within and between subaks kept the system in tune. Variations in the ritual cycle could influence the planting schedule. Staggered planting of the crop occurred in times of water scarcity and coordinated planting among the subaks of one drainage occurred in times of abundance. Boon concludes:

For our purposes the important point is the flexibility of Bali's subsistence system guaranteed partly by the ritual apparatus surrounding it, which can stagger water usage up and down a slope, or shift the periodicity of planting, growth, and harvest depending upon various factors...it is doubtful if the national bureaucracy could work out a rationalized scheme as effective in fine tuning the entire rice-production system to the ever changing exigencies of fluctuating differential needs for each other's water.

The point to return to is the fact that the institutional basis of subak organization, which keeps the finely-tuned mechanism of water

control running is, a debt of labor to the system by the individual member. Furthermore, the system is run by a bureaucracy with jural sanctions against non-performance of duties. This is, as we have noted, consonant with other characteristics of Balinese culture yet it would be impossible in Batak society.

An irrigation bureaucracy with jural sanctions and coercive powers, would not be compatible with traditional Batak social and political structure. One point to reiterate here is, made by Castles (1975:75), that "when viewed from the inside the Batak did not need a state." By this I take it he means that the existing structure of kinship, regional tribal groups, adat, etc. fulfilled the functions a state might have for the Batak in precolonial times. Socio-political coordination at a higher level was not necessary and did not develop. Castles implies that one necessary condition for the development of a state would have been the threat of conquest by an outside power; something which did not happen until the 1820's. Something which is implicit in Castles' statements, but which has been a basic part of the social model of this work is the capacity of Batak social structure to allow cooperation on a large scale for a specific purpose or in response to special circumstances. This has been demonstrated in several instances historically. One of these was the ability of the Singamangaraja XII to mobilize thousands of warriors from maximal regional groups, who had themselves been at war forty years before, to fight the Dutch in Balige in 1883. Bruner's (1972:216) example of the pan-Batak ethnic association in Bandung was also cited. Batak from all of the linguistic and

cultural subdivisions of the Batak people who had migrated to Bandung defined themselves as a common group with the presumption of common descent from the founding ancestor of the Batak people as the organizing principle of the group. The construction of Silean Banua is, however the primary example. It is not simply an example of large-scale cooperation for a short period of time. Silean Banua required fifteen years for construction and each of several large-scale subsequent improvements required several months of cooperative labor. However, building and improving Silean Banua has been instrumental in developing productive wet-rice agriculture in Lintong ni Huta. Under normal circumstances large-scale or wide-ranging cooperation ceases when its purpose has been fulfilled or the circumstances that cause it no longer exist. The soldiers of the Singamangaraja dispersed after his defeat in Lumban Gorat, Balige. The pan-Batak ethnic association in Bandung disbanded after the threat the Batak community felt lessened as more Batak settled in the city and intercultural understanding improved. This scale of cooperation probably could not have operated effectively on a daily basis for the maintenance of an irrigation system and the allocation of water.

The basis of irrigation organization in Toba, as we have seen, is the payment of upa bondar ('irrigation levies') for the services of the parhara and managing body of the irrigation system. The payment of gifts or padi for services is not unique to irrigation in Batak culture. Vergouwen (1964:458) lists more than thirty specific kinds of upa or payments in his index of Batak words. Some of these are gift exchanges

between affines during marriage or other kinds of feasts, but many are repayment for specific services; such as the upa jujur ari, a gift or payment given to the person who divines an auspicious day for a feast with oracle magic, etc. Despite the fact that the Batak lacked a monetary economy until the coming of the Dutch, rice provided a comparable medium of exchange:

A much used medium of exchange then [in pre-colonial times] was eme = rice in the husk, a product for which there were official measures in many of the large markets. One could get practically anything with rice. (Vergouwen 1964:318)

The Count von Brenner (Brenner von Falsach 1894:291) made much the same observation and lists official prices in measures of rice for such goods as tobacco, limes, and clay pots in Karo Batak markets in 1886. The levies paid to the treasurer of Silean Banua in 1975 were still delivered in rice, and the financial books of the association still list amounts of rice in standardized traditional measurements, kaleng and tumba, rather than in kilograms.

Coupled with this well-established custom of payment for services, is the fact that Batak officials, from the Singamangaraja to hamlet chiefs, had little in the way of coercive power. Chiefs were recognized more by wealth, influence, generosity, ability, and obvious possession of the spiritual essence of chieftanship (sahala harajaon) than by strict succession to a title. One elder in Lintong ni Huta emphasized that a chief had to be na malo marhata, good at speaking, and na malo marpungu, good at gathering or organizing people. These qualities influenced the common people to undertake tasks on the basis of consensus rather than strict obedience to the will of the raja.

Numerous aphorisms emphasize the need for obedience to the raja, saying that the outcome will be prosperity and order. Disobedience brings personal detriment through the power of adat, not the retribution of the chief. Behind the chiefs stood the power of adat from which "the life of the community mainly draws its sustenance" (Vergouwen 1964:135). In the same section of his ethnography, Vergouwen writes of the disruptive effect the Dutch colonial administration had on the system of chieftanship where "Each of them from the hamlet chief upward had a specific task in this respect (upholding adat) within his own group...". Tampubolon (1964:164) states that the pande aek ('irrigation technician') was one of the eight chiefs (raja na ualu) who were the governing force in the villages of the Pchan tribal group. He was in charge of irrigation and agriculture.

With this in mind the institutional structure of Batak irrigation organization can be seen to be consonant with other spheres of Batak culture. The development of an irrigation bureaucracy with the powers of the subak board in Bali would have been impossible in Toba. The power of the rajas lay in persuasion and organizational ability, not force. Ypes' (1932:288) description of the position of raja bondar ('irrigation or canal chief') implies that he organizes the construction of the system and must provision "...those who wish to work on the canal...". Coercion or force had no mention in these undertakings. The payment of rice for services was well established in other spheres of Batak culture so that the basic principle of repaying the managing body of the irrigation system for their labor is not unique. Even the

services of the members in the yearly cleaning and maintenance had to be repaid with provisions. As we have noted before, the managing body of the system had no sanctions to force participation in this activity; only community disapproval and the force of adat. If the delinquent person accepted some of the meat from the meal for the workers, this created a debt (utang) to the suhut of the system, which made it entirely another matter. The adat of debts was extensive and complex. Vergouwen (1964:292) notes that the law relating to debts:

has reached a fairly advanced stage of development, to which the delight in litigation which is in the Batak's blood has been a considerable contributory factor, as has been its natural counter part the desire for mediation and adjudication.

The suhut had well-defined sanctions at their command in regard to debts. Delinquency in payment of irrigation levies could similarly be adjudicated in adat court.

It is not certain if the Batak system of organization could have coordinated several small irrigation systems in the drainage of a single river, such as Boon describes for Bali. The general adat of water rights is well-developed, but only concerning the organizational basis of bondar organizations, access to water, etc. Between bondar organizations on the same water course the allocation of water during times of scarcity would have to be a local decision worked out in formal negotiation. There are no recorded principles of adat concerning water allocation. Data may simply be lacking. On the other hand the question may never have arisen. The population density in Toba probably has not equalled that of the areas of intense rice cultivation in Bali. The problem of fine-tuning the allocation of water among

several irrigation systems on the same watercourse may never have been important. Vergouwen (1964:293) notes:

Formerly land was less frequently than at present the object of transactions, and agreements relating to it had for the greater part a different character. There was an abundance of land and a sparse population, it was possible to clear land, and fields that were less productive or which were difficult to reach could be allowed to lie fallow for a long time.

He states overleaf (1964:294) "The change in the relationship between supply of land and size of population has taken place in the last fifty years...". Counting back from the time that Vergouwen's ethnography was first published would make the beginning of this increase in population density almost precisely the time that the decision to build Silean Banua was made. The village population has never been higher than at that time as well. The population in the 1870's was estimated to be 330 households. This declined to 220 households by the 1920's. Had the population increased without the outlet of migration which became possible in the early years of this century, the Batak social system as a basis for irrigation might not have had the capacity to maintain cooperation among several bondar organizations on a large river drainage. It was possible to maintain cooperation within bondar organizations where common residence or descent did not enter into the criteria for membership in or management of the system. It has been averred that obligations to the irrigation association in one such area superceded kinship and hamlet obligations (Toenggoel Siagian: personal communication). The system of kinship and sacrificial communities probably had the capacity to unite dispersed irrigation organizations, as it did villages. The entire Pohan tribal group can be

considered one major sacrificial or 'eating' community (sapanganan). Whether cooperation within this context would be sufficient to provide continuous, equitable allocation of water among several bondar organizations is questionable. Major descent feasts involving the mobilization of an entire marga, much less a tribal group, occur only once in decades.

The Thai Irrigation Systems

Both Michael Moerman (1968) and Jack Potter (1976) have provided data concerning traditional irrigation works on the Ping River near Chiangmai in Northern Thailand. Irrigation systems in the area date at least from the thirteenth century. One of the major trunk canals on the left bank of the Ping River was excavated in 1281 during the reign of the Lanna Thai king Mengrai (Ishii 1978:20). Potter notes (1976:81) that some of the descriptions of irrigation organization in a 1292 manuscript concerning the irrigation laws under the same king aptly described irrigation organization at the time he did his research. Some irrigation systems reported in the Chiangmai basin are comparable in size to Silean Banua. One is described (Ishii 1978:20) as irrigating ninety-six hectares and was managed by community organization under the control of an irrigation headman. The one studied by Potter was much longer and consisted of fourteen administrative villages and provided water to 6500 villagers (1976:84).

The irrigation systems in the Chiangmai basin are what Ishii (1978:20) calls fai and muang systems ('diversion weirs and canal). The

systems described by Moerman (1968 and Potter (1976) both involve large, temporary diversion weirs, built of bamboo, sand ballast, and wood, which are constructed across the Ping River during the dry season. These divert water into the irrigation systems and are washed away each year when the river is at flood stage. They must be rebuilt every year; one of the major tasks of the irrigation organizations. The irrigation organization studied by Potter is similar to the subak board in Bali in that it has a hierarchy of officials including irrigation headman, assistants, etc. Potter (1976:88-89) notes:

The successful completion of these maintenance and repair tasks requires the cooperation of large numbers of men; the supervision of these men and the coordination of their activities require leaders who have the authority to make decisions. These leaders also need effective sanctions to ensure that each member of the irrigation association fulfills his obligations. Such a system of authority has existed for centuries in the Chiengmai Valley.

The system Potter studied is especially large in comparison to the individual subak organizations of Silean Banua. The basic organization of the managing board is the same as for the smaller systems, there are simply more levels of authority and officials who coordinate the activities of the members and allocation of water. The system conforms to Glick's Syrian water allocation type. The amount of land farmed by a member is carefully recorded as the amount of labor he owes to the system is proportional to the amount of land he farms with water from the system (Potter 1976:91). The secretaries of Silean Banua similarly keep careful records of the amount of land farmed by all of the members irrigated by the system, but in order to know how much levies to charge them. The managing board has sanctions to back up

its demands for labor from the members. Potter mentions fines for failing to contribute labor or the requisite materials for the rebuilding of the weirs. If an offender is repeatedly negligent he can be taken to the district officer of the central government for punishment.

The connection between people active in politics and in irrigation seems pronounced in the system Potter studied. Many of the secondary and tertiary officials in the hierarchy are also government officials, heads of communes or administrative village headmen. This does not appear to be true of the system studied by Moerman (1968:51). In a system the size of Irrigation System Y, studied by Potter, the village irrigation headmen must represent the vital interests of their constituency in irrigation matters. One reason the villagers choose their headmen and other officials as irrigation officers as well, is the fact they are knowledgeable in dealing with official matters and with higher-level functionaries in the government. As such they can most ably represent their villages in irrigation matters.

The basis of organization of these systems is not clear. Neither Moerman nor Potter state that they are corporate groups. Because of the amount of mud and silt deposited in the canal system each year and the fact that the weirs must be rebuilt each year the labor requirements for the maintenance of the system are enormous. Responsibility for maintenance of portions of the system are sharply delineated. Each village is responsible for the canal network in its territory and participating in cleaning all branches of the canal system which provide water to their portion of the system. This means that villages at the

end of the system work a good deal harder than those at the head of the system. Ishii (1978:20) states that in a small system, roughly the size of Silean Banua, each farmer owed twenty to thirty days of labor to the system. Moerman (1968:171) notes that thirteen percent of the total agricultural labor expended on a large irrigated complex of fields was devoted to irrigation tasks. Beyond the recognition that these tasks were crucial to the maintenance of agriculture, there seems to have been no social force to bind the group together. Potter uses the metaphor of segmentary opposition to describe the branchings of the system he studied (1976:95). He notes:

The annual cleaning of the canals serves a symbolic social function as well as an instrumental one. As the farmers cooperate with other farmers in cleaning their canal system, moving from smaller canals up to higher levels of segmentation within the system...they recognize those to whom they are most closely related. And the fact that they share this important experience reinforces their feeling of solidarity.

He notes elsewhere, however (1976:100) that "Since the social organization of the irrigation system follows the segmentation of the canal system, conflict takes place at every point of segmentation."

There seems to have been nothing like the power of adat for the Batak, nor the ritual basis of the subak organizations in Bali to bind people together beyond the recognition that mutual cooperation was necessary to maintain irrigation in the Thai organizations. Both Moerman (1968:51) and Potter (1976:99) mention sacrifices of pigs to the "spirit" of the weirs as necessary components of the yearly rebuilding activity. Potter notes (1976:101) that the entire membership of Irrigation system Y did not cooperate even in this; the

two administrative communes which made up the system held separate sacrifices and Potter noted that even in this limited ritual element there was nothing to symbolize the unity of the system. There also seems to be a lack of ways to mitigate conflict over water theft between village neighborhoods. Moerman (1968) also reports a breakdown of the traditional modes of cooperation in rebuilding the weir and other tasks in the system he describes.

Potter (1976:100-102) describes frequent conflict over water allocation in times of scarcity at every point of segmentation in the system, and between separate systems on the Ping Rivers. When water is scarce different village neighborhoods try to divert more water to their fields at night to the detriment of their downstream neighbors. Conflict at the village level is infrequent, but because detection is almost certain and the culprit loses face, not because of feelings of solidarity. Conflict between two villages over water in one part of the system Potter studied was so intense, that cooperation could not be maintained to take care of the canal system. Some farmers joined a different irrigation system.

The system described by Moerman (1968:51-53) is probably smaller than the one studied by Potter. He gives no amounts of hectares irrigated but the weir for his system could be rebuilt by the communal work party in one day, whereas, the weir for Potter's system took seven days of concerted labor. Moerman does not mention conflict such as occurs in the system Potter described. But the social basis which maintained the cooperative spirit of the system was breaking

down during his field residency in 1959-1960. He notes:

But gradually, making the dams and channels become more of a chore. There were "too many strangers, too few kinsmen", for the old social controls to operate...Now, when there are no sanctions, no one works; when there are sanctions, all try to escape them. (1968:52)

The situation became bad enough that the irrigation chiefs staggered the workdays of the constituent villages of the system so that only closely situated villages worked on the rebuilding of the weir at one time. Even then six families shirked their duties and the village chief assisted them rather than threatening them with punishment:

He later boasted to the village elders that he had protected Ban Ping's interests from the neighbors, "kinsmen", and fellow Lue-all of whom, because of increased population and commercialization, are often treated as strangers. (1968:53)

Only the smallest social unit that maintained a minor canal segment managed to avoid these troubles since "the reciprocity is immediate and the benefits for an individual's fields are obvious".

One other point of interest in both author's work is new construction. In Potter's field area the government planned to build a concrete weir to replace the traditional one, which had to be replaced annually, for an irrigation system upstream from the Irrigation system Y, the one Potter studied. The people of Irrigation system Y were afraid that a concrete weir would not allow any water to flow downstream to their weir. They threatened to tear down anything the other irrigation system constructed but a traditional bamboo stake and ballast weir. Only direct intervention and mediation in several meetings involving officials from both systems by representatives of the central government

solved the situation. The plans for the concrete weir were altered to include a bypass gate to allow more water through to System Y's weir in times of water scarcity. It was also agreed that the government irrigation officer would be the official to whom the Irrigation Headman of system Y would go if the bypass gate needed to be opened to release water. In Moerman's field area the government suggested to the irrigation organization that they would financially assist in the construction of concrete weirs. Most villagers rejected the idea as they feared the government wanted new reporting of land holdings to reassess taxes. They were also afraid they couldn't meet the assessment for the village's share of the costs. One large landowner confessed to Moerman that he favored construction of the dam as it would make work easier in the future with no more yearly rebuilding of the weir. His public argument was that it would obviate the need to contribute to the cost of the sacrifice to the spirit of the weir. Other elders remained unenthusiastic and the plan was dropped. Moerman concludes (1968:52):

If villagers come to favor a concrete dam, it will probably not be because they are receptive to capital investment, but rather, that population growth has made it more difficult to organize cooperative labor, and that the possibilities of alternative employment are slowly rising.

There is much in the data on the Thai irrigation systems that is of interest in comparison both to the subak organizations and to Silean Banua. One of the most striking differences is the lack of institutionalized unifying factor for the irrigation associations, such as adat for the Batak or the ritual basis of the subak organizations.

The organization of the systems described by Potter and Moerman seems strictly bureaucratic. The system described by Potter maintained the traditional modes of cooperative labor but the social system seemed incapable of dealing with conflict resolution within the major system, or between systems, without outside intervention. In the system described by Moerman the traditional modes of cooperation were breaking down because of changing social conditions; increased population, alterations of social groups, etc. In both cases the social systems seem incapable of responding effectively to change or resolving conflict internally. The fact that many of the secondary and tertiary officers in the system Potter studied were also commune or village headmen may have enhanced their prestige and effectiveness in enforcing the participation of the members in communal labor. A spirit of cooperation seems lacking. The headman of the system Moerman studied boasted of assisting his fellow villagers in shirking their duties. Potter states that "...everyone in the system wants to be sure that everyone does his fair share and no more" (1976:93). The duties of the irrigation officers are onerous, time-consuming, and carry heavy responsibilities (Potter 1976:89). In the system Potter studied the officers held tenure for life or until retirement. In the system Moerman studied the office of irrigation headman rotated between three individuals.

The contrasts in the social organization of irrigation between the Thai organizations and Silean Banua are pronounced. The levy-paying basis of Silean Banua obviates the need for forcing the members

of the system to participate in time-consuming, heavy labor. The parhara is well paid for his labors and the head of the system had only to direct his work, not that of his fellow villagers. The co-operative spirit of the members was easier to maintain when their labor was only called for once a year. Adat and its all-encompassing nature also provided a unifying basis to the social organization of irrigation. The young men who were parhara for the small systems were seen to be guarding the rights in adat of their descent groups by maintaining the canal systems well. Industrious labor was also remunerated. Farmers were expected to contribute extra rice over their assessed levies to the parhara after harvest if the system ran well. The irrigation officers and the parhara also received honor and recognition at adat feasts. Only important kinsmen of the feast-giver, the raja of the area, and in the past the priest-practitioner (datu) received prestigious portions of the animal slaughtered for the feast at the ceremonial division of meat. An important share was generally reserved for the officials of the irrigation system. The difference in organization between the small systems, maintained by individual descent groups, and Silean Banua which was maintained by the village was represented in the adat of meat division in the village. If a feast-giver slaughtered a pig and invited only the appropriate eating community, he was obliged to give an important share to the officials of the small irrigation system he paid levies to. At a major feast where a buffalo is slaughtered, and the entire village is recognized in the ceremonial meat division, the officials of Silean Banua are honored.

We have already recounted the way in which the adaptability of adat helped to resolve the problems in the administration of Silean Banua brought about by changing social conditions. Moerman's Thai villagers were quoted as saying that there were "too many strangers and too few kinsmen" for the old social controls to operate. The changing social picture of Lintong ni Huta was not substantially different in the 1950's. We saw in chapter six that the descent group composition of the village has changed as a result of out migration. There are also "strangers" in the village; uxori-local marriages have brought several men not of the margas of the Pohan tribal group into the village, affinal kinsmen of villagers have rented houses and rice land in the village, etc. The old social controls and structures of Silean Banua could not be maintained. The people recognized that the every-descent-group-for-itself attitude resulted in poor maintenance of the system. An internal solution in adat was found for the problem, in part to avoid outside intervention in village irrigation affairs. The intervention of the Central government in Thai irrigation affairs in the Chiangmai area is obvious from the above discussion.

In Thailand the district officer in the area is the final resort in punishing a person who does not fulfill his labor obligations to the system. The government also mediated in intersystem disputes and assisted in financing capital improvements to the system. The relationship of the government and the varying sizes of the systems has led different authors to different conclusions concerning these systems and the applicability of Wittfogel's theories. Potter (1976: 102) sees his analysis as supporting Wittfogel's theories on the

connection between the state and irrigation:

Irrigation systems like X and Y would have inevitably come into open conflict in times of water scarcity if the traditional Chiangmai state had not existed to organize and govern the irrigation system on a valley-wide scale. Since the downfall of the Chiangmai kingdom, the Thai government has had to furnish this necessary central authority.

Ishii (1978:23) characterizes agriculture in the area as "quasi-hydraulic" because of limited state participation in water control and the construction of trunk canal systems, such as that built by the Lanna Thai kingdom in the thirteenth century. Moerman noted in 1960 (1968:51) that "The pattern--that irrigation is organized and maintained locally without the national government--is widespread...throughout and perhaps characteristic of northern Thailand. He states that the Ban Ping irrigation system was independent of 'hydraulic despotism' and its bureaucratic successors.

The final comparison comes back to the problem of new construction. In both cases described above the government was active in trying to encourage local irrigation organizations to build concrete weirs. In Moerman's village the people were suspicious of the government's motives in the offer of financial assistance. There was also the problem of a scarcity of cash. One of the richest elders in the village argued in terms of the economic benefits of the dam only in private. In Potter's field area the irrigation system upstream had agreed to build a concrete weir with government assistance. We noted above that the people of System Y threatened to destroy anything that the other system built except a traditional weir, as they feared a concrete weir

would deprive their system of water in times of scarcity. The problem was only resolved by mediation with a government representative.

In both cases traditional modes of cooperation could not successfully resolve intersystem conflict, or motivate the members of an irrigation system to come up with a portion of financing for a concrete weir. These problems were all resolved in the village of Lintong ni Huta by recourse to adat in the course of the construction and development of Silean Banua. Before the village of Lintong ni Huta could begin construction on Silean Banua they had to consult with the village of Tangga Batu and probably with the villages in the valley of Meat as well. The general adat of water rights states that if one village wishes to tap a watercourse outside of their own territory for irrigation, the village in whose territory the watercourse flows must give its permission. The charter of Silean Banua does not specifically state that negotiations were carried on with Tangga Batu. However the main irrigation dam is at Balanpinang in the territory of the horja of Tangga Batu and their permission was probably necessary. The river that feeds Silean Banua flows into the valley of Meat before reaching Lake Toba. Almost the entire valley floor is given over to irrigated rice land, irrigated primarily by this river. The adat of water rights also states that downstream flow in irrigation systems must not be adversely affected by the construction of a new irrigation system. It seems probable that the people of Lintong ni Huta had to assure the farmers in the valley of Meat that the construction of Silean Banua would not endanger their irrigation. The procedures of adat would provide

formal situations where intervillage mediation could take place. The dispute with the neighboring village of Hinalang over their rights to the water that leaked from the wooden irrigation dam was also settled in adat; despite the mistaken finding of the Dutch colonial administrator in favor of Hinalang.

The history of the capital improvements the villagers have financed and made to the system of Silean Banua amply illustrates the capacity of adat and Batak social organization to help the people achieve what Moerman's Thai villagers could not. The financing for the original replacement of the wooden irrigation dam with a cement one and further improvements in the system alone required 67,750 kilograms of padi raised by cooperative financing in the village. The villagers also provided all of the labor and engineering skills as well. All of this was accomplished without the assistance of the Dutch colonial government or the central Indonesian government.

This comparison has shown that the basis of irrigation organization in Toba effectively accomplishes the tasks of maintenance, development, and administration of a large scale irrigation works without the development of a hydraulic or "quasi-hydraulic" bureaucracy. Adat as the Batak conceive of it provides an effective institutional basis for irrigation organization. The subak irrigation associations of Bali and the bondar organizations of Toba show a number of external organizational similarities. Both are corporate organizations whose sole purpose is the management of irrigation. Both had a controlling board of officials whose responsibility was to manage the system, control maintenance and

allocation of water. Membership in both was dictated by working land irrigated by the system. The similarities between the systems end there, however. Each system has evolved a basis of irrigation management which is consonant with other institutions of the individual societies. The subak organization is a ritual as well as irrigation society and depends upon jural sanctions as well as the religious basis of its organization to enforce the participation of members in necessary maintenance tasks. Labor is the primary debt the member of a subak organization owes to the system and his or her participation is obligatory if land is farmed in the irrigation system. The Toba Batak bondar organization has a radically different managerial organization. The controlling board of the organization, rather than the membership, bears the responsibility for maintenance. The members pay levies for irrigation services and minimally owed a debt of labor to the system in the past. A person owes levies and labor to the system only if water from the system is used; participation is not obligatory.

The simple explanation that irrigation organization will have an institutional base consonant with other spheres of the individual society explains this particular difference. The Balinese and northern Thai had small-scale state-level organizations. Both the Thai and Balinese irrigation bureaucracies could exact fines from their membership for not performing obligatory duties and Moerman (1968:53) mentions the possibility of physical punishment as something the Thai system he studied had as a possible sanction as well. Coercive powers and jural

sanctions were not characteristic of other types of administration of people and land in Toba. The economic organization of irrigation in Toba has its basis in other characteristic institutions of Batak society. As we have seen rice served as a standardized medium of exchange in the pre-monetary economy and the practice of paying rice for different kinds of services rendered was well established. The primary means of settling disputes was through litigation. The adat law of debts was well established and the managing board of an irrigation organization had ample redress against non-payment of levies or non-participation on the yearly cleaning of the canal in adat court litigation. They had no coercive sanctions at their command.

The effectiveness of adat as an institutional basis of irrigation administration has been demonstrated by the history of Silean Banua. The people of Lintong ni Huta constructed, and effected expensive capital improvements upon, a large scale irrigation works without the intervention or assistance of an outside agency. Moerman's and Potter's data on new construction in the Thai irrigation societies have shown the difficulties which can arise even when the central government takes an active interest in developing irrigation at the local level. The adaptability of adat also allowed the people of Lintong ni Huta to reorganize the administration of Silean Banua in response to changing social conditions. Moerman's limited data suggest a breakdown of cooperation in the maintenance of the irrigation system due to social change. While the system Potter studied was still organized along traditional lines, conflict and water theft were characteristic of it

at each level of segmentation of the system. Batak adat provided ample sources for conflict resolution and arbitration.

The applicability of the theories of Wittfogel in this case remains problematic. On the basis of his criteria it was possible to identify Batak agriculture and irrigation as "hydraulic" rather than "hydroagricultural". It was noted however that the Batak have none of the institutional markings of a hydraulic society. They never achieved a state-level organization in Toba in pre-colonial times. Positions of real power also do not develop in the irrigation bureaucracies. Wittfogel interpreted Bali as a well integrated hydraulic order. Yet Boon sees the ritual cycle rather than state-level decisions ordering the allocation of water among individual subak organizations on a common drainage. Finally we have seen the differing interpretations of the three authors cited on the applicability of Wittfogel's ideas to irrigation in the Chiangmai basin of Northern Thailand. The divergent opinions seem based equally on different interpretations of Wittfogel and the data available to the three authors.

The capacity of adat to act as an effective regulating force in relations between separate irrigation systems on a common drainage remains problematic as well. Ypes (1932:288) lists basic principles of water rights which would indicate that intervillage or intersystem cooperation on access to water and other matters could be established within the principles and procedures of adat. Negotiation with other villages must have been necessary before construction on Silean Banua began but the data are insufficient. Silean Banua provides water to

no other village and its trunk canal has not been tapped by any other system. There is also the fact that outmigration has provided a release valve on population pressure in the Toba Batak area so that competition for water in the limited watercourses around the lake may never have developed as a result of increasing population.

The most convincing demonstration of adat as an effective organizing force in irrigation remains in the construction and improvement of Silean Banua with local resources. The data provide a contrary case. Bennett's (1976:398-399) assertions that peasant society should lack the capacity for social mobilization, financing, and engineering skills necessary for large-scale construction of irrigation systems. More importantly they confute his assertions that if a desire is felt for more "efficiency" in irrigation a supra-authority is necessary, and that people will willingly give up freedom in return for payment of bills by an outside authority. Bennett notes that one cannot predict the course of change accurately and that "humans act perversely from time to time". His assertion that in the organization of irrigation one does not have "culture" but channeling of behavior is not applicable in the case of Silean Banua. It is not possible, at least in the Toba Batak case, to surgically excise the organizational basis of irrigation from the greater cultural system of which it is a part. There is, however, an interesting comparative case in the literature on an attempt at large-scale construction of irrigation works by a tribal society with local means and traditional modes of cooperation, the Bontoc of highland Luzon (Bacdayan 1974).

New Construction and Traditional Cooperation: The Bontoc

The irrigated rice terraces of the Ifugao and Bontoc of highland Luzon have often been commented upon as wonders of primitive engineering. Barton (1919, 1922) reports that irrigation for the Ifugao is by the gravity feed systems. He does not mention the construction of weirs or any artificial water raising devices. Jenks (1905:91) notes that the Bontoc build diversion dams and flumes of hollowed-out logs to carry water from an irrigation dam to irrigated rice terraces. He mentions one irrigation dam constructed of piled boulders which was 300 feet long and twelve feet high.

Bacdayan (1974) reports on the attempts of four Bontoc villages in highland Luzon to build large-scale irrigation works on the basis of traditional cooperation. The four villages of the Tanowong area viewed themselves as a distinct socio-political group. Bacdayan (1974:247) estimated their population to be 1,000 people. The parallel with Lintong ni Huta is interesting since its population at the time of the construction of Silean Banua was probably only slightly greater. Because of village endogamy and an "egalitarian exploitive pattern of their territory" (Bacdayan 1974:249) the rice terraces surrounding the villages are owned by Tanowong people and each family owns at least one terrace in the area. Because of this irrigation is jointly maintained by the entire community. Participation in maintenance of the system is a serious matter. Jenks (1905:93) noted:

All dams and irrigating canals are built directly by or at the expense of the persons benefitted by the water. Water is never rented to persons with sementeras (rice terraces) along an artificial waterway. If a person refuses to bear

bear his share of the labor of construction and maintenance his sementera must lie idle for lack of water.

The basic unit of traditional organization was the dap-ay or men's house. They were the "religious, social, and political centers of village life where major decisions are made and through which the villages are mobilized for communal action" (Bacdayan 1974:248). There was a spirit of competition between them but they coordinated their efforts for community welfare. The men's houses of the villages cooperated in the maintenance of the irrigation system which tapped water from two streams which was the primary source of irrigation for the area. Each men's house was expected to provide personnel for the work parties. Individual shirkers could be fined by other members of their men's house organization.

Expansion of terraces in the original site of rice cultivation, the construction of new terraces along and below the irrigation canal, and deforestation of the hills above the streams that fed the system all contributed to a decrease in the supply of water. The villagers accused their allocation officials of mismanagement, but finally came to the conclusion that there was not enough water to meet demand. The people hit upon a plan which was more ambitious than Silean Banua. They decided to tap a stream for irrigation which lay more than three hours' walk from the area. The canal which brought water to the terraces would have to follow the contours of the mountains and was estimated to be twenty-five kilometers long. The system would also require an irrigation dam at the head of the system. Labor was organized under the "men's house" system and each family was assessed five days

of labor in repeating construction labor cycles. Bacdayan notes that "there was strong commitment to the project and enthusiasm on the part of all (1974:253). Government grants were obtained which helped to compensate the laborers, and for other expenses. But money was then only outside assistance. The engineering expertise came from the people:

This remarkable engineering feat, which would appear overwhelming for a strictly gravitation flow through the mountains with no sophisticated surveying equipment, was made possible only through the people's detailed familiarity with the territory from years of hunting and foraging (1974: 252).

Traditional labor assignments for canal maintenance have been expanded to include the new system and Bacdayan notes (1974:253) "maintenance of the Bwasao irrigation system is one of the most important annual activities of Tanowong today." The individual men's house organizations have been assigned maintenance of different portions of the system.

The building of the Bwasao system also had fallout in the form of new relations with neighboring village groups. The people of the Tanowong villages weathered problems with spurious claims to the Bwasao stream by another group whose village territory was slightly closer to the stream. This was solved by mediation but the continued threats of diversion of some of the sources of water to the irrigation system resulted in the application to the central government by the Tanawong villages for an official sanction for their irrigation system. The isolated Bontoc villages had few relations with the central government before this. The government grants which assisted in the construction of the system stimulated their interest in obtaining official recognition of their irrigation system. Collections were taken twice

to send a delegation to Manila to obtain official recognition of the village's right to the stream that fed the system. The development of the system expanded cooperation between Tanowong villages and a neighboring Bontoc village complex with whom they had had little in the way of cooperation in the past. Intermarriage with the village intensified ties concomitant with tenure of fields irrigated by the new system passing to the neighboring village. The new ties resulted in expanded cooperation in irrigation affairs, opposition to the granting of forest concessions in the area since they recognize deforestation as resulting in less water in the irrigation systems, etc. (Bacdayan 1974:254-256).

Bacdayan (1974:257) credits the construction of the Bwasao irrigation system with stimulating community cooperation, resulting in a favorable relationship with the central government, and providing new horizons for intervillage cooperations and the development of leadership. The same sorts of social change which have affected Lintong ni Huta and Thai villages were at work in the Luzon Highlands; religious change, education and changing values between old and young, election politics and government administrative divisions imposed on the traditional village neighborhoods. He sees the expanded irrigation systems as "a boon for community integration and for the continuation of traditional communal organization."

The expansion of irrigation was a critical problem for the livelihood of the village. The scarcity of water and the threats to the irrigation system by the neighboring village galvanized people into action.

Bacdayan notes (1974:257) that no one was fined or punished for outright refusal to work on the project.

We have here a case which is remarkably similar to the construction of Silean Banua. A traditionally organized society has achieved large-scale construction of an irrigation works primarily with traditional modes of social organization and mobilization. This case again provides a contrary case to many of Bennett's (1976:399) and the Hunts' (1976:393) propositions concerning new construction and development of irrigation works by a traditional society. It is true that the system received financial assistance from the central government. Bacdayan notes (1974:257-258):

It is conceivable that this enthusiasm (for the construction) might have sagged later had not government funds been forthcoming. Government support was important in maintaining the morale of the people and in facilitating their continued mobilization.

In all other spheres it was a local project, including engineering expertise. The relationship with the central government has been positive and has increased the Bontoc's understanding of and cooperation with the central government. It was not the passive relationship of the Bontoc sitting back waiting for the government to finance and construct their system as Bennett (1976:399) suggests:

When the people of a local community have become accustomed to having someone else pay the bills, or can perceive an opportunity for getting someone else to do so, they rarely pass it up, local autonomy or no.

The Hunts (1976:393) significantly do not mention Bacdayan's paper in their discussion of new construction. They mention his study in a paragraph which begins "Social systems can, to a point, increase the

supply of water". They note that in the Bontoc case supply was exceeded by demand and the solution to the problem was to tap a new source. The scale of the new construction nor the fact that it was achieved by traditional means is not mentioned. Bacdayan's conclusions concerning the construction of the Bwasao irrigation system are remarkably similar to mine concerning Silean Banua:

The expansion of the Tanowong irrigation system is an example of the flexibility of traditional Bontoc social organization in incorporating greatly enlarged communal tasks without a change in structural form. At the same time, the successful accomplishment of the Bwasao irrigation works projected the small Tanowong community into new external relationships at the local, regional, and national levels.

CONCLUSIONS

The cases of Silean Banua and the Bwasao irrigation systems are the same in outline. The differences are simply attributable to cultural differences in the two societies. A segmentary lineage system and adat account for the possibility of large-scale cooperation in Toba. The dap-ay or men's house organizations were the main means of political and social mobilization in Bontoc society. They cooperated in a spirit of friendly competition to outdo each other in matters pertaining to community welfare. The fact that the Bontoc case increased the external connections of the community while Silean Banua and the village of Lintong ni Huta remained resolutely independent of external contacts in irrigation is explainable in terms of basic differences in social organization and the times of construction for each. The Bontoc of Tanowong practiced village community endogamy which at the time of

the construction of the Bwaso irrigation system was breaking down. Intermarriage and bilateral inheritance with neolocal residence brought them into closer contact with another Bontoc community, resulting in title to land in the Tanowong irrigation system passing to members of the other community. This has strengthened cooperation in irrigation and other matters between the two villages where little existed before. The Bwasao system was also built in 1954-1955. The central government played a benign but useful part in the construction of the system with financial assistance. The village also needed governmental sanction to recognize their permanent title to the stream which fed their system in the face of claims against it by the neighboring village of Agawa.

For the Batak the case is entirely another matter. The Batak practice virilocal residence and patrilineal inheritance. Sons-in-law do receive some land gifts from their wife's parents which are theirs in title. Usually the natal village of their wife is distant enough from their own to make working this land impractical and it is rented out on a tenant basis to agnates of the father-in-law. Adat demands that a plot of land received in patrilineal inheritance must be offered to close agnates, fellow villagers, wife-taking affines, and those farmers whose terraces adjoin the one for sale before it can be disposed of to an outsider. If sons-in-law wish to dispose of land received as wedding gifts they must first offer it to their father-in-law's agnates and marga-mates. These rules mean that little land passes in title to non-villagers. Very little land in Lintong ni Huta has been disposed of to outsiders or is tenant-farmed by outsiders. As a result, non-villagers have little involvement in irrigation affairs within the

village. In systems such as the one in Si Gumpar the situation is entirely different as well. Silean Banua was also built almost one hundred years before the Bwasao project. It was completed without government assistance and the right of the villagers to the water from the river that feeds Silean Banua was secure in adat. The one time they applied to the colonial government for assistance in improving the system, the local official forbade them to do what they ended up doing themselves, building the first cement irrigation dam. Lintong ni Huta needed no expansion of its contacts with other communities in the area. Although there is no institutionalized village exogamy the marriage pattern tends that way. And since pre-colonial times there has been frequent inter-village visiting for feasts, and ceremonial cooperation in the past for the bius ceremonial. Silean Banua was functioning efficiently and the villagers would have gained nothing in assistance or official sanction in tying the system to central governmental control.

The basic similarities of the cases are more striking. In both cases expanding population and a finite supply of water stimulated the desire to tap new sources of water outside of the traditional territories of the two communities in question. In the Bontoc case new terraces had been constructed which were beyond the capacity of the existing system to irrigate, and rice terraces were drying out. In the Batak case the capacity of the small irrigation systems in the village had been reached to bring new riceland in the village under irrigation. The people desired an increased source of water to bring

more existing dry rice land in the village into irrigation. In both cases the capacity for cooperation and mobilization of labor, as well as financing, was found in existing social structures and applied successfully to construct the desired systems. The above data have demonstrated that the differences in the cases can be explained in terms of the social organization and institutions of the individual societies.

This brings us back to the argument earlier in this chapter that the institutional basis of irrigation in a society will reflect other spheres of the culture in question. Where adat and social structure provide the means for cooperation in Toba, the dap-ay men's house organization succeeds in Bontoc society. If Boon (1978) is correct it is the ritual cycle that coordinates the activities of the individual subak organizations in Bali. The Hunts (1976:394) note that there is not agreement in the literature as the connection of the subaks on a single watershed to a superordinate political authority. The pervasiveness of the ritual cycle and temple organization in other spheres of Balinese society makes Boon's argument attractive. The question requires further study but the point remains that the organizational basis of the subak organizations is similar to other kinds of organizations in Balinese society. The organizational types of bondar organizations runs the gamut of possible types in Batak society, from lineage-based organization to cooperative associations. Nonetheless in each case the basis of irrigation is culturally appropriate for the individual society.

The seeming triviality of the argument of cultural appropriateness disappears, I think, in this comparative context. In the Batak and Bontoc cases the capacity of each society to construct these large irrigation works must be explained in culture specific terms. However, despite being separated by almost one hundred years in time, several miles of land and ocean, and with basic differences in traditional social organization they are remarkably similar. The independent conclusions of the two anthropologists who analyzed these two cases, myself and Bacdayan (1974), are also remarkably similar as to the basic argument. These two cases have demonstrated that separated traditional societies are capable of all facets of large-scale construction the Hunts (1976) and Bennett (1976) as well as Ishii (1978) say they ought not to be capable of. Bennett (1976:399) concludes his remarks on the fact that traditional societies lack the capacity for large-scale construction and that they will rarely pass up the opportunity to let someone else pay the bills in irrigation development, regardless of autonomy with the following:

If they can get water more cheaply they tend to put this first and worry about losing their freedom later. Here again, we don't have "culture" but simply the structural channeling of behavior. Obviously one cannot always predict the course of change precisely, and of course humans act perversely from time to time, but at key levels the outcomes are remarkably similar in these water management situations if you know where to look and what questions to ask.

A sample of two is not sufficient to controvert completely Bennetts' arguments. But the striking similarities of the cases, free of culture-specific differences, leads me to the conclusion that "culture" is indeed the answer to numerous questions concerning irrigation organization.

I see no justification for describing the Batak and Bontoc cases as perverse behavior because they confute Bennett's propositions. We must of necessity return to the Hunts' call for more detailed studies which concentrate on irrigation and have a broader data base than the single community. In this work I have provided a study which concentrates on the social organization of irrigation with a diachronic perspective. The single community basis of this work was unavoidable because of the lack of participation of other villages in Silean Banua. I hope that this work stimulates further study. These two examples of the successful expansion of irrigation systems by traditional societies with traditional modes of cooperation might; I hope, have some influence on development efforts.

Bacadyan (1974:258) concludes:

In the Philippines, with increasing demand for water and other limited occasioned largely by a growing population, the Tanowong ecample may represent a more general pattern of change, whereby ecological necessity brings the one relatively isolated agricultural village into closer relations with the national forms of economic and political organization.

The Toba Batak tendency to outmigration has provided a release valve for population pressure on the land. This may explain the lack of involvement of Silean Banua in outside affairs. However, both these cases provide data which shows that development of irrigation can be achieved by local organization. Bacdayan's assertions concerning the beneficial effects of the development of the Bwasao system on communal organization are important. The divisive tendencies of the social changes he says this resurgence of communal feeling counteracts are common to

all traditional agricultural societies. It could be hoped that similar development efforts in the expansion of traditional irrigation systems in agricultural development could be effected in a similar, beneficial manner.

This work has demonstrated that traditional societies, and traditional systems of social organization have the capacity to expand to accomplish the communal construction of large irrigation systems. Traditional modes of cooperation can also provide the basis for effective management of irrigation without the development of Wittfogelian bureaucracies which many writers on irrigation have indicated as necessary for managing the labor needs of irrigation maintenance and allocation.

The history of Silean Banua shows that the organization of irrigation for the Toba Batak, either for the "infrequent decision" of construction or the "frequent decision" of water allocation, does indeed rest in culture, not the "structural channeling of behavior" (Bennett 1976:399). The model of adat developed in chapter one explains the capacity of the villagers of Lintong ni Huta to build Silean Banua-- and the payment of irrigation levies, not a debt of compulsory labor, by members of the irrigation associations. The comparison of the Batak system with other irrigation systems in this chapter has also shown that the institutional basis of irrigation will tend to be consonant with other segments of the social organization in individual societies. Typologies such as Glick's can isolate features on which to base comparisons of irrigation systems, but as we have seen that

the Yemenite/Syrian dichotomy predicts nothing in terms of the institutional basis of irrigation beyond the conditions by which it is defined. For explanations of the institutional basis of irrigation, culture-specific models, such as adat for the Toba Batak, are often necessary.

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