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"HOUSEBOARDS AND WARSHIELDS OF THE MOUNTAIN-OK,
CENTRAL NEW GUINEA: ANALYSIS OF AN ART STYLE."

VOLUME ONE.

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Honorarium in support of the 1967 fieldwork; and finally my wife, for making available her own fieldnotes and for encouraging me and supporting me financially for the last few months of writing this thesis.

CHAPTER I.I. INTRODUCTION

Mountain-Ok is a linguistic term coined by Dr. Alan Healey. Because the boundaries of certain features of material culture and social organization seem to correlate closely with the linguistic boundaries, it is convenient to use the linguistic term "Mountain-Ok" to refer to the culture and to the people.

Up until the establishment of Oksapmin Patrol Post in 1961, the whole of the Mountain-Ok area was administered from the Sub-District Office at Telefomin. In January, 1962, I arrived by aircraft at Telefomin as an Administration-employed teacher for the small Primary 'T' School on the government station area. At that time there were about 60 pupils enrolled, mostly children of administration native employees from the compound near the Sub-District Office. However, there was a small number of pupils in their teens boarding at the school who came from the various tribal and linguistic groups around Telefomin. It was the friendships developed with these lads that enabled me to pursue my interest in the areas from which they came and facilitated the survey-character of my field-work. In April, 1962, my wife joined me and she began the experience of orientation with a different purpose to mine - as a research student in Anthropology, she was concerned to understand Telefomin social organization.

We eventually established ourselves on the outskirts of Angkevip

(a village about two miles from the Sub-district Office), the better to win co-operation from a reserved and dour people.

About the middle of 1963 I was in correspondence with B.A.L. Cranstone, Assistant Keeper of the Department of Ethnography, British Museum. His aim was to form a collection illustrating as completely as possible the material culture and technology of one of the groups of people in the Telefomin area and to support this with the fullest possible documentation. During his stay (December, 1963 - April, 1964) I was able to observe some of his methods and was ready for a suggestion by Mr. D. Miles - then Assistant Curator of Anthropology in the Australian Museum, Sydney - that a collection of Telefomin artefacts would be a useful adjunct to his Sepik Expedition planned for the latter half of 1964. I therefore began making a collection, recording the data I thought most interesting and taking hints from what I had seen of Cranstone's work. The research had little direction for, being a graduate in a Department where the study of material culture and art styles was not then in the curriculum (there is now a Pre-history section), I had no idea of the sort of investigations students of material culture were pursuing.

During this time I became interested in the carved and painted war-shields and house-boards in the area. I began systematically photographing, and recording data for, these objects. My line of enquiry bore a strong bias towards the sort of questions a social anthropologist would ask; for example, who assisted in the manufacture of the board at the various stages; what payment was given by the

owner for the assistance; who inherited the board, and so on.

I did not obtain systematic information of the meanings of the design elements - the people for a long time disclaimed that the designs had any meaning at all. But an alteration of the question from: "What does this design mean?" (gesturing at the whole design) to: "What does this design mean?" (pointing at a particular element of the design), brought immediate results. However, the fact that the one element often had more than one meaning and sometimes more than one meaning for the one informant, discouraged me from pursuing the matter. The Telefolmin denied any function other than that of house adornment for the houseboards, and the shields were carved and painted because it made them "look good", and because their forefathers did it.

In pursuit of a photographic record of these boards and shields, I visited all but one of the Telefolmin villages during 1964-5, four of the six villages of the Falamin, and most of the Ulapmin and Tilfalmin villages in 1964. I visited Oksapmin twice - once in 1964 and once in 1965. These trips were carried out during school holidays and I was never more than a few days in any area and mostly only an hour or two in any one village. Unfortunately, the detailed data I obtained for the Kialikmin villages close to where we were living were not obtainable for the other villages I visited. Whereas it was possible to catch the owners of Kialikmin houseboards at home sooner or later, I could not be sure that anyone would be present in a village I just happened to be passing through. The Patrol Officer

normally sends advance warning of such events as census-taking to ensure that there will be a good number of persons present when he arrives. I could not adopt the same approach and the nature of my employment made it impossible to follow on behind census patrols, although this would be the best way to overcome the problem.

Finally, such is the individuality of Telefolmin that for accurate information it was absolutely essential to speak to the owner of the houseboard or shield - seldom could anyone else tell me anything reliable about the item being investigated.

In February - May, 1965, I took part in the Australian Star Mountains Expedition ¹ and I was able to add a little more information from the Wopkeimin south of the Stars. Although the Atbalmin to the north of the Stars are said to have shields, we did not see any - I believe they were kept hidden from us.

I returned to Sydney in June, 1965. In January, 1967 ² I returned to Telefomin for four weeks to extend the area covered by my investigations, spending one week in the Elip valley, north of Telefomin, two weeks completing the Falamin villages and updating and checking the Telefolmin data, and a week in the Faiwolmin-Wopkeimin area at the headwaters of the Fly River in Papua. This brought the inventory of warshields, houseboards, and carved and painted house facades to over 300. I also obtained 540 rubbings of carved arrow

-
1. Financed by the members of the Expedition.
 2. Financed in part by a grant from the Wenner-Gren Foundation for Anthropological Research, in part by an honorarium from Professor Jean Guiart, and in part by myself.

foreshafts and etched smoking tubes and ear-tubes.

During January-February, 1968¹ I conducted an expedition to the Upper Sepik area. Based at Green River, I spent some three weeks on the Idam, August, October and Sepik Rivers, and a week in the Border Mountains. There were few shields - all that remained were of most recent manufacture. Some 350 rubbings of carved arrow foreshafts and etched smoking tubes were obtained. A collection of several hundred artefacts, including 125 stone tools, was assembled for further study in Sydney. I have been able to examine the ethnographic collections of the Australian Museum in Sydney, which provide a wealth of comparative data.

This thesis will be concerned with only the houseboards and warshields of the Mountain-Ok. I will not attempt to deal with other aspects of the art of these peoples. Elsewhere I hope to discuss the designs carved on arrow fore-shafts and black-palmwood spatulate clubs, (Plate 20). and etched on bamboo ear-tubes and smoking-tubes. My present feeling is that the art-style expressed on these objects - particularly the arrows - will be found to have correspondences with the styles on similar objects throughout the Sepik District, as far as the North Coast. However, I am still preparing for this exercise and a forthcoming expedition to the Yellow, Sand, North and Hordern Rivers, east of the Border Mountains, should add considerably to the data already accumulated.

1. Financed largely by a grant from the Wenner-Gren Foundation for Anthropological Research, the balance by the members of the expedition (B. Craig, D. Balmer, G. Morren).

It will be obvious that this study suffers to some extent from throwing the net wide and I readily admit the necessity to do far more detailed work in certain localities. Only a detailed study will provide data to support, refute or modify the hypotheses put forward in this thesis. I offer them exactly for this reason.

NEW GUINEA

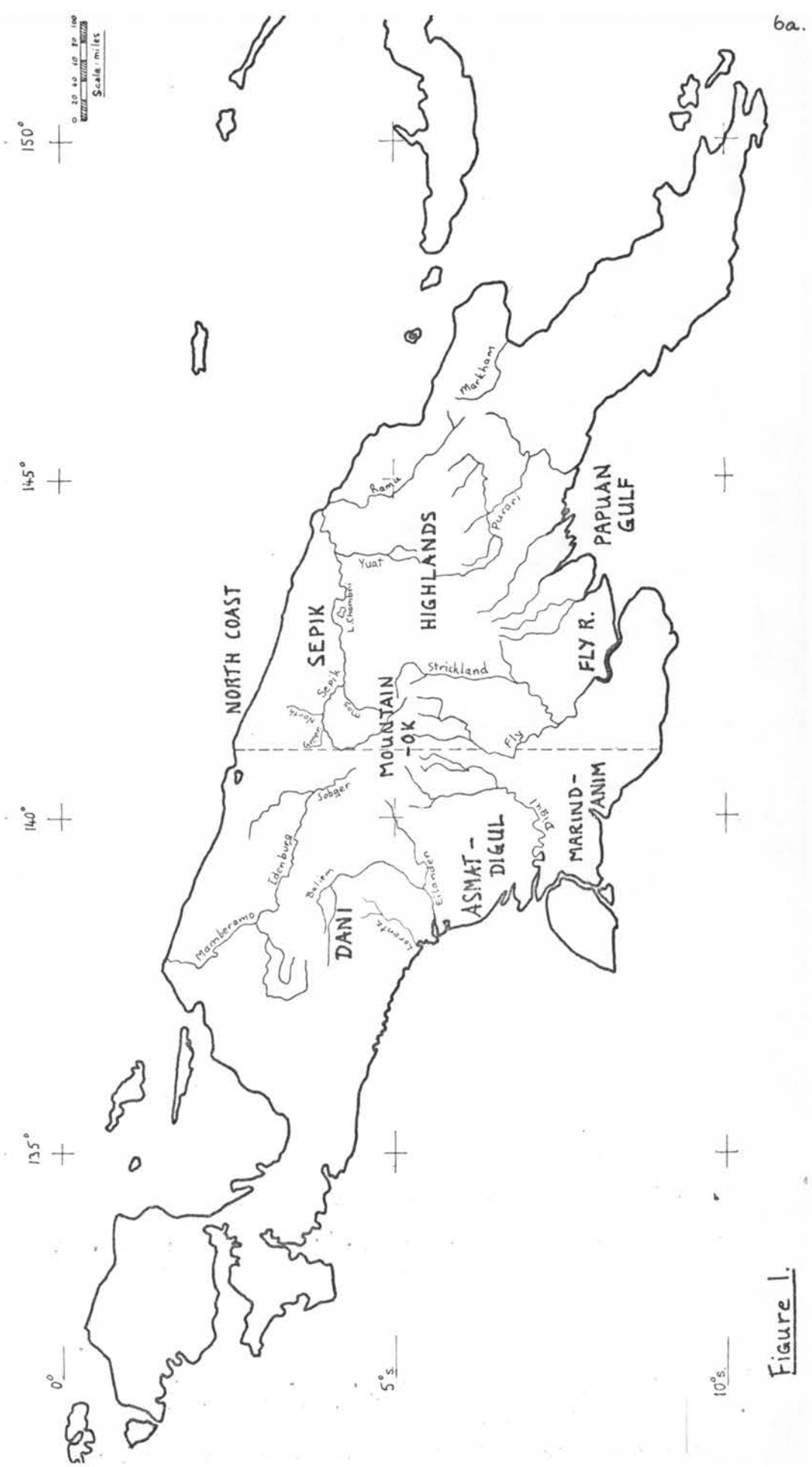


Figure 1.

6a.

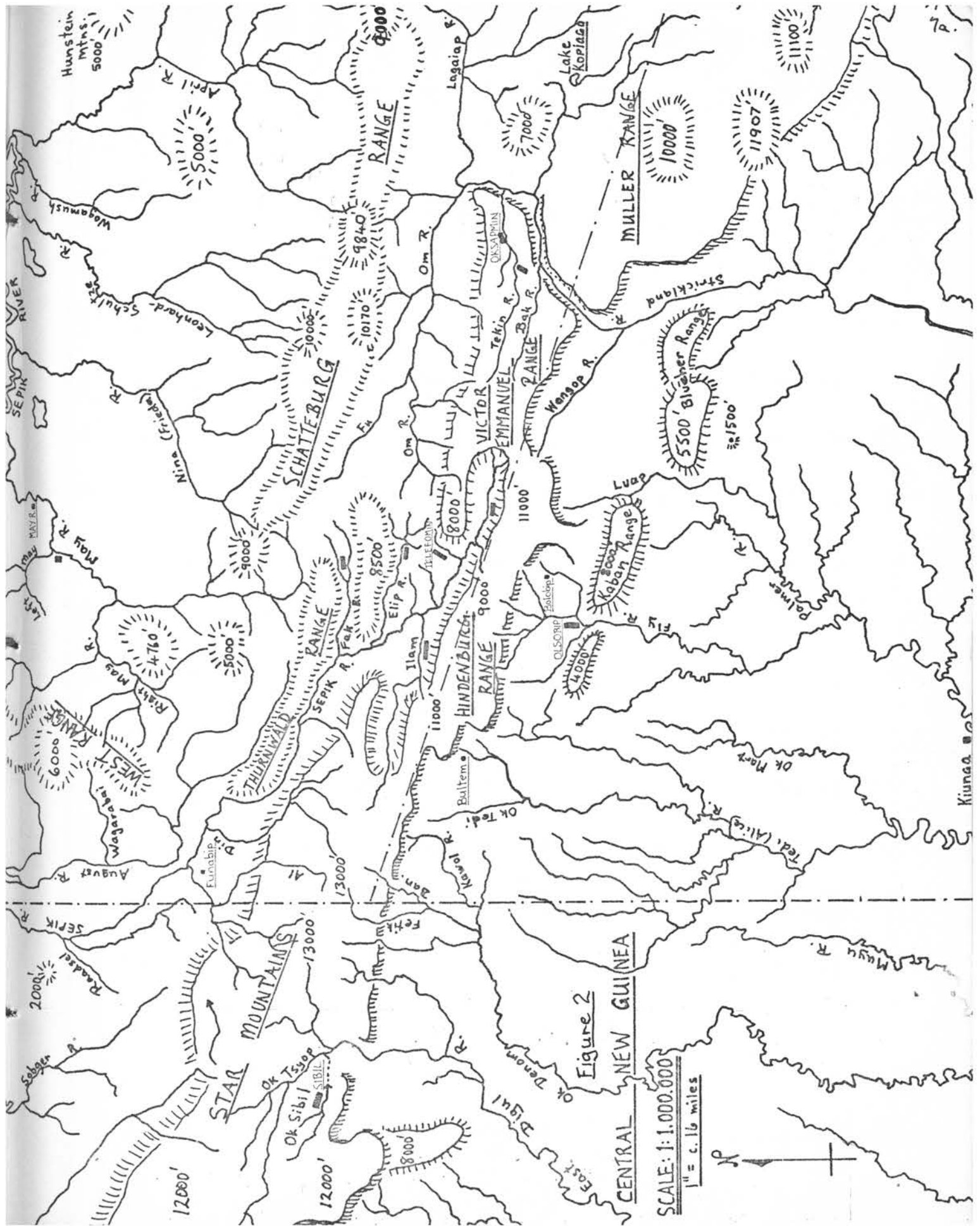
CHAPTER II.

II.1 THE GEOGRAPHICAL CONTEXT.

The three biggest rivers in New Guinea (Figure 1) have their sources close together in the Central Highlands near the geographic centre of the island and it is here that the Mountain-Ok dwell. Two of these rivers flow north: the Sobger-Idenburg-Mamberamo River, entirely in West New Guinea, and the Sepik River, chiefly in the Territory of New Guinea. The third, the Fly River, flows south through Papua. A fourth but smaller river, the Digul, has its source in the Star Mountains immediately to the west of the Fly headwaters, and flows through the southern foothills and plains of West New Guinea.

The Central Highlands constitute the most important physical feature of New Guinea. They form the high mountainous backbone, nearly 1,500 miles long, running from end to end of the island, and reaching heights up to 16,500' - the peaks of Carstenz, Wilhelmina and Juliana, in West New Guinea, are mantled with permanent snow. In the vicinity of the Sepik - Fly headwaters, the mountains rise to a maximum height of about 13,000' in the Star Mountains, and 11,000' in the Hindenburg Range.

Although the highlands are continuous throughout the length of the island and form a complete divide between the north and south-flowing drainage, they do not constitute a single chain but comprise a complex system of ranges of restricted length, separated in places by broad upland valleys. One such valley is that of the Upper Sepik



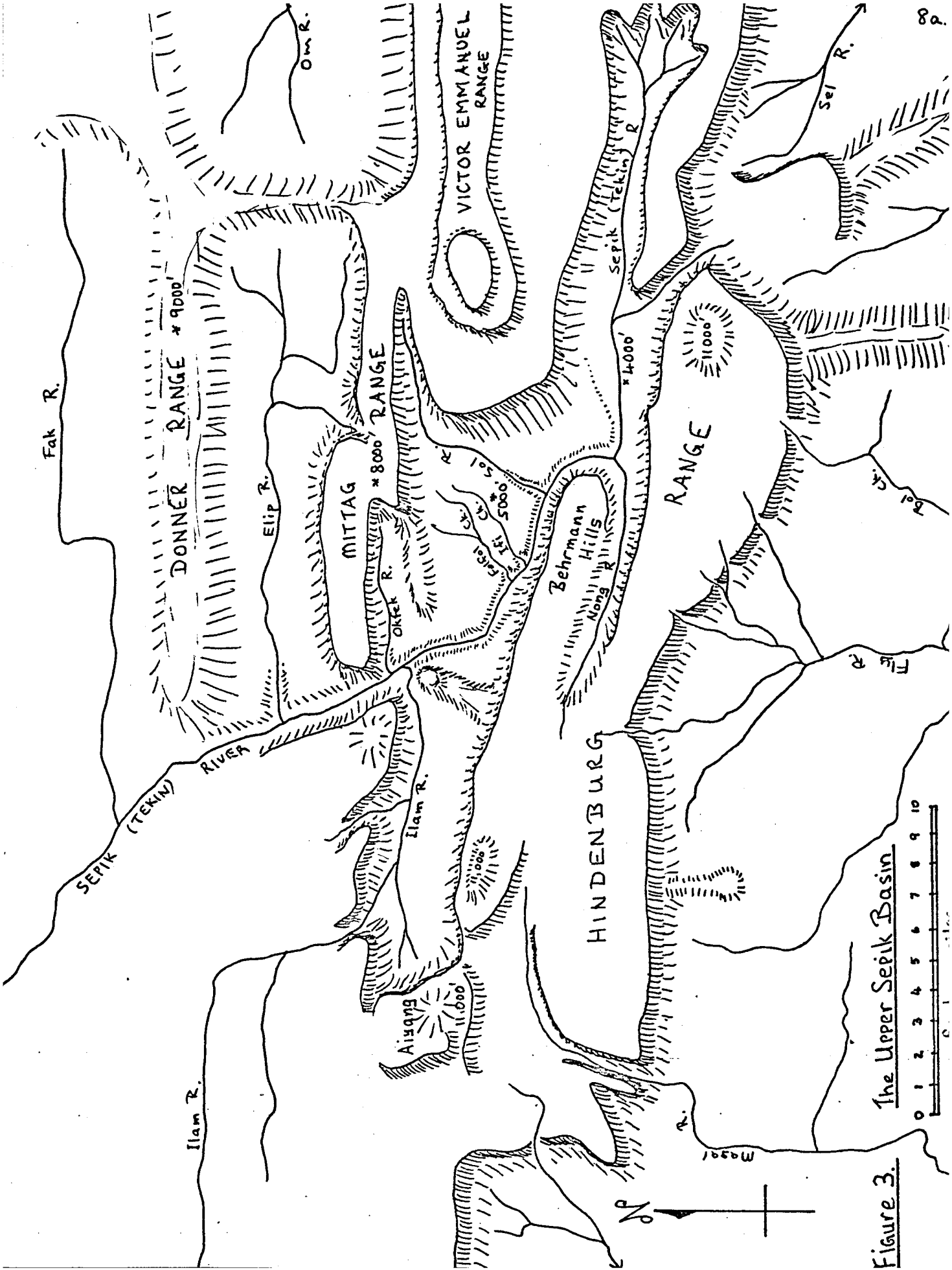
Basin, at an altitude of 4,000' - 5,000'.

There is generally a foothills zone of mountains of decreasing height and varying width along both northern and southern flanks of the central ranges, that have their greatest development along the southern flank of Western Papua, and to the north of the Thurnwald and Schrader Ranges where there is a gradual descent from the crest northwards to the Sepik.

In the south, above the junction of the Palmer and Fly Rivers, the country rises in a series of small ridges running approximately east-west, each higher than the last, until finally the crest of the Kaban Range is reached, varying between 3,000' and 8,000' in altitude. The northern face of this limestone range is sheer and it is this range that marks the southern boundary of the Mountain-Ok.

Ten miles to the north of, and parallel with, the Kaban Range are the Hindenburgs, a series of sheer limestone precipices thousands of feet above surrounding country, with crests nowhere less than 9,000' and in places over 11,000' above sea level. This massive wall merges with the Star Mountains at its western end, and at its eastern end curves away to the north-east to join other ranges and become the Victor Emmanuel Range.

It is in the valley twenty miles long, between the Hindenburg and Kaban Ranges, that the numerous headwaters of the Fly River converge to rush through a narrow gorge in the Kaban. Within this valley (Figure 2), inhabited by the Faiwolmin, is a maze of steep, heavily-



The Upper Sepik Basin

Figure 3.



wooded hills and razor-backed limestone mountain ridges rising from just over 1,000' above sea level to 5,000'. Other, somewhat differently structured, valleys lie to the east (drained by the Palmer headwaters and tributaries of the Strickland, and inhabited by the Seltamanmin) and to the west (drained by the headwaters of the Ok Tedi or Alice River and inhabited by the Wopkeimin).

The northern side of the Hindenburg Range is not sheer as is the southern face, but a steep slope down the dip of a syncline to the floor of the Upper Sepik Basin at 2,000' above sea level. This Basin, about twenty miles long from east to west and about eight miles wide at its widest point, ringed around by mountains 7,000' to 11,000' above sea level, is inhabited by the central Mountain-Ok groups - the Falamin, Telefolmin, Ulapmin and Tifalmin.

The Upper Sepik Basin (Figure 3) consists of three parts. The western section is the four-mile wide valley of the Ilam, dominated at its western end by the 11,000' Mt. Aiyang. The central section is the biggest and is bounded at its southern edge by the Behrman Hills, and to the east by the Victor Emmanuel Range. The third section, south-east of the main section, is at a generally lower altitude than the 5,000' grassy terraces of the central and western sections, and is the bottom of the syncline mentioned above.

The Tekin (Sepik) rises in the Victor Emmanuel Range to the east of the Upper Sepik Basin, flows along the axis of the syncline, is joined by the eastward-flowing waters of the Nong valley cradled between the Behrman Hills and the Hindenburgs, skirts the northern

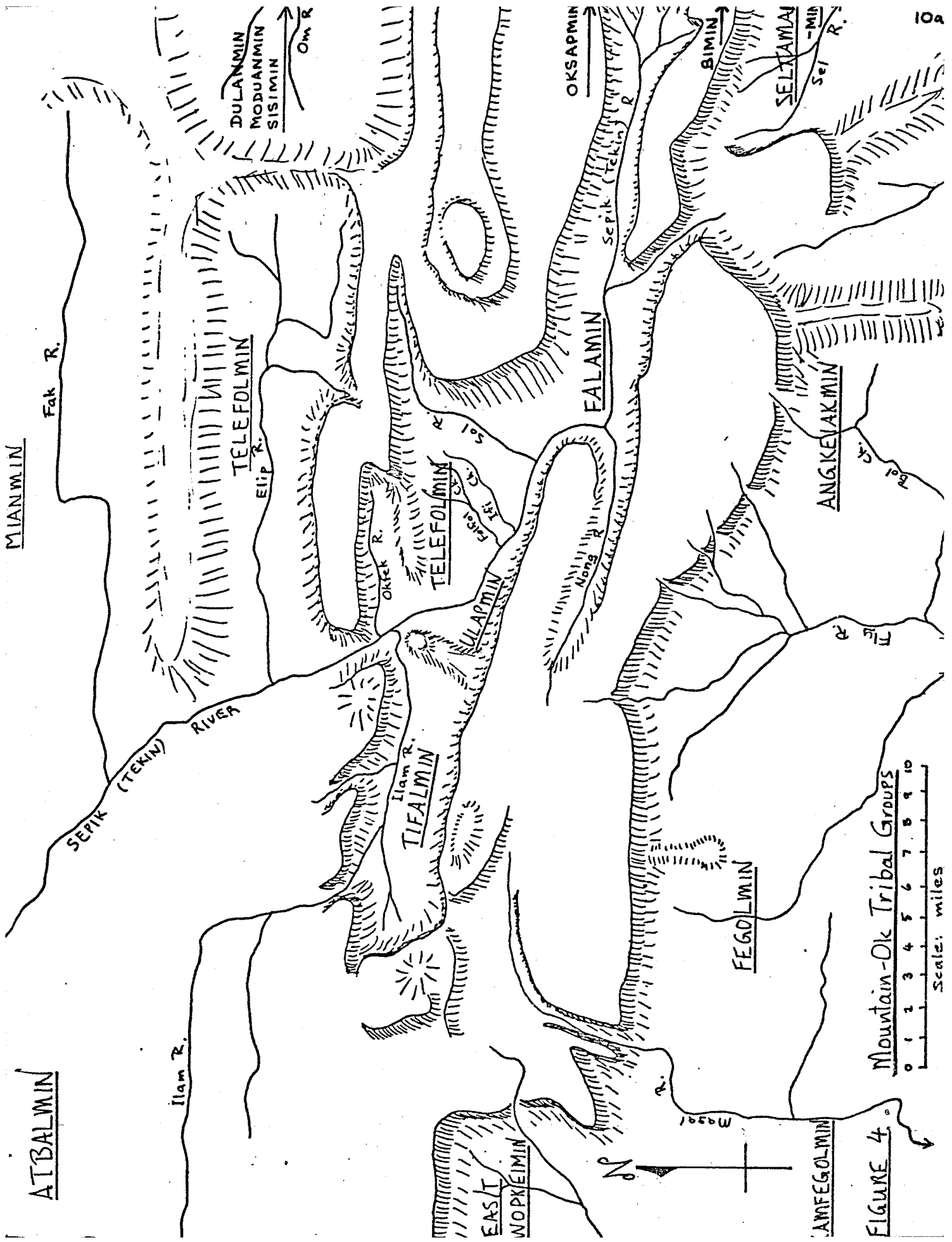
edge of the Behrman Hills, whereupon it turns north to its junction with the eastward-flowing Ilam. It then leaves the north-western corner of the central section of the Basin through a deep and narrow gorge.

In the central section of the Basin, the Sepik is deeply entrenched in the valley floor. To the north, the ground slopes up in huge grassy terraces to 5,000' above sea level, above which the forest-covered Mittag Range rises abruptly to 8,000'. This drops away steeply into the smaller east-west valley of the Elip (also inhabited by Telefolmin), the headwaters of which are separated only by a narrow ridge from those of the Om (Strickland) to the east.

The Strickland flows east for some thirty miles, is joined by the westward-flowing Lagaiap, and turns south to flow through a 5,000' deep gorge, a tremendous open gash across the Central Highlands. Between the Upper Sepik Basin and the Strickland Gorge are a number of east-west valleys in which live the Oksapmin, or Bimin, groups.

North of the Elip, over the 9,000' Donner Range, is the valley of the Fak, which flows parallel to the Elip into the Sepik. Beyond this lies an extensive tract of high mountain country drained by the May, Frieda and Leonhard-Schultze Rivers, the highest peaks being Mt. Stolle and the D'Albertis Dome at 10,000'. The Fak valley and the May and August River headwaters are inhabited by the Mianmin, and another Telefolmin group (the Ninataman Kasel) live on the headwaters of the Frieda.

Collecting the waters of the Elip and Fak, the Sepik



flows north, then north-west, along a narrow V-shaped valley, bordered on either side by precipitous heavily-wooded ranges, receiving most of its tributaries from the Star Mountains to the south, where live the Atbalmin groups. Close to the border with West New Guinea the Sepik, and its companion the August, spill out onto the Sepik plain and meander north to join near Green River. The Sepik continues eastwards, collecting the waters of the May, Frieda, Leonhard-Schultze and others on its way to the sea.

In the Star Mountains of West New Guinea live the Sibil and Kiwirok groups - on the southern flanks of the central range, in the highland valleys of the Sibil, Tsyop and Bon, and in the valleys drained by the Sobger and Sepik tributaries to the north.

II.2 THE PEOPLE.

The Mountain-Ok consist of several named groups of from 300 to 3,000 persons each ^{(Figure 4).} These names are characterized by the suffix "-min" meaning "people". Within these named groups - which could perhaps be called "tribes" - are other, smaller named groups not normally exceeding 200 persons living in one or more villages and/or hamlets. These names are also characterized by the suffix "-min", and for convenience we may refer to the lands occupied by such groups as a "parish". In this account, the status of a particular named group as a parish group or tribe may not be certain. This applies particularly to the Mianmin, Atbalmin, Wopkeimin, Fegolmin and Oksapmin groups,

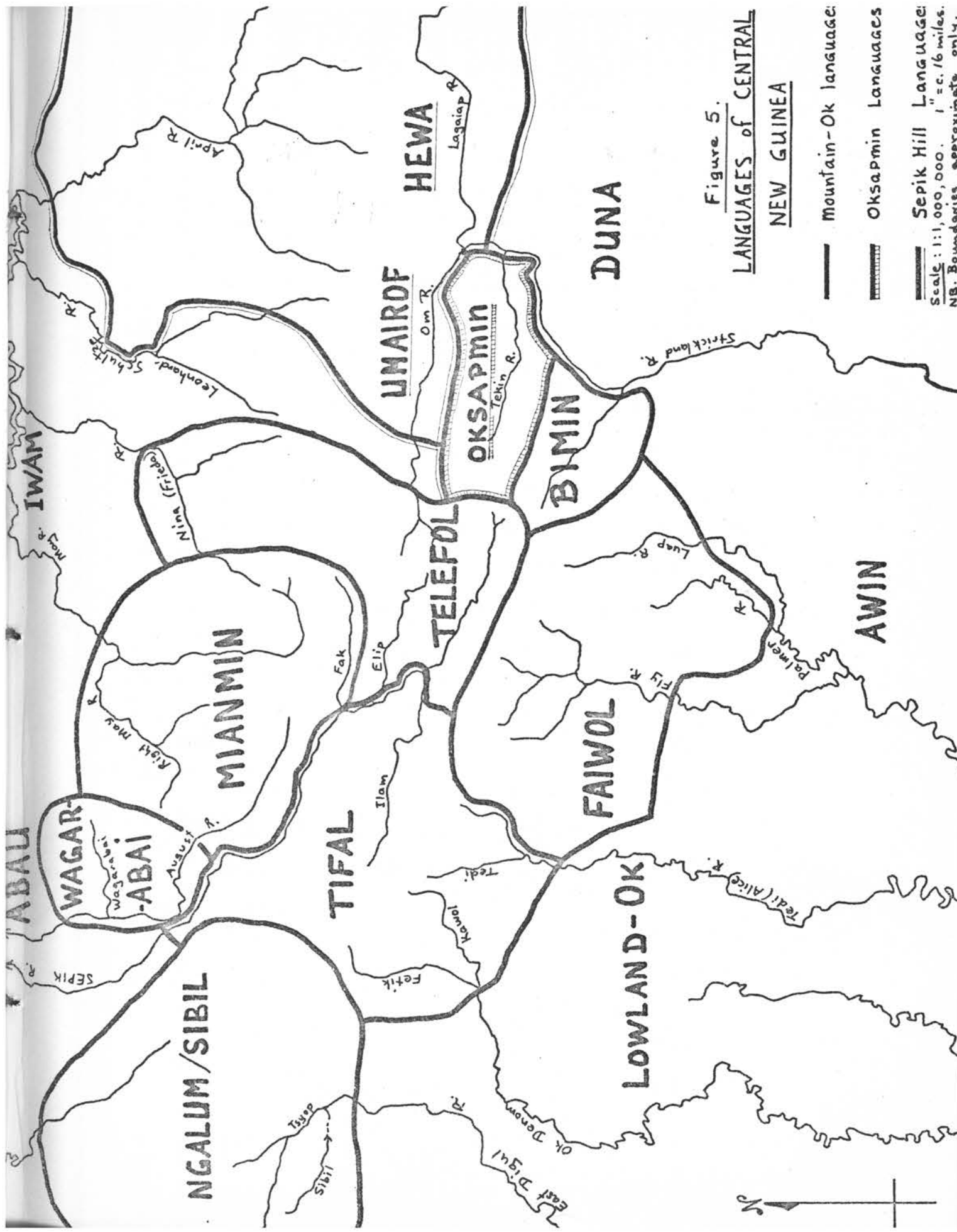
which are so named by the Telefolmin and do not necessarily represent the way the groups see themselves in relation to one another.

For example, the Telefolmin distinguish the Fegolmin from the Angkeiakmin to the south of them, whereas the Awin (a Lowland-Ok group to the south of the Fegolmin and Angkeiakmin) refer to both groups as Faiwoimin. The Angkeiakmin distinguish themselves from the Fegolmin; but the Fegolmin do not normally refer to themselves as such, but use the names of their constituent parishes, such as Atemkiakmin, Ningkilimmin and so on. The status of the Kamfegolmin (Fegolmin who live on the Kam River) as a tribe or parish-group is not certain.

Similarly, the Mianmin are probably called such only by the Telefolmin and perhaps refer to themselves as such only when talking to Telefolmin or to Europeans.

The Atbalmin are even less understood, for they consist of several groups some of which bear the same "parish" names and have for convenience been distinguished by numbers, for example, Wimulapmin 1, Wimulapmin 2, and so on. These like-named groups are not contiguous and this perhaps indicates a recent pioneering of virgin country, with groups breaking up into several branches, scattering over the territory available.

It should be noted, then, that the terminology used is to a large extent that used by the Telefolmin and adopted and perpetuated by Administration personnel, and reservations must be held concerning



The map displays the following language regions in Central New Guinea:

- NGALUM/SIBIL** (Southwest)
- WAGAR-ABAI** (Northwest)
- MIANMIN** (West)
- TIFAL** (Central West)
- TELEFOL** (Central)
- OKSAPMIN** (Central East)
- LUNAIROF** (North Central)
- HEWA** (North)
- BIMIN** (East Central)
- DUNA** (North East)
- FAIWOL** (East)
- LOWLAND-OK** (South East)
- AWIN** (Far East)

Key rivers shown include the Sepik R., Iliw R., Fak R., Elip R., Tedi R., Kaval R., Fetik R., East Digul R., OK Denom R., Tedi (Alice) R., Fly R., Luap R., Polmer R., Strickland R., and various regional rivers like Apni R., Leonhard, Schultz, Nina (Friede), and Wagar.

the status of the various named groups in relation to one another.

II.3 THE LANGUAGES.

The languages of the Ok Family are spoken by perhaps 50,000 persons inhabiting the geographic centre of New Guinea. Healey (1964:38) suggests: "These languages may be divided into two sub-families on purely linguistic grounds but this division also correlates well with topographical features. The Mountain-Ok Sub-Family includes at least six languages and perhaps ten spoken by a total of some 30,000 people. The Lowland-Ok Sub-Family includes at least three languages, and perhaps five. These are spoken by a total of almost 20,000 people, most of whom live in the swampy and low hilly country between the Kao River and the Tedi (Alice) and Fly Rivers."

The Mountain-Ok Sub-Family (Figure 5) may be divided up as follows (1964:38 f.f.):

DIVISION A : Telefol, Tifal, Faiwol, Setaman, Bimin.

DIVISION B : Mianmin, Wagarabai.

DIVISION C : Ngalum, Sibil.

Additional data may lead to a reclassification of DIVISION C as another Sub-Family rather than as a part of the MOUNTAIN-OK Sub-Family.

In the following brief description, letter-codes are designated for those languages which will be used in the text of this thesis, for ease of reference. Population figures are as given in the 1968 Village Directory.

TELEFOL (TL) is spoken by the Telefolmin living in the central section of the Upper Sepik Basin (Sometimes called Ifitaman), as well as in the Ilib (Elip) and Nina (Frieda) valleys to the north. A dialect of Telefol is spoken by the Falamin (Feramin) who live in the south-eastern section of the Upper Sepik Basin. Total Telefolmin speakers: 3767.

TIFAL (TF) is spoken by the Tifalmin people of the Ilam valley, the westernmost section of the Upper Sepik Basin. Dialects of this language are spoken by the Atbalmin living on the northern slopes of the Star Mountains, the Wopkeimin (Opkemin, Optimin) living on the headwaters of the Ok Tedi (Alice) and Ok Kauwol beneath the southern face of the Star Mountains, and by the Ulapmin (Urapmin) living on the south-western banks of the Sepik between the Tifalmin and Telefolmin. Many of the Ulapmin speak Telefol as a second language. Tifalmin-Ulapmin: 835; Atbalmin: 1,190; Wopkeimin: 470.

FAIWOL (FW) is spoken by the people living on the headwaters of the Fly and Palmer Rivers - from west to east:- the Imdalmin (Imdelmin), Fegolmin, Angkeiakmin (Inkiakmin), Gipmin, Wokfiakmin and Figalinmin. Speakers of Faiwol number 2,700 (including Seltamanmin).

SETAMAN is spoken by the Seltamanmin, on the headwaters of the Palmer River. However this may not be a separate language, but a dialect of Faiwol. These people are included with Faiwol speakers for Census.

BIMIN is the language of the people living in the valley of the

Wanggop River, a tributary of the Strickland. There may be 1,000 speakers of this language. These people are included with Oksapmin speakers for Census.

MIANMIN (MN) is spoken by people living in the Fak valley, north of Ilibtaman (Eliptaman), and around the headwaters of the May and August Rivers. Mianmin: 1,282.

WAGARABAI is similar to Mianmin and is spoken by an estimated 500 people living around the Wagarabai River, a tributary of the August, in the West Range.

NGALUM is spoken by the Ngalum people living in and around the valley of the Ok Nangul (Kiwirok), a tributary of the Sepik in West New Guinea. The Kupel of the Ok Bi and Upper Sobger seem to speak a dialect of Ngalum. The people of the Ok Sibil, Ok Tsyop and Ok Bon speak another dialect of Ngalum (SB). A recent estimate numbers speakers of the three dialects of Ngalum at 15,000.

The OKSAPMIN language (OS) consisting of several dialects is spoken by peoples living in the valleys east of the Upper Sepik Basin. These valleys are drained by rivers flowing eastwards into the Strickland Gorge. Oksapmin (including Bimin): 4,276. Although the Oksapmin tribes share basically the same culture as the peoples speaking Mountain-Ok languages, their language is regarded by Healey as having the status of a separate Family.

"Oksapmin shows 17% possible cognates with Bimin, and an average of 7% with the other languages of the

Mountain-Ok Sub-Family. These figures show exactly the characteristics to be expected if it is posited that Oksapmin is genetically unrelated to the Ok Family and that within the past millenium or so it has borrowed heavily from Bimin." (1964: 115).

The UMAIROF language is part of the Sepik Hill Language Family described by Dye et. al. 1968. Dialects of this language are spoken by the Morubanmin (Moduanmin), Sisimin, and probably Dulanmin, groups living on the Om (Strickland) headwaters. Population: 383.

According to the techniques of glottochronology, the degree to which two related languages share a basic morpheme stock may be taken as an index of the time that has elapsed since they separated. Of course, the degree of separation is an important factor and continued close contact between the two groups may slow down the process of linguistic divergence.

However, it is worthwhile quoting some tentative conclusions about the Mountain-Ok languages arrived at by Dr. Alan Healey (personal communication, 1965): "The total picture is that the Fegolmin, Tifalmin-Atbalmin and Telefolmin split up about 2,000 years ago into these three groups. Soon after that, Wopkeimin appeared as a separate group, either as a result of interaction of the Fegolmin and Tifalmin or perhaps as a fourth group 2,000 years ago Then about 700 years ago the Tifalmin-Atbalmin group split into their two sections,

and some of the Atbalmin living near the Telefolmin, and the Tifalmin living near the Telefolmin (i.e. the Ulapmin) were somewhat affected by this Telefol influence. Also about 700 to 1,000 years ago the Fegolmin group split into its present several dialects About 300 years ago, Telefolmin split into Telefolmin proper and Falamin It seems most likely to me that the forebears of the present Telefolmin people have been in the Ifitaman valley at least 1,000 years and probably 2,000 years the headwaters of the Sepik around Telefomin is the obvious centre of dispersal

The languages of the Lowland-Ok sub-family are spread along several lowland rivers, and there are several strands of evidence suggesting their centre of dispersal may have been on the western tributaries of the Ok Tedi (e.g. Ok Birim) in the Indonesian-Papuan border area at about 5⁰30[±] The Family as a whole began to split up about 5,000 years ago The data on surrounding languages are meagre, but some of them show up to 10% similarity in vocabulary. These may all be loanwords, but some look like inherited cognates. So far as I know, all of these possible distant relationships (10,000 years?) are with languages to the south and west of the Ok Family area."

CHAPTER III.

III.1 THE COMING OF TABALASEP.¹

There is no evidence that any of the Mountain-Ok were aware of the existence of aliens, or had obtained any goods of alien origin, until the German-Dutch boundary expedition of Dr. Leonhard Schultze-Jena penetrated Atbalmin territory in 1910 to ascertain that the Sepik (Kaiser-Augusta-Fluss) had its source in the Victor Emmanuel Ranges of German New Guinea, not in Dutch New Guinea as was previously thought (Schultze-Jena 1914).

In 1912-13, a German scientific expedition, conducted by Dr. Walter Behrmann, explored the Sepik and its tributaries. His last major camp was at the junction of the Sepik and Berg (August) Rivers. Dr. Thurnwald later continued beyond this camp and followed the Sepik to the Upper Sepik Basin.

Evidently Champion (1966: 180) did not realise that Thurnwald went as far as he did:-

"We had with us a photographic copy of a map made by Dr. Thurnwald which shows this river (the Clear River). Apparently he went a few miles above the junction because from there towards the source, the supposed course of the

1. Tabala is almost certainly derived from the Motu word taubada. Motu is used in Papua as a lingua franca and taubada means 'master' with reference to the white man. No doubt the Telefolmin obtained the word from Karius' and Champion's carriers and police. -sep is a common Telefolmin name-ending.

Sepik is shown by a dotted line. We had at last connected with the farthest point reached by an expedition from the northern side of New Guinea. Later we had an opportunity of seeing his map and found this river to be called the East, and the Grey the Donner." ¹

From Thurnwald's detailed account (1916) however, there is not the slightest doubt that he attained the Upper Sepik Basin with its open valley and relatively heavier population. Behrmann (1924: 162 translation) also confirms this:

"Population was lacking in the gap and in the slopes of the first range. There were only a few paths which gave evidence of them. Above all, hanging bridges over the streams are lacking. Only in the upper source basin do people appear in any quantity. Previously only the smoke of fires was seen. Only in this area were villages of small, four-cornered huts met up with on quite low pillars. There were many plantations. This population, living far from navigable rivers, naturally is completely dependent on the yield of the land, and is distinguished very greatly in this respect from the river or swamp population in the rest of the area. This population has established paths through the forest, which cross the ravines on artistic bridges. The people are small

1. The Clear or East River is the Ok Fak, and the Grey or Donner is the Ok Elip.

(1m.55cm.) and carry a great deal of cane decoration around their loins

The map included in Behrmann's 1924 article shows camps and route established by Thurnwald, the last camp being on the west bank of what is probably the Sol River, dated 19th-20th November, 1914. He gives some village or group names which are recognisable as names currently in use, for example, Bugilmin = Bogalmin; Faram = Falamin.

Campbell (1938: 233) also thought that Thurnwald had reached the Upper Sepik Basin:-

"From the base at the Yellow River one member of the party, Dr. Thurnwald, set off with only fourteen native carriers and made a most remarkable trek of over 100 miles through unknown country to the grass plateau of the Upper Sepik valley, and thus achieved the distinction of being the first to discover the headwaters of the river."

The Telefolmin give an account of a white man coming from the direction of the Sepik at about that time (judged by reference to the childhood experience of a certain aged man). This could have been none other than Thurnwald. They report that Thurnwald, whom they called futmin, stayed one night in their territory and crossed the Sol River and stayed one night in the Ninipil area - at that time, Falamin territory. He then returned down the Sepik from whence he had come.

Apparently the Telefolmin were wary of the white stranger but some of the bolder youths brought food to the camp and received knives

and other goods in payment. One of these youths - Binengim - about twelve years old at the time, told us that he had given a stick of sugarcane for which he received a small knife. He did not know what it was for and experimented with it for some time before ascertaining its use.

It is by reference to this first appearance of the white man among the Telefolmin that the age of many houseboards and warshields may be ascertained.

The Fly River was discovered in 1845 by Captain F.P. Blackwood, R.N., of H.M. Surveying Ship, 'Fly', but apparently he did not investigate the river.

D^oAlbertis, an eminent Italian naturalist and explorer, made three trips up the Fly in 1875, 1876 and 1877. He discovered the tributary which he called the Alice, and he named the Victor Emmanuel Range. Four stone adze blades he collected on 20th June, 1876, at a village above the Fly-Palmer Junction are identifiable as fubi blades of the Mountain-Ok (D^oAlbertis 1881, Vol. 2, figs. 7, 8, 10, 11 oppos. p. 132).

In 1890, Sir William MacGregor ascended the Fly to a point 610 miles from the mouth. He made an attempt to reach Mt. Donaldson by way of the Palmer but did not succeed. No contact was made with the Mountain-Ok (Annual Report of British New Guinea, 1889-90: 49-64).

Between 1913 and 1924, a number of Government patrols explored the Fly and Strickland Rivers in the area inhabited by the Lowland-Ok. A few of these people had seen white men before and, near the border,

were often in contact with Malay bird-hunters from Dutch territory (Annual Reports - Papua: 1921-22, 1922-23 and 1924-25).

Murray and Ray (1918: 41) report of the men on the Fly and Strickland Rivers; that they wore nuts as phallics; that their hair was "generally speaking string-dressed plaited into long ringlets, sometimes with cane or bark. Some of the people seen on the Strickland had caps of plaited string or grass." They note that the women wore the "fore-and-aft rami - that is, a grass petticoat covering the back and front but open at the sides." In Village A (300 miles up the Fly) women commonly wore a bark hood and cloak combined and in Village B (100 miles further on from Village A) the men were found wearing cuirasses of rattan (called trim) and possessing clubs of egg-shaped stone with the shaft through the longitudinal axis. Houses were built in piles and attached to trees and were loop-holed. They describe visitors from the mountains as being of small stature (1918:43).

In 1922, Leo Austen followed the Ok Tedi (Alice River) right to the base of the Star Mountains (Austen 1923:346), but his detailed report of the people and their culture was not published. During his trip of 1924, Austen saw two men who came from the mountains to the north - most likely Faiwolmin. It is likely, therefore, that Austen was the first to contact the southern tribes of the Mountain-Ok.

On Friday, 3rd December, 1926, Karius and Champion left Port Moresby on the Government vessel "Elevala". Their mission, described officially as the North-West Patrol, was to cross the central range

from the headwaters of the Fly to those of the Sepik. A tract of incredibly rough unknown country, thirty miles wide, lay across their path.

By May, 1927, Champion had befriended the people of Bolivip and explored the Luap, Bol and Feneng (Fly), and Karius had explored the Strickland and its tributary the Wangop, but lack of supplies, illness and sheer weariness forced them back. They arrived back at Port Moresby on 17th July, 1927.

A renewed attempt began from Port Moresby on 17th September. They followed Champion's route of the earlier part of the year and were welcomed by the friendly Angkeiakmin. Leaving Bolivip on 27th November, 1927, they stood on the southern rim of the Upper Sepik Basin four days later.

"Out into the bright sunlight we stepped to gasp at the sight before us. We were standing on a small grass plateau looking at what I thought was the most beautiful sight that one could ever wish to see. Several thousand feet below us was a great basin surrounded by mountains, and through this basin, bordered by casuarina trees, meandered a slow flowing stream. On a projecting rock stood Tamsimara pointing to the valley and calling 'Wok Takin! Wok Takin!'" (Champion 1966:161).

Two days later they camped among the Telefolmin and Champion notes (1966:172):

"Throughout our whole journey this Kelefomin plateau,

at an altitude of 4,877 feet, was the only place we saw where an aeroplane could land."

They did not stay but continued on through Telefolmin territory, crossing the Elip (Donner/Gray) and Fak (East or Clear). They crossed the Sepik into Atbalmin territory, carrying Champion delirious from a knee infection. The Atbalmin often fled from the aliens and the Patrol sometimes had to raid gardens to supplement its own meagre supplies.

In the vicinity of the Brücken (Din) River:-

"My bearers pointed out to me a tree with the marks of a steel tomahawk in it. It was the first sign we had seen of the presence of steel tools. Possibly axes had been left by the German expedition or handed through from coastal tribes, and now, no doubt, were treasured by their owners in this stone-axe land." (1966:187).

On the 23rd December, 1927, the Patrol came out of the mountains onto the flat forest country of the Sepik plain. They commenced rafting down the Sepik on the 18th January, 1928, and the next day met the "Elevela" near the October River junction.

A decade passed before the Telefolmin had their next visitors (Campbell 1938). To investigate rumours of valuable mineral deposits in the area embracing the Fly and Sepik headwaters, an expedition was organised on behalf of American and British mining interests. The leader was J. Ward Williams, accompanied by prospectors, Burke,

Kienzle and Korn, wireless operator Brown, aero-mechanic Savage, and Stuart Campbell - pilot of the Sikorsky Amphibian. A second pilot, Garden, joined them later.

After a good deal of aerial reconnaissance during 1935-36 it was decided that a ground party would walk into the Telefolmin area from the Fly River and select a site for an airstrip.

Burke, Korn and Kienzle left Base Camp on the Fly River and after ten days, by canoe and on foot, established an advanced camp above Flint Island on the Fly. After further preparations they left on 19th September, 1936, received an airdrop of rice at Bolivip and another on the north side of the Hindenburgs. By October 20th they were established on the swampy plateau of the Telefolmin area and commenced work on an airstrip.

Six days later Campbell landed on a narrow strip 40 yards wide and 400 yards long. From the camp established beside the airstrip, exploration on foot and by air was carried out over the next five months. They explored the Donner (Ok Elip) and Strickland (Ok Om) in November and part of the Sepik down past Casuarina Creek in December.

The following month a place on the August River (called the January River by this expedition) was selected as a landing site for the Amphibian, and a camp established there. The Brücken (Ok Din) and Hoffnungs (Ok Ilip) were investigated. Then, on February 23rd, 1937, a party left to follow the August upstream and made contact with a group of surly natives - probably Mianmin.

The prospectors crossed a divide to the May headwaters and made slow progress through rough trackless country, supported by airdrops, to reach the junction of the west and south-west branches of the May. Here Campbell landed in the Sikorsky and a camp was established from which further prospecting was carried out, but without success.

Although no mineral wealth was discovered, a great deal of ethnographic data was obtained (Campbell 1938; Kienzle and Campbell 1937-8). Stuart Campbell also made a collection of 124 items,¹ including three very fine shields,² which he presented to the Australian Museum in Sydney.

Only a year elapsed before the Telefomin had their next visitors. This was the Administration patrol of J.L. Taylor and J. Black. Leaving Mt. Hagen on 9th March, 1938, they passed westwards through Enga country to camp at Biviraka on the Lagaiap on the 1st April. The patrol took a southerly route down the Waga valley (a tributary of the Kikani River) rather than the northerly route down the Lagaiap. When it was evident that nothing would be achieved by continuing southward, Taylor decided to split the patrol. Black was to push westwards along the southern fall of the main range in an attempt to reach Telefomin where they knew there was an airstrip. Taylor was to return to establish an airstrip in Enga territory on the Yuat headwaters and from there proceed westwards to join with Black at Telefomin. A third part of the patrol

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1. Presented November 2, 1937. Museum register numbers these items E.44030 - 44104, several like items often being registered as one item.
 2. E.44031 - E.44033; see Appendix B: T W 8, T W 12, O W 5.

was to remain based at the Enga airstrip site.

Taylor pushed west, discovered Lake Kopiago, and arrived at the Strickland on 27th October. Here he discovered signs that indicated the passage of Black's patrol across the river at the same point. Black's bridge had evidently been swept away, so Taylor's men built another. At this point the river was 80 yards wide and at 1,250 feet above sea level. About the end of November, Taylor arrived at Telefomin where he met Black. Taylor does not mention the Oksapmin with whom he must have made contact, as he travelled to Telefomin via the Sepik headwaters. Oksapmin informants claim that they attacked Taylor (or Black?) and some of them were killed and injured by firearms, but there is no mention of this in the official accounts.

Black had established himself among the Telefolmin and "was much liked by the local people" (Taylor 1940:146). Taylor decided to reach the Sepik by travelling down the May River rather than by following the Sepik itself along the route taken by Karius and Champion. Black accompanied him as far as the headwaters of the May. Taylor reports (1940:146):-

"At Mianmin in the Thurnwald range we were fiercely attacked. Until then the journey from Wabag had been completely peaceful Early in the morning of the 17th December, a clever surprise attack was made upon us and a fine young man Kwinjil died almost instantly at the door of my tent. Four others were wounded. Two more attacks were made within the next hour but the police and carriers remained

perfectly steady and the attackers were driven off. None was killed as far as is known although it is believed that one was wounded ¹ After resting the wounded for a day or two we pushed on to the head of the May. Black and I spent Christmas together and then he returned to Kelafomin en route to Wabag by the mountain trail."

Taylor moved off down the May, wary of the hostile people on its banks, reaching the Sepik on the 13th January. The party barged down the Sepik to meet the "Sirius" at Yessan. They proceeded to Kopar at the Sepik mouth, rested a few days, then were taken by the "Sirius" as far up the Karawari as they could safely proceed. They took canoes further up the river, then commenced walking and reached the first Enga-speaking people on the 15th March, arriving at the Lai base (Wabag) on 1st April, 1939. Black arrived on the 16th. He had travelled from Telefomin via the Om and Lagaiap valleys, proving that the Lagaiap was a tributary of the Strickland. He had contacted the Heiwandagar (Hewa?) people of the Strickland-Sepik watershed. His journey of ten months had been without casualty. After further explorations from Wabag base camp, the patrol eventually arrived at Mt. Hagen on 19th June, 1939.

1. George Morren, working among the Mianmin, reports: "Black and Taylor came through USAREINMIN I spoke with a fellow there (the luluai) who participated in the attack (he gave a very graphic description of what a bullet does passing through a body - little hole in front, big hole in back)." personal communication 22/8/68.

One of Taylor's recommendations was the establishment of a police post at Telefomin to assist in opening up the area west of the Strickland.

In January, 1942, the landing of the Japanese at Rabaul and subsequently the rest of the north coast of New Guinea forced many civilians to escape to the Highland stations of Kainantu and Mt. Hagen, where they were picked up by aeroplane and evacuated to Port Moresby.

Eight men at Wewak, cut off from Madang, decided to escape by crossing from the Sepik to the Fly and thence to Daru. With the example of Karius and Champion, and armed with a copy of J.L. Taylor's report, Jack Thurston led the other seven, and eighty carriers, in another of New Guinea's epic journeys.¹

They ascended the Sepik by Administration launches, towing canoes, and reached the junction of the May on 24th April, 1942. They began the land journey on May 9th after getting as far up the May as they could by canoe.

On May 25th they stood looking down on the grass plateau of the Telefomin. They descended into the valley and remained there until June 4th, befriended by the villagers. They crossed the Hindenburgs to Bolivip in five days and rested there for four days. By July 23rd they were clear of the mountains and began making canoes and cutting sago palms for food.

1. The following account is reported in Champion, 1966:214-5 and is based on Champion's talks with Leonard Odgers, clerk at District Headquarters at Wewak, who kept a diary of the trek.

The river journey by canoe began on August 17th and they arrived at Madiri plantation, 100 miles up from the mouth of the Fly estuary, on September 19th - 133 days after beginning the trek from the May River.

Later on in the war, the Japanese were pushed back and the Allied forces captured Hollandia. An air route from Merauke on New Guinea's south coast to Hollandia on the north coast was established, and an intermediate base became necessary. The choice was between the Grand Valley of the Baliem in the Highlands of West New Guinea, or Ifitaman in the Upper Sepik Basin. The decision was in favour of the latter site because the Telefolmin had been contacted a number of times and found to be friendly, whereas little was known of the peoples of the Baliem.

Six C-47's released gliders above the Telefolmin. The gliders landed on the site of Campbell's small airstrip and disgorged men and equipment - bulldozer, grader, etc. Employing hundreds of the Telefolmin to assist the machines, the airstrip was re-established and Elsmore claims that it became an important base - not only as a haven for north-south flights but also for rescue planes.¹ However, Champion (1966:216) is skeptical about the significance of the base: "I do not know if the strip was ever used as an emergency landing ground; in its present state it hardly looked large enough for any but small aircraft." He adds that the post was staffed by members of the Australian New Guinea Administration Unit who patrolled to

1. Elsmore, 1945. Much of the small amount of information Elsmore gives of the Telefolmin is incorrect.

some of the outlying villages.

Dr. A. Healey (personal communication) provided the following additional details, some of which differ from Elsmore's vague account:-

"On 17th October, 1944, four gliders landed with 13 Europeans and 20 natives. The old strip was cleared by local labour in three days, then aircraft landed to evacuate some of the Europeans. Two further gliders came with earth-moving machinery, and later heavier planes with more equipment. Squadron leader Michael J. Leahy, R.A.A.F., was Officer-in-Charge of the job The strip was 3,300' long when completed. During this period several men of the area were taken for a visit to Hollandia. The project was completed on 7th February, 1945."

Champion, as Assistant Director of District Services and Native Affairs, landed at Telefomin in June, 1948. His mission was to "Select a site for a Government post ... in keeping with Australia's pledge to the United Nations to bring social and economic advancement, and ultimately independence, to the peoples of Papua and New Guinea" (Champion 1966:212).

Champion and Glindeman - an airport inspector for the Department of Civil Aviation - stayed two days surveying the airstrip and found that the bulldozers were repairable. Champion explained that the Administration intended to establish a patrol post adjacent to the airstrip and to this proposal the Telefomin seemed agreeable. Upon his return to Port Moresby, arrangements were made, "and before the

end of the year two patrol officers and their force of police opened the first civil patrol post at Telefomin" (1966:216).

III.2. EXTENSION OF ALIEN INFLUENCE.

The outpost at Telefomin assumed more significance the following year when it became apparent to Champion that Indonesia would occupy Netherlands New Guinea. He decided to place a line of patrol posts across Australian New Guinea adjacent to the border. Thus Vanimu was established on the north coast, Green River on the Sepik lowlands, Kiunga on the Fly River above D^rAlbertis Junction, with others at Lake Murray and on the Moorehead River on the south coast of Papua.

Simpson (1962:362) reports the reaction of Desmond Clifton-Bassett after the first official patrol in 1948: "It is difficult to imagine a useful purpose for the area, or the ultimate role of such a people in the Territory's economy."

About September, 1952, Colin Simpson visited Telefolmin for a few days. He gives an interesting account of his stay, although some details are inaccurate, particularly that no warriors in the Telefolmin area carry shields. ¹

1. Simpson, 1962:365. Another error is the caption to the colour photograph opposite p. 321 stating that the houseboard shown was in position on the amabem at Telefolip. In fact, it has always been on the amabem at Derolengdam and is currently (February, 1968) on the amabem at one of the Derolengdam off-shoots, Daldavip No. 1. It is Tel.2 in my Appendix B.

An incident occurred whilst he was there that foreshadowed the tragedy of 1953. He and the Patrol Officer, L. Nolen, were woken in the early hours of the morning by the police Sergeant who had just received notice that the men of the Elip valley intended to attack the patrol post. Nolen took the matter casually and nothing came of it at that time.

In November, 1953, Patrol Officer Gerald Szarka and Cadet Patrol Officer Geoffrey Harris, and two native police constables, Buritori and Purari, were attacked and killed. They had been conducting a census at Eliptaman and had split the patrol, Harris going to the eastern end of the valley and Szarka to the western end. Whilst Harris was camped at Tarapdavip Rest House four hours north of Telefomin, and Szarka was at the Misinmin Rest House, a hard day's walk from the patrol post, the Telefolmin struck. Early in the morning of the 6th, the three simultaneous attacks took place resulting in the death of the four men. The attackers were driven back and news carried swiftly to the patrol post where the resident Baptist missionary, Rev. Norman Draper, called by radio for assistance from Wewak.

The original plan, apparently, called for simultaneous attacks in Eliptaman and Ifitaman disposing of all the aliens, the destruction of the transceivers, and the obstruction of the airstrip with logs to prevent aircraft landing. Something went wrong at Ifitaman and Draper's life was thus spared.

The District Commissioner flew in to Telefolmin with other

Officers and a detachment of about 100 police. Months of patrolling were necessary to capture all those involved in the killings (Simpson 1962:374). On 7th July, 1954, at Wewak, the Administration brought 33 Telefolmin of Ifitaman and Eliptaman to stand trial for the killings (Quinlaven 1954:17). They were sentenced to death, but "the Australian Government commuted the sentences to 10 years imprisonment with hard labour, a penalty which I think was appropriate under the circumstances" (Champion 1966:219).

My discussion of the incident with the missionary for whom Rev. Draper was acting as a temporary replacement makes it clear that the incident was the climax of a considerable amount of provocation over the year or two before the killings, provocation that Szarka, at any rate, did not provide except in so far as he was an alien. In fact, he had not long taken over from Nolen when he met his death. The details of the grievances will not be given here but suffice to say that none of the published accounts do justice to the facts as stated by the Telefolmin themselves, a point Champion himself hints at:- "I think there were other reasons, too, though it is unlikely that the whole story will ever be known" (1966:219). Justice Gore's account (1965:Chapters 23,24) is one-sided and therefore dishonest. He tells us nothing about the motivations behind the murders because such would incriminate an officer of the Administration.

It seems that the incident has had a deep effect on the Telefolmin. I have found them to be dour and reserved, and not readily co-operative in matters involving aliens. Administration and Mission values are

not accepted by the majority of the population. Compromises are made when Administration officers give orders that cannot be disobeyed without penalty, and compromises are made to earn money to purchase goods at the Mission trade stores. Individual aliens have earned the respect - even liking - of the Telefolmin with whom they have come in contact, but the people regard these as exceptions and their acquired basic distrust is strengthened by every unhappy incident.

The men convicted in 1954 were released from prison and flown back to Telefomin late in 1962. Their relatives had prepared for their return by establishing their pig herds and preparing gardens for them.¹ Although most of them learned a trade whilst in imprisonment, so far as I know none of them sought employment at Telefomin or anywhere else. One of them, Domolokim_A,^(Plate 15) was offered a job at Rabaul, but he refused it and returned to a completely traditional mode of existence, rejecting clothes, Pidgin English and all but necessary contact with Europeans. He is now a kamokim ("big man") in his village but has avoided becoming officially recognised. He is also one of the most competent artists among the Telefolmin.

1. Their pigs and gardens had been taken over by kinsmen when they were arrested, and the preparations were by way of repayment for what had been taken in trust on their behalf.

CHAPTER IV.

IV.1. THE CULTURE.

No attempt will be made to present a comprehensive account of Mountain-Ok culture. It is not necessary for the purposes of this thesis, nor is it possible, for there are many aspects that have not been studied, or have been studied for one or two groups only.

Pouwer (1964:160 fn. 6) has already said: "The general cultural relationship between the Star Mountains and the Telefomin area which borders it on the east is so striking in many details that we are inclined to speak of one culture area."

From a comparison of the material collected by the Dutch Star Mountains Expedition (1959) with the published accounts of the Telefolmin material (Campbell, Kienzle and Campbell, Champion and Simpson), Kooijman (1962:32) concludes that, "... the area over which this culture extends is not confined to Netherlands New Guinea but continues eastwards into the mountain country of the Australian Territory, presumably over an area bounded in the north by the Thurnwald Range, in the south by the Williams Range and in the east by the Upper course of the Strickland river."

With both these assessments - although necessarily superficial at this stage - I find myself in agreement. I have available more evidence than either Kooijman or Pouwer had, but I will confine myself to three aspects of culture:- oral traditions, house types, and male

initiation rituals - as these are particularly relevant to an adequate understanding of the houseboards and shields as elements of culture. The aim is to demonstrate that the Mountain-Ok are a cultural entity with a high degree of homogeneity and thus may be distinguished from the peoples around them.

IV.2. THE CULTURE : ORAL TRADITIONS.

The most widespread myth is that concerning the foundation of the peoples of the area by the original ancestress, Afek.¹ The story, as given by the Oksapmin,² is as follows:

-
1. Afek: lit. "old woman". The account given by Quinlaven (1954) is much abbreviated and differs in many details from the accounts given to myself and my wife. Telefolmin myths often have three parts: a beginning, a middle, and an end; the beginning and the end are public knowledge, but the middle is highly esoteric and known only to those men who have been through a number of initiation ceremonies. In addition to this there are several versions, each one held by a particular named category of people. Membership of these named categories is claimed cognatically and constitute sects within the Telefolmin belief system, each having its own version of various myths.
 2. My Oksapmin informants included a Bimin lad whose mother was Falamin. He had spent long periods with his mother's brother at Falamin and although he was able to give me most of the details of the Telefolmin myth, I assumed his knowledge was acquired from his MB and not from an Oksapmin-Bimin corpus of knowledge.

There were three yowan.¹ One established the Oksapmin and Telefolmin; another established the Bimin and Faiwolmin groups; the third established the Om River tribes and the Mianmin.

The first was named Bogi or Kaga. She wanted to cross from the east to the west bank of the Om (Strickland), so her 'man' (brother or husband?) built a bridge with stones. He had almost completed it when a spirit began talking with Bogi, whereupon her hard-working 'man' became irritated and demanded to know what she was doing. Bogi replied that she wasn't doing anything. He shouted: "Come over here. I'm not going to bother completing this bridge. You sit around chatting to strangers whilst I work hard and then deny it. It is your fault that the bridge will not be finished."² Bogi therefore jumped across the gap and climbed the steep slopes of the Strickland Gorge to the valleys of the Tekin. She bore the Tarangmin, Oksapmin, and Tekmin. She then crossed north from the headwaters of the Tekin to the headwaters of the Om, over into Eliptaman, and then around to Telefolip where she established the Telefolmin. Bogi was responsible for building the first spirit-house (yowan-ap) among the Tekmin.³

The Telefolmin take up the story of Afek in no detail until she crosses the low divide between the headwaters of the Om and the Elip:
 'As she reached the mountains at the source of the Om, she let loose one of her pigs thinking that it would be a good idea if it became wild and multiplied so that her descendents could go hunting there.

-
1. Some Telefolmin informants claim that there were three Afek.
 2. A bridge has been maintained across the Strickland at this point, so I am informed, but I have not seen it myself.

As evening fell, she descended into the Elip valley and built a house for herself and her pigs, in the vicinity of present-day Afokavip. She remained there for some considerable time, bearing the original Iligimin population and establishing them. She bore children naturally or they were born of her urine and excreta.

In due course she took up her journeyings and travelled to Bolbil, thence to Duluntikin, overlooking Okfekaman. Part of the way down the mountain slope it began to get dark, so she decided to stay overnight in a near-by cave. She tethered her pigs at the opening. The next morning, as she was untying them, one got loose and ran away; it changed into a species of possum (teliok). As she was crossing Kalamtikin, a male piglet fell out of her carrying bag and disappeared down a crevice. She tore at the ground but was unable to locate it. She gave it up as lost, saying: "You will become a possum (species kuyam) and only old men may eat you."

She continued on down to the open flats near the Bon River. She was menstruating at that time and her blood became red earth. She decreed that men should rub this red earth onto the skin of their pigs, calling upon her name as they did it. This would have a beneficial effect upon the growth of the pigs so treated.

Travelling westwards, she eventually reached the banks of the Sepik and followed it downstream to its junction with the Elip. On the way a pig fell out of her carrying-bag but she did not notice until she heard a hopping sound behind her. Turning around, she saw that the pig had become a wallaby. She fired an arrow at it and pierced

its foreleg. This is why the wallaby has small forelegs.¹

The story continues in great detail, as above, but a precis will suffice:

¹Afek built bridges across the Sepik between Telefolmin and Atbalmin territory and between Telefolmin and Ulapmin territory. She founded the Ulapmin and then further west in the Ilam valley, she placed men and pigs there. She planted a garden for herself and continued westwards, leaving strict instructions that no-one was to interfere with her garden.

²Having thus provided for her return, she crossed the high range near Aiyang mountain and came to the headwaters of the great rivers flowing south. Here she founded the Wopkeimin from her camp at Bultemavip and established the spirit-house there. During this period she also established the Atbalmin.

³Her work completed, she returned to the Ilam valley to find that her garden had been interfered with and in her anger she killed a youth and the resulting conflict between her and the Tifalmin left the latter with many dead and their houses and land devastated. Afek took the body of the youth and sang victory songs as she carried it east through Ulapmin territory to the Sepik (where the present track crosses over a bridge to Bogalmin/Telefolmin territory). She paused in the vicinity of present-day Tumdeloltikin to assess the site for a village, but it was too difficult to find suitable building materials. Whilst she was there, her period came on. But it was not menstrual

blood but ten varieties of taro which came out of her vagina - these are known as Afek's taro. The details of this episode are a closely guarded secret and revealed only to adult male initiates. Should any unauthorised persons hear the story, the taro would be ashamed and run away - i.e. die out - and the people would die of starvation.

‡Afek continued on with the Tifalmin corpse till she came to a small rise beside the Ifi creek. Here she began to collect wood and stones to cook the corpse. Looking up, she noticed smoke rising from a garden to the south-east and spotted a man (a Nukokmin, the inhabitants of the Falamin area prior to its invasion by the Telefolmin) climbing a tree. She called out to him but he ignored her and so she cut down the tree and killed him with her bial-sanam (spatulate palm-wood club). Her motivations were to provide the Telefolmin with enemies: "They must not be without enemies; they must be able to fight."

‡Afek brought the body back to where she had left the Tifalmin corpse and put stones on a fire to heat. She then built a house at the present-day site of Telefolip. This house remains to this day and contains the relics of an ancestor who controls the weather.

‡She returned to her fire and butchered the two corpses, putting the meat on the hot stones to cook. She then went down to the Ifi to wash the intestines. Whilst thus busy, she noticed smoke billowing up from her fire and, running quickly back up the hill, found that a fire had been maliciously started by a rat (sinok) and a frog (suguan: Rana grisea). Afek attacked them with her bial-sanam and condemned

them to be eaten by women only. She attempted to contain the spreading flames but sparks set alight the bush in the Elip valley. She rushed over to Eliptaman and managed to quell the fires but by the time she returned to Ifitaman, the whole area was burnt out. She took the cooked corpses to her house and ate them.

'Afek then built the village of Telefolip - family houses, spirit-house, men's houses and menstruation hut. At this point Afek's "brother" is first mentioned. Afek and her brother lived at Telefolip for a long time and worked out the basic tenets of male and female roles. Eventually Afek decided to experiment to make man immortal. She killed her brother with magic but she was thwarted and thus man is destined to follow her brother through the stage of decomposition and death.'

It is not clear what became of Afek. Some say she left Telefolip and established other populations; others claim that she died locally and that her relics were preserved in the spirit-house at Telefolip.

The Mianmin version agrees in essentials with the Telefolmin myth,¹ 'The Mianmin call Afek Fitipkanip. She came to the head-waters of the Fak river and planted a taro garden. Some men came to her and told her that her sister - Dimoson - was about to die. Fitipkanip hurried to her sister's side and instructed that she was to prepare a path to the spirit-world for her descendents, otherwise their bodies would be eaten by dogs and other animals. Fitipkanip then returned

1. I have summarised the version reported by George Morren in an unpublished manuscript, 1968.

to the Fak and followed it down to its junction with the Sepik.

Following the Sepik upstream she built a number of bridges, the main contribution being the construction of narrow gaps across which the bridges could be readily built.

Fitipkanip then founded the Ulapmin on the west bank of the Sepik, building a kwoisam (MN : "spirit-house") at Nengribip. She then noticed smoke rising in the Ilam valley. She found a man there and killed him, and brought his body back to the Ulapmin kwoisam.

She then went to Kelafolbip (Telefolip) to build a kwoisam there. She selected a site on which were growing a sago palm and a simi tree. She felled the two and built a house over them. The stump of the sago tree provided a base for one of the hearths on which taro was to be cooked; the stump of the simi tree was for the second hearth where certain magical rites connected with warfare were to take place.

When she had completed this, Fitipkanip noticed smoke rising in the Falamin valley. She found a man there, killed him, and brought his body back to the kwoisam at Kelafolbip. Whilst she prepared the body for cooking, the fire was neglected by the rat, bird and frog asked to watch it, and it spread from the kwoisam, got out of control, and burnt freely in the Ifitaman valley. Fitipkanip prevented it from spreading to Eliptaman and causing harm to her people there, and eventually she brought it under control. She restored Kelafolbip and created the other Telefolmin villages and populated them.

For all her heroic contributions to Telefolmin-Ulapmin culture,

Fitipkanip met a most ignominious end. She was attacked and raped by a wild dog; this was seen by a man who, in disgust, shot Fitipkanip in the head. The dog turned and consumed her genitalia and then ran away. Fitipkanip's body was disposed of by the women and her skull later retrieved and kept at Kelafolbip, where it is believed to be to this day.

The similarities, and complementary nature, of the Oksapmin, Telefolmin and Mianmin myths are obvious, even though the Oksapmin myth does not elaborate at all about the activities of the ancestress in the Telefomin area.

The Telefolmin Sun myth also suggests connections between the peoples of the Sepik and Strickland headwaters. The Sun introduced the concept of pig as food - prior to that, pigs were cared for as pets only. The Sun then made a number of handiwork prototypes - binding for arrows and bows, and the cane cuirass. (Some versions attribute shield, houseboard and carved arrow designs to the Sun, others attribute them to Afek.) He then left the Telefolmin and journeyed to the Om valley where he established a particular kind of hair-binding as appropriate for the mafumban (one of the stages of initiation) - the hair is bound and wrapped in a special net, and feathers stuck into it. The normal Telefolmin method is to bind the hair into two long plaits extended artificially and placed one over the other (Plate 5).

The Sun continued on to the Strickland Gorge and attempted to build a bridge there by drawing the two banks close together, but he was frustrated in this attempt. This recalls the Oksapmin version of the myth where Yowan's "man" refused to complete the bridge because of her dalliance with the spirit-man.

The identity of the Sun was hidden from us for a long time, but eventually it was admitted that he impregnated Afek who bore a son Unmoiyim, who in turn begat Nanotim, whose relics are preserved in a house at Telefolip to this day (the house to which T.61 (Appendix B) is attached). Apparently, then, the Sun was Afek's consort and in both myths Afek's consort attempted to build a bridge across the Strickland.

Returning to the Afek myth, it must be pointed out that the Mianmin version does not state that Fitipkanip was responsible for the Mianmin population. George Morren writes (personal communication): "The foundation myth for Temelmin (MN : Komaten) parish depicts it as being peopled by the offspring of a particular kind of snake - genus einap, species komaruru. The names of other parishes have similar derivations." The Telefolmin report that the snake, temeguru, had intercourse with Afek and the offspring were called Temelmin.¹ Further, the Telefolmin believe that the gully through which the path leads to Telefolip was made by a snake as it thrashed about in its death throes, and the red flowers of a species of climbing pandanus

1. The Telefolmin mostly use the suffix -min in their group-names, whereas the Mianmin use -ten. However, the Telefolmin use -tan also, particularly in the context of talking about only some members of a named group rather than all members as an entity. Sibil speakers use the suffix -tena (see below) in the same sense as the Mianmin use -ten and the Telefolmin use -min.

growing at the edge of the gully is said to represent the serpent's blood. The Mianmin however, so the Telefolmin assert, believe it was caused by Afek in her death throes when she was shot by one of her children for poisoning her "brother". This brother was said to be Nanokim and it was his son Dilinosep who avenged his death. In the Telefolmin account above, Nanotim is Afek's son's son, not her brother.

At this point it is interesting to compare the Mianmin myth of the origin of the Komaten with the Sibil myth of origin obtained by Pouwer: "A large white rock (tum) which lies somewhere in the vicinity of the Dirksz Summit ((W.N.W. of the source of the Sibil)) became pregnant but was unable to bring forth a child. Then an earthworm (upi) begat a child on itself. First of all small earthworms were born, and subsequently the first man, followed by the first woman. From these two human beings, the entire human race descended, and they have spread out over the Star Mountains (to the Sibillers this region constitutes the whole world). The mother worm died, and therefore all her descendants are mortal and died too." (Brongersma and Venema 1962:99). The people of Wagumbon on the Ok Bon consist of both upi-tena (worm-children) and awot-tena (lizard-children), (1962:192). The parallel with the Mianmin myth is clear.

The Wopkeimin recognise Afek as their ancestress and confirm that she came across the range from Telefolmin via the Ilam valley and established their forebears at Bultemavip, building the spirit-house there. During the Australian Star Mountains Expedition we brought a

Wopkeimin headman to Telefolmin from his hamlet a week's walk to the west. One of the things he was looking forward to seeing was the spirit-house at Telefolip, the village where Afek spent most of her time working out the basic tenets of Mountain-Ok culture.

The Fegolmin state that they originally migrated to the headwaters of the Fly from the area at present inhabited by the Falamin. There was a dispute with Telefolmin over a woman and a fight ensued. The Fegolmin ancestors decided to leave the area and followed the Nong upstream until they came to Tifalmin territory. A deputation committee went to ask the Tifalmin if they could stay and settle in Tifalmin territory and this was agreed to, and the Fegolmin returned to their camp.

However, a child with the party was left behind, which was fortunate, for he overheard the Tifalmin plotting to allow the Fegolmin to move in with all their goods and then kill them, taking away their women and their wealth. The child hid till first light and then ran to warn his people. The Fegolmin departed hurriedly southwards, found their way down the steep southern face of the central range, and moved into an uninhabited virgin land.

The Bifulmin of the upper (western) end of the Ilam valley claim that they came from the area now occupied by the Falamin, along the same route as the Fegolmin up the Nong. This could have been as a result of Telefolmin expansion into the area about 300 years ago. This expansion is affirmed by both Telefolmin and Falamin and is confirmed by common parish names. Healey places the Falamin dialect

at about 300 years separation from Telefol.

It would seem that some of the original inhabitants remained on the south side of the Sepik (Famokmin parish) and others moved south-east over a pass in the central range to the headwaters of various tributaries of the Strickland.

The migration from Falamin to the Ilam was placed at only two generations in the past (FF of present middle-aged headman was said to be one of the immigrants) and thus could have been a much belated consequence of the Telefolmin expansion, or the genealogy quoted to me could have been telescoped.

The Tifalmin of the lower end of the Ilam valley were frequently in conflict with the Tifalmin in the top end. Such conflict within a 'tribe' is unusual among the Mountain-Ok and is probably a perpetuation of the conflicts that arose no doubt when the Falamin immigrants first moved into the valley.

The people evicted from the top end of the valley are called Wimulapmin and were said to have removed to Atbalmin territory. There are several Wimulapmin groups among the Atbalmin, but they do not occupy contiguous territory. It may be that they followed the Ilam to its source and then spread out over a sparsely occupied area by following the major rivers towards the Sepik. There are two Wimulapmin groups on the Nong, one on the Din, one on the Al and one on the Bilka.

Whilst obtaining genealogical data at Busilmin, I discovered that a considerable proportion of the people of this parish trace their

descent from Tifalmin immigrants only two generations back. However, there could have been telescoping here for most Busilmin demonstrated little knowledge of their ancestry. This is consistent with a short average life span and a constantly shifting pattern of settlement around a central hamlet important only for ceremonial occasions. Thus many children have little opportunity for acquiring knowledge of their kin, past or present. This contrasts to the Telefolmin situation where a more sedentary existence brings larger groups of kin into more permanent face-to-face relationships.

I was told also that the Kifelmin, living among the Wopkeimin on the headwaters of the Ok Tedi (Alice), originated from among the Tifalmin. The headwaters of the Ok Tedi rise in the same area as both the Nong and the Ilam, and present-day trade-routes link these three river valleys through this section of the central range.

The total picture presented by these oral traditions is one of widely-recognised ties to the Telefolmin and, more remotely, the Oksapmin groups to the east. The universal possession of the Afek myth with its many tribal - even sectarian - variations, justified the inclusion of the Oksapmin groups with the speakers of Healey's Mountain-Ok Sub-Family of languages. However, the relationship of Sibil oral traditions to those of the Mountain-Ok, although similar to those of the Mianmin, is ambiguous, as the Sibil do not share the Afek myth.

IV.3. THE CULTURE : HOUSE TYPES.

The Telefolmin house (Plate 1; Figure 6) is a single room about twelve feet square with two hearths, a small entrance, and no windows. The roof is gabled and leaves of pandanus, giant ginger, bamboo or grass are used as roofing material. Eaves are generous and frequently project sufficiently in front of the house to afford some shelter to the doorway and a narrow 'verandah' - simply a continuation of the flooring beyond the front wall. Walls are of vertically-placed split timber, except in the case of men's houses where smooth poles are used. The walls are lined inside with pandanus, palm or softwood bark sheets. The floor is raised a foot or two off the ground - men's houses a little higher - and lined with sheets of bark. The hearth is a well, made with timber battens supported by four corner-poles, filled with stones and finished off with clay. Firewood is dried in racks above the hearth. Smoke from the fires escapes slowly under the peak of the gable, front and rear, and the soot deposited by continuously-burning hearthfires preserves much of the roofing material from rapid destruction by insects and constant rain.

A Telefolmin family may have several houses: a village house, pig houses, and garden houses. All are built as described above except where a man decides that a lean-to will save him going to the trouble of building a more respectable structure.

The houses of the Wopkeimin-Atbalmin-Tifalmin that I observed are like those of the Sibil in being oval or round in plan (but still with a gable roof) and having only one central hearth (Figure 6).

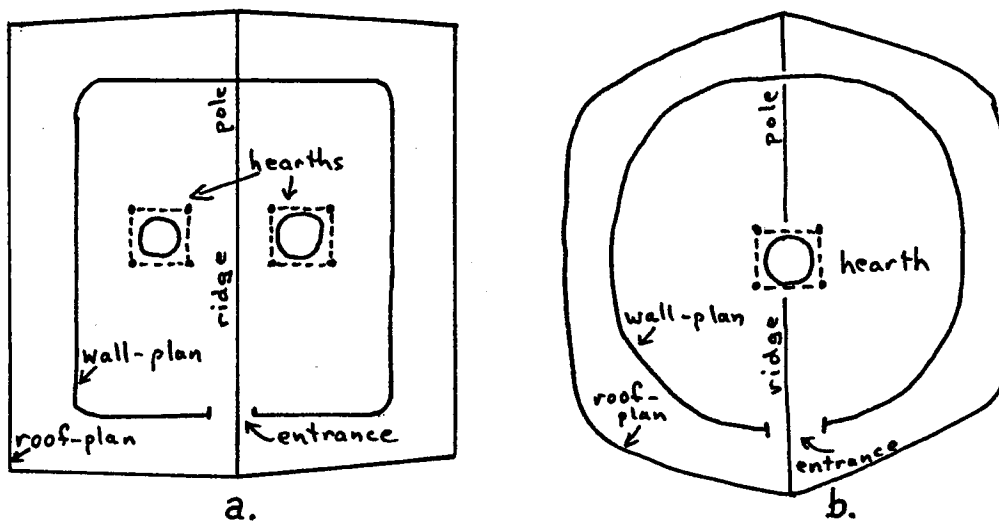


Figure 6. Plan of Mountain-Ok houses: a. Telefolmin-Falamin - Faiwolmin; b. Tifalmin - Atbalmin - Wopkeimin.

However, the Sibil houses are peculiar in having two entrances:

".... a square hole, set at some height above the floor level on the side facing the open ((village)) space, and forming the men's entrance, and a large door reaching to the whole height of the house, by which the women, children and pigs entered at the back." (Brongersma & Venema 1962:88-9).

The Faiwolmin houses are rectangular like the Telefolmin houses but utilise the durable sago-leaf for roofing material, as do the Wopkeimin.

The Oksapmin houses are inferior structures compared to those of their western neighbours, and are often built straight onto the ground. Men's houses sometimes have a screened entrance and I also noted some

double-roomed structures, though these may not have been traditional. Pandanus leaves are the chief roofing material.

I have seen photographs of Mianmin houses and these are like those of the Telefolmin except that the door-way is much larger (higher) than the small Telefolmin hatchway.

The Mountain-Ok make a primary distinction of house types on the basis of the persons using them: "woman-house" (MN, TL, TF: unangam; FW: wanangam; OS: kuap) and "man-house" (TF: tenumam; FW: kinimam; OS: kanap). The Telefolmin and Mianmin male often sleeps in the "woman-house", but the "man-house" is preferable because of male company and the peace and quiet due to the absence of children and pigs. The Oksapmin male may be somewhat more in favour of the "man-house" as I was told that only the older men sleep with their wives in the "woman-house". The Telefolmin told us the same thing, but observations did not substantiate the claim.

Although the naming of houses by the Sibil is not fully reported, it is evident that similar distinctions are made by them as by the Mountain-Ok. Pouwer reports (1964:134): "The bokam is the gathering-place of the uninitiated males of the hamlets and the parish. Male guests are received and accomodated here, and it serves as a dormitory for the young unmarried men, for widowers, and for the married men who have quarrelled with their wives and whose wives are segregated because of menstruation or childbirth."

This division of the sexes into separate houses (however imperfectly it is carried out in practice) is sanctioned by the Telefolmin Afek myth: 'Afek adorned herself and slept in the yolam (ceremonial house) and her brother slept with the pigs in the unangam, but neither of them had a restful night. The pigs squealed incessantly, keeping them awake; Afek ate continuously - there was nothing else to do. In the morning she carried out the ritual of dew-washing, painting her face and ornamenting herself, but during the day nothing seemed to go right.

'By evening, Afek had decided to reverse the roles. She instructed her brother as to every detail of what he was to do in the morning. She then went to the unangam to attend to the domestic chores whilst her brother went to the yolam. Everything proceeded smoothly and they had a satisfying meal. The pigs were content and Afek fell asleep so quickly that she did not bother to fasten up her doorway.

'In the morning, her brother "dew-washed", painted and decorated himself, and after some time managed to wake up Afek. She awoke with a start, exclaiming at the lateness of the hour, "Oh, I had such a good night. The yolam certainly is for men and the unangam for women." When she came outside and saw her brother's wonderful decorations she enthused and knew for a certainty that these things were for the men. So she relinquished them into male custody in the person of her brother.' (Unpublished field notes, R. Craig).

There are a number of houses for the sole use of men that have specific functions. Where a particular building serves more than one function, it may be given more than one name, depending upon the

context in which it is being discussed.

Among the Telefol, Faiwol and Tifal speakers, the generic term for "man-house" is rarely used. There is the "ceremonial-house" (TL, FW: yolam; TF: yowolam),¹ the "young-men's-house" (TL: kabelam; FW, TF: kawelam), and the "old-men's-house" (TL: katibam; FW, TF: katiwam). Some villages may have all three buildings, others may have only two, or one. Where there is only one, it is usually called a yolam/yowolam, although it serves also as a "young-men's-house" and an "old-men's-house". This is usually the case with the smaller Wopkeimin hamlets and the Atbalmin.

Another name for the Telefolmin yolam is amoken (lit. "houses' mother") or amabem (lit. "house-taboo") and another name for the kabelam is timam (lit. "dew-house", referring to the custom of 'dew-washing'.) The Mianmin also call their men's house timam. The Telefolmin amoken seems to be cognate to the amok of the Angkeiakmin, Fegolmin and Wopkeimin. In 1967 there was one amok only in the most important village of each of these three 'tribes', except that the Angkeiakmin amok had been pulled down and only the site and a few poles remained.² I was unable to ascertain the specific functions of this house but it is most likely not completely equivalent to the Telefolmin amoken in that every Telefolmin village has an amoken.

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1. The derivation of yol-/yowol- is not known but Healey gives olal (TL) as "ancestors" (1964:158). Ancestral relics are always to be found in the yolam/yowolam and olal appears to be cognate to yowol.
 2. See Champion 1966:77, 141, where he is prevented from entering the 'amawk' of Bolivip/Angkeiakmin; See also photograph oppos. p.66.

Although only a temporary structure built for the purposes of particular initiation rituals, the Oksapmin-Bimin apyowal (ap = house; yowal: cognate to FW yowol?) appears to fulfil functions similar to those of the Telefolmin yolam.

In addition to the above buildings there are others that are of central importance as storehouses of sacred relics and are the centre of supra-parish, and even supra-tribal, male initiation rituals. The Telefolmin of Ifitaman possess an amdolol¹ at Telefolip (Plate 2); the Telefolmin of Eliptaman have one at Ubtentikin (Plate 4). The Falamin have a yologeng at Igimduvip but I have no evidence of its use for supra-parish rituals. I did not identify such a building for the Ulapmin or Angkeiakmin although they probably have one. The Fegolmin have a house they call the nongam at Imigabip (where the amok is situated), the Wopkeimin have the futmanam at Bultemavip (also where the amok is situated), and I have evidence that both these villages were the centre of supra-parish, even supra-tribal, initiation rites.

The Tifalmin have a yowolamem (which may have another name as well) at Bulolengabip that serves the needs of all the Tifalmin parishes at least, and each Mianmin parish has its kwoisam. The Oksapmin groups share about six yowanap (yowan: the ancestress; -ap = house) among themselves, and it would appear that each Atbalmin parish has a central yowolam.

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1. dolol: particular technique of making external walling of this house (Plate 3); also called un-mib, the plaiting that holds the arrow-head in its shaft.

Pouwer reports for the Sibil (1964:134-5): "The sacred meeting house (iwol) may be entered only by men who have been initiated for a number of years. It is the centre of the taro ritual and the storage place for the sacred pork fat, which is strictly taboo to the uninitiated Besides being the ceremonial and religious centre of the parish, the iwol is also the centre of a regional iwol community which comprises a number of parishes. These often have their origin in the parish where the iwol stands and themselves lack iwol."

I intend to classify dwellings as family houses, men's houses, or spirit houses. The first category consists of those houses inhabited by women and children and sometimes men; the second consists of those occupied only by men and youths and forbidden to women and children; the third consists of those houses not normally inhabited, used only for specifically sacred purposes, and prohibited to women and uninitiated males. Table 1 sets out the implications of this classification from the available information.

Besides these dwellings, the Mountain-Ok build other types of houses, e.g. garden houses, hunting huts, pig houses and temporary structures for the seclusion of initiands. The Oksapmin and Mianmin also build large houses for indoor 'sing-sings' (OS: telap; MN: itam), in which small communities may live for some time. These are in many respects similar to the "tree-houses" of this area (TL, TF: elam; FW: ailam) - large community houses built high up on poles or attached to a tree, mainly for refuge from attack whilst working in gardens close to enemy territory.

TABLE 1: HOUSE TYPES OF THE MOUNTAIN-OK.

<u>TRIBE:</u>	<u>FAMILY HOUSE:</u>	<u>MEN'S HOUSES:</u>	<u>SPIRIT HOUSES:</u>
Telefolmin	unangam	?	amabem / amdolol yologeng? (FAL.)
Falamin			
Ulapmin?			
Faiwolmin	wanangam	kinimam	yolam amok nongam
Wopkeimin	wanangam	?	yowolam amok futmanam
Tifalmin	unangam	tenumam / yowolam	yowolamem
Mianmin	unangam	?	kwoisam
Oksapmin	kuap	kanap	yowanap (perm ^t) apyowal (temp ^y)
Sibil	?	?	iwol

A description of a Dulanmin (Om River) "tree-house" is given by Marks (1962-3): "... one large community house erected on stakes approximately 12' from the ground. Its dimensions were 30' x 15' with an attached 12' x 12' storage room; one ladder led onto a verandah facing the two entrances. The floor was firmly-constructed limbon ((black palm)), roofing of pandanus and bamboo leaves, walls of split

timber and layers of bark. As with all houses within the Telefomin sub-district, a gap was left between the eaves at the apex of the house to allow smoke to escape. At roughly ten-foot intervals, ports were cut into the walls enabling the use of bows against attackers Two earthen fireplaces had been built into the floor at each end of the house In the storage room lay an abundance of food, particularly sago, and above the fireplaces was firewood in copious quantity The Dulanmin earnestly expected reprisals from the Sisimin; after the raids they had hurriedly constructed this impressive "citadel". All outlying garden settlements had gathered their belongings together and sought almost immediate refuge in the house."

The community-type house would seem to have been used by the Mountain-Ok only in cases of emergency, but are the normal dwelling for the areas north and south.

Schwartz reports (1965:13) that the Birua in the hills west of the May River live in community houses "..... 40' to 50' square and very high, 25' to 30' at the ridge beam. Typically, such a house holds ten to twenty-five people - a head man (father or eldest brother), his sons or brothers, unmarried girls, and children." Later (1965:14-15) he mentions that each family has its own hearth, and makes the observation that "... with some variations in design, ((the Birua houses)) are of the same type as the large communal houses of the Nakejaj ((of the Wogamush River)) and the communal dance house of the Mianmin."

He describes a communal dance house at the Mianmin village of Usage

on the Upper May River (1965:18): "..... all families and some unmarried men have a place in this large house. Each place is a portion of a raised platform around the edge of the square dancing floor; each is marked by a hearth, of which there are fifteen there is no segregation of the sexes the construction is generally not so good as that of houses among the Birua. The ramp from entrance to floor, with provision for barring or barricading the entrance, is the same throughout the area."

Dye, Townsend and Townsend report that the western Sepik Hill peoples (vicinity Wogamush and April Rivers) "..... live in one-house hamlets, though in some groups they also have intermittently-occupied villages housing fifty or more people. Traditional houses are rectangular with many small supporting poles, sago-leaf thatch roofs, bark walls, and palm bark floors from three to thirty feet off the ground, the height depending partly on the need for defence. A few families, each with its own fireplace, share such a house." (1968:146; see also Schuster 1967, Plate 9).

This description sounds like that of the Dulanmin community house and it is significant that these authors group the Morubanmin (= Moduanmin/Dulanmin) and Sisimin dialects of Umairof with the Sepik Hill language family, although the percentage of shared cognates is fairly low at a minimum of 22% for Umairof against Kaningra in the east (1968:155, Table 3).

Schwartz notes (1965:18) that the Usage/Mianmin male dress - "penis gourds, high headdresses of hair grown long and covered with

a net, and cane hoops around the waist ((are)) much like that of the Mbukabukei of the Wogamus and April Rivers," and of course this is also characteristic of the Om River groups.

Although many Abau groups (Upper Sepik, vicinity Green and August Rivers) now live in villages, traditionally they lived in large communal houses set high up on stilts (Thurnwald 1914:340; Behrmann 1922:332-3; Uittreksel 1910:Plates 20,21). I was able to determine that there was some separation of the sexes within the structure, but Thurnwald reports (1914:342) that there were no partitions between the sleeping places of the men and women. The Iwam, river people of the May River, have one large men's house and one large women's house for each community (Schwartz 1965:11). I discovered that Abau oral traditions claim that they migrated from the May River area, and Laycock (1965:113) has grouped Iwam and Abau in the one family of languages.

Thurnwald commented (1914:340) on the similarity of the Abau houses to those reported by D^rAlbertis for the Upper Fly. Champion gives a good description of such a house on the Fly River about 20 miles below its junction with the Palmer: "The house was 40 feet long and 30 feet wide, built up on slender poles 10 feet from the ground. There was a double floor, the lower one being a foot below the level of the upper. At various distances along each side of the house, holes, 2 feet square, were cut into the upper floor. These acted as fireplaces and refuse was pushed in between the two floors. Running lengthwise, and through the middle of the house, was a partition of the bark of the sago palm which divided the women's quarters from those of the men. The single

entrance to the house was at one end and consisted of a circular hole in the floor closed by a trap-door of thick rattan A ladder was the approach from the ground The roof was thatched with sago leaf, and the walls made with the mid rib of the sago palm branch, strengthened with lengths of the goru palm." (1966:24-5).

Champion mentions similar houses on the Palmer right to the southern slopes of Mt. Blucher (1966:38-9). He also describes two drums in a Palmer River house as having "fish-shaped mouths." (1966:38). These do not sound like Mountain-Ok drums, but rather like the drums of the Lower Fly. Kooijman reports similar drums from the Muyu area of the Upper Digul in West New Guinea (1962:Figs. 47, 49).

Only a few miles north of Mt. Blucher, a totally different type of dwelling was found. "Of the three houses composing the small village, two had ground floors, the other being built on slender piles 6 feet off the ground. The latter was roughly 9 feet square, the walls of split slabs of wood with pieces of bark placed round them inside to prevent draughts. The floor was made of the goru palm, and in the centre was a square hole let down below the surface in the form of a box, filled to the floor level with earth and forming a fireplace. At each corner ((of the hearth)) was a small post, the posts being connected with one another by lengths of cane on which rested firewood, evidently to dry." (1966:51-2). There is no doubt that this is the Mountain-Ok type of dwelling.

Austen describes tree-houses built up to 6-0' from the ground in the Ok Tedi (Alice River) area, between the Digul and the Fly,

with separate entrances and ladders for men and women (1923:342-3,348). Unfortunately he does not describe the houses of the mountain people at the head of the Ok Tedi, although it appears from his map that he may have gone as far as Wopkeimin territory.

Brongersma and Venema (1962:44) record "tree-houses" on the Digul River upstream from Tanah-Merah in West New Guinea, and in the Ariem area downstream from Katem (junction of Ok Tsyop and Ok Iwur) where they are fifty feet above the ground and accomodate several families (1962:135-9, Plate oppos. p. 32). Only a few miles north of Katem is the settlement of Wetamding. "This village consisted of three houses, closely resumblng the Sibil dwellings in form, but built on piles about five feet high, in contrast to the houses in the Sibil valley, where the floor is about one foot above the ground." (1962:137).

I could find no references to house-types immediately east of the Strickland gorge, but the Enga groups build horse-shoe shaped houses with half-conical, half-gabled, rooves and earthern floors (Meggitt 1957a; 1957b:35) quite unlike anything built by the Mountain-Ok. The Dani of the Baliem valley in the highlands of West New Guinea build round houses (Matthiesen 1963:12-13; Temple 1962:33; Plates oppos. p.p. 34-5). However, the Tapiro houses at the head of the Mimika closely resemble Mountain-Ok and Sibil houses, even to having pig jawbones hanging up across the front wall. (Bijlmer 1939, p.p. 124-5; Le Roux 1948-50, Vol. 2, Photos 67-9, p.p. 580-1).

It would appear then that the Mountain-Ok house-type is to be

found also along the southern foothills of the central range in West New Guinea, and is bordered north and south by community dwellings, often built high up on stilts, to the east by horse-shoe shaped houses with earthen floors, and to the west by round, conical-roofed huts with earthen floors. I was unable to discover from the available sources what the specific functions of Tapiro houses might be and so, for the present, we must regard the Mountain-Ok houses as representing a style of dwelling fulfilling functions peculiar to Mountain-Ok culture, particularly the male initiation rituals.

IV.4. THE CULTURE : MALE INITIATION RITUALS.

Because there is somewhat more data for the Telefolmin than for any other Mountain-Ok group,¹ it will be best to describe their male initiation rituals first and then compare those of other Mountain-Ok groups.

The initiation of the Telefolmin male takes place in several successive ceremonies in a prescribed order. The first is conducted when the initiand is about 5 - 8 years of age and most have been fully initiated by their late twenties.

1. Data on Telefolmin rituals were obtained from my wife's field notes. Data for Oksapmin and Mianmin initiation rituals were obtained by myself from Oksapmin and Mianmin informants at Telefomin; I have never observed the rituals in these two areas. I have recorded some aspects of the ot-ban at Telefolin/Telefomin on 8 m.m. cine film in the latter part of 1964. Other data was obtained during the Australian Star Mountains Expedition 1965 and during a field-trip in January, 1967.

Several boys are initiated at the one time. The first ceremony may be carried out at the initiative of one village group, but invitations are extended to other villages for sponsors to bring initiands. Such invitations are often accepted, but the ceremony is basically a parish affair. However, at successive stages in the series of rituals, the local basis of participation widens until invitations to attend are accepted by individuals of other tribal groups for what amounts to a Telefolmin-wide ceremony.

Thus there is a group of lads in an intimate age-set of small size (the members calling each other nafalop), being integrated into bigger and bigger age-sets that cut across local groupings and provide the basis for many male inter-personal relationships.

The first ceremony - the mankemin - has not been performed since about 70 years ago when a house full of initiands and sponsors caught fire and most of the men and boys died. This precipitated mass suicides among the women and the ceremony was dropped. However, it appears that it involved the seclusion of quite young boys for a period of about four months, the main aim being to separate them from the women and make boys out of infants.

The next ceremony, and for several decades the first, is called the dakasal-ban. This ceremony was performed somewhere among the Telefolmin every year, but later ceremonies such as the ot-ban and tap-ban occur perhaps only every ten years or so. The age gap between sponsor and initiand for the dakasal-ban is comparable to that between father and son, and as sponsors are fully-initiated males, the age-

gap between sponsor and initiand for the later ceremonies is a minimum of ten years. However, the rituals involved in these later ceremonies are so important and specialised that the participation of the older men is essential and thus the effect of a generational age-gap between sponsor and initiand is preserved.

The character of the rituals conforms to what would be expected from an expression of generational differentiation. Although there is an element of the expression of sexual differentiation in the rituals - the initiands are secluded, many details of the rites are kept secret from the women and children, and initiands are progressively removed from the habit of sleeping in the family houses to sleeping in the men's house - this is not stressed and, in contrast to many Sepik River, Highland and South coast cultures (Allen, 1967; Van Baal, 1966), there is no mutilation of the genitals and no ritualised expression of fear or envy of female sexual functions.

Pain and discomfort is, however, characteristic of the rites. This is inflicted by sponsors birching the initiands, beating them with stinging nettle, forcing them to sit close to blazing fires, showering them with hot ashes, forcing them to dance and stay awake for many hours, covering them with pig-grease and paint and stuffing it up their noses and in their eyes and ears, and sleeping in seclusion without the warmth of fire to dispell the chill of the highland dawn. There is also a great deal of moral instruction and the teaching of etiquette.

The rationale for this pain and discomfort is that it is payment

for certain privileges granted upon completion of each stage of the rites - admission into male society, the granting of secret knowledge, and the removal of restrictions on eating certain foods.

Food taboos are enforced at all rituals because certain substances - particularly water - are inimical to the "heat" (i.e. power) of the ancestors. Initiands are "shown" to the ancestors (youthful informants often said that the ancestral relics were "shown" to them, but older men made the converse statement), and there must be no impediment to their being blessed with ancestral goodwill.

Not only are initiands fed with foods believed to give them a strong and healthy appearance, but the paint and pig-grease on their skin has direct magical properties conducive to their health and strength.

Another important aspect is the revelation of a corpus of secret male knowledge. Men, women and children know a number of myths, but many of them consist of three parts - a beginning, a middle and an end. The "beginning" and the "end" are public knowledge but the "middle" is secret and revealed only to initiated males.

One of the most important functions of the later ceremonies, the ot-ban and tap-ban, is to provide an opportunity for performing tribal-wide taro-fertility rituals (iman-ban). This involves the burying of certain ancestral bones beneath 'tangets' (red cordyline plants), planted for the occasion in selected taro gardens throughout tribal territory. When the taro has reached the appropriate stage of maturity, the bones are retrieved with much ceremony and the major part of the initiation ceremony proceeds. Domestic pigs are killed

at all initiation ceremonies and a portion of pork is always offered to the ancestors for them to eat.

The care of the ancestral relics, reflecting concern for the ancestors' welfare, is necessary to enlist their aid in pursuits of importance to the Telefolmin - gardening, hunting, pig husbandry and warfare. The initiation rituals serve to introduce initiands to the less public aspects of the ancestral cult.

In the earlier ceremonies (dakasal-ban and om-ban), the village amoken is the building in which the more secretive aspects of the rituals are performed. The next - the talalep-ban - involves the use of a temporary structure only and a fenced-off gully to force the initiands to run the gauntlet. For the mafum-ban the initiands and sponsors gather at the tribal ritual centre and the initiands' hair is bound into double pigtails, one on top of the other and hanging down at the rear (TL: mafum/dubal/kubok; TF: sel; OS: mafom; SB: kamil). The rites of the talalep-ban are repeated and followed by instruction of the social mores. The ot-ban and tap-ban involve the use of the spirit-house (amdolol) at the tribal ritual centre, but any village may sponsor the ceremonies. The ot-ban grants the privilege of using the hand-drum (ot) and the "jew's harp" (talam), and the tap-ban completes the series of initiation rituals.

The Oksapmin-Bimin groups appear to have seven or eight ceremonies for male initiation. Only three of these involve the killing and eating of pigs, but during the kusbai or mafom, some pork is explicitly allocated for the skulls of the ancestors in the apyowal: "If we feed

the skulls regularly, the taro grows well. If this offering is neglected, the ancestral spirits will devour us."

Cus-cus and other game are hunted, killed and eaten in conjunction with most of the ceremonies. This could be linked with the Telefolmin idea of priveleges granted at each stage of initiation, for hoaxing and bullying by the sponsors is characteristic of the rites. This includes severe rubbing of the face and skin with leaves and animal dung, nettle-beating, showering with embers, midnight vigils, and food and water restrictions during seclusion. The painting of the initiands with pig-grease and red paint is as described for the Telefolmin. Some of the taboos terminated are that on eating salt, handling fire and cooking certain game, eating certain foods, and eating with adult men. The initiands are "shown" to the ancestors (the skulls) and this privelege is paid for by pain and discomfort.

Another important aspect of the Oksapmin-Bimin rites is the revelation of a secret vocabulary. Many items, important in the rites, have both sacred and profane names. This appears not to be the case for the Telefolmin, but certainly is for the Mianmin.

The women are as strictly removed from the sacred aspects of the rites as they are from Telefolmin ritual, but participate in the public aspects of the ceremonies, especially the singing and dancing at the conclusion of each ceremony. This is particularly so at the kusbai or mafom ceremony where the public singing and dancing continues for several months in the telap (communal dance house). This provides an opportunity for youths and girls to become attracted to one another

and intimacies occur at this time that eventually lead to marriage.

It is not clear whether the Oksapmin rites involve wider and wider local groupings as they progress, although it is known that some involve only the smallest local group and others appear to involve several parishes centred on a particular yowanap ("ancestress-house"). It seems most likely that age-sets would be found to be an important structural principle in Oksapmin society too.

As for the Telefolmin, the concept of "heat" is integral to the ancestor-cult. During the gelep ceremony a particular stone is heated, dropped into a net bag containing tinder, and swung around and around until it bursts into flame. This is passed into the apyowal where the initiands have been gathered and fires made at the two apyowal hearths. The rationale of this rite is that the heat from the stone goes into the skin of the ogiyaman (initiands) and kana (initiates), and when they go to their gardens the heat will transfer to their crops to make them grow well.

Another point of comparison with the Telefolmin is that, at the first initiation ceremony, the initiands receive a string-bag decorated with feathers (TL: dakasal-men; OS: nelbatunga). At the kusbai or mafom the initiands are given little net-bags containing red seeds as hunting charms. The Telefolmin have these too but I do not know when they are obtained. Unlike the Telefolmin who may use a hand-drum after completing the ot-ban, an Oksapmin man may not use the instrument until middle-age.

The pre-initiate is called kulugana (ku: woman) by the Oksapmin and unangamin (unang: woman) by the Mianmin; the initiands are called ogiyoman by the Oksapmin and yominten by the Mianmin; fully-initiated men are called kana ("men") by the Oksapmin and dil by the Mianmin (the Telefolmin call the middle, i.e. longest, finger dil; the first of multiple wives is called dil; the first-born is called dil).

The Mianmin have seven ceremonies to complete initiation in the early twenties. Seclusion, food and water restrictions, a diet of certain game (cus-cus and possum), the revelation of myths and a secret vocabulary, the termination of various food taboos, the exclusion of women from the rites, the killing and eating of pigs, the "showing" of the initiands to the ancestors whose relics are kept in the kwoisam, and rituals to ensure the success of the taro crop, are all characteristic of Mianmin initiation.

At the end of the first ceremony (yomin), the initiands are painted with black and red paint mixed with pig-grease, but only on the face. One quite significant difference between Mianmin and other Mountain-Ok rituals is the almost complete lack of imposition of pain and discomfort. If my informants were reliable, apart from minor discomforts and restrictions imposed during seclusion, the only physical pain suffered by initiands is that from a few scratches of a possum's claws.

Oksapmin and Mianmin both incorporate in one of their initiation ceremonies the rite of lighting a fire by the friction method on a supine man's chest. The significance of this is not known. The Telefolmin perform the same rite on the body of a man whose bones

are to be collected for a menamem (net-bag-sacred).

The Mianmin parish acts as a ritual unit but invitations are extended to neighbouring parishes and these are sometimes accepted. This appears to be the case also among the Atbalmin. I questioned 23 men of the Busilmin parish of the Atbalmin and all of them had been through all of their initiation rituals at their central hamlet, Afunabip. We were not permitted to enter the yowolam there and no doubt it contained sacred relics. The three ceremonies my informants said they had been through were the keiyu-ban (dakasal-ban), the sel-ban (mafum-ban) and the wos-ban (ot-ban). There is some evidence that a fourth ceremony, the un-ban (tap-ban or bokol-ban) is also performed by the Atbalmin, for a Wopkeimin informant said that he had gone through this ceremony at a hamlet near the Din-Sepik junction when he was on a trading visit there. This particular ceremony was banned - at least among the Tifalmin - by a Patrol Officer many years ago, as he believed it incited hostilities. The Tifalmin say they used to kill an enemy in connection with the ceremony, although this is not the case among the Telefolmin. It is easy to understand the reluctance of the wary Atbalmin to admit to such a ceremony.

The Wopkeimin and Tifalmin have four ceremonies as implied above.¹ The dakasal-ban involves trial by fire, the telling of secret stories, the showing of the initiands to the ancestors in the yowolam, and the decoration of the initiands with the dakasal-men and red paint and pig-grease. The sel-ban involves the binding of the sel or mafum

1. One informant said the tap-ban was performed at Tifalmin, but I have no supporting data.

appendage to the hair of the initiand; the os-ban involves the first use of the hand-drum by the initiands and the iman-ban ritual (the planting of an ancestral fore-arm bone beneath the red cordyline in taro gardens to promote the growth of taro), and the un-ban involves nettle-beating, the hunting and killing of possums and wild pigs, and the slaying of an enemy.

In the majority of instances, the dakasal-ban and sel-ban were performed locally by the parish, or neighbouring parish, of the initiand. For the Wopkeimin, Bultemabip acted as the ritual centre for the os-ban in all sixteen cases recorded, and Imigabip/Fegolmin as the ritual centre for the un-ban in nine out of thirteen instances.

For the Tifalmin, Bultemabip acted as the ritual centre for the os-ban in six instances, Bulolengabip/Tifalmin in nine instances, and other Tifalmin villages in the remaining two instances. Three Tifalmin men went through the un-ban at Imigabip/Fegolmin and three at Tifalmin villages.

Pouwer provides information that indicates the unity of the Mountain-Ok and Sibil with regard to initiation rituals. The men's house (bokam) "... is the gathering place of the initiated males of the hamlets and the parish The initiation which gives right of entry to the bokam is a typical rites de passage. It takes place on the attainment of puberty. The culminating point of the ceremony is reached when a heavy club-shaped object made of artificial hair is

fastened and displayed.¹ The sacred meeting house (iwol) may be entered only by men who have been initiated for a number of years. It is the centre of the taro ritual and the storage place for the sacred pork fat, which is strictly taboo to the uninitiated." (1964:134).

Kooijman (1962:29) gives Kigonmedip as the centre of the ceremonial dance called wot ".... in which the drums have a central function. This dance which has to do with the well-being of men, animals and plants, is held periodically at very long intervals, sometimes from 20 to 25 years, and it is in Kigonmedip that the time of its beginning and its duration is determined." This sounds identical to the Telefolmin ot-ban and the Wopkeimin os-ban. Kooijman reports that this ceremony was derived from the Ariem area (1962:29), but it is most likely common to the whole Mountain-Ok area, including the Sibil.

The Telefolmin spirit-house (amdelol) must be kept in good condition and its site must never be changed. The Oksapmin yowanap also must be kept in good repair or strong winds result. Thus whenever strong winds occur, the men rush to the yowanap to repair whatever damage is assumed to have caused the wind. Should any catastrophe overtake the yowanap, many hundreds of people would die.

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1. A detailed description of this object, the kamil, is given in Brongersma and Venema 1962:83-4 and illustrated in Plates 8 & 13. It is also illustrated in Kooijman 1962: Figs. 24, 25, 69. It is identical with the Telefolmin mafum/dubal/kubok (Plate 5) and the same male/female symbolism of the two "tails" applies. I photographed the same object in the Kawol valley worn by a man from the Fetik valley just across the border in West Irian, where it is called sel (Plate 6).

The Sibil have an identical belief: "The well-being of humans, animals and crops, and of taro in particular, depends on maintaining the iwol in perfect order: its position may not be changed, and it may only be renovated, never demolished. Disasters are feared when these rules are not strictly observed and when unauthorised persons enter the house." (Pouwer 1964:134-5).

Considering the available evidence, there appears to be a consistency in the male initiation rites throughout the Sibil-Mountain-Ok-Oksapmin area, with local variations in form and content. These rituals concern the relationship between the generations of males, the relationship between the sexes, and the relationship between man and the super-natural. The rites are carried out in special houses containing sacred relics and are believed to benefit the community in the pursuits of importance to it: gardening, pig husbandry, hunting and warfare.

CHAPTER V.THE MANUFACTURE AND USE OF HOUSEBOARDS AND SHIELDS.

This chapter will deal with the technology and social relations involved in the manufacture and ownership of houseboards and, to some extent, warshields and the use of warshields. The technology involved is the same for both artefacts, but the data on social relations applies only to 35 houseboards made by the Telefolmin of the Kialikmin parish group. Most of this latter information has already been reported (Craig 1967 :162-6).

a) Materials and Technique: A softwood tree of suitable size is selected and felled. As a result of its fall it may split lengthwise. If so, the artisan can readily chop out a length of log and complete the split. If not, he must split it with wedges. He then chops away at the convex side of the half-log until he has a rough plank about nine feet long and two feet wide in the case of the houseboard and about five by two feet in the case of the shield. The houseboard plank is pointed at one end and a hole about 30 inches by 20 inches is cut in what becomes the lower end. The houseboard would be about 3 inches thick and the shield about one inch thick. Traditionally, stone adzes (TL: fubi, mok; Plates 7, 8) were used and the amount of labour expended must have been enormous. Nowadays, of course, steel axes are used.

One of the questions I asked about houseboards and shields was whether the tools used were stone or steel. Where there was nobody

to consult, in many cases it was possible to discern the distinctive marks of the type of tool used (Plate 9^a). In some cases, however, this was not possible, (Plate 9 b, c). Examination of the rear of the object would be decisive in almost every case (Plates 25, 26), but this was not often possible, especially for the houseboards, and in the case of the Faiwolmin shields in spirit-houses I judged it unwise in view of the sacred nature of the objects.

Table 2 demonstrates that the period of transition from stone to steel took place during the first half of the 1940's - only four boards were made with steel tools prior to 1940, and curiously all were made in the Elip valley. One of these four was actually made with both stone and steel tools, and in the period 1940-43, eight were made with both stone and steel tools, and one with steel tools only. Thereafter stone tools were not used again on their own and only twice in combination with steel tools.

A few steel tools were left in the Telefomin area by Thurnwald and Champion in 1914 and 1926 respectively, and by Campbell's expedition in 1936-7. Some steel tools also seem to have found their way into the area from the south, following the same trade routes as the black palmwood bows. The Telefomin nowadays speak of them as having come from Kiungga, a Patrol Post established on the Fly River about the same time as the Telefomin Patrol Post in 1948. By this they mean they came from the Fly River area. They most likely came from West New Guinea as they appear to be of German

TABLE 2.

<u>PERIOD:</u>	<u>STONE TOOLS ONLY:</u>	<u>STONE AND STEEL:</u>	<u>STEEL ONLY:</u>	<u>TOTAL:</u>
Pre-1900	8	-	-	8
1900-13	27	-	-	27
1914-26	7	-	1	8
1927-36	6	1	2	9
1937-39	-	-	-	-
1940-43	-	8	1	9
1944-53	-	2	38	40
1954-61	-	-	23	23
1962-67	-	-	44	44
Undated	25	-	11	36
Nil data on tools used	16			16
<u>TOTAL:</u>	73	16	11	220

TABLE 2: Stone vs. Steel Tools used in the Manufacture of Houseboards over Time - Total Sample 220 houseboards.

manufacture and the Dutch probably used German steel for trade in New Guinea. These axes are of distinctive appearance and have a round hole for the handle (see Figure 7).

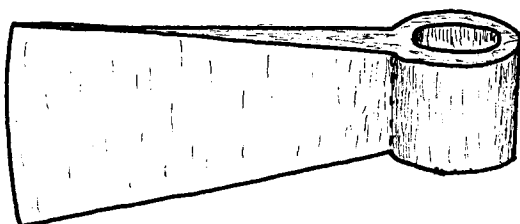


Figure 7— Steel axe blade of German manufacture.

Stone tools were last used soon after the arrival of a large American-Australian work-force in 1944. Steel axes were given in payment for labour rendered by the Telefolmin in rehabilitating the airstrip.

After the board has been smoothed, it is carried to a near-by garden-house or to the village and placed at the side of a house, underneath the eaves, to dry out. It may be bound with cane to prevent splitting. When the board is dry, the design is marked with charcoal. All the areas not covered with the black lines are then chiselled out to a depth of about $\frac{1}{4}$ " , leaving a raised pattern which is later re-painted black. The chiselling was once done with the stone adze and small hand-held flakes and blades. Cassowary bone gouges were also sometimes used in the manner of a chisel, the wood being broken out splinter by splinter. Steel knives are used today.

The facade of a house seen in the Oksapmin area to the east (Appendix B: 0.2, 0.2a), a very poorly-executed shield of the same area (OW.6) and a shield (British Museum No. 1964 Oc.3.435) supposed to have come from the Bimin area, show definite indications that charring has been used as a technique for arriving at a black surface either prior to, or after, the cutting of the design. Such a technique would result in rapid deterioration of relief as is indeed the case with the Bimin shield. The boards of a facade collected for the Papua and New Guinea Public Museum and Art Gallery in Port Moresby show the same charring technique and make it likely that they were collected from the Oksapmin area. It is interesting that this technique is in use among the Papuan Gulf tribes (Newton 1961:29).

Four colours are commonly used: red ochre, yellow ochre, white and black. The red is obtained from two sources. The first is a red clay found at Ulapmin. It may be obtained by trade. When required for use it is broken from a lump and applied with a little moisture by rubbing into the surface to be painted with the forefinger. The second source (Healey, personal communication) is a red iron deposit found in water seepages, this being an iron compound associated with micro-organisms. The deposit is scraped up and taken home, the water is squeezed out and the deposit placed on a sheet of bark, or directly on the hot coals. When it is thoroughly baked into a hard lump, it is removed from the fire with tongs. For use, it is crushed to a powder and applied without water. The Ulapmin ochre is called bakan and the seepage deposit is called inalol. The latter term has now been applied to rust on iron implements. The former term is the general term for 'ground' and all kinds of 'paint'.

Yellow ochre is a clay found locally. White paint (bakun) is a chalky substance also found locally. Neither requires special processing. Black paint (amsaling) is obtained by mixing soot, found on the under-side of house roofs, with water or saliva.

The design in relief is always painted black, and other parts of the design are painted according to the inspiration of the artisan. The colours were said to have no particular significance.

It is interesting that there is no fixed rule for application of colour for certain designs. For example, T.15 and T.44 are identical designs but the former has a white figure against a red ground and

the latter a red figure against a white ground; T.36 is red against white whilst T.51 has the reverse; T.29 has the top half of the design painted in red and the lower half in white, whilst T.86 - the same design - is the reverse; T.70 is the reverse of E.33, and E.28 the reverse of E.68; F.13 is the reverse of F.17, F.28 the reverse of F.29, and F.22 the reverse of F.27. The central motif on the centre board of Tif.1 is the reverse of the central motif on the centre board of the Bultemabip spirit-house (rear wall) Faiw.14. MW1 and MW2 are opposites with respect to colour and MW18 has a most unusual diagonal balance of colour. This reversal of colour areas for identical designs has already been pointed out by Cranstone (1968:618-9).

Houseboards may occasionally have a hole bored each side of the top of the porthole to facilitate fastening of the board to the front wall of the house coinciding with the entrance (T.62, 64, 66, 79; E.73; U.2, 3, 7), but most boards are bound at the pointed end with cane and kept in place with a horizontal batten fastened across the board just above the porthole. A few are held above the ground by a forked stake which cradles the bottom of the board (T.89, F.8, U.3, Faiw.8) whereas most just rest on some part of the floor timbers.

Shields have four holes bored - two at top and two at bottom - varying from positions quite close to the edges to almost at centre (E.W.5 represents one extreme and O.W.1 represents the other). Two pieces of cane are knotted at their ends and pulled through the top two holes, twisted around one another and then pulled through the

holes at the bottom. They are then trimmed and knotted. An alternative method, using only one long piece of cane, is to knot one end, pull it through one of the holes to the rear, pass it through the hole on the same side opposite end, pass it across the middle front of the shield to the nearest hole, through again to the rear, twist around the other vertical length and back through to the front side of the shield by the hole closest to the starting point; it is then trimmed and knotted (OW.5; MW.14, 15; and Cranstone 1968 : Plates 4b, 6a). A minor modification of this method is not to pass the cane across the middle front but to take it around the edges of the shield (MW.13, Cranstone 1968 : Plates 5a, 5b, 8a). These alternative methods occur among the Ulapmin, Tifalmin, Mianmin and the Telefolmin of Eliptaman.

b) Artisan: Not every man in the community is sufficiently talented or sufficiently motivated to manufacture a houseboard, and fewer are sufficiently talented to execute a symmetrical and aesthetically-pleasing design. There is, then, a tendency towards specialisation. During the period 1960-65, there were seventeen artisans involved in the manufacture of eleven Kialikmin houseboards, and eighty adult males in the workforce. 21% of the workforce therefore participated in the manufacture of houseboards in 1960-65.

Table 3 further explores this tendency towards specialisation. Each of the four tasks or processes involved in the manufacture of a houseboard is called a 'unit of work.' By carrying out each of the four processes himself, an artisan scores four units of work. Should

two men share each task or process, they score half a unit each at each task, making two units each. In this sample, only eleven of the thirty-five Kialikmin houseboards in this sample were manufactured by a single artisan at each of the four stages of manufacture, and in only eight cases was this the one artisan throughout.

TABLE 3. TENDENCY FOR EMERGENCE OF SPECIALISTS.

A. Artisans involved in the manufacture of 35 Kialikmin houseboards.

<u>UNITS OF WORK:</u>	<u>SHAPING:</u>	<u>TRANSPORT:</u>	<u>DESIGN:</u>	<u>PAINTING:</u>	<u>ALL PROCESSES:</u>
0.1-1	40	44	26	31	18
1.1-2	1	1	3	2	17
2.1-3	1	1	1	-	6
3.1-4	-	2	1	3	7
4.1-5	2	-	-	-	1
5.1-6	-	-	1	-	1
6 plus	-	-	-	-	3
<hr/>					
Persons participating	44	48	32	36	53
Persons not participating	9	5	21	17	-
<hr/>					
<u>TOTAL PERSONS:</u>	53	53	53	53	53

B. The 'Over Six' Group.

<u>NAME OF ARTISAN:</u>	<u>TOTAL SCORE:</u>				
Domolokim	2.7	2.7	2.8	3.5	11.7
Dabalgai	4.2	3.2	3.8	3.5	14.7
Ebielapnok	4.5	4.0	5.5	4.0	18.0

Table 3 deals only with living artisans but, as houseboards last on average 28 years, most if not all of the boards of the older artisans

have decayed, thus giving them a low score for productivity. Table 3 indicates that an artisan normally participates in the manufacture of only one houseboard. However, there was a case of an artisan involved in the manufacture of six houseboards and there is reason to believe that he could add to this number. Of the tasks involved, design turns out to be the most specialised; for only 32 persons were involved in it as compared to the least specialised task of transport, where 48 persons were involved.

Three men scored more than two units of work in each process (Table 3B). Ebielapnok scored highest in each task. He is known throughout the area as an artist and craftsman of outstanding skill, as also are Dabalgal and Domolokim. These and other men have recently turned their skills to benefit from the tourist trade and are making shields of reduced size bearing the traditional designs common to both shields and houseboards (MW.1-21). These were selling at between five and eight dollars in 1965 and at about ten dollars in 1967.

Should any person other than the owner, joint owner, or a very close relative, take part in the manufacture of a houseboard, ideally he must be paid. Payment is normally in the form of food to sustain the artisan(s) during manufacture, or a gift of pork after completion of the board. Of the 35 houseboards sampled, only 29% had been paid for, though some payments were pending. The persons receiving pork could not be classified as any particular kind of relative, distant or close. However, six of the seven donors of pork were of kamokim ('big man') status, or were aspiring to this status. The sole

exception was a case where the owner took no part in the manufacture of the board, was clearly obliged to pay for its manufacture, and was a person who did not renege on his obligations.

Distributing pork provides an opportunity for a man to further his kamokim status, and whilst every opportunity may not be taken, most are. Thus, not only in the manufacture of a houseboard but also in the building of a house, those assisting are fed during the project and a substantial meal of some kind provided at completion. In both instances, if the owner is a kamokim, and has a pig available, he will distribute pork.

Table 4 shows which relatives¹ assist a man to manufacture a houseboard. For this table, ego is the owner. Three important results emerge. First, there are no cases where a senior relative of ego (in terms of kinship, not age) assisted in the manufacture of his houseboard. For example, ZS has appeared in a work group for MN (ego), but never has MB appeared in a work group for ZS (ego). Second, affinal and cognatic relationships are of equal significance. Third, the Telefolmin say that "one's brother-in-law is as one's brother", and together they account for half the relationships activated for the manufacture of houseboards.

In some societies, the manufacture of certain objects and/or the execution of certain artistic designs is the privilege of one sex rather than the other, and may be the privilege of one particular

1. My wife's assistance with genealogical data obtained during her fieldwork 1962-5 is acknowledged. She was also able to supply estimates of ages of the Kialikmin males (see Tables 4 and 5).

TABLE 4.
KIN RELATIONS ACTIVATED DURING MANUFACTURE OF HOUSEBOARDS
 (Kialikmin only).

<u>COGNATES</u>	*Elder brother* : <u>bap</u> *Younger brother* : <u>ning</u>	B	6		
		FBS	2		
		MZS	1	11	
		MBS	-	20%	
		FZS	2		
<u>man</u>	*Son*	S	7		
		BS	1	25	
		FZSS	1	46%	
<u>man</u>	*Sister*s son*	ZS	2	14	
		FBDS	1	26%	
		MBDS	1		
		FZDS	1		
<u>AFFINES</u>	*Brother-in-law*	<u>basim</u>	ZH	6	
		ZH	FBDH	2	
			FZDH	2	
			MBDH	1	15
			MZDH	-	28%
		<u>basim</u>	WB	2	
		WB	WFZS	1	
		<u>kabelim</u>	WZH	1	24
	Other in-laws	<u>basim</u>	WBS	2	44%
			WFBSS	1	
		<u>mulin</u>	DH	2	9
		<u>sama</u>	ZHB	1	16%
			BWB	-	
			ZHFZS	2	
			ZHFZSS	1	
No traceable relationship			2	2	4%
Ego alone			3	3	6%
<u>TOTAL:</u>			54	54	100%

age-category. The Mountain-Ok shields and houseboards are made exclusively by males and I have attempted to ascertain whether this is the privilege of one age-category rather than another.

TABLE 5.
AGE OF ARTISAN AND PRODUCTIVITY.
(Kialikmin only).

<u>AGE BRACKET:</u>	<u>20-30</u> <u>YEARS:</u>	<u>31-40</u> <u>YEARS:</u>	<u>41-50</u> <u>YEARS:</u>	<u>51 YEARS</u> <u>PLUS:</u>	<u>TOTAL:</u>
Derolengdam village Artisan-participation:	11	2	8	5	26
Angkevip village Artisan-participation:	8	15	3	1	27
<u>TOTAL:</u>	19	17	11	6	53
<u>PERCENTAGE:</u>	36	32	21	11	100%

Table 5 examines the ages of the men involved in the manufacture of 35 Kialikmin houseboards. It was found that the results for Derolengdam village differed greatly from those for Angkevip. The reasons for this are not clear. However, if the results of the two villages are combined, the distribution looks as if it would correspond to the age-distribution of all males in the population and it would therefore seem that no one age-group is involved in houseboard manufacture significantly out of proportion to its representation in the population at any given time. In fact, the distribution of 76 Kialikmin males over the four age-categories in 1965 was rather odd, being:

TABLE 6.

DISTRIBUTION OF ARTISANS AND ALL MALES BY AGE CATEGORIES

	<u>20-30</u> <u>YRS. OLD:</u>	<u>31-40</u> <u>YRS. OLD:</u>	<u>41-50</u> <u>YRS. OLD:</u>	<u>51 YEARS</u> <u>PLUS:</u>	<u>TOTAL:</u>
<u>ALL MALES:</u>	28	28	22	22	100%
<u>ARTISANS:</u>	36	32	21	11	100%

It is probable that the availability of medical services over the past 10 years has increased the life-expectancy of the older men and thus kept their representation in the population much higher to-day than would have been the case prior to the advent of Europeans.

I thought that it might be worthwhile to look at the ages of the men who executed the designs on houseboards, omitting those who participated in the other processes of manufacture. For this table I added two houseboards made in 1966, thus giving a total of 37 Kialikmin houseboards. The differences between this analysis and the one presented in Table 5 is hardly significant; the age-group most represented is now the 31-40 year-olds rather than the 20-30 year-olds.

TABLE 7.

AGE AT WHICH ARTISANS EXECUTED DESIGNS
ON 37 KIALIKMIN HOUSEBOARDS.

	<u>20-30</u> <u>YRS. OLD:</u>	<u>31-40</u> <u>YRS. OLD:</u>	<u>41-50</u> <u>YRS. OLD:</u>	<u>51 YEARS</u> <u>PLUS:</u>	<u>TOTAL:</u>
	33	35	22	10	100%

c) Ownership: Although several men may live in the one house and own it jointly by virtue of having co-operated in its construction, they do not automatically become joint owners of a houseboard attached to the house. Only if they have inherited it jointly, jointly manufactured it, or jointly commissioned its manufacture, can they be considered joint owners.

A woman may become owner of a houseboard by gift or by inheritance. The board is regarded as hers and although she may allow her husband to assume ownership and right of disposal, this is only by grace and at any time she could assert full rights of ownership should she so desire. In respect of rights to this and other types of property (shell-wealth, pigs, etc.), Telefolmin woman's status is not unlike that of a woman's status in our own society.

Inheritance of houseboards is generally by males. Sons were the recipients in four cases out of nine recorded; cognates were the recipients in six cases out of nine, the remainder being affines, two of whom acquired ownership through the widows of the original owners. The widow retains residual interest, and resides in the house to which the board is attached. Effective ownership, however, has been taken over by a sister's husband in one case and by a brother in the other.

What is most important in every case of inheritance is that the houseboard remains on the house of the deceased and is inherited by the senior occupant. This is usually, but not necessarily, a son; but he is seldom the eldest, for the latter has usually established an independent household before his father's death.

d) Distribution of Houseboards over Time: It seems that houseboards and shields have a maximum life-span of about 100 years. Houseboards rarely last over 60-70 years as they are continually exposed to the weather and to deterioration by constant traffic in and out of the houses. Shields have a greater chance of survival, providing they are not damaged or lost during use in warfare, because they are kept in the smoky interior of men's houses, away from the weather. The accumulation of generations of soot renders them relatively immune to attack by borers and fungi. I have recorded two shields 100 years old (E.W.5; E.W.9) and some of the shields kept in the Faiwolmin men's houses could be of similar vintage. There it is their sacredness that gives them a greater life expectancy as many of them do not appear to have been used regularly as warshields. On the other hand, those in spirit-houses, which are occupied only on rare occasions, hardly benefit at all from the smoky fires and are thus quite vulnerable to fungi and borers.

The toll of houseboards and shields caused by fungi, borers, accidental damage or loss in conflict, weathering, and the inflammability of the dwellings must be 100% over a period greater than a century. It should be remembered that the two shields dated at 100 years old have had the benefit of 20 years of pax australis.

The factors affecting the destruction of boards are not all random. The effect of sun and rain with the resulting weathering of the surface of the board (affecting the design if not the timber in the board itself) and perhaps splitting, the effect of fungi and insects, and

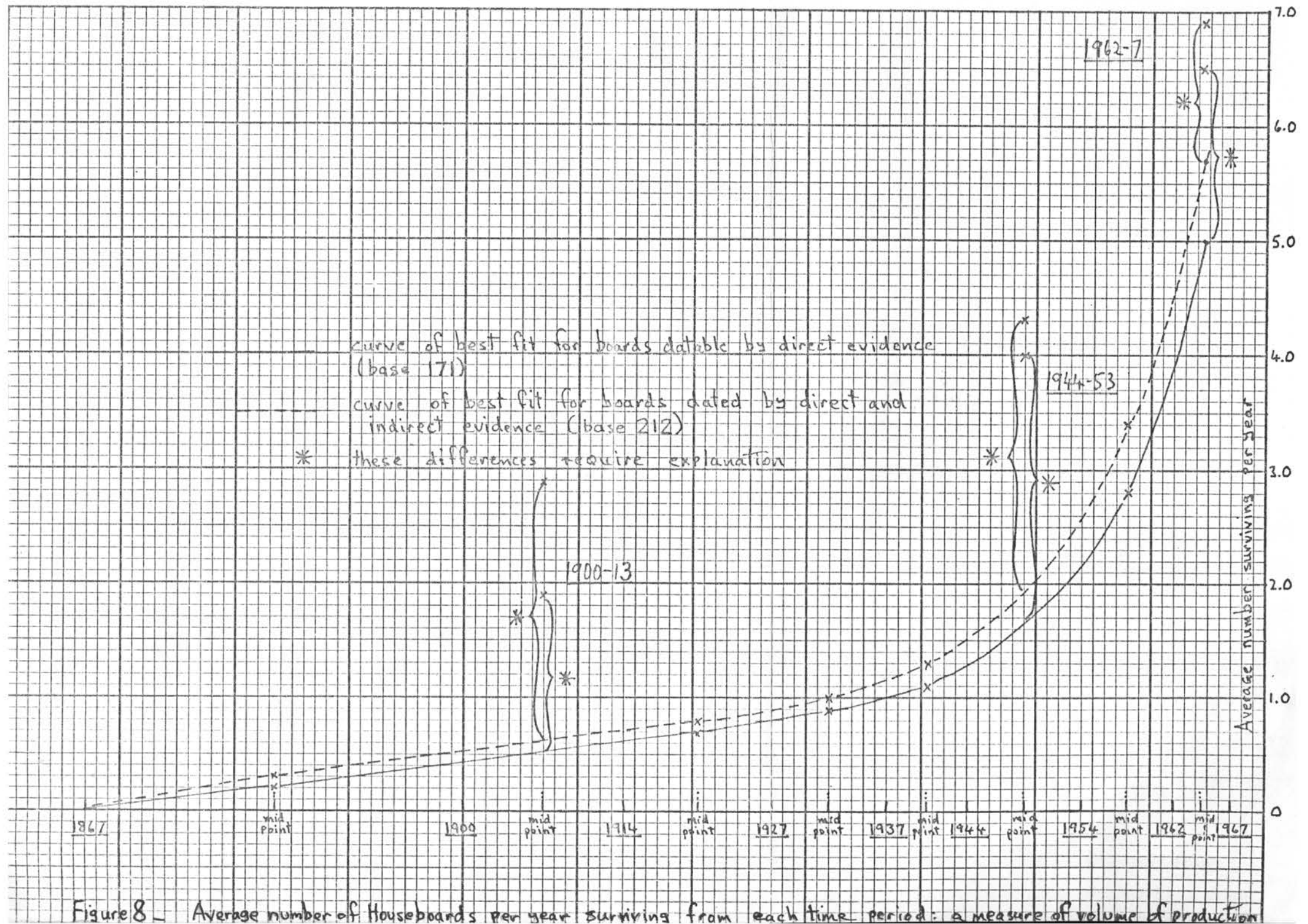
the mechanical wear and tear, are all cumulative. The varieties of timber used probably are affected differently by these cumulative factors, but unless there has been some major change in the varieties of timbers used at different periods in the past, this is not likely to be a factor which would cause boards made during one period to survive more favourably than boards made during some other, later, period.

If we calculate the average number of boards per year surviving from each of the eight time periods (assuming a maximum life of 100 years and therefore giving "pre-1900" a value of 33 years) and plot those averages at the mid-point of each of the time periods, and try to draw a smooth curve joining most of the points, we find that three time-periods seem to be over-represented (Figure 8). Even allowing that many boards from the period 1900-13 have been dated conservatively and belong somewhere in the "pre-1900" period, there are far too many survivals from that period if we assume a constant, or constantly increasing, rate of production of houseboards. Similarly there are far too many boards from the 1944-53 period and, it would seem, in the most recent period. It may be considered, then, that there was an abnormally high rate of production of houseboards during these three time periods, and it remains to attempt to discover the reasons for this.

One obvious cause for a large number of houseboards being made at the one time would be the loss of a large number at the one time. This could be caused by destruction of a village by fire, or the removal of houses to a new village site, at which time old materials are

FIGURE 8.

Average number of Houseboards per year Surviving from each Time-Period: a measure of Volume of Production.



replaced, including old or decrepit houseboards. Fires occur infrequently and do not necessarily destroy a whole village. It is worth noting that the men's houses are placed at some distance from family houses, and this could be to reduce the risk of the sacred contents being lost in a fire spreading from among the family houses. Village shifts are also infrequent. For a period of over 120 years, the Kialkimin have split into first two, then four, villages from an original village, and the shifts have occurred at intervals between 15 and 40 years, with an average of 25 years spent at each site. Whilst these village shifts, and destruction by fire, might account for general renewal of houseboards at a local level, the fact that the analysis I have carried out involves houseboards from nearly 40 villages makes it extremely unlikely that the effect of these two factors is anything but random for the total population of houseboards.

The causes, then, must be ones that apply over the whole area, and they must be historical factors, i.e. factors unique to each of the periods under consideration.

I will deal with the latest time period first, as it covers the time I was at Telefomin and is therefore the best-documented period. For example, it is quite clear that the increase in the manufacture of boards during that time had nothing to do with any cyclical rituals.

During the period 1963-6, the Kialikmin villages (Derolengdam and Angkevip) each split into two villages. Derolengdam became Deliduvip and Dalduvip I; Angkevip became Angkemavip and Dalduvip 2 (the numbers have been used to distinguish the two separate villages

placed immediately north and south of the old village site of Dalduvip (c.1870-1907) and called Dalduvip after that old village). In addition, a small off-shoot village (Muntevip) joined the Deliduvip group. All four of these new villages were built on new sites and thus there was occasion to renew materials, including decrepit houseboards. Twelve new houseboards were made between 1963 and 1966, eleven of which were of the current popular design (T.26-35, 37) and one (T.36) of the design popular in the Elip valley 20 years before. One other board had its old design taken off and a new one carved (T.9, 9a). Seven houseboards were destroyed or were later purchased by European collectors during that period. Some of those later sold to collectors would have been destroyed had I not impressed upon the owners that they were worth money and should be kept until a buyer came along, but it is impossible to know how many would have been destroyed in a more natural course of events.

In the three-village situation before the splits occurred, there were 23 houseboards on 41 dwellings eligible for a houseboard. In the four-village situation three years later, there were 30 houseboards on 36 eligible dwellings, an increase of seven houseboards and a decrease of five eligible dwellings. (Eligible dwellings are those constructed after the traditional style, whereas ineligible dwellings are of coastal or quasi-European style with the full-height doorway at the side of the house and therefore inconsistent with the use of a houseboard).

However, two of the houseboards (T.18, 22) had been in storage prior to the split. Both were owned by men at that time in gaol at

Wewak for their part in the 1953 killings. Thus there was a real increase of five houseboards - from 25 to 30 - during the period 1963-6.

This could be explicable in terms of increased population leading to the setting up of new households, or by an increase in the percentage of households possessing a houseboard. The former is ruled out as the number of households dropped from 49 prior to the split to 46 after the split. The percentage of eligible dwellings possessing a houseboard prior to the split was 56%, and after the split 83%. The number of houseboards as a percentage of total dwellings was 47% before and 65% after the split.

Whichever basis we use for calculating, it is obvious that an increase in the number of houseboards has taken place in the Kialikmin/Telefolmin villages that is not due to an increase in the number of households resulting from an increase in population.

My personal view is that the increase is in response to the interest shown by Europeans in this art form. The readiness of certain artisans to manufacture shields of reduced size for sale to Europeans attests to this pride.

The reason given for the addition of the narrow carved and painted boards either side of the houseboard (T.3) attached to the men's house at Angkemavip/Kialikmin (see T.3a), was that something had to be done to replace the facade purchased from the Tifalmin spirit-house in 1965 on behalf of the Musee National des Arts Africains et Oceaniens.

It is significant that the responsibility for making this replacement was taken by a group of another tribe - it would seem that already the various tribes of the Mountain-Ok are beginning to recognise themselves as some sort of cultural unit.

The high number of boards made during the period 1944-53 could be explained by the availability of steel tools in quantity. To make a houseboard with stone tools must have required a tremendous amount of labour. Only those who were really keen would expend the effort. However, steel tools became generally available to the Telefolmin after 1944 (when many were used as payment for labour on the airstrip), and this would have been a deciding factor in encouraging the less keen to try their hand at making a houseboard.

There is no ready explanation of the large number of boards from the 1900-1913 period. However, there are a number of lines of enquiry that could be pursued: first, it would be necessary to date the boards more accurately, and this would almost certainly reduce the number of boards in that period. Secondly, I would try to ascertain whether the Iligimin (the original inhabitants of the Elip valley driven out by the Telefolmin c. 1870) had houseboards and, if so, what happened to them when the Telefolmin moved in. If they did not have houseboards, or if they were all destroyed, I would try to find out whether they were immediately replaced, or just how long it was before houseboards were attached to houses in the Elip valley by the Telefolmin invaders. It might be found that the first Elip houseboards were made just prior to, and after, the turn of the century.

However, 45% of the boards of this period are Falamin, and it is obvious that a close enquiry into the recent history of that tribe would be necessary to explain this. It may even be found that these people have only recently, i.e. late 19th century, adopted the houseboard as a culture trait, and that many of the boards from this initial burst of manufacturing have still not needed replacement. It is conceivable that it would take several houseboard life-cycles for the effect of the initial batch of manufacturing to be reduced to a cycle of continual replacement. The same sort of effect may have brought about the large batch of boards made in the Elip valley in the period 1944-53: the boards made initially may have been discarded at about the same time and new ones made, thus amplifying the effect of the introduction of steel tools.

e) The Use of Warshields: The Mountain-Ok shield is quite light. Cranstone (1968) has weighed nine in the British Museum and they average 14 lbs. 2 ozs. I possess two weighing 8 lbs. and 13 lbs. The shield was normally carried by an unarmed shield-bearer, a man of exceptional courage. He carried a stick with which to sweep off arrows that became embedded in the front of the shield. This man often acted as a scout on raiding trips, returning to collect his shield for the attack.

The shield-bearer was accompanied by one or more bowmen who sheltered behind the cover of the shield. Cranstone says (1968:612): "The shield-bearer controlled the tactics of his group, since where he

went the archers had to go; his was therefore the post of responsibility and honour."

The shield could be used as a weapon to batter and pin down an enemy, until the bowmen could fire an arrow at the victim. In all demonstrations I have seen of the shield being used, the bearer held it at either edge and ran with it, held away from his body, moving it slightly from side to side. The bowmen followed in single file, shooting arrows as they went. However, these demonstrations were always lighthearted affairs and they may have been more in the nature of public dances than real demonstrations.

The Telefolmin often took shields with them when going to gardens in territory adjoining enemy lands; they thus had defensive purposes. But normally they were used in large-scale fights against enemy of other tribes. Only rarely were they used in fights between parishes of the same tribe.

CHAPTER VI.

VI. HOUSEBOARDS AND WARSHIELDS AS ELEMENTS OF CULTURE:

a) The Problem: The Telefolmin have always insisted that the carved and painted designs on houseboards (amitung) and warshields (atkom) are purely decorative, that there are no sacred connotations whatsoever.

They have admitted, however, certain characteristics of warshields that could be described as animistic. The shields possess sinik (spirit, life essence); they have personal, male names; they may vibrate, emitting a knocking or drumming sound when a fight is imminent; they, like the fight-arrows, are freshly painted prior to battle; they become light when being carried into battle; if struck by an arrow, the wood of the shield instantly swells around the point to prevent penetration. Normally, shields are kept in men's houses or spirit houses, often with the design turned face-to-the-wall.

The Faiwolmin also give the shield a personal name, but impose food and water taboos on the artisans whilst it is being made. The shield is initiated by firing an arrow into it so that it will not be afraid when taken into the fight - a frightened shield would shake violently. The shields are kept in spirit houses and men's houses, design side showing, with ancestral skulls placed on the floor in front of them, or with menamem hanging from them; menamem (lit. "bag-sacred") are small net bags containing the relics of ancestors -

usually small bones of the finger, hand or arm, collar-bone, vertebrae, etc. In particular, bogolmen or unmen (bogol : "hawk"; un : "arrow") are menamem containing the relics of renowned warrior-ancestors.

The Faiwolmin shields keep the skulls and the relics "warm", and heat is power. The warrior who is entrusted with the bogolmen will be carried across streams by members of the raiding party to avoid his feet becoming wet and cold, as cold is inimical to the heat, that is power, of the ancestors. If a bivouac is necessary, the man carrying the bogolmen is sheltered first.

Further, the shields are somehow providential for the taro crop, for both B.A.L. Cranstone and myself were told by Wopkeimin that they would not part with their shields for fear of failure of the taro crop.

The interpretations of the design elements on warshields from the Faiwolmin area are commonly anthropomorphic, and often approach a unitary anthropomorphic meaning (see VI.2. below). Thus the shields may be regarded as representing the ancestors, and amplifying and directing their power to the benefit of the community, especially in its activities in the realms of fighting, hunting and gardening - and most likely pig husbandry as well.

The Faiwolmin state that the carved and painted boards on the spirit houses and men's houses promote the well-being of the taro crop. They add that the people south of them - the Awin - have no carved and painted boards "because they have no enemies".

The design elements on the carved and painted boards are often anthropomorphic but, as for the design elements on shields, there is a wide range of meanings ascribed to them. However, it is clear that the decorative facades, like the shields, have to do with the power of the ancestors, amplifying and directing it to the benefit of the community by promoting the well-being of the taro crop and maintaining preservation of life and territory.

It seems probable, from their condition and manner in which they are secured to the wall, that certain shields are left permanently in position in Faiwolmin spirit houses, solely to serve a sacred function, whilst others may be carried forth to the fray.

The presence of a unique board in the yolam at Katokabip/Bolobip/Angkeiakmin (Faiwol, W.8) is interesting. This board is not a shield, having the shape of a houseboard, but is called imanaskom, i.e. "taro-shield" and apparently is intended for sacred purposes only. Unfortunately I was unable to obtain information concerning it, but it recalls the Papuan Gulf gope, the ancestral board that is placed in close contact with skulls, and which wards off sickness and other ills (Newton, 1961:16, 33).

There are thus sacred objects never seen by the uninitiated, shields that are used against enemies, and finally, for all to see, the decorative facades.

It is tempting to compare these "private" and "public" versions of graphic symbolism with the analysis presented by Douglas Newton for Papuan Gulf art. He suggests that the same form - the sacred bull - roarer - "is repeated in, so to speak, wider and wider contexts of

decreasing secrecy. By the time the aiaimunu mask reaches the audience of women, its prototype, the bullroarer, is already at several removes. Its "heat" is safely dissipated. The secret is safe, yet has been revealed far enough to prevent its retention from being a source of frustration" (1961:35).

It appears then, that, for the Faiwolmin, shields and carved and painted houseboards are culture traits closely connected with warfare, gardening, hunting and pig-husbandry. The Telefolmin admit a degree of animism for their shields, but attribute no significance to their houseboards. The Mianmin deny any sacred or animistic characteristics for their shields and do not possess houseboards.

The problem is to explain why some Mountain-Ok tribes possess houseboards and others do not; why some attach these boards to family, men's and spirit houses, others to men's and spirit houses, and others to spirit houses only; and why there is a variation in the significance attributed to these boards.

Similar questions may be asked of the shields but I will confine myself to suggestions for future research.

b) The Method: In an attempt to answer the questions posed above, I shall use the method of scale analysis developed by Louis Guttman.

This method of analysis has been developed for quantifying qualitative data. Because some of the culture traits I will be using were not

studied as quantifiable variables, I must have recourse to this particular approach.

Guttman sees "... mathematics as unveiling necessary relationships that arise from classifications," and points out that "... qualitative classifications lead to just as rigorous implications as do quantitative." (1944:139-40 footnote).

The Guttman scale deals with qualitative variables, or attributes. The universe of attributes "... consists of all the attributes of interest to the investigation which have a common content". Borderline cases arise where it is difficult to decide whether or not an item belongs in the universe, but "the formal analysis for scalability may help clarify uncertain areas of content." He is emphatic that "... a criterion for an attribute to belong in the universe is not the magnitude of the correlations of that item with other attributes known to belong in the universe attributes of the same type of content may have any size of intercorrelations, varying from practically zero to unity." (1944:141-2).

Carneiro says: "Our aim is to determine which traits (if any) out of the universe of cultural elements actually scale. It is not our purpose to discover whether or not scaling is characteristic of a random sample of culture traits in fact, we would do well to select only traits which seem to have some initial probability of scaling (and) to direct our attention from the outset to developing rules of thumb for helping us to pre-select traits that are particularly good candidates for scaling" (1962:161-2).

Two of the characteristics of scalable traits suggested by Carneiro are: "(1) their presence indicates a greater degree of complexity than their absence, and (2) once developed they tend to be retained, if not indefinitely, at least over long periods of time." This second criterion, however, becomes relevant only "if we mean to examine the evolution of culture over its entire range," or at least over a very wide range, or through a long period of time (1962:162).

A third criterion, if we wish to study a distinct sphere of culture rather than the whole range of cultural phenomena, would be that of "close functional relationships" (1962:163).

"However, even if the sample of attributes is selected without knowledge of their empirical interrelationships and is found to form a scale for any sizeable random sample of individuals, then the universe from which the attributes are selected is scalable for the entire population of individuals" (Guttman 1944:148).

And this introduces another important problem: that of the definition of the population¹ to be investigated. The population must be defined clearly by the investigator and difficulties may be encountered in deciding whether or not a particular individual belongs in the population being investigated. If the population of individuals is large, a sample must be selected. The important point is that the sample of individuals should be representative of the population from which it is drawn.

1. Population refers to a complete set of individuals and universe refers to a complete set of attributes.

Probably the most significant difficulty, however, is that of deciding whether a culture trait is present or absent for a given society. This difficulty may be greater for some traits than for others. For example, one instance of an ancestral skull kept by a household in a family house does not establish this as a trait for the group of which that household is a member. There would be no doubt if all family houses were so endowed. But what frequency is decisive?

In the case of the decoration or non-decoration of the sole cult-house belonging to a particular group, the presence or absence in this one instance is sufficient to establish this as a trait, as the maximum frequency can only be one.

Before going on to describing the method of constructing a scale, the problems I have met in selecting traits, in defining the population, and in deciding whether a trait was present or absent for any 'individual' in the population, must be discussed.

c) The Traits : Houseboards: Despite the fact that some Mountain-Ok groups do not readily admit that there are connections among various aspects of their culture, it has proved worthwhile to follow the clues afforded by certain observations and test for scalability, utilising a number of traits in the realm of magico-religious symbolism, and two others that seem to have a "close functional relationship" with some of these traits.

The traits I have chosen are as follows:-

- a. 'Herringbone' external wall cladding on spirit house - no carved and painted boards;
- b. Carved and painted boards on family houses;
- c. Carved and painted boards on men's houses;
- d. Carved and painted boards on spirit houses;
- e. Trophies of the hunt displayed in family houses;
- f. Trophies of the hunt displayed in men's houses;
- g. Trophies of the hunt displayed in spirit houses;
- h. Domestic pig jawbones displayed in family houses;
- i. Domestic pig jawbones displayed in men's houses;
- j. Domestic pig jawbones displayed in spirit houses;
- k. Skulls of ancestors kept in family houses;
- l. Skulls of ancestors kept in men's houses;
- m. Skulls of ancestors kept in spirit houses;
- n. Ancestral relics kept in family houses;
- o. Ancestral relics kept in men's houses;
- p. Ancestral relics kept in spirit houses;
- q. Village residence;
- r. Pig husbandry.

These traits are but some of the 'attributes' of the 'universe' under consideration. For example, ancestor worship, hunting practices, warfare, shields, certain gardening techniques are all assumed present for the total 'population' under investigation.

The following Mountain-Ok groups (*tribes*) are to be included:

- a. Telefolmin of Eliptaman and Ifitaman
- b. Falamin
- c. Ulapmin
- d. Tifalmin
- e. Atbalmin
- f. Mianmin
- g. Fegolmin - Angkeiakmin (Faiwolmin)
- h. Wopkeimin
- i. Oksapmin

The data available for the Atbalmin and Ulapmin are limited, but I have been in the areas occupied by these groups and have taken sufficient notes to make their inclusion worthwhile. However, I have never visited the Telefolmin of Ninataman, the Om tribes (Sisimin, Duanmin, Moduanmin, Suamin), the Bimin, or Seltamanmin. I have not visited the Mianmin either, but I have worked with a Mianmin informant and also have been assisted by data from George Morren who is at present doing fieldwork among these people. For the Tifalmin, I have supplemented Bryan Cranstone's material with my own notes.

The Oksapmin are included because they share Mountain-Ok culture, if not the language. The Sibil of West New Guinea are also candidates for inclusion, but information is almost completely lacking for the traits I have chosen for scale analysis, particularly regarding the contents of family houses, men's houses, and spirit houses.

In Appendix A, I list all the data I have used for the scale analysis. It can be seen that the data are quite adequate for the Telefolmin of Eliptaman, for the Faiwolmin, and eastern Wopkeimin, but that for other areas, and for the family house contents in most areas, the data is hardly adequate to demonstrate beyond doubt the presence or absence of each of the eighteen traits for the nine groups.

Despite all this, I believe it is worthwhile to carry out the exercise, making judgements on the basis of the data available.

a. The 'herringbone' external wall cladding technique is unique to the Telefolmin. The spirit houses at Ubtentigin/Eliptaman and Telefolip/Ifitaman, both ritual centres, are completely clad with narrow slivers of split timber set in a herringbone pattern, from ground level to roof-line (Plates 2 - 4). A blank houseboard is incorporated in the wall structure at the entrance.

b. - d. Carved and painted boards include single houseboards with the entrance hole at the lower end, a number of narrow carved and painted boards fastened either side of the doorway, or a combination of both. There is little difficulty in deciding the presence or absence of these traits for each group. The main purpose of my survey work was to record these boards, and almost every village or hamlet was included. In areas where the boards do not exist (Atbalmin, Mianmin), or where they only occur on spirit-houses (Oksapmin), informants supplied data that made a complete survey unnecessary.

e. - g. Trophies of the hunt include the skulls, jawbones, and

other bones of mammals, birds and reptiles, including wild pigs, cassowary and crocodiles_Λ (Plates 11, 12, 14). These are usually kept inside houses, but the Mianmin hang them up on the front external wall of the houses (G. Morren, personal communication). The Atbalmin have been reported as doing this, and it is also a feature of Tapiro houses in West New Guinea, and the houses of both river and mountain peoples of the Upper Sepik (Green River) area. Despite the fact that I did not sample family houses in any of the Mountain-Ok areas, and noted the presence or absence of this trait only incidentally, it is almost certainly universal for all types of dwelling in all Central New Guinea groups.

h. - j. Domestic pig jawbones displayed in family/men's/spirit houses_Λ (Plates 12, 14) are traits that relate closely to the presence of pig husbandry (trait r.), and a complete census of jawbones in all houses in all the villages or hamlets of each group would prove, perhaps, a sensitive measure of the significance of pig-husbandry in the economy of each group. For the moment, however, I have adequate data for men's and spirit houses in most groups, but data for the family houses is poor, often lacking.

k. - p. Although the skulls of ancestors are kept in houses by most Mountain-Ok groups, the Tifalmin and Oksapmin prefer to keep them in "burial caves"_Λ (Plate 13) bringing them to their spirit houses only for the purposes of certain initiation ceremonies¹. However, I have chosen not to differentiate between permanent and temporary lodgement. I have

1. After the ceremony is over, and the ritual house is abandoned, the Oksapmin place the skulls in the andabap, a small shelter about two feet square and four feet high, close by the abandoned ritual house. I do not know how long the skulls are left there.

chosen, however, to differentiate between ancestral skulls and ancestral relics. Relics are the bones (other than skulls) or personal belongings of ancestors and include finger, hand, arm and thighbones, collarbones, vertebrae, hair, teeth, and teruntet (bamboo ear-tube). I have relied partly upon my own observations - in some cases not systematic enough to impart certainty to the decisions as to whether or not the traits are present for each group - and partly upon general statements by informants. A more systematic census is warranted.

q. Village residence is difficult to define and depends upon two factors: the number of dwellings in a cluster and the amount of time spent by residents in these dwellings. Whereas I have data for the first factor, there is insufficient evidence concerning the second.

The Telefolmin of Eliptaman and Ifitaman, and the Falamin, average eleven dwellings per cluster; the Ulapmin average seven, the Tifalmin five, the Faiwolmin nine, the eastern Wopkeimin six, and the western Wopkeimin and other groups average less than four. The Oksapmin have, at best, vague clusterings of a few dwellings only. For the purposes of this analysis, a village is defined as a group of at least six buildings specifically for use as dwellings.

Even for groups which indisputably have villages, such as the Telefolmin and Falamin, it would appear from Patrol Reports and my own observations that traditionally a family might spend but half its time in its village dwelling, spending the other half in scattered garden houses. It is also worthy of note that Patrol Report No. 5 of 1958/9 states (p.6) that the Tifalmin - unlike the Ulapmin - did

not live in villages, except in the case of Woksivip, but in scattered hamlets of three or four houses only. Villages as they now exist in some of the Tifalmin parishes¹ could be a quite recent trait, and one wonders whether the decorated spirit house at Bulolengabip is also recent.

r. 'Pig Husbandry' is here defined as 'rearing pigs from litters borne by domesticated sows'. There may well be variations concerning the age at which domesticated boars are castrated and thus whether domesticated or wild boars mate with the domesticated sows - in this respect I would anticipate that the Telefolmin are the most developed as regards pig husbandry, for wild boars are very few and far between in their territory and domesticated boars would be necessary to serve the sows.

The Mianmin rely almost entirely upon wild pigs caught by hunting, or wild piglets raised till mature enough to kill and eat. The Wopkeimin claim that they used to domesticate pigs a generation ago, but that now they rely upon pigs from the Awin area to the south in exchange for tobacco obtained from the Tifalmin to the north. That they used to domesticate pigs probably accounts for the presence of domestic pig jawbones in men's and spirit houses.

This trait requires much more attention than I have been able to give it. It is, perhaps, too complex to subject to simple plus-minus assessment. Certainly, more research is necessary so that the line between plus and minus may be drawn less arbitrarily.

1. Bufulmin average 7 dwellings per cluster; Damalmin (one village only) has eight houses; Dubalmin three; Dulkamin two, and Ifilkamin 5 - 6.

d) Constructing the Scalogram : Houseboards: The method of constructing the scalogram has been demonstrated clearly by Carneiro. The presence or absence of a number of traits are indicated for each of a number of societies on groups. The groups may be arrayed across the page and the culture traits down one side. Plus and minus signs are marked in each 'cell' to indicate presence or absence of the trait (see Table 8). Where the information is either completely lacking, or too inadequate even for an 'educated guess', I will record only a question mark. Where the information is inconclusive, but sufficient for an 'educated guess' I will record a plus or minus followed by a question mark. Where the information is adequate, a plus or minus will be recorded.

The total number of traits for each group is recorded at the bottom of the Table and the total number of groups possessing a particular trait is recorded at the side. The Table is then re-arranged with (i) culture traits in decreasing order of frequency from bottom to top, and (ii) groups in increasing order from left to right, according to the number of traits they possess (see Table 9). The resulting scalogram exhibits a definite pattern if the items are scalable. "Scaling as an attribute is either inherent in the data or it is not. Re-arrangement of the traits and societies according to the stipulated rules merely brings it out; it does not and cannot create it." (Carneiro 1962:153).

Guttman (1944:140) warns that: "Perfect scales are not to be expected in practice. The deviation from perfection is measured by

a coefficient of reproducibility" This is "... the degree to which we can reproduce or predict which items a member of the population will have if we know only the number of items it possesses" (to calculate this coefficient, we must) "..... determine the number of items whose presence or absence would have been incorrectly predicted¹ from a knowledge of each member's scale score alone. These errors are added, and their sum is then divided by the product of the total number of items multiplied by the total number of members of the sample appearing on the scale. The resulting decimal fraction, subtracted from 1, gives us the coefficient of reproducibility. Coefficients will range between 0, which indicates no scaling at all, and 1.0, which indicates perfect scaling" (Carneiro 1962:156). Guttman suggests 0.85 or better as an acceptable approximation to a perfect scale, but Carneiro suggests 0.90 or better.

e) The Results : Houseboards : The scalogram constructed for the Mountain-Ok tribes (Table 9) yields a coefficient of reproducibility 0.98 assuming that none of the queried cells turn out to be anomolous. However, the scalogram will constitute an acceptable approximation even if there are a total of sixteen "errors" - or a total of twenty-four "errors" if we accept Guttman's 85% coefficient of reproducibility.

1. Note that each anomaly will result in two "errors" unless there are other anomalies which compensate in part. The Telefolmin possess a total of seventeen traits. From this information we would have predicted - given perfect scalability - possession of all traits except No. 1. In fact this prediction would have been in error, as trait No. 1 is possessed by the Telefolmin. Similarly, we would have predicted that trait No. 9 would be possessed by the Telefolmin, but in fact it is not. Thus one anomaly has given rise to two "errors". "Errors" may coincide if there is more than one anomaly.

It might be objected that, if a larger number of attributes are included in a scalogram than are required to differentiate each group from the others this increases the denominator and decreases the effect of a given number of "errors", thus increasing the coefficient of reproducibility. This would be especially true if the additional attributes were possessed equally by all the groups (for example, Culture Traits Nos. 14 - 18, Table 9). Thus it might be objected that traits 14 - 18 are unnecessary; only one of traits 2 - 5 are necessary; and so on. Whilst this is a fair criticism if our concern is only to rank the tribes on some evolutionary scale of culture traits, it is not a legitimate objection if we are also concerned to note the rank order of the various culture traits themselves.

However, to forestall the objection, I present in Table 10, a scalogram using the minimum number of traits. The coefficient of reproducibility, even assuming all queries turn out to be "errors", is 0.89 which indicates a sufficient approximation to a perfect scale to justify acceptance of the discriminatory powers of the traits chosen.

To validate the scalogram results in a convincing manner would require a close investigation of the contents of family houses in all the tribal groups and a much closer study of the Atbalmin and Ulapmin.

It is worth noting that in my travels throughout the Mountain-Ok area I was invariably offered accomodation in men's houses if there was no Administration Rest House, and I felt a considerable inhibition

TABLE 8: GUTTMAN SCALE ANALYSIS : HOUSEBOARDS (a).

<u>CULTURE TRAITS</u>	<u>TELEFOLMIN</u>	<u>FALAMIN</u>	<u>ULAPMIN</u>	<u>TIFALMIN</u>	<u>ATBALMIN</u>	<u>MIANMIN</u>	<u>FAIWOLMIN</u>	<u>WOPKEIMIN</u>	<u>OKSAPMIN</u>	
a. Special wall cladding on spirit houses - no carved and painted boards	+	-	-	-	-	-	-	-	-	1
b. Carved and painted boards on family houses	+	+	+	-	-	-	-	-	-	3
c. Carved and painted boards on men's houses	+	+	+	-	-	-	+	+	-	5
d. Carved and painted boards on spirit houses	-	+	+	+	-	-	+	+	+	6
e. Trophies of the hunt displayed in family houses	+	+	+	+	+	+	+	+	+	9
f. Trophies of the hunt displayed in men's houses	+	+	+	+	+	+	+	+	+	9
g. Trophies of the hunt displayed in spirit houses	+	+	+	+	+	+	+	+	+	9
h. Domestic pig jawbones displayed in family houses	+	+	+	-?	-?	-	-?	-?	-?	3
i. Domestic pig jawbones displayed in men's houses	+	+	+	+	?	-	+	+	+	7
j. Domestic pig jawbones displayed in spirit houses	+	+	+	+	+	-	+	+	+	8
k. Skulls of ancestors kept in family houses	+	+	+	-	-	-	-	-	-	3
l. Skulls of ancestors kept in men's houses	+	+	+	-	-	-	+	-	-	4
m. Skulls of ancestors kept in spirit houses	+	+	+	+	+	+	+	+	+	9
n. Ancestral relics (other than skulls) kept in family houses	+	+	+	-?	-?	-	-	-	-	3
o. Ancestral relics (other than skulls) kept in men's houses	+	+	+	+	?	+	+	+	+	8
p. Ancestral relics (other than skulls) kept in spirit houses	+	+	+	+	?	+	+	+	+	8
q. Village residence	+	+	+	+	-	-	+	+	-	6
r. Pig husbandry	+	+	+	+	+	-	+	-	+	7
	17	17	17	11	6-9	6	13	11	10	

TABLE 9: GUTTMAN SCALE ANALYSIS : HOUSEBOARDS (b).

CULTURE TRAITS		6	6-9	10	11	11	13	17	17	17
		MIANMIN	ATBALMIN	OKSAPMIN	TIFALMIN	WOPKEIMIN	FAIWOLMIN	ULAPMIN	FALAMIN	TELEFOLMIN
1. Special wall cladding on spirit houses - no carved and painted boards	*1	-	-	-	-	-	-	-	-	+
2. Carved and painted boards on family houses	*3	-	-	-	-	-	-	+	+	+
3. Skulls of ancestors kept in family houses	3	-	-	-	-	-	-	+?	+	+
4. Ancestral relics kept in family houses	3	-	-?	-	-?	-	-	+?	+?	+
5. Domestic pig jawbones displayed in family houses	3	-	-?	-?	-?	-?	-?	+?	+?	+
6. Skulls of ancestors kept in men's houses	*4	-	-	-	-	-	+	+?	+	+
7. Carved and painted boards on men's houses	*5	-	-	-	-	+	+	+	+	+
8. Village residence	*6	-	-	-	+	+	+	+	+	+
9. Carved and painted boards on spirit houses	*6	-	-	+	+	+	+	+	+	-
10. Domestic pig jawbones displayed in men's houses	7	-	?	+	+	+	+	+?	+	+
11. Domestic pig jawbones displayed in spirit houses	*8	-	+?	+	+	+	+	+?	+	+
12. Pig husbandry	7	-	+	+	+	-	+	+	+	+
13. Skulls of ancestors kept in spirit houses	*9	+	+?	+	+	+	+	+?	+	+
14. Ancestral relics kept in men's houses	8	+	?	+	+	+	+	+?	+?	+
15. Ancestral relics kept in spirit houses	8	+	?	+	+	+?	+	+?	+?	+
16. Trophies of the hunt displayed in family houses	9	+	+	+?	+?	+?	+?	+?	+?	+
17. Trophies of the hunt displayed in men's houses	9	+	+?	+	+?	+	+	+?	+?	+
18. Trophies of the hunt displayed in spirit houses	9	+	+?	+	+	+?	+	+?	+	+

(NOTE: * : See Table 10)

TABLE 10: GUTTMAN SCALE ANALYSIS : HOUSEBOARDS (c).

<u>TRAITS</u>	<u>MI.</u>	<u>AT.</u>	<u>OKS.</u>	<u>TIF.</u>	<u>WOP.</u>	<u>FAIW.</u>	<u>UL.</u>	<u>FAL.</u>	<u>TEL.</u>
1 Special Wall Cladding - spirit houses									+
2 Carved & Painted boards - family houses							+	+	+
6 Skulls of ancestors - men's houses						+	+?	+	+
7 Carved & Painted boards - men's houses					+	+	+	+	+
8 Village residence				+	+	+	+	+	+
9 Carved & Painted boards - spirit houses			+	+	+	+	+	+	-
11 Domestic pig jawbones - spirit houses		+?	+	+	+	+	+?	+	+
13 Skulls of ancestors - spirit houses	+	+?	+	+	+	+	+?	+	+
Maximum no. of "errors" possible	-	2	-	-	-	-	4	-	2

$$\begin{aligned} \text{Coeff. of rep}^2\text{y} &= 1 - \frac{8}{8 \times 9} \\ &= 1 - 0.11 \\ &= 0.89 \end{aligned}$$

to peering inquisitively into family houses and invading family privacy.

Secondly, my stay among the Atbalmin was brief and during that time I visited only a couple of hamlets, and was not permitted to investigate the spirit house. During the one day I travelled in Ulapmin territory I was concerned only with photographing the houseboards. No doubt, had I thought that these data would be important for later analysis, I would have contrived to carry through the investigation and indeed I hope that this will be possible in the near future.

To return to the questions which led to the construction of the scalogram. The first conclusion to be drawn from the results of the scalogram is that certain traits seem to be closely associated. The most important is the association between carved and painted boards and the skulls of ancestors.

The keeping of ancestors' skulls in spirit houses is a necessary condition of carved and painted boards on spirit houses, but not all spirit houses with ancestors' skulls in them are so decorated. The same is true for men's houses and for family houses. Unless it is the custom to keep ancestral skulls in houses of a particular type, that type of house may not be decorated with carved and painted boards. The inevitable conclusion, then, is that the decorations have something to do with ancestors' skulls, even among those people who do not admit to the connection. The relationship may be purely historical, a relic of the past that has lost significance in the consciousness of the

people, but it is a relationship nevertheless.

Secondly, it seems established that the houseboards are a culture trait indicative of an evolutionary trend for the Mountain-Ok. Carneiro says the implications of scalability are "... first that when societies become more complex they do so by a cumulative process which involves adding on traits of successively higher rank order at the same time that they retain traits of lower rank order, and secondly that in this process societies add on the same scalable traits in the same order." ¹

He does not claim that all societies adhere to this process in every detail, but he does suggest that "... in scale analysis we have a tool which permits us to re-examine the question of unilinear evolution in a more comprehensive and systematic manner than has ever been attempted before (and might lead to) the resurrection and rehabilitation of unilinear evolution in some tempered and discriminating form." The most important thing for the ethnologist is that "... since societies retain many of the traits they have invented at different stages in their past, it is evident that to an important degree a society's culture history is encapsulated within itself. Scale analysis seizes upon this fact and attempts to make the most of it." (1962:159, 160).

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1. Carneiro 1962:158. He later makes the qualification that some traits are mutually exclusive and there may be supersedence of earlier traits instead of retention of them. This seems to be the case with the absence of decorated houseboards on the spirit houses at Telefolip and Ubtentikin which are characterised instead by a unique walling technique not found anywhere else in the Mountain-Ok area.

The second conclusion, then, is that the trait of decorated houseboards on family houses is higher on the evolutionary scale than decorated houseboards on men's houses, and that the latter are in turn higher on the evolutionary scale than decorated houseboards on spirit houses.

f) Warshields as a Culture Trait: One of the most interesting aspects of this analysis is the difficulty of scaling 'warshields' as a culture trait. The mere presence or absence of shields presents no scaling problem - all of the groups dealt with possess shields. But there is a vast difference in their significance for the Faiwolmin as against the Mianmin.

If I had sufficient information for each of the Mountain-Ok groups, I would construct a scalogram using such attributes of the warshield 'universe' as:

- a. Are warshields given personal names?
- b. Have they sinik (spirit, life essence)?
- c. Do they behave animistically?
- d. Are the designs given a unitary anthropomorphic meaning?
- e. Are menamen used in association with shields?
- f. Are shields kept in family houses?
- g. Are shields kept in men's houses?
- h. Are shields kept in spirit houses?
- i. Are shields sometimes kept as purely sacred objects?

Other attributes may suggest themselves during investigation.

The result of such a study could well be to establish the Faiwolmin at a higher point of development than the Telefolmin with regard to the 'universe' of warshields. How is this to be interpreted?

If we concede that scale analysis of only a sub-set of the whole universe of culture traits does not lead to valid conclusions about that universe, then it would not be surprising should analyses of the houseboards and warshields as culture traits each arrive at different rankings of the Mountain-Ok groups, and indeed ought to be expected as a characteristic of sub-sets within a universe of culture traits.

However, another interpretation is possible without denying the truth of the above reasoning. Carneiro discusses the interpretation of 'deviant plusses' in a scalogram, and suggests that the presence of plusses "... well above other plusses in the column tells us that a trait of relatively high rank order is present in a society of relatively low rank order. The most likely explanation for such an occurrence is diffusion of the trait in question from another society of higher cultural level. Traits which a society has obtained through diffusion would in fact consistently tend to stand above those that had been indigenously evolved what diffusion does is to transmit to societies traits which they have not yet been able to develop for themselves (but) the adoption of traits by a society through the mechanism of diffusion is ordinarily limited to those traits which stand not too far above the ones that the society itself has already developed" (1962:164).

The difficulty then is to decide whether a deviant plus is a

remarkable ~ but indigenous ~ development for that particular group, or whether it is the result of diffusion. Certainly it seems that all the prerequisite conditions are present for the development of warshields as sacred objects by the Faiwolmin, but I wonder whether it is possible that in this may be seen influences from the Papuan Gulf cultures with their gopi ancestor boards?

g) Postscript: Shields in the Sibil? Members of the 1959 Dutch Star Mountains Expedition did not record the presence of shields in the Sibil area and Kooijman therefore concludes that they do not exist there (Kooijman 1962:25). On the basis of this, and Simpson's erroneous report (Simpson 1962:365), Kooijman was led to believe that the shields did not exist among the Telefolmin either (1962:32 footnote 61).

Kooijman could be correct about the Sibil. However, I must point out that members of the Expedition were not permitted entry into the iwol - the spirit house of the Sibil area - and it is precisely in such a house that shields would be kept (Brongersma and Venema 1962:89, 192). Champion reports a similar prohibition on entering the amok at Bolibip/Angkeiakmin when he visited the village in 1927 (Champion 1966:77-8, 141). It is remarkable that he never saw a shield in all the time he spent among the Angkeiakmin, nor during his journey north through Falamin, Telefolmin and Atbalmin territory. Neither did Thurnwald in 1914, even though his sudden appearance caused considerable agitation among the Telefolmin (1916:88).

The same prohibition prevented my investigating Atbalmin

spirit-houses. I have never seen a shield among the Atbalmin and Cranstone's Tifalmin informants said that the Atbalmin do not possess shields (Cranstone 1968:611), but MacArthur records seeing one at the hamlet of Funabip/KAIDAGOIYIN, not far from the Ip (Hoffnungs) - Sepik Junction (Patrol Report No. 12 of 1962/3 Telefomin SD0, p.159). This hamlet was known to my informants at Bibiyun on the mid-August river and thus provides a point of contact between shield makers of the Mountain-Ok and Upper Sepik (Green River) areas.

It would seem quite likely, then, that the Sibil people - sharing as they do so many of the Mountain-Ok culture traits, and being of the same sub-family linguistically - also have shields. Even if the people have denied the existence of shields, this would not settle the matter, for the Sopkeimin of the Kawol valley denied that they had shields and I later found three (Appendix B : Faiwol W.41-43). It is apparent that the investigation of the contents of Sibil iwol would be necessary to establish presence or absence of shields for that area, and that must await the pleasure of the guardians of the iwol.

CHAPTER VII.

VII. ICONOGRAPHICAL ANALYSIS OF MOUNTAIN-OK ART.

1. MOTIF AND DESIGN TYPE:

Schmitz defines a motif as ".... a symbol which stands for a certain complexity of ideas, beliefs and behaviour patterns deformations of the original symbol (may) occur which have no relation to its meaning but belong to the laws of art." (1956:112).

For both houseboards and shields, but not usually for the narrow carved and painted boards either side of the main houseboard that make up a decorative facade, it is possible to isolate a centrally-placed motif. This motif bears little visual relation to any natural phenomenon either because the symbol itself is not a particular material object, animate or inanimate, or because of the deformations that have occurred to the symbol for purely artistic reasons.

The Mountain-Ok, when asked to give meanings for the total design deny that there is any such meaning. In fact, for a year or two I asked, in Pidgin: "What is the meaning of this design" ("Wonem as bilong dispela mak-mak?"). The answer was always: "There is no meaning." ("I nogat as bilong dispela mak-mak"). However, I had been gesturing at the whole design. When one day¹ I pointed to a particular

1. I should acknowledge that this alteration of the questioning was due to the guidance of B.A.L. Cranstone who spent a short time at Telefolmin in December, 1963, before commencing his fieldwork at Tifalmin.

part of the design and asked the same question, I obtained meanings for that particular element of the design.

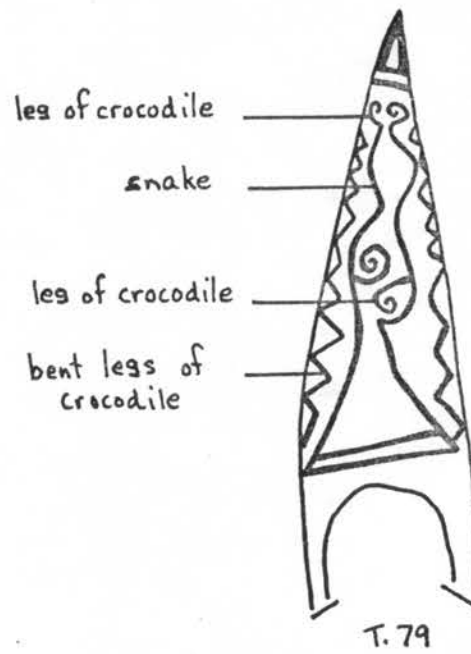
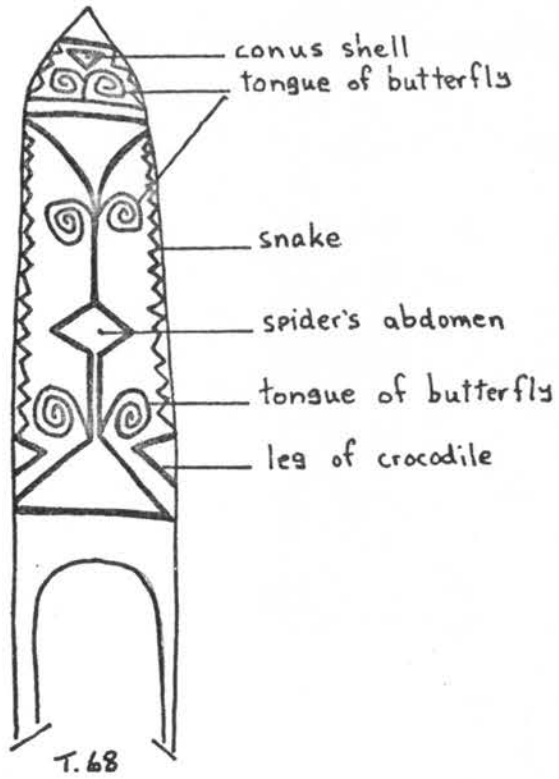
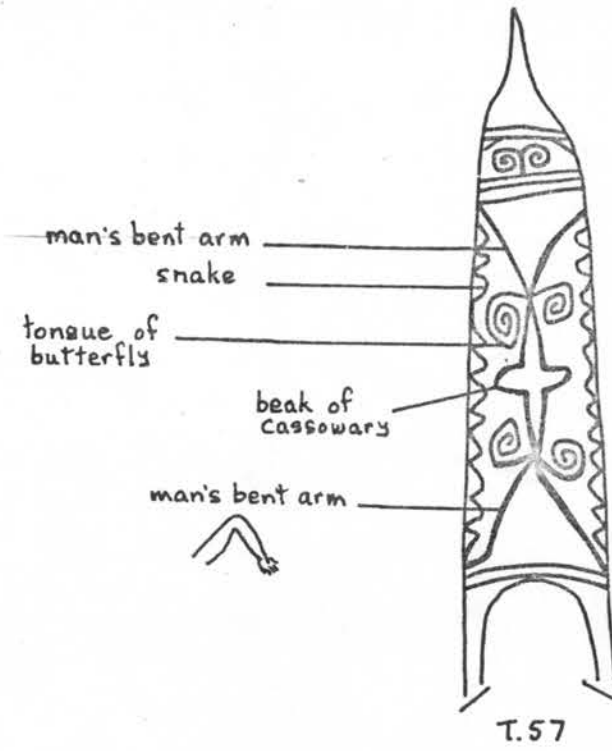
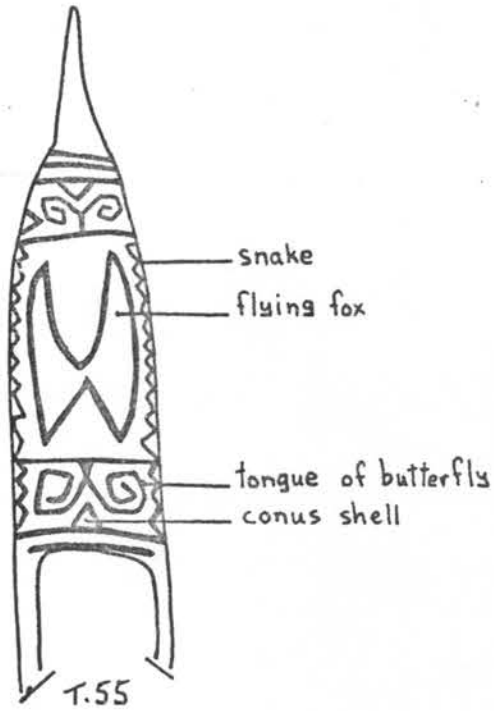
As explained in the Introduction, the variety of meanings attributed to the one element of the design and the apparent lack of consistency in the meanings attributed to the various elements of the one design, discouraged me from pursuing the matter. This is most regrettable and I have no doubt now that a systematic study of the meanings attributed to design elements and an analysis of the distribution of these meanings, would result in a much deeper understanding of the art of these people than is possible at the present time. However, some data was collected, albeit unsystematically. These data will be presented to indicate the complexity of the relationship between motif and design-type and to shed some light on the meaning of particular design-elements.

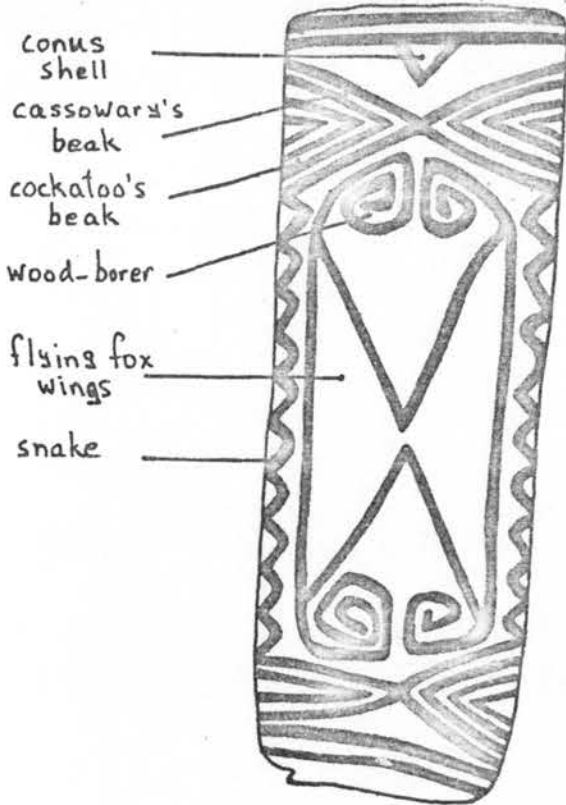
2. THE MEANINGS OF DESIGN ELEMENTS:

For the purpose of analysing the meanings of design elements, I have assembled drawings of 45 warshields, houseboards and decorative facades for which I obtained some meanings; fourteen shields, one houseboard and parts of one decorative facade for which B.A.L. Cranstone obtained meanings (1965b, 1967, 1968); a shield for which G. Morren obtained meanings (personal communication); and two shields drawn by F. Barth and about which he makes some observations (personal communication).

Despite this apparently large number of objects about which there is some data, a statistical analysis is not justified. Most of the objects have only a few elements described and in most cases these meanings would have been volunteered by only one informant, and rarely by the artist himself. With such complete absence of control in eliciting the information, the analysis cannot be anything more than suggestive of the lines of enquiry further research could pursue.

First I will present the data itself, then a summary table (Table 11 a, b) showing the range of meanings attributed to each of the most common elements of design for four principal regions - Mianmin, Telefolmin-Falamin, Ulapmin-Tifalmin-Wopkeimin, and Faiwolmin-Baktaman - each of which is relatively homogeneous linguistically, and finally Table 12 showing the major areas of meaning given in each region.





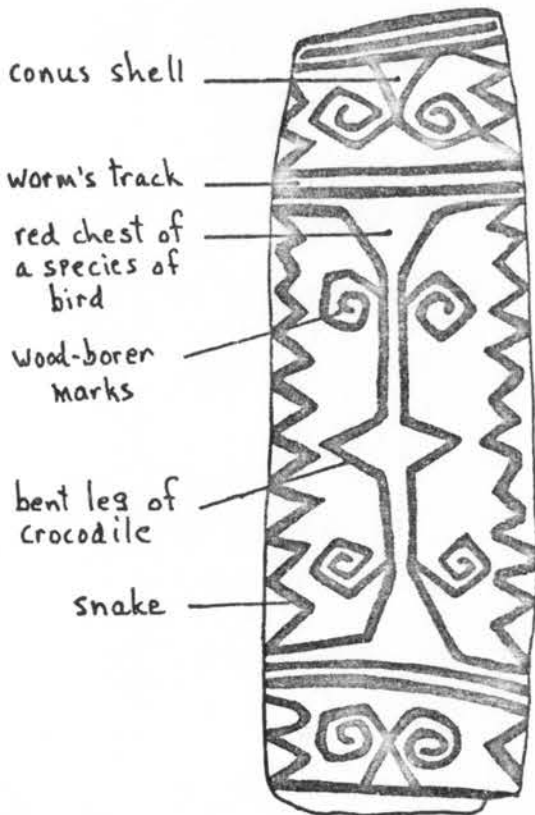
- conus shell
- cassowary's beak
- cockatoo's beak
- wood-borer
- flying fox wings
- snake

T.W.1



- conus shell
- wings of flying fox folded
- bat or flying fox hanging upside down.

T.W.2



- conus shell
- worm's track
- red chest of a species of bird
- wood-borer marks
- bent leg of crocodile
- snake

T.W.4



- dorsal plates of crocodile; or snake (duliam)
- cockatoo's beak [black: beak, red: inside mouth]
- cassowary's beak
- tracks of snake (mafom)
- abdomen of (don) spider or woman's vagina
- man's elbow/bent arm
- crocodile leg [black: muscle, red: bone, white: skin]

T.W.6



E.8

cassowary's leg

snake

wood-borer marks

cassowary's leg

wood-borer marks

spider's legs
or big lizard's legs

["Afek's design"]



E.59.



E.62.

conus shell

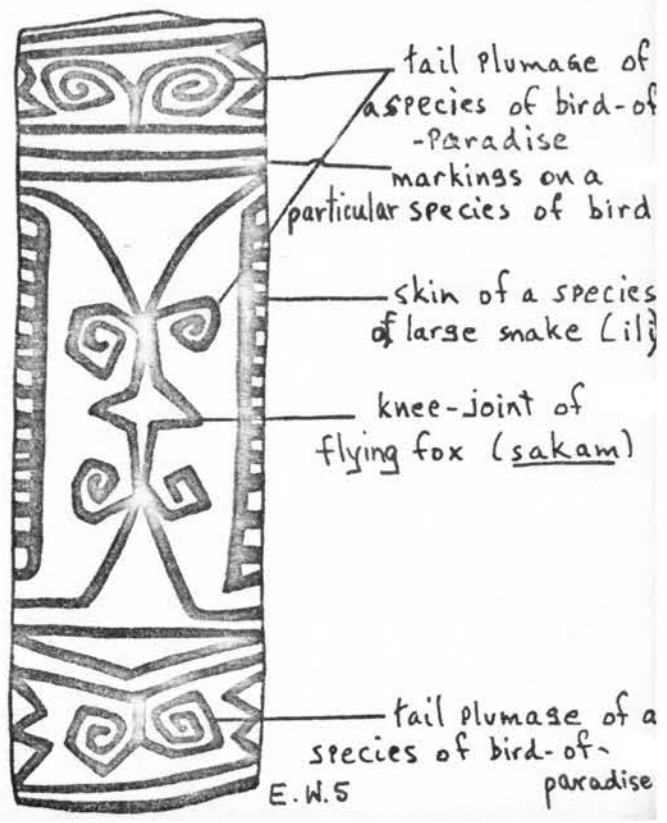
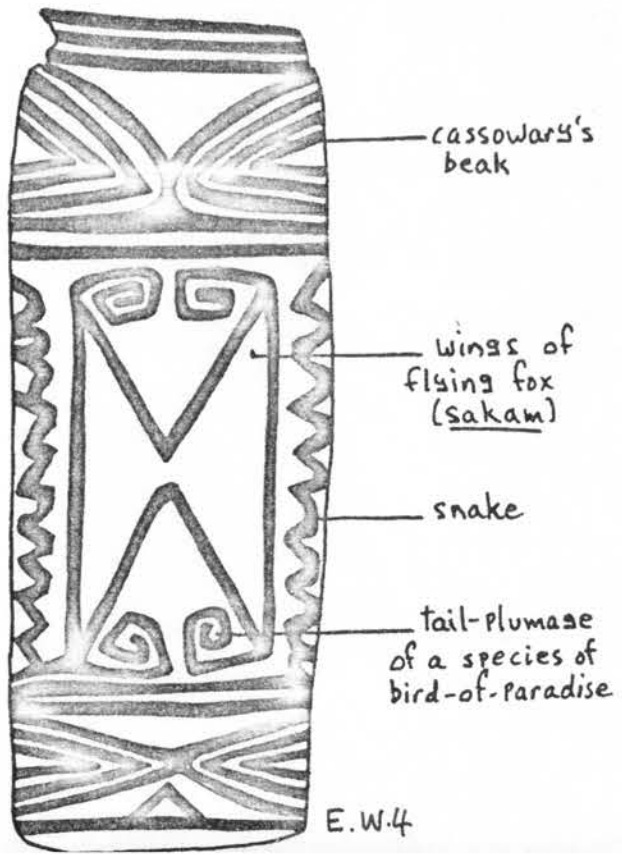
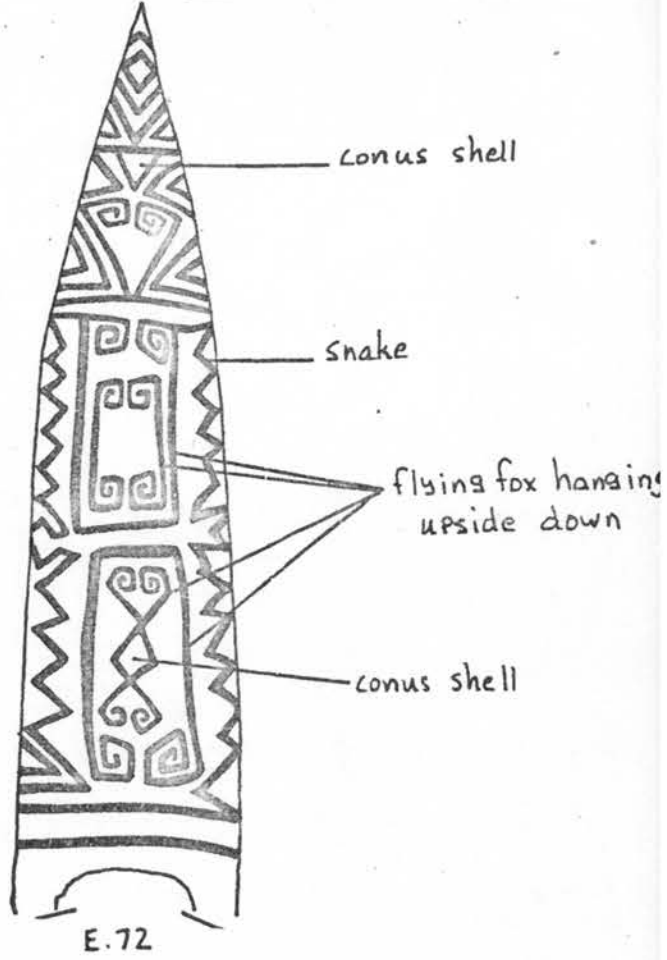
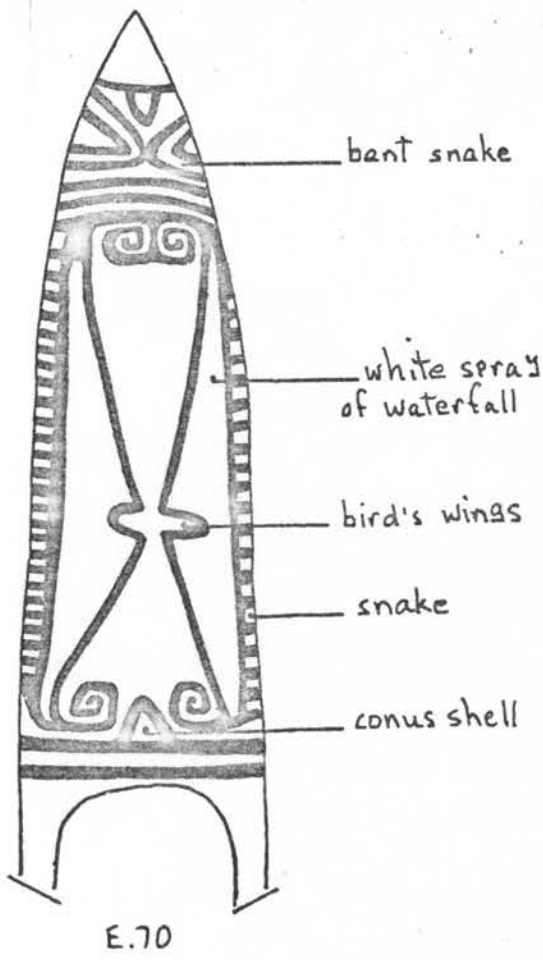
wood-borer marks

spider's legs

snake

spider's abdomen

a bird's beak (san)

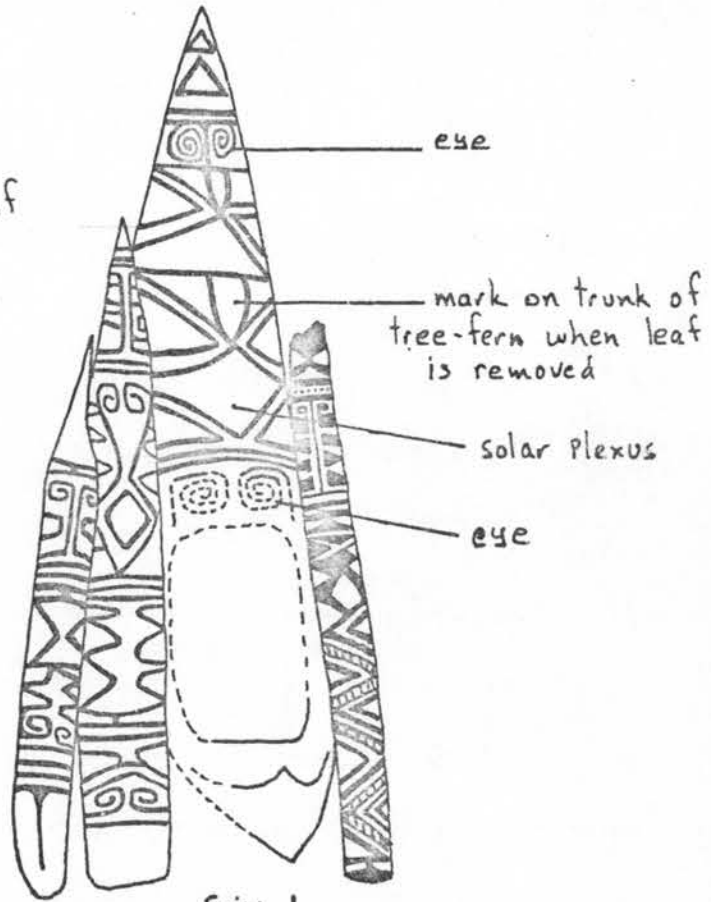


FALAMIN

FAIWOLMIN



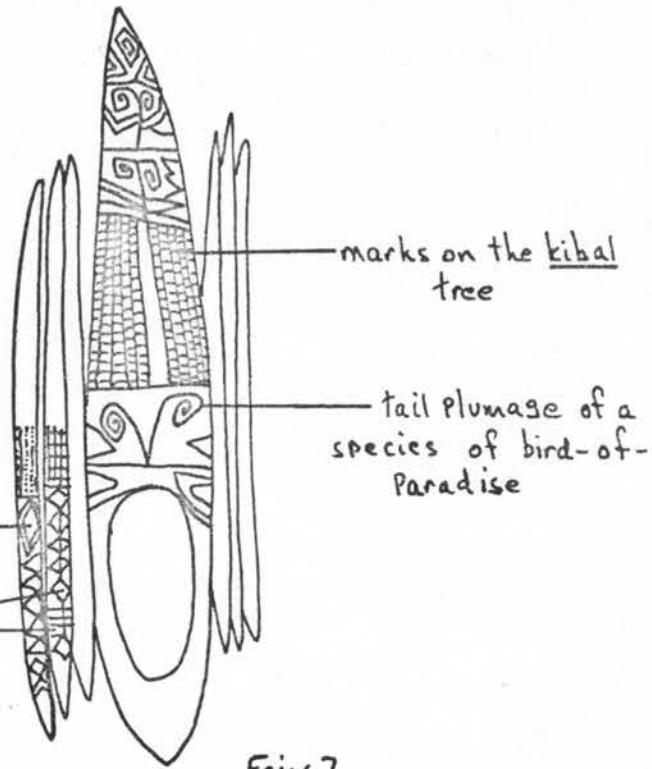
F. 23



Faiw. 1

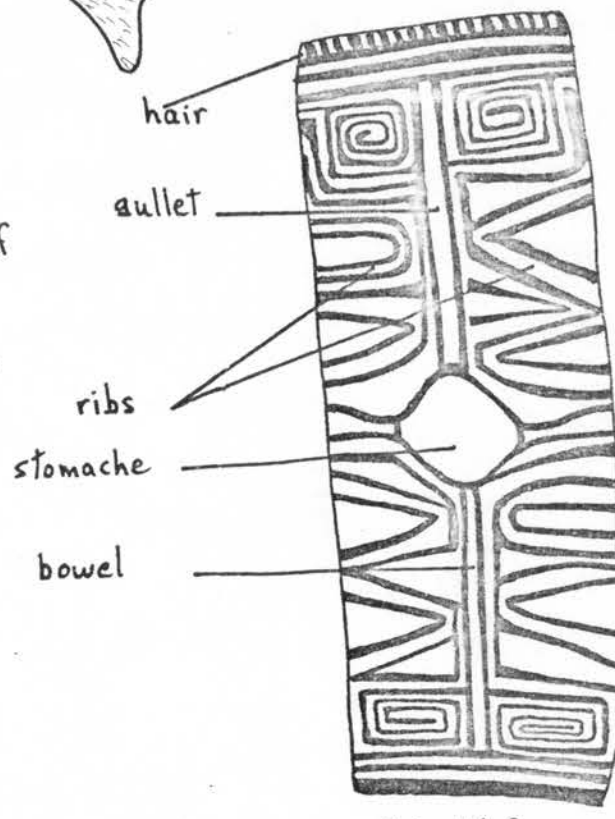
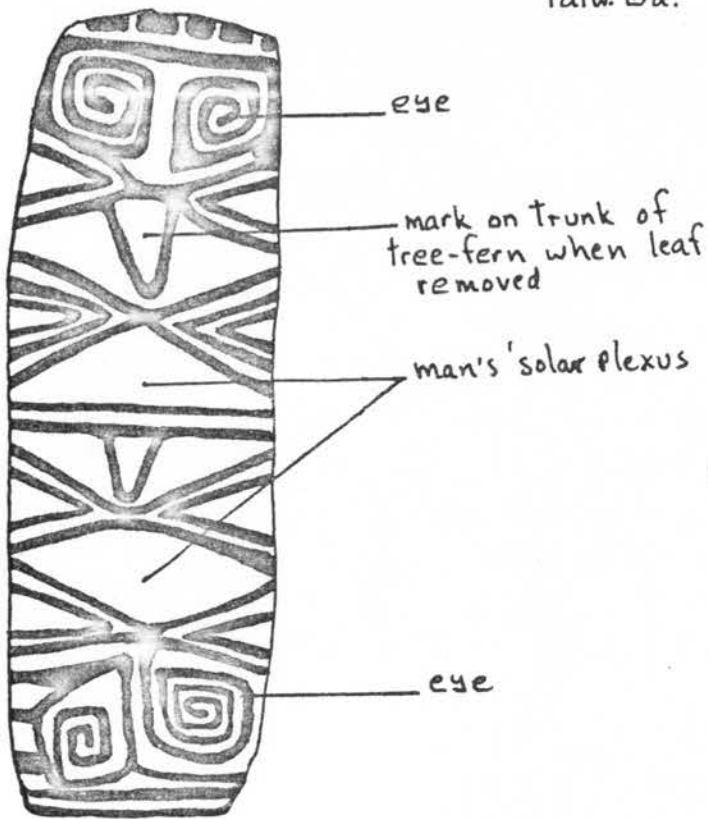
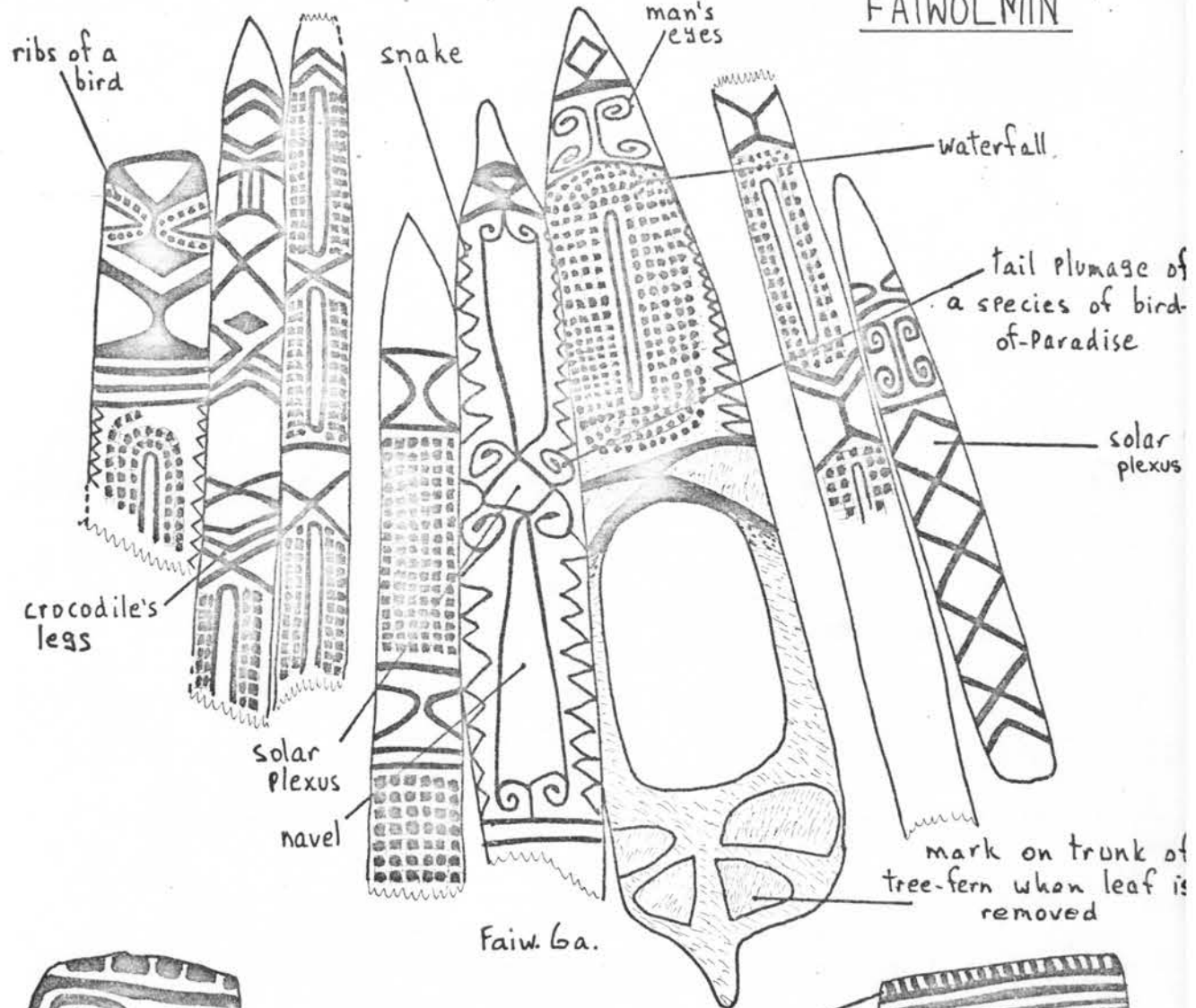


Faiw. 5

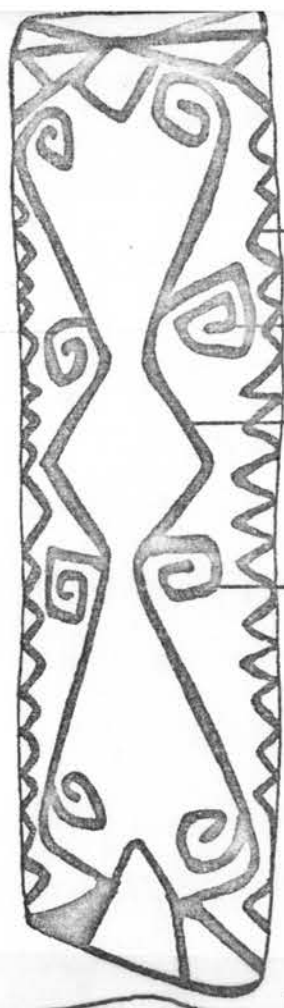


Faiw. 7

FAIWOLMIN

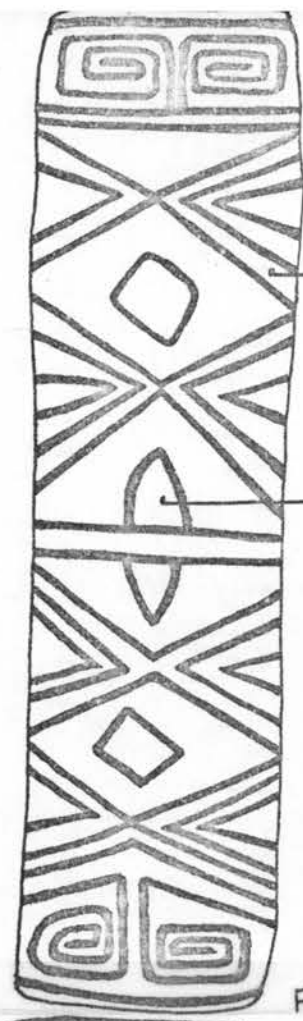


Faiwolmin



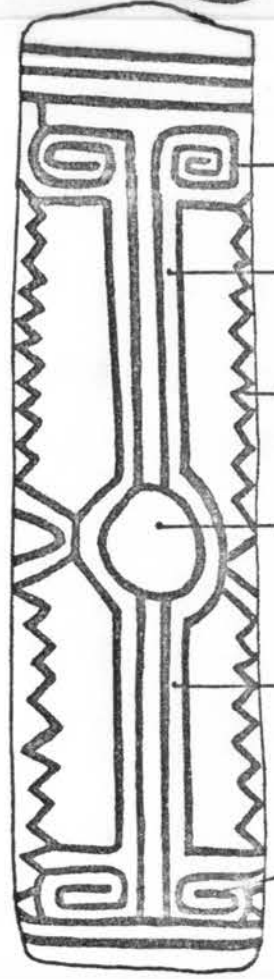
- snake
- bird's eye
- snake
- bird's eye

Faiw. W. 14



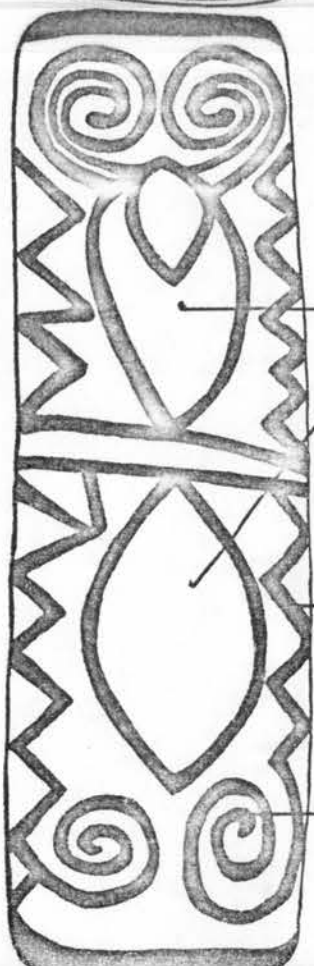
- watercourses (white)
- waterfall (white)

Faiw. W. 15



- hands
- arms
- snake
- woman's stomach
- legs
- feet

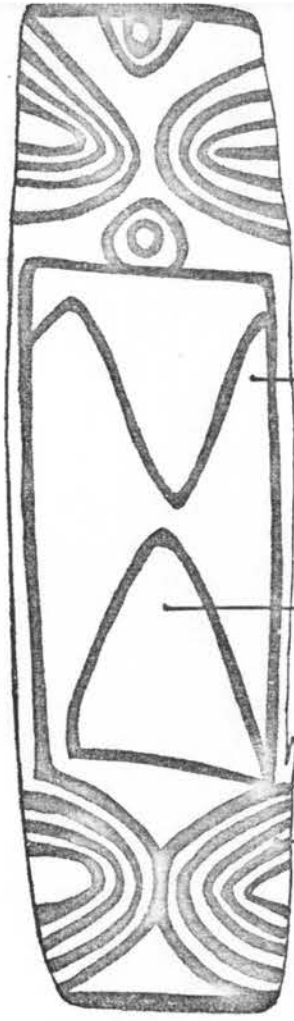
Faiw. W. 16



- solar plexus
- snake
- tail plumage of a species of bird-of-paradise

Faiw. W. 18

FAIWOL MIN

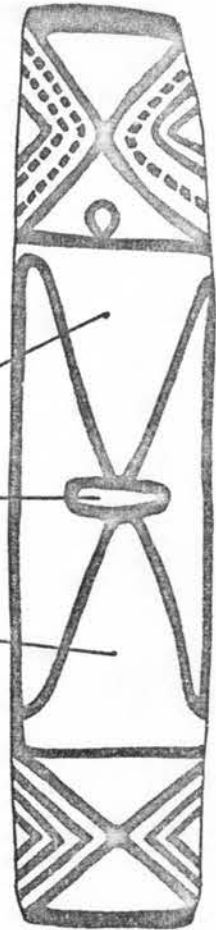


crocodile's foot

solar plexus of old man

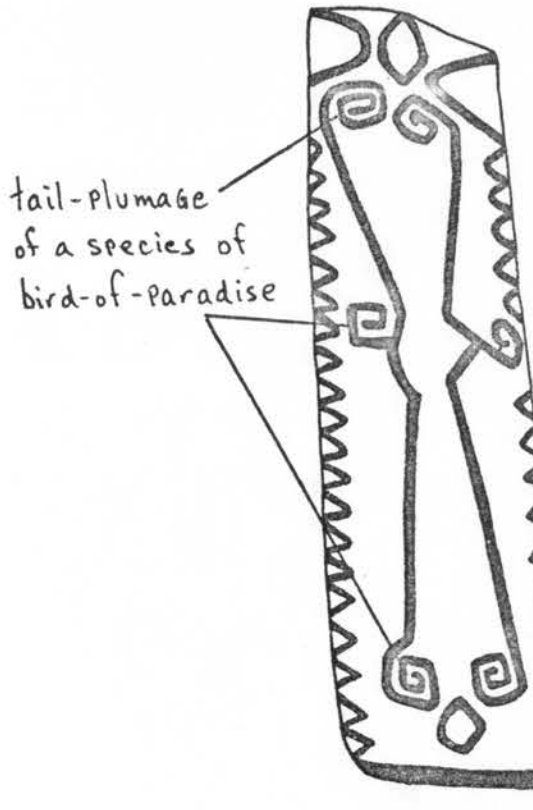
bird's wings feathers

Faiw. W.19



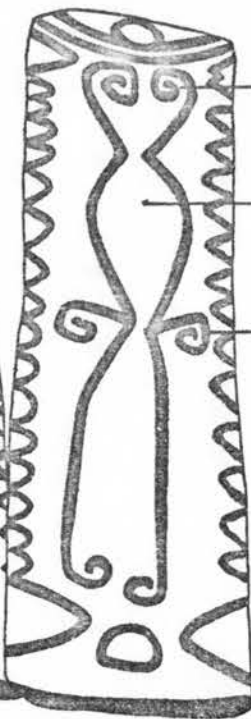
navel

Faiw. W.20



tail-plumage of a species of bird-of-paradise

Faiw. W.21



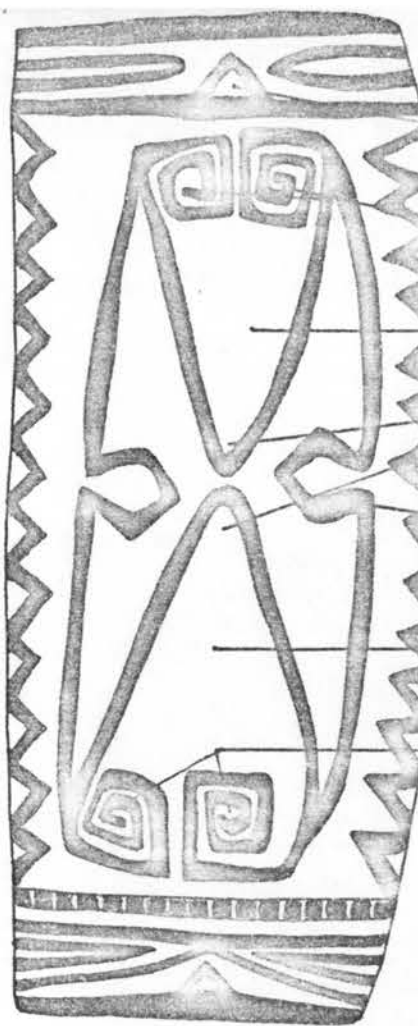
eye

man's body

tail plumage of a species of bird-of-paradise

Faiw. W.22

FAIWOLMIN



Faiw. W. 23

nose shell

eyes

solar plexus

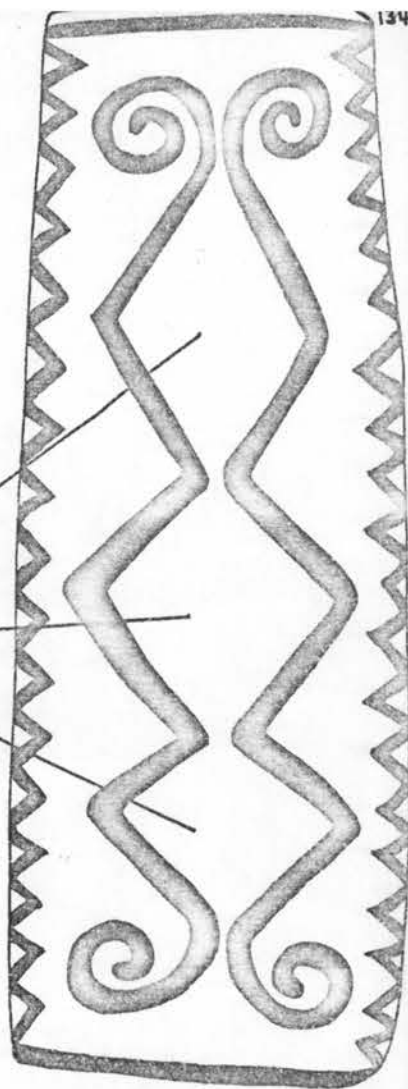
knees

ear

solar plexus

eyes

"two men facing
each other in
squatting position"

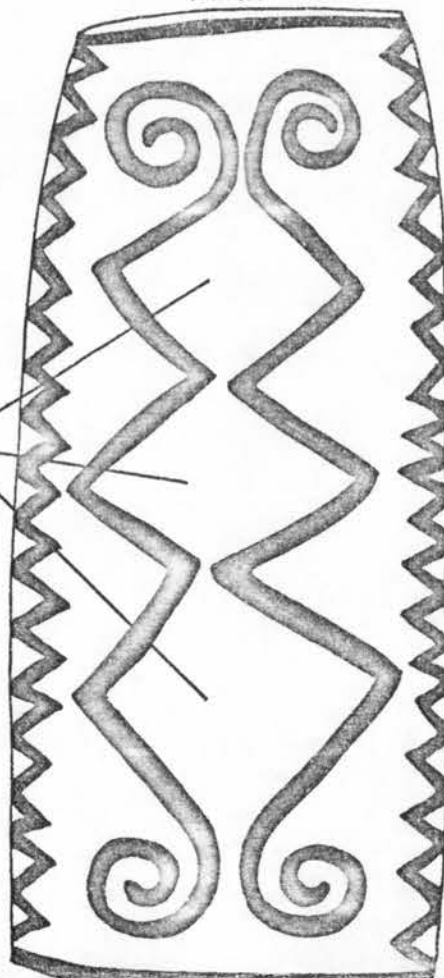


134

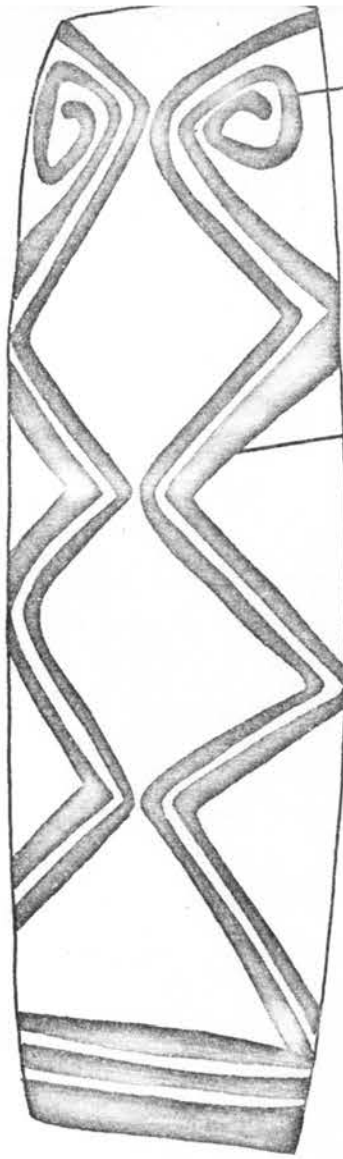
Faiw. W. 24

Faiw. W. 25

solar plexus



FAIWOLMIN



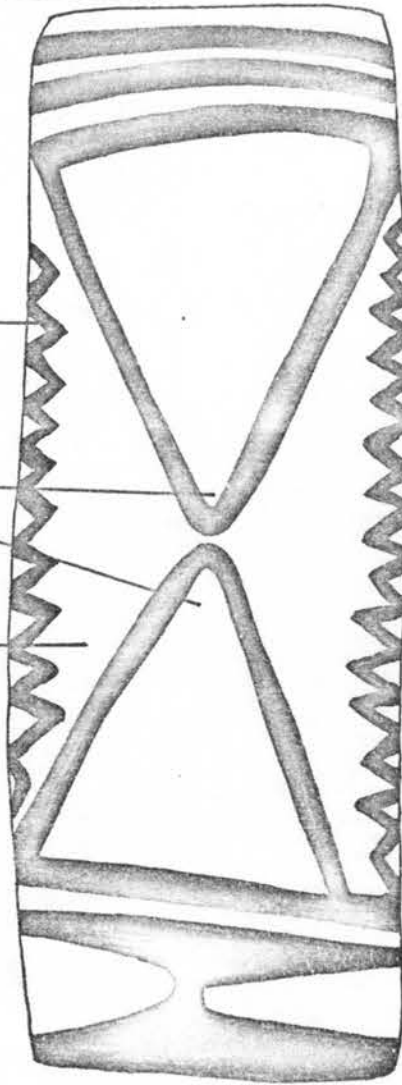
Faiw. W. 27

lizard's front leg curled up

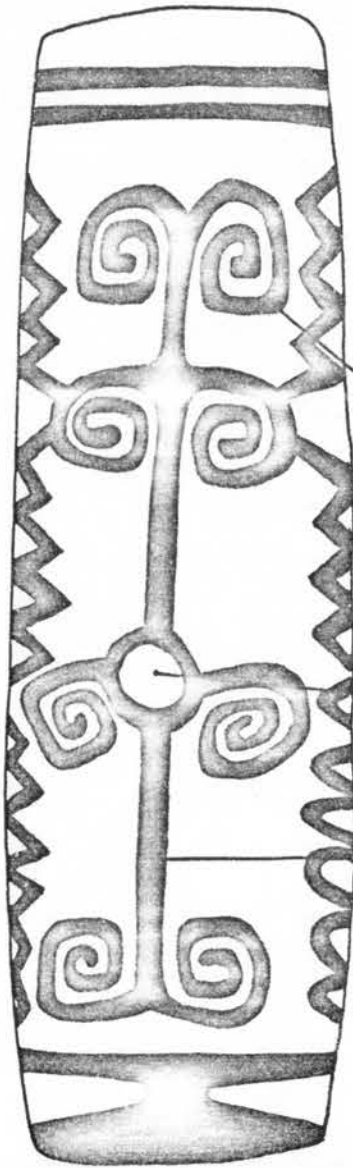
snake

arrow-head

mountains



Faiw. W. 29



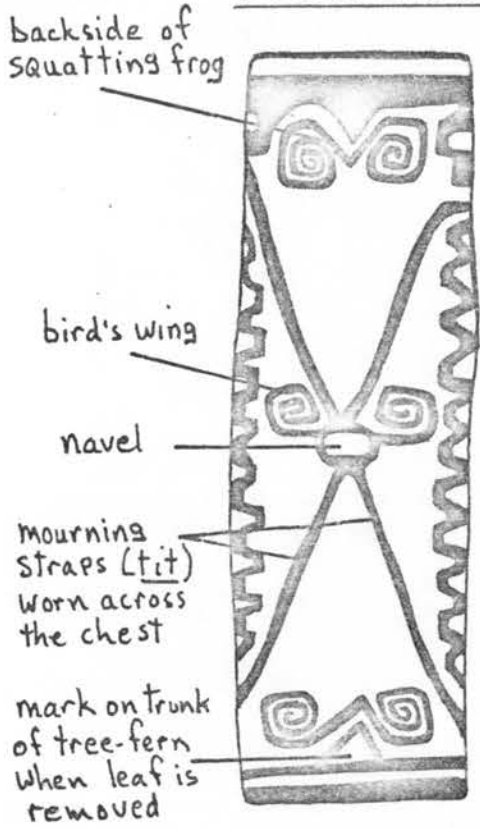
Faiw. W. 28

lizard's front leg curled up

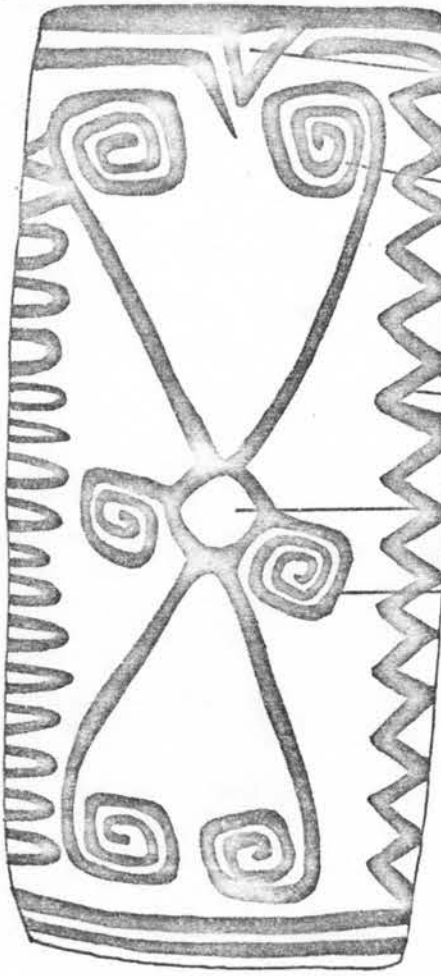
navel

snake

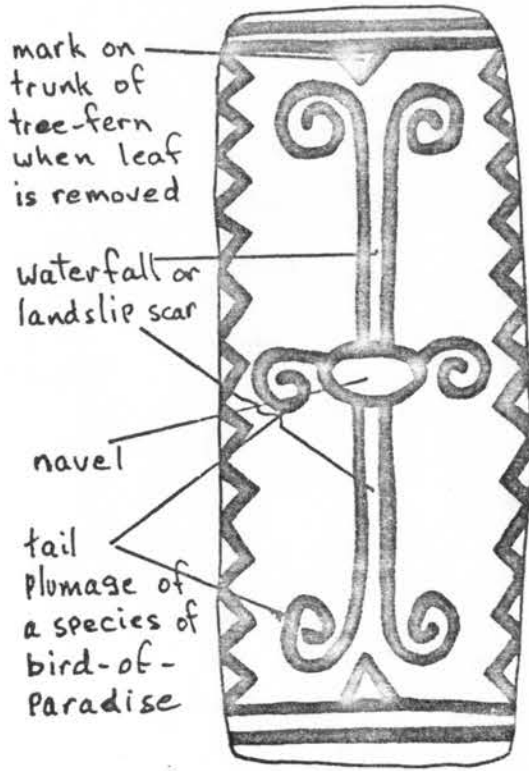
FAIWOLMIN



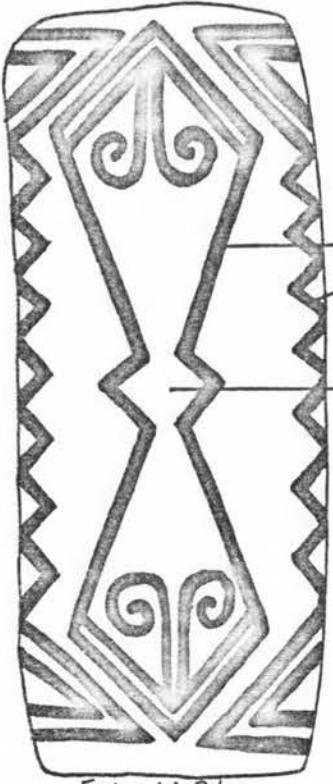
Faiw.W. 30



Faiw.W. 31

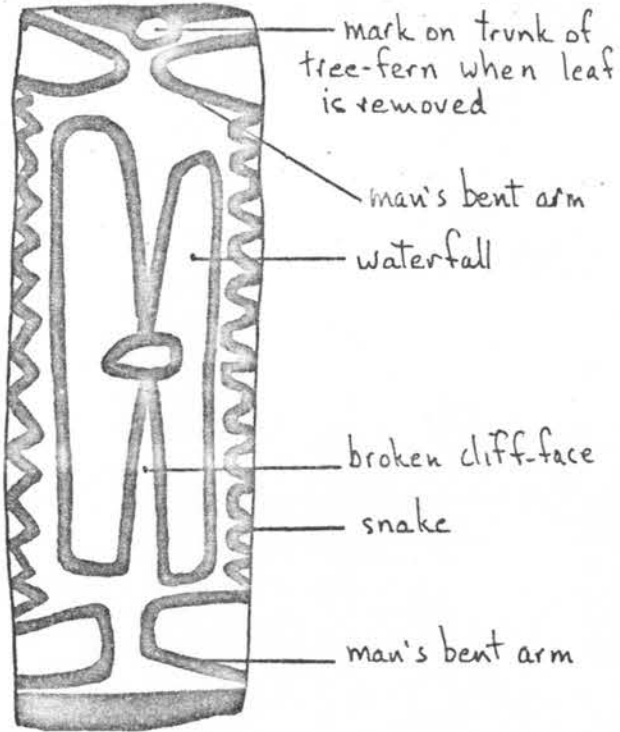


Faiw.W. 33



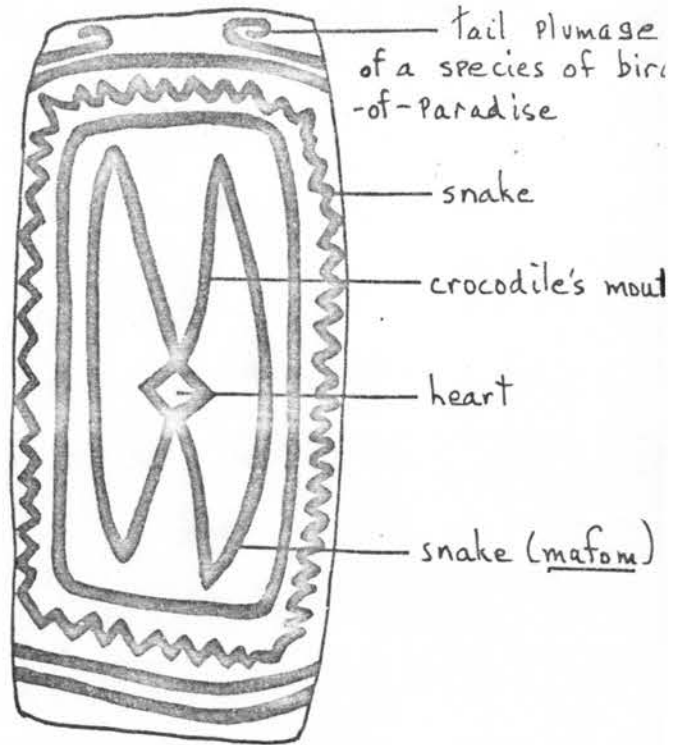
Faiw.W. 34

Faiwolmin



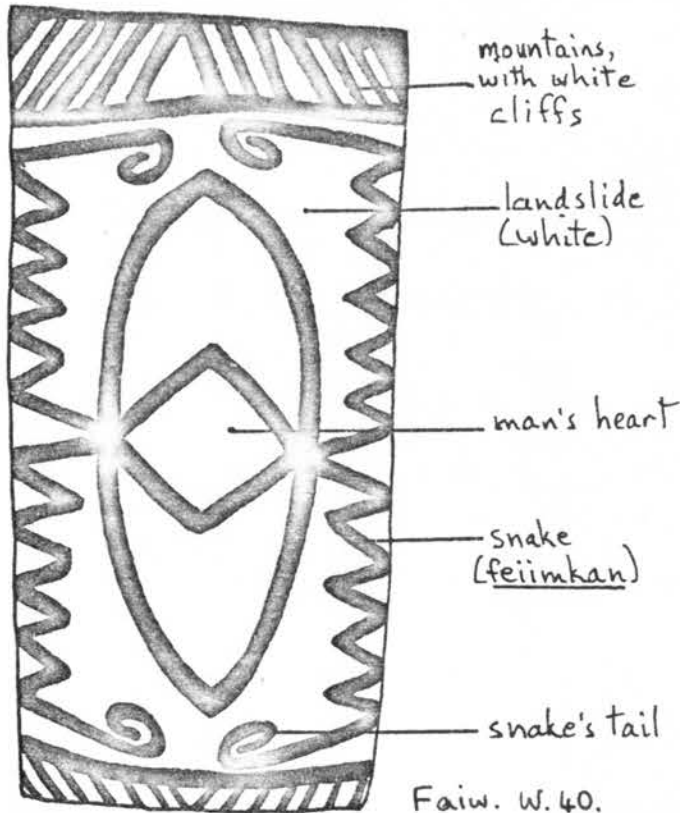
Faiw. W. 35

Wopkeimin



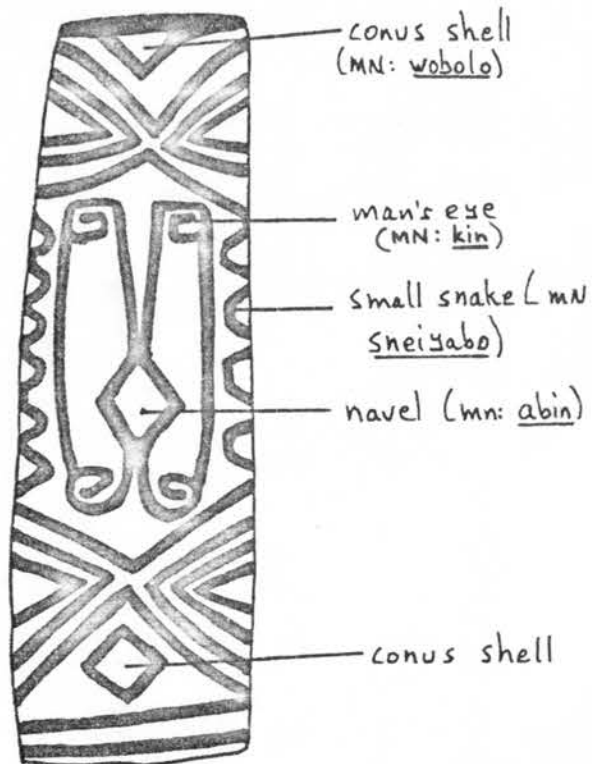
Faiw. W. 36

Workeimin

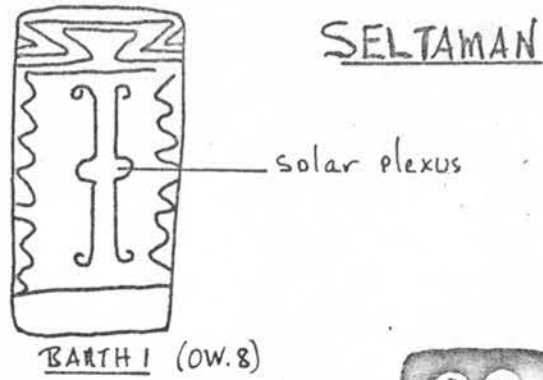
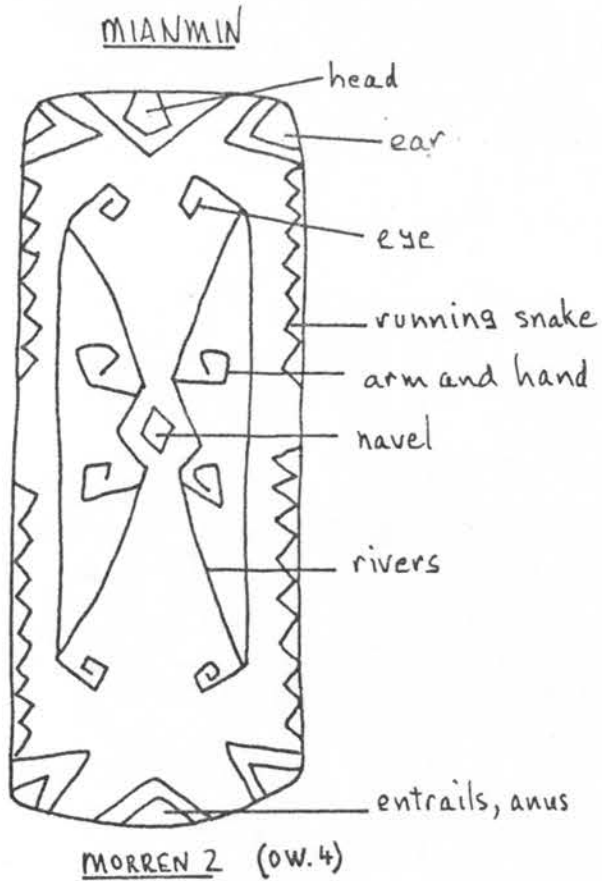


Faiw. W. 40.

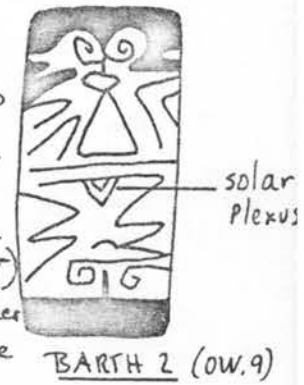
Mianmin



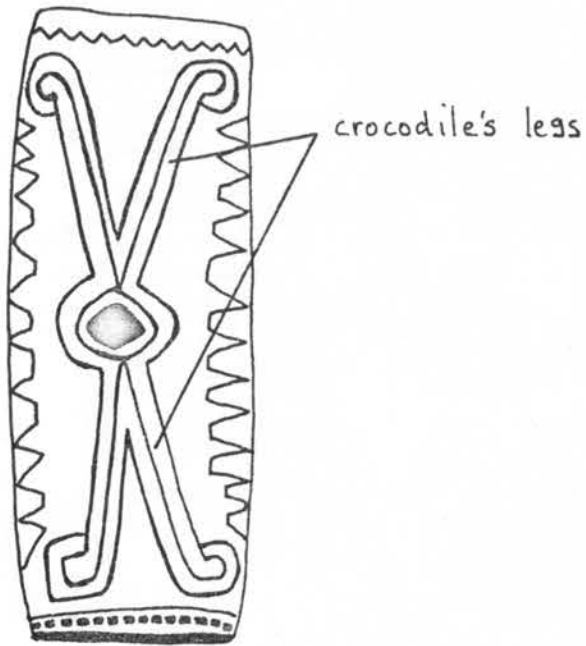
O. W. 5.



"(The shields) all seem to be anthropomorphic..... having eyes, ears, mouth above and less below.... the central point (♠, ▽) ... being the plexus under the breast bone, above the navel." (Barth, personal communication).

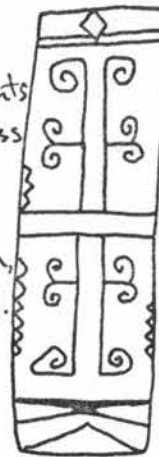


DULANMIN (T.W.3).



MIANMIN

The cross-like motif at the centre "represents the bark-twine harness men wear across chest, back, and shoulders..." (Morren, personal communication).



MORREN 1 (OW.3)

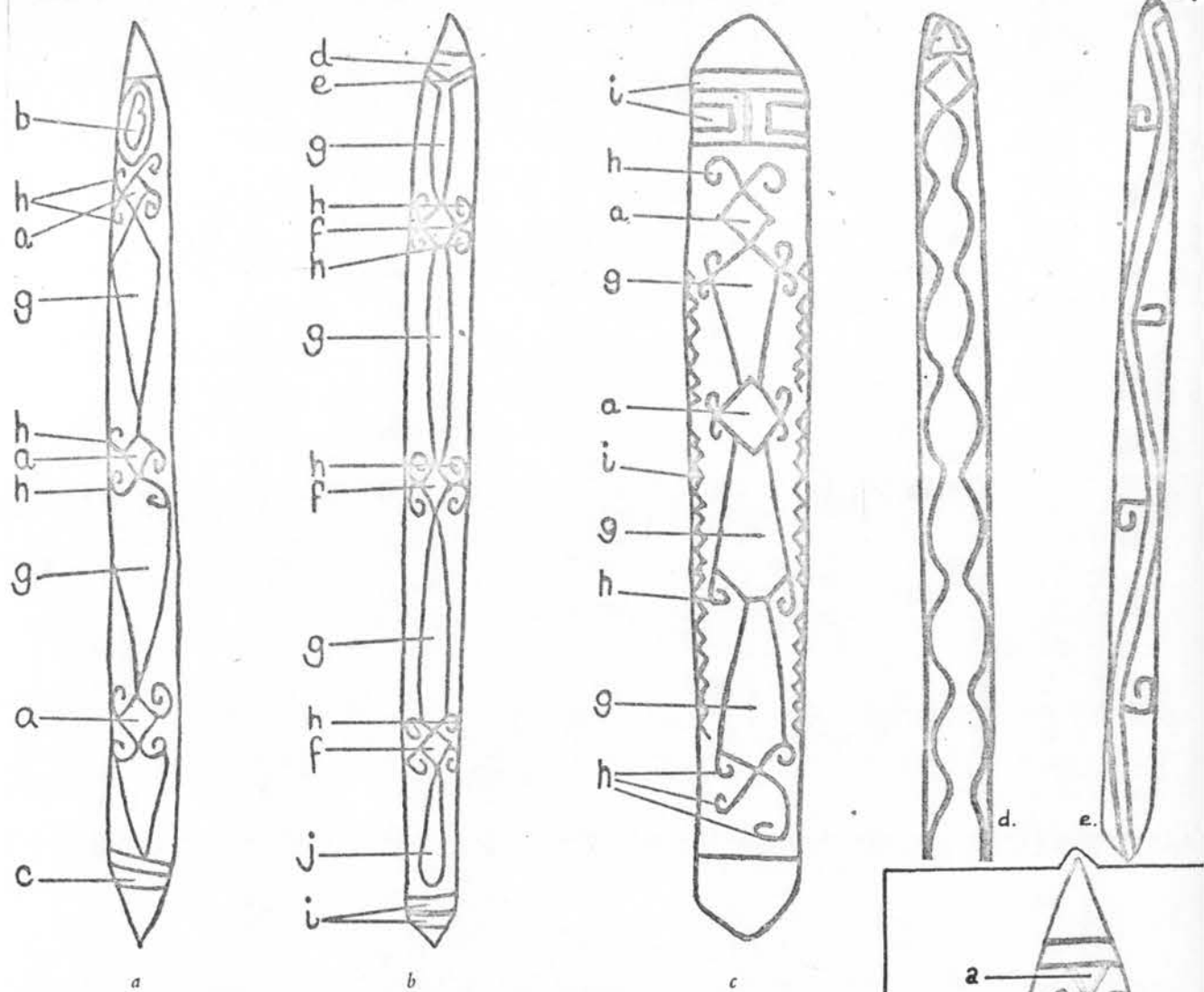
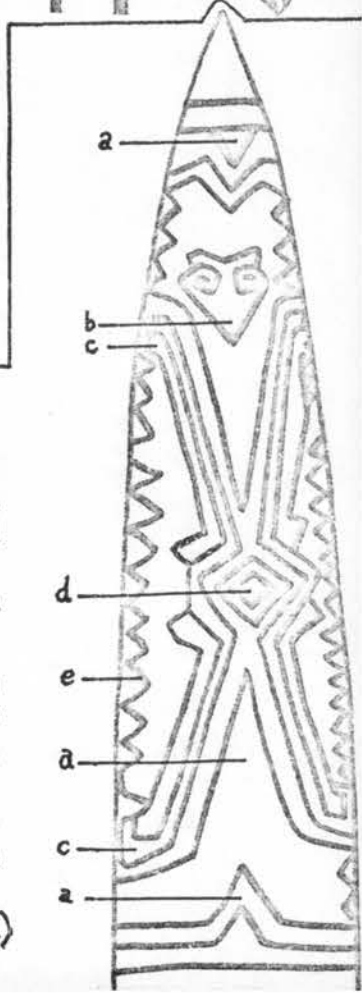


FIGURE 1a-c. The meanings ascribed to the patterns of three Tifalmin *haus tanbaran* boards.
a, man's belly. *b*, man's head. *c*, man's belt? (this was uncertain). *d*, man's eye. *e*, man's arm. *f*, man's forehead. *g*, water (or a stream). *h*, bird's feather (probably bird-of-paradise plume). *i*, snake or snake track. *j*, jews' harp.
 (Cranstone 1967)
 Figure 1d-e. — *d*. branches of a large flowering tree (Cranstone, field notes).
e. a branch, with thorns, of same tree. (Cranstone, field notes)

- (a) 'Cassowary's beak.' Cassowary and wild pig are the largest game animals. Cassowary feathers are commonly used in making dance ornaments, and the quills are passed vertically through the pierced nostrils of men.
- (b) 'Marks made in bark by a boring grub.' This meaning is sometimes ascribed to the element *e*.
- (c) 'Crocodile's foot.' The crocodile rarely if ever penetrates into the valley, but it reaches its threshold and there is a crocodile skull in one of the houses. Among the Tifalmin, and probably among the Telefomin too, pieces of crocodile bone are valued as magical objects.
- (d) 'Conus shell [an ornament] obtained from the Duanmin.' The Duanmin are one of the peoples living in the Tekin valley about 12 miles south-west of the Oksapmin Patrol Post.⁶
- (e) 'Snake.'

(Cranstone 1965b.)



A: crocodile's mouth. B: crocodile's leg or foot. C: hole in which an insect lives (probably the same as D). D: marks made in wood by boring insect. E: forehead of *brul* or *bri* (flying lizard/shooting star). F: eye of *brul*. G: foot of *brul*. H: liver of *brul*. I: ankle of *brul*. J: snake or snake's track. K: crocodile's ribs. L: woman's vagina. M: man's hand. N: moon. O: jaw-bone of ancestor recovered after exposure or burial. P: hornbill's beak. Q: path. R: cassowary's foot. S: branch. T: bird of paradise feather. U: hawk's wing. V: teeth of large snake. W: man's chest. X: wild taro leaf. Y: *brul*. Z: water (or a stream). AA: man's belly. BB: man's eye. CC: cassowary's breast. DD: cassowary's back or rump. EE: new moon. FF: man's head. GG: sago branch.

(Cranstone 1968)

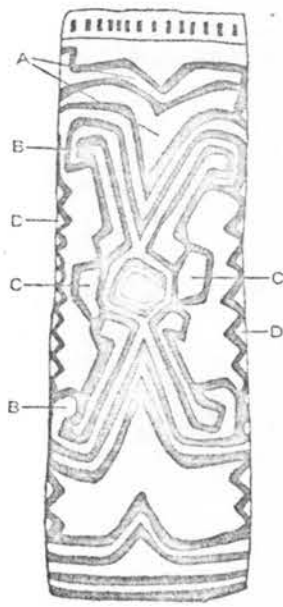


FIGURE 2. Telefolmin.

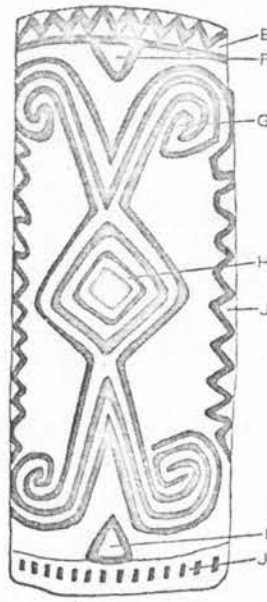


FIGURE 3. Telefolmin.

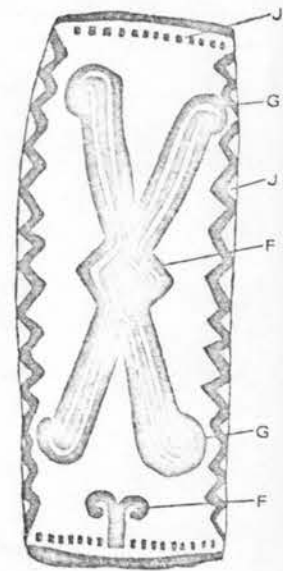


FIGURE 4. Eliptaman-kasel.

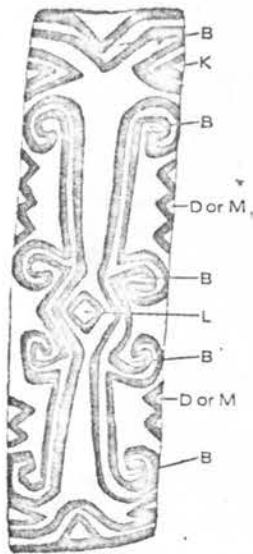


FIGURE 5. Telefolmin, captured from the Mianmin.

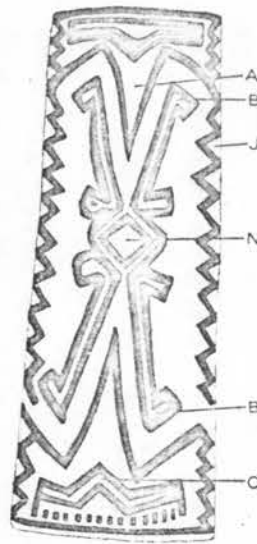


FIGURE 6. Urapmin.

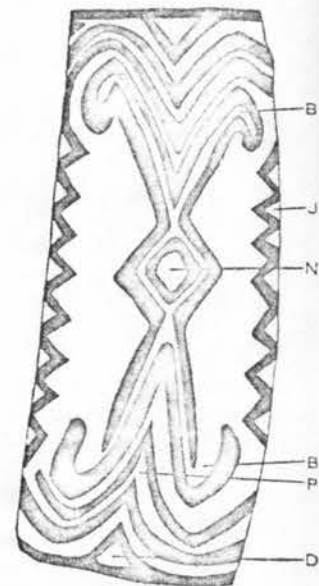


FIGURE 7. Urapmin.

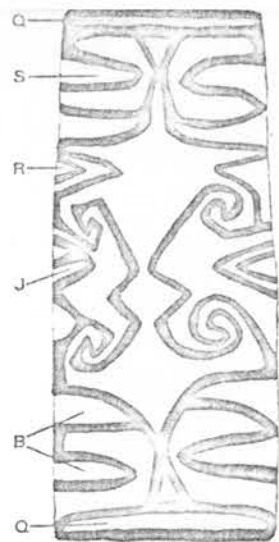


FIGURE 8. Urapmin.

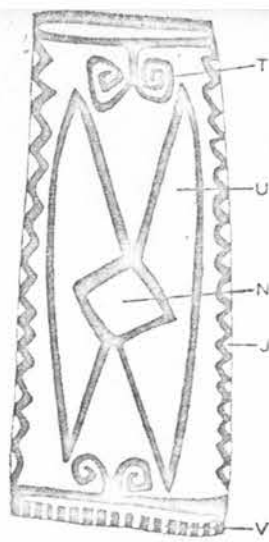


FIGURE 9. Urapmin.

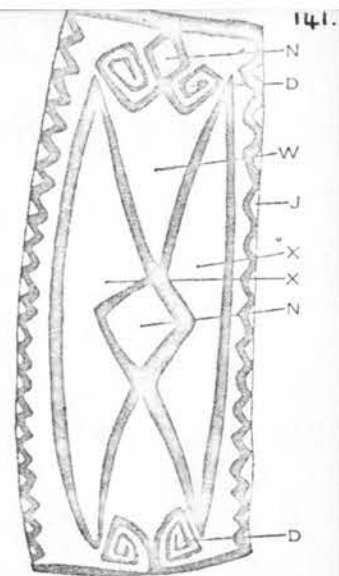


FIGURE 10. Urapmin.

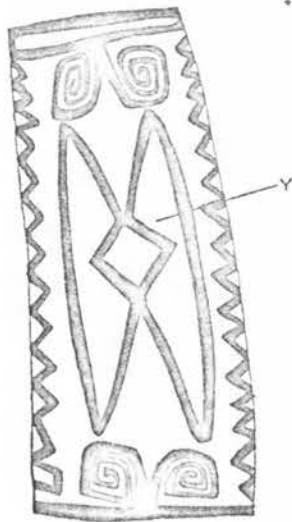


FIGURE 11. Tifalmin, captured from the Urapmin.

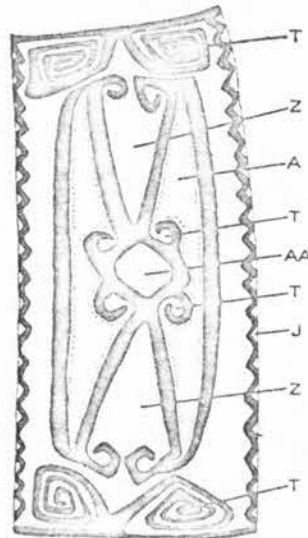


FIGURE 12. Tifalmin (Bufalmin).

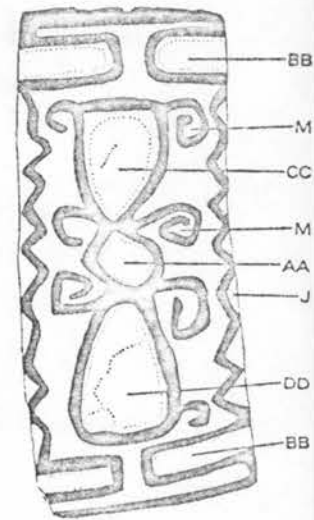


FIGURE 13. Tifalmin (Ifilkamin).

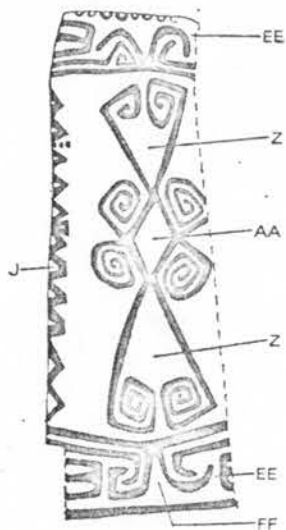


FIGURE 14. Tifalmin (Bufalmin).

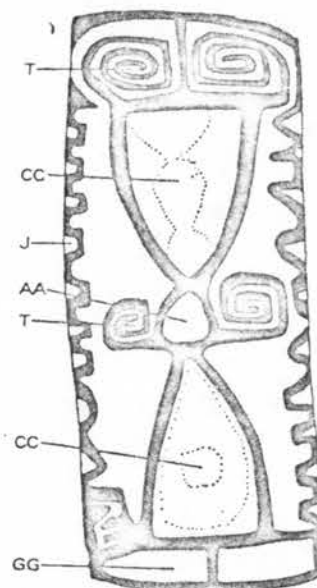


FIGURE 15. Tifalmin (Dubalmin).

(Cranstone 1968)

A: crocodile's mouth. B: crocodile's leg or foot. C: hole in which an insect lives (probably the same as D). D: marks made in wood by boring insect. E: forehead of *brul* or *bri* (flying lizard/shooting star). F: eye of *brul*. G: foot of *brul*. H: liver of *brul*. I: ankle of *brul*. J: snake or snake's track. K: crocodile's ribs. L: woman's vagina. M: man's hand. N: moon. O: jaw-bone of ancestor recovered after exposure or burial. P: hornbill's beak. Q: path. R: cassowary's foot. S: branch. T: bird of paradise feather. U: hawk's wing. V: teeth of large snake. W: man's chest. X: wild taro leaf. Y: *brul*. Z: water (or a stream). AA: man's belly. BB: man's eye. CC: cassowary's breast. DD: cassowary's back or rump. EE: new moon. FF: man's head. GG: sago branch.

(Cranstone 1968)

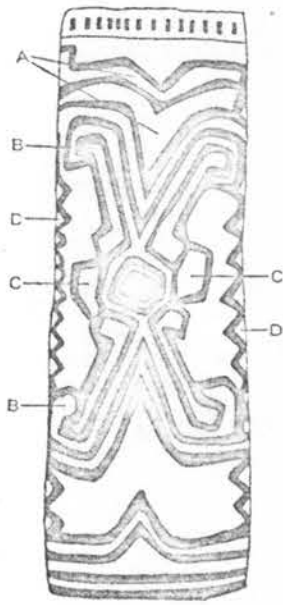


FIGURE 2. Telefolmin.

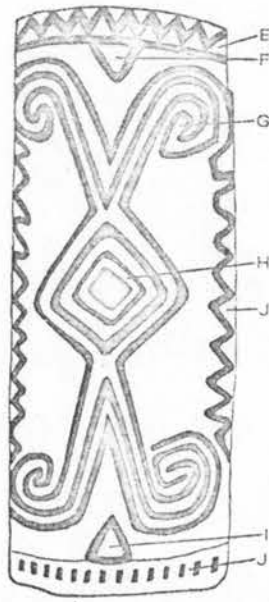


FIGURE 3. Telefolmin.

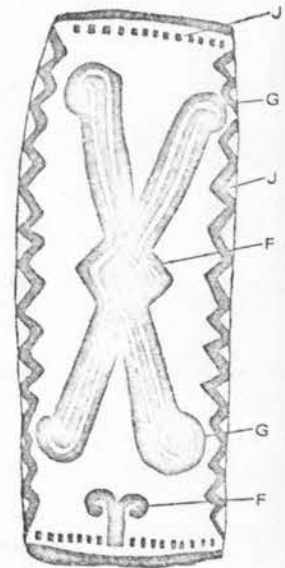


FIGURE 4. Eliptaman-kasel.

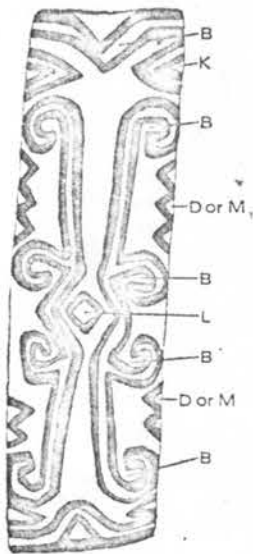


FIGURE 5. Telefolmin, captured from the Mianmin.

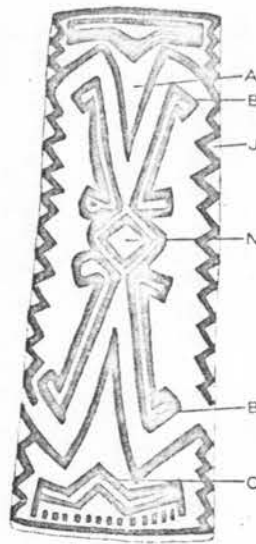


FIGURE 6. Urapmin.

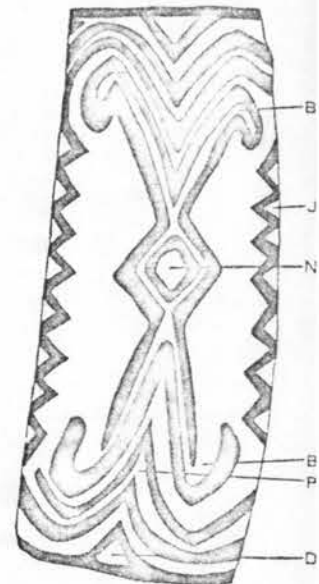


FIGURE 7. Urapmin.

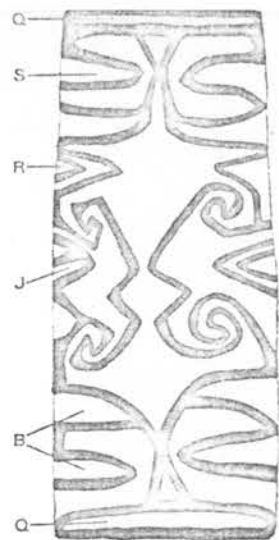


FIGURE 8. Urapmin.

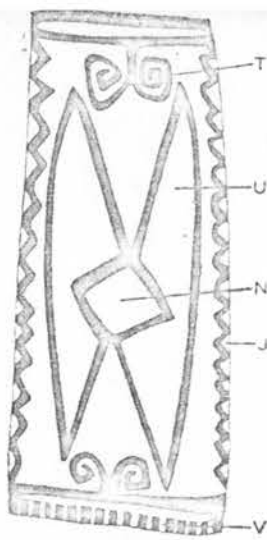


FIGURE 9. Urapmin.

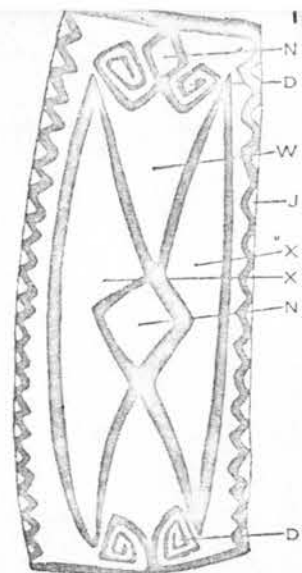


FIGURE 10. Urapmin.

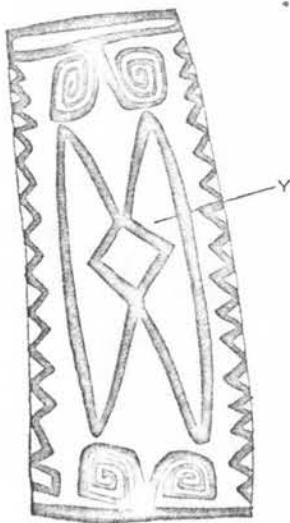


FIGURE 11. Tifalmin, captured from the Urapmin.

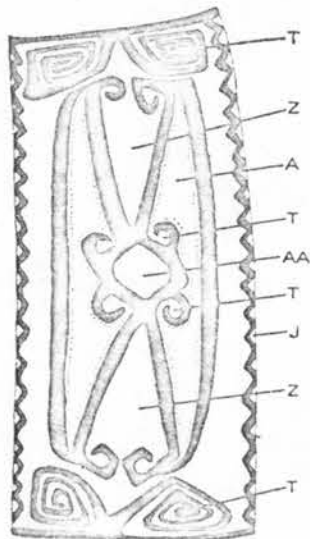


FIGURE 12. Tifalmin (Bufalmin).

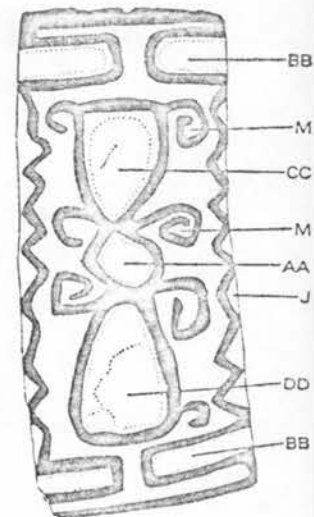


FIGURE 13. Tifalmin (Ifilkamin).

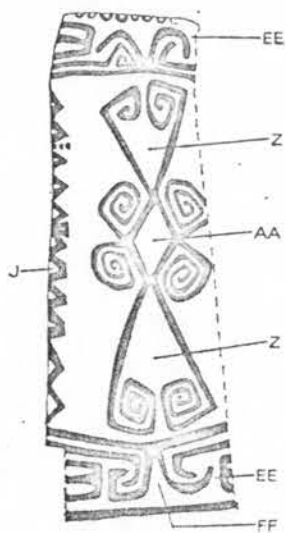


FIGURE 14. Tifalmin (Bufalmin).

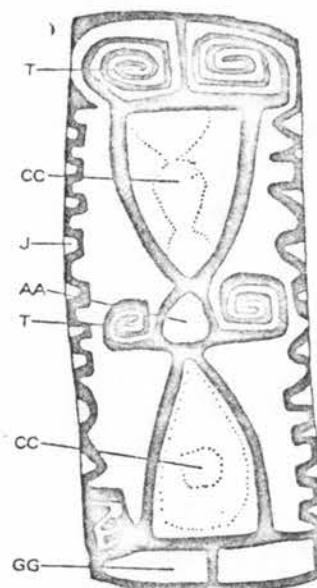
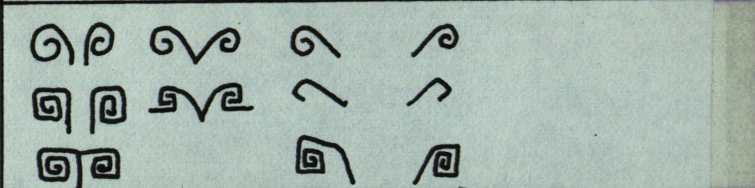
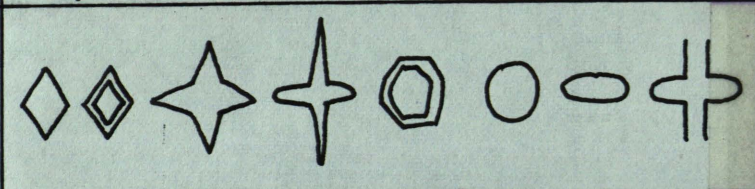
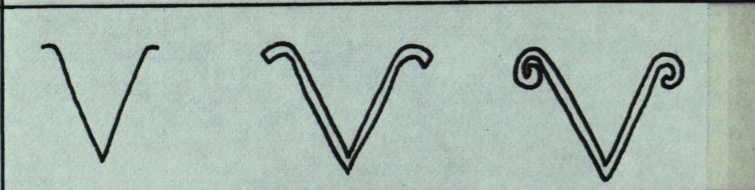
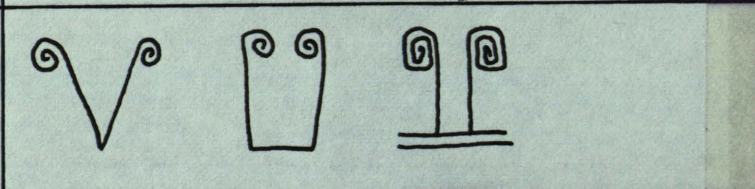
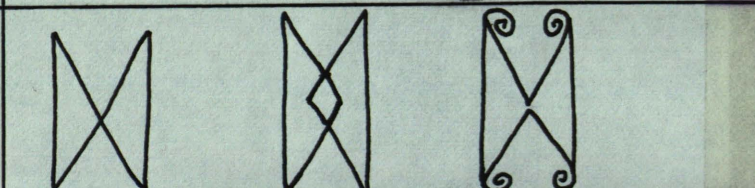
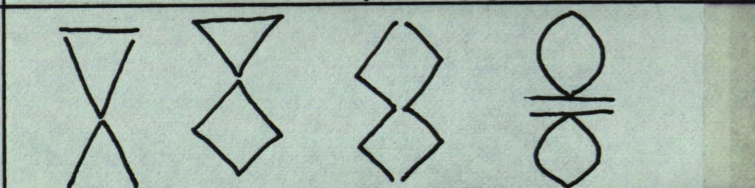
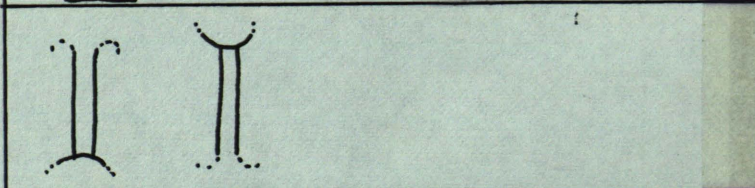
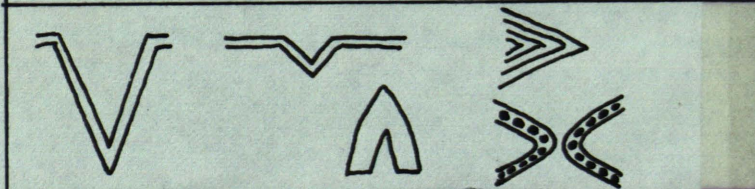
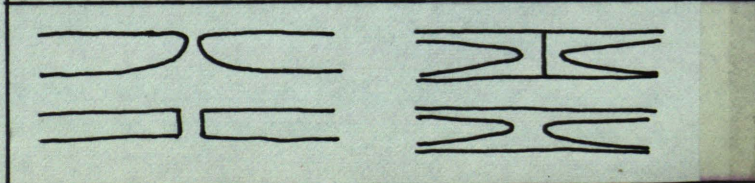


FIGURE 15. Tifalmin (Dubalmin).

(Cranstone 1968)

DESIGN ELEMENTS:	TELEFOLMIN - FALAMIN	ULAPMIN - TIFALMIN - WOPKEIMIN	FAIWOLMIN - BAKTAMAN	MIANMIN (two objects only)
	<p>tongue? of butterfly; wood-borer marks; tail plumage of bird-of-paradise; lizard's eyes</p>	<p>man's hand/head; thorns; snake's tail; tail-plumage of bird-of-paradise; wood-borer marks</p>	<p>man's eyes/hands/feet; bird's eyes/wings; tail-plumage of bird-of-paradise; lizard- legs curled up; backside of squatting frog</p>	<p>man's eyes/arms/hands</p>
	<p>spider's abdomen; woman's vagina; conus shell; lizard's eye; lizard's 'liver'; bird's wings</p>	<p>moon; man's solar plexus/forehead/heart</p>	<p>woman's stomach; man's solar plexus/navel; snake's stomach</p>	<p>navel</p>
	<p>spider's legs; crocodile's legs/feet; lizard's legs; man's bent arm</p>	<p>crocodile's legs/feet</p>	<p>mourning-straps across the chest</p>	
	<p>flying fox with folded wings</p>			
	<p>wings of flying fox</p>	<p>hawk's wings; wild taro leaf; lizard; <u>part</u>: crocodile's mouth</p>	<p><u>part</u>: crocodile's feet</p>	
		<p>man's chest; water or stream</p>	<p>man's solar plexus/body</p>	
			<p>gullet - bowels (human) arms - legs (human) waterfall; landslip scar</p>	
	<p>cassowary's beak/leg; cockatoo's beak; crocodile's leg/foot/mouth/ribs; bird's beak; lizard's leg; spider's leg; snake</p>	<p>cassowary's foot; hornbill's beak; crocodile's leg/foot/mouth; jawbone of ancestor; snake's tracks; man's bent arm; branch</p>	<p>bird's ribs/wing-feathers; crocodile's legs; man's ribs/knee/elbow; arrow-head; watercourse (white)</p>	
		<p>man's eyes; sago branch</p>		

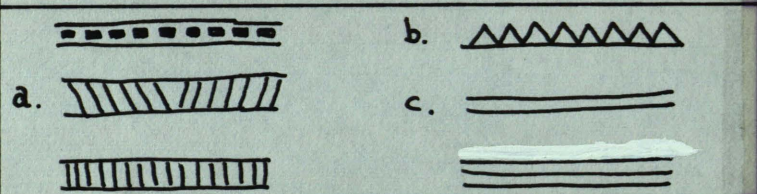
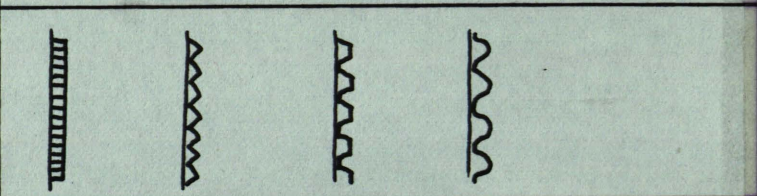

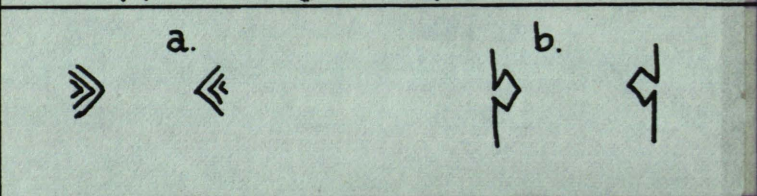
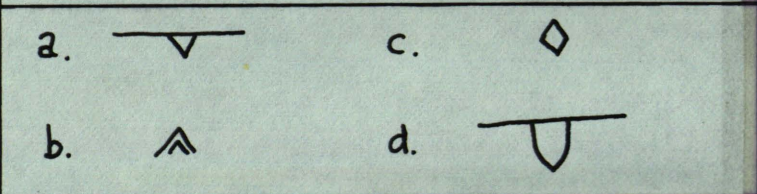
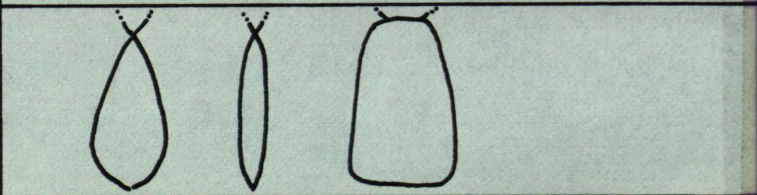
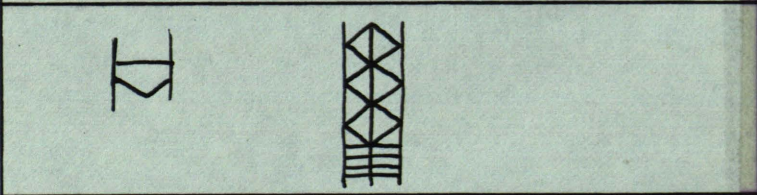
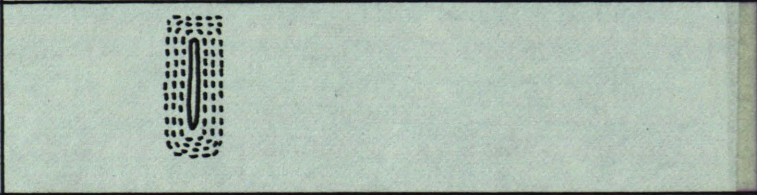
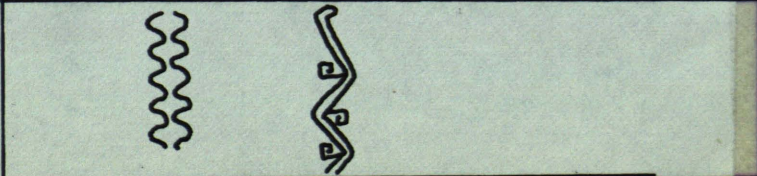
DESIGN ELEMENTS	TELEFOLMIN - FALAMIN (22 objects)	ULAPMIN - TIFALMIN - WOPKEIMIN (13 objects)	FAIWOLMIN - BAKTAMAN (27 objects)	MIANMIN (two objects only)
	<p>a. snake; snake's track; dorsal plates of crocodile; b. lizard's forehead; c. worm's track; path; markings on a particular species of bird</p>	<p>a. teeth of large snake; mountains with white cliffs; c. path; snake's tracks</p>	<p>a. hair</p>	
	<p>snake; snake's skin; snake's track; wood-borer marks</p>	<p>snake; snake's tracks</p>	<p>snake</p>	<p>snake; running snake</p>
			<p>snake</p>	
			<p>b. ears</p>	<p>a. ears</p>
	<p>a. conus shell; cassowary's beak; lizard's eye/ankle?</p>	<p>a. borer hole</p>	<p>a. nose-shell; mark on trunk of tree-fern; waterfall (white); d. mark on trunk of tree-fern; waterfall (white)</p>	<p>a. and c. conus shell; b. anus</p>
		<p>cassowary's chest/rump; jew's harp; water or stream</p>	<p>navel</p>	
		<p>man's eyes</p>	<p>eyes</p>	
			<p>coix-seeds necklace; marks on kibal tree waterfall</p>	
		<p>branch of particular flowering tree; branch of same with thorns</p>		

TABLE 12: MAJOR AREAS OF MEANING GIVEN IN EACH REGION.

N.B. Areas of meaning bracketed are represented by only a few cases and a dash indicates only one, or no, mention.

<u>TELEFOLMIN-</u> <u>FALAMIN:</u>	<u>ULAPMIN-</u> <u>TIFALMIN-</u> <u>WOPKEIMIN:</u>	<u>FAIWOLMIN-</u> <u>BAKTAMAN:</u>	<u>MIANMIN:</u>
snake	snake	snake	snake
(man)	man	man	man
bird	bird	bird	-
crocodile	crocodile	(crocodile)	-
lizard	lizard	(lizard)	-
cassowary	cassowary	-	-
wood-borer marks	wood-borer marks	-	-
conus shell	-	-	conus shell
flying fox	-	-	-
spider	-	-	-
butterfly's tongue	-	-	-
-	moon	-	-
-	-	marks on fern-tree trunk	-

Cranstone has made some tentative observations on the basis of his material and concludes (1968:619) that "The meanings, with few exceptions, bear no relationship with either sacred or secular life. Certain species or objects represented may have significance in the ancestor cult or refer to myth, and certain others have some economic importance; but I can trace no general pattern."

Sir Herbert Read has pointed out (Smith, 1961:18) that "no necessary verbal equivalent exists for the visual work of art, whence follows the anthropologist's difficulty in extracting a meaning for his designs from the aboriginal or primitive man. The design has a meaning, but not a verbal meaning, logical or rational meaning."

Forge has suggested that Sepik art - particularly that of the Abelam - might be analysed as a non-verbal means of communication (1965:23). He regards their art as "expressions related directly to the culture, not through the intermediate stage of myth." (1965:24). He goes on to suggest that if there is any general pattern to the symbolism, it "must be at the level of the relation between symbols, and at this level may not be consciously perceived by either the artist or the beholder. For this sort of analysis the overt meaning of any symbol is not of great importance. What matters is the arrangement of symbols and the significance of that arrangement." (1965:25).

I would suggest that this is also true of the art of the Mountain-Ok. The apparent lack of relationship between the meanings of design elements and the ancestor cult and mythology is real because it is not concerned

so much with making statements about the ancestor cult and the content of the myths as it is with a much more limited aspect of the culture. It might be noticed that there is only one reference to any object concerned with the ancestor cult: "jaw-bone of ancestor" in Fig. 6 (Cranstone, 1968). The main areas of meaning concern a number of birds and animals, including man. Pigs - wild or domesticated - dogs, the phallus, skulls, taro, pandanus, banana and a number of other important elements of culture rate not the slightest mention. The ancestress Afek is nowhere mentioned except that one particular design is said to "belong" to her, i.e. was originated by her, and this statement has no relationship to the interpretations given for the design elements of "Afek's design" (E.59).

It would seem to me that the message has to do with the activity in which much of the art is used and seen. Putting aside the houseboards for the moment, let us consider the warshields. For these objects, it is more than probable that the design symbolism has to do with the affective aspects of warfare.

It would not contradict my earlier contention that the designs do not make statements about the ancestor cult to suggest that the anthropomorphic designs are visual demonstrations of ancestral power and a reminder to the enemy that they are attempting to deal with more than mere men. The practice of taking ancestral relics to the battle and, among the Faiwolmin, of keeping these relics in close association with the warshields, supports such an interpretation. The point of the statement being made concerns more the relevance of the ancestors

to warfare than the ancestral cult itself.

One common symbol - the crocodile - may be thought of as conveying the idea of invulnerability - it is dangerous and has an exceptionally tough hide. The beaks of cassowary, cockatoo and hornbill are hard, sharp and aggressive. The snake is regarded with a certain amount of fear - depending upon the species - and the hawk (bokol) is explicitly associated with warfare where the bokolban involves the killing of an enemy. Among the Tifalmin/Telefolmin, the hawk's claws are also used as a hunting talisman and here it is the fierce gripping action of the claws that is believed to assist them.

Other symbols - the spider, the curled tail-plumage of a species of bird-of-paradise, the wood-borer marks, and so on - may be indications that the designs have achieved a measure of independence of their *raison d'être*.

It seems obvious that the idea of decorating shields must first have assisted rather than detracted from the business at hand and the object must have been to frighten - or at least to impress - the enemy and the visual symbols used must have had some currency. It is then possible, once people have learnt to react appropriately to certain designs, for minor changes to occur in the designs without detracting from the required effect, and in due course these may come to be interpreted at the verbal level in ways that have no connection at all with warfare.

There is no doubt that shields do have this effect on the Mountain-Ok.

Cranstone describes how: "An elderly Urapmin demonstrated how he would creep through the grass, dragging his shield, and leap to his feet with a shout when near the enemy. The effect on two Tifalmin youths (traditional enemies of the Urapmin) who were resting nearby was electrifying." (1968:612 and Note 7). I myself have felt quite startled at the sudden appearance of a shield - especially those with huge spirals at the top like two enormous eyes. To suggest that the shield designs terrify the enemy would be to overstate their effect, but to claim that the enemy were blase would also be in error.

Another mechanism whereby the verbal meanings of design elements might drift away from warfare symbolism is the borrowing of designs from other groups - either by capturing shields or by copying the designs. Thus, as Cranstone has already pointed out: "We have here a situation in which patterns could travel over long distances, acquiring new meanings as they did so. Perhaps this helps to explain the fact that the whole pattern ((frequently)) has no meaning, and that with few exceptions (e.g. snake track, bird-of-paradise feather) the meanings ascribed seem to a European eye, arbitrary and sometimes unrelated to the form of the element." (1968:619 - the qualification is mine; whereas Cranstone's data indicated a lack of unity in the meanings ascribed to any one design, my data has shown that - at least among the Faiwolmin - a design may achieve a high degree of unitary meaning. These are almost always anthropomorphic. Barth's Baktaman data agrees with my Faiwolmin data in this respect).

The decoration of houseboards is particularly interesting, for

it is obviously more for the benefit of the group itself than for the group's enemies. In this respect it is not obviously related to warfare, and yet the designs are identical to those on the shields.

The first piece of evidence that these decorated boards are in some way connected with warfare is a statement by a Bolobip/ANGKEIAKMIN man: "The Awin (peoples to the south) do not have house decorations because they have no enemies."

Another clue is to be found in the similar combination of symbols for the Iatmul-Abelam peoples and the Mountain-Ok. Forge has described how the spirit-house is regarded as female, the most important part, however, (the ridge-pole manggendu) being masculine and phallic. Other details of the house construction and trimmings demonstrate that "The head of the house with its peak is the focus of the masculine aggressive aspect....." and ".... is closely associated with warfare and the success of the village in killing its enemies." (1965:27).

The Mountain-Ok spirit-house is frequently referred to as amoken ("mother-house" - the unangam or family-houses are its children) and may therefore be regarded as female. Indeed, the Afek myth explicitly states that the spirit-house was originally intended for female use but that things did not work out well and so Afek gave it into male custody. The small, often oval, doorway is consistent in form with this idea, perhaps representing the vagina. However, it appears that the phallic symbol is probably the houseboard: its shape is identical to that of the bull-roarer, an important male cult object for the Papuan tribes in the south of New Guinea (Newton, 1961:23 and Williams

1936^{a.}) and itself a phallic symbol (van Baal, 1966:270). The houseboards bear designs found on the warshields and therefore carry the same messages of warfare and aggression.

It is apparent then that, like the symbolism among the Abelam, the Mountain-Ok symbols found on warshields and houseboards communicate the same message to both in-group and out-group, reassuring and lifting the morale of the former and undermining the confidence of the latter.

It is also apparent that this communication does not take place at a conscious level. As Forge has said: "These 'messages' I believe to be statements about the nature of man and his culture, statements that may not be totally conscious in either the creators or the beholders of the art - who do these things because they are correct - but which are relevant to and essential for the existing social structure." (1965:30).

For the Mountain-Ok it would appear that the messages are concerned with only a limited range of behaviour not, as for the Abelam, with the whole wide sweep of their culture. To determine the exact content of the messages and the exact range of behaviour with which these messages are concerned would require a systematic study eliciting far more data than is at present at my disposal. However, I believe that the available evidence suggests the lines further enquiry might pursue.

Figure 21: Average Number of Surviving Boards Per Year within each of eight time periods by Design Type and Total (Base 161 and assuming a 10-year period for "pre-1900").

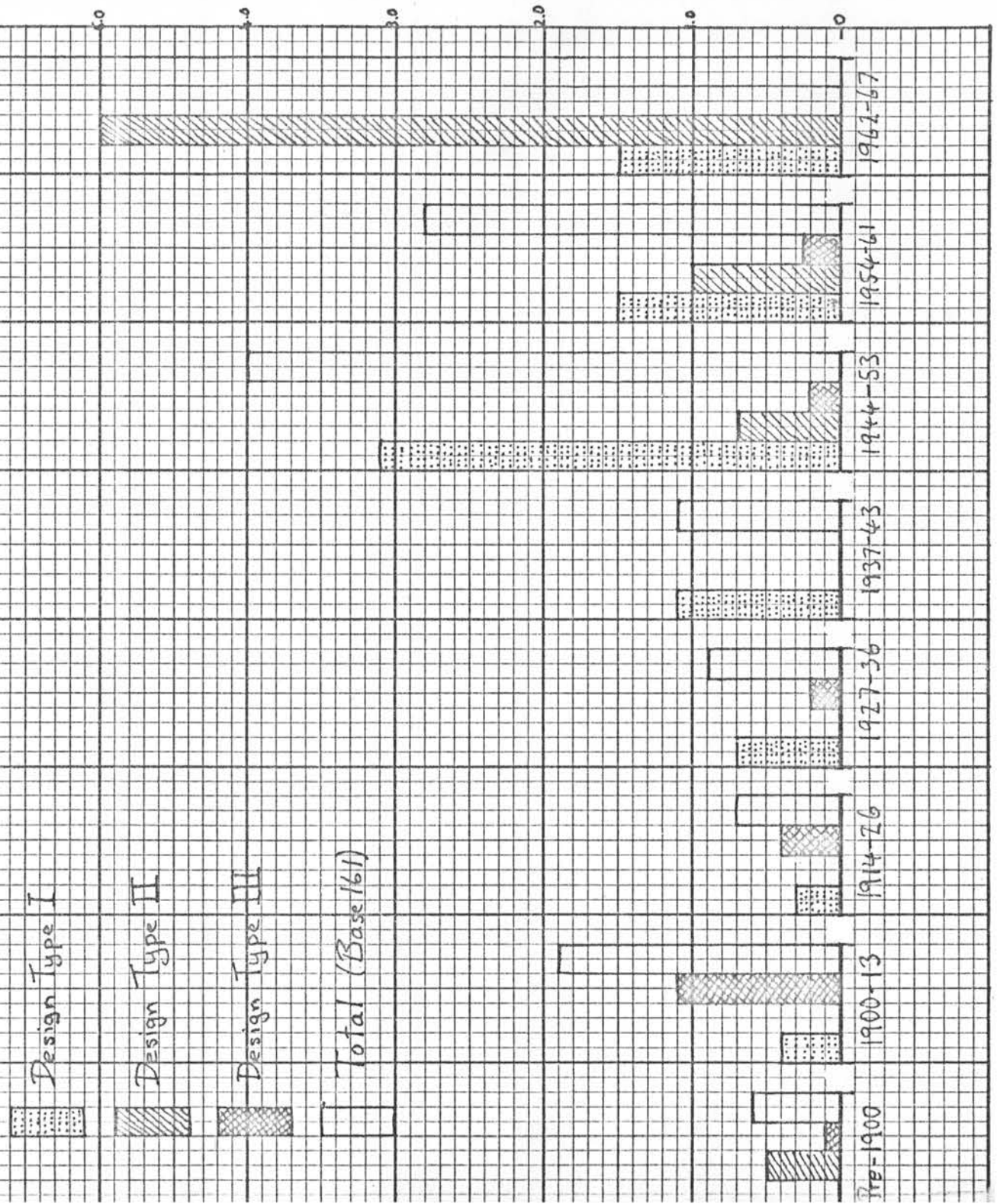
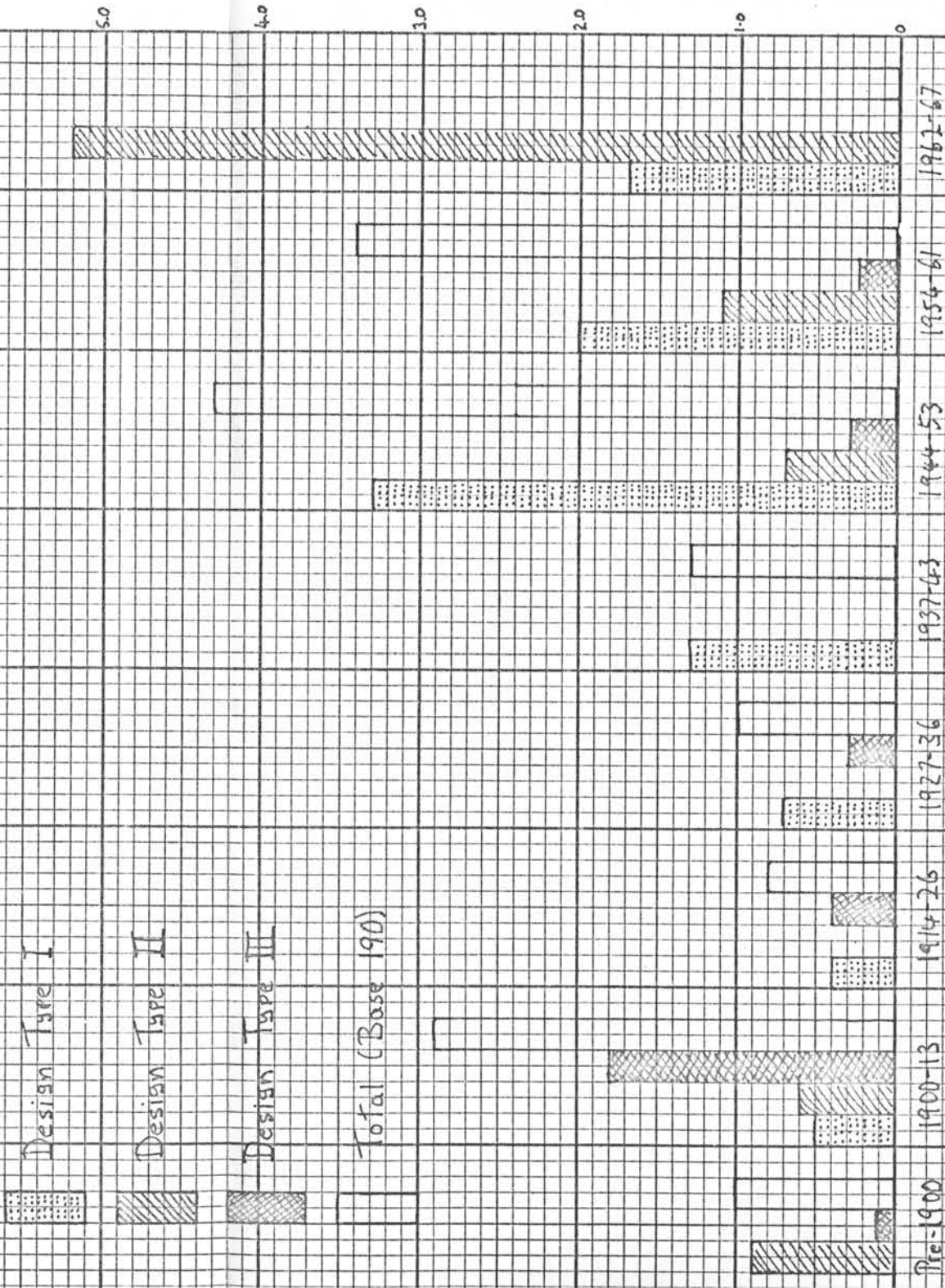


Figure 22: Average Number of Surviving Boards per Year within each of eight time periods by Design Type and Total (Base 190 and assuming a 10-year period for "Pre-1900").



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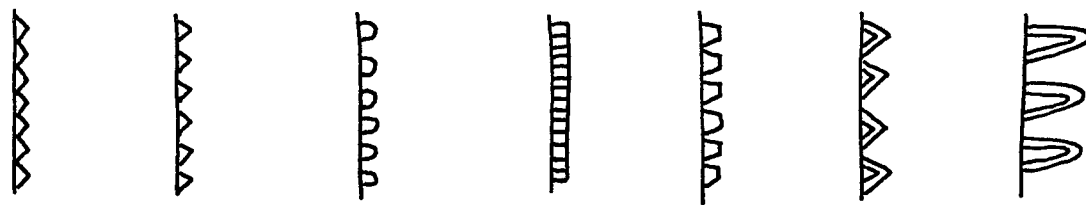


Figure 9.

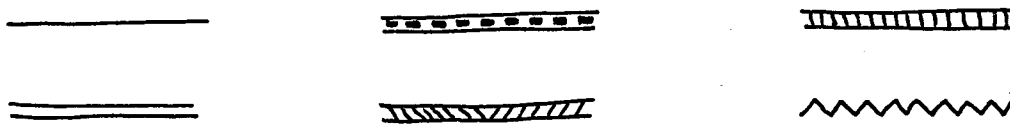


Figure 10.

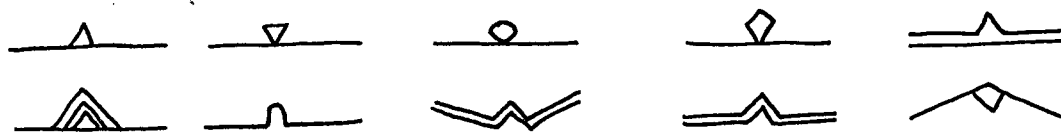


Figure 11.



Figure 12.

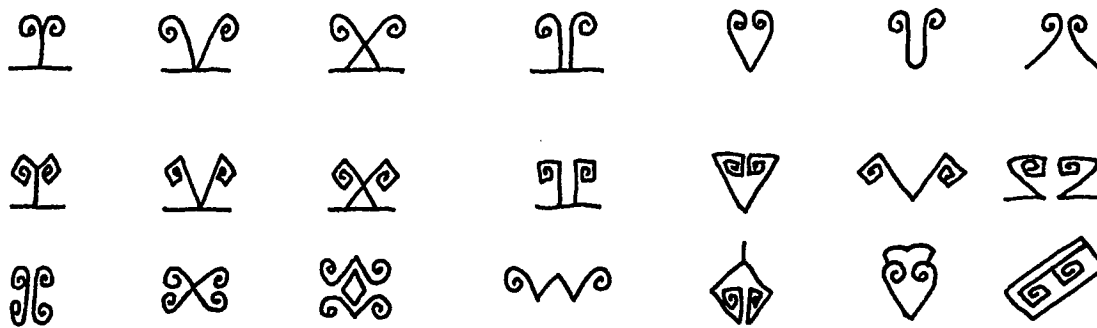


Figure 13.

These framing elements of the design appear to be used more or less according to whim, and the one artist may vary his rendering of a particular design with respect to these optional elements. For example, E.9, 10, 12, 13 are each different from the other, but all were made by Fugitengim. E.46, 47, 48, 52 are alike, but slightly different to 11 and 14, all six of which were made by Amiyamsep. These optional elements, therefore, do not constitute a means whereby a particular artist writes his signature on his work, but rather serve to satisfy a desire for individuality.

4. THE ARTIST AND DESIGN TYPE.

Having established which elements of the total design are framing elements, it is a fairly straightforward task to identify the central motif in each design and to classify accordingly. Our task is further simplified by the tendency for particular designs to become popular and to be reproduced many times with little variation.

Rather than think in terms of a particular artist inventing a design and others copying it slavishly by constant reference to the original, I am more inclined to the view that there is a mental stock of designs in the community acquired not at the conscious level of purposeful observation, but incidentally and without particular motivation. Boards and shields are continually seen but not remarked.

However, when a man actually begins to draw a design on a board there is usually at least one other man ready to assist and to offer

his opinion on details of the design. Nonetheless, such is the individuality of the Mountain-Ok that some designs are left incomplete for want of competence, or reflect the ineptitude of the artisan.¹ Others are completed in a competent manner, but incorporate quite individualistic departures from the normal pattern.²

It is remarkable that there isn't a greater number of incompetent attempts. The method of gaining the skills of design and woodcarving is most informal and very few men execute more than one or two designs in their lifetime.

It is interesting that an artist does not necessarily adhere to one type of design. Ebielapnok has three to his credit (vide T.17, 19, 20, 21, 24, 26), whereas Dabalgal and Domolokim have only the one (vide: Dabalgal: T.23, 25, 27, 28, 35; Domolokim: T.22, 28, 31, 33). Kwengkalanengim executed three quite different designs (T.38, 39, T.W.2), but Atilengim's two are the same (T.41, 42). Of Fugitengim's designs (E.9, 10, 12, 13), only E.10 is different in lacking the spiral/meander element attached to the extremities of the wing-like design and substituting two pairs of this element protruding from the top and bottom framing elements. Amiyamsep's are all the same (E.11, 14, 46, 47, 48, 52), and Alalfaganengim's are the same (E.20, 21), but Fuleganim and Yulengim's are all three different (E.39, 44, 45).

1. Examples are: T.40, 76, 77, 94; E.49, 50, 54, 56-8; F.33, 37; OW.6; MW.16-18.

2. Examples are: T.9a; 47, 53, 61, 71, 72, 90; E.61-3; 65, 70, 72, 75-7; MW.4, 6, 14, 15.

It is therefore impossible to allocate particular pieces to the same, or different, artists judging by the total design - both framing elements and the central motif - or by their manner of execution.

By "manner of execution" I am thinking of a tendency to 'squaredness', or 'roundedness', or strict 'parallelism', the shape of the board and its entrance hole, the colours used and so on. For example, E.9 and E.11 seem to be more alike than E.9 and E.12, especially in the shape of the top of the board and in the details of the top framing elements of the design; but E.9 and E.12 were made by the one artist, and E.11 by another. E.37, 38 and 42 are also remarkably alike, but all three were done by different men. The 'roundedness' of the spirals in T.22, 23, 25, 27, 33, is attributable to two artists, not just one.

Then there is the matter of symmetry. For the Mountain-Ok artist, symmetry around the vertical axis is almost inviolate for the total design,¹ and is very strong around the horizontal axis - at least for the central motif.² However, the requirements of symmetry are approximate only, and individual artists vary in the strictness with which they meet these requirements. Even so, it is still not possible to utilise this fact to identify the work of individual artists. It is certain that the characteristics of any one artist's work so overlap

1. Exceptions are T.61, 64, 79; TW.2; Schuster 32; E.40; MW.14; other minor violations are almost certainly accidental and due to the ineptitude of the artist.

2. Exceptions are: T.21, 35, 45, 47, 61, 64, 67, 71, 72, 79, 93-6; TW.2, 5; E.65, 72, 75; F.2, 4, 6, 7, 33, 37; FW.1; U.1-7; Faiw. 1, 2, 4-8, 14; Faiw.W.1, 3, 4, 8, 9, 21, 22, 26, 28, 30, 31, 33, 43; OW.3; MW.4, 8, 14; Schuster 32; Cranstone figs. 13, 15, Plate 8b; Barth 2.

those of another's that the degree of confidence in assigning particular pieces to any one artist would be very low indeed.

It is therefore with caution that I consider suggestions such as Gerbrand's (1967 b.) that certain Asmat shields may be attributed to particular artists because of the similarities in the designs and manner of execution e.g. p.p. 172-3: the maker of A is known and B & C are attributed to the same artist; p. 179: C & D are attributed to the same artist, but A. & B., almost identical to each other, are carved by different men; for D & E, p.p. 182-3, the name of one of the carvers is doubted, partly because the designs are so similar that Gerbrands feels they are the work of the one man, and F is attributed to this carver also; p.190, the maker of B is known and C attributed to the same artist; A. on p.192 is attributed to the same artist who executed the design on D, p.191; p. 192 B is documented as carved by Adas, as is p. 194 D, although the designs are different; p.195 E is attributed to Adas also, on the grounds of manner of execution of the design rather than on the design itself which is different to both the others.

Of course, Gerbrands may be correct and certainly his opinion has more weight than that of a researcher working in another area. But in the attempt to remove anonymity from primitive art, the fact that we may not have sufficient information to make a positive identification should not be lost sight of.

5. THE IDENTIFICATION OF DESIGN TYPES ON HOUSEBOARDS.

This section will by implication demonstrate the method of identifying and grouping designs that appear on the central boards of decorative facades, and warshields. However, facades and shields do not occur in sufficiently large numbers for analysis to proceed with any degree of reliability. The main concern of this and the next section will be, therefore, the designs appearing on houseboards among those tribes where it is common practice to attach a houseboard to a family house. A later section will deal with the facades and shields, each separately, and then relate all parts of the analysis to obtain an overall understanding of the distribution of designs throughout the Mountain-Ok area.

(a) The Sample: The sample consists of 220 houseboards. Eighty boards were recorded for the Telefolmin of Ifitaman between June, 1964 and May, 1965; another 16 were recorded in January, 1967 - 13 had been made since the earlier survey and three were boards that I had missed recording previously. All villages of the Telefolmin of Ifitaman were covered. I should point out that there was some turnover of boards between the time the survey began in June, 1964, and when it ended in January, 1967. A number were destroyed, some deliberately and at least one accidentally when a whole village was destroyed by fire; some were sold to museum and private collectors. Between June, 1964, and May, 1965, twelve new boards were made and nine old ones sold or destroyed. One old board had a new design carved on it. Between June, 1965, and January, 1967, four boards were said to have been sold, and one was destroyed by fire. The

total number of boards recorded for the Telefolmin of Ifitaman was therefore 97, considering, for the purposes of analysis, the new design carved on an old board (T.9a) to be an additional board.

For the Telefolmin of Eliptaman I recorded 77 houseboard designs in January, 1967. During 1966, several boards had been purchased by an ethnographer from a museum in Barcelona and by M. Schuster of the Museum für Volkerkunde in Basel. However, I have not been able to obtain photographs and data of these boards or any idea as to how many were obtained. Only one village, Ibatigin, was omitted from the survey, on the purely personal grounds of the effort that would have been required to get there.

For the Falamin, I recorded 21 houseboards in four villages visited in August, 1964, and an additional 17 in two villages visited in January, 1967, one of which was actually a facade rather than a single houseboard. Two of the villages visited in 1964 I visited again in 1967 and I found that one board had gone and another was badly damaged and would almost certainly be discarded. In the two villages visited only in 1967, four boards had been made between 1965 and 1967, but I do not know whether these were replacements or additional boards. The total number of Falamin boards in the sample was therefore 38, with all villages included in the sample.

Four Ulapmin villages were surveyed in August, 1964, yielding a total of eight houseboards. It is believed that at least two other villages exist, possibly with houseboards.

The only other place where houseboards may exist as family house decoration is among the Telefolmin of Ninataman, at the headwaters of the Frieda and north-east of Eliptaman. This was too remote for me to include in the itinerary for January, 1967.

The sample may therefore be said to be representative in that it is almost as extensive as the universe of objects under consideration. The fact that I have included boards that were destroyed or taken out of the area and subsequently replaced will not cause any bias for the sort of analysis I intend to carry out.

(b) The Method: In his article 'Style Provinces and Style Elements', Schmitz says that: "... certain combinations of elements will occur more often than others (and) these combinations of style elements we shall call the types of our motifs" (1956:116). He goes on to say that it is the distribution of these types that requires statistical investigation. This will be the main task of this section of the thesis.

The first step in identifying design-types was to put together all those designs that were - disregarding distortions of shape, slight displacement of design elements, and certain ineptitudes on the part of the artist - essentially the same design. Thus, in Figure 14, a., b., and c. were classified together, but not a. and d. Similarly, e. and f. were placed together; g. and h. placed together; and i. - k. placed with a. - c.

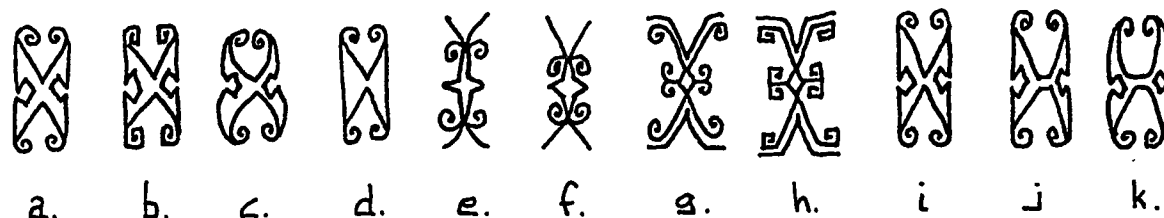


FIGURE 14.

Obviously this begs the question: how do the people themselves classify the designs? The data is insufficient to answer this, but examination of the designs indicates that distortions in shape and displacement of elements occur at all points between extremes and therefore cannot be the bases for classifying into types. There may be "good" and "bad" renderings of a design, but I have no information on this and it would be unwise to apply one's own ideas of "good" and "bad" renderings.

On the other hand, the presence or absence of particular design elements may be assessed objectively and provides a reliable basis for differentiation between designs and their classification into types.

The first step resulted in a large number of categories, some represented by only one or two examples. It was considered essential that further grouping take place.

This was achieved by selecting a "simple representation" that was considered basic to a large number of designs and grouping all those designs that differed in only one respect - in the presence of only one additional design element - from the "simple representation."

For example, Figure 15, Ia. is the "simple representation" considered basic to a large number of designs having a wing-like appearance. It is readily admitted that the selection of a "simple representation" is a subjective procedure, but its validity as a methodological procedure is established by its success as an analytical tool. For Figure 15, then, Ib. and Ic. differ in the treatment of the two vertical lines of the wing figure, whereas Id. and Ie. differ in possessing an element at the centre - in one case a rhomb and in the other, an oval. This accounted for a total of thirteen designs.






Ia.		"the simple representation" T.55; F.28, 29.	3
Ib.		F.8, 19.	2
Ic.		T.88; E.10; F.1, 13, 17, 18, 20.	7
Id.		(No houseboards of this design)	-
Ie.		T.43.	1
			<hr/>
			13
			<hr/> <hr/>

FIGURE 15: VARIATIONS BY ONE ELEMENT FROM SIMPLE REPRESENTATION NO. I.

By adding an additional element - the spiral or 'key' - to the extremities of the wing figure, a further 74 are accounted for.






Iai.		T.7, 9-13, 16, 48, 51, 56, 69, 80; E.19-22, 28, 32, 44, 61, 68, 69; F.21.	23
Ibi.		(No houseboards of this design)	-
Ici.		T.36, 51, 76; E.2-9, 11-18, 23-7, 29-31, 34-8, 40-3, 45-50, 52-55.	46
Idi.		T.8, 14, 15, 44.	4
Iei.		E.70	1
			<hr/>
			74
			<hr/>

FIGURE 16: VARIATIONS BY TWO ELEMENTS FROM
SIMPLE REPRESENTATION NO. I.

Thus, by starting with a simple representation, and adding a maximum of only two additional elements, a total of 87 boards were accounted for. These designs belong to TYPE ONE.

The next simple representation is a lozenge with four limbs diagonally to each corner of the design. Most of these designs, unlike those of TYPE ONE, are compound designs with a great deal of parallelism. Whereas TYPE ONE had a line enclosing a figure on a ground, here the figure is manifested by sets of parallel lines to form the limbs, and lozenges placed one inside the other at the centre. There is considerable variation in the exact manner in which this is done and these variations will be ignored for the purposes of classification. However, additions of distinct spiral or 'key' elements to the extremities of the limbs

is considered significant, as is the replacement of the lozenge with the four-pointed star shape and the replacement of outward-turning spirals with inward-turning spirals (Figure 17).





IIa.		T.17-20; E.39, 58. "the simple representation"	6
IIb.		T.91	1
IIc.		(No houseboards of this design)	-
IIId.		(No houseboards of this design)	-
			<hr/>
			7
			<hr/> <hr/>

FIGURE 17: VARIATIONS BY ONE ELEMENT FROM SIMPLE REPRESENTATION NO. 2.

By adding an additional element - the spiral or 'key' - to the central lozenge, either singly or in pairs either side of the lozenge, a further 50 designs were added to the seven above (Figure 18).









IIai.		T.82, 83; F.22, 25, 27.	5
IIbi.		T.22-35, 37, 40, 49, 52, 73, 75, 84-87, 90; E.1.	26
IIci.		T.53, 61, 70; E.33, 73.	5
II di.		T.2, 39, 41-2, 50, 54, 57, 60, 63, 66, 68, 81, 92; F.12.	14
			<hr/> 50 <hr/>

FIGURE 18: VARIATIONS BY TWO ELEMENTS FROM
SIMPLE REPRESENTATION NO. 2.

By permitting additional elements (spirals for T.9a, 71; lozenges either side of the central lozenge of E.63, 75-7) and the loss of spirals at the extremities of the lower limbs of T.72, seven boards were added to the 57 above to bring the total of boards in TYPE TWO to 64.

The third simple representation is a set of counterposed chevrons. These may be rendered strictly lineally, or with some degree of curvilinearity. However, because there is a range between the two extremes, curvilinearity cannot be considered an element of the design but rather a "distortion" of the linear model, and therefore part of the manner of execution.

On the other hand, the repetition of the motif along a vertical axis - "stacking" - may be considered significant, as is the incorporation of the spiral or "key" element into the central motif (Figure 19).

IIIa.		T.3; F.9, 15, 23, 24, 35, 36.	"the simple representation"	7
IIIb.		T.1, 4-6, 58, 59, 65, 89; E.59, 60, 67, 71, 74; F.3, 5, 10, 11, 14, 16, 26, 30-2, 34, 38.	"stacking"	25
IIIai.		T.46; U.8.	spirals added	2
IIIbi.		T.21, 45, 62, 78(?); E.64, 66; U.2, 4, 6, 7(?).	"stacking", with spirals	10

44

FIGURE 19.

The total number of boards of TYPE THREE were 44.

The remaining 25 boards (195 have been classified into the three TYPES) could be grouped only in minor categories or not at all. Of these, E.72 is clearly derived from a Mianmin warshield design (Schuster, 1968, photo 35; Appendix OW.1; OW :3 (drawing after G.

Morren, personal communication); note the vertically opposed rectangular forms with spirals at the extremities).

Five Ulapmin designs have been accounted for and the two Telefolmin boards, T.64, 79, could be thought of as related to them, but not sufficiently to include them in TYPE THREE. T.79 is clearly the prototype for T.64 (they are situated in the contiguous villages of Telefolip and Bogalminavip and T.79 is almost certainly older than T.64). The three remaining Ulapmin boards (U.1, 3, 5) consist of vertically-stacked rhombs, with spirals attached to the sides of the rhombs, and are in this respect similar to the four Falamin boards F.2, 4, 6, 7.

The Eliptaman board E.65 seems to be related to the Telefolmin boards T.67, 93-6. The four boards T.38, 47, 74, E.62 seem to be related. E.62 is particularly interesting in its use of the V-shaped element above and below the central rhomb -- this is to be seen on a bark painting from Itelinu, May River area (Schuster, 1968, Photo 33).

The remaining designs (T.77; E.56, 57; F.33, 37) are unclassifiable and most give the appearance of ineptitude; however the elements of the designs are the familiar rhomb, spiral, chevron, zig-zag, etc.

6. DISTRIBUTION OF DESIGN TYPES OVER TIME.

The houseboards and shields have been dated by reference to various historical events such as the invasion of the Elip Valley about 1870;¹

1. Established by my wife during her investigations of diadic relationships among the Telefolmin. The date was fixed by extensive genealogies and the relative ages of persons in these genealogies.

the first arrival of white man (Thurnwald, 1914); the Karius and Champion patrol (1927); the Stuart Campbell expedition and first airstrip at Ifitaman (1936); the rehabilitation of the airstrip by glider-borne personnel (1944); the establishment of the Patrol Post (1948); the killing of two patrol officers and two native policemen (1953); and finally the year I myself arrived in the area (1962). Cross-checks were carried out in many cases by reference to whether or not a particular board was made around the time various persons were born - persons whose ages could be estimated within about 5 years.

One weakness in this procedure is the difficulty in dating the older boards. For example, in my earlier investigations of houseboards, I was told that T.55, 57 and 68 were made two generations back, but in 1967 I obtained what seemed to be much more detailed and reliable evidence which placed them three generations back and from a dating of 60 plus to 70-80 years. Thus these boards, which otherwise might have been allocated to the period "1900-13", were allocated to the period "pre-1900". It could well be that more detailed questioning would result in the allocation of many more boards to the "pre-1900" period, and thus reduce the number assigned to the "1900-13" period. As the only fixed date we have beyond 50 years ago is that of Thurnwald's 1914 visit, anything made prior to his arrival must be dated by reference to relative ages of persons and various other clues that may be obtained only by a thorough genealogical investigation. As this probably will never be done, the somewhat less than satisfactory results I have obtained must suffice.

Accepting, then, the data given by informants, 171 houseboards were allocated to eight time periods, but there remained 49 boards of uncertain vintage. Most of these were older boards for whilst it was possible to get an informant to relate, with reasonable accuracy, the details of a neighbour's board if it was made only 10-20 years ago, it was almost impossible to get a reliable date on an old board from anyone but the current owner. As I pointed out in the Introduction, current owners were frequently not available at the time of my brief visits and as a consequence the majority of undated boards are older ones. This is particularly unfortunate because there are so few boards in the earliest time periods that the distributions for the dated boards might not be representative.

It was therefore thought worthwhile to date as many as possible of the undated boards using the available evidence, to ascertain whether any additional regularities might be discovered. The grounds for assigning each of the undated boards to a time period are set out in Appendix C. Only the eight Ulapmin houseboards could not be allocated to these time periods.

Of the 195 classified designs, 34 are of uncertain vintage. Thus 161 remain for analysis in respect of the time variable. Table 13 shows the results of such an analysis:

<u>TYPE:</u>	<u>Pre- 1900</u>	<u>1900-</u>	<u>1914-</u>	<u>1927-</u>	<u>1937-</u>	<u>1944-</u>	<u>1954-</u>	<u>1962-</u>	<u>TOTAL:</u>
I	-	6	4	7	8	31	12	9	77
II	6	6	-	-	-	7	8	30	57
III	1	15	5	2	-	2	2	-	27
<u>TOTAL:</u>	7	27	9	9	8	40	22	39	161
<u>OTHER:</u>	1	-	-	-	1	2	1	5	10
	Undated boards (34 classified, 15 unclassified)								49
<u>T O T A L:</u>									220

TABLE 13: DESIGN-TYPES ON HOUSEBOARDS BY TIME
(BASE 161).

We are considering a population of objects existing more or less at a point in time (1964-7). Most of these are recent and a few are quite old. These latter represent survivals of a larger number of objects. Although it is possible, it is however highly unlikely that the attrition of houseboards has taken place selectively with respect to design-type. We may assume, therefore, that if we have at the present time a certain distribution of design-types on boards made during a certain period in the past, this is a reflection of the distribution of design-types for all the boards made during that period, many of which no longer exist.

Even without applying any statistical test of significance, it is apparent that there is a rise and fall in the popularity of the Types. Designs of Type III were the most popular at the beginning of this century; designs of Type I reached a peak in popularity between

1944 and 1953; only recently giving way to designs of Type II which appear to be reaching a peak in the 1960's.

By including the boards that were dated by indirect evidence, 190 become available for analysis. The results are set out in Table 14:

<u>TYPE:</u>	<u>Pre- 1900</u>	<u>1900-</u>	<u>1914-</u>	<u>1927-</u>	<u>1937-</u>	<u>1944-</u>	<u>1954-</u>	<u>1962-</u>	<u>TOTAL:</u>
I	-	7	5	7	9	33	16	10	87
II	9	8	-	-	-	7	9	31	64
III	1	25	5	3	-	3	2	-	39
<u>TOTAL:</u>	10	40	10	10	9	43	27	41	190
<u>OTHER:</u>	1	7	-	-	2	2	2	8	22
								Undated Ulapmin Boards	8
								<u>T O T A L:</u>	220

TABLE 14: DESIGN-TYPES ON HOUSEBOARDS BY TIME
(BASE 190).

Table 14 supports the results of Table 13 and we may now note that designs of Type II were probably popular prior to designs of Type III towards the end of the 19th century.

These results in no way imply that designs of one Type have developed from designs of another. Within each of the three Types there are a number of variations possible, some perhaps as yet unrealised (e.g. sub-type Ibi) - and one or two variations may be favoured at any particular time. The design favoured may be one of the stock of

variations within the Type (e.g. Ici) or a new development from one such variation, but not necessarily a development from the previously-favoured Type (e.g. designs of sub-type IIbi have developed from the sub-types IIa and IIb, but not from the previously-favoured Type I designs - Figure 20).

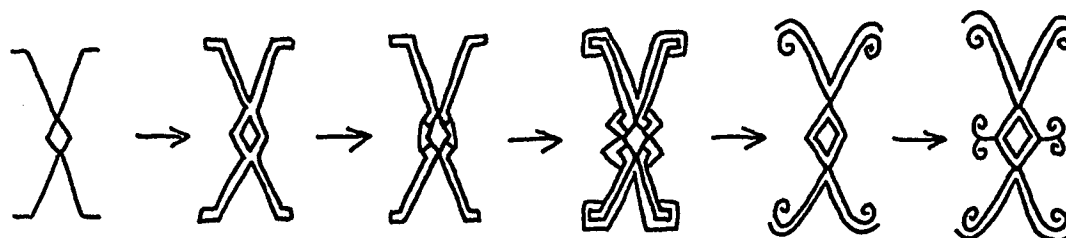


FIGURE 20.

There is difficulty in reading Tables 13 and 14, however, for the time periods to which the boards are assigned are not of equal duration. The longest time period (disregarding the open-ended "pre-1900" class interval) is the 14 years of 1900-13; the shortest is the 7 years of "1937-43". Thus in Table 13, designs of Type I occur 6 times during 1900-13 and 8 times during the period 1937-43. The difference seems negligible unless it is remembered that in the first case we are noting 6 instances over 14 years, and in the second case, 8 instances over only 7 years. The second frequency is almost three times that of the first.

To overcome this shortcoming in the Tables, histograms were constructed showing the average number of boards of each design-type made per year within each time-period (Figures 21 and 22).^{pp. 151, 152} The distributions now clearly demonstrate the cyclical nature of the rise

and fall of the popularity of the three design-types and confirm the conclusions arrived at by examining Tables 13 and 14. Of course the small scale of the left-hand end of the histograms reflects the smaller number of boards surviving from the earlier time periods.

To test the distributions for significance, a Chi-square analysis was carried out. Because some of the time periods do not contain a sufficient number of boards to justify such a test, they had to be grouped. As I have isolated what appear to be peaks in the cycle of popularity of each design, and as these cycles are out-of-phase, i.e. the peaks do not coincide, it is possible to group the eight time periods into three to provide bases sufficient for a statistical test of each peak. The time periods thus became: "pre-1927"; "1927-53"; "1954-67". The distributions are set out in Tables 15 and 16.

<u>DESIGN TYPE:</u>	<u>PRE-1927:</u>	<u>1927-53:</u>	<u>1954-67:</u>	<u>TOTAL:</u>
I	10	46	21	77
II	12	7	38	57
III	21	4	2	27
<u>TOTAL:</u>	43	57	61	161

TABLE 15: DESIGN-TYPES ON HOUSEBOARDS BY TIME
(BASE 161).

<u>DESIGN TYPE:</u>	<u>PRE-1927:</u>	<u>1927-53:</u>	<u>1954-67:</u>	<u>TOTAL:</u>
I	12	49	26	87
II	17	7	40	64
III	31	6	2	39
<u>TOTAL:</u>	60	62	68	190

TABLE 16: DESIGN-TYPES ON HOUSEBOARDS BY TIME
(BASE 190).

For each Time period and the Total, the null hypothesis was that each design is equally represented. For Table 15 the following values were obtained:

pre-1927: Chi-square = 4.79 df = 2; Therefore $0.05 < p < 0.10$
 1927-53: Chi-square = 57.8 df = 2; Therefore $p < 0.001$
 1954-67: Chi-square = 31.9 df = 2; Therefore $p < 0.001$
TOTAL: Chi-square = 23.6 df = 2; Therefore $p < 0.001$

For Table 16 the results were as follows:

pre-1927: Chi-square = 9.7 df = 2; Therefore $0.001 < p < 0.01$
 1927-53: Chi-square = 58.3 df = 2; Therefore $p < 0.001$
 1954-67: Chi-square = 32.6 df = 2; Therefore $p < 0.001$
TOTAL: Chi-square = 18.2 df = 2; Therefore $p < 0.001$

The incidence of designs of the three Types in the time period "pre-1927" is a significant departure from the null hypothesis but for Table 15 the probability of the departure being due to something other than chance is not great. However, in Table 16 the probability

is sufficiently great to reject the null hypothesis. For both the other time periods, and for the Total, in both Tables, we may reject the null hypothesis.

Rouse (1939:150), in his study of pottery modes of pre-historic Haiti, arrived at the conclusion that each pottery mode tended to change in a cyclical manner: "The mode occurred only in a few instances at first, then it increased in frequency until it reached a peak. Then it diminished to a few instances again, and finally it died out."

Dethlefsen and Deetz (1966) confirmed this by a study of gravestones in the New England district of the United States, when they discovered that three designs went through cycles of popularity during the eighteenth century. Deetz (1967:27) concludes: "Similar developmental sequences are followed by most aspects of man's culture; initial small beginnings, growth to maximum popularity, and, finally, small endings."

Newton (1961:30) has already suggested this for Papuan Gulf art objects: "When an object is statistically rare, this may rather suggest the historical increase or decrease of that object's popularity in an area: a process familiar enough to us by the name of 'fashion'."

Design-Types I, II and III of the Mountain-Ok houseboards exhibit the same characteristic as Rouse's pottery modes and Dethlefsen's and Deetz's gravestone designs. This is the first time that this has been demonstrated for New Guinea art objects to my knowledge.

7. DISTRIBUTION OF DESIGN-TYPES OVER AREA.

Tabulating the three design-types over the three tribal groups which attach houseboards of these designs to their family houses results in the following:

<u>DESIGN TYPE:</u>	<u>IFITAMAN:</u>	<u>ELIPTAMAN:</u>	<u>FALAMIN:</u>	<u>TOTAL:</u>
I	21	56	10	87
II	51	9	4	64
III	14	7	18	39
<u>TOTAL:</u>	86	72	32	190

TABLE 17: DISTRIBUTION OF DESIGN TYPES OVER AREA.

From this it is obvious that the most popular designs at Ifitaman are those of Type II and conversely that designs of Type II are most represented at Ifitaman (the one does not necessarily follow from the other). At Eliptaman, designs of Type I are the most popular and the converse is also true. At Falamin, designs of Type III are the most popular and the converse is also true.

8. DESIGN TYPES ON WARSHIELDS AND DECORATIVE FACADES.

I will first deal with the designs that appear on warshields of the Mountain-Ok, and finally with the designs that appear on the houseboards and decorative facades not already dealt with in the preceding sections.

As we found for the houseboard designs, a central motif may be identified, surrounded by framing elements. The only examples of framing elements not already met with on the houseboards are those set out in Figure 23. Some of these are probably influences from the Sepik art style: particularly a. and e., and probably also b. and c., as they occur on shields of the northern Mountain-Ok tribes only.

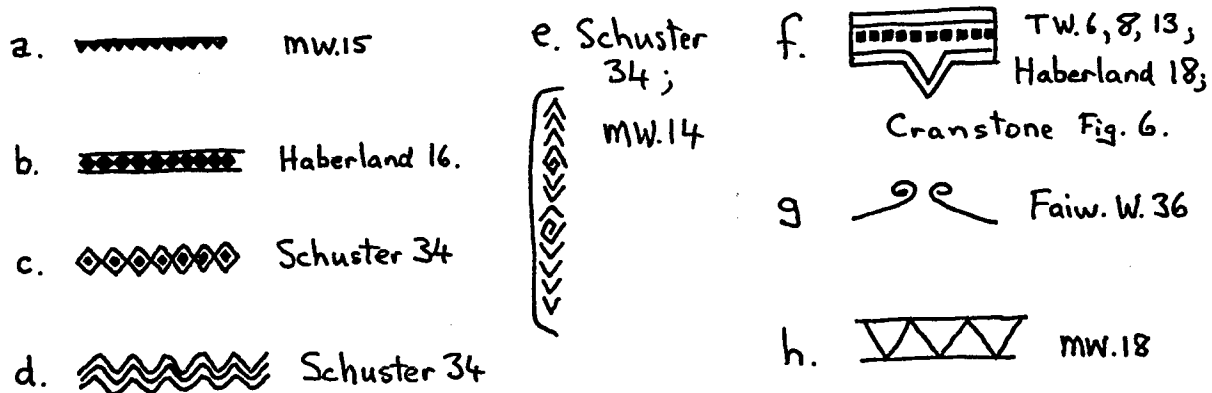


FIGURE 23: ADDITIONAL FRAMING ELEMENTS FOUND ON WARSHIELDS.

The central motifs are almost all the familiar designs met with on the houseboards. I will set out the allocation of the total of 120 shields (which includes a number of 'shields' made recently for sale to Europeans, and others published by Haberland (1965 b.), Schuster (1968), and Cranstone (1968); drawings of two boards were supplied by George Morren, and of another two boards by Professor Frederik Barth, for Mianmin and Baktaman respectively).

TYPE I DESIGNS:

Ia: Faiw.W.19.

Ib: Faiw.W.29.

Id: Faiw.W.36; Cranstone, figs. 9, 10, 11.

Ie: Faiw.W.20, 35.

Iai: TW.1; EW.3, 4, 7.

Ici: EW.1, 2; Faiw.W.23; MW.1, 2, 3.

TOTAL TYPE I DESIGNS: 18

Three shields bear central motifs which are a variation of Id. These are TW.9, OW.5 and MW.13 and vary from Id. in having spirals or hooks inside the wing-like figure, and in one case (TW.9) the "wings" are separated and arranged either side of a central lozenge.

Another shield bears a design which is a variation of Iai, having two spirals at the centre (Schuster 32).

Two others are variations of Idi, having four spirals or hooks arranged around the central lozenge within the "wings" (Cranstone, fig. 12; Morren, 2).

A fourth is a variation of Ici, having a most peculiar reversal of the wing-like forms (MW.6). This design is a stroke of creative genius and it will be interesting to see whether any more objects are made bearing this design.

TOTAL TYPE I VARIANTS: 7

TYPE II DESIGNS:

IIa: TW.3, 6, 8, 10, 11, 13; EW.6, 8; OW.2, 7; MW.4, 5, 16, 17;

Cranstone figs. 2, 3, 4, 6, 7; Haberland 17, 18; Schuster

34. The latter is unusual in having an elementary face

marked inside the central lozenge: two eyes and a mouth.

Remarkably, this also seems to occur at the top of the

houseboard E.76, where the head appears to be that of a

cat-like animal with pointed ears. This face is almost

certainly an indication of Sepik influence, as faces on

shields are common on the Sepik and its southern tributaries.

IIb: Cranstone, Fig. 8.

IIai: MW.11, 12, 19, 20, 21.

IIbi: Faiw.W.44; MW.7, 8, 18; Haberland 16; (MW.8 differs in having only two spirals around the central lozenge instead of the usual four).

IIci: FW.1; Faiw.W.14, 31; Cranstone Fig. 14; and the rather freely-rendered designs of Faiw.W.21, 22, 30.

IIidi: TW.4, 12; EW.5, 9, 10.

TOTAL TYPE II DESIGNS: 45

A variant of IIbi is Cranstone fig. 5, where the two halves of the central motif are separated by a central lozenge, and the central spirals are situated at slightly different positions to those of Faiw.W.44 and Haberland 16. As has already been pointed out, this design is almost identical with that on Eliptaman houseboards E.75, 76, 77. Related to this variant are other Mianmin shields OW.1; Schuster 35; Morren 1; where the "limbs" are represented by the long vertical sides of

rectangular forms. As already noted, these rectangular forms appear on the houseboard E.72.

TW.2, 5, represent another variant of IIbi, where only two spirals occur around the central lozenge, and the whole design is broken up into three zones by horizontal parallel lines just above, and just below, the central lozenge.

Related to IIb are a series of Faiwol designs. These incorporate parallel "limbs" arranged vertically above and below a central lozenge or circle, with spirals at their extremities. Some of these have chevrons or loops set in each side panel (Faiw.W.2, 5); or rows of short coloured strokes (Faiw.W.45); and others leave the panels blank (Faiw.W.16, 17; Barth 1). Two others add spirals at the centre (Faiw.W.28, 33) - one of these (Faiw.W.28) also has an additional set of spirals at one end and a single vertical line down the centre rather than two or more. Faiw.W.7, 11, 18, 43, divide the shield into two zones with horizontal parallel lines across the centre instead of having a central rhomb or circle, and in three cases (Faiw.W.7, 11, 18) the vertical "limbs" have been distorted to rhomboid and elliptic shapes.

Gross distortions of IIb and IIbi occur on Faiw.W.38 and Cranstone figs. 13, 15, and Plate 8b. It may be possible to regard Faiw.W.34, 39, and TW.7 as related to type IIc.

TOTAL TYPE II VARIANTS: 25

TYPE III DESIGNS:

IIIb: Faiw.W.8, 9, 12.

IIIbi: Faiw.W.1, 3, 4, 6, 10, 15, 26; MW.9, 10; Barth 2.

TOTAL TYPE III DESIGNS: 13

Perhaps related to these designs are the large zig-zag motifs, terminating in spirals (Faiw.W.24, 25, 27), and possibly the three-tiered rhombs of Faiw.W.32.

TOTAL TYPE III VARIANTS: 4

OTHER DESIGNS:

There remain eight designs unclassified. Four of these (Faiw.W.37, 40, 41, 42) are identical and are unique to the Wopkeimin (three of them occur among the western Wopkeimin of the Kawol valley).

Two designs are indecipherable: Faiw.W.13, due to a poor photograph, and OW.6, due to an ineptly executed design.

Two others are well executed: MW.15 incorporates elements already familiar to us (except for the saw-toothed framing element top and bottom, testimony to Sepik influence), but combined in a unique manner; MW.14 utilises a vertically-aligned string of crude interlocking spirals that may be found as a more skilled rendition on shields of the April, Leonhard-Schultze, and May Rivers (see Schuster 1968, Plates 38, 45, 46, 48; Haberland 1965a, Abb. 1 a - d; Abb. 4 a, d; 1965b. Abb. 11, 12, 13, 14). This shield also utilises short series of chevrons, also a characteristic element of some April and May River shields (Haberland

1965a, Abb. 1 a - d; 1965b. Abb. 13, 14, 15).

TOTAL OTHER DESIGNS: 8

GRAND TOTAL ALL DESIGNS: 120

Decorative facades may consist of a central houseboard (amitung) with several narrower boards fastened on either side, or may consist of the narrower boards only, arranged either side of the doorway. In the case of the spirit-house at Bultemabip, there is a panel of carved and painted boards on the back wall as well as the houseboard and narrow side boards on the front wall (Faiw. 14, 14a).

Four houseboards already covered by the houseboards analysis have additional narrow carved and painted boards either side: E.59, E.73, T.3a and F.29. The first is very poorly executed and the last one was done by a Fegolmin man and is obviously after the Fegolmin style. All of them were said to be copies of the Fegolmin custom. The Kialikmin told us that some generations ago they had a facade on the men's house in their village of Abaldabip (c. 1907-1928), and that this was a copy of the Tifalmin facade.

Five houseboards, without the additional boards on either side, have not yet been dealt with. These are Faiw.2, 3, 4a (a broken remnant used to block a doorway), and 5. Tif.2 seems to be a remnant of a spirit-house facade used to decorate a family-house after the Ulapmin-Telefolmin-Falamin manner.

Five houses have the narrow carved and painted boards, but no

houseboard. These are Faiw. 10, 11, 13, 15 and the Oksapmin facade 0.2. Barth reports (personal communication, 1968): "There are no houseboards here ((at Baktaman, east of Seltaman)). One of the Seltaman yolam has a series of eleven narrow ones, sort of in the Tifalmin style; this is a recent innovation from Bolobip." The Kawokabip facade (Faiw. 15) is an emulation of the Bultemabip men's house facade, but it was not suggested that the Oksapmin facade was a borrowing from the headwaters of the Fly, although it could be. The Oksapmin maintain close contacts with the Bimin and share many aspects of ritual in common with them. As Healey noted, there appears to be a considerable degree of word-borrowing between the two groups. If it is found that facades are a feature of Bimin culture, then the hypothesis that the Oksapmin borrowed the idea from the Faiwolmin via the Bimin has some support.

Finally, there are ten decorative facades with between one and thirteen narrow carved and painted boards either side of the central houseboard, all but two of which are attached to spirit-houses (Faiw. 1, 4, 6, 7, 8, 9, 14; Tif. 1). One is attached to a kawelam (men's house: Faiw. 12) and the other is a museum specimen lacking documentation (0.1).

It would appear, then, that the most trouble is taken with decorative boards for spirit-houses rather than for men's houses, and that the facade as a culture trait belongs to the Angkeiakmin, Fegolmin and East Wopkeimin. It is not known whether the Tifalmin facade is indigenous or whether the idea was borrowed from the Wopkeimin. I am

inclined to the latter view (despite the reference to a facade at Tifalmin during the period 1907-28) on the analogy of the movement of the trait north, east and west from the headwaters of the Fly in more recent times.

For the discussion of design-types, I will deal only in passing with the narrow carved and painted boards placed each side of the central houseboards on the Faiwolmin, Wopkeimin and Tifalmin houses. There are, then, a total of sixteen houseboards for consideration; Tif.1, 2; Faiw.1-9, 12, 14 (including Faiw.4a and the central board of the rear wall of the spirit-house at Bultemabip (Faiw.14)), and the museum specimen 0.1.

The design on the houseboard of Faiw.12 is poorly executed and unclassifiable. The houseboard and the centre board of the rear wall of the Bultemabip spirit-house (Faiw.14, 14a) bear designs in one case identical with, and in the other closely related to, the design on the houseboards of Tif. 1 and 2. These are of Type IIci. The design on the houseboard of 0.1 seems also to be related to these designs.

The Angkeiakmin and Fegolmin houseboards bear two different designs: Faiw.1, 2, and 4a bear designs of Type IIIb - "stacked" sets of counterposed chevrons. The remainder, Faiw. 3, 4, 5, 6, 7, 8, and 9, bear a design interpreted (in the case of Faiw.5) as representing a necklace of coix seeds. Except in the case of Faiw. 9, there are pairs of spirals added above the coix motif representing (in the case of Faiw. 6) a man's eyes. The coix motif is peculiar to the peoples of the headwaters of the Fly River and it occurs so frequently - in seven cases out of ten

for Angkeiakmin and Fegolmin houseboards - that we must regard it as another design type, Type IV, and as characteristic of that area.

All of the above motifs may be found on the narrow carved and painted boards - see especially Faiw. 6a where all three may be found on the one facade.

The coix motif appears on only one shield, as noted above:

Faiw.W.45. I saw this shield on display in Sydney in 1966 and it is obviously of recent manufacture as it lacks even the holes for the cane handle. However, on this shield the coix motif is secondary to the main motif, so we must regard the motif as peculiar to houseboards and the narrower boards of decorative house facades. It occurs also on the four narrow side boards of the facade at Falamin (F.29).

9. DISTRIBUTION OF DESIGN SUB-TYPES OVER AREA AND TIME.

For the purpose of this discussion I have prepared Maps 1 - 12 (Appendix B). The first map shows the geography of the region; the second defines the areas I am going to use as units; Maps 3 to 11 give the distributions of the various design sub-types over area; and Map 12 shows the distribution of designs for the "shields" made recently for sale to aliens.

The designs are those found on houseboards, including the houseboards of decorative facades, and shields. The areas are tribes, or neighbourhoods consisting of parishes or groupings of parishes, whose members are settled in contiguous villages and who interact more frequently among themselves than with members of other parishes.

The easternmost Eliptaman villages are all Kubrenmin and Tamanmin; the villages of these two parishes at Ifitaman are also contiguous. The central groupings of Elip villages are Kialikmin and Atemkiakmin - again parishes whose villages are (except for the Atemkiakmin village of Emolavip) contiguous at Ifitaman. The western grouping of villages are Misinmin and Tamanmin.

The eastern Ifitaman villages are all Kialikmin and Atemkiakmin; the southern Ifitaman villages are Kubrenmin, Tamanmin and Bogalmin, and the western grouping is Misinmin, with one distant Atemkiakmin village (Emolavip), and the Sepkialikmin on the Sepik close to the Sepik-Elip junction.

The Falamin divide readily into the northern Kialikmin parish, the southern Famokmin parish and the western Kubrenmin and Oksimin parishes. The Fegolmin are divided into their two parishes: the Ningkilinmin in the east and the Atemkiakmin in the west; and the Wopkeimin are divided into two areas: the east Wopkeimin consisting of all the settlements as far west as Bultemabip, and the west Wopkeimin consisting of the remainder. The Angkeiakmin, Tifalmin and Ulapmin remain undivided, as are the Mianmin, Dulanmin, Oksapmin, Bimin and Baktaman areas which are not shown on the maps.

Because this analysis covers a wider area than the houseboards analysis, a degree of latitude was allowed in the classification of some designs on houseboards previously included in "Other", for the number of minor variations and distortions is bound to increase as the basis of the investigation is widened.

MAP 3 shows the distribution of designs Ia, Ib, Ic, Id, Ie.

Ia is found among the west Falamin (F.28, 29), the south Ifitaman (T.55), and the east Fegolmin (Faiw.W.19). It is worth noting that F.29 was carved by a Fegolmin visitor (note the Fegolmin coix and spiral motifs as found on Faiw.6a, 8). Houseboard T.43 (design Ie) was said to have been made at Fegolmin and carried across the range to Oksivip (south Ifitaman) - if it is true, a remarkable physical feat, and if it is not true, a remarkable lie! Faiw.W.20, 35 are also of design Ie and are east Fegolmin and east Wopkeimin respectively.

F.8 (south Falamin), F.19 (north Falamin), and Faiw.W.29 (west Fegolmin) are all of design Ib. Cranstone figs. 9, 10 and 11 are Ulapmin shields of design Id, as is the east Wopkeimin shield Faiw.W.36. The three Ulapmin shields at first glance appear to be of design Idi, but close scrutiny reveals that the spirals at top and bottom are attached to the framing elements of the design, not to the extremities of the "wings".

Finally, design Ic is represented by F.1 at south Falamin, and F.13, 17, 18, 20 in the west Falamin villages. The same design appears on T.88 of south Ifitaman and E.10 at east Eliptaman. In the latter case the effect of the pair of spirals at top and bottom, attached to the framing elements, is to make the design appear very like design Ici. The Mianmin shield OW.5 is unusual in including spirals inside the "wings", as is true for TW.9, but both may be considered variants of design Id.

Except for these two shields and the Eliptaman houseboard E.10, then, there are quite definite links in the designs between the Telefolmin -

Falamin - Ulapmin and the Fegolmin - Wopkeimin and this correlates with the north-south links in trade, friendly alliance, mutual participation in certain initiation rituals, and oral traditions.

There appears to be some progression of the sub-types of Design I through time: designs Ia, Ib, and Ic are all 40-50 years old at least; objects of design Id are perhaps younger at 30 - 40 years old; and the most recent design is Ie, which coincides with the popularity of Iei at Eliptaman in the 1950's. More details of the dates of these various objects are needed to confirm this tentative conclusion.

MAP 4: shows the distribution of designs Iai, Idi and Iei. These designs are well-represented throughout the Ifitaman and Eliptaman areas on both houseboards and shields, but occur only once on a Falamin houseboard (F.21) and, with additional hooks or spirals around the central lozenge, on a Mianmin shield (Morren 2) and a Tifalmin shield (Cranstone fig. 12).

The oldest documented objects are the Eliptaman shield EW.4 and the Ifitaman shield TW.1, which were made at the turn of the century. They bear design Iai as do two Ifitaman houseboards (T.56, 69) and four Eliptaman houseboards (E.19, 22, 32, 44), all of which were made during the period 1900-13. A design Iei houseboard (E.70) at Eliptaman and Iai (F.21) at Falamin survive from 1914-26, and from the period 1927-36 there are four Eliptaman houseboards (E.51, 61, 68, 69) and one Ifitaman houseboard (T.7) of design Iai. For 1937-43 there are six Ifitaman boards (T.9-13, 48) and one Eliptaman warshield (EW.7) of design Iai, and two Ifitaman houseboards (T.8, 14) of design Idi. There are two

Eliptaman houseboards (E.20, 21) and two Ifitaman boards (T.16, 80) of design Iai, and two Ifitaman boards (T.15, 44) of design Idi, all made during 1944-53. One Eliptaman houseboard of type Iai survives from the period 1954-61. The Eliptaman shield EW.3 is undated, but appears to be old, and Schuster 32, also undated, is unusual in having two spirals at the centre, inside the "wings".

It would seem that designs Iai, Idi and Iei have not attained a high degree of popularity anywhere among the Mountain-Ok in the past 100 years. However, design Ici achieved considerable popularity in the eastern and central sections of Eliptaman in the period 1944-53.

MAP 5: In 1967, design Ici represented almost 70% of the designs on houseboards in the eastern and central sections of the Elip valley. This design is represented also on two broken warshields from the eastern end of the valley. Only four examples of this design occur outside the Elip valley: three houseboards at Ifitaman (T.36, 51, 76) and a shield at east Fegolmin (Faiw.W.23), probably all made since 1944 and quite likely conscious copies of the Eliptaman design.

Only two boards (E.2, 3) were supposed to have been made before the period 1944-53 when the majority were made; it would be desirable to check the information given on these two boards for it could be incorrect and they may not be as old as first indicated. It is interesting that both were made with steel tools, and there were, no doubt, a few steel tools around prior to 1944 when they became readily available, but again this could mean that in fact the boards were made after 1944. It would also be desirable to obtain detailed history of Faiw.W.23.

MAP 6 shows the distribution of designs IIa and IIb. These designs are widespread in the northern, eastern and central Mountain-Ok tribes. The Telefolmin speak of IIa as a Dulanmin (Om River) design representing the crocodile, a creature found only rarely in the Sepik west of the Ifitaman/Eliptaman area, but more frequently on the Om River.

These designs were found on only seven houseboards, but on 19 shields, and are by far the most numerous designs for warshields in the Telefolmin-Falamin-Ulapmin area. It is a very old design, for the Ifitaman shield TW.3, made towards the end of the 19th century, is a copy of a captured Dulanmin shield. It may be noticed that the design has several levels of complexity ranging from the extreme simplicity of OW.2 to the more complex design represented by EW.8; TW.6, 8; Cranstone fig. 2; and Haberland 18, all but the last being made in the 1930's and 1940's.

The extremities of the limb-like forms seem to have undergone a change from an angular foot-like projection in IIa to a definite spiral in IIb. (T.91; Cranstone fig. 3). This design then acquired spirals around the central lozenge and design IIbi is formed (Fig. 12). Design IIai is probably IIbi without the spirals at the extremities rather than IIa modified by adding spirals at the centre, but this is a subtlety that could only be investigated by close enquiry into the thinking processes of the artists who make these designs.

The designs on the three Upper May (Mianmin) shields, Haberland 16, 17, 18, are possibly of Telefolmin origin. Haberland 18 is particularly like the IIb designs of the Telefolmin, but with shorter

"limbs"; Haberland 16 is identical with design IIbi of the Ifitaman area and it is interesting that this design also got as far south as the village of Loubip (east Fegolmin) where it is represented by Faiw.W.44.

The Apiap shield (Schuster 34), from the area between the Leonhard-Schultze and the Frieda (Nina), seems to be closely related to the Dulanmin "crocodile" design. I cannot find a map which shows the village of Apiap, but this could be a settlement of Tuwari speakers "... known as Akiapmin by the Telefol people a group of at least 122 people on the Upper Leonhard-Schultze and on the Karu River, a tributary of the Om." (Dye et al 1968:154). This makes them the north-western neighbours of the Dulanmin.

OW.7 is a shield collected among the Bimin by Patrol Officer A. Marks on behalf of the Australian Museum. The Bimin have close contact with the Oksapmin, through whom they obtain the black Dulanmin stone adze-blade (TL:mok). It is feasible that the Bimin deal direct with the Dulanmin on occasions, providing the opportunity to become familiar with the design on their shields and to copy it on return to their own area. It might also be copies from a shield purchased from the Dulanmin, although I have no record of shields being sold by one group to another. I was told, however, that the Oksapmin used to have a large number of shields but that with the extension of administration pressure against tribal warfare, the Oksapmin passed their shields on to the Bimin who had had little contact with the alien administration.

MAP 7 shows that designs IIai and IIbi have the highest concentration

among the northern Ifitaman villages, where it would seem that this design had its origin in a houseboard made by the Kialikmin men Domolokim and Okmansep in 1951 (T.22) as a logical extension of the more complex versions of IIa. This design is achieving its peak of popularity at the present time and has spread to Falamin, where it is represented by three houseboards (F.22, 25, 27) and Eliptaman, where it is represented by one board (E.1). It also occurs on one Upper May River (i.e. Mianmin) shield (Haberland 16) and one Fegolmin shield (Faiw.W.44) as mentioned previously.

Almost identical with these designs are the ones on the west Eliptaman houseboards E.63, 75-7. These boards - particularly E.75-7 - are obviously a copy of the design on the Mianmin shield, Cranstone fig. 5, captured by the Telefolmin at least twenty years ago, before the presence of the Administration curbed Telefolmin forays into enemy territory. Three characteristics of Cranstone fig. 5 and E.75-7 differentiate these from the normal Telefolmin IIbi design, and E.63 shares two of these characteristics: a) the central motif is divided into two separate forms, one to the left and the other to the right of a central lozenge (this separation is also found on the Mianmin shield, Morren 2); b) the spirals are not attached to the left and right-hand points of the central lozenge, but elsewhere on the lozenge, at the junction of the lozenge and "limbs", or part the way along the "limbs"; c) for all the houseboards, but not for the shield, there is a lozenge attached to each side of the central lozenge, like ears. The "ears" appear on the Telefolmin shield, Cranstone fig. 2, and the houseboard T.20 and might therefore be a Telefolmin design element rather than Mianmin.

Another example of a Mianmin design at Eliptaman is E.72, which is clearly derived from the design on Mianmin shields OW.1, Morren 1, and Schuster 35. This design is widespread among the Mianmin, for OW.1 is from the Ulapmin parish of the west Mianmin; Morren 1 is from the Boblipmin parish just downstream on the Sepik from the Sepik-Fak junction; and Schuster 35 is from Usage, about 12 miles north of Mt. Stolle.

Two Tifalmin shields (Cranstone fig. 13, 15) and one Wopkeimin shield (Faiw.W.38) bear a design which would seem to be related to Iibi, as noted previously, the main difference being the addition of lines joining the top two spirals or hooks and one joining the bottom two, thus creating a figure of three segments with spirals at top, middle, and bottom. The 'Bimin' shield (Cranstone Plate 8b) has a somewhat similar appearance, although this could even be regarded as related to the Dulanmin "crocodile". This shield, like OW.7, was collected by Marks among the Bimin but my Bimin informant said that it was not of Bimin manufacture. He suggested that it might have been made by the Kuskusmin, a group east of the Bimin close to the Strickland gorge. The technique of marking the design on the board seems to have involved the burning of the surface of the board prior to incising the design and the usual Mountain-Ok technique of leaving the thin raised lines to form the pattern has been reversed in parts of this shield: the "limbs" and spirals are cut into the board and filled with paint. As I remember, the relief is almost non-existent, which is consistent with the rapid rate of deterioration of a charred surface. This technique was also used for the Oksapmin facade 0.2 and the

"shield" OW.6, and the undocumented houseboard and facade 0.1. The correspondence of technique and crude designs on 0.1 and 0.2 places the former amongst the Bimin-Oksapmin groups with a fair degree of assurance.

Finally, there are the designs with parallel vertical "limbs" and large spirals at their extremities (TW.2, 5; Faiw.W.2, 5, 16, 17, 28, 33, 45; Barth W.1) and what appear to be variations of this design (Faiw.W.7, 11, 18, 43). These are confined to shields of the two Fegolmin parishes, the Angkeiakmin and Baktaman areas and the south Ifitaman area. Most of these are not dated, so a time analysis is not possible. However, some appear quite old and Faiw.W.2, at least is very recent, having been made for the purpose of an attack on the Fegolmin in 1959 that was thwarted by Administration intervention.

MAP 8: gives the distribution of design IICI. This design is not only widespread geographically, but also in time. Three Telefolmin boards (T.53, 61; E.73) and at least one west Fegolmin shield (Faiw.W.30) were made at the beginning of this century. I have no dates for the Fegolmin shields Faiw.W.14, 21, 22, 31, but they could be all quite old. One houseboard of this design was made in 1957 (E.33) and another in 1967 (T.70).

I have classified the west Fegolmin shield Faiw.W.34, the Wopkeimin shield Faiw.W.39 and the Eliptaman houseboard E.62 in this type of design, although they do not have central spirals and the spirals that are present are not indisputably at the extremities of the "limbs" of the design. The shields are not dated, but the houseboard was made

between 1944 and 1948. The Tifalmin shield, Cranstone fig. 14, and the Falamin shield, FW.1, are also not dated.

This design is a feature of the Tifalmin board Tif.2, (where it has no spirals at the extremities); the houseboard and side boards of the Tifalmin spirit-house facade (Tif.1, 1a); the side board to the left of the houseboard on the east Fegolmin spirit-house (Faiw.6a) and either side of the east Wopkeimin houseboard Faiw.12; the centre-board of the rear wall of the Bultemabip (east Wopkeimin) spirit-house (Faiw.14); and, altered to appear strikingly anthropomorphic, with the coix motif, on the houseboard at the front of the Bultemabip spirit-house.

Other correspondences are the large zig-zag motif on the narrow boards 5th to the left and 8th and 9th to the right of the houseboard of the Tifalmin spirit-house (Tif.1, 1a) which appear also on a Wopkeimin facade (Faiw.12: 2nd to the left and 3rd to the right). The plain vertically-stacked rhombs, usually painted alternately red and white, are also common on the Tifalmin and east Wopkeimin facades.

There is no doubt that the artistic links between the Tifalmin and the Sopkeimin and Fegolmin are strong. This correlates with the close social contacts maintained by intermarriage, trade partnerships, and attendance at certain initiation rituals held at the ritual centres of these three tribes.

MAP 9 shows the distribution of design IIdi. This design is almost exclusively Ifitaman, with only one houseboard (F.12) made at

Falamin and one shield (EW.10) apparently made at Eliptaman. The two other Eliptaman shields of this design were made at Ifitaman at least 100 years ago and brought to Eliptaman during the conquest of the Iligimin.

Of the remaining 13 houseboards and two shields, all but two objects were made before, or just after, the turn of the century. One of the exceptions (T.39) was made between 1944-53 and the shield collected by Campbell (TW.12) is not dated, but of course might well be as old as the other Ifitaman shields.

It is almost certain that this design was the most popular one in the Ifitaman area at the end of the nineteenth century, as it is represented on nearly 50% of all the houseboards surviving in that area from the period prior to 1914.

MAP 10 does not attempt to differentiate between the sub-types IIIa, IIIb, IIIai and IIIbi. However, it does show the Type III variants separately. These include the four Fegolmin shields Faiw.W.24, 25, 27 and 32; five Ulapmin houseboards (U.1, 2, 3, 5, 7); and three south Ifitaman houseboards (T.62, 64, 79). Most of these objects appear to be quite old and T.79 and 62 were dated pre-1900 and 1900-13 respectively.

The main Type III designs are widespread among the Telefolmin, Falamin and Ulapmin, on three houseboards and eight shields of the Angkeiakmin, two shields of the East Fegolmin and on a Baktaman shield. These Fegolmin and Angkeiakmin shields and houseboards are peculiar in

having large spirals in pairs at the top and bottom, whereas on the houseboards of the Telefolmin, Falamin and Ulapmin they occur at the top only, or are incorporated into the body of the design itself.

"Stacking" of the opposed sets of chevrons is not characteristic of any one area. However, the pronounced curvilinearity of the Falamin designs - especially F.24, 26, 34, 35, 36 and 38 - is peculiar to that area and constitutes a local style with respect to this design-type.

MAP 11: this shows the quite localised distribution of five designs represented by only a few boards or shields. The east Wopkeimin shield Faiw.W.37 and the west Wopkeimin shields Faiw.W.40-42 are alike. My informants in the Kawol valley claimed that this design was the only one they had for shields in that area and had been current since the time of their fathers.

The design on the four Falamin houseboards (F.2, 4, 6, 7) consists of pairs of spirals arranged vertically along a central line relieved only by one or two lozenges. This could be related to the design on the Ulapmin houseboards U.1, 3, or the west Fegolmin shield Faiw.W.28.

The five Ifitaman houseboards T.67, 93-6, are all characterised by stacked spirals, division of the design into several zones by horizontal bands, and in three cases by a most characteristic 'W' motif with spirals attached to either side (T.94-6). T.96 was made in 1937-43 and the others only several years ago.

Two Ifitaman houseboards (T.38, 74) and one Ifitaman shield share a motif consisting of two vertically-opposed V-shaped figures with

inward-turning spirals at the extremities. The shield looks quite old (and was unfortunately destroyed in a fire in 1966), but the houseboards are much more recent.

Finally, there is the coix motif design-type IV. This occurs only south of the central range (except for the Falamin facade F.29 carved by a Fegolmin visitor), and may be found on the Angkeiakmin houseboards Faiw.3 - 9 (including many of their side boards) and as a secondary motif on the houseboard of the Bultemabip spirit-house (Faiw.14a) and a recent shield (Faiw.W.45). Some of these boards are evidently quite old, particularly Faiw.5 which was judged by Champion to be quite old when he saw it in 1927 (Champion 1966: 66 photo; 77).

MAP 12 shows the distribution of designs on "shields" made over the past few years for sale to aliens. Most were made at Ifitaman as it is nearest the point of sale - few alien visitors venture far from the Sub-District Office.

The Tamanmin-Bogalmin of south Ifitaman show a decided preference for designs of Type IIbi (MW.11, 12, 19-21) although one other is of Type IIa (MW.5) and another of Type IIai (MW.7). Three shields of type Ici were made by Kialikmin artists of east Ifitaman (MW.1-3) and there is the interesting variant of this design (MW.6). A design whose top half is of type IIa and whose bottom half is of type IIai, was also made here (MW.4), and another is a variant of IIbi (MW.8).

The two Falamin "shields" (MW.9, 10) are of type III design and the three unusual Eliptaman "Shields" (MW.13-15) have already been

discussed. Two other Elip "shields" (MW.16, 17) are of type IIa (the Dulanmin "crocodile") and another shield (MW.18 - type IIai) has no data but is probably of Ifitaman origin as I photographed it at the Sub-District Office.

10. CONCLUSION.

It would appear that there is a consistency in the elements of design throughout the Mountain-Ok area. Hooks, spirals and meanders are combined with zig-zags, chevrons, rhombs, triangles and straight and curved lines to form a readily-recognisable set of designs. Conformity operates to prevent artists from being innovators. The lack of specialists and the low rate of production of even those few men who have developed any competence, reduces the opportunity for experimentation. If a man made dozens of these objects, he might tire of traditional designs and be tempted to experiment. But when most artists execute only one or two designs, they are almost certain to follow the patterns they are familiar with and to accept the guidance of their similarly-conservative critics. It is therefore likely that there has been little change in the style over hundreds of years, and that new ideas from outside the Mountain-Ok area take a long time to gain ground.

I have demonstrated that it is possible to isolate a central motif for the designs on houseboards and warshields of the Mountain-Ok. This motif may be classified as belonging to one of four major design types. Each of these design-types is statistically predominant in a particular area - Type I at Eliptaman; Type II at Ifitaman; Type III at Falamin;

and Type IV among the Angkeiakmin and Fegolmin.

Types I - III on houseboards of the Telefolmin and Falamin were shown to exhibit a cyclical distribution over time and thus confirm the discoveries of Rouse (1939) and Dethlefsen and Deetz (1966). It is therefore most likely that the occurrence of the above design-types is constantly changing with respect to area and what is popular in one area may, after many decades, come to be popular in another. Linked with this is the drift, through minor variations, from one design to another. It is therefore possible that although the Types may recur over the generations and centuries, the designs will not be exactly the same.

The detailed study of design-types has also shown that there are definite artistic links between tribes within the Mountain-Ok and that whereas some designs are characteristic of one tribe or neighbourhood for a certain period of time only (e.g. Ici of central and east Eliptaman since 1944; IIbi of east and south Ifitaman in the 1960's; IIdi of the south Ifitaman at the turn of the century; IV of the Fegolmin and Angkeiakmin over the past few decades), others are widespread both geographically and through time (IIa, IIci and III).

Some designs - particularly IIai/IIbi - may be seen to be spreading from a point of origin with later and later appearances at points further and further distant from the origin. Unfortunately there are too few objects in this analysis to test the interesting hypothesis about the Doppler effect of diffusion suggested by Deetz and Dethlefsen, but two of their assumptions may be regarded as tentatively established

for houseboard designs IIai/IIbi. The first assumption is that "... any type used in seriation originated at a single locus and subsequently spread outward from that point..... The second assumption is that sites further removed from the locus of origin of any type will show the occurrence of that type, at a given frequency, later in time." (1965:196-7). The following Table establishes that these assumptions are valid for Mountain-Ok houseboard and warshield designs.

	<u>1951</u>	<u>1954</u>	<u>1960</u>	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>TOTAL:</u>
East Ifitaman	1	2	2	-	1	3	7	1	17
South Ifitaman	-	-	2	-	-	2	5	4	13
Eliptaman	-	-	-	1	-	-	-	-	1
Falamin	-	-	-	-	-	-	-	3	3

TABLE 18: OCCURRENCE OF DESIGNS IIai/IIbi OVER AREA AND TIME.

No dates are available for the Upper May (Mianmin) shield Haberland 16, nor the Fegolmin shield Faiw.W.44, but both look recent and may have been carved in the early sixties - about the same time, say, as the Eliptaman houseboard.

The single-point-of-origin hypothesis is not challenged by the data presented here, but tentatively affirmed.

CHAPTER VIII.

VIII. RELATIONSHIP OF MOUNTAIN-OK ART TO NEIGHBOURING ART STYLES.

1. Mountain-Ok Style Province.
2. Defining Style.
3. Area and Objects to be Compared.
4. Warshields: Intrinsic Characteristic: Form.
5. Warshields: Genetic Characteristic: Technique.
6. Warshields: Genetic Characteristic: Materials and Tools.
7. Warshields: Functional Characteristic: Secular.
8. Warshields: Functional Characteristic: Non-Secular.
9. Other Carved Boards: pahui shields of the Marind-anim.
10. Other Carved Boards: canoe-gope of the Fly River.
11. Other Carved Boards: ancestral boards of the Papuan Gulf.
12. Other Carved Boards: sacred boards of the Highlands.
13. Painted Sago Spathe: Men's House Decorations of the Sepik Hills.
14. Painted Sago Spathe: Mourning Signs of the Marind-anim.
15. Intrinsic Characteristic: Iconography.
16. Affective Characteristic.
17. Genetic Characteristic: The Artist.
18. Conclusions.

"A style may be thought of as a class of related solutions to a problem" (Ackerman 1962:236).

1. MOUNTAIN-OK STYLE PROVINCE:

The previous chapter has established that there is a high degree of consistency within the art of the Mountain-Ok peoples as expressed by the carved and painted two-dimensional surfaces of houseboards and warshields. Buhler (1960:97) has defined a 'style-province' as "... an area clearly delimited in the geographical sense that has its own typical artistic style." The consistency of the art of the Mountain-Ok provides the sense of the word "typical" and we may therefore tentatively talk about the 'Mountain-Ok style province'. The test of this area being a 'style-province' is whether its style is peculiar to itself.

A comparison between the art of the Mountain-Ok and that of surrounding regions will serve the purpose of establishing the uniqueness of the Mountain-Ok art style, but will also establish the degree to which style characteristics are shared. This is useful for an understanding of the history of the art of central New Guinea and, although there is as yet insufficient data to come to firm conclusions, a number of hypotheses may be proposed and, hopefully, tested at some future date.

2. DEFINING STYLE:

Some students of art-history stress the exoteric aspects of art in attempting to arrive at a useful definition of art style. Buhler defines style as: "... the purely formal qualities of a work, for its style is in fact the product of a certain unique and immutable selection and combination by the artist of elements which can also occur, in a

different composition, in other styles." (1960:97).

Ackerman makes the following observations: "We distinguish one style from another by noting the differences in the use of conventions, materials and techniques." (1962:236). He says (p.229) that "..... conventions of form and of symbolism yield the richest harvest of traits by which to distinguish style. I mean by conventions an accepted vocabulary of elements and a syntax by which these elements are composed into a (work of art)."

Schapiro stresses the more esoteric aspects of art. For him, style is ".... a meaningful expression communicating and fixing certain values of religious, social, and moral life through the emotional suggestiveness of forms." (1953:287). "The description of a style refers to three aspects of art: form elements or motives, form relationships, and qualities - including an over-all quality we may call 'expression'." (p.289). Although he admits that technique, subject matter, and materials may sometimes be included in definitions because they are characteristic of a certain art style, he says that they are frequently not discriminative, and this may be true even of the formal elements or motives. Further, he insists that the structure of the formal elements - the "syntax or compositional pattern" - may not be analyzable mathematically and ".... in practice one has been unable to do without the vague language of qualities in describing styles." (p.289).

Whilst this may be true for the art of Western society, for the art I am discussing, it would be pretentious. Admittedly, Newton (1961) has used such terms and phrases as "austere", "gay", "inventive", "vigor"

(p.37); "relaxed", "eerie vitality" (p.41); "stiffly unimaginative", "clumsy impressiveness", "rigidity" (p.45); "taut and accomplished", "curiously fresh and elegant" (p.47); "noble" (p.48); "naive" (p.50); "spontaneity and freedom", "tension" (p.60); "upward-bouncing, springy composition" (p.66); "sophisticated", "static" (p.71); but it seems to me that these characteristics are too subjective to be of any use whatever in discussing relationships between art styles. They make an art book more readable because they invite the reader to participate in an aesthetic experience, but all too often the reader is left puzzled by the suggestions he is given, simply because he has a different experiential life-history to the writer and his aesthetic reactions may be altogether of another kind, and no less valid for that.

Finally, such terms lead many readers to suppose that something is being said about the aesthetic intentions of the native artist and the reactions of his native critics. To be fair, Newton has to some extent reduced the risk of such a misunderstanding by his discussion of the emotional aspects of Papuan Gulf art (1961:32-5) and by his lengthy quotation of Williams (1940:356-7) who gives a sensitive account of what he felt to be the aesthetic response of the Elema to the Revelation of the ma-hevehe masks.

However, it is my intention to avoid comments about qualities and to rely upon the purely formal attributes or traits.

I am indebted to Dr. Donald Brooke (Department of Fine Arts, University of Sydney) for the suggestion (but he is not to be held responsible for my elaboration of his suggestion) that the characteristics

of style might be considered under four headings: genetic, intrinsic, functional and affective. Most of these, if not all, have already been suggested by the sources quoted above although, as we have seen, students of art have differed in the weight they would give to the discriminative value of various characteristics.

- a) the genetic characteristics are those arising out of the materials used and the techniques applied in creating the art-object; certain social, psychological and physical characteristics of the artist may also be of relevance - whether he belongs to a particular class of society; whether he is a specialist; whether he is in some way physically handicapped and has had to evolve a special technique for overcoming this; whether he is psychologically handicapped and thus projects the effects of this upon his art, e.g. the art of schizophrenics; whether he is an adult or a child; and so on.
- b) the intrinsic characteristics have to do with the object itself; they are the sum total of all information required to produce an exact copy of the work of art - the size, shape, colour, iconography, etc.
- c) the functional characteristics are concerned with the use and intellectual significance of the art object, including its function as a means of communication at a non-verbal level.
- d) the affective characteristics involve an understanding of the emotional response of the artist and his audience to his work.

For example, it is relevant to know whether the object provokes amusement, serious contemplation, terror, sorrow, sexual excitement, anger, etc.

3. AREAS AND OBJECTS TO BE COMPARED:

It is immediately obvious that I will be unable to discuss thoroughly all these characteristics of style for any of the art-styles with which I wish to compare Mountain-Ok art. Nor has it been possible for me to identify all these characteristics of style for Mountain-Ok art.

Despite this limitation, it is worthwhile attempting a comparison using those characteristics for which there is adequate data. Most of these will be intrinsic characteristics. I will attempt to use genetic and functional characteristics but these are not fully identified and any conclusions arrived at on the basis of such characteristics must be open to review when and if more information becomes available. The affective characteristics of style are the least-understood, but some suggestions may be made as a stimulus to further enquiry.

It will suit my purposes to deal with these characteristics in a somewhat different order to that presented above. In particular, I intend to discuss the iconography and the artist last rather than along with the other Intrinsic and Genetic characteristics of style.

The Style-provinces I will use for the purposes of comparison and the main sources are set out below. These have already been distinguished by such scholars as Schmidt (1929), Buhler (1960, 1962), Haberland (1963, 1965 a and b), Kooijman (1956, 1961) and Newton (1961), and

require no justification here.

- i) ASMAT-DIGUL area (Kooijman 1956, 1961; Gerbrands 1967 a, b).
- ii) MARIND-ANIM area (Wirz 1924-28; Kooijman 1961; van Baal 1966).
- iii) FLY RIVER-PAPUAN GULF area (Williams 1940; Haddon 1894; Newton 1961).
- iv) HIGHLANDS OF EAST N.G. (Ryan 1958; Vicedom and Tischner 1943-8; Aufenanger and Holtker 1940).
- v) MIDDLE SEPIK area (Kelm 1966 a, b; Haberland 1963, 1965a/1966a).
- vi) UPPER SEPIK area (April-Yellow Rivers) - (Kelm 1966b; Haberland 1963, 1965a, b).
- vii) UPPER SEPIK area (North-October Rivers) - (Kelm 1966b; Haberland 1963, 1966b; and my own observations 1968).
- viii) NORTH COAST area (van der Sande 1907).
- ix) TORRICELLI (LUMI) area - during 1930-37, H.D. Eve, an officer of Oil Search Ltd., made an extensive collection of artefacts during a survey of the Bewani, Torricelli and Price Alexander Mountains. This material, including seven shields from the Torricelli (Lumi) area, was presented to the Australian Museum in April, 1938. Some documentation appears in the Register.

For a systematic study of art styles, we would do well to limit the number of variables. For a start, Schmitz (1956) has insisted that two-dimensional works should be treated separately from three-dimensional works. It is true that the decorative elements of three-dimensional

works may be, in fact, two-dimensional, e.g. Asmat art, but if we have a specific problem that is universal, or almost universal, for the societies in our sample, and if that problem may be solved only within a restricted range of possibilities, then conclusions arrived at after studying the styles expressed in these solutions should have a high degree of validity.

I will therefore restrict my comparisons of art-styles initially to a consideration of warshields. I will then deal with other objects presenting the artist with essentially the same problem - that of executing a design on a flat surface. These objects will include the 'canoe-gope' of the Fly River (Newton 1961:10, 35, 41), the pahui-shield and the mourning signs (dapa, sar-ahai and awong) of the Marind-anim (van Baal 1966:617-9, etc.), the gope boards of the Papuan Gulf (Newton 1961), and the painted sago spathe used as house decoration by the Sepik Hill peoples (Buhler 1962; Schuster 1968; Kelm 1966a, b; Haberland 1966a).

I will not be including the elaborate masks of the Papuan Gulf tribes although they are related in form, function and design to the objects I have included from that area. Nor will I be including the bis poles of the Asmat. These poles are sculptured three-dimensional forms, but have large "pennants" carved in open-work which are basically two-dimensional in conception. The design elements on this "pennant" are closely related to - often identical with - those found on the shields. The bis poles are at some time shown publicly and may be left on public display or used as hearth poles in the men's house. They represent specific ancestors (Gerbrands 1967b:34-5) as do the shields.

However, they properly belong to a study of sculptured works.

4. WARSHIELDS: INTRINSIC CHARACTERISTIC: FORM:

The first problem I will deal with is that of expressing certain ideas in artistic form as a warshield. There are a limited range of possibilities in doing this. The first requirement is that the shield be effective in protecting the user against enemy missiles. An open-work board would therefore not be a practicable solution as it would permit arrows to pass through and injure the shield-bearer. Similarly the materials must be adequate - we do not find shields made of sago-spathe.

In the areas we are considering, then, the solution is initially to work a wooden plank of sufficient thickness to stop an arrow, but not so thick that it becomes impracticable to use by reason of its weight. Exceptions to this solution are the crocodile- and pig-skin shields of the Middle Sepik (Haberland 1963) and the palmwood bark shields of the Mendi (Southern Highlands) (Ryan 1958).

Considerations of weight become even more important if the shield is to be used in a highly mobile fashion. The shield must be at least 12" (c. 30 cms.) wide to be of any use, and at least high enough to protect the user between the thighs and neck, i.e. about 30" (c. 75 cms.). If it is required to protect more than one man it has to be correspondingly larger. It may be rectangular or tapered either at the top and/or bottom without impairing its effectiveness, for the human form is narrower at the top and bottom than at the middle. The range of artistic solutions

may therefore include rectangular, oval or boat-shaped boards pointed at one or both ends. It would preferably be taller than it is wide, a minimum 30" x 12" (75 cm. x 30 cm.) and a maximum 72" x 36" (180 cm. x 90 cm.), but it could be taller if it were narrower, or wider if it were shorter, than the maximum.

There are a number of means by which the shield could be carried but a device of some sort is imperative if the bearer is required to use his weapons (spear, or bow and arrows) at the same time. If the bearer uses a spear, he has one hand free to hold the shield. If he is a Bowman, the shield must be able to be slung on the shoulder. An alternative is to have a shield-bearer accompanied by a spear-man or Bowman to work as a team. Here both hands are free to use the device and to manage the shield if it has any weight. The shield must be large enough to protect both the bearer and the weapons man.

Figure 24 and Table 19 deal with these intrinsic aspects of form. Figure 24 shows the typical shape(s) of shields from each area, the form of the carrying device, and the ratio of average height to average width is indicated by comparison with the scale at the left. The average width, in centimetres, for shields in each area is given underneath each shield-type.

Table 19 gives the number of shields from each area for which information was available and the average dimensions in centimetres. The ratio of length to width is ranked, except that subdivisions of the style-provinces are kept together.

**TABLE 19: STYLE AREAS GROUPED ACCORDING TO RATIO OF HEIGHT
TO BREADTH OF WARSHIELDS.**

<u>STYLE AREA:</u>	<u>NO. OF SHIELDS:</u>	<u>DIMENSIONS:</u> (cms.)	<u>PROPORTIONS:</u> (h x b)
Middle Sepik (vic. Chambri)	11	155 x 33	4.7:1
Blackwater/Karawari	3	208 x 33	6.3:1
Middle Sepik (vic. Ambunti)	22	156 x 39	4.0:1
Leonhard-Schultze River	11	174 x 40	4.4:1
April River	10	169 x 45	3.8:1
May River	13	179 x 32	5.6:1
Yellow River	4	181 x 40	4.5:1
Torricelli Mountains (i-Yeri, Bongos)	2	148 x 65	2.3:1
Torricelli Mountains (ii-vicinity Lumi)	5	96 x 65	1.5:1
North Coast	5	123 x 54	2.3:1
North River	12	128 x 45	2.8:1
Green River	12	136 x 56	2.4:1
Upper May River	3	170 x 72	2.4:1
Mountain-Ok (B.A.L. Cranstone)	14	156 x 62	2.5:1
Mountain-Ok (B. Craig)	42	? ?	c.2.8:1
Asmat (Lorentz:Kooijman)	6	150 x 53	2.8:1
Asmat (Eilanden:Kooijman)	5	159 x 39	4.1:1
(average Lorentz-Eilanden)		154 x 47	3.3:1
Asmat (Lorentz-Eilanden:Rockefeller)	70	168 x 51	3.3:1
Tjitjak (Upper Eilanden:Kooijman)	3	158 x 41	3.9:1
Auyu (Lower Digul:Kooijman)	3	117 x 49	2.4:1
Papuan Gulf	11	84 x 32	2.6:1
Mendi (Southern Highlands) (a)	1	167 x 61	2.7:1
Mendi (Southern Highlands) (b)	12	76 x 30	2.5:1
Mendi (Southern Highlands) (c)	11	? ?	2.3:1
Hagen (Western Highlands)	?	155 x 60	2.6:1

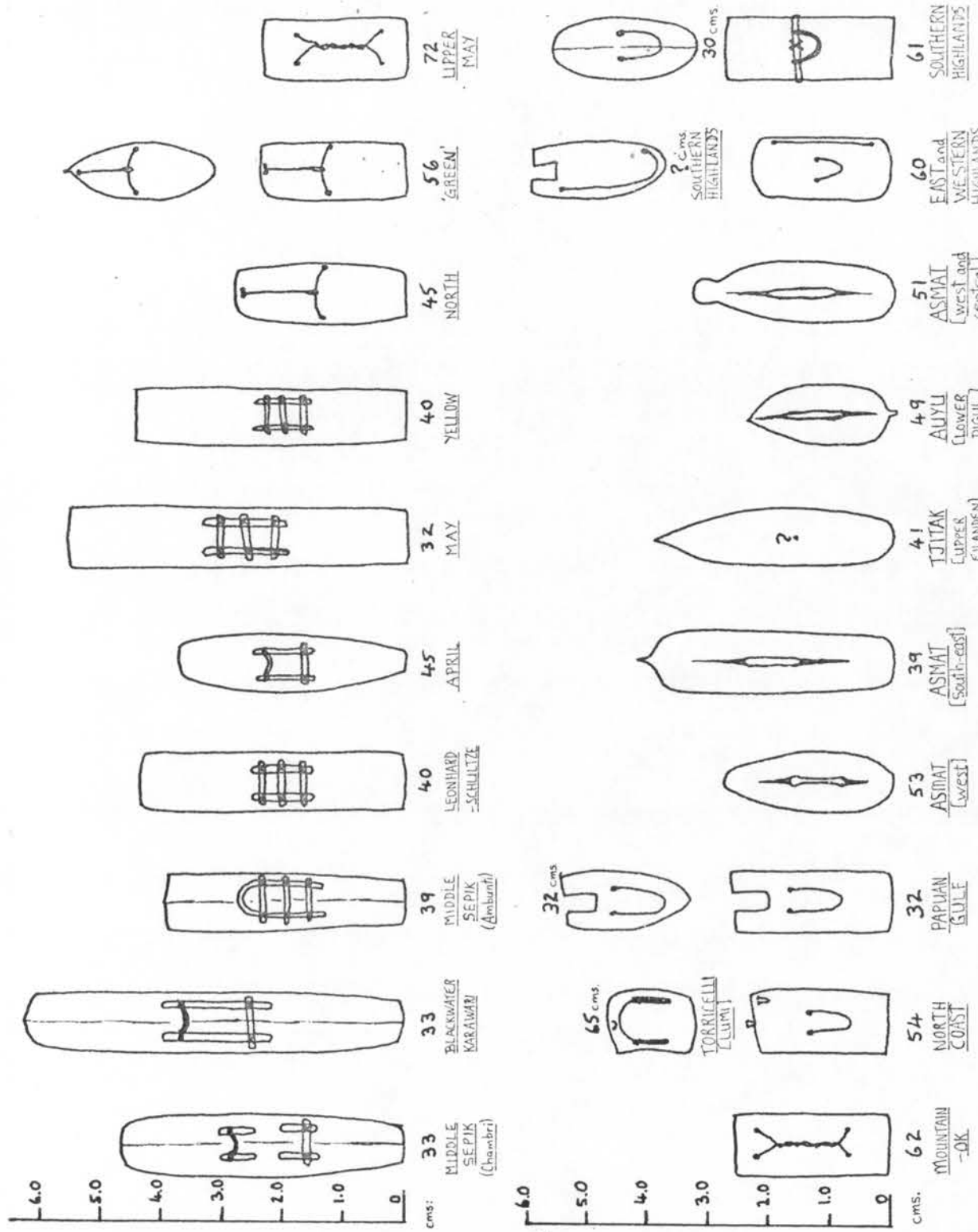


Figure 24. — Ratio of Length to Breadth of Shields [breadth held constant] with the Most Common Shapes and Carrying Device Indicated.

There appear to be three broad regions distinguishable on the basis of the ratio of length to breadth: the Middle Sepik and Upper Sepik (April-Yellow Rivers), in excess of 3.8 to 1; the Asmat-Digul area ranging between 2.4 to 1 on the Lower Digul to 4.1 to 1 on the Lower Eilanden, the average being about 3.3 to 1. The remaining areas - from the North Coast, through the Upper Sepik (North-October Rivers) to the Mountain-Ok, Highlands and Papuan Gulf areas show proportions ranging between 2.3 to 1 and 2.8 to 1. It is this latter region which has the flexible handle-form, rather than the timber battens of the Sepik or the vertical wooden grip of the Asmat-Digul area. It is also of interest that the Sepik and Asmat-Digul peoples use the spear in combat, whereas those using the flexible handle-form use the bow and arrow, with the exception of the Highlanders who sometimes use spears. This correlation has been pointed out already by Schmidt (1929). Amongst the Mendi, only the largest type of shield was used by spearmen, the other two types being used by bowmen (Ryan 1958).

The Torricelli shields fall into two categories: those in the vicinity of Lumi, and those of Yeri and Bongos (Yeri is about 25 miles due east of Lumi and Bongos is a river about 30 miles north of the Washkuk Hills, south-east of Yeri). There are five examples of the first category, and I have seen several others that conform in every respect. The proportions of this type of shield are unique for our area of study, being 1.5 to 1.

One particular detail of form that poses an interesting problem is the correspondence between some shields of recent manufacture in

the Green River area and the shields of the North Coast recorded by van der Sande (1907). There is an odd asymmetrical distortion of the rectangular form and the addition of a projecting knob at the top centre of the shield (Figure 25). Further, van der Sande records that the shields "... are made out of the wall-like roots of large trees. The bulging out of the carved front surface would then be accidental, possibly caused by subsequent shrinking." (1907:253). The same materials are used by the Green River peoples and the same bulging phenomenon is to be observed. It is probably a desire to achieve the maximum amount of material from, and/or to utilise an already-existing edge of, the wall-like root that leads to the strange asymmetrical shape (Figure 26).

The same explanation may apply for the second category of Torricelli shields (Lumi area). These all depart from a rectangular shape, exhibiting the same asymmetrical distortion as the North Coast and Green River shields mentioned above. Eve reports (Australian Museum Register, April, 1938, E.44366-72): "The shields are made from the flange of the fig tree, roughly thinned down and tied in a clamp so that they will dry flat." An examination of the form of the raw material would, I suggest, provide the explanation for the odd shape.

With respect to the projecting knob of Green River and North Coast shields, the question is whether this is a correspondence due to recent borrowing (none of the shields collected by the German expeditions of 1912/13 show this characteristic), or whether it is a traditional correspondence in form. If it is the former, from whom was the idea borrowed? To my knowledge there is no record of shields between the Upper Sepik and the North Coast and the north coast shields seem to

Figure 25.

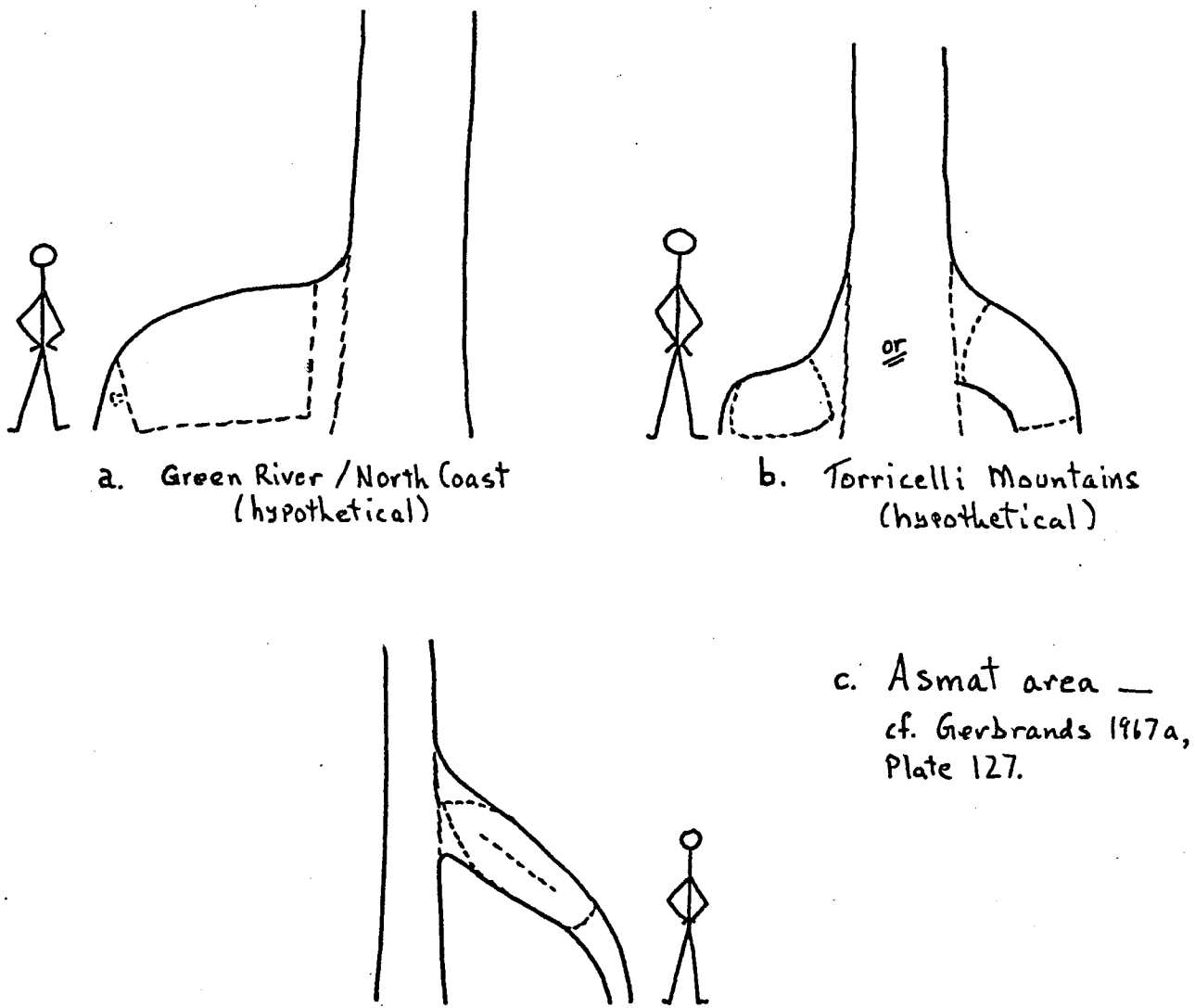
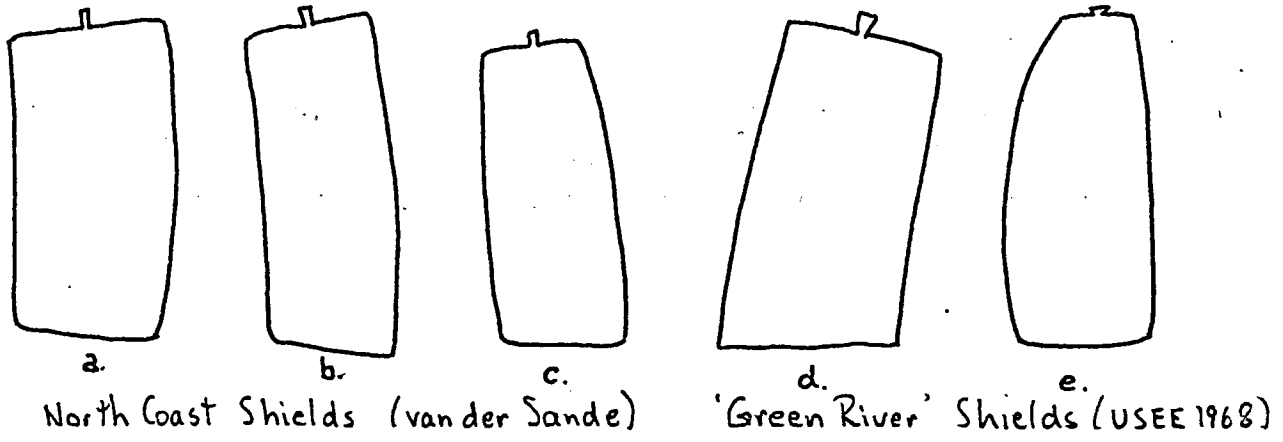


Figure 26.

have been discarded long ago. It is unlikely that the correspondence is purely fortuitous. I discovered that the phallocrypt popular in the Upper Sepik area used to be the long, sometimes curling, gourd worn by most of the central and southern Mountain-Ok men to-day (Behrmann 1922 : Photographs on pages 25, 96, 243 and Plate 15 of 'Uittreksel' 1910). However, it is now an egg-shaped or teardrop shaped gourd, a type popular in the Border Mountains north of the Upper Sepik, through to the North Coast east of Sentani and Humboldt Bay. ('Uittreksel' 1910, plates 4-11, 13, 15, 19). If it is possible for the type of phallocrypt popular in the area through to the coast to be adopted by the Upper Sepik peoples, then it is equally likely that the shield-type might also come to be adopted. Obviously this warrants inquiry in the field.

Yet another correspondence in form is worthy of brief discussion. The Elema - and perhaps the Namau - are the only Papuan Gulf peoples with shields. The Elema migrated to the coast from the hills on the east side of the Purari River, perhaps 40 miles or more inland (Newton 1961:25). Although Mendi is 130 miles in a straight line from this supposed place of origin, one of the Purari tributaries has its source in the Western Highlands well north of the Mendi and is called the Mendi River in its passage through the Southern Highlands.

It is therefore not so remarkable that shields of the Papuan Gulf type, with the notch cut out at the top end, are to be found also among the Mendi and in the Western Highlands. Another correspondence between the two areas is in the shape of worrumbi shield of the Mendi and the gope boards of the Papuan Gulf. The Elema and Namau gope

(called by these groups hohao and kwoi respectively) are more pointed at each end, and the worrumbi shield has, since the introduction of steel tools, a "keel" or projecting ridge running lengthwise down the front centre. The "keel" is also a characteristic of the tall aiaimunu and hevehe masks of the Namau and Elema respectively. On the other hand, most Middle Sepik shields have strongly-defined vertical "keels" too.

Ryan (1958) does not point out these similarities, but Wirz (1952) has already found correspondences between certain carved boards of the Chimbu area and the Papuan Gulf gope boards. The possibility of some cultural relationships existing between the Papuan Gulf and the Highlands is not remote, for most of the Highland valleys are drained by rivers flowing into the Gulf - and river-systems are the traditional trade-routes throughout New Guinea. This contact is even more likely for the Southern Highlands, an area more accessible from the coast than are the Central Highlands.

Another correspondence in form is between the oval type of shield in the Upper Sepik (vicinity Green River; Plate 27) and the Tjitak (Upper Eilanden) and Auyu shields of the Asmat-Digul area (Kooijman 1956). There are differences in that the Tjitak shields are pointed only at one end, and the Auyu shields are more leaf-shaped, having even a short stem-like projection at the bottom. This tendency to oval form is only slightly developed in the area of the April River and nowhere else on the Sepik except at Green River. However, it occurs on the south side of the central range (Asmat-Digul area) and also in the form of the Papuan Gulf gope. Nevertheless, it is perhaps wise to be

cautious and allow that such a correspondence, being as imperfect as it is, may be the result of convergence of forms rather than an indication of diffusion.

Two of the shields I obtained from the Green River area in 1968 - both were made in 1967 - have a projecting knob at the top centre somewhat different to the one mentioned earlier (Appendix D, Section 7, Plate *F, I*). The shields are oval and the knob is shaped like the tail of a fish. I seem to remember an informant saying that it was indeed the tail of a fish, but I can find no mention of this in my notes. As will be mentioned later, the Marind-anim, and probably the Papuan Gulf peoples, equate bull-roarer and fish - the Marind-anim bull-roarers are obviously fish-shaped with forked tails (van Baal 1966, Plate XI.1) and there are some with bifurcate "tails" in the Papuan Gulf area also (Edge-Partington 1898, Plate 74:8, 9 - provenance not given but the design on one is obviously of the Papuan Gulf style; I might add that fish-shaped bull-roarers also exist in Central Brazil: (Haddon 1895:176)). Also, as will be pointed out later, the bull-roarer and the gope boards may be thought of as expressions of the same formal idea. It is therefore worthwhile pursuing the possibility that a correspondence in form between fish, bull-roarer and a board representing the ancestors is suggested by these two Green River shields. This, of course, may only be done in the field and I mention it only as another line of investigation worth pursuing.

The big shields of the Hagen area (Western Highlands), and in the vicinity of Goroka (Eastern Highlands), are of a distinctive form: rectangular, but rounded off at top and bottom, and "... moderately

curved lengthwise, especially along the vertical edges, in such a way that the convex side lies on the outside..... The upper edge of the shield, for a space of about 2 cm. in breadth, is worked down to half the thickness of the wood and thus forms a kind of shelf or ledge which bears a roll of plaiting in the holes punctured in it" (Vicedom and Tischner, 1943-8:218-20, translation). The shields described by Aufenanger and Holtker (1940:32-4) for the Gende (vicinity of Goroka, Eastern Highlands), conform to this description, which is confirmed by my examination of specimens in the Australian Museum (Appendix D, Section 7, Plate J). This type of shield is significantly different to the flat board-shields of the North Coast, Upper Sepik and Mountain-Ok.

5. WARSHIELDS: GENETIC CHARACTERISTIC: TECHNIQUE:

The shield may be left undecorated in some parts of New Guinea e.g. Mafulu people of the mountains north of Port Moresby (Williamson: 1912:185 and Plate 74). However, all the people in the areas I am concerned with decorate the shield in some way. The techniques by which this may be effected are various.

The simplest technique is to paint the surface of the shield. Or the shield may first be incised with lines, or rows of tiny holes may be punched, so that the design has some permanency, acting as a guide when the shield needs refurbishing. Sections of the surface of the board may be covered by incised strokes or short scratches all aligned in the one direction; or a scratching instrument may be used to make rows of incised curved zig-zags. Alternatively, the design

may be carved in relief.

It is important to make a distinction between a relief-band and a relief-form. I follow Schefold's description of a relief-band: "By 'relief-band' we understand a simple projection in low relief, of constant width and depth, and with a rectangular cross-section," (Schefold 1966:259, footnote 133). By relief-form, I mean a simple projection in low relief, of varying width but constant depth, and with a rectangular cross-section. Of course, a particular design may be made up of both relief-bands and relief-forms and it will be important to note whether one or the other, or both, are used in the art of a particular area.

The carving of relief-bands and relief-forms may be carried out in three ways. First, the design may be drawn or scratched (or it may be marked out mentally) and the artist proceeds to cut away all the timber that is not designated as a line or form. This may result in a design made up of relief-bands and/or relief-forms which are the figure against a lowered ground (Plate 24); or the relief-bands may mark the border between figure and ground, the figure and the ground occupying the same level in the carving.

The second method, illustrated by the unfinished shield M.R.361 (Gerbrands 1967b:177) involves carving out a figure as a relief-form initially, as with the first method, followed by the removal of material inside the bounds of the form, so that a relief-band remains to define the border between figure and ground, which then both occupy the same level in the carving. It may be impossible to tell from the object itself whether this method, or the first method, has been used to

arrive at a design wherein the relief-band marks the boundary between figure and ground. It is more than likely, however, that the second method results in the relief-band acting as the boundary between figure and ground in almost every instance, whereas the first method easily accomodates designs wherein the relief-band itself is the figure. An examination of a number of objects from any area should therefore indicate which method of carving has been employed.

The first and second methods tend to involve a maximum removal of material in executing the design; the third tends to involve a minimum removal of material. These are to be understood as positions on a continuum, not as absolute characteristics. Schuster has also commented on this (1968:9, 10).

The third method is hypothetical and deduced from observation of some Middle Sepik shields, e.g. the unfinished Middle Sepik shield No. 138 (Kelm 1966b). It appears to involve an ambiguity about whether the relief-bands and relief-forms constitute the figure or whether the figure is in fact the incised lines and forms (Plate 23). Thus the artist would appear to conceive of the design in terms of lines or grooves and forms cut into the surface of the timber, rather than in terms of relief-bands and relief-forms, even though the figure may be the bands and forms in relief and not the incised lines and forms which remain ground as in the other two methods.

Two shields which appear to illustrate the different effect obtained by the first and third methods are those illustrated in Appendix D, Section 7, PlateA:2). These come from the Middle Sepik

and are almost identical in every respect, except for the result of the application of what I take to be two different methods of executing the design. The shield on the left demonstrated the ambiguity of how the design is to be read - as black figure in relief against a white ground, or as white figure incised into a black ground (see also Plate A:1). There is no ambiguity in the way the design of the shield on the right should be read: it is clearly black figure in relief against a white ground.

Schefold (1966) has found for the hook-figures of the Middle Sepik that there has been a development from relief-band representation of facial features to "more plastic and more realistic" forms. This is noticeable in the shields of the Lower and Middle Sepik (Plates 23, 24), where the human face is an important motif. These "more plastic and more realistic" representations we may call sculpture. In fact, of course, all cutting techniques are sculpture (Schmitz 1956:113), but I wish to retain the term specifically to refer to a technique of cutting material which results in projections of varying width and of varying depth, with no restrictions on shapes of cross-sections.

The techniques used by the Highlanders are worthy of special mention. In particular, the large wooden shields are remarkable for an especially-smooth front surface. This is achieved among the Gende of the Eastern Highlands by scraping the surface of the soft timber "... with the leaves of the poringe tree, which have a rough hairy upper side" (Aufenanger and Holtker 1940:33, translation). The distinctive effect of a design marked out by rows of holes or pits is

achieved by puncturing the smoothed surface of the shield with the point of an arrow; the design is then painted black, white and red (1940:34).

Vicedom and Tischner do not describe the exact means by which the Hagen shields are smoothed and decorated with tiny holes, but they do mention that the back side of the shield is roughly burnt or hewn out and that the design is painted in red, greenish-blue, black or white, leaving some parts of the surface unpainted (1943-8:218).

I could not locate a description of the smaller oval shield of the Western Highlands, but specimens in the Australian Museum indicate that they are the same as the Mendi worrumbi described by Ryan. The shields are hewn out of a mountain hardwood with an adze. "The designs are incised on the shields, so that refurbishing the colours is merely a matter of filling in the outlines. The designs, therefore, are permanent, but the actual placement of colour is largely a matter of personal choice on most worrumbi and many elayaborr, certain areas are covered with incised scoring and these sections are usually coloured red" (1958:247).

This scoring is illustrated in Plate 21. In addition to the type of scoring noted by Ryan, another type is used in both Southern and Western Highlands. It appears that a sharp instrument is held in the hand and moved in short arcs from side to side, the wrist acting as fulcrum; the hand is moved backwards in a direction at right angles to the arcs. The effect is clearly shown in Plate 22. These techniques appear to be unique to the Southern and Western Highlands.

A technique that appears to be characteristic of some Papuan Gulf tribes is the practice of charring the surface of the board before it is carved and painted (Haddon 1894:93; Newton 1961:29; Browne 1969). This technique is used also by the Oksapmin tribes of the Mountain-Ok. I have noticed that some Middle Sepik shields in the Australian Museum are lightly charred apparently after carving but before painting, so that the lines and forms in relief are blackened without the need for black paint. The backs of Green River shields I collected in 1968 were lightly charred, but this may have been from heating the newly carved board over a fire to straighten out bends in the timber caused by the drying-out process.

Whether the charring technique spread from the Papuan Gulf area to the Oksapmin area is impossible to say. Nothing has been published for the areas between the headwaters of the Fly River and the Papuan Gulf, except Haddon's few comments on the material obtained by D^rAlbertis from the middle reaches of the Fly in 1876 (Haddon 1895:27-8), and there is no mention of charring on the mouth of the drums, the only objects collected by D^rAlbertis where such a technique would be applicable.

Colours depend upon what is available. These are generally white, black and a range of red and yellow ochres; occasionally greys, blues and greens are available from coloured marls. Bixa orellana is available to some Lowland peoples, and this produces a brilliant crimson colour. It does not seem worthwhile attempting any categorisation of styles on the basis of colours used for all peoples generally use whatever is available. This is substantiated by their, sometimes regrettable, readiness to use paints of 'European' origin.

TABLE 20: WARSHIELDS: GENETIC CHARACTERISTIC: TECHNIQUE.

<u>AREA</u>	<u>PAINT- ING</u>	<u>INCISED & SCRATCHED LINES</u>	<u>ROWS OF HOLES</u>	<u>RELIEF- BANDS & -FORMS (1)</u>	<u>RELIEF- BANDS & -FORMS (2)</u>	<u>INCISED- LINES & -FORMS</u>	<u>SCULP- TURE</u>
Middle Sepik (vic. Chambri)	+	-	-	+	-	+	+
Blackwater/Karawari	+	-	-	-?	-	+	-
Middle Sepik (vic. Ambunti)	+	-	-	+?	-	+	-
April River	+	-	-	+?	-	+	-
Leonhard-Schultze R.	+	-	-	-?	-	+	-
May River	+	-	-	+	-	-?	-
Yellow River	+	-	-	+	-	-?	-
North-October River	+	-	-	+	-	-	-
Upper May-Mountain-Ok	+	-	-	+	-	-	-
North Coast	+	-	-	+	-	-	-
Torricelli Mountains	-	-	-	-	-	+	-
Asmat-Digul	+	-	-	-	+	-	-
Papuan Gulf	+	-	-	+	-	-	-
Southern Highlands	+	+	-	-	-	-	-
Western and Eastern Highlands	+	+	+	-	-	-	-

Table 20 attempts to classify style areas according to the significant techniques used. There is considerable doubt about which techniques are used in the Upper (April-Yellow) and Middle Sepik. I have been unable to discover any direct reference to the techniques used in these areas. There may be such references but, although I have gone to considerable expense

having translations made of German publications, I have not found any. Schuster has recognised two techniques - that of incised designs and that of relief-band designs - in the Sepik but is obviously inferring them from the objects as I have done; he is unable to cite evidence of direct observation of the process itself, or verbalisations by the artist. This therefore is a serious weakness in the present comparative analysis.

However, if the tentative classifications are accepted as set out in Table 20, it may be seen that the art of the Middle Sepik, Upper Sepik (April-Leonhard-Schultze Rivers) and Torricelli Mountains displays a technique not shared by the Mountain-Ok, whilst the Upper Sepik (May-October Rivers), Upper May, North Coast and Papuan Gulf techniques appear to be the same, with the exception that the latter sometimes char the surface of the board before carving is commenced. The Highlands and Asmat techniques are each unique, although the finished Asmat shield has the appearance of being made by the same techniques as used by the Mountain-Ok.

More information is required so that a better analysis can be made. In particular it is desirable to know whether the design is first marked out visibly, or whether it is present only in the mind of the artist, before he begins the actual work of carving. Secondly, it is desirable to know whether the template - visual or mental- is of incised-lines and -forms, or relief-bands and -forms.

An interesting future analysis might be to examine all the shields that employ techniques involving the carving of designs in relief

(whether the figure be the relief-bands and -forms or the incised-lines and -forms) and also the sculpturing of facial features. It is quite possible that the figure as relief-bands and -forms will be found to be associated with relief-band sculpture as described by Schefold (1966), and the figure as incised-lines and -forms with the "more plastic and more realistic" representation of facial features.

Schefold unambiguously places the "relief-band style" earlier in time than the "realistic" style: "The long relief-band was the initial way of representing the nose bridge in our area of investigation. A tendency to a more realistic and more plastic shaping on the Lower Midcourse has led to the transformation of the relief-band into the realistic form" (1961:261). This has interesting implications for my analysis, as it suggests that the "relief-band style" found in the Upper Sepik and Mountain-Ok areas, perhaps even the North Coast, Asmat-Digul and Papuan Gulf areas, may be older than the styles of the Middle and Lower Sepik characterised by the "realistic" style of sculpture and the figure as incised-lines and -forms.

6. WARSHIELDS: GENETIC CHARACTERISTIC: MATERIALS AND TOOLS:

I have already mentioned the source of shield material for the North Coast, Green River and Torricelli Mountains: the buttress roots of large trees. In the Green River area these roots are quite thin - no more than two or three inches thick - and very large, as may be seen from Plate 28. They require only to be chopped out to a suitable shape with stone axes, and the bark and a minimum amount of material to be removed with stone adzes, before the design can be marked on with black

paint or charcoal, and then cut out with small stone adze blades and cassowary bone 'chisels'. The Abau (i.e. Green River) name for the tree is kofekan. Eve has reported for the Torricelli area that the tree used is a species of fig.

Similar material is used by the Asmat; the shields "... are made of the big plank root of the mangrove" (Gerbrands 1967b:24). Stone axes, animals' teeth and shells were the Asmat's only tools, according to Gerbrands. It appears that the adze is not used by peoples between the Mimika and the Fly (Pretty 1969:33). Metal tools were introduced during the early 1940's (Gerbrands 1967b:24).

Newton notes that most of the Papuan Gulf ancestral boards are made from old canoes (1961:35), and it is quite possible that shields are made from the same second-hand material, although there is no reason to think that planks from newly-hewn trees might not also be used. Carving tools "... are limited among the Namau (and probably throughout the area), to stone adzes and axes for rough work, and shell scrapers for finishing" (1961:29).

Ryan (1958:244) states that the larger wooden shields of the Mendi were carved from one of the mountain hardwoods in one solid piece between $\frac{1}{2}$ " and $1\frac{1}{2}$ " thick. The smaller wooden shields are described as "lighter" - whether by virtue of smaller size, lighter material, or both, he does not say. On p.244, he mentions the use of "an axe", but does not specify whether he is referring to a stone or a steel tool. On p.247 he specifically refers to a "stone adze". However, he does not mention the tool used to make the incised lines and scratches.

Vicedom and Tischner provide the information that the shield of the Hagen area (Western Highlands) "... is constructed from the comparatively soft wood of a variety of oak" (1943/8:218 translation), but again the tools used are not specified, although stone axes and adzes are used by the Hagen peoples (1943/8:224, Figs. 94, 95). Aufenanger and Holtker add that the Gende of the Eastern Highlands use the point of an arrow to punch the rows of holes or pits in the surface of the shield, and a rough leaf for "sandpaper" (1940:34). They do not mention stone adzes, only axes (1940:9, Fig. 2).

For the Sepik, Bateson records that tools used in the production of various artefacts are stone adzes, graters made of the teeth of pig or rodent, and shell-scrapers of the fresh-water mussel (*Anodonta* sp.) (1932:258). I could find no reference to the means by which the material for middle Sepik shields is obtained, but in all probability it would be obtained by cutting a plank from a log rather than from a buttress root. This is partly because the thickness of middle Sepik shields (sometimes over 2") is too great for the plank roots I have seen - particularly when the vertical handle bases are also carved from the same piece of timber. The other factor is that there seems to be a variation in weight (Kelm 1966b:Plates 136-140; 157-9; 166-8 and notes thereon) which is probably due to the differences in density of the species of timber used.

I have already suggested that the form of some Green River, North Coast, and Torricelli shields are to some extent determined by the form of the material used for their manufacture - the buttress root. The grain in the timber follows the curved sides of these distorted shapes and indicates that at least one edge of the raw material is being

utilised to save work.

Many rain forest trees have buttress roots, but the species vary in their development of these forms and the one species may vary according to its environment. Some buttress roots, such as those of the Antarctic Beech (Nothofagus sp.) in the Telefolmin area, are too small to provide material for a shield. Others, such as those in Plate 28, seen near Iburu on the Green River, might provide sufficient material for two shields. The enormous size (50" x 80") of some of the shields I purchased in 1968 indicate a species of tree with a highly-developed form of buttress root, whereas the small size of the Lumi shields suggest a much smaller root (Fig. 26a, b).

The Asmat shields are taller and narrower than Green River and North Coast shields and it appears that this is due to the different form of the buttress root of the mangrove. Gerbrands illustrates Asmat men working on this material to make ancestral bis poles (1967a:Plates 29-31, 127). The root is not triangular, but narrow and curved, and thus limits the width of the plank that may be won from it (Fig. 26c). It is also quite thick, thus allowing the vertical handle and the shield to be carved from the one piece.

It may be that there are no suitable buttress roots in the Middle Sepik area, or that the people have elected to obtain their shield material from relatively narrow logs despite the extra effort involved. However, they do not appear to be willing to expend still more effort and obtain a wide plank from a large log as do the Mountain-Ok and other Highlanders. No doubt the Lumi people could obtain large planks

from logs, but they are apparently satisfied with rather small boards from small buttress roots.

Thus, having decided that making a buttress root into a shield requires much less effort than working on a log, and having decided that small shields are adequate for their purposes, the Lumi artist finds that he must work within the limits imposed by his material. Similarly, once the Asmat artist has decided that the mangrove buttress root provides a plank with the least expenditure of effort, the limits of the form of the shield are set by the form of the material.

The implications of this are interesting. For example, suppose the Lumi people migrated to another area and found that they now had available a species of tree with very large buttress roots. They may elect to make a larger shield, for the extra amount of effort involved would be minimal. This could be the explanation for the larger Yeri and Bongos shields.

The reverse situation could also arise where peoples using large buttress roots to make big shields migrate and find themselves in an area where the buttress roots are relatively small. Rather than change to a different type of material, such as planks from large logs, they may reduce the size of the shield according to the limits set by the material.

It appears then, that the form of the shield is defined within the limits set by an already-existing idea of what is wanted and the availability of material requiring the minimum amount of effort in turning it into shields. There is thus a relationship between the form of the material and the form of the shield, but the elective factor in this aspect of style lies in the choice of the material first of all,

and then the solution adopted from the range of possibilities within the limits set by the form of the material.

As for tools, it would appear that stone adzes are used almost everywhere (the exception being the central south coast). Some groups, such as the Mountain-Ok, do not possess stone axes, but all the groups that possess them would use them. The peoples of the interior of New Guinea substitute bone tools for shell tools; shells are too rare to be used as tools and are reserved for personal adornment and as items of wealth. Animal teeth - especially boars' tusks and rodents' incisors - appear to be ubiquitous.

Since World War II, steel tools have been adopted everywhere, although in some areas, such as Green River, stone tools are still used where steel axes are not suitable and steel adzes still not readily available - for example, smoothing the inboard sections of canoe hulls.

In conclusion it would appear that no one area possesses tools that would enable an artist to produce a warshield significantly different from those produced elsewhere. There are variations in the materials available, however, and given that some peoples choose materials unique to their area, the forms of shields in New Guinea vary as a consequence.

7. WARSHIELDS: FUNCTIONAL CHARACTERISTIC: SECULAR:

Regarding the actual methods of using shields, it may be said that these vary according to the character of the environment, the type of weapons used, and the nature of warfare. Big heavy shields are best

suiting to defence or siege or to formal battles on open ground. Light, preferably small, shields are better suited to ambush and minor skirmishes, especially in a close environment. Heavy shields are less suitable for use by an archer - who needs both hands free to use his weapons - than light shields, but the latter are inadequate defence against the momentum and impact of a spear.

A great deal has been recorded about the significance of Asmat shields and their designs, but I have been unable to discover anything about the actual method of use in warfare. Although the Asmat have spears, it is possible that they use their relatively light shields only in bow and arrow skirmishes. However, Kooijman does give an interesting account of the use of large shields by the Awju-Muyu of the Upper Digul: "Some (shields) from the Awju tribe and from the Muyu area can easily protect five or six men. They are used for attacking a house or a group of houses. A strut at the back holds the shield upright while the attackers throw their missiles from its shelter. At the right moment they move on behind the shield as Roman soldiers approached the walls of a besieged city under cover of the testudo" (Kooijman 1961:56). It is not clear what he means by missiles.

The Mountain-Ok shields were normally carried by a shield-bearer. He was accompanied by bowmen - often more than one - in single file; they do not have spears. Although the shield has a vertical cane grip, on both occasions when I saw demonstrations of the shield in use, the bearer simply gripped it at each edge whilst running with it, ignoring the cane handle.

Mountain-Ok fight tactics were frequently those of a raiding party surprising one or more persons in a garden or on the track. These attacks never warranted the use of a shield. However, when a larger group was to be attacked - especially a village - shields would be used. They were not only used for protection against arrows, but also as a battering and holding weapon, to knock and pin down an enemy until bowmen could finish him off. They were also used to block the tiny doorways of the houses to prevent the occupants from escaping. The attackers then shot the inmates through the gaps in the walling, or set fire to the houses.

Shields were also used for defensive purposes and taken to gardens to shelter bowmen in the event of an attack by enemy raiders. Unlike the Highlanders of eastern New Guinea, only rarely did the Mountain-Ok use shields in formal battles on open ground. Most of this information has already been published by Cranstone (1968:611-12).

Haberland, after deciding that shields of the Green River area were not shields but houseboards (1965b:44), discovered photographs and notes of Roesicke, ethnologist of the 1912/13 Behrmann expeditions to the Sepik River, which caused him to change his mind. We are thus now in possession of a description by Roesicke: "Light wooden shields are carried by a cord over the left shoulder; the left hand clasps with two fingers through a small loop at the upper end of the shield" (Haberland 1966b:64 translation). Haberland is puzzled as to how this can be done and the bow used simultaneously. From Roesicke's photograph reproduced by Haberland (1966b:62), it appears that the loop is not held at all when the bow is in use, but the shield is left hanging freely

from the shoulder.

One of the tactics used in warfare in the Green River area, so I was told, was to surround a community house with shield bearers and bowmen and set afire to the leaf roofing of the house with burning arrows. Anyone trying to escape would be shot down. Shields were necessary because most houses, no doubt, would have had a clearing around them so that enemy raiders could be picked off by bowmen in the house. The defenders also used large stones to smash the attackers' shields and drive them off.

It seems likely that similar tactics were used by the Border peoples of the North Coast; van der Sande reports that the shields he found in the village of Thae had been left behind by Arso attackers who, although they succeeded in setting fire to the spirit-house at Thae, had lost some men and were eventually driven off. These shields were carried on a loop of bark rope over the left shoulder in the same way as are the Highland and Papuan Gulf shields. However, the North Coast shield is provided with a small ridge-like projection on the back right-hand upper corner, through a hole in which a loop is fastened. "When using bow and arrow, the lower arm is simply put through this loop, allowing the left hand to hold the bow" (van der Sande 1907:253). This is technically akin to the steadying-cord of the Mendi shomo (Ryan 1958: Fig. 1). The Green River shields apparently did not need this device, the much wider shoulder-strap (from edge to edge rather than close to the centre of the shield) providing a steady enough device.

Neuhauss reports of the Sissano shields of the North Coast that "On these shields the wounded warrior is carried by the women out of the

hurly-burly of the fight. During attack, the warrior doesn't protect himself with this, as the heavy weight would hinder him in the use of his bow. Rather the shield plays a major part as a weapon in the defence of the village" (1911:307 translation).

The Torricelli shields appear to be devised to hang upon the shoulder protecting the abdomen only. The Bongos shield, however, is equipped with a rigid handle-form, common on the Middle Sepik. In fact, the Gongos shield is closely related to the Malu-Brugenuwi-Yambon shields of Washkuk (Haberland 1963:Plate 1, Figs. 1-4) also in form and technique.

Of the Sepik shields, Haberland says that they "... must be held in one hand - they cannot be hung over the upper arm nor over the shoulder or the back. Thus they preclude the use of bow and arrow, because for this one needs both hands. Because of their size, and even more because of their weight, they cause a certain lack of mobility, if not complete immobility, on the part of the people who carry them" (1965a:168-9, translation). Some Kupkein shields, he says, weigh around 20 kilos (c. 44 lbs.). "Therefore, the Papuans took the shields along only for the fights that were proclaimed beforehand, in which both parties stood opposite each other in long rows; or else on headhunting expeditions in canoes; they were left at home (if) a sudden raid (was planned)" (1965a:169, translation).

Haddon records that Papuan Gulf shields "... are carried at the left side of the warrior, the left arm passing through the notch The handle is inserted a short distance below the notch; it consists of a loop of cord which is passed through two holes in the shield. It is

slung onto the left shoulder when the shield is carried" (1894:93). These shields were probably used in the same way as Ryan reports for the Mendi shields of like form: "The elayaborr was a much smaller and lighter shield (than the worrumbi and the shomo) used also in formal fights, but primarily designed for skirmishing and small raiding parties. "We'd be sitting in our house at night, but not feeling sleepy and someone would say, Let's go and raid the Tungenjup. So we'd grab our elayaborr and our bows and arrows, and off we'd go"" (Ryan 1958:249). This type of shield was hung from one shoulder by a long diagonal loop. The warrior did not pass his arm through a notch at the top, however, as did his Papuan Gulf counterpart, but looked through it, the projections giving some protection to his head. It is curious that several of the Papuan Gulf shields illustrated by Haddon (1894:Plate 6, Figs. 87, 90, 93-7) have notches so narrow that they would accommodate an arm only with great difficulty, or not at all. I therefore doubt that the early accounts reflect the only method of use, and am inclined to the view that many of the shields were used as the Mendi use them.

The larger, heavier shields of the Mendi -- the worrumbi and the shomo -- were formal battle shields "carried only when clans opposed each other in open lines of battle." They were not used for the more common skirmishes and guerrilla raiding. "The worrumbi was slung from the shoulder of the bow-arm by a looped shoulder-strap attached to the shield by threading it through two holes and knotting the ends. It was steadied by the firing-hand, which was free." (Ryan 1958:244). The shomo also had a looped shoulder-strap: "Since the shomo was clumsy and quite heavy, it was provided with a steadying cord to prevent it swinging aside and

exposing the bearer" (1958:243). Apparently the bow and arrow was the weapon used here, not the spear.

Notes accompanying Ialibu (Southern Highlands) shields presented by P.C.A. Conroy to the Australian Museum on 28th April, 1956 (see Appendix D, Section 7, Plate I) state that the oval shield (equivalent to the Mendi worrumbi) is used by the front-line archers in formal battle skirmishes, whereas the smaller notched shield, equivalent to the Mendi elayaborr, is used by the rear-line archers.

Vicedom and Tischner report that the Mbowamb have two shield-types: "... the big rectangular shield or kumbe reipe and the little oval shield or kumbe ramokl." The big shield is for spear fighters and protects the body completely. "Two ratan (cane) strips serve as a handle and they are pulled through four holes which are bored in the middle of the shield, in such a way that they form two vertical clamps on the inner side of the shield. Under these there are usually two strong slings made of tree bark, and by these the warrior hangs the shield over his left shoulder a further handhold, a ratan strip extending over two-thirds of the length of the shield runs along on the inside close to the front edge of the shield" (Vicedom and Tischner 1943/8:218-20, translation).

Aufenanger and Holtker have an identical description for the carrying device of the Eastern Highlands shields, and add that "Together with the shield one can carry simultaneously the bow and the arrow as well as the spear. When he is using the bow, the archer puts his left hand under the ratan strip which is to be found along the front edge of the shield. When he uses the spear, however, he holds this ratan strip

firmly in his left hand. In either case the weight of the shield hangs by the bark straps on his left shoulder. In a fight, the shield-bearer goes ahead. The archers without a shield protect him with their arrows from a distance" (1940:34, translation).

The only common factor to be extracted from this great variation in the details of the use of shields is that, except in the Highlands where the bow and arrow are as important in warfare as the spear, if not more important, the shields with the flexible handle-forms are made by peoples who fight with the bow and arrow, whereas the shields with rigid handle-forms are made by peoples who fight with the spear. The latter tend to be larger and heavier than the former.

8. WARSHIELDS: FUNCTIONAL CHARACTERISTIC: NON-SECULAR:

As I have already shown, the shields of the Mountain-Ok vary in their significance from region to region. The Mianmin regard them as shields only - they are not named, nor are they believed to have animistic properties. They may be kept within the vicinity of women, for the Mianmin shield OW.1 was found in a community dancing house (verbal communication, Patrol Officer L. Bragge).

At the other extreme, the Faiwolmin shields are named, behave animistically, and some shields, at least, are kept in close association with ancestral relics and skulls and are believed to be important for the maintenance of the taro crops in particular and the well-being of the community in general.

I was unable to elicit any information in the Green River area which

indicated that shields had anything other than a secular function. These same informants denied that there was ever any ancestor worship or that they ever kept the bones of ancestors. However, Thurnwald reports (1914:342 translation): "The bones - especially the skull - are packed together with a couple of personal belongings - penis gourd, pipe and similar things - into a stringbag and hung in the house. they worshipped the bones of the relative....." It would appear then that recent acceptance of Christianity has caused them to reject their traditional religion to the extent that they deny its past existence. If the shields had any sacred significance, it is as likely that they would deny this too. Probably much patience and persistence would be required to reconstruct a reliable account of traditional religious beliefs and practices.

Regarding the Asmat shields, Gerbrands writes that they were always made on the occasion of a shield festival. "In former times, the ceremony for which the shields were carved was a sort of prelude to a headhunting raid organised to revenge the ancestor after whom the shield was named. The supernatural power of the ancestors represented on the shield helped to secure the successful outcome of the raid. Sometimes a shield was also placed in the entrances of yeu houses (men's houses) so that the ancestors represented on the shield might keep intruders or evil spirits away from the inhabitants of the household" (1967b:27). Kooijman also reports the shields as protective objects: "..... the human figure is the principal motif, sometimes in the form of a number of disconnected arms and hands. It seems likely that these are intended to avert danger, for by raising their arms and stretching out their hands, the Asmat people try to protect themselves

from strange and unknown dangers" (1961:56).

Kooijman has somewhat overstressed the importance of the human figure as a motif. The material collected by Rockefeller does not cover the whole Asmat area and may therefore represent a somewhat biassed sample of Asmat motifs. However, it is worth noting that of the 70 shields illustrated in Gerbrands (1967b), in 41 cases the flying fox is the main motif; in 14 it is a bird of some kind; there are six miscellaneous designs, and in only nine cases is the human figure used as the principal motif.

If we examine the photograph (1967b:146) showing 21 shields from the southern parts of Asmat territory, we find that only six bear motifs clearly derived from the human form with three - perhaps five - other possible anthropomorphic designs. Of the nine Asmat shields illustrated by Kooijman (1956), only three use identifiably human motifs.

As Gerbrands has said of the Asmat artist: "..... the figures he carves always represent specific ancestors, but the motifs he uses are always symbols for the unspecified headhunter in general" (1967a:35). Elsewhere he elaborates: "..... the ancestors are represented symbolically as the black, fruit-eating, flying animals or birds Examples are the flying fox and the heron and 'V' or 'S'-shaped designs, usually arranged in easily distinguishable groups Additional symbols representing unspecific ancestors cover the remainder of the shield. Most commonly used are bi-pane, a shell nose ornament in the shape of a capital 'C', placed horizontally, and a circular design with little fingers on it representing the elbows and hands of ghosts. Occasionally the shield is covered with a random arrangement

of these designs" (1967b:27).

Little seems to be known about Papuan Gulf shields. Chalmers states that each shield has a name, but he was unable to find out the significance of this (Haddon 1894:93).

The significance of the designs themselves is not known either, although it is most likely that they are to be interpreted in the same way as the designs on the gope boards (here called hohao). These designs refer to mythical ancestors and culture-heros and often incorporate motifs representing clan totems. Newton says of the hohao boards that those "..... recognised as merely decorative have no names. Those which are named are sacred; they represent bush spirits which indeed inhabit them and may sometimes emerge to wander about the eravo (men's house)" (1961:25). Whether the shields represent - and are inhabited by - bush spirits, as is the case with the hohao boards, is not clear, but the fact that they have names indicates that they have some sacred significance.

The Mendi attitude to shields recalls that of the pragmatic Mianmin. "The owners of the shields do not seem to feel any special attachment to them. There is no suggestion, as there is with certain other artifacts, of their being family heirlooms, the designs being entirely decorative and not representing family crests..... The shields do not even seem to have any sentimental value for their owners as, for example, souvenirs of successful fights. Since they ceased to be of any practical use, they are readily disposed of for very small payment with no signs of regret" (Ryan 1958:243).

Neither Vicedom and Tischner, nor Aufenanger and Holtker, mention any non-secular significance for shields of the Western and Eastern Highlands.

For the Sepik area I have been unable to discover any precise analysis of the function and significance of shields as non-secular objects. Apparently they were kept in both men's houses and ordinary houses (Haberland 1963:109). Schuster (1968) briefly mentions the reproduction of religious themes in Sepik art but nowhere refers specifically to shields in this context.

Kelm is hardly more specific, admitting that for Sepik objet d'art, we lack "... a precise knowledge of their meaning, i.e. of their specific functions" (1966a:5, translation). However, his understanding is that Sepik peoples believe in "..... the omni-present working and ruling of supernatural powers and forces, in the existence of non-transient creative power which is made responsible for creating the world and its contents, for the preservation of the status quo, and for the well-being or misfortune of the individual and the community. Corresponding to this belief we have the religious behaviour that is expressed in the efforts to realise, make concrete, approach and have a part in that power that has achieved exceptional things and still achieves them. This occurs in the form of rituals which make communion with the transcendent powers possible for the participants and also enable them to make and set up works of art which do not represent holy things and are not worshipped, but are means to make visible in a very manifest way the creative power, the divine force and the holy values" (1966a:19, translation). He goes on to suggest that in the case of the

decoration of objects of "profane" use, "..... by using motifs of certain content and significance borrowed from the religious sphere (e.g. representations of totemic ancestors) they attempted to improve and to enhance the efficacy of the objects decorated with them in an exceptional way. This is obvious in the case of weapons for attack and defence" - and presumably here he includes warshields - "... yet it would be a one-sided evaluation if we neglected the possibility that certain symbols originally of religious content are used as profane ornamentation to decorate everyday utensils, e.g. a cooking pot, without any idea of making real a supernatural power lying behind them. But the truth of our assertion (remains unaffected), that the character of this art is basically a religious one" (1966a:20, translation).

Forge also has found the significance of Iatmul art to be not immediately apparent: "Although there are specific pieces illustrating specific myths such pieces are not, on the whole, the important ones. The main sacra of an Iatmul clan rarely incorporate references to a specific myth, and although they frequently do have animal totems of their clan, these totems are not personages from myths but attributes of the clan." (1965:24). He then devotes the rest of his paper to demonstrating that Iatmul and Abelam art transmit 'messages' "..... about the nature of man and his culture, statements that may not be totally conscious in either the creators or the beholders of the art - who do these things because they are correct - but which are relevant to and essential for the existing social structure" (1965:30).

The evaluation of warshields as objects representing ancestors, culture heroes, or other agents of the non-secular world, appears to be peculiar to the Papuans of the southern regions of New Guinea, including the southern Mountain-Ok. This contrasts with the purely pragmatic attitude of the Highlanders of eastern New Guinea, the Mianmin and perhaps the Abau of the Upper Sepik (Green River area). The significance of Middle Sepik art seems to lie in the message being conveyed rather than in the object itself. It is perhaps not unlike the differing attitudes of Catholic and Protestant to the significance of the bread and the wine of the Sacrament: to the Catholic, the bread is the body and the wine is the blood of Christ, whereas the Protestant considers them merely as symbols, the efficacy of Communion not being in the actual partaking of the body and blood of Christ, but in drawing the individual into a personal communion with God in response to the message the symbols convey.

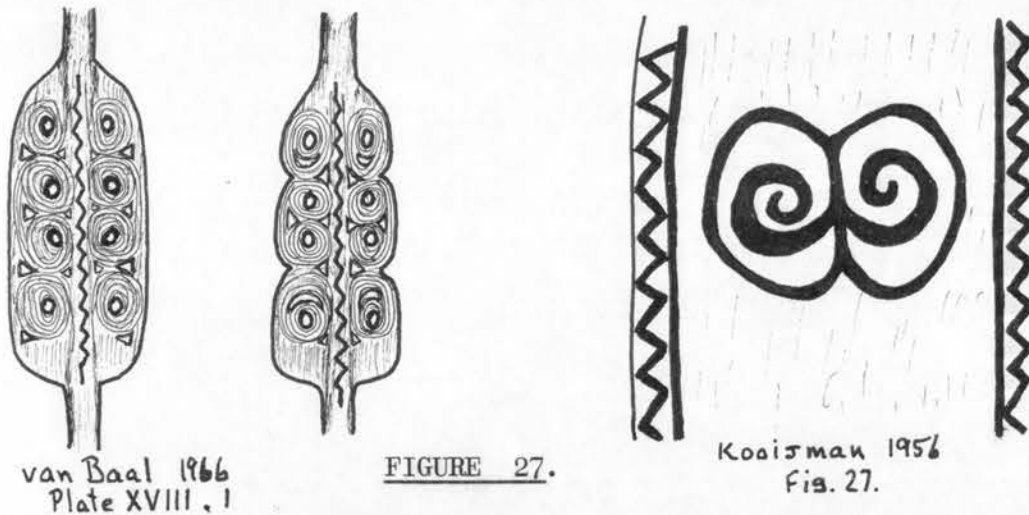
The evaluation of warshields as objects representing the ancestors is a characteristic of style that defines boundaries cutting across those defined on the basis of technique and form. Consequently there is a strong case for the hypothesis that this evaluation of shields by the Mouthern tribes of the Mountain-Ok is an influence from the south.

9. OTHER CARVED BOARDS: THE PAHUI-SHIELDS OF THE MARIND-ANIM:

The Marind-anim do not have shields. However, they do make an object that looks very like a shield, made only in connection with the bangu ritual. These objects are decorated by carving in low relief.

In preparation for the bangu ritual, a ceremonial area is fenced off. Along two sides low sheds are constructed, and a pit four or five feet deep is dug in the centre. "Round this pit a number of remarkable ornaments are set up, each consisting of a wooden plank which initiates have worked into a kind of shield, between one and two metres in height and from 30 to 40 cms. in width. They are decorated with carvings in a peculiar design, the kewazib- or pihui (snail-shell) -motif, executed in concentric circles The ornamentation differs from one shield to another, each of them representing a different totem, such as the betel, the sting-ray, etc. The centres of the circles, the eyes, are perforated. In due time, i.e., just before they are set up around the pit, palmwood arrowheads will be inserted into the holes and from that moment onwards the shields are secret objects, not to be seen by the uninitiated." (van Baal 1966:617). The shields are called pahui, the same name as that given to the ceremonial clubs carried by headhunters on their raids. A reference to headhunting therefore seems to be implied. There is also a reference to the male-female dichotomy: "In the bangu ritual, the man is represented by an arrowhead, the woman by a big shield" (1966:739).

van Baal observes that the motif of the ornamentation of two Tugeri pahui-clubs - collected by MacGregor on the coast of Papua some 70 miles east of the border with West New Guinea - "... is the same as that of the pahui shields used during the bangu ceremony" (1966:737). It is tempting to compare this motif (Fig. 27) with that on two shields from the Auyu of the north bank of the lower Digul, neighbours of the Marind-anim (Kooijman 1956, Fig. 27; Appendix D, Section 7, Plate H:5).



The bangu rites, which include the otiv-bombari in which most of the women gratify the men for the purpose of collecting sperm, conclude with frenzied dancing, and the pahui are thrown into the pit and frantically covered with earth. The sperm is then mixed with a previously prepared festive dish and apportioned among the participants. van Baal characterises the ritual as "..... a life-giving fertility rite" (1966:626).

There are many details of the bangu ritual that express a symbolism not specifically conveyed by the pahui-shields and I will not go into them here. It would appear that the pahui-shields are basically symbols of the female as a sexual object and as prime motivators to headhunting. The women do not respect men who are slow to indulge in this activity and even go along on raids with their menfolk.

It is a great pity that we have no figurative record of the pahui-shields, only the comparison with the decoration on the pahui-clubs collected by MacGregor. Thus it is impossible to assess the significance of these objects in the art of south New Guinea. It does, however, provide continuity of form and technique between the Papuan Gulf-Fly River area to the east, and the Asmat-Digul area to the west.

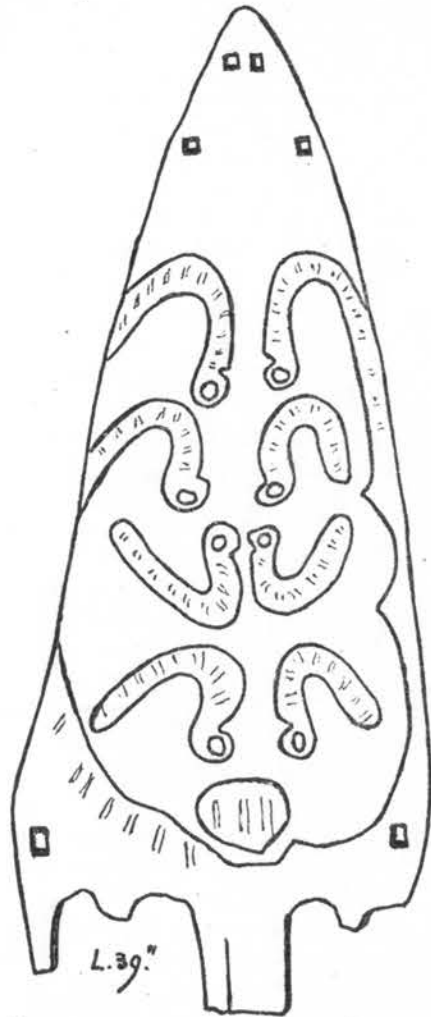
10. OTHER CARVED BOARDS: THE CANOE-GOPE OF THE FLY RIVER:

The outrigger canoes of the Fly and Bamu estuaries are equipped with a sort of splashboard; the side facing inwards is carved with a human face. The boards are called gope, a word which is also the secular name of the bullroarer. These gope are not only fitted to canoes but also suspended in front of the gable of the men's house "so that they can twist in every direction, to ward off illness from whichever quarter it comes" (Newton 1961:10).

It is evident that these canoe-gope got some distance up the Fly River. Edge-Partington illustrates (1898:77, Fig. 1) what he calls a "Carved House Ornament, Upper Fly River" (reproduced here as Fig. 28a). This is obviously a canoe-gope. It may have been in use as a house talisman when collected, hence the description as a house ornament. Exactly from which part of the Fly River it was collected I could not discover - unfortunately the place where the ornament was kept at the time Edge-Partington compiled his catalogue is not mentioned.

It is particularly interesting to examine the design closely and compare it with Newton 1961, Fig. 181, a gope from the Era River (reproduced here as Fig. 28b). The design on the "Upper Fly" object is nothing like those on the canoe-gope of the Lower Fly (c.f. Newton 1961, Figs. 11, 63-5), which are all clearly human faces. The Era River gope also has a clearly-recognisable human face, but the elements of the design in both cases are identical: short thick curved elements each with a small circle at one end.

This stylistic correspondence across the map is paralleled by another. Fig. 178 of Newton 1961 (reproduced here as Fig. 28c)



a. "CARVED HOUSE ORNAMENT UPPER FLY RIVER" [after Edge-Partington 1898]



b. Newton 1961 Plate 181.



e. Newton 1961 Plate 178.

d. Sorenson & Gajdusek 1966 Figure 6.



Figure 28.

illustrates another Era River gope that is almost identical in its composition of design elements to a Tjitjak shield of the Upper Eilanden (Sorenson and Gajdusek 1966, Fig. 6). This shield (the one on the right of the photograph, reproduced here as Fig. 28d), shows the same stylistic peculiarity as the "Upper Fly" gope and the Era River gope: the use of short thick curved elements. However, in the case of the Tjitjak shield, the small circle at one end of each element is lacking.

Such correspondences are difficult to ignore and suggest that there is some traffic of artistic ideas, as well as goods, up and down the Fly River, and between the river systems of Papua and West New Guinea, as well as the fairly well-known traffic along the coast.

On the other hand, Haddon (1894:84-5), on the basis of his similarly meagre evidence, was ambiguous: "The art of the Middle Region of the Fly River is certainly very distinct, and the leaf-like designs and free treatment of curved lines and spirals is quite unlike anything we have yet studied. The spirals we shall meet within the Papuan Gulf District, but the free use of leaf-like figures is practically unique The technique, not the style, of the decoration of the bamboo pipes from the central Fly River district also points to an affinity with the Papuan Gulf natives." I will leave further comment on the Fly River as a link between East and West New Guinea until I discuss the sago-spathe mourning signs of the Marind-anim.

11. OTHER CARVED BOARDS: ANCESTRAL BOARDS OF THE PAPUAN GULF:

Among the Kerewa, near the mouth of the Kikori River, the gope boards attain their fullest significance, probably as surrogates of the bullroarer which is not known in this area. There are three types of gope between two and nine feet in height, "..... oval boards carved in relief outlining human figures and painted The most sacred examples are sometimes called darimo-ebiha. Each clan group owns one of these large boards which is stored under the roof of the men's house, is never taken out of it, and has a certain aura of secrecy. Every six years or so, in connection with initiations, the darimo-ebiha is burned and a new one is made, being inaugurated by the taking of a head. Less important and less endowed with spiritual power are the smaller, individually-owned boards apparently called obina-ebiha; they stand at the entrances to the clan cubicles, and are inaugurated with pigs. Both the darimo-ebiha and the obina-ebiha also have individual names, after ancestors and places. Boys and young uninitiated men own small unnamed boards which are hung in the cubicles or on the outside walls of their houses; these are supposed to help the growth of the boys, losing potency after the initiations. The gope boards are, among other functions, protective beings who ward off sickness and other ills" (Newton 1961:15-16; Figs. 114-135). The most important gope travelled underground from Kiwai in the mouth of the Fly River to Kerewa, followed by all the others; apparently they are not a Kerewa invention.

On Boaribari Island, as part of the ceremonial cycle gibumamu, a row of skulls is placed on the floor of the ceremonial house, in front of the gope. In a later part of the ceremonies, the gope are

held whilst the roll of enemy villages is called, "... until the gope stir in the bearer's hands: the sign of which should be raided Next day the raid is launched, as the gope spirits have already gone ahead to sap the strength of the prospective victims" (Newton 1961:17).

In the turama cycle, a friend of the successful headhunter undertakes to clean the skull and decorate it, and to give it offerings of food. The skulls of small animals, fish and birds are kept in houses of the Lower Fly-Bamu-Kerewa area. At Wapo Creek, about 40 miles east of Kerewa, pig and crocodile skulls are laid out on the floor in front of the gope. From photographs it is apparent that the skulls are painted, the designs echoing those on the gope boards (Newton 1961: Fig. 159).

In the Purari delta area, the sacred boards are called kwoi and are hung on the partitions separating each cubicle in the men's houses. Among the Elema, further east, the boards are called hohao. "Some of the hohao boards, being recognised as merely decorative, have no names. Those which are named are sacred; they represent bush spirits which indeed inhabit them and may sometimes emerge to wander about the eravo" (men's house) (Newton 1961:25).

Throughout the area, then, there are carved oval boards which are kept in men's houses in association with human and/or animal skulls, are often named, behave animistically, and are connected with myth and ritual. Some of these objects are more sacred than others "..... but we cannot relate these differences to the art motives. The relative age of the objects was of prime importance: hohao, kwoi and Purari Delta

masks became more loaded with power the older they became. Agiba (hook-figures for holding skulls) took on power with the addition of paint it is "heat", menace, danger" (Newton 1961:33). Newton goes on to suggest that the attachment of skulls to the agiba, which represent ancestral males and females, "... clearly represents an assimilation of the dead to the clan. It may be hazarded that "gope", in their various forms, also represent some concept of assimilation. Thus the gope of the Urama-Wapo, and their counterparts the Namau kwoi, are placed in close contact with skulls" (Newton 1961:33).

Finally, Newton suggests that the bullroarers, ancestral boards, and masks form a constellation of objects which the people themselves are not aware of at the conscious level:

- "1. The most sacred objects, the thunder-voiced kaiaimunu, are kept in association with the thunder-noise producing bullroarers, all in strict secrecy.
2. Bullroarer-shaped boards (kaiaimunu) are kept in secrecy, but versions of these are placed where they can be seen by any man, whether initiated to the bullroarer cult or not.
3. Unimportant versions of gope are given to young uninitiated boys who have not yet seen the men's gope.
4. Bullroarer- and gope-shaped masks are worn publicly, so that some version of their form is revealed even to the women who will never see the objects they really represent.

Thus the same form is repeated in, so to speak, wider and wider contexts of decreasing secrecy. By the time the aiaimunu mask reaches

the audience of women its prototype, the bullroarer, is already at several removes. Its 'heat' is safely dissipated. The secret is safe, yet has been revealed far enough to prevent its retention from being a source of frustration rather than satisfaction" (1961:35).

The similarity to the Faiwolmin imanaskom, or sacred shields, is immediately apparent. Also apparent is the similarity in form between the Papuan Gulf objects and the Mountain-Ok houseboard. There is a wide variety of possible forms that a houseboard could take. It is nothing less than remarkable that it should take the form of a bullroarer. This object is not known to the Mountain-Ok, but a form may be diffused beyond the bounds of its origin. The existence of "fish-mouth" drums in the Faiwolmin area (Champion 1966:77) testifies to the efficiency of the Fly River trade route as a means of diffusion of artistic forms.

Even such changeable things as names of objects exhibit a remarkable persistence along this trade route. For example, Williams reports that stone disc-clubs, found in the Trans-Fly area of Papua, have come from up the Fly River. In the Telefomin area, they are called tingi, and I have been told by informants that they are made by the Bimin. The Trans-Fly people call all stone clubs ngi or tani and the disc-club variety is called sentangi (Williams 1936:416). The first steel tools to come to the Telefomin area are nowadays referred to as "akis bilong Kiungga", an acknowledgement of its transmission along the Fly River trade route.

The evidence for historical links between Mountain-Ok and Papuan Gulf art forms is thus considerable.

12. OTHER CARVED BOARDS: SACRED BOARDS OF THE HIGHLANDS OF EASTERN N.G.:

Wirz has reported oval or rhomboid-shaped boards, some carved and painted, used for the construction and decoration of the walls of dwelling huts and fences or stiles across roads in the Chimbu (Eastern Highlands) area. "The decoration of these wall and fencing boards from the highlands is limited to incised zig-zag lines, or occasionally circles (Figures 1, 2, 5) emphasised with ochre or white earth, or to perforations of the middle portion in the form of circles or lozenges (Figure 3), the latter sometimes formed of four perforated triangles surrounding a central wooden cross (Figures 4, 6). These boards, which are simply decorations for the houses and fences of important or influential persons have no religious or ritual significance; they seem to represent about the only element in the culture of these people which points to direct relationship with the Gulf area" (Wirz 1952:26-8).¹

Newman reports of the Gururumba, in the vicinity of Goroka in the Eastern Highlands, that their pig festival involves the display of gerua boards. "They are wooden planks varying in height from a few inches to several feet, with polychrome geometrical designs painted on them. One type is anthropomorphic in shape, but they are usually abstract shapes such as rectangles, squares, circles or crescents. They are made ostensibly to honor the ancestors, but the designs painted on them symbolise prosperity and well-being, growth and vitality - qualities manifest in the pig festival itself (The) juxtaposition of the boards and the accumulated wealth of the group is a tacit recognition of the interdependence of the ancestors and their progeny.

The ancestors look on, observing the remembrance with pleasure"
(Newman 1964:269).

The designs represent things associated with wealth, display activities and food. One design represents the leaves used to make bustles worn at dances where large amounts of food are given away; another represents the wooden cask for steaming food; others are "pig skin", the grub fed to girls at first menstruation, the life-giving "eye" of the sun, war victors, and a myth figure whose body sprouts plants.

"When the display is over, the boards are placed among the branches of trees or stuck in the ground of the gerua enclosure At times of crisis the boards may be removed and cleaned in the same way the bones of the dead may be exhumed and cleaned to stave off the harmful forces of sickness and death" (1964:270).

These boards are involved in rituals which, Newman concludes, aim for "... the control, stimulation, and display of nurturant strength and growth." (ibid). Only at this very general level of abstraction, and only in part, does this correspond with the non-secular function of shields and houseboards among the Mountain-Ok. The techniques of making the objects seem to differ in both areas and the form of the objects, including the designs and the meanings of these designs, are different. It would appear, then, that no direct relationship may be postulated between the boards of these two areas. At most it is possible that there is some relationship between the Highland boards and boards in the Papuan Gulf area. Alternatively, Newton implies the possibility

of a relationship between the anthropomorphic gerua board and anthropomorphic figures of the upper Karawari (Newton 1966:207).

13. PAINTED SAGO-SPATHE: MEN'S HOUSE DECORATIONS OF THE SEPIK HILLS:

Sago-spathe is that part of the branch of the sago-palm which is attached to the central trunk and wraps around it. When detached from the palm trunk and opened out, it provides a fairly large flat surface on which a design may be painted. Several pieces may be sewn together to provide any size of surface on which integrated designs may be painted.

This material is obviously restricted to the lowland areas where sago can grow, and therefore does not occur in the highland areas. However, there are other types of bark that would appear to be just as suitable as sago-spathe, so it must be concluded that the choice of sago-spathe by the lowland peoples and the choice of timber by highland peoples represents a significant difference when comparing the art styles of two such regions.

The Sepik Hills extend almost the whole length of the Sepik, south of it, from the Karawari to the August River, and perhaps ought to include the Washkuk Hills on the north bank near Ambunti where the Sepik breaks through a northern extension of the Hunstein Range. The Sepik Hill Language Family, as described by Dye et al. (1968), extends only from the Karawari to the Leonhard-Schultze River. I therefore use "Sepik Hills" in the geographical sense only.

The Sepik Hills cultures are today strongly influenced by the art of the more recent Middle Sepik culture. Buhler ascribes the Karawari hook-figures to this older culture (1962:112) and some of the painted sago-spathe in this area would also appear to belong to this older culture (Kelm 1966a:Figs. 388, 391; Haberland 1966a:Figs. 6-13). This non-figurative style of painting is distinct from that of the Middle Sepik with its obvious concentration on the human face (Kelm 1966a:Figs. 382-7; Buhler 1962:Plates on pp. 56, 78), and extends as far up the Sepik as the May River (Schuster 1968:Fig. 43; Kelm 1966b:Figs. 183-5; Buhler 1962:Plate p.81). However, it is in the hills around the May River that we find another style of painting that may be even older than that of the May River itself and the hills to the east. These non-figurative designs (Newton 1967:Figs. 76, 77;¹ Schuster 1968:Fig. 33) appear to be closely related to those on the Mountain-Ok shields and houseboards. In the Green River area, too, sago-spathe paintings bear designs identical to those found on the shields of that area (Kelm 1966b:Figs. 232-40; Simpson 1962:364).

In the Sepik Hills area, and right through to the North Coast (Meyer and Parkinson 1900:Vol. II, Plate 12; Neuhauss 1911:Plates 141-2), paintings on sago-spathe are used especially for the decoration of cult buildings. In the Lower Sepik area, these paintings have a religious

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1. It would appear that the photographs in Newton's book (1967) have been numbered incorrectly and that 76 and 77 ought to be reversed (this error has occurred elsewhere in the book). The object numbered 76 is labelled "Iwam" (the river people) and 77 is labelled "Awai" (the hill people). However, 76 is more like the Mountain-Ok designs than is 77, and it is the hill people who are supposed to have some contact with the Mianmin. 76 is also closely related in design to Schuster 1968:Fig.33, which is from the Awai village of Itelinu. See also Schuster 1968:Fig. 31 from Aimi/AWAI.

significance and are related to ancestor worship or mythological tradition (Buhler 1962:56).

In the Middle Sepik they probably have a protective function (1962:78). In the Alfendio region of the Upper Karawari, each piece of spathe is painted with an independent design. These pieces are set up vertically along the inside back wall - or even all the walls - of the men's house (Haberland 1966a:43-4). This is also the pattern among the Awai - the hill people of the May River. Schuster (1968) reports that many paintings, like the one in Fig. 31, are fastened one above another horizontally between sticks, lining the walls of the community dance-house. Sometimes as many as 100 pieces line the underside of the roof of the men's house (1968:Fig.33).

The Iwam (river people of the May River) bind together sheets of painted spathe as wall linings, and also use pieces as door coverings of cult houses. The clan is represented by a totem painted on the spathe. I was told that a single piece of painted spathe was incorporated into a ceremonial head-piece in the Green River area (c.f. Schuster 1968: Fig. 9: photograph of spathe headgear from the Maprik area). The only supporting evidence for this statement is that the piece illustrated by Simpson (1962:364) appears to be tied to a stick or frame of some sort. Unfortunately there were none in the area at the time I was there (1968). I was told that the old ways had been forsaken for Christianity.

The sago ceremony involves a dance by the men who wear large phallocrypts about a foot long and 3" diameter at the distal end. There is thus a possibility that the ceremony is some sort of fertility

ritual and is conducted to ensure continued supplies of sago.

It appears, then, that little is known of the significance of the painted spathe in the areas north of, and adjacent to, the Mountain-Ok, apart from the possibility that totems are being represented. This is a significance that cannot be attributed to Mountain-Ok houseboards, and although there appear to be iconographical correspondences between the two areas, as I shall point out later, we must look elsewhere for correspondences at the level of function and significance.

14. PAINTED SAGO-SPATHE: MOURNING SIGNS OF THE MARIND-ANIM:

Among the Marind-anim, men's houses have been found with a piece of painted sago-spathe over the doorway. This is the dapa and is fixed to the men's house when an inmate has died. It is thus a mourning sign. These pieces sometimes have the form of "an enlarged reproduction of a bullroarer The motif in the ornamentation is very clearly the pahui motif" (van Baal 1966:781-2 and Plate 21:3). "In five other objects depicted by Wirz (1922/5, III:Plate 21) the bullroarer shape is less evident Three of these five items have been executed in a form reminiscent of a snake. One of them is quite evidently a phallus (No. 4) of the six specimens known (one reproduced by Vertenten and five by Wirz), three show the sar-ahai design and one a human head at the end of the dapa. This implies that the dapa represents the deceased in the shape of a bullroarer" (van Baal 1966:782).

Among the Kiwai, bullroarer and snake are closely related and among the Marind-anim the snake and bullroarer belong to a complex of symbols associated with the phallus. (ibid:895). "Sosom's identity with the phallus is beyond doubt. He is the bullroarer, and the bullroarer is the phallic symbol par excellence. Every boy is given a bullroarer on the occasion of his initiation. The thing has the shape of a fish, which, in turn, is a phallic symbol itself, as is most obviously demonstrated in the myth of Sosom who, as a fish, enters a woman's vagina and impregnates her." (ibid:487).

The use of the sar-ahai motif is worth elaborating upon. This design is painted on sago-spathe which is then placed as a taboo-sign in coconut gardens consequent upon a death (ibid:775). Closely connected with the sar-ahai is the awong. "The awong is an image of the deceased, usually showing only the upper part of the body. The breast is always decorated with a red ornament, representing the heart, bekai. Since bekai also means alive, breath the awong represents the deceased as a living being" (ibid:777). The awong is used in a number of contexts, one of them being as a taboo-sign in coconut gardens, as for the sar-ahai. "There is every reason to consider the sar-ahai, and also the awong, as images of the dead guarding his coconut gardens." (ibid:780).

An understanding of the dapa, then, includes a consideration of the significance of the sar-ahai and awong as well. The factor common to these three objects is that they signify the death of a (presumably male) member of the community, and the bekai of the awong and sar-ahai

suggests that they may also signify the continuing spiritual presence of the dead. van Baal points out that the human figure is depicted on sar-ahai by the Marind of the western region where "the cult of the dead is somewhat more elaborate than in the east." (1966:776). The eastern Marind favour animal totems or geometric designs.

The form most represented by the dapa is that of the bullroarer/fish/phallus/snake - symbols completely consistent with one another in Marind culture. The motifs used in the painted designs are the pahui motif common on the bullroarers and ceremonial clubs; the sar-ahai motif, i.e. human face, and animal or plant totems. Sometimes the dapa are accompanied by painted designs - mainly geometric - on the external wall of the house each side of and above the entrance. Two are illustrated in sketches by Wirz (1922/5, III, Plate 21) and in a photograph (1922/5, III, Plate 22:1).

The Marind do not preserve the bones of ancestors but were they to do so, and keep them inside the men's house as do the Mountain-Ok, it is easy to imagine that the dapa might become a more permanent fixture representing not merely the recent dead, but the past dead, i.e. the ancestors, as well, and this is precisely the meaning and significance I have attempted to show for the houseboards and facades of the Mountain-Ok.

15. INTRINSIC CHARACTERISTIC: ICONOGRAPHY:

There are four aspects of iconography which will require attention. It is desirable that all four be treated quantitatively but there are a number of requirements that ought to be met before a quantitative procedure could lead to statistically valid conclusions about the similarities between styles.

First, the sample should be representative. As I have shown for the Mountain-Ok, different areas within a style-province may be currently represented by different designs and these may vary in their use of certain design-elements. In one design the spiral may occur ten times, and in another not at all. Thus each design should occur in the sample in proportion to its representation in the total "population" of designs. This implies that there are sufficient numbers of objects to eliminate the apparent statistical significance of unusual characteristics of design.

Secondly, either the sample should represent the "population" of designs more or less at a point in time, or it should be representative of all designs made over a period of time. However, this presumes that the "population" of designs is known, either at the point in time chosen, or over the period of time specified, from which a sample may be selected. In fact, this requirement cannot be met for any style-province except the Mountain-Ok, and perhaps the Asmat. Indeed, we are doing well to accumulate sufficient numbers of objects to satisfy the first requirement. The representativeness of the sample is almost impossible to control because collecting has occurred sporadically over both time and place, and even worse, documentation for time and place

is frequently lacking.

A more fundamental difficulty confronting a statistical procedure is that even the total "population" of objects produced over a short period of time in fact may not be representative of what is held in the total mental stock of artistic ideas. When we desire to consider art as a clue to history, when we want to know whether one style owes anything to another, or has origins in common with another, it is not only the current expression of the mental stock that is of relevance, but the whole of that mental stock. Ultimately the art-historian must work with artists, not merely with the objects they produce. Only if we have reason to believe that the objects produced are representative of the total mental stock of ideas can we then proceed with maximum confidence to use the data provided by the objects themselves, employing strictly quantitative procedures. I do not think that anyone has ever attempted to sample the total mental stock of artistic ideas in a community and until this is done in a variety of style-provinces and for a variety of mediums of artistic expression, we may utilise only the grossest of quantitative procedures. Small-scale societies with relatively few artistic specialists are most suitable for such an experiment.

Given the limitations of the data, then, I intend to use terms such as "mostly", "often", "sometimes" and "never", rather than attempt to use, as yet unwarranted, statistical procedures.

The four aspects of iconography that I wish to examine briefly are:-

- i) the distinction between figure and ground and how relief-

bands and relief-forms are used in this distinction;

- ii) the principles of design, especially isomorphic principles such as -
 - a. symmetry around the vertical axis
 - b. symmetry around the horizontal axis
 - c. serial repetition along the vertical axis
 - d. parallelism and concentricity
 and such other principles as "horror vacuo" and complexity of design;
- iii) the presence or absence of figurative and non-figurative designs or motifs;
- iv) the occurrence of certain non-figurative design elements.

i) FIGURE-GROUND DISTINCTIONS:

I have already made some reference to the use of relief-bands and relief-forms in achieving figure-ground distinctions (see 5. Warshields: Genetic Characteristic: Technique). There, I was more concerned with the process by which the distinction was arrived at. Here I am more concerned with the end-result.

There are five categories of figure-ground effect achieved by the carving of relief-bands and -forms in the style-provinces I am concerned with:-

- a. the relief-bands and-forms constitute the figure set against a lowered ground;
- b. the relief-bands and -forms constitute the ground with the incised lines and forms representing the figure;

- c. there may be an ambiguity as to whether the figure is represented by the relief-bands and -forms or by the incised-lines and -forms;
- d. the relief-bands may represent the outline enclosing a figure, the figure and ground occupying the same level in the carving ~ the lowered plane;
- e. the incised-lines may represent the outline enclosing a figure, the figure and ground occupying the same level in the carving - the relief plane.

For each style-province in turn I will indicate which of these effects are achieved.

MOUNTAIN-OK: category a., but almost always using relief-bands rather than relief-forms; category d. to a lesser extent than category a., and always in conjunction with category a. Sometimes there are two figures sharing a common relief-band as part of their outlines.

NORTH COAST: category a., both relief-bands and relief-forms; some of the designs could include category d. where the looped relief-bands are set one inside the other and could thus define a looped figure (Appendix D, Section 7, Plate K:l).

TORRICELLI MOUNTAINS: category b. exclusively.

MIDDLE SEPIK: category c.; the ambiguity is resolved, however, in those designs incorporating a recognisable human or animal face or figure, which is usually in relief (the Yuat (Lower Sepik) shields, however, are not in the least ambiguous. They employ sculptured forms,

and categories a. and d. of figure-ground effect).

UPPER SEPIK: (April-Yellow Rivers): category a. in the May and Yellow River areas, with some ambiguity (category c.) achieved by varied use of a range of more than two colours. This gives rise to what appear to be parallel figures with two figures sharing a common relief-band as boundary (e.g. Haberland 1965b:Figs. 13, 15). Where human or animal faces are represented, category d. applies. In the April River area, category b. seems to be predominant, although there is also some ambiguity (category c.) that is partially the result of the varied use of more than two colours.

UPPER SEPIK (North-October Rivers): category d. almost always, but with category a. occasionally, and sometimes there are parallel figures as described for the Mountain-Ok and the other Upper Sepik area (e.g. Kelm 1966b:Plates 213, 215).

ASMAT-UPPER EILANDEN: category d. almost without exception.

LOWER DIGUL: categories a. and d. about equally.

FLY RIVER-PAPUAN GULF: category a., with category d. predominant in some areas (e.g. Wapo Creek, Era River and Urama Island - Newton 1961: Figs. 148-151; 178; 180-1; 187-9). Other areas employ a mixture of both categories a. and d., and sometimes there is ambiguity as to which lowered area is figure and which is ground (e.g. Newton 1961:Figs. 188, 189, 192 - second from left; 242 - left). In Fig. 242 (right) there is added confusion because the two colours applied to figure and ground are reversed half-way up the design with no relief-band or incised line

to act as a boundary. In other examples (Appendix D, Section 7, Plate I) the relief-band is the figure but is bordered on one side by white and on the other by red, thus confusing the fact that it is the relief-band that is the figure and not one of the white areas enclosed by the relief-band. Both these peculiarities also may be found in Mountain-Ok art (e.g. T.67, 93; Cranstone 1968:Plate 7b).

HIGHLANDS: category e. is the effect most achieved by Highland art, although it may be incised lines or rows of punched holes that mark the border between figure and ground. Frequently these incised lines or rows of punched holes mark the borders of a narrow white or black line that itself constitutes the figure against ground of other colours, or that marks the outline of a figure (e.g. Appendix D, Section 7, Plate J).

In summary, Lower Digul and Fly River-Papuan Gulf art shares with Mountain-Ok art the combined use of both category a. and category d. effects. However, the Papuan Gulf style uses relief-forms occasionally in addition to relief-bands. (The Yuat style of the Lower Sepik should also be included). The art of both the Upper Sepik areas shares with Mountain-Ok art the device of parallel figures, i.e. two figures sharing a common relief-band as boundary, but differs from the Mountain-Ok in the degree to which other effects are used.

The Upper Sepik (North-October Rivers), Asmat, Upper Eilanden and the Wapo-Era-Urama area of the Papuan Gulf share the characteristic that almost all relief-bands serve as outlines of figures, although

this effect is achieved by different means in each area.

ii) PRINCIPLES OF DESIGN:

The aspects of design that are of most interest are the isomorphic principles: symmetry around the vertical axis, symmetry around the horizontal axis, and serial repetition along the vertical axis.

a. Symmetry around the vertical axis: this principle is almost inviolate for the major part of the design throughout the areas I am considering. Where it is not strictly followed, it is usually only in minor details of the design (especially the finer details of some Asmat designs - Gerbrands 1967b:172 f.f.) or in service of some other isomorphic principle which we might call "balance" (e.g. Gerbrands 1967b:190B, C; 200A; Telefolmin houseboards T.61, 64, 79), where a compromise is achieved between the demands of symmetry around the vertical and horizontal axes. Where this compromise is not reached it is the demands of symmetry around the vertical axis that has precedence over those of symmetry around the horizontal axis. The few designs that ignore both rules nevertheless are executed with a conscious feeling for "balance" (e.g. Gerbrands 1967b:196A; 202A).

b. Symmetry around the horizontal axis: this principle is by no means followed equally in all the areas under consideration. It is shared about equally by the Mountain-Ok, North Coast, Upper Sepik (North-October Rivers), Upper Eilanden and Highland areas, but the frequent use of the human face as a motif in the Middle Sepik, Upper Sepik (April-Yellow Rivers), Marind-anim, Papuan Gulf and Fly River areas, is largely

inconsistent with symmetry around the horizontal axis. The face-motif may be represented singly, or serially, the same way up, along the vertical axis, but only rarely in pairs facing each other (i.e. one the right way up and the other upside down). In the case of Asmat art, however, the demands of both serial repetition and symmetry around the horizontal axis may be satisfied (e.g. Gerbrands 1967b:194B, C; 196B; 197C; 198A, B; 199C, D and some of the designs in the photograph on p.146).

c. Serial repetition along the vertical axis: this principle is shared in about the same proportion by the Mountain-Ok, North Coast, Upper Sepik (North-October Rivers) and Marind-anim areas. The Asmat-Digul and Sepik peoples utilise this principle quite frequently whereas the Highlanders, Torricelli and Papuan Gulf peoples do not use it at all - except in the case of the Elema hevehe masks on which this particular Papuan Gulf people represent their clan totems.

<u>STYLE PROVINCE:</u>	<u>SYMMETRY VERTICALLY:</u>	<u>SYMMETRY HORIZONTALLY:</u>	<u>SERIAL REPRESENTATION VERTICALLY:</u>
Mountain-Ok	mostly	mostly	sometimes
North Coast	mostly	mostly	sometimes
Torricelli	mostly	mostly	never
Middle Sepik	mostly	sometimes	often
Upper Sepik I	mostly	sometimes	often
Upper Sepik II	mostly	mostly	sometimes
Asmat	mostly	often	mostly
Upper Eilanden	mostly	mostly	mostly
Lower Digul	mostly	never	mostly
Marind-anim	mostly	sometimes	sometimes
Fly River/Papuan Gulf	mostly	sometimes	never
Highlands	mostly	mostly	never

d. Parallelism and concentricity: these are the repetition of lineal figures concentrically or parallel to one another. Mountain-Ok art provides many examples of this device, especially in the sets of chevrons of Design Type III and the "limbs" and central rhomb of Design Type IIa, IIb, IIai, IIbi. The designs of the Upper Sepik (April-Yellow Rivers) also provide examples of concentricity (usually of circles) and of parallelism (of straight lines, curved lines and the "running-dog" motif). Torricelli Mountains art also makes much use of these principles.

e. Other principles of design: there are a number of principles that have to do with the complexity of the design. One of these is traditionally explained as 'horror vacuo', the compulsion to fill spaces in a design with secondary design elements that are irrelevant to the main motif. Mountain-Ok, Marind-anim, Torricelli and Highland art reveals no compulsion to do this, whereas the art of the Asmat-Digul, Middle and Upper (April-Yellow Rivers) Sepik, and to a lesser extent Fly River-Papuan Gulf, North Coast and Upper Sepik (North-October Rivers) fills the entire field with secondary design elements.

Another measure of complexity that is less subjective is the total surface area of relief-bands and -forms as a proportion of the total surface area of the object. It would most likely be found that this varied from style-province to style-province. It would not be beyond present-day technology to devise a method of treating photographs of objects so that a computer could scan them and record the total surface area of the relief-bands and -forms. It should also be possible to have the computer analyse the tendency for the concentration of relief-bands and -forms to be at the centre, or at the edges, of the design.

Another technique for analysing the level of complexity of the design would be to take a sample of objects, divide the surface area of each object into, say, hundredths and count the number of changes within each hundredth, averaging them over the whole sample. Each change in colour would count as a unit of change; each change in depth or width of relief-band; each change in direction of a boundary between figure and ground or of an element of the design. This would be a long and tedious method but would serve to quantify a characteristic of style and reduce reliance upon intuitive assessment.

This technique could be used, like the computer scanning method, to assess the degree to which the artist's attention is concentrated towards the centre as against the periphery of the design.

iii) FIGURATIVE AND NON-FIGURATIVE DESIGNS:

I characterise figurative designs as those employing recognisable natural forms such as the human face and body, animals such as lizards and birds, and so on.

MOUNTAIN-OK art is wholly non-figurative, although certain designs are almost certainly derived from figurative prototypes (Craig 1967:269).

NORTH COAST art may be figurative or non-figurative; two shields from Sissano have a squatting human figure as primary motif and two from Aitape have zoomorphic forms as primary motifs. Four others from the Border area, in West New Guinea, and another two from Aitape, have secondary anthropomorphic and zoomorphic figures. Only five shields from the fifteen I have come across from the North Coast appear not to

employ figurative motifs (Appendix D, Section 7, Plate K).

TORRICELLI art is non-figurative.

MIDDLE and UPPER SEPIK to YELLOW RIVER art employs the human face as a primary motif, and occasionally "hocker" figures - like those on some of the North Coast shields (e.g. van der Sande 1907:Plate 26:14) - as a secondary motif.

UPPER SEPIK (North-October Rivers) art is not figurative, except that one shield made c. 1967 (Appendix D, Section 7, Plate E:8) uses a fish-figure as a secondary motif. This could be a recent innovation.

UPPER EILANDEN and ASMAT art depicts human figures, the Asmat sometimes using bird and animal figures as well. Many of the non-figurative designs are said to be birds and flying foxes, and are obviously derived from the more recognisable examples.

LOWER DIGUL art is non-figurative.

MARIND-ANIM, FLY RIVER and PAPUAN GULF art is mostly concerned with the human face, but the human body, animals, birds and plants may also be depicted.

HIGHLANDS art is almost wholly non-figurative, the exception being the anthropomorphic gerua-boards (Newton 1966:Fig. 3). Some simple designs on shields could be abstractions from the human face and body.

Thus Mountain-Ok art shares with the art of the Upper Sepik (North-October Rivers), Torricelli, the Lower Digul and the Highlands the distinction of being almost wholly non-figurative.

However, the art of all the areas I am examining utilises non-figurative, i.e. geometric, design elements, whether found in figurative or non-figurative motifs.

iv) NON-FIGURATIVE DESIGN ELEMENTS:

Schmitz (1956:114f.f.) has already suggested that an analysis of style should proceed by recognition of "style elements". Style elements are the various ways parts of a motif may be represented. For example, a human face motif should have eyes, nose and mouth but each of these may be represented by different forms, e.g. circles, ovals, rectangles. They may also vary in their proportions: short or long, big or small. They may vary in their position within the motif: e.g. mouth between middle and bottom of facial outline, mouth at bottom of facial outline, etc.

The implication, however, is that we know what is being represented, that the motif is figurative. Schefold (1966) adopted Schmitz's method for the analysis of hook-figures of the Middle Sepik.

Where the motif is non-figurative, however, we can only resort to the recognition of the presence or absence of certain geometric design elements (called "signs" by Gardin 1958:341f.f.) and if present - here following Schmitz - noting their proportions and their position in the total structure of the design.

To carry out an exhaustive analysis of design elements is beyond the scope of this present study. I will therefore confine myself to a few of the more common elements: spirals/meanders; circles/ovals;

chevrons; zig-zags; dentates. After that, I will discuss a few of the geometric designs or motifs that seem to occur in more than one style-province.

MOUNTAIN-OK art is characterised by the frequent use of spirals and meanders (rectilinear versions of the spiral) traced by single relief-bands. These occur either in a rosette fashion, arranged around a central rhomb (Fig. 29a) or serially in pairs along a vertical axis (Fig. 29b). Sets of large chevrons may appear at top and bottom of the design (Fig. 29c), and sometimes throughout the design (Fig. 29d) with their bases attached to the vertical sides of the design.

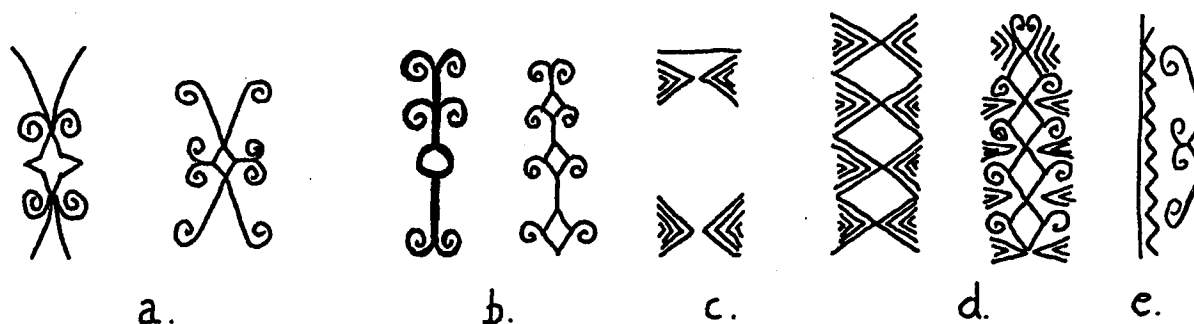


Figure 29.

The vertical edges of the design usually carry a zig-zag element (Fig. 29e). Dentates are entirely absent, and circles are rounded-off central rhombs rather than deliberate attempts to draw a circle.

NORTH COAST art is characterised by design elements that are not as severely rectilinear as is Mountain-Ok art. Chevrons almost become arcs (Appendix D, Section 7, Plate K). The spiral, usually as the "limb" of an anthropomorphic or zoomorphic figure, is traced by a single relief-band; the meander is not used. Concentric circles and loops are common. Rows of anthropomorphic figures without heads are represented by rhomboid shapes nesting between two lines of zig-zags.

The zig-zag is otherwise almost entirely absent, but dentates are common.

TORRICELLI art makes much use of highly developed spirals arranged in the position of four "limbs", sometimes with an additional pair at the centre of the design. These spirals may be seen as traced by two interlocked incised-line spirals or as a relief-band double-spiral (Fig. 30a, b). Chevrons and dentates also appear, the latter especially on the two shields at the eastern end of the Torricelli area.



Figure 30.

SEPIK art is characterised by its curvilinearity, which, however, yields to rectilinearity in the May River area (Haberland 1965b:Plates 13-15). Concentric circles, dentates and interlocking spirals are common, the latter frequently developed into the line of interlocking S-spirals called by the German ethnographers the 'laufender Hund' ('running dog') motif (Fig. 31). This motif is common on canoes of the North Coast, and occurs throughout the Sepik River area. It is to be found occasionally on Asmat shields (Kooijman 1956:Fig. 22; Gerbrands 1967b:202A), but nowhere else south of the Sepik in our area of study. Sepik art, particularly upstream from Washkuk, uses zig-zags and chevrons; these occur throughout the design as secondary fill-in elements. The framing of the whole, or sections, of the design is frequently achieved by rows of dentates.



FIGURE 31.

UPPER SEPIK (North-October Rivers) art makes use of the spiral too: traced by a single relief-band (Kelm 1966b:Plates 198, 200, 205, 213), or as a relief-band double-spiral (1966b:Plates 197, 199, 201, 203, 206, 207, 215). The former is characteristic of Mountain-Ok art and the latter of Sepik art. In the extreme western section of the Upper Sepik, the spiral is barely developed, being little more than a hook (1966b:Plates 211, 214, 216-220). They most always occur in pairs (horizontally), and twice as often turn outwards from each other as inwards towards each other (compare 1966b:Plates 206 and 207; 219 and 220). Little use is made of framing elements at the edge of the design; zig-zags, dentates and chevrons do not occur in the western section of this area. Mostly the spirals are arranged as though representing two faces, often sharing a mouth (Fig. 32).

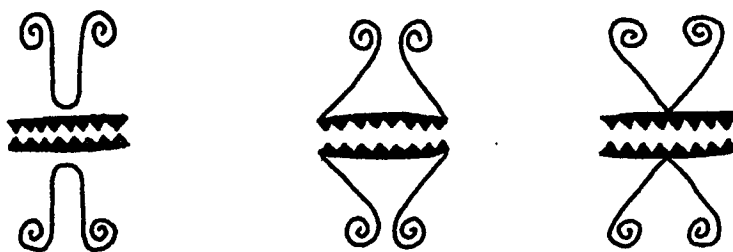
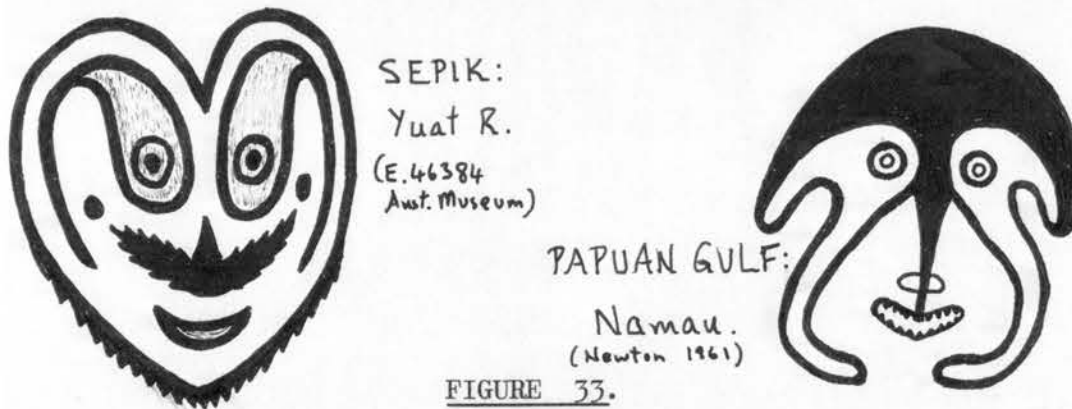


FIGURE 32.

This is consistent with the essentials of facial representation in the Sepik generally. Sepik art tends to stress the continuity of the jawline whilst the forehead is divided into two parts, the split being brought about by the extreme emphasis of the eyes and the dividing influence of the nose-bridge. This is the opposite effect to that achieved by Papuan Gulf art (Fig. 33).



PAPUAN GULF art tends to emphasise the continuity of the forehead-line, but splits the jawline. This is particularly noticeable for the Namau ancestral board designs (Newton 1961:Plates 218-221). Spirals traced by a single relief-band are common in Elema art whereas further west in the Namau-Era River-Kerewa area the spirals are barely-developed figures enclosed by relief-bands, as for the Upper Sepik and Asmat (Fig. 34).

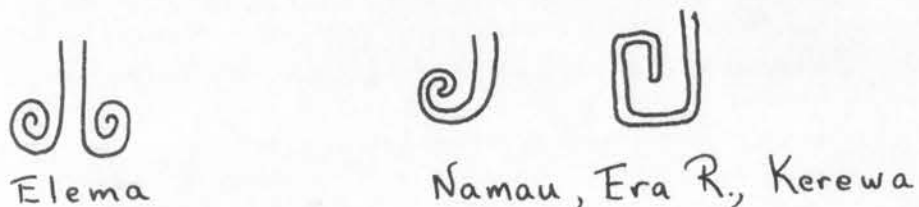


FIGURE 34.

The spiral is seldom, if ever, used to represent the eyes of the face-motif but may appear as "limb"-like forms (Newton 1961:Plates 148-151, 187, 188), or perhaps representing ears (1961:Plate 152), intestines (1961:Plate 162), nostrils or nasal ornaments (Appendix D, Section 7, Plate I.8), or pig-tusks (Brown, 9th April, 1969). It may also be irrelevant to the face-motif and represent a clan totem of some kind. Like Sepik art, Papuan Gulf art uses dentates and chevrons, but zig-zags

are not common in the eastern half of the Papuan Gulf area, where a zig-zag may define the edges of what amounts to a dentate-figure against a ground of another colour (e.g. Newton 1961:Plate 192, second from left and second from right). The chevrons are generally a framing element, surrounding the edges of the design. The dentates may also serve as a framing device, but occur throughout the design, especially in Elema art, defining the edges of many elements of the central face-motif.

MARIND-ANIM art is difficult to assess as there is so little extant of the type under consideration here.¹ However, what there is shows that relief-band spirals (or simply painted on sago spathe), are set in rosette fashion around a central rhomb (e.g. Wirz 1924/8:III:Plate 21, Fig. 3). Also used are zig-zags, chevrons, vertical series of rhombs, and vertical series of split rectangles (1924/8:III:Plates 17, 21). All these elements of design appear in Mountain-Ok art, especially in the designs on the Faiwolmin spirit-house facades. Even the Marind-anim face-motif may be found on the Faiwolmin facades (Fig. 35).

1. NOTE: Earlier (1967:272, note 9) I had given Plate 1 of Fuhrmann (1922), captioned 'Mannehaus - Sud-Neu-Guinea', as evidence of houseboards covering the facade of spirit-houses in the southern part of New Guinea. However, I noticed that Boas (1927) illustrates the same house (Plate III) and ascribes it to North New Guinea. I therefore checked through a number of publications until I discovered a photograph in 'Verslag' (1920:Plate 64 oppos. p. 145), captioned 'De tempel in Sawar (Noordkust)', which has a decorated facade almost identical with the one illustrated by Fuhrmann *and* by Boas. The former is therefore incorrect and my 1967 footnote is to that extent also incorrect.

I earlier remarked that the coix motif (Faiw. 3 to 9, 14a; Faiw.W.45) is peculiar to the peoples of the headwaters of the Fly River; this remark was made in the context of a discussion of Mountain-Ok art. The same design element is to be found in Marind-anim art, probably representing the lizard's scaly skin (Vertenten 1914:Plates 24, 25).

There are in fact a number of remarkable consistencies between Mountain-Ok and Marind-anim art if we are prepared to examine a wide range of Marind-anim decorated objects (Fig. 35). It is of further interest that the designs on the Lower Digul shields utilise both spirals and rectilinear meanders, the zig-zag as a framing element, and sets of chevrons at the sides (Kooijman 1956:Fig. 14, 20, 27; Buhler 1962:Plate I; Appendix D, Section 7, Plate H).

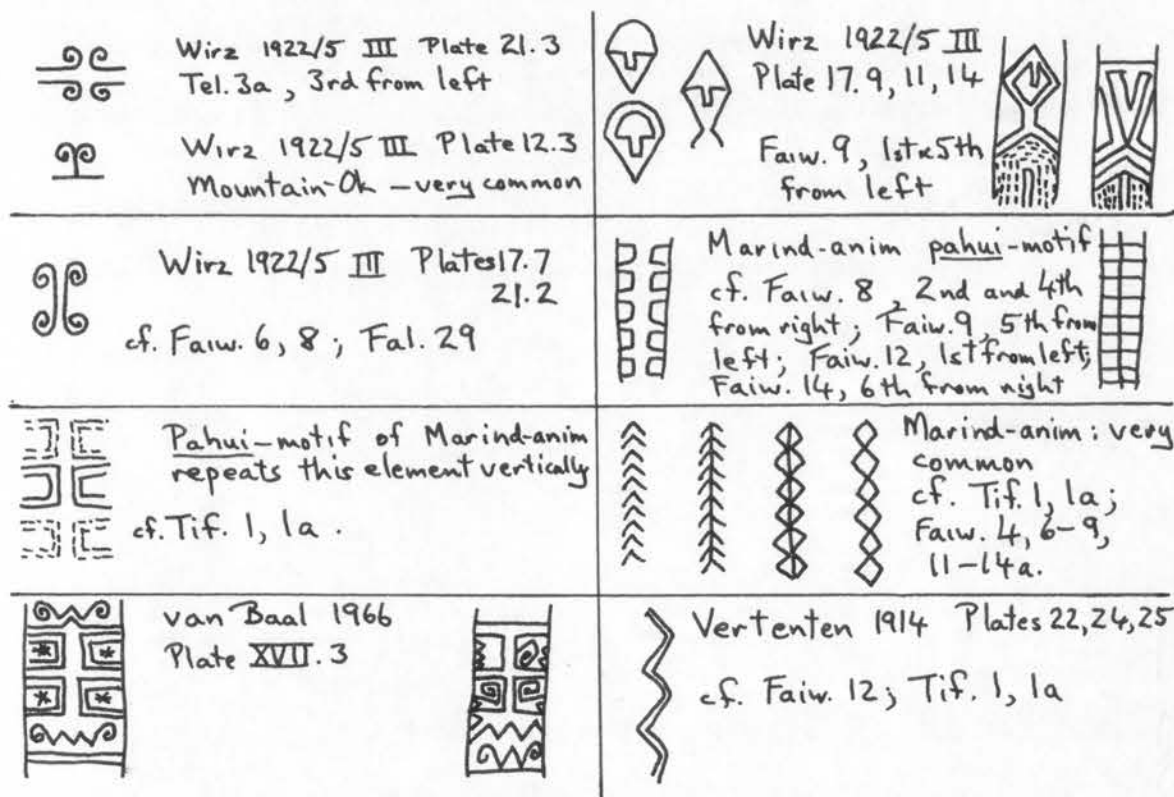
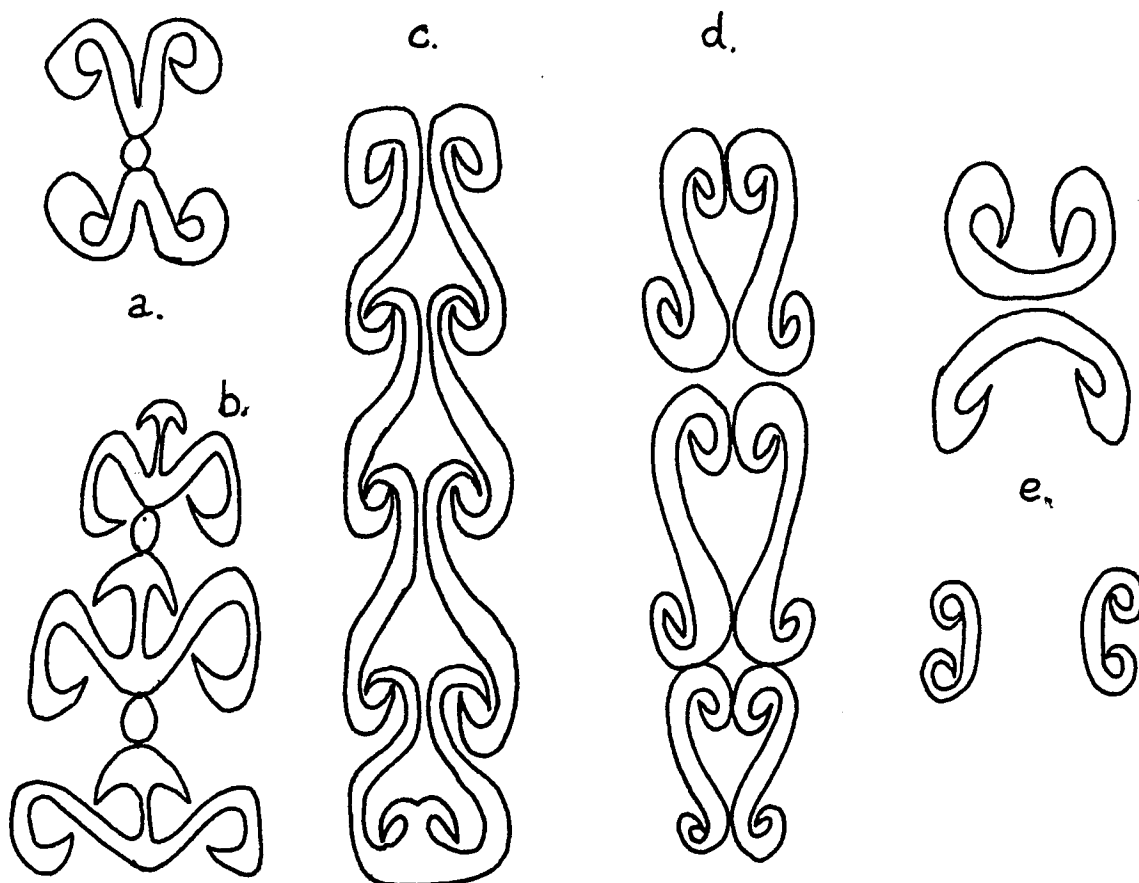


FIGURE 35.

ASMAT art uses spirals but always as a figure enclosed by relief-bands. The spirals are barely-developed forms with acute rather than rounded ends. They may be set in rosette fashion around a small central circle or rhomb, representing limbs, or may be arranged in pairs serially along a vertical axis (Fig. 36a, b) also representing limbs or the wings of a bird or flying fox (Gerbrands 1967b). The spirals may be S-spirals, arranged in pairs vertically, sometimes interlocking in the "running dog" motif (Fig. 36c, d). Other spirals are in pairs as a "boar's tusk" design (Fig. 36e). Almost no use is made of chevrons, dentates or zig-zags, and circles are rare. Asmat art is on the borderline between figurative and non-figurative and it is possible, in many cases, to recognise that a human or animal form is being represented.

Figure 36.



HIGHLANDS art is almost entirely geometric, especially in the Western and Eastern areas, with only the vaguest hints that eyes or limbs are being represented (Ryan 1958:Plates M, N; Appendix D. Section 7, Plates J:6; I). Occasionally the human form is recognisable on Southern Highlands shields, but at other times only inferable from the pairs of circles or triangles possible representing eyes or eyebrows.

I have drawn attention to a number of iconographical correspondences in passing - those between some Papuan Gulf areas, the "Upper Fly" and the Upper Eilanden; those between the Upper Sepik (vicinity North River) and the Sepik generally; and those between the Marind-anim and southern Mountain-Ok. A number of other correspondences are worth listing below (Figs. 37 to 44).

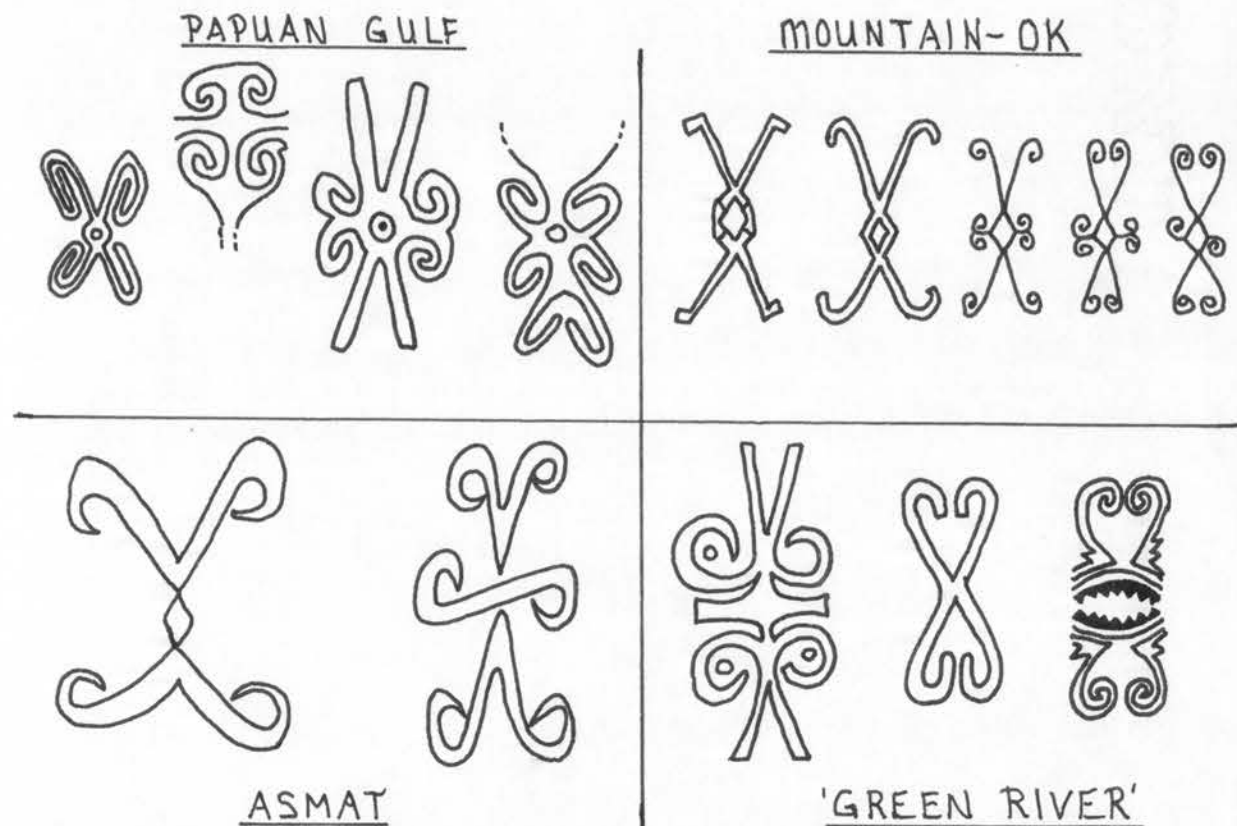


Figure 37.
Spirals as 'limb'-like figures.

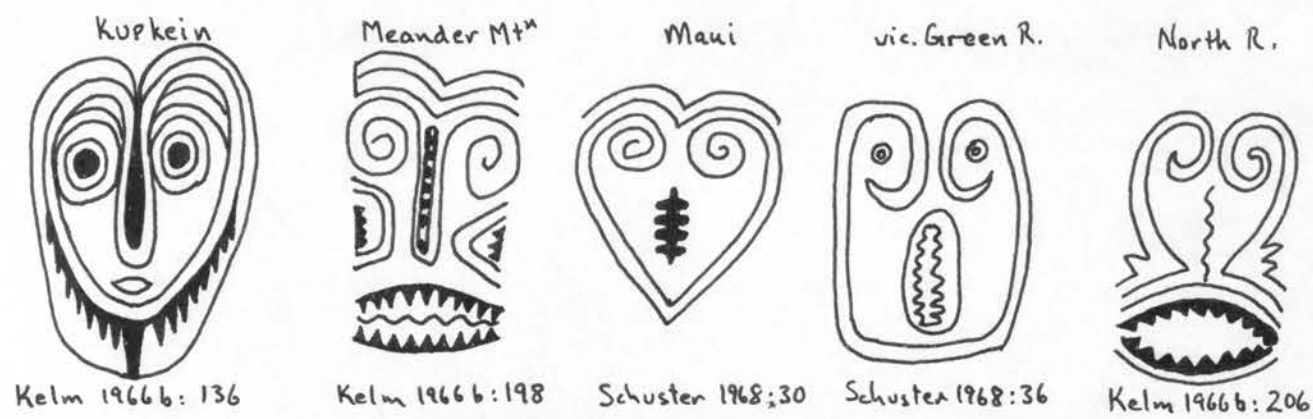


Figure 38: Spirals as facial features.

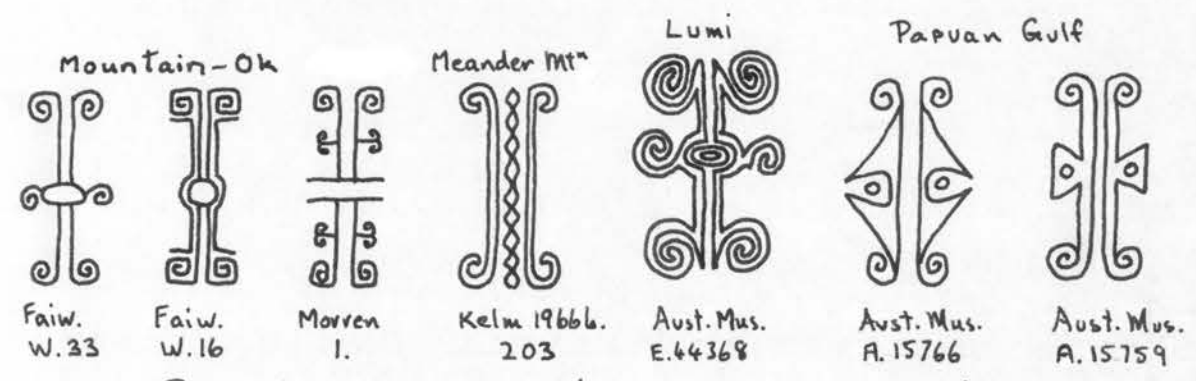


Figure 39: Parallel vertical lines with spirals at extremities.

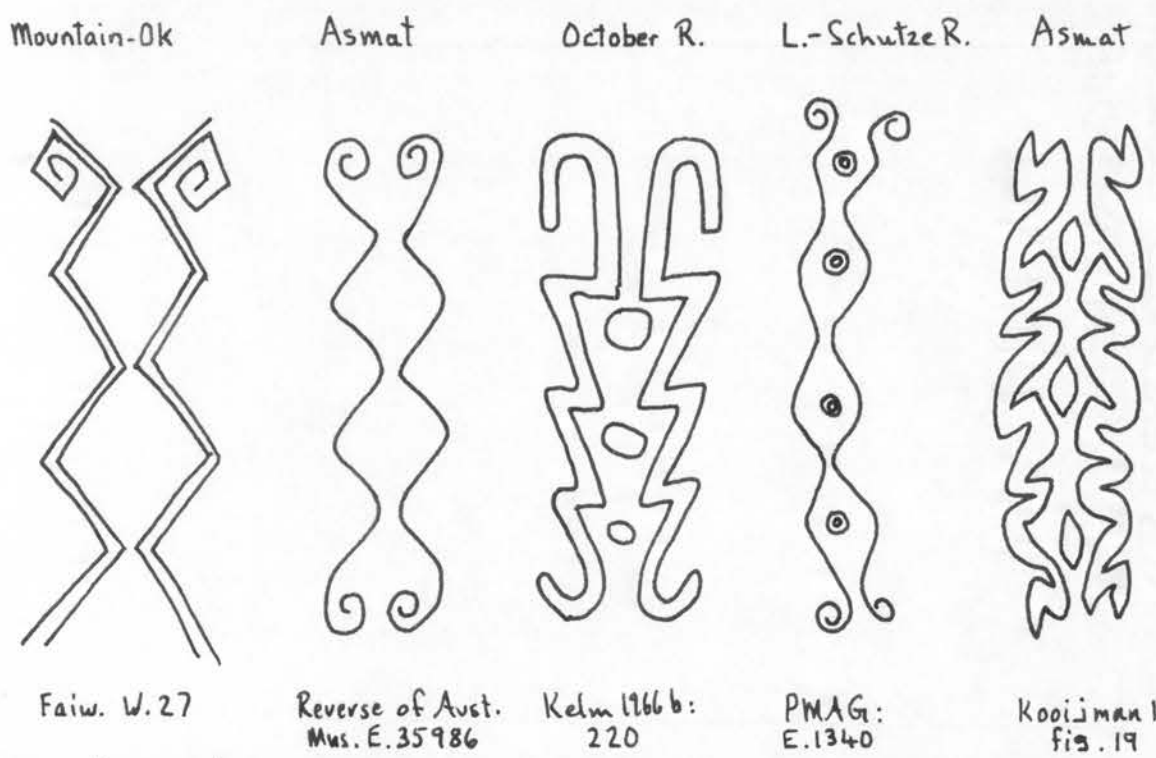


Figure 40: Large 'snake-like' zig-zags (cf. also Kooijman 1961 Plate 25)

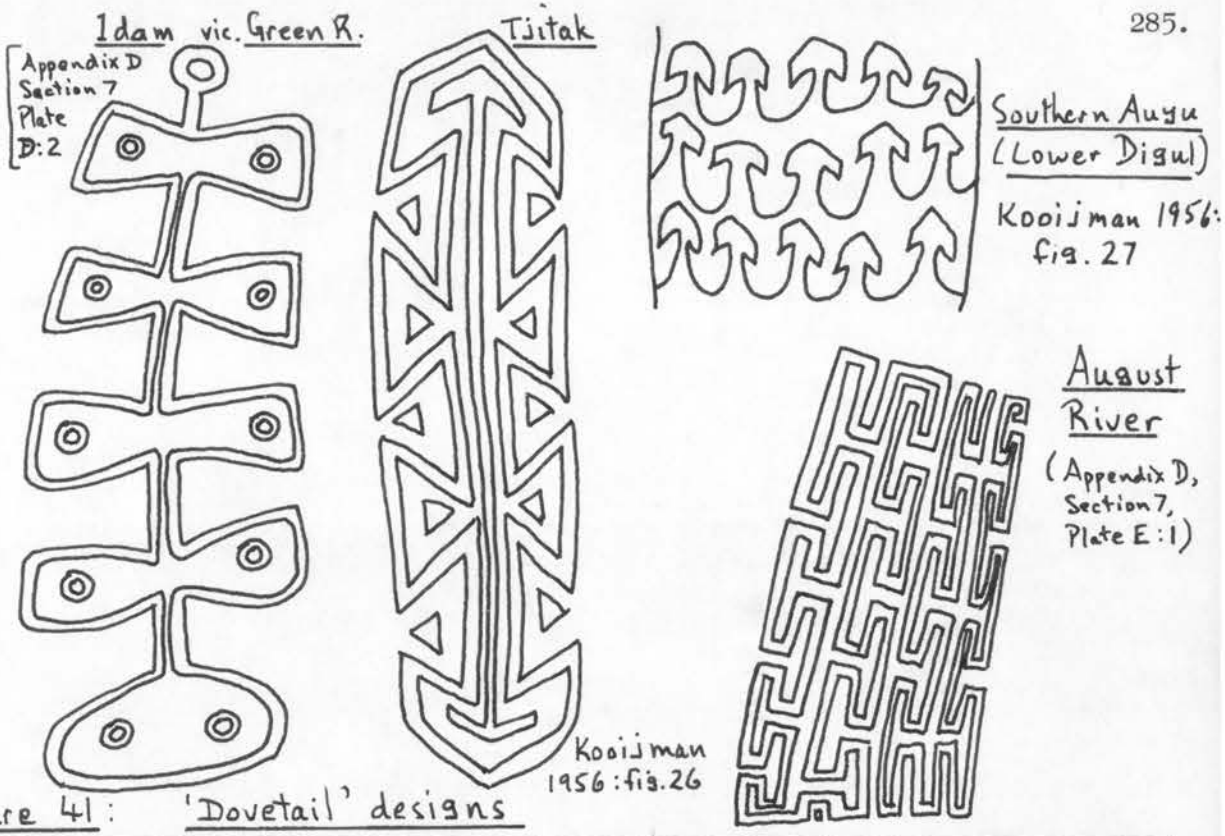


Figure 41: 'Dovetail' designs

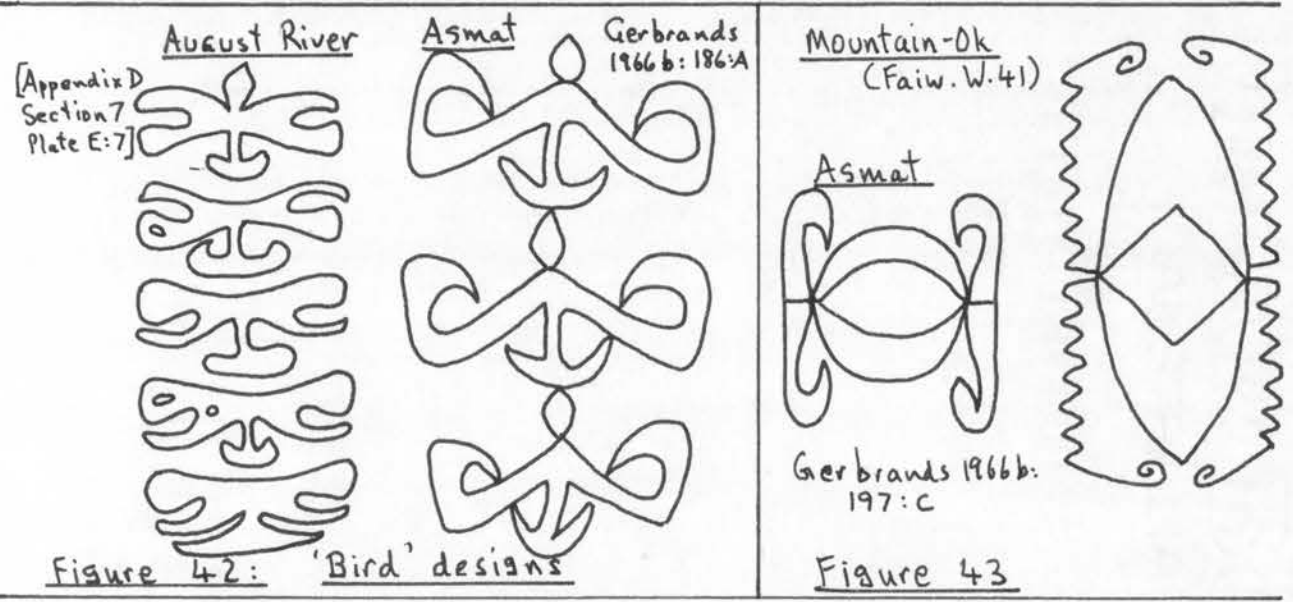


Figure 42: 'Bird' designs

Figure 43

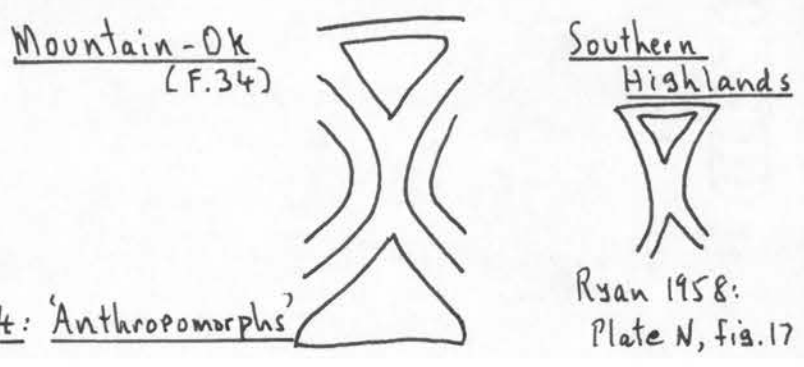


Figure 44: 'Anthropomorphs'

16. AFFECTIVE CHARACTERISTIC:

As stated earlier, this aspect of style involves an understanding of the emotional response of the artist and his audience to his work. Almost nothing is known about this aspect of New Guinea art. We are offered some clues by various authors and Gerbrands (1967a) gives us some insight into the response of artist and audience but most of the comments are to do with whether the work was considered good or bad, i.e. successful or not successful by the standards of the community. This is a most important aspect of study that has received little attention in most studies of 'primitive art', but here I am more concerned to know what emotions the art stimulates.

It is obvious that the pahui-shields of the Marind-anim must stimulate an emotion consistent with the mixture of frenzied sexual excitement and lust for heads that characterises the context in which they are used.

The Asmat carved shields for a ceremony which was a prelude to a headhunting raid organised to revenge the ancestors after whom the shields were named. The shields were also placed in the entrances of yeu houses "... so that the ancestors represented on the shield might keep intruders or evil spirits away from the inhabitants of the household" (Gerbrands 1967b:27). Thus it might be expected that the art provokes feelings of revenge, and feelings of security. These feelings, divorced from the context of the ceremony and from imminent danger to the settlement, would probably be low-key, but doubtless they were there.

Newton remarks of Papuan Gulf art that "... through daily habit a great deal of the terror surrounding many of the most ferocious appearing objects must eventually wear off" (1961:33). However, he reminds us that we are not able to fully experience the circumstances in which the art objects are sometimes first seen "... accompanied as initiations are in some areas, for the girls by legitimized rape, and for the boys and girls alike by such fright that the initiatory enclosure becomes 'like a cesspool'" (ibid). He further points out that so little of their everyday life was enriched by art that on the occasions when it was displayed "... the aesthetic experience must have been almost overwhelmingly rich" (ibid). The nature of the experience was of objects felt to be "... at once belligerent and protective" (1961:35), like the Asmat shields.

Mountain-Ok art was not investigated in the field with the Affective aspect of style in mind. I have heard statements such as 'We make them this way because our ancestors did it this way'; and 'They are merely decoration'; and 'I don't want to sell it as it was made by my father and it bears the mark of his hands'. These comments suggest that the emotional significance of Mountain-Ok art is not directly accessible to the enquirer and at best I have been able to suggest that the two emotions attached to Asmat and Papuan Gulf art also apply in the case of Mountain-Ok art - feelings of belligerence and protection.

On the other hand, Ryan feels that there is no special emotion attached to Southern Highlands art, as the people parted with their shields for a small sum of money and "with no signs of regret" (1958:243).

Although I have been unable to find specific references to the emotional significance of Sepik art, it too is probably both belligerent and protective, especially the shields and men's cult-house decorations.

There is thus a most difficult task confronting the student of art in a New Guinea society. It is almost imperative that he learn the language of the people whose art he is studying, otherwise the search for understanding of something as elusive as low-key feelings about art will be considerably hampered if not made impossible.

17. GENETIC CHARACTERISTIC: THE ARTIST:

The information available on the artist is limited indeed, but sufficient is available to suggest an hypothesis concerning the rate of change of style. First it will be necessary to review the available data.

"..... the wood-carver, the maker of wooden images, has a special place in Asmat society when a wow-ipits (wood-carver) is occupied for days in making a drum or shield, or even longer on a big ancestor pole, he will have no time left to pound sago, to fish or to hunt. The man who has employed him takes over these tasks as a matter of course" (Gerbrands 1967a:35-6). Gerbrands describes how a man becomes a wow-ipits: youths who are interested watch wow-ipits at work and are occasionally allowed to do some preparatory work. After they have attained some skill, they may continue to receive suggestions from other more experienced artists. "But certainly no clear-cut training system or apprenticeship existed, nor was there any concentration

within given family or professional groups" (1967a:170).

Newton says of the Papuan Gulf artists: "... among the Namau, any man is capable of at least attempting to decorate his own canoe or bark belt, but is likely to call in a recognised expert either to carry it through from start to finish or at least to add final touches. He will pay for this, probably with shell ornaments. It seems likely that this procedure was followed for other utilitarian objects" (1961:29). He adds that "... old and learned men are usually on hand to offer advice and criticism about the traditional designs." (ibid).

Whiting reports of the Kwoma of the Middle Sepik: "At the beginning of each ritual the participants examine the carved wooden figures on the altar and comment on their excellence, those who have made them standing by to receive the praise. Men who are adept at carving may expend considerable time and effort fashioning and painting the formalised wooden heads and figures which are supposed to represent the marselai of the cult, in order to have them so displayed" (1941:131).

It would appear, then, that one of the motivations of an artist on the Middle Sepik is to receive praise from his fellow-villagers and thus to attain a high status in the community. I have been unable to discover whether he receives payment for work done on behalf of others or to what extent the artist is a specialist, but the system of public criticism is bound to encourage those with talent and discourage those who are mediocre, thus giving rise to a degree of specialisation.

Although the Abelam do not come within the sphere of this comparative discussion, it is useful to elaborate upon the matter of specialisation

in an area where there is considerable artistic endeavour. "All Abelam painting is executed by groups of men under the direction of a master artist who paints the white (lines of the design) and supervises the painting of the other colours few of the Bengragum men were sufficiently expert - or rather they were not believed by their fellows to be sufficiently expert - to undertake the direction of a complete design, so that (sometimes) even the painting of the white lines is the work of a group" (Forge 1960:13).

The implications these facts have for style relate to variation and change. Where every man is his own artist, because the skills are of a relatively low order, I would expect little change in style. There would be constant reference to prior works for guidance and no one man would engage sufficiently in this sphere of endeavour to develop any remarkable skills or to develop any interest in experimenting with the materials, techniques, and designs current in his community. However, where there are a great many objects requiring artistic embellishment, and where the interest in such is relatively high in the community, I would expect the presence of a critical audience to give rise to specialists, and the volume of work they would be called upon to handle would enable them to develop such a level of technical skill, and of interest in the medium, that they would begin to experiment and introduce new ideas. Because so much work passes through their hands, I would expect also that the genius of one artist would be expressed on many objects and these would find their way outside the artist's own local community and thus influence the artists of other communities. It is easy to see how the Abelam situation could even give rise to "schools" of artists in much the same way as in Western art.

There is another possibility, however, illustrated by the Iwam of the May River. Schuster reports (1968:34) that the design is usually painted in black lines by older experienced men whilst the colour is filled in by younger men. This could result in a considerable degree of artistic conservatism, where the older men execute designs that must conform to ancestral models. Here the volume of work to be done is quite low, being confined almost entirely to the manufacture of a few warshields now and then, and the occasional redecoration of the men's house which must be done quickly. Thus an assembly-line approach is adopted. This is a different situation to that of the Abelam.

Buhler has already noted the profusion of styles in the Sepik area, and puts it down to extensive contact between the various groups of peoples. "Already in early times, in spite of traditional hostilities, feuds and headhunting, commodities, ritual figures, masks, and even ceremonies and songs were interchanged over a wide area. This often led to modifications in their significance, but the external forms remained the same, and were emulated or fused. This is why some styles are disseminated over such a wide area, and especially why it is often hardly possible to distinguish between different style provinces and local variants. Quite often there are to be found in the same settlement masks and sculptured figures that differ completely from one another" (1962:108).

My suggestion is that, were it not for the relatively high degree of artistic specialisation, in turn brought about by the volume of work, these local styles would not have spread so readily, or been able to exist alongside one another. The implication to be drawn from this is

that where the degree of artistic specialisation is low we may expect to find a low rate of change in the style. Where there is a relatively high degree of specialisation we may expect a relatively high rate of change in the style. Haddon has also pointed out that a high rate of production - especially of temporary art works - gives rise to a great deal of variation (1894:97). Newton remarks: "We should probably be wiser to think of change rather than development where Papuan Gulf art is concerned and of rather rapid change at that." (1961.30).

This contrasts with Mountain-Ok art. Change is slow and new ideas take a long time to gain ground. The heterogeneity of styles in the Sepik area, contrasts markedly with the homogeneity of Mountain-Ok art, and if there is any correspondence between Sepik art and Mountain-Ok art, it is more likely to be the result of the receptiveness of Sepik artists than of common historical origins, or of "culture impulses" from the Sepik to the mountain peoples.

18. CONCLUSION:

A comparison was made between Mountain-Ok art and the art of surrounding style-provinces. I confined my analysis to essentially two-dimensional representation and included North Coast, Torricelli Mountains, Sepik River, Asmat-Digul, Fly River, Papuan Gulf and Highland areas.

It was found that with respect to such formal characteristics as shape, proportions, and type of handle, shields were consistent

throughout the North Coast, Upper Sepik (North-October Rivers), Highland and Mountain-Ok areas, with a variation in the Papuan Gulf in that the shields are considerably smaller, and notched at the top end. Torricelli shields were found to be unique in almost every respect. Mountain-Ok houseboards were found to be formally consistent with Marind-anim dapa, the bullroarer, and the Papuan Gulf ancestral boards.

A close functional relationship appears to exist between Marind-anim sago-spathe mourning signs and Mountain-Ok houseboards, and between Papuan Gulf ancestral boards, Faiwolmin (Mountain-Ok) shields, and to some extent Asmat shields.

There is a high degree of correspondence between the Iconography of the Mountain-Ok houseboards and shields and that of some Marind-anim and May River Hills painted designs, and some Papuan Gulf shield and ancestral board designs. Upper Sepik (North-October Rivers) iconography is perhaps more closely akin to that of the Asmat and Papuan Gulf than to that of the Mountain-Ok. It is possible that an historical connection exists between Asmat and Upper Sepik art, but the Mountain-Ok style does not seem to be a link between these two areas. Rather we should look more closely at the possibility of finding such links in the Sibil valley. The most convincing links for Mountain-Ok art seem to be with the Lower Digul (probably via the Upper Digul - see the Muyu shield in Kooijman 1961:Plate 25 - reproduced in Appendix D, Section 7, Plate H:6), the Marind-anim area, and some art of the Papuan Gulf.

Cranstone has pointed out, in reply to earlier suggestions I have made (1967:271) along these lines, that "..... the distance between the mountains and the south coast is considerable, and what is known of the peoples located between them indicates an almost total absence of shields and of local art styles which could bridge the gap" (1968:622). However, the data presented here would indicate that the gap is more likely to be due to our ignorance about these in-between areas than to a lack of shields and connecting art styles. The scanty indications we have of material from the Upper Eilanden and Upper Digul, and the lone canoe-gope supposedly from the Upper Fly, all indicate that there is a need to make close inquiries in the field.

CHAPTER IX.IX. CONCLUSION:

The first part of this thesis was concerned to identify the Mountain-Ok as a cultural entity. Reference was made to the language, the mythology, house-types and initiation rituals. A consideration of the material culture would have been too complex and there is still insufficient data for a thorough analysis, although I have no doubt that numerous items will be found to be diagnostic of Mountain-Ok culture.

The history of the area was dealt with so that the reader might assess the degree of contact each of the tribal groups has had since the first European alien entered Mountain-Ok territory. More important, however, is the usefulness of the series of historical events as a scale by which to assess the age of houseboards and warshields of the Mountain-Ok. I have admitted that the dating of these objects could be carried out more precisely, but this would require the intensive genealogical technique of the social anthropologist. The dating of the houseboards of the Kialikmin/TELEFOLMIN has been more precise than that of all the other objects because genealogical data was available from my wife's research in that area.

The Telefolmin claim that houseboards have only secular significance as purely decorative objects, and the degree of animism attributed to shields is minor. However, from statements made by Faiwolmin informants,

it appeared that this was only one point in a range of variations in the significance of houseboards and warshields. A Guttman scale was therefore constructed to test the extent to which certain traits were required before others could occur. It was found that not only did certain traits scale, but that there were associations between certain traits. Thus, not only did the trait "Ancestral Skulls/Relics in Men's Houses" precede the trait "Ancestral Skulls/Relics in Family Houses", but "Houseboards on Men's Houses" was associated with "Ancestral Skulls/Relics in Men's Houses" and "Houseboards on Family Houses" was associated with "Ancestral Skulls/Relics in Family Houses".

Thus it was shown that the houseboards - and probably the warshields - in some areas have a significance not verbalised and of which the people themselves probably are not conscious. The same may be said of the visual symbols in the designs executed on houseboards and warshields. The symbolism is interpreted only at a sub-conscious level.

Three types of design were identified and their distribution over time and place was examined. The most important finding was that design-types show a cyclical distribution over time - an increase to a peak of popularity and a falling away to low incidence. The conclusion reached concerning change was that it would occur at a very slow rate, and that this would be a result of the low rate of production and the rather weak tendency towards specialisation in the arts.

The data also suggested that a new design appears to have a single point of origin and spreads from that point, appearing at later and later times, further and further from the origin.

Finally, a comparison was made between Mountain-Ok art and the art of surrounding style areas, in a search for correspondences in the various aspects of style. It was found that the most significant iconographical links for Mountain-Ok art seem to be with the Lower Digul and Marind-anim, via the Muyu of the Upper Digul. Close functional relationships appear to exist between southern Mountain-Ok art and the art of the Papuan Gulf, and formal relationships are strong between Mountain-Ok, Upper Sepik (North-October Rivers) and North Coast (Border) shields. Formal relationships also exist between the Mountain-Ok houseboard and the Marind-anim dapa, the Papuan bullroarer, and the Papuan Gulf ancestral board.

A technique exists in the Sepik area - that of incised-lines and -forms - that might be proved to be correlated with a more realistic, a more plastic sculptural representation and this, according to Schefold's recent analysis (1966), is a recent development. The relief-band style might thus be shown to predate the incised-line style.

The diffusion of art styles and the diffusion of ethnic groups probably follow somewhat different rules and certainly operate at different rates. It is hardly any use appealing to ethnic, i.e. blood group genetic, data for decisive proof of an hypothesis concerning the origin of art styles. Such data can be useful if it can be demonstrated that a particular art style belonged to a particular ethnic group which may then be shown to have migrated to another place where that style is to be found at the present time. However, most of the art of New Guinea is perishable and we often lack evidence of the

art of pre-historic groups. In any case the blood group genetic data is very difficult to use in relation to movements of ethnic groups, except in the most general way. Although Macintosh et al. (1958) have been able to say that their data indicate a movement of people east to west or west to east along the Highland backbone of east New Guinea, and Riekman et al. (1961) conclude that the people of the Telefomin area appear to have a different origin to the Highlanders east of the Strickland Gorge, Simmons et al., caution that the results they obtained in West Irian ".... illustrate the wide variations in gene frequencies found in the people of the same area, and even between peoples of the same linguistic group (and that a number of forces operate that) singly or collectively, can radically alter the gene frequency pattern found in any one generation" (1967:296).

It would seem that oral traditions and the identification of trade-routes offer much better scope for tying up the - admittedly recent - history of art in any area of New Guinea (e.g. Newton 1966).

Perhaps of greater importance than an attempt to write a history of art is the attempt to understand the principles of art in any style area, and thus to write an aesthetics of the people concerned. This is research which does not founder on speculation, and is fruitful ground for coming to an understanding of man's apparently universal propensity to communicate at a level other than that of language. So-called primitive peoples have developed quite complex communication systems in their art styles and it is a challenge to the anthropologist to equip himself with all the learning he can muster, the better to study this complex and important aspect of culture. The world to-day

is beset by problems of communication. It is a world where the means of communication are manipulated to achieve ends not always desirable. Perhaps it is someone else's task to define what is desirable and what is not desirable for society, but we ourselves have to decide what is desirable for each of us as individuals. Anything at all that would help us to understand what is taking place in a communication-situation is valuable for it may one day be of vital importance to our survival as individuals in an increasingly complex society.

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a. Family House — Oksivip, KUBRENMIN, Ifitaman



b. Spirit House — Afunabip, BUSILMIN / ATBALMIN

c. Family House — Oksapmin, TEKIN VALLEY





PLATE 2. — Spirit house (amdolel) at
Telefolip, TAMANMIN, Ifitaman

PLATE 3. — dolel walling,
Spirit house at Ubtentikin,
Eliptaman



PLATE 4. — Ubtentikin, Eliptaman: men's houses above, family houses below.





PLATE 5. — Dancing during otban at Telefolip, April 1964— note mafum head-gear.



PLATE 6. — Star Mountains (Fetiktemanmin) sel head-gear.

PLATE 7. — Two fubi adze-blades at Bultemabip, WOPKEIMIN. ($\times \frac{1}{4}$)



PLATE 8. — Hafted mok adze-blade : OKSAPMIN. Scale is in inches.

PLATE 9.



a. detail of T.61 — note 'flaked' edges of relief-bands, clearly indicating use of stone adze.



b. detail of E.22 — use of stone tools is not as obvious here.



c. detail of E.19 — the sharp cuts appear to be the result of the use of steel tools but in fact a sharp stone flake was used, according to informants.

[Note: Plate 10 does not exist].



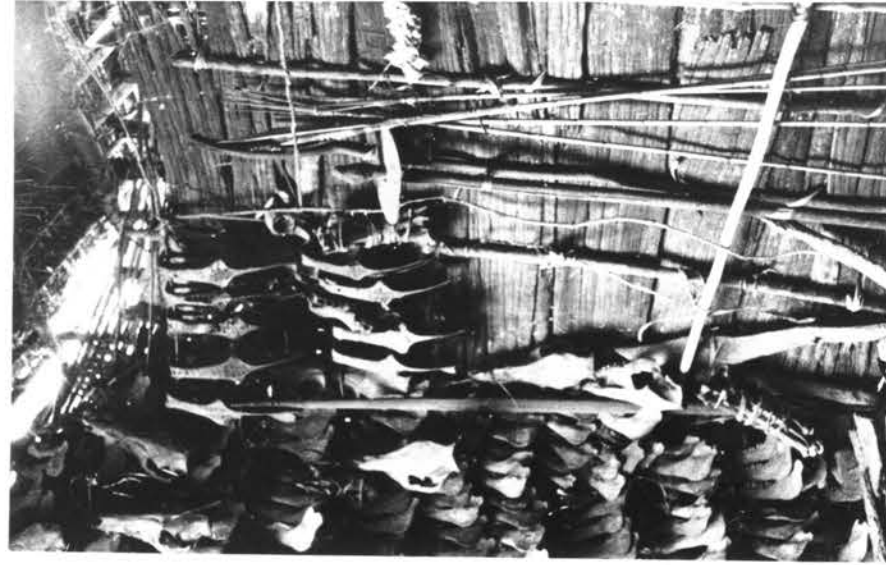
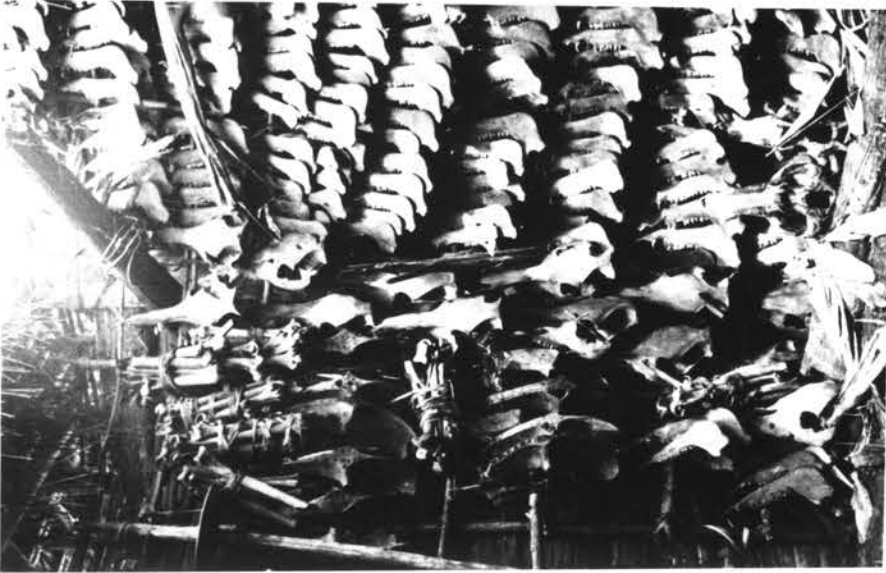
PLATE 11. — Trophies of the hunt:
small animal jawbones in men's house
Kawokabip, WOPKEIMIN (Star Mtns).

PLATE 12. — Pig
Jawbones and
menamem in a
Family House,
Telefolip, Ifitaman



PLATE 13. — Skulls of Ancestors
in a cave at Tifalmin, Ilam valley





c. ↓

↑ a. ↑ b.

PLATE 14. — Interior rear-wall of Tifalmin Spirit-house (Yowolamem) at Brolengavip, BUFULMIN.

Most of the jawbones are of domestic pigs; cassowary sacrum-bones at left and right; pig-skulls left and right; a. crocodile skull b. menamem c. row of small animal jawbones



PLATE 15. — Domolokim, a Kialikmin maker of houseboards.



PLATE 16. — otban initiand Telefolip, Ifitaman — 1964

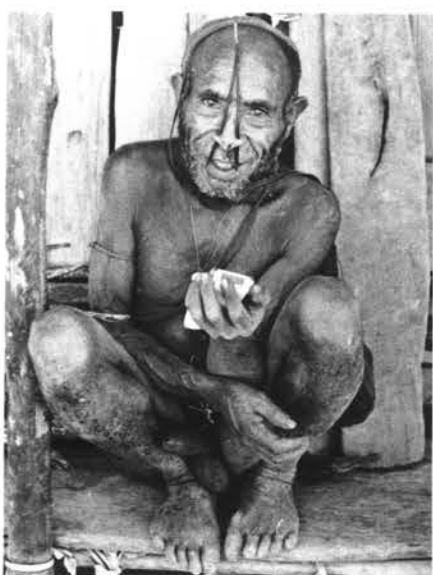


PLATE 17. — Binengim, a Kialikmin maker of houseboards; died 1966, aged c. 65 years.

PLATE 18. — Star Mins (WOPKEIMIN) group



PLATE 19. — Young Women of Silinabip, WOPKEIMIN





Plate 21. — incised lines & scratches
— detail of E. 58472

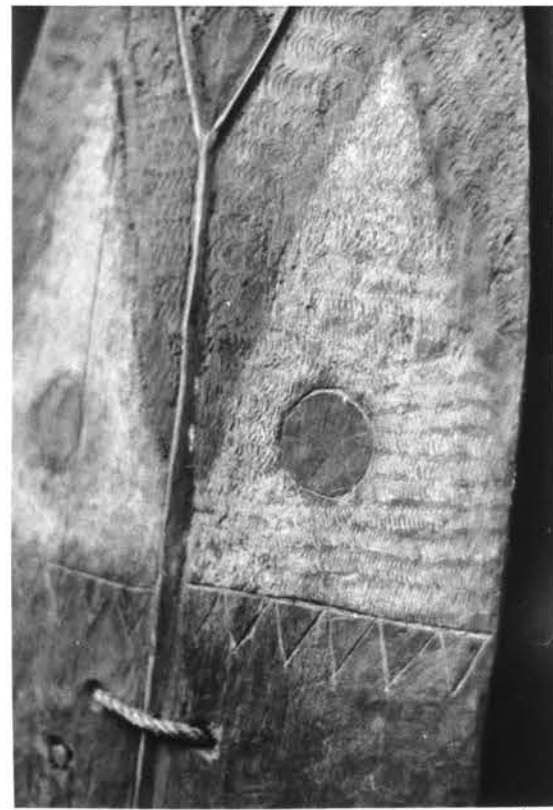


Plate 22. — incised lines & scratches
— detail of E. 58531

Plate 23. — Sculpture combined with
Incised lines: detail of E. 10426



Plate 24. — Sculpture combined with
Relief-bands & -forms: detail of E. 46385





PLATE 25. — Markings typical of use of stone adze.



PLATE 26. — Markings typical of use of steel axe

PLATE 27. — Shield of Buna, Upper Serik



PLATE 28. — Buttress roots of kofekan tree vicinity Iburu. Greenk

