COOPERATIVE RICEFIELD CULTIVATION AMONG THE SIANG DYAKS OF CENTRAL BORNEO

By JOHN H. PROVINSE

THE ethnological reports on the primitive peoples of the world are regretfully lacking in the amount of information they contain pertaining to primitive labor. Nowhere is the literature more scant in this regard than in Indonesia, particularly with respect to the cultivation of the rice fields. In the reports on these peoples one seldom finds more than the merest mention of the actual labor of clearing, planting, harvesting. Full and elaborate information is frequently encountered as to the purely technical processes involved, the tools used, the technique of felling, or planting, or harvesting, with usually quite careful descriptions of the ceremonies and rituals which appear to be such a necessary adjunct of all tillage work and without which one gathers that the economic organization would collapse. But when one endeavors to find out who works, when they work, how, for how much or for how long, one finds either no mention at all of the actual conditions, or has to be content with a statement or implication that the working of the fields either is a very simple, communistic endeavor, in which all work and share alike, or that it is done with the help of relatives, friends, and neighbors.

Ricefield cultivation in Indonesia is of two types: irrigated and non-irrigated. The former type, which may or may not be terraced cultivation, is, with few exceptions, employed by the more advanced peoples of the region who have had contact with Islamic, Indian, or Western civilization; the non-irrigated type, which with considerable certainty can be considered the earlier and more primitive, is practiced for the most part by the more backward and peripheral groups, inhabiting the less accessible, mountainous, and heavily wooded regions.

Though one may find throughout Indonesia many minor variations in the non-irrigated cultivation, in general this "dry" culture, known also as "hill" or "slash and dibble" culture, and locally as ku, or kaingin, or jhum, or tavy culture, presents very much the same features wherever it is found. It consists in making, during the dry season of the year, a small clearing in the jungle, and planting, at the beginning of the wet season, a few grains of rice into holes made with a sharp-pointed planting stick or dibble. With few exceptions the population of these isolated regions is exceedingly sparse

---

1 Rewritten portion of a Master's thesis accepted by the Department of Anthropology, University of Chicago, 1931.
and the amount of land available is practically unlimited. A man is therefore under little compulsion to use the same land over again, year after year, or ever again, unless he so desires.

The clearing of the brush and trees is done not only to provide ground space in which to plant, but also to remove the large trees and branches which shut off the sunlight. The same sunlight, however, which nurtures the rice crop, also brings to life innumerable weeds and grasses, against which the less hardy rice cannot maintain itself for more than one or two years, after which the field is abandoned and a new clearing made. After a few years, by which time the new jungle growth has attained such size and strength as again to crowd out the weeds and grass, the old field may be recleared and again planted. Often as many as fifteen or twenty years will elapse before the old field is again used.

In selecting a site the side of a hill or a gently sloping piece of ground is usually, though not necessarily, chosen. Ordinarily the clearing is begun by cutting away all the underbrush, small trees, grass, and creepers. Then, beginning at the bottom of the slope or at one edge of the area to be cleared, the remaining trees are notched rather deeply, sometimes on but one side, sometimes on both uphill and downhill faces, but are not completely severed. Certain large key trees near the top of the slope or at one side of the slashing are then felled in such a way as to fall upon and carry with them those trees already partly cut through. In this way a comparatively large plot, sometimes as much as an acre, can be crudely cleared in a short time. The larger branches of the felled trees are then lopped off and the entire area left to dry out, the length of drying time depending upon the size of the trees felled and the weather. A week or ten days of exceedingly dry weather is often enough to prepare a field for burning; more frequently a month is required.

One burning, especially in plots being used for the first time and where large trees have been felled, is often not sufficient to reduce the large trees and branches; in which case the charred debris, or such of it as can be moved, is collected into piles and burned again. Even such a second burning will seldom clear the field of a great number of half-burned tree trunks and enormous roots, but it increases the amount of ash available for, and knowingly so used for, fertilizing the soil.

As soon as the burning is finished, which, unless a second burning is

---

2 There are some regions in Indonesia, for example among the Sema Nagas, where the trees are not felled. Here the branches are trimmed off except for a small tuft left at the top of the standing and bare trunk. Within two or three years such trees will branch out again. It is the ordinary thing, however, to fell the tree completely.
necessary, can usually be accomplished in one day, the field is ready for planting. The object is, of course, to get the seed into the ground immediately before the rains come. Small holes an inch or so in depth are made with a sharp-pointed stick and three or four kernels of rice (most commonly called padi) dropped into them. Sometimes the holes are covered, sometimes not; in either case a certain loss in the seed planted is always expected and experienced from the forays of the birds. If the seed has been planted too long a time before the rains set in, the seeds may not sprout. Or, again, it may turn very warm after the first rains and so bake the soil that the sprouts cannot come through the hardened crust. If such happens more padi must be sown.

Once the fields are planted and the rains have begun, little more is done to them except to guard against the birds and jungle animals, monkeys, wild pig, deer, rats, etc., which come in, particularly during the ripening season, in great numbers. Rude bamboo fences are often built around the plots, scarecrows are employed, and dogs frequently assist the watchers—usually the women and children—in keeping the wild animals out of the fields. Weeding is done occasionally among some of the peoples, but it is a very disheartening task and no great effort is expended on it.

When the grain is ripe, some five or six months after planting, it is harvested laboriously with a small crescent-shaped reaping blade, the seed padi for the following year being selected from the first rice harvested. After threshing, the unhusked rice is usually stored in specially constructed granaries in the fields or in the nearby village, in large bin-like baskets underneath the village house, or in smaller baskets in the small ricefield house; this small house being a characteristic feature throughout Indonesia and often being occupied for several months of the year by the owner of the field.

When, from this generalized picture of the agricultural pattern, which with minor variations will apply with considerable accuracy to the tillage activities of all those Indonesian people engaged in the “hill” cultivation of their ricefields, we turn to the labor involved, its cooperative nature, its amount and kind and organization, the present literature affords very little. A review of the published material discloses that among three of the groups, the Bontoc, Bagobo, and Achinese, an exchange of labor is referred to, but one reads in vain to see how this exchange is organized.

---

3 Among some of the peoples the seed is sown broadcast over the cleared area; sometimes being raked in, sometimes not. The planting stick method predominates, however.

4 Occasionally water is poured into the hole at the time the rice is planted to insure sprouting.
Wages are intimated for two of these same groups, the Bontoc and Achinese, as well as for the Tinguian. Among the Subanun, Muruts, Ibans, Duhoi, Angami Nagas, Ao Nagas, and the Tanala of Madagascar, we find that cultivation is carried on "with the assistance of neighbors," "by friends and kindred," or "by groups of relatives." Assistance procured by providing a feast is reported for the Achinese, the Angami Nagas, and is intimated for the Bontoc Igorot. Two groups, the Sakai and the Moi, are reported to be communistic in the development of their fields, and such is also stated for the Muruts. Only one report can be said to be anything more than suggestive—that of Mr Hutton on the Sema Nagas, where one obtains a rather good picture of the "gangs" upon which the cultivation of the fields largely depends.\(^5\)

The following section attempts to supply some of the details of the general tillage pattern and the labor organization involved, based upon information secured by the writer in 1929 during a three months visit\(^6\) to the Siang Dyaks of central Borneo, during July, August, and September, the time of year devoted to the clearing of the jungle for ricefield plots.

II

The Siang people of central Borneo occupy a fan-shaped sector spreading northward from Poeroek Tjahoe on the upper Barito River in longitude 114°20'-114°40' East, all within less than one degree of latitude south of the equator. There are approximately 2500 adults scattered in some fifty small villages over an area not exceeding four or five hundred square miles. The country is quite hilly or mountainous, covered with thick jungle growth, and traversed by numerous small mountain streams which flow either north or east to the Laoeng, or south to the larger Barito. It is along the smaller streams, many of them not navigable even in the small prahus of the Dyaks, that most of the Siang villages are found.

Culturally these people resemble the other Indonesian, or non-Malay, non-Mohammedan peoples of Borneo. Each village consists usually of one

---

\(^5\) It is at once apparent that but a few of the many so-called Indonesian peoples—slightly more than a dozen—are mentioned in the preceding summary. This does not mean that the writer has neglected the reports on other groups, but that these reports fail to contain even a reference to the labor employed in the fields, and the mere enumeration of them is pointless.

\(^6\) The writer was attached at the time to the All-American Mohawk Malaysian Expedition, under the leadership of Theodore Seelmann, and financed by the All-American Mohawk Radio Corporation of Chicago. To this company and to Mr Seelmann the writer is indebted for the opportunity afforded him to gather the information here presented. Most of the observations were made at the village of Nono Kliwon on the Toepoeh river, an average Siang village of eighteen families two days by trail from the Dutch outpost at Poeroek Tjahoe.
long house, raised ten to twenty feet off the ground on hardwood piles and divided lengthwise through the center, the rear half being again divided into the family rooms and the front half left undivided to form a long hall or balcony. Each village has a head man, or pumbakal, who is chosen by the adult men of the village with Dutch approval and whose official acts usually reflect the sentiment of the men gathered in informal council. There is no intervillage organization, though chiefs of certain villages are recognized as having more power in Siangland than others.

The family is the basic unit of the social organization, kinship is the most important social and economic tie, but a clan or gens organization is unknown. Marriage is customarily, though not necessarily, extra-village, is matrilocal and usually monogamous. Sickness and disease are caused by the presence in the body of the sick person of certain malignant spirits, in the casting out of which the services of medicine men, or blians, are employed. After death a soul does not return to its accustomed resting place until after the death feast, or tiwah, is given by the surviving members of the family. This may occur a year or more after the death, and is a time of drinking and promiscuity into which nearly everyone enters. The rice wine is also drunk to excess on other festive occasions. Head-hunting, though once important, is no longer indulged in.

Rice and wild pig are the main articles of the diet, supplemented from time to time by fish, jungle fruit, roots, honey. The wild pig is hunted with dogs and spears, and though the blowpipe and poison dart are utilized to some extent, the spear is the main hunting weapon. Large knives, known as mandaus or parangs, are used for cutting underbrush and cleaning game, as well as for much household work. Small axes and adzes of iron, hafted to a springy root or piece of rattan, are used for cutting the big trees. Ironworking, using the double-cylinder forge, is well developed.

The above will suffice to place the Siangs in the general Indonesian picture. Let us turn now more directly to the subsistence life. Almost the entire life of these people is concerned with wrestling a living from the jungle, hunting the birds and animals, collecting fruits and vegetables, or clearing the land to provide space and sunshine for the cultivation of their main crop, rice. The hardest and most important of these activities from the point of view of the effort expended, though not from the amount of time each year devoted to it, is the clearing of the jungle land for cultivation.

The amount of land available for cultivation is practically unlimited, though the people of each village rather definitely regard the land surrounding it as belonging to the men of that village for purposes of cultivation. Individually, however, they do not regard themselves as having anything
more than a temporary claim to use the land. As long as a man wishes to use land which is being cleared or has been cleared by him, no one can take it from him. If a man abandons a used plot after its first year, and moves to another without manifesting in some way his intention to retain his use of the first plot, someone else may come in and cultivate the old field. There is a well recognized feeling, however, that if an abandoned field is wanted for use by another within one or two or even three years, permission must first be obtained from the user. After two or three years usually anyone may clear and cultivate it.

The first problem that the Dyak faces in his cultivation is the choosing of a site, usually done at the end of harvesting in April or May, or before the beginning of the dry season in June or July. The site of the previous year is considered: if the soil appears not to have been exhausted, if a good crop has been realized the year before, and if the grass and weeds have not overrun the place, this site may be used again. If last year's plot seems undesirable, those previously used but which have lain idle for three, five, ten or more years, are considered. The roots and stumps and partially burned timber from the previous clearing may have rotted and fertilized the soil; many of the rocks may also have been cleared away previously. Such a plot also has the advantage that the new growth of trees will not have attained such size as that in the undisturbed jungle.

If no old site is considered suitable, a new piece of jungle must be cleared. In choosing this site attention is paid to the size of the trees to be felled, to the quality of the soil, the scarcity of rocks and roots, its distance from the village, the availability of water for domestic purposes. If the roots are many and very large, rice planted among them is likely to be stunted. If the trees are very large ones, after felling they will require con-

7 By planting javau, vegetables, or perhaps rubber, or by simple announcement of his retention of an interest in the plot.

8 The dry season in the interior of Borneo is not as distinctly marked as in many other parts of the archipelago. From late June until October there was some rain on every day except eight which the writer spent in the region. The rainy season proper, however, usually begins in October, becomes heaviest during the months of December, January, and February, and tapers off again into comparative dryness in April or May.

9 Such is infrequent, however, and only two last year's sites were being used again at the village of Nono Kliwon during the writer's visit. Two other last year's fields were being devoted to secondary crops.

10 At Nono Kliwon the chief's present ricefield site was last used six years before, when he himself had a crop there. The trees were about eight to ten inches in diameter and there was not much grass or underbrush to be cleared. Of eighteen fields being cultivated around Nono Kliwon, two were fields used the previous year, five were fields that had been used five to ten years before, and ten were in previously uncleared jungle.
siderable time to dry out sufficiently to burn. A slightly sloping or level piece of ground is more desirable than a steep one; it is essential also to stay away from too high or too greatly exposed ground, for the winds in January or February are often strong enough to knock down the rice plants if they are in an unprotected location.

The site having been chosen, the first work is the clearing of the underbrush, creepers, grass, and small trees. After these have been cut, the debris is allowed to dry out thoroughly—a few days being sufficient—before the larger trees are felled upon it. Then the larger trees are attacked with the small axes, partially cut through until the top or the edge of the clearing is reached, when the peripheral trees are completely felled as previously described (see page 78). Of course, such method of felling does not perfectly nor completely clear a plot, and a good bit of hard work still must be done felling those trees which have withstood the avalanche of the first felling.

After the trees are down many of the larger branches still extend high into the air, and these must be cut off in order to allow for more complete burning. This leveling process, known as mehera, is almost as strenuous work as felling the trees originally. After the leveling the trees are allowed to dry out and the plot is burned, on a windy day if possible. A second burning may or may not be necessary. The fields are usually ready for planting by the middle of October.

Each family, that is, a man, his wife, and their unmarried children, has its own ricefield. The fields are not necessarily located in the same general region, nor in the same direction from the village, though in former years when head-hunting and raiding parties had constantly to be taken into consideration, it was usual for all the fields to be very close together if not actually adjoining. At present, two or more families, sometimes as many as ten or twelve, often go together in the preparation of the same area, cooperating through all the different stages of felling the trees, burning, planting, watching, and harvesting. If sufficient good land is available in one location, it is desirable to join together in cultivating it; for though head-hunting and raids no longer give the people much concern, joint cultivation supplies a companionship and economic advantage that is very desirable. During the growing season, when the animal pests are bad, watching of the fields can be done turn and turn about if several families are involved. Further, as one man at Nono Kliwon expressed it, if there are

---

11. At Nono Kliwon, during the year in which these observations were made, six families worked together in one large plot; two other families were joined in another. The rest of the families in the village—ten in number—worked separately, their fields being widely separated and in different directions from the village.
several fields together, it is not likely that the animal pests will ruin any particular crop completely, but rather will injure all partially, whereas if a man is alone the pests may clear out his entire field.

But it is not always possible to join together. There may not be sufficient good ground in one place for all to get a good crop, or there may be different opinions as to the best locations for the year, or there may be individuals, as there were at Nono Kliwon, who prefer to work their plots by themselves. When, however, several do join together in the selection of a site, each family has a particular portion which is its own, the boundaries of the plot being approximately determined at the time of selection of the site and more definitely located during the time of felling. It is usual to leave certain small trees standing as markers to define the boundaries of plots.

Occasionally there is a dispute over boundaries, due to failure to mark the trees which define the intended plot, or in straightening out the edge of a plot, after felling, one man’s markers may encroach upon ground already included within another man’s line of trees. Every case that was brought to my attention at Nono Kliwon was said to be unintentional and was easily adjusted between the parties. Infrequently the dispute cannot be settled by the parties to it, in which case it is carried to the headman of the village whose decision in the matter, sometimes with, sometimes without the aid of the older men, is abided by.

The amount of time necessary for clearing the jungle varies considerably from one plot to another, dependent upon whether an old plot is being used or new ground has to be cleared. If a last year’s plot is made use of, there is usually nothing but a small growth of grass and trees to be cleared, which can be accomplished in a few days’ time without a great expenditure of effort. A field with somewhat larger growth may require three weeks or a month for cutting, while a plot in previously unused jungle, with big trees to fell, requires six, seven, or eight weeks to prepare for burning.

12 However, one morning at Marowei, a Siang village to the north, one of the grown daughters of the family in which the writer was living came in sobbing, complaining that the man felling trees on the plot adjoining hers had put his mark on a tree on her piece of ground and claimed a small piece of land which she herself had cleared. Though the contested piece was but ten yards square, there was haggling for three days before it was settled, the man finally taking the disputed sector and agreeing to help the girl fell more trees on her plot, which he did.

13 Aboen, who was working among the big trees, spent seven weeks on his field when his foot was badly injured by a falling tree and he was forced to leave off work. He was then within a week of completion. Others who had already finished their felling took it upon themselves to finish Aboen’s field for him, expecting no remuneration therefor.
When one visits a ricefield in the making, it is not unusual to find five or ten or even twenty or more people working on the same plot. This may be accounted for by either one or another of two methods commonly employed by the Siangs in working their fields. More frequently it is due to a well recognized system of labor exchange, known as hando. Usually by previous arrangement, but often not until the clearing is underway, several of the heads of families will club together for the purposes of joining their combined efforts in developing their fields. If ten men thus agree, they will all work one day in one field, the next day in another, and so on around until in an ideal case at the end of ten working days a man will have worked nine days on others' fields but will have the services of ten men for one day on his plot. Usually one day only is spent on any one field at one time, thus insuring that all fields will near completion at approximately the same time and that everyone in the hando arrangement will have approximately the same amount of cleared land for planting when the rains come. If the hando agreement includes only those families which have their plots adjoining, the same group may be seen working in the same area day after day, but hando may be entered into with others whose fields are not adjoining, and the people actually working in any particular plot do not furnish any conclusive evidence as to the ownership of the area. After a man has returned service for all services rendered him, if such has not finished his clearing, he may proceed alone, or may enter into hando with others. Nor need a man necessarily hando: he may prefer, and often such is the case, to work his field by himself, assisted only by the members of his family.

In this system of labor exchange, no clear-cut evaluation of a particular individual's services is made. Work performed by a man may be returned in services of one of the older boys of the family or even the man's wife, and though this may result in some inequality in the amount of assistance secured, it is "against Dyak custom to complain." If not satisfactory a man can decline to hando another year or can enter into combinations with other families.

In hando each man is supposed to provide his own food, but in practice this most frequently works out that the ones who are assisting on any particular day take their morning and evening meals in their own homes, but the owner of the ricefield where the work is being done furnishes at noon a

14 Aboen was working his field by himself, assisted only by his wife and sister-in-law. His objection to hando was that he always got very poor assistance in return for his own hard work on someone's else field. Pladong and Odoh also worked their fields without hando, saying they could do much better alone; both have grown children, unmarried, who assist them.
meal consisting of boiled rice and perhaps a little dry or salt fish or wild pig. Occasionally the workers leave for the field as soon as it is light in the morning, when breakfast is served to them in the field house by the owner of the field, the women usually accompanying the men to the fields to prepare the meal or meals.

Besides this exchange of a day's labor for a day's labor, a second means exists for obtaining help with ricefield cultivation. This other practice is known as haweh and is carefully distinguished from the exchange system of hando. Here a man who does not wish to return services for help rendered informally announces that on such a day he will have haweh at his ricefield and invites all those who are so disposed to come and assist him. Such services as are rendered him on that day need not be returned by him, but it is expected of him that he give a feast, or at least something more than the customary boiled rice and fish, during the day. It is a festive work-gathering, not unlike a Western corn-husking or barn-raising, and the owner of the field provides not only breakfast for all those who come, but at noon, in addition to bare necessities, provides pig or chicken, and usually tuak, the native rice wine. If the tuak is plentiful the working party may turn into a drunken rout before the day is ended, and probably very little work will be accomplished after the midday meal.\(^1\) The amount of work performed on such days, at least after the midday feast, usually is in rough inverse proportion to the amount of tuak available; but since a man's standing in the community and the success of his festive services are somewhat dependent upon his liberality at haweh times, it is incumbent upon him to provide rather generously for all who come to work. As the owner of one field at which haweh was being made said, "If I do not furnish plenty to eat and drink, I will become known as stingy, and people will not come to help at another time."

Haweh, of course, is not as reliable a method of procuring services as the direct exchange of labor, but on the whole considerable work can be accomplished in this manner, and with much less effort on the part of the owner than in hando. It is, of course, a practice which can be resorted to more frequently by the well-to-do—those who have a supply of rice, pigs,

\(^1\) At one haweh which the writer attended, all the men worked hard until noon felling trees, but at the midday meal nearly all drank too much and no more work was accomplished. The owner of the field did not complain. It was at this drunken party that the writer witnessed one of the very few quarrels which came to his notice during the visit. Pladong, one of the older men of the village, smeared pig oil into Koembit's hair during a bit of horseplay. Koembit, well past fifty himself, and regarded as the richest man in the village, resented it. He spent most of the evening in the writer's quarters telling what "bad manners" Pladong had.
chickens, and tuak—and it is a difficult thing for a poor man to secure assistance in this way. But if a poor man is able, by loan or otherwise, to secure the necessary food and drink for a feast, he is as much entitled to haweh as the richest man in the village, and usually secures as much labor return, oftentimes more, than the well-to-do owner. Haweh is utilized particularly by those who, for some such reason as sickness or enforced absence from the village, have been delayed in the clearing of their plots; then feast labor may accomplish much in a short time. Or it may be that a man will let his clearing drag along until all the others have finished their work; then there being no work to perform for the others on an exchange basis resort can be made to haweh if the man cannot accomplish the work by himself.

The two methods of procuring assistance described in the preceding paragraphs, and which we may well designate for convenience “exchange” labor and “feast” labor, are not restricted to the clearing of the fields but are utilized as well during burning, planting, watching, and harvesting. Both methods are also resorted to for other purposes than cultivation. When a man needs help in bringing in a prahu (dug-out canoe) or a torah (large memorial pillar) from the jungle, or in building a house, or in shaping a coffin, or preparing a grave, he may seek assistance from his friends and relatives, repaying the services in kind when the necessity for them arises, or with a feast which may be held at the time the services are rendered or at some future date.

The employment of others on a payment basis is not unknown among the Siangs, and although money or any other standardized medium is not found, payment in commodities or by “shares” is occasional. If during the preparation of a joint field, a man becomes ill, he may employ some one else not in the working partnership to work for him, paying him in rice or other commodity. And if he cannot employ others to work for him, his co-workers in the field must help finish his plot as well as their own, the man who is so helped being expected to repay later either a part of his harvested crop or by extra labor when he is able. If a man has an individual plot and becomes ill, he may make an arrangement for some one to work his field for him, sharing one-third or two-thirds, depending upon the amount of work necessary to be done for him. Or it may be an agreement whereby at the time of harvest the man who has assisted will harvest one day for himself, the next day for his friend, or, after all the rice is in, the harvest may be divided into two piles, one for each. But these methods of assistance are exceptional to the ordinary methods of exchange and feast labor. Occasionally help will be given unfortunate individuals by the other members of the village for which help no repayment of any kind is expected by the donors;
but such help is only tendered those whose misfortune has come through no misconduct on their own part and who are deserving of it.

With this rather simple picture of the organization of labor before us, let us look more closely at its background. There are many things extraneous to the cultivation of the fields which must be taken into account in trying to understand or to describe the organization of effort which these people have achieved. The circumstances of life of any two individuals in the society are never identical; some men have large families to provide for; some have no family at all, or only a wife. The children of some are small and helpless and a constant drain upon the family provider; some have grown children who assist materially in the economic struggle; some who have been expecting to count upon the help of their children lose them through death or early marriage. Through marriage or through inheritance a man or woman may come into such estate that the economic pressures, though never entirely removed, may be greatly reduced. Family factors alone, not to mention individual variations of ability, ambition, energy, health, preclude a perfect reciprocity in the Siang system.

The man is considered as the head of the household, the room in the long house where he and his family reside is referred to as his, and it is expected of him that he will provide to the best of his ability the rice, wild game, and jungle produce, while the women will take care of the children, husk the rice, make mats, and do the cooking. It is unseemly for a woman to do the hardest kinds of work, to fell large trees, to hunt wild pig, or even to bring in a load of firewood; and a man who spends his entire time around the house to the neglect of his jungle work is guilty of a breach of responsibility.

Boys and girls, until they have reached the age of six or seven, are not required to work in the fields. Most of their time is spent in play, swimming, trivial household duties, meanwhile absorbing from their elders the ways of life and the traditions of their people. Quite early, however, they become accustomed to performing such services as can be entrusted to them: simple house work, minding the younger children, guarding the drying unhusked rice from the pigs and chickens, occasionally bringing water from the river or wood from the woodpile. When they are able to make their way along the jungle paths and to appreciate the jungle dangers, they are allowed to accompany their parents to the ricefields where they do such tasks around the ricefield house as they are able, gradually attaining such familiarity with the surrounding forest and the use of the knife that they are allowed to search for rattan or bamboo or other jungle products that may be useful in native crafts. The amount of direct labor, however, per-
formed by the children up to the age of nine or ten in the cultivation of the fields is relatively insignificant in the general labor problem.

After nine or ten, however, many of the children of both sexes have sufficient strength of body and facility with the native tools to assist materially in the clearing of the jungle underbrush and creepers, preliminary to the felling of the big trees. Their services can be utilized in collecting debris for burning, to some extent in planting, to a greater extent in watching and weeding, and at harvest time. A noticeable division of labor occurs very soon, and the boys are seen to devote more of their time to the men's work, the clearing of the fields, hunting, fishing, and the girls to the women's work of cooking, tending the children, pounding rice, or mat-making.

Not until the boys are fourteen or fifteen years of age are they considered able to take their places with the older men in felling the big trees, difficult as well as dangerous work. Until such time as they marry, usually three or four years later, their services are rendered to their father's field or other work in his family. Upon marriage the man leaves his father's house and takes up his residence in the village to which the girl belongs, or if the marriage has been in the same village, in the long house to which the girl belongs. A father, therefore, loses his son's help upon the son's marriage, and though the son then becomes a member of his wife's family, his residence with the father-in-law is not of great duration—seldom as long as a year—and the father-in-law does not benefit appreciably in the service rendered him.

It is expected of the newly married couple that they shall set up their own establishment, in the wife's village, as soon as they are able. When this is done, usually with the assistance of the two families concerned, the girl devotes her whole time to the new home, and if children do not come immediately, she assists her man in the ricefields as much as her household duties will permit. Though the division of labor in the fields is not so rigidly drawn as to preclude a woman from helping in felling the big trees, or to preclude the man from assisting in preparing a meal, it is a serious reflection upon a man whose wife must work too hard in the fields.16

A man's grown daughters, like the sons, while still unmarried, devote a considerable part of their time to the work in the fields and assist ma-

---

16 Aboen's wife and sister-in-law, who helped Aboen in felling big trees, were very much ashamed to be forced to do such work. The wife also complained rather bitterly that she should have to carry in a load of firewood from the jungle. Aboen was by no means a lazy person, as reference to his record in the Appendix will show: he appeared to be one of those individuals who, despite the best intentions and tremendous effort, was frustrated by a lack of sound judgment and an undue share of misfortune.
terially in the family welfare and the economic status of the father. The services of these grown daughters can be and sometimes are exchanged, but the usual thing is for them to work only on their father’s field.

Women who have lost their husbands through death, desertion, or other cause, and who have not been successful in procuring another are oftentimes forced to cultivate their own plots by themselves. Of course, some of them are fortunate enough to have parents or brothers or other relatives to whom they can look for help, but when such is not the case they must engage in the hard work of clearing their own ground, usually confining themselves, however, to those areas which have been previously used and on which the growth has not yet attained any great size. On the whole, the women can swing an axe as effectively as the men. When they do cultivate their own plots, they may enter into hando arrangements with their friends and neighbors, and may, if not too poor, which they usually are, secure feast labor. If a woman is left with several small children and has no relatives upon whom she can call, she is usually assisted by the others in the village, through gifts of rice and wild pig or by help in the clearing of her field; at least until such time as the children have become old enough to help her.

With the exception of the children, who until they are married are cared for in their father’s house and the old people who no longer are able to do hard work in the field, everyone must cultivate a field of some sort. The old men and women are cared for by their relatives, or these lacking, by friends and neighbors, and though no definite reciprocal obligations arise from the help extended to them, the old men ordinarily contribute a helpful share to the family existence by gathering and stripping rattan, sharpening tools, carving out boards and troughs, tending the children; the old women by weaving, cooking, tending the children, or such other small duties as devolve upon the stay-at-homes. With these exceptions no one is exempt from the necessity of making a ricefield, not even the medicine man or the chief.

Among the Siangs as among other peoples there are certain individuals who are shiftless, certain other ones who do not regard with any great circumspection their obligations either to their family or to their fellow-workers. These people here, as elsewhere, somehow get along. No one of them, however, or at least no one of them who has not learned to emulate the shrewd Malays and Chinese can be said to live entirely by his wits, and without occasionally devoting himself to real labor in the fields or in

---

17 Three such instances came to the writer’s attention during his visit. As many more instances were related by various informants.
the jungle. The Siangs, as other Dyaks, are notorious for their hospitality and visitors from other villages are readily accepted and provided for, sometimes for considerable periods of time. But if a man after considerable time makes no attempt or offer to reciprocate in some way for the hospitality afforded him, he is asked to move on. The Siang territory is a small one, communication between the villages is frequent, so that a man’s shiftless ways quite soon spread to all the long houses and that man’s reception becomes gradually less and less hearty. No really deserving person who through sickness or other misfortune has come to difficulty will be permitted to suffer or starve among the Siangs, but an undeserving person is seldom tolerated longer than is necessary to find out what he is.

III

Of recent years economists and other social scientists have justly complained that the material so far gathered from primitive peoples does not tell very much about what they wish to know. Descriptions of foodstuffs, primitive tools, weapons, or traps, the various techniques of cultivation, hunting, fishing, harvesting, etc., no matter how detailed or accurate such descriptions may be, do not furnish much aid in the solution of those problems which are nearest the hearts of the economists. How much of the life of primitive man is spent in work, in play, in idleness; how much in the discharge of obligations to his fellowmen? What is the motivation behind work and the business of making a living? What are the factors, environmental, social, religious, or selfish, in this economic drive? How do production, distribution, exchange, function? These are but a few of the questions to which answers are sought.

Fifteen years have now elapsed since Dr Malinowski, striving to correct the barrenness of ethnologic endeavor, ploughed new furrows in the sterile landscape of primitive economics, deposited and fertilized a few promising seeds, and went on to other fields. Inspired by him Raymond Firth has subsequently contributed an interesting investigation of the Maori in which he exhausts the extant literature on the New Zealand people to give us a correlated picture of Maori life from the economic standpoint.

Dr Malinowski has effectively brought into further disrepute the already disreputable concept of a primitive economic man; has admirably hammered home the motivating importance of the semi-commercial ceremonial Kula in the Trobriand economic life; has disclosed the influence of magic in the economic activity. For all of these services his work has received the

19 *Primitive Economics of the New Zealand Maori* (New York, 1929).
deserved plaudits of anthropologists and economists alike. But one wonders, after reading *The Argonauts of the Western Pacific* how these Trobriand people actually live. That they are impelled to work and that they are kept at it is diligently demonstrated to us, but when and how do they do it and by whom is it done? After all, arm shells and bracelets do not satisfy at least one very important vital need. The unique Kula exchange, like the excrescent potlatch of the Northwest Coast, provides an incentive for work that is paralleled in our own society by many vain drives to industry and accumulation, but after all, these socio-psychological drives are not the description of the economic structure that arises from them. There is no reason to believe but what in every society that is a going concern there will be found some socially determined drives that keep people at work and that these urges in any particular culture will take on different forms. To point out the variety of these motivations is an interesting, romantic, perhaps even a useful procedure; but if ethnology is going to realize its full responsibility to economic theory it must present for the economists’ use objective material that goes beyond these individual drives and reveals social and economic intercourse as a thing in its own right, capable of being studied and understood in terms of societal balance, stress, and integration.

The purpose of the present paper is not the refutation of Dr Malinowski’s socialized economic man, not an attempt to dispute the influence of magic and ritual in Melanesia and New Zealand, not a stricture upon the economic importance of ceremonial motivation. It has a different problem; that of describing the cooperative effort of a primitive group in the cultivation of its fields. It aims at presenting an apologetically meagre but what the writer believes a significant amount of data that will help to clothe the concept of social reciprocity in objective fact rather than in subjective impressionism. And incidental to that problem it will, the writer believes, appear that the organization of labor and production, despite its cooperative character, is not always or necessarily the complex and highly socialized phenomenon, shot through and through with magic and sustained by psychological drives of non-utilitarian nature which the two studies of Malinowski and Firth might lead us to think is the rule in primitive society.

It is easy enough to agree with the emphatic statements that self interest is not the only motivating force in native industry, and the rather self evident proposition that many other social, magical, and religious factors modify and condition this self interest. It is less easy, however, to agree when the influence of these other factors is so stressed as to give one the impression that self interest as a motivating factor in economic life plays
but a secondary role. The writer’s experience in the field failed to disclose the overshadowing importance which has come to be attributed to these factors. Not, however, because they were neglected in the observation of the agricultural activity; in fact, an effort was made to see them and to note their possible conditioning effect. That they were not observed may be due to the short period of time covered by the observation, the unfamiliarity with the culture, or to the intellectual shortcomings of the observer; but the fact remains that the cooperative effort in cultivation herein described appeared to function under its own motive power to a much greater extent than it was motivated by external social and religious forces. In this fact resides the writer’s justification for his separate treatment of the data.

The chief, the smith, the medicine man, though their respective offices or callings gave them certain prestige in the community life, and somewhat reduced the effort in cultivation which they must put forth, were not relieved from work. They labored in the fields along with the others, their work dictated by their individual physical needs or the wants of their families. The wealthy, though their additional resources made it easier for them to live than was the case for some of the less well-to-do, were no more exempt from work in replenishing their rice bins than was the poorest individual in the village. Idlers idled at their own risk.

Restrictions and taboos, the paralyzing effect of which on the economic existence of primitive people has so often been noted, are not denied for the Dyaks. Many of them were told the writer and many pages of notebooks were covered with them. To cite but a few: at marriage, the couple is restricted from work for three days; on the death of a close relative no work may be performed for seven days; if the relative is a baby or small child the restriction is reduced to three days. But it was further noted that an occasional taboo on activity for three or four or seven days is not at all a disastrous restriction in a society which does not regard leisure as an evil nor measure time as money; further it was noted that though these restrictions applied to “work,” they did not preclude such male activities as hunting in the jungle, or collecting jungle produce, or doing odd jobs around the house, or such female activities as cooking, caring for the children, carrying water, all activities which have considerable importance in the round of economic life. And at the one death which occurred in the village during the writer’s visit—that of a baby for which the traditional restriction from work is three days—the father repaired to his field the next day after the death, the breach of observance exciting no comment whatever in the village, causing no punishment to be meted out to him, and being explained
by the chief with the statement that "just now that family is very busy." Numerous as these taboos and restrictions may be, powerful as they may appear on paper, the facts of their existence seem to have been overworked and their effects on the economic life to have been overstated.

Likewise omens. The flight and calls of numerous birds, the actions and cries of certain animals, the occurrence of certain natural phenomena, are all regarded as prophetic and ominous by these jungle people. But it is a fact that during the three months in which the writer lived the everyday life of these people, no journey was ever postponed, no ricefield was ever abandoned, no work was ever laid aside for any other reasons, either observed by him or given as an excuse by the natives themselves, than reasons of utility, personal disinclination, or inclement weather. Not only was no ricefield abandoned after being selected, but no native to whom the question was put could refer the writer to anyone who had ever abandoned his field on account of inauspicious omens.

This is not to deny that these people do not consider themselves to be surrounded by a great spirit world, a world which for them contains many non-understandable agencies which can do many strange things. But this spirit world is of much greater importance to them in those phases of life which their limited knowledge precludes them from accounting for rationally—such phenomena as disease, sickness, birth, death, propagation—than it is concerned with the facts of their economic existence. True it is that when a man selects his field, omens are frequently consulted, that at planting time offerings are made to the spirits, and that at harvest a thanksgiving feast is held. But true it is also that a man selects his field not because the omens are right but because he sees in the plot chosen a suitable soil, an absence of stones and weeds and grass, the possibility of a fair crop, a possibility based not upon what the omens have said but upon his own past experiences with soil, weeds, and ricefields in general. Whatever help he can obtain from the unseen world of spirits in securing a good harvest by means of ceremonies and offerings he will gladly, hopefully, even fearfully put forth the effort to obtain, but he is neither so ignorant of the facts of life nor so oblivious of their practical operation as to believe that these spirits will fell the big trees in the jungle, or burn them, or plant his rice, protect it from the animals, weed it, and harvest it. Anyone who has watched a loin-clothed Dyak, armed with a small axe, attack a tree six feet in diameter and after an hour of perspiring labor, see him scurry for safety out of the way of the falling trunk, cannot come away from the scene with the feeling that here is a man whose every movement is regulated by some magical influence. Anyone who has seen one of them come home in the eve-
ning from his field, plunge into the river for a refreshing bath, consume great quantities of boiled rice, and stretch out on the floor of the long house balcony for a contented chew of betel-nut and lime, will not attribute to this man any inability to recognize and face the cold hard facts of existence, nor deny that he knows what work is and what it will bring him in the way of bodily sustenance at some future time, spirits or no spirits.

For two fortnightly periods the observer kept a day-by-day schedule of the activities of several individuals in the village where he lived, the better to secure an objective record of the everyday life. These accounts are embodied in the Appendix. Though the investigation was abruptly terminated and the records are regrettably inadequate in many respects, such as they are they fail to indicate any great number of external pressures which drive the individual to his work. And for those who maintain that such bare records can never reproduce the subtle influence of these extra-economic pressures the writer can only say that the records were kept as fully as his observation of the facts of every-day life seemed to warrant.

APPENDIX

The following pages are the records of activity of six men and one woman of the Siang village of Nono Kliwon for two fortnightly periods during the season devoted to the preparation of the jungle ricefields. The continuity of the records is broken by an unavoidable absence of a week which detracts somewhat from their already meager value as an account of primitive occupation, but the records are appended as a sample of what may be done with such data kept over a yearly or longer period for a large number of individuals. Besides the concrete information which such records furnish, the data lends itself readily to statistical manipulation and analysis.

It is, of course, often difficult to record with exactness in such large units as a day every activity an individual engages in every twenty-four hours. An hourly unit would furnish a much more exact picture, but the returns from such minute tabulation are probably incommensurate with the added effort required. This difficulty is not a very real one in a record of Dyak activity except with regard to those days on which the individual remains at home. It must be pointed out, there-

---

20 Attention is invited to the records of the Appendix as a method of securing objective information on primitive economic activity. Such a record maintained over a long period of time for a large number of individuals, men, women, and children, would provide an excellent framework for the consideration of the life of a primitive community. Firth has called attention to the need of such records in the following words: "But as a note for the field-worker, it may be here remarked that a most valuable ethnographic document would be a diary of native work from day to day, extending over a long period of time—say a complete year. This would provide most useful data in regard to the organization of activity and the seasonal distribution of occupation" (Primitive Economics of the New Zealand Maori, p. 56).
fore, that in the following records the designation "at home, resting," does not mean necessarily that the man on that day did not devote any of his time to any gainful occupation, but merely that the major portion of the day was spent in leisure; likewise, a man "at home, working," was not necessarily employed during all the hours he remained in the village.

The records are roughly accurate of the individual activity and are based not only upon the recorder's observation of what the man was doing but also upon what the man considered himself to be doing on the particular day. No attempt was made to begin the records until the observer had become well enough acquainted with the customary activities of the village and with the individuals selected to be able to keep the record by personal observation as well as on the testimony of the people themselves.

Several interesting things suggesting further investigation are brought out in the recapitulations. The chief of the village spent ten of the twenty-eight days hunting wild pig in the jungle, while Tatak, whose diet consisted in pork as much as did the chief's, did not hunt a single day, but spent double the amount of time the chief did in the ricefields. Almost a third of the time of the medicine man Seetak during the four-weeks period was devoted to ceremonials for the cure of the sick, yet for this he received no remuneration except one small gift of rice and on two occasions, when he performed at other villages, his meals. Medan spent eleven and one-half days at home resting but only two in the ricefields. This reflects not only the fact that Medan had his field on a plot that was used the previous year and hence the work was not so pressing, but also a certain streak of indolence which the writer observed in him.

Unfortunately, due to the abrupt termination of the investigation, the recapitulations were not made up until after the writer's departure from the field. Hence the many problems suggested by them could not be pursued further at the time. It would be especially interesting to have the records complete enough to demonstrate the actual working out of the labor exchange system among these people.

The record for Liwoei, the only female record obtained, is but a poor sample of the work performed by the women. Most of the women who, like Liwoei were without small children, spent much more time in the ricefields than did Liwoei, whose man was a very good worker. Those with small children were at home practically all the time, as were the old women.

**Records of Activity**

**Tatak (male):** age about 50, married; wife and grown son.

<table>
<thead>
<tr>
<th>Date</th>
<th>How Occupied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug. 24</td>
<td>Working in his own ricefield</td>
</tr>
<tr>
<td>25</td>
<td>Ditto</td>
</tr>
<tr>
<td>26</td>
<td>Ditto</td>
</tr>
<tr>
<td>27</td>
<td>Working in Oeke's ricefield (hando)</td>
</tr>
<tr>
<td>28</td>
<td>Working in his own ricefield</td>
</tr>
</tbody>
</table>
29  Ditto
30  Home, resting (made strap for knife)
31  Working in his own ricefield

Sept.  1  Ditto
  2  Home, resting; wife’s uncle visiting from another village
  3  Home in a.m., resting; his own field in p.m.
  4  Home, resting, half day; his own field half day
  5  His own ricefield
  6  Sahadan’s ricefield (haweh)
7–12  No record (observer absent from village)
  13  Home, resting
  14  Home; helped Kenting make coffin for dead baby
  15  Home; assisting Kenting (other work taboo)
  16  His own ricefield
  17  Home, resting
  18  Ditto
  19  Sahadan’s ricefield (haweh)
  20  His own ricefield
  21  Ditto
  22  Half day his own ricefield; home resting half day
  23  Half day his own ricefield; home half day—sick
  24  Home—sick with dysentery
  25  Ditto
  26  Ditto (on his mat in the long house all day)*

Recapitulation

Number of days working in his own ricefield.............................. 12½
Number of days working in others’ ricefields............................ 3
Number of days hunting in jungle........................................... 0
Number of days home, resting.................................................. 6
Number of days home, but working.......................................... 3½
Number of days home, sick...................................................... 3

Total........................................... 28 days

* Tatak died a week later.

Daka (male): age about 40, married; wife and grown son; chief of village.

Date  How Occupied
Aug. 24  Hunting wild pig (alone); got three
  25  Working in his own ricefield
  26  Working in Oeke’s ricefield (hando)
  27  Ditto
  28  Hunting wild pig (with Medan)
  29  His own ricefield; home 4 p.m., went fishing
  30  Hunting wild pig (alone); got one
  31  His own ricefield
Sept.  1 Tatak's ricefield (haweh)
      2 Home, resting, half day; own ricefield half day
      3 Hunting wild pig (alone); got none
      4 Home half day; half day in own ricefield, which is finished for burning
      5 Home, resting
      6 Hunting wild pig (alone)
7–12 No record (observer absent from village)
      13 Hunting wild pig (with Tolong and Medan); got one
      14 Home, resting; helped repair observer's quarters
      15 Home, resting; Kenting's baby's funeral (work taboo)
      16 Hunting wild pig (alone); got one
      17 Home, resting
      18 Ditto
      19 Ditto
      20 Working in Aboen's ricefield (haweh)
      21 Hunting wild pig (with Odoh); got one
      22 Hunting wild pig (alone); got none
      23 Fishing; brought prahu from down the river
      24 Mended fish net; cooked out jungle oil for preserving fish-nets
      25 Hunting wild pig (with Tolong and Medan); got one
      26 Repairing prahu; home all day.

Recapitulation

Number of days working in his own ricefield ......................... 4
Number of days working in others' ricefields ....................... 4
Number of days hunting wild pig in jungle .......................... 10
Number of days at home, resting ..................................... 4
Number of days at home, working .................................... 6

Total .................................. 28 days

MEDAN (male): age about 35, unmarried; lives with unmarried sister; assistant chief of village.

<table>
<thead>
<tr>
<th>Date</th>
<th>How Occupied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug. 25</td>
<td>Working Daka's ricefield (hando)</td>
</tr>
<tr>
<td>26</td>
<td>To Moeara Toepoeh to see Malay trader about debt</td>
</tr>
<tr>
<td>27</td>
<td>Home, resting</td>
</tr>
<tr>
<td>28</td>
<td>Hunting wild pig (with Daka)</td>
</tr>
<tr>
<td>29</td>
<td>Home, resting</td>
</tr>
<tr>
<td>30</td>
<td>Hunting wild pig (alone); got one</td>
</tr>
<tr>
<td>31</td>
<td>Home, resting</td>
</tr>
<tr>
<td>Sept. 1</td>
<td>Home, resting</td>
</tr>
<tr>
<td>2</td>
<td>Home; helped in cleaning up village for inspection</td>
</tr>
<tr>
<td>3</td>
<td>Home half day, resting; half day in jungle</td>
</tr>
<tr>
<td>4</td>
<td>Home, resting</td>
</tr>
<tr>
<td>5</td>
<td>Ditto</td>
</tr>
<tr>
<td>6</td>
<td>Half day in ricefield; half day at home, resting</td>
</tr>
</tbody>
</table>
7–12  No record (observer absent from village)
13  Hunting wild pig (with Daka); got one
14  Home, resting; helped repair observer’s quarters
15  Home, resting; Kenting’s baby’s funeral (work taboo)
16  Ricefield half day; home, resting, half day
17  Home, resting
18  Ditto
19  Went to Poeroek Tjahoe as coolie for writer
20  Ditto
21  Ditto
22  Ditto; returned from Poeroek Tjahoe afternoon
23  Home, resting
24  Ditto
25  Hunting wild pig (with Daka and Tolong); got one
26  Hunting wild pig (alone); got none

Recapitulation

Number of days working in his own ricefield ........................................... 1
Number of days working in others’ ricefields .......................................... 1
Number of days hunting wild pig in jungle ................................................. 5
Number of days traveling in other parts of Siangland ................................ 5
Number of days home, resting ................................................................. 11½
Number of days home, working ................................................................. 33½

Total .................................................. 27 days

Seetak (male): age about 45, married; blian (medicine man)

Date  How Occupied

Aug. 24   Home, resting
25  To Changkang to perform as blian for sick person
26  At Changkang
27  Ditto
28  Ditto; home 5 p.m.
29  Working in his own ricefield
30  Working in another’s ricefield (hando)
31  Ditto

Sept. 1  Tatak’s ricefield (haweh)
2  His own ricefield
3  Home, resting
4  Ditto
5  His own ricefield
6  Sahadan’s ricefield (haweh)
7–13  No record (observer absent from village)
14  Home, resting; last night performed for Kenting’s dying baby
15  Home, resting; Kenting’s baby’s funeral (work taboo)
16  Home, resting
17 Home, working on blian's paraphernalia
18 Home, resting
19 Home, resting, half day; half day performed as blian at Mapit's ricefield house
20 Aboen's ricefield (haweh)
21 To Tombang Bana for blian's performance
22 At Tombang Bana
23 At Tombang Bana; home in evening
24 In jungle gathering firewood
25 Home, resting
26 Ditto

**Recapitulation**

<table>
<thead>
<tr>
<th>Description</th>
<th>Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of days working in his own ricefield</td>
<td>3</td>
</tr>
<tr>
<td>Number of days working in others' ricefields</td>
<td>5</td>
</tr>
<tr>
<td>Number of days working in jungle</td>
<td>1</td>
</tr>
<tr>
<td>Number of days (or nights) performing as blian</td>
<td>8½</td>
</tr>
<tr>
<td>Number of days home, resting</td>
<td>7</td>
</tr>
<tr>
<td>Number of days home, working</td>
<td>2½</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>27 days</strong></td>
</tr>
</tbody>
</table>

**Tolong (male): age 23, married three years; no children**

<table>
<thead>
<tr>
<th>Date</th>
<th>How Occupied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug. 25</td>
<td>Working in Daka's ricefield (hando)</td>
</tr>
<tr>
<td>26</td>
<td>Tatak's ricefield (haweh)</td>
</tr>
<tr>
<td>27</td>
<td>Oek's ricefield (hando)</td>
</tr>
<tr>
<td>28</td>
<td>Pladong's ricefield (hando)</td>
</tr>
<tr>
<td>29</td>
<td>Djawa's ricefield (hando)</td>
</tr>
<tr>
<td>30</td>
<td>Home, resting</td>
</tr>
<tr>
<td>31</td>
<td>Working in his own ricefield</td>
</tr>
<tr>
<td>Sept. 1</td>
<td>Tatak's ricefield (haweh)</td>
</tr>
<tr>
<td>2</td>
<td>Ditto</td>
</tr>
<tr>
<td>3</td>
<td>Mapei's ricefield (haweh)</td>
</tr>
<tr>
<td>4</td>
<td>Hunting wild pig (with Oedoet and Nyaring); got two</td>
</tr>
<tr>
<td>5</td>
<td>Working in his own ricefield</td>
</tr>
<tr>
<td>6</td>
<td>Sahadan's ricefield (haweh)</td>
</tr>
<tr>
<td>7-12</td>
<td>No record (observer absent from village)</td>
</tr>
<tr>
<td>13</td>
<td>Hunting wild pig (with Daka and Medan); got one</td>
</tr>
<tr>
<td>14</td>
<td>Home, resting, half day; ricefield half day</td>
</tr>
<tr>
<td>15</td>
<td>Home, resting; Kenting's baby's funeral (work taboo)</td>
</tr>
<tr>
<td>16</td>
<td>His own ricefield</td>
</tr>
<tr>
<td>17</td>
<td>Home, resting</td>
</tr>
<tr>
<td>18</td>
<td>His own ricefield</td>
</tr>
<tr>
<td>19</td>
<td>Hunting wild pig (with Kenting); got one</td>
</tr>
<tr>
<td>20</td>
<td>Home nearly all day; two hours in ricefield</td>
</tr>
</tbody>
</table>
21 Working as coolie for writer
22 Ditto
23 Ditto; home in evening
24 Home, resting
25 Hunting in jungle (with Daka and Medan)
26 His own ricefield; clearing finished

Recapitulation

Number of days working in his own ricefield.......................... 5
Number of days working in others’ ricefields............................ 9
Number of days hunting wild pig in jungle............................... 4
Number of days traveling in Siangland.................................. 3
Number of days home, resting............................................ 3½
Number of days home, working............................................ 2½

Total......................................... 27 days

ABOEN (male): age past 50; married; wife, mother-in-law and two sisters-in-law in his house.
(Aboen an Ot-Danum Dyak from the Sampit River country to the west.)

Date How Occupied
Aug. 25 Working in his own ricefield (slept at field)
26 Ditto
27 Ditto
28 Ditto
29 Ditto (home in evening)
30 Ditto (slept at field)
31 Ditto
Sept. 1 Tatak’s ricefield (haweh)
2 His own ricefield
3 Ditto
4 Ditto
5 Ditto
6 Sahadan’s ricefield (haweh)

Note: The observer was absent from the village September 7-13. During his absence a falling tree so injured Aboen’s foot that Aboen was not able to work again during the writer’s visit. Though this record, hence, is not as adequate as the others, it is presented as evidence of Aboen’s industry during the thirteen days he was observed.

Recapitulation

Number of days working in his own ricefield.......................... 11
Number of days working in others’ ricefields.......................... 2

Total......................................... 13 days
Liwoei (female): age about 50, wife of Tatak; one grown son; sister of the chief.

<table>
<thead>
<tr>
<th>Date</th>
<th>How Occupied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug. 24</td>
<td>At home, pounding rice, cooking</td>
</tr>
<tr>
<td>25</td>
<td>Home in morning, house work; afternoon in ricefield</td>
</tr>
<tr>
<td>26</td>
<td>Tatak's field until 5 p.m.; pounded rice two hours in evening</td>
</tr>
<tr>
<td>27</td>
<td>Home, house work, pounding rice, etc.</td>
</tr>
<tr>
<td>28</td>
<td>Ditto</td>
</tr>
<tr>
<td>29</td>
<td>Ditto</td>
</tr>
<tr>
<td>30</td>
<td>Ditto; two hours in ricefield gathering javau</td>
</tr>
<tr>
<td>31</td>
<td>Ditto</td>
</tr>
<tr>
<td>Sept. 1</td>
<td>With Tatak in ricefield (cooking for haweh group)</td>
</tr>
<tr>
<td>2</td>
<td>Three hours in ricefield; home remainder of day</td>
</tr>
<tr>
<td>3</td>
<td>Home, house work, pounding rice, etc.</td>
</tr>
<tr>
<td>4</td>
<td>Ditto</td>
</tr>
<tr>
<td>5</td>
<td>Ditto</td>
</tr>
<tr>
<td>6</td>
<td>Ditto</td>
</tr>
<tr>
<td>7-13</td>
<td>No record (observer absent from village)</td>
</tr>
<tr>
<td>14</td>
<td>Home, house work, etc.</td>
</tr>
<tr>
<td>15</td>
<td>Home, helping with feast after burial of Kenting's baby</td>
</tr>
<tr>
<td>16</td>
<td>Home, house work, etc.</td>
</tr>
<tr>
<td>17-26</td>
<td>Home, house work, pounding rice, stripping rattan, etc.</td>
</tr>
</tbody>
</table>

**Recapitulation**

Number of days at home with house work, cleaning rice, weaving, stripping rattan, etc. .......................................................... 24

Number of days helping in ricefields .................................................. 3

Total .................................................. 27 days

**University of Arizona**

**Tucson, Arizona**