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Abstract

Nearly all anthropologists who work in New Guinea comment upon the importance of warfare in the life of the people. This thesis attempts to make a comparative study of primitive war in New Guinea and trace the significance of certain military characteristics in native society.

The subject matter of the thesis is divided up into four chapters. The first chapter is a discussion of the comparative method and anthropological theory relating to a study of warfare. After Malinowski (1941), war is defined as organized hostility with the aim of political gain. Primitive war is distinguished from advanced war because in the former, political aims are implicit and war sometimes occurs for reasons which are not political, whereas in the latter, the political aim is always explicit.

The second chapter is a discussion of ecological theories which relate to primitive war. The suggestions of "cultural ecologists" (Vayda 1961, 1971; Rappaport 1968), that people fight when their population density increases and they suffer a shortage of resources, are tested with ecological material, demographic information and ethnographic examples. The conclusion of this chapter is that few wars in New Guinea can be explained by ecological factors alone.

The third chapter is a discussion of social organization and war. The argument of this chapter is divided up into three parts. Firstly, an outline of the concepts and a definition of the terms used in the survey. Secondly, a series of twenty seven ethnographic examples accompanied by diagrams of political and descent group organization, and the fields of war. Thirdly, a comparative analysis of war and social organization facilitated by a series of computer programmes. The argument of this chapter, following the political criteria stipulated for war in the first chapter, is that war in New Guinea is basically a struggle between small political factions led by big men.

The fourth chapter is a discussion of primitive military organization. This analysis is based on a series of military principles suggested by Turney-High (1949) and concludes with a comparative study of military organization and the different types of war discussed in the previous chapter.

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WARFARE IN NEW GUINEA:
A Comparative Study

by

P. SILLITOE
(Van Mildert)

B.A.

A Thesis submitted to the
University of Durham
for the Master of Arts degree

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"For what can war but endless war still breed"

Milton - On the Lord General Fairfax

"Qui desiderat pacem, praeparet bellum"

Vegetius - De Re Mil. 3, prol.

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Academically, my greatest debt is to Professor Lucy Mair who supervised the early stages of this thesis and clarified several of the problems surrounding an anthropological study of war. I am grateful to other graduates within the department for informal discussions on various problems, in particular, during graduate seminars. I thank Professor E. Sunderland, head of the Anthropology Department, for his advice on the practical aspects of producing a research thesis.

A thesis based on book research is dependent upon the help and co-operation of various libraries, and I thank all the institutions which helped during the research for this thesis. In particular I thank the Science Library of Durham University and the efforts made by staff to trace and borrow obscure books for me via the inter library loan service. A considerable part of the comparative analysis attempted in this study was facilitated by the use of a computer and I thank Mr. B.M. Youngman of Durham University Computer Unit for his patient guidance of a non-mathematician through the confusing maze of procedures which surround a computer programme.

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Introduction

A comparative study of warfare in New Guinea is the aim of this thesis. The study, however, is limited to certain aspects of war and some important topics are omitted from the discussion. Three major topics relating to warfare in New Guinea are covered in this thesis, they are ecology, social organization and primitive military organization.

Topics omitted, include values to war and the psychological aspects of warfare. Some martial values are briefly touched upon in this study; for example, the value people in New Guinea place on successful warriors and the prestige which accrues to a killer. The superficial accounts which are available suggest that people in New Guinea value warfare highly and this is in accord with the political interpretation placed on war in this thesis. Where the political system functions through war, as leaders of small groups seek to extend or maintain their limited influence, violence is an essential and highly valued feature of life.

The study of primitive values is difficult because the margin of subjective error is large and the problems of interpretation are, in some cases, almost insurmountable. These difficulties increase with a study of the values placed on war because some aspects of

primitive military behaviour are so bizarre that anthropologists are at a loss for an objective reference point and consequently misinterpret the situation. This margin of subjective error can be reduced by the study of specific problems, rather than asking the question, "Why do you value fighting and war?"

The study of the symbolism of weapon design, for example, is a specific problem which will probably clarify some of the values held by New Guinea people with regard to warfare. The decoration of arrows, shields and clubs occurs throughout New Guinea and much of this design probably has some symbolic significance related to the values placed on warfare, (for example, see Leach (1954) and subsequent criticisms). The ceremonies of war, for example peace settlements and victory celebrations, are also saturated with symbolic actions which are relevant for a study of values and war. Why is there an emphasis on re-birth in some peace ceremonies (e.g. the Asmat) and how does this relate to the values people place on war?

Cannibalism is an interesting aspect of war in New Guinea but it is a subject which is omitted from this thesis. The study of cannibalism will facilitate the understanding of various primitive martial values found in New Guinea. Why, for example, do some people eat their foe for religious reasons while others eat their enemies out of spite or for gastronomic reasons? Do different cannibalistic practices reflect different attitudes and values towards warfare? (See Volhard (1939) for a discussion of some of these problems).

Psychological approaches to warfare in New Guinea is another topic neglected in this study. The following hypothesis is an example of the problems which deserve closer study. In societies where young males are spoilt members of a female household, does the lack of discipline encourage the development of an aggressive individual and the kind of domineering male who characterizes New Guinea? The significance of the men's house in New Guinea society is related to this question. Where men live apart from women and regard females as inferior is violence more likely? A psychological study of the rôle of male initiation ceremonies in the development of warriors in New Guinea society is also related to the development of aggressive and assertive males.

Despite the self-confessed gaps in this study of the New Guinea warfare, this thesis attempts a comprehensive analysis of certain aspects relating to culture and war. The period of research which produced this thesis was twelve months from October 1971 to October 1972. After reading the scanty theoretical material relating to primitive war, approximately four months were spent noting books and articles for material on warfare in twenty seven selected societies from New Guinea. All of the material which could be traced in this country was used; a book or article which was unobtainable either at the British Museum, the library

of the Royal Anthropological Institute or from abroad, via the inter library loan system, was classified as unobtainable and not used in the compilation of this thesis. Until June 1972 this raw material was analyzed comparatively and this period of research entailed the use of a computer; the remaining period was spent writing up the fruits of this research.

The ethnographic present is used throughout this thesis for reasons of uniformity. In some regions of New Guinea war is a poorly remembered aspect of a previous way of life which altered with the advent of European control. In other regions the struggle of war continues as an aspect of everyday life. The use of the ethnographic present in anthropology is an ill-defined convention which at some point in time develops into the past tense. Studies that cover a range of ethnographies which are spread over a considerable period of time can write either in the past, the present or a combination of both tenses. The latter alternative, however, produces an awkward style and the writer has to choose between present or past. This thesis uses the ethnographic present tense because the ethnographies on which this study is based are written in the present tense and the situation of war in New Guinea is recent enough to facilitate the conventional use of the present tense.

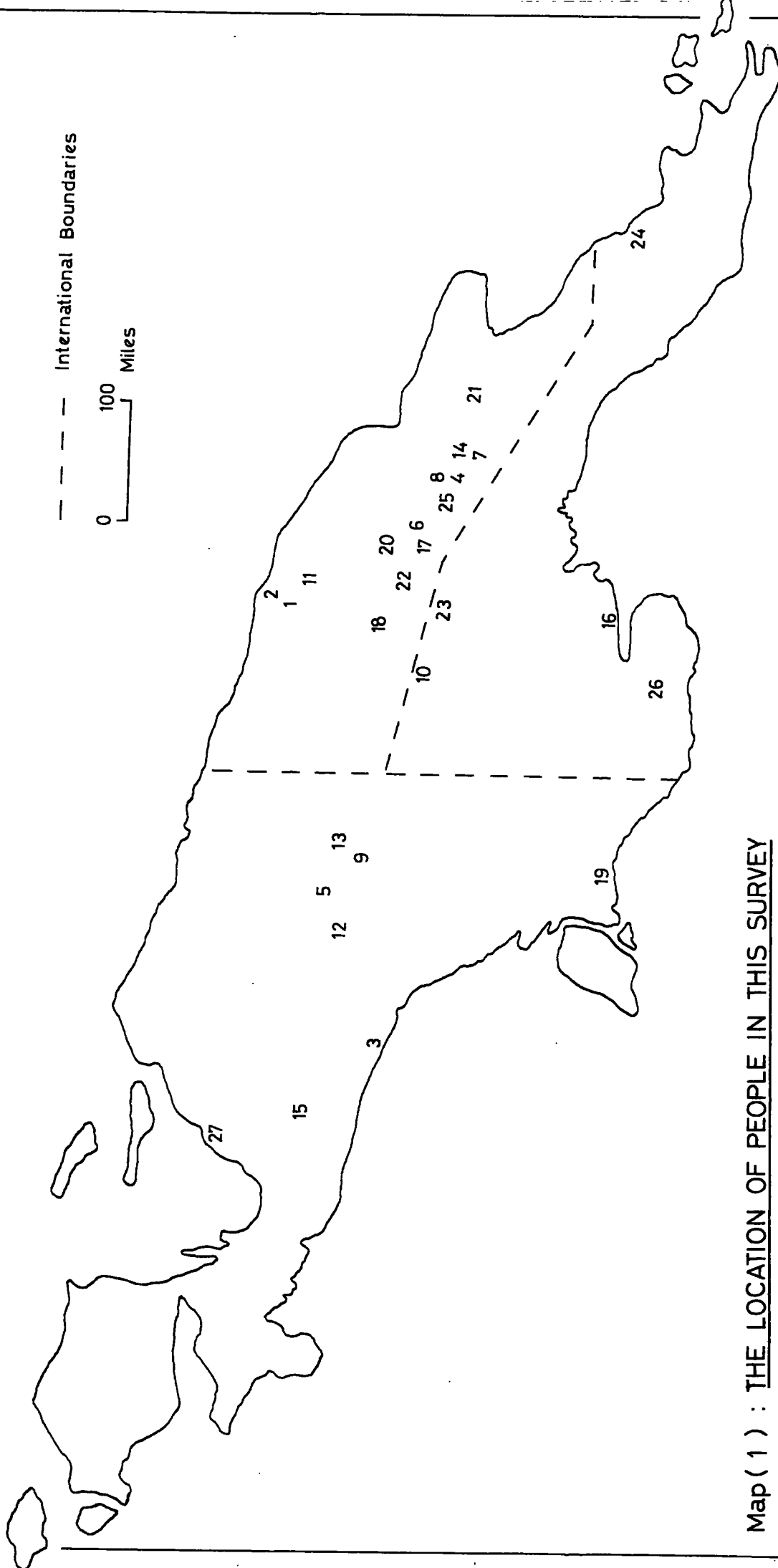
Primitive war is an interesting subject which is

neglected by anthropologists but which attracts sensational writers who misinterpret some of the bizarre actions associated with war. The scope of this thesis, as indicated, is limited but the purpose is to analyse certain aspects of war, because this is an important institution in the understanding of New Guinea society. So long as the institution of war remains unstudied, our understanding of New Guinea society remains incomplete.

Chapter I

Comparison and Theory in the Study of Primitive War

The object of this thesis is to study from a comparative aspect, warfare in New Guinea. The intention is to define the type of war found in New Guinea and to trace the variables which characterize, and account for, these patterns of war. After a brief survey of the anthropological theory which relates to warfare, the argument of the thesis is divided into three chapters which study specific aspects of war in New Guinea. The first chapter deals with ecology and studies of primitive war which postulate that population density and shortage of resources are the reasons for war (Vayda 1961;1971). Ecological factors are significant in a study of primitive war but the conclusion of this chapter is that few wars are explained in terms of ecological factors alone. The second chapter deals with social organization and primitive war. In this chapter two important themes relating to the ethnography of New Guinea are discussed and they are the significance of descent (Barnes 1962; Langness 1964; Strathern 1972) and the rôle of big men (Read 1959; Strathern 1966; 1971). Fortes (1970:123), an authority on descent theories, notes that field studies in New Guinea "have shown how 'dogmas of descent' may be used to identify segments of tribal structure, recruitment to which is, in fact, based on a variety of filiative and affinal kinship credentials." The argument of this chapter is



Map (1) : THE LOCATION OF PEOPLE IN THIS SURVEY

(Numbers refer to alphabetical list of People given in text)

that an emphasis on descent, as a recruitment principle to the political groups concerned with war, is misleading and that the significant groups in New Guinea warfare are political factions centred upon big men. The third chapter deals with primitive military organization and argues that a comprehensive study of military engagements should use certain military principles (Turney-High 1949) and not proceed with piece meal descriptions (Vayda 1960).

The distribution of the people included in this study is plotted on map (1) which shows a reasonable geographical spread across the island. The groups represented on the map are called people and this term refers to a distinct linguistic, cultural and territorial segment of the island population. The comparative study of this thesis includes the following people (numbers refer to location on map (1)):

- | | |
|---------------------------|--------------------|
| 1. Abalam | 15. Kapauku |
| 2. Arapesh | 16. Kiwai |
| 3. Asmat | 17. Kuma |
| 4. Bena Bena | 18. Mae Enga |
| 5. Bokondini Dani | 19. Marind-anim |
| 6. Chimbu | 20. Maring |
| 7. Fore | 21. Markham Valley |
| 8. Gahuku | 22. Melpa |
| 9. Grand Valley Dani | 23. Mendi |
| 10. Huli | 24. Orokaiva |
| 11. Iatmul | 25. Siãne |
| 12. Ilaga Dani | 26. Trans-Fly |
| 13. Jalé | 27. Waropen |
| 14. Jate, Kamano, Usurufa | |

There are three reasons why the sample is not larger. The first reason is diminishing returns, where the time expended in collecting further ethnographic evidence outweighed the small amount of material gained. The second reason is that large areas of New Guinea remain unexplored by anthropologists. Map (1) shows that there are large regions which are unstudied, for example, three outstanding regions are Telefomin, the upper reaches of the Fly river and the Star Mountains of West Irian. The third reason for not enlarging the sample was the limited amount of time available to complete the study. It is for this reason that the island societies surrounding New Guinea are omitted from the survey; this is a regrettable omission because of the information available on warfare for some island societies - for example, the Trobriand Islands (Malinowski 1920), Tanga (Bell 1934), Manus (Schwartz 1963) and the Torres Strait Islands (Haddon 1908).

A brief note is in order concerning the standard of the ethnographies used in this study because some works represent a high standard of fieldwork, while others are based on dubious material. The standard of an ethnography is approximately correlated with the date of the fieldwork; the older the work, the less reliable the information. It is a paradox that modern ethnographies with no specific interest in warfare yield more information than older books with specific chapters on war and this is a reflection of a high standard of fieldwork, that

the library researcher can glean information on topics which did not specifically hold the interest of the fieldworker.

An attempt to indicate the reliability of the data used in this survey is made in table (1) where the people are listed according to the standard of the information referring to warfare. The list does not reflect the standard of fieldwork for the societies concerned but is only an indication of the information on war; in some societies, for example, the information on war is thin but the published data on another aspect of the society represents a high standard of fieldwork.

The table estimating the quality of information on warfare is important because in a comparative study, societies with an inadequate amount of data might be misclassified according to these few facts. The lack of standardized reporting on various topics is a serious handicap to comparative work in anthropology.

<u>Good</u>	<u>Reasonable</u>		<u>Poor</u>
Asmat	Abelam	Waropen	Gahuku
Grand Valley Dani	Arapesh	Trans-Fly	Iatmul
Marind-anim	Chimba	Mae-Enga	Ilaga Dani
Maring	Fore	Bena Bena	Mendi
Melpa	Jate, Kamano, Usurufa	Kapauku	Kuma
Huli	Kiwai	Bokondiri Dani	Markham Valley
Jalé	Orokaiva		Siane

Table (1) : Standard of information on warfare.

Table (2) is an attempt to indicate the reliability of a society in the definition of a group of people, computed on the basis of a particular selection of characteristics, because this type of classification forms the basis of the comparison in this study. The table is based on the information from twenty computer programmes and the figures indicate the number of times a society fluctuates from one cluster to another. A society which changes clusters frequently is a poor society for the definition of any group and these societies represent borderline people between two groups. Stable societies (those with a low figure in table (2)) are the most reliable for indicating a comparative trend.

The comparative study of primitive warfare has an honourable ancestry which stretches back to Steinmetz's (1894) study of feud and vengeance in primitive societies. The comparative study of several aspects of culture by Hobhouse et al (1915) includes a section which attempts a comparative study of primitive war. More recently, Otterbein (1965;1968) has published cross-cultural surveys on feuding and warfare.

0	1	2	3	4	5	6	7	8
Waropen	Melpa Kuma Asmat Iatmul Kiwai	Mendi Kamano Jate Usurufu	Bena Bena Kapauku Bokondini Dani Ilaga Dani Abelam Markham Valley Orokaiva Mae Enga Huli	Grand Valley Dani Jaké Trans- Fly Arapesh Chimbu	Maring	Marind Gahuku	Siane	Fore

Table (2) : Reliability of people in the definition of comparative groups

In a comparative study, a short note of introduction is necessary to explain what the writer understands by the term "comparative method" because of the various interpretations which different writers place on this method of study. Anthropologists have argued over the value of comparison since Galton criticised a paper read by Tylor (1889) at a meeting of the Royal Anthropological Institute and Boas (1896) published a critique of the comparative method. Today, anthropologists are divided in opinion about the value of comparison. Some anthropologists (see Schapera 1953; Evans-Pritchard 1963) argue against the value of the comparative method because the lack of standardization and subjective nature of the material make objective comparison impossible. Other anthropologists (see Radcliffe-Brown 1952; Murdock 1949) think that the comparative method is indispensable in anthropology for the revelation of regularities which form the basis of human society. In this thesis a middle path is taken because there are valid criticisms on both sides of the comparative debate. In the interests of anthropology "the hatchet should be buried" in the "bitter feud between comparativists and non-comparativists" (Köbben 1970:593) because this is the only way our understanding of society can progress.

The method used in the research for this thesis is called "The Method of Uncontrolled Comparison" by Sahlins (1963) because facts are not selected to fit a pre-conceived hypothesis. Ethnographies were noted for

all facts relating to warfare and all this information was taken into consideration. The large number of facts made a computer analysis essential because the correlation of these facts was impossible by brain. Twenty seven societies, for example, with a possible combination of 376 variables for each society results in 2×10^{121} possible correlations. I hope that the result is not judged as "tabulated nonsense" (Leach 1965:299) which is a comment made on the comparative work of Murdock. The use of mathematics and statistics in social anthropology is little developed outside America (see K8bbsen 1952; Mitchell 1967). It is in America that the method of comparison is developed beyond the level of "the illustrative method" (Evans-Pritchard 1963), where pre-conceived ideas, considered applicable universally, are illustrated by a few carefully chosen examples. The illustrative method was used by the Victorians and as late as 1951 by Radcliffe-Brown but it is not a comparative method. The advantage of a computer is that it facilitates a complex comparative study which is otherwise impossible to achieve.

Anthropologists who doubt the validity of comparative studies are concerned with the raw material used for study, not the sophisticated methods used to achieve the comparison. Some American anthropologists attempt cross-cultural surveys which are too ambitious with regard to our knowledge and this results in a careless use of source materials which invalidates the comparison.

Evans-Pritchard (1963:26), for example, criticizes Murdock for his "unbelievably uncritical use of sources". Schapera (1953) and Evans-Pritchard (1963) discuss the problem which faces comparative students in the selection of societies for their survey. Some writers use single references of questionable reliability as authorities, other students use ethnographies written in a single language and some anthropologists select their facts to fit pre-conceived theories. The societies included in this study were selected on the basis of published material relating to warfare and where possible no single source of reference was relied upon - this, however, raises new problems.

Where several sources of reference are used for the same people, the evidence given by different fieldworkers is sometimes contradictory. In this case, the accuracy and reliability of the raw material available for comparative studies is called into question, but this is not a problem peculiar to comparative studies. The subjective nature of anthropological fieldwork is an uncontrolled element in any study but it reaches alarming proportions in the study of a bizarre subject such as primitive warfare. This problem is reflected in the work of Mead and Fortune who were co-fieldworkers among the Arapesh. Mead (1935:23) thinks that "warfare is practically unknown among the Arapesh" who are a placid people with a maternal temperament. Fortune (1939), in a paper

entitled "Arapesh Warfare", criticizes Mead and thinks the Arapesh are a warlike people fighting over women. The margin of subjective error increases in a study of primitive warfare because few fieldworkers live in a society where war is still a part of life. In a comparative study of this type there is no solution to this subjective problem but it is a limitation which reduces the validity of any comparative survey.

The lack of a standard terminology in anthropology increases the problem of subjective interpretations because objectivity, of the most elementary type, is impossible. When, for example, is a hamlet not a hamlet but a scattered homestead or a village? Or, at what point does a truce develop into peace? The difficulty surrounding the lack of definitions is increased by the translation of a variety of different customs into the same term. The uncertain meaning of the terms used in several ethnographies reduces the validity of the generalizations made in this comparative study but in an attempt to reduce this problem the key terms used in this thesis are defined.

Another difficulty with comparative studies is the selection of groups for analysis. Schapera (1953) questions the meaning of the word "society" and points out that no writer has given an adequate definition of the term. This, however, is not a criticism applicable only to studies of a comparative nature. It is a

problem which faces all anthropologists because no fieldworker can gain experience of a whole society. Usually their data is restricted to a few small groups but all anthropologists refer to Trobriand society, Nuer society or Tswana society. In this study the term people designates a specific cultural and linguistic group which is distinguished by the fieldworker; the term society is used synonymously with the term people.

The criticisms of some anthropologists indicate deficiencies in the comparative method but this does not invalidate the use of comparison in anthropological studies. The critics are correct when they point out that the complexity and volume of anthropological knowledge makes world wide comparisons impossible because there is no way to handle all the data. Comparative studies should restrict themselves to a specific region and a specific topic because the student has control over his information. As Evans-Pritchard (1963:31) points out, it is by the solution of "small problems and not by attempting sweeping generalizations that we shall make progress: piecemeal and little by little, it is true, but firmly grounded in ethnographic fact."

The critics, however, are too restricting with the limitations they place upon comparative studies. It is necessary to acknowledge the limitations of a comparative study and indicate the short comings of the result but this does not mean comparison is of little value in

anthropology. Indeed, comparative studies can unearth new insights into old material and indicate fruitful areas for future fieldwork. The comparative techniques developed by some anthropologists (see Hymes 1965; Naroll and Cohen 1970) allow studies to proceed into new fields but it is necessary to realize that statistical correlations only pose questions and do not answer them. In this thesis the statistics and tables resulting from the computer analysis are kept to a minimum so that the reader is not blinded to the argument by a barrage of poorly explained figures, tables and graphs. Where possible, answers are suggested for the correlations produced by the computer and in this way a general picture of warfare in New Guinea is built up.

The statistical method allows an objective comparison on the variables programmed into a computer but this does not meet the objective requirements of science because the study is based upon subjective raw material. The method of comparison is objective but the study is built on subjective foundations and the results are not exact or reliable but they do indicate trends.

Ethnologists have filled numerous museum show cases with primitive weapons but the study of warfare has received little attention from anthropologists. Thirty years ago, Radcliffe-Brown (1940:xix) wrote that "the comparative study of war as a social institution has not yet been undertaken" and this statement remains true today.

Bohannan (1967:xiii), in the introduction to a reader on law and warfare, writes, "interestingly enough, warfare is seldom handled in the anthropological literature, With some noteworthy exceptions, the ethnography on it is poor."

Why is there this gap in anthropological work?

There are three probable reasons for a lack of interest in primitive war. The first was the desire of anthropologists in the 1930's and 1940's to disprove the Victorian notion of the primitive and childlike savage. An interest in the barbarous customs surrounding primitive war would have undermined their efforts. Malinowski (1941:521), for example, was concerned that anthropologists were not the clowns of social science, who amuse readers "with anecdotes on cannibalism or head-hunting, on preposterous magical rites or quaint war dances." The second reason follows on from the first because the anthropologists who ignored warfare laid firm foundations for the study of other institutions. Strong tools of analytical enquiry forged for the study of these social institutions resulted in their study proceeding in leaps and bounds under the pens of anthropologists such as Evans-Pritchard and Fortes. This progress was made at the expense of studies in primitive war which have consequently lagged behind the study of other social institutions.

The third reason for the lack of interest in primitive war is that fieldworkers rarely study a culture in which wars are a part of life. The result is that

anthropologists have difficulty re-constructing from native accounts the rôle of war. Re-construction is particularly difficult in New Guinea because natives exaggerate about their activities in war; for example, some of the startling case material in Berndt (1962) which are plainly fantasies of male informants. The fact that anthropologists rarely study war in the field is the probable reason for the oversight concerning the crucial rôle of big men and their political factions in war. The egalitarian nature of society in New Guinea soon hides the fact that big men are crucial in an understanding of war.

In the anthropological study of war there is a lack of acceptable definitions. "As a matter of fact, war has rarely been carefully defined in anthropological literature" (Newcomb 1950:317). It is necessary therefore, to outline the meaning of the term primitive war as used in this study. There are three terms, sanction, feud and war, which require adequate definition as a preliminary to a study of primitive war.

Radcliffe-Brown (1933:531) defines a sanction as "a reaction on the part of a society or of a considerable number of its members to a mode of behaviour which is thereby approved (positive sanctions) or disapproved (negative sanctions)." In this study, a sanction is a punishment imposed upon a wrongdoer and which members of the culprit's group consider a fair judgement which

does not require retaliation. In New Guinea sanctions are imposed upon members of a small social group which is defined as the group within which lethal fights are forbidden. Sanctions imposed within this group represent the extent of law in New Guinea because it is only within this small group that redress by another member is judged as fair behaviour and the wrongdoer or his relatives obliged to accept the judgement of the group. A wrongdoer brings upon himself the condemnation of his small political group and the result is that the culprit is forced to accept any sanction imposed upon him because it has the tacit approval of the other members of his group. In this context, the egalitarian nature of New Guinea society is important because there is no authority with the power to impose sanctions; the punishment of wrongdoers is according to the opinion of members of the group, although the opinion of big men carries more weight than the opinion of others. The warlike environment of New Guinea is significant in the imposition of sanctions because the solidarity of the small political group in which punishments are imposed, is essential. The group within which lethal fights are forbidden is small and bound together by numerous individual ties, and for this reason, group opinion and the imposition of sanctions operates to hold the group together and facilitate the punishment of persistent wrongdoers.

Redress upon persons outside the small political

group within which lethal fights are forbidden is not a sanction because these actions can cause fights which escalate into war. Some writers (e.g. Pospisil 1969) refer to these actions as external self-redress and classify them as sanctions when the punishment is accepted as justifiable by the culprit's group. In New Guinea this distinction is unnecessary because no retaliatory actions outside a small political group are considered justifiable and these actions contribute to the strains which cause a war.

Some anthropologists try to distinguish between feud and war but Radcliffe-Brown (1940:xx) notes that "it is very difficult to draw an exact dividing line, valid for all societies, between war and feud." In New Guinea it is not only difficult, but undesirable, to distinguish between war and feud. The aim of a feud is to secure revenge. Another characteristic of a feud is that it lasts for a lengthy period; for example, Evans-Pritchard (1940:150) refers to a feud in Nuer society "in the sense of lengthy mutual hostility between local communities." The enemies in a feud are also neighbouring, probably related, groups. Hobhouse et al (1915:228) think that feuds are "reprisals exercised by one branch of a community upon another, e.g. as between two clans or two local groups within a tribe." The close relations between members of feuding groups have important consequences for the outcome of a feud because fighting is inconvenient for social relations and this is the contradiction of a feud which

results in a settlement, (see Colson 1962). Feuds also follow certain rules or procedures recognized by both sides, as Radcliffe-Brown (1933:204) writes, "the retaliatory action is regulated by custom; the *lex Talionis* requires that the damage inflicted shall be equivalent to the damage suffered." The equivalence of retaliatory actions is a significant characteristic of feud and the acceptance of *wergild*, in lieu of a life, is important in the settlement of a feud. The social obligation to exact revenge in a feud is usually reinforced by social values and prestige which induce a person to fulfill his obligation; this is particularly the case in feuding societies of the Middle East, with their concepts of honour and shame.

No fighting in New Guinea follows the pattern which defines a feud but all the fights which occur have some of the characteristics which typify a feud and for this reason it is incorrect to try to define between war and feud in New Guinea. The aim of a war, as opposed to a feud, is that people fight for gain. All New Guinea wars are also fought to secure revenge. On the basis of a minimum definition therefore - viz. that the aim of a feud is revenge and the aim of a war is gain - the hostilities which occur in New Guinea are a hybrid which cannot be clearly distinguished from war or feud. In New Guinea the same type of hostility occurs between neighbouring groups and distant groups, and although the geographical proximity in the former case results in

a larger number of individual ties and an increased likelihood of settlement, the type of war is not essentially different. The duration of wars in New Guinea varies and in some cases the hostile relationship between two political groups is permanent. The time a war lasts is correlated with the size of the political groups fighting the war and the relationship between these groups; for this reason a distinction is made in this thesis between minor and major war. The concept of equivalence occurs in New Guinea warfare when two groups intend to negotiate peace, otherwise there is no idea of equivalence and enemy groups commonly aim to destroy one another. Prestige is also an important factor in New Guinea warfare but not in the sense of prestige in a feud, where social values induce a person to fulfill his revenge obligations. In New Guinea, the reputation of a man, who fails to seek revenge, suffers but prestige is gained by men who fight for no reasons of revenge; the act of fighting brings a man prestige and a successful warrior builds up a social reputation which, if combined with other characteristics, may result in the man developing into a big man.

The important difference between the feud, as defined above, and war in New Guinea, is that the latter occurs for political reasons. This thesis argues that war in New Guinea can only be understood when it is studied as a political mechanism used by big men who lead small political factions. The wars which occur in New Guinea, therefore, although they display

certain characteristics which typify a feud, are hostile group encounters which require study in their own right as a specific type of aggressive action.

Definitions of primitive war vary in their comprehensiveness and emphasis. Berndt (1962:232) for example, defines war as, "planned violence carried out by members of one social unit, in the name of that unit, against another." Newcomb (1950:317) attempts a more comprehensive definition and treats war "as a type of armed conflict that takes place between societies, meeting in competition for anything that is valued by the groups involved." Bohannan (1963:306) thinks war is "a contest having as its aim a peace in which the balance of power is shifted." The definition of war given by Malinowski (1941:523) supplies a useful working hypothesis with which to analyse concepts relating to primitive war. Malinowski defines war "as an armed contest between two independent political units, by means of organized military force, in the pursuit of a tribal policy."

According to Malinowski we can only talk of war when the aim of organized hostilities is political and is in pursuit of group political policy. The argument of this thesis is that warfare in New Guinea fulfills this basic requirement and can legitimately be called war. The policy of the small political groups in any region is the reason for the distinctive patterns of warfare found in New Guinea.

Although the overall pattern of warfare in New Guinea fits into a political framework, there are wars which occur for no apparent political reason. The problem is the classification of these types of hostility because, according to Malinowski's definition, they are not war. Malinowski (1941:538) thinks that any other type of hostility "is not cognate to warfare, for it is devoid of any political relevancy ... Human man-hunting in search of anatomic trophies, the various types of armed body snatching for cannibalism, actual or mystical, as food for men and food for gods, present a phase of human evolution which can be understood in terms of ambition, thirst for glory, and of mystical systems." Bohannan (1963:305) holds a similar view to Malinowski and argues that in New Guinea "the main point of much fighting is acquisition of heads, which are needed in religious and prestige ceremonies. ... It may be unwise to call this sort of situation warfare."

The argument of this thesis is that these other types of hostility are warfare so long as they occur within a context which can, when the occasion arises, be turned to a political advantage. In this study the term primitive war is used to designate hostilities which fit into an overall political pattern but which, on occasion, occur for reasons with no political context. The term advanced war designates hostilities which occur for political reasons only and this type of war corresponds

to Malinowski's "true war." Before proceeding it is necessary to correct a popular misconception advanced by writers who refer to primitive war as a sport. Malinowski (1941:538), for example, refers to "sportive types of human man-hunting" and Vicedom and Tischner (1943) describe highland battles as "athletic matches." These metaphors are misleading, ethnocentric judgements and obscure a proper understanding of the nature of war in New Guinea.

The acephalous societies of New Guinea, unlike those described for parts of Africa, cannot be understood in terms of the balanced opposition of groups formulated according to a descent ideology. In New Guinea the political system approaches anarchy. The political leaders are men who have the ability to extend their influence over a small group but the political system is such, that big men cannot extend their influence, which depends upon personal contacts, beyond a small group. The political system comprises numerous faction groups which stand opposed and in this sense the system is in balance. A weak group, however, ceases to exist in this system of opposed groups because the balance of strength is upset. It is against this fluid and ever changing political background that primitive war in New Guinea operates. The political system operates through war because big men and their factions fight to extend their unstable political influence or to weaken the threat of a rival group. Primitive war in New Guinea

rarely occurs for explicit political reasons because the leaders of political groups do not have the power to command their followers to fight. Group policy is political survival but big men have to manipulate situations, between members of their group and members of other groups, to their political advantage. For this reason the expressed objective of a war in New Guinea is redress or heads or economic gain but the implicit objective, in many cases, is political.

The cause of some wars in New Guinea is redress for a wrong. Once a war is started the obligation to seek revenge maintains hostilities and in this respect, as mentioned earlier, war in New Guinea is similar to a feud. Some writers refer to the feud as a primitive judicial mechanism, for example Malinowski (1941:541) thinks the feud "is a judicial mechanism for the adjustment of differences." Warfare in New Guinea, however, cannot be thought of as an aspect of the indigenous legal system because wars occur between independent political groups, whereas law presupposes a political authority with jurisdiction over both litigants and a compliance with the opinions of this overall group by both parties to a dispute.

An important reason for primitive wars is economic and political gain. When one group is short of resources they sometimes try to seize those of others and some writers (Vayda 1961) suggest that population pressure is

an important factor because a larger group experiences shortages of resources. Only a few wars in New Guinea however, occur for reasons of economic gain because on the whole there is no shortage of resources. A significant consequence of war is the pillage of property from a defeated group but this only is a bonus for the victors and wars do not occur for reasons of pillage alone.

Primitive wars sometimes occur for religious reasons. Head-hunters in New Guinea, for example, fight for heads which are essential for the development of children. In other regions of the island men are obliged to seek revenge for dead warriors because failure to exact vengeance makes the ancestors angry. All of the above reasons are explicit reasons for war in New Guinea but they all conceal the implicit political aims of war. A head-hunting raid, for example, not only satisfies certain essential, religious ends but also weakens a rival group.

The significance of prestige in New Guinea warfare is mentioned earlier in this chapter. People in New Guinea value prowess in war highly because war is an important aspect of their lives. A collection of heads, for example, is essential for a respected position in Asmat society and "a bunch of skulls at the door post is a measure of status" (Zegwaard 1959:1039). The individual prestige which accrues to successful warriors has led some writers (Whiting 1944) to postulate psychological explanations of primitive war.

In New Guinea, men fight for individual prestige but it is incorrect to suggest that men fight for reasons of anger. Individual warriors, particularly those at dispute with members of the enemy groups, may fight for reasons of anger but their group does not fight to release pent up emotions. Newcomb (1950:320) correctly writes that "the weak point of all these interpretations is the failure to distinguish between the motives of an individual for fighting and what causes his society to go to war."

Other arguments, similar to the psychological explanations of war, concern the so called "functions" of war. Some writers disagree with the term function and suggest that wars are dysfunctional; in this study the concept of functions in war is avoided because the term, as currently used in anthropology, is misleading in the context of war. A function of primitive war suggested by some writers (Wedgewood 1930; Murphy 1957) is social cohesion. Wedgewood (1930:33) suggests that war in Melanesia serves the "double purpose of enabling people to give expression to anger caused by a disturbance of the internal harmony, and of strengthening or reaffirming the ties which hold them together." Murphy (1957:1034) thinks that repressed hostility is the reason for war and suggests that war "is an especially effective means of promoting social cohesion in that it provides an occasion upon which the members of a society unite and submerge their factional differences in the vigorous pursuit of a common purpose." Arguments that

postulate social cohesion as a beneficial function of primitive war are difficult, if not impossible, to substantiate and for this reason these suggestions are not discussed in this thesis.

In this study the fundamental requirement of warfare suggested by Malinowski (1941) is applied to war in New Guinea. The term primitive war is used for hostilities which have small scale political aims. Primitive war can occur for other reasons, such as redress or economic gain, but the implicit political aim remains, although in some cases it plays a negligible rôle. In the following chapters of this thesis the nature of primitive war in New Guinea is explored and an attempt is made to fill, in a small way, the lacunae in anthropological theory. As Vayda (1967:133) points out, "many hypotheses about functions of war, either in particular societies or in general, have been stated, but rarely have there been even the most preliminary attempts at testing the hypothesis empirically," and this is a poor state of affairs.

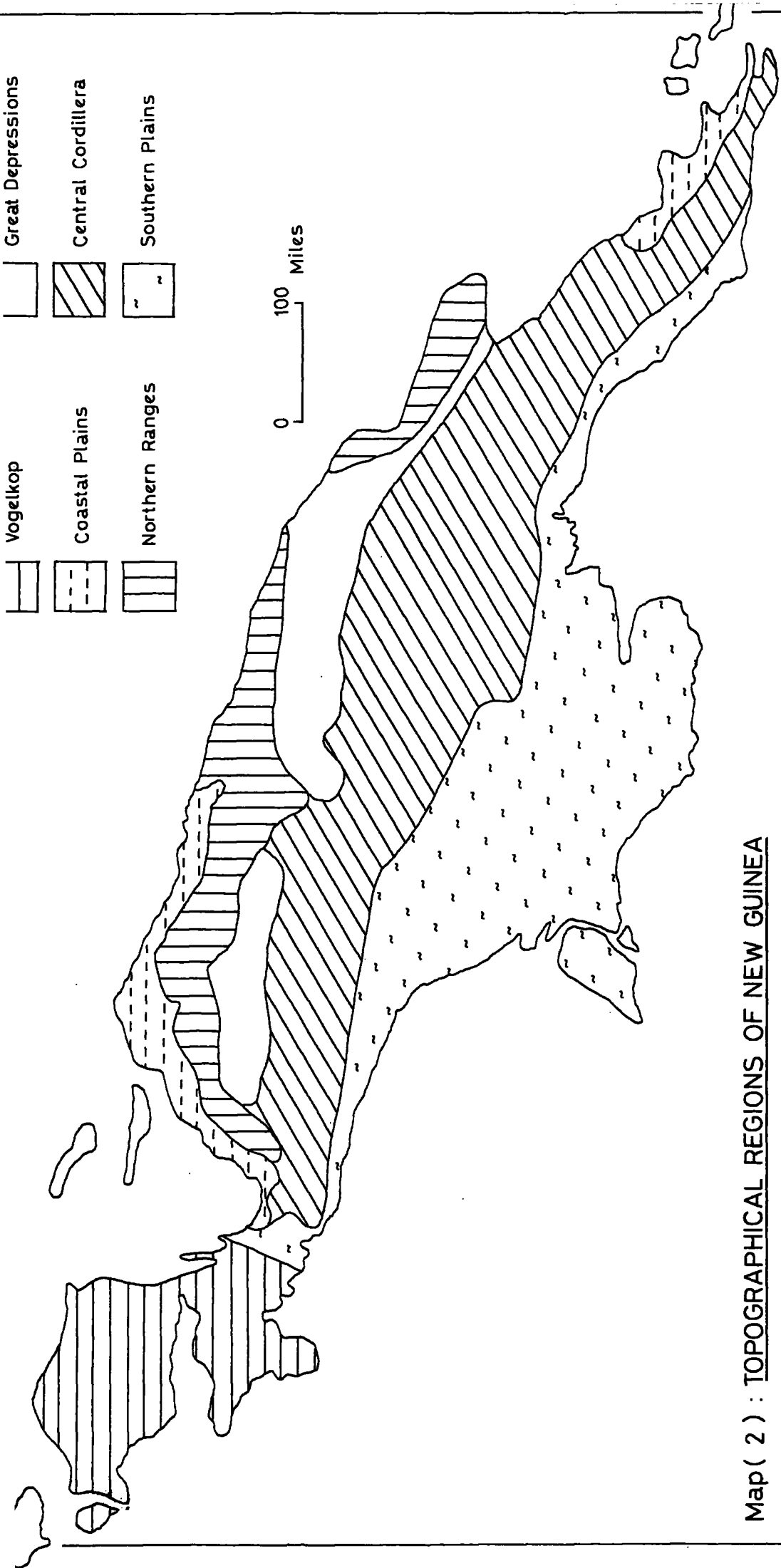
Chapter 2

ECOLOGY AND PRIMITIVE WAR

The aim of this chapter is to examine some of the ecological theories relating to primitive war in New Guinea. The first part of the chapter is a brief survey of the ecology of New Guinea. The survey reveals certain specific ecological types and the people in this study are classified according to these ecological types. In the following part of the chapter ecological theories which propose that war is the result of population pressure and land shortage are tested against population figures and densities. The conclusion of this chapter, supported by ethnographic examples, is that few wars in New Guinea are simply the result of ecological pressure. Ecology is one of several factors which it is necessary to consider in a comprehensive analysis of primitive war.

The island of New Guinea is geologically young and the landscape is dynamic and unstable. The crustal weakness of the island is testified to by present day tectonic activity; volcanic eruptions and earthquakes frequently occur. In the first stages of an erosion cycle the landscape is in the process of rapid change.

A varied landscape is the result of such geological instability. Howlett (1967:31) thinks that the diversity "makes New Guinea a unique tropical country." There are swamps and tangled mangrove forests; high mountains



Map (2) : TOPOGRAPHICAL REGIONS OF NEW GUINEA

and wide upland valleys; grasslands and rugged plateaux of knife edge ridges dissected by deeply incised, swiftly flowing rivers. The rugged country of New Guinea is graphically compared by Leahy and Crain (1937:49) to an equatorial Switzerland:

"Overspread its (Switzerland) peaks and gorges with a rank growth of tropical vegetation, put in a wide barrier of malarial swamps to guard its borders, pollute it with tropical diseases, add a malignant assortment of poisonous snakes and insects for variety, and you have a good idea why New Guinea has remained one of the last spots on this planet to be explored and mapped."

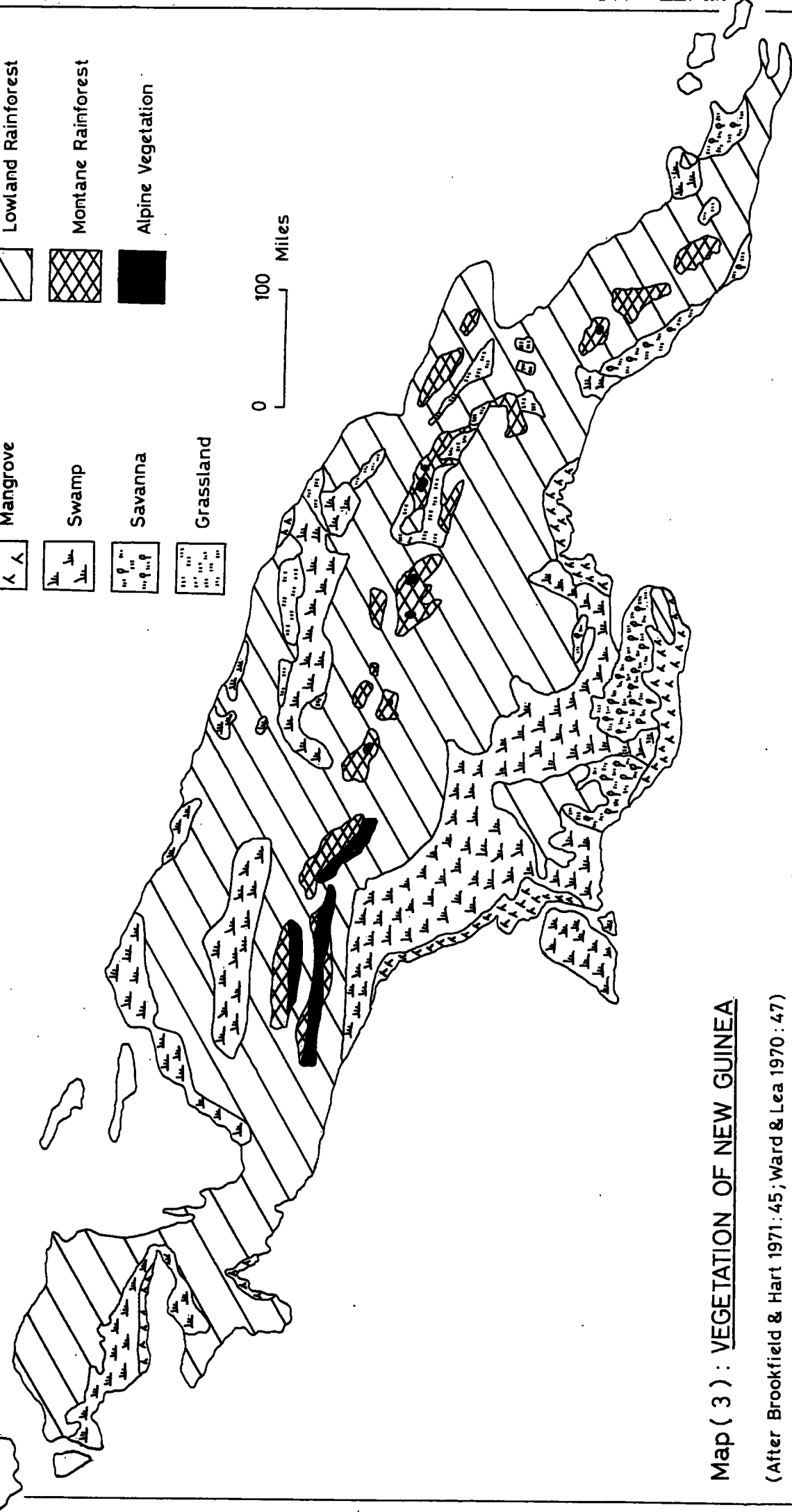
The island can be divided up into seven, broad topographical regions which are sufficient for this study (map (2)):

- 1). Vogelkop - a region not covered in this survey.
- 2). The coasts - there are two types of coast, steep cliffs (along the northern coastline which is slowly emerging from the sea) and swamps, which are usually intermingled with mangrove forests.
- 3). The low-lying coastal plains in north West Irian and the Popondetta region - which in some places are swamp, particularly near rivers which are subject to seasonal flooding.
- 4). The broken series of mountain ranges along the north coast. These rugged mountains include the Van Rees range, Prince Alexander mountains, Adelbert range, Finisterre mountains and the Saruwaged mountains.
- 5). The great depressions - the Mamberamo river basin

in West Irian which opens out into the Meervlakte (the Lake Plain); and the Sepik, Ramu and Markham river basins. Often these areas are swamp because of the slight gradient.

- 6). The central cordillera - this forms the highland backbone which runs the length of New Guinea and includes the following mountain ranges (nearly all of which are over 10,000 feet high) : Weyland, Sneeuw (Snow), Nassau, Oranje (Orange), Sterren (Star), Hindenberg, Schrader, Bismark and Kratke. The broad intermontane valleys and plateaux (which have an average elevation of 5,000 feet) include : the Grand Valley, Wahgi, Chimbū, Goroka and Kainantu. They are variable in length, width and alignment. The series of mountain ranges is compressed into the Owen Stanley range at the eastern tail of the island.
- 7). The extensive, poorly drained plains of the south - a flat region of sago and nipa palms, and mangrove forests. Several rivers meander across the plains, including the Lorentz, Vriendschap, Digoel, Merauke, Fly, Strickland and Bamu.

The climate of New Guinea is monsoonal; a two season regime marked by a reversal in the wind system. A notable characteristic is the high rainfall. The temperature varies little month to month. The lowlands are characterized by high temperatures and clammy conditions.



Map (3) : VEGETATION OF NEW GUINEA

(After Brookfield & Hart 1971 : 45 ; Ward & Lea 1970 : 47)

The highlands are cooler and the altitude produces local micro-climates which vary from valley to valley. Morning mists and frosts are frequent in the highlands. An important fact is the variability of rainfall in some regions which often results in drought conditions.

New Guinea soils are poor and difficult; the dynamic landscape precludes the development of good soils. Pockets of rich soil occur, for example in volcanic regions, some limestone areas and on well drained alluvials. In most areas, however, poor drainage results in swamps. Rapid erosion gives areas of bare rock and frequent landslides result in soil loss. Brookfield and Hart (1971:37) state that "well-developed mature soils, dominantly influenced by climate, will occur only in areas where the process of erosion and transportation are rather less active."

The vegetation cover of New Guinea corresponds to the topography. The following classification is a simplification of a complex situation, because the varied topography and changeable climate result in unique vegetation patterns within small areas. (map (3)).

- 1). Coastal and lowland plain vegetation - varies from stretches of sandy beach backed by palms, to treacherous mangrove forests with a tangled network of raised roots and dense growth. Swamps characterize this zone. There are two types of swamp: those waterlogged all year and covered by various grasses (notably tall cane grasses); and seasonal swamps with clumps of sago and nipa palm.



Plate (I) : Mangrove swamp (Held 1957)

- 2). Lowland rainforest - the most extensive vegetation type in New Guinea; extending up to 3,000 feet. There are two types of lowland rainforest. One type is the varied and rich forests which occur on alluvium (river terraces, deltas and flood plains). Many species of plants are found in these forests; epiphytes predominate and seasonal swamps are common. The other type of forest is the lowland hill rainforest which is widespread and occupies a variety of habitats. This rainforest also has a varied flora but only develops three vegetation storeys as opposed to the five vegetation storeys of the former forest.
- 3). Savanna woodland - occurs in regions of low rainfall, where a dry climate predominates. These regions consist of mixed short grasses, principally lalang (*Imperata cylindrica*). Trees are scattered and poorly developed but the eucalyptus predominates.
- 4). Montane rainforests - extend between 3,000 and 9,000 feet. The number of species found in these forests are fewer than those found in lowland rainforests and the forest structure is simplified to two storeys. The trees vary with altitude. Oaks (*Quercus* spp; *Castanopsis* spp.) favour the lower zone. Beeches (*Nothofagus*) and pines (*Araucaria*) predominate in the higher zones. Bamboo, Pandanus trees and Ficus are also prevalent. The creepers and epiphytes of the lower forests give way to a variety of ferns and shrubs in the lower storey.



Plate (2) : Lowland rainforest (Landtman 1927)

5). Grasslands - are rarely natural; they are the result of human actions. The frequent clearing of areas for the purposes of shifting cultivation hampers the secondary growth of forests because of changes in soil content and structure; the result is permanent grassland. The dominant grasses are Kunai (*Imperata cylindrica*) and kangaroo grass (*Themeda*).

6). High montane cloud forest - sometimes called "mossy forest." These forests occur above 9,000 feet and are continually enveloped in cloud. The damp conditions result in a thick covering of mosses and lichens and produce stunted and gnarled trees. Pine, myrtle and rhododendron predominate, and colourful orchids are abundant.

7). Alpine grasslands - occur above 12,000 feet where trees do not grow. Tussocky grass, shrubs and colourful wildflowers are found on the high peaks.

New Guinea has a characteristic fauna. The larger mammals commonly associated with rainforests, such as carnivores, monkeys and elephants, are absent. The distinctive mammals of the island are the marsupials, such as the kangaroo and cuscus. Other indigenous mammals include ant-eaters, rats, mice and bats. None of these animals are important sources of food for man. The meagre animal life of New Guinea is compensated for by the variety of avi-fauna, (Mayr (1953) estimates there are 300 genera and 650 species of birds in New Guinea).



Plate (3) : The highlands - Chimbu district (Brookfield & Hart 1971)

The bird life includes cassowary, parrots, pigeons, cockatoos and the renowned birds of paradise. The rich, colourful plumes of birds are important as a source of native wealth. Various reptiles are found in the lowlands, including crocodiles, lizards and snakes. Fish are important in the diet of coastal peoples but few fish (only crustaceans) are found in highland lakes and rivers.

In the following part of the chapter the peoples included in this survey are classified according to the geographical and ecological environment in which they live. The result is comparison on a macro-scale, but there is a problem in such a comparative ecological approach. Comparative studies consider regions, whereas fieldworkers study, on a micro-scale, small areas. Intensive studies of small areas are a hallmark of anthropology. Generalisation can distort the situation. For example, the Huli are classified as a highland people inhabiting a transitional vegetational zone between lowland hill rainforest and montane rainforest. The groups studied by an anthropologist in this region live in valleys of extensive grasslands, an environment largely of their own making. The comparative anthropologist has two choices, the Huli can be classified according to their region, in which case the ecological generalizations will be inapplicable for the Huli groups on which we have detailed anthropological knowledge. The alternative is to classify the Huli according to the ecology of the

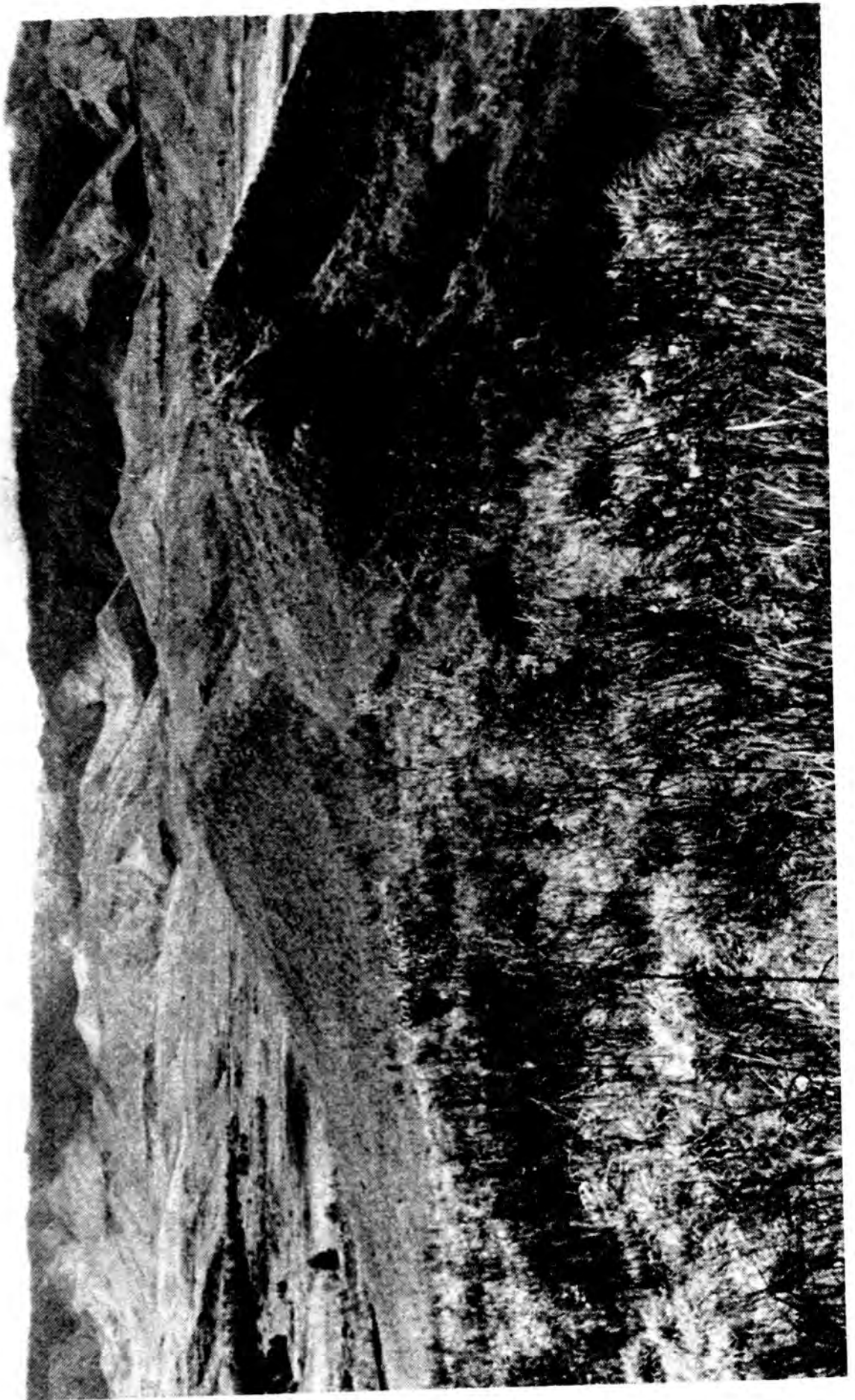


Plate (4) : Grassland - Eastern highlands (Read 1965)

groups with which the fieldworker lived, in this case the classification will be incorrect for the overall ecological typology of the Huli region. The ecological survey given above is regional but the classification of peoples outlined below is based on the ecology of the particular groups on which we have information. The result is that the ecological classification of some peoples does not correspond to the ecological classification of their region as a whole; this is a reflection of the variety which can occur in a small area. The objective of this analysis is to find and explain correlations between ecology and differences in warfare; in order to achieve this the ecology of the groups for which we have information should be considered and not the overall ecology of their region, if this is different. The ecological descriptions of New Guinea, although represented regionally on the maps, should be considered as a description of types into which the peoples of this survey are classified. The interesting question, is not, do peoples in the same region have similar patterns of war; but, do peoples in similar environments, possibly in different regions, have similar patterns of war?

The primary ecological division of the peoples in this survey is into those who live in the highlands and those who live in the lowlands. This division is based on topographical and ecological differences but it is important because it is also reflected in subsistence patterns and other details of life.

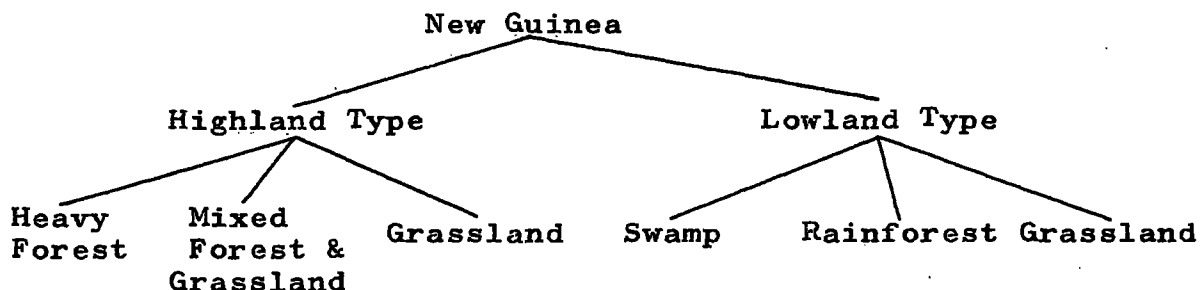
The peoples included in the survey are classified as follows:

<u>Highland</u>		<u>Lowland</u>
Arapesh (mountain)	Jalé	Abelam
Bena Bena	Jate, Kamano, Usufufa	Asmat
Bokondini Dani	Kapauku	Iatmul
Chimbu	Kuma	Kiwai
Fore	Mae Enga	Marind-anim
Gahuku Gama	Maring	Markham Valley People
Grand Valley Dani	Melpa	Orokaiva
Huli	Mendi	Trans-Fly People
Ilaga Dani	Siane	Waropen

Table (3) : Highland and Lowland Classification

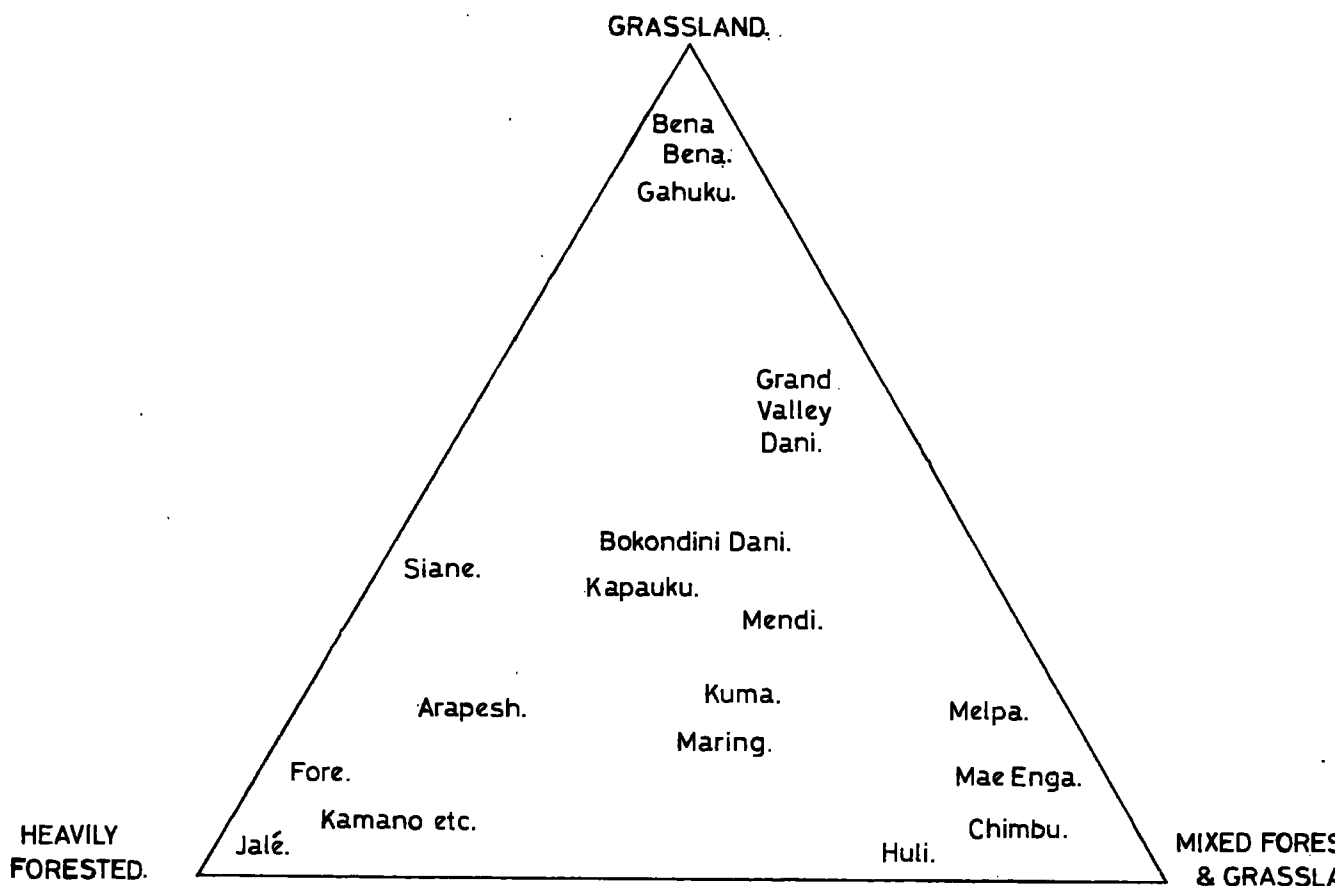
These two primary regions are divided into sub-types. The lowlands are sub-divided into areas of swamp and mangrove, rainforests, and grasslands. The highlands are sub-divided into heavily forested regions, areas of mixed forest and grassland, and grasslands. These ecological sub-types are not clearly demarcated; one type blends into another and within any one region more than one sub-type can be found - although one will be dominant.

Diagrammatically, the sub-types are:



The sub-type classification is not represented as a list because this is too rigid to convey the flexible nature of this grouping. In an attempt to convey this

HIGHLAND PEOPLE.



LOWLAND PEOPLE.

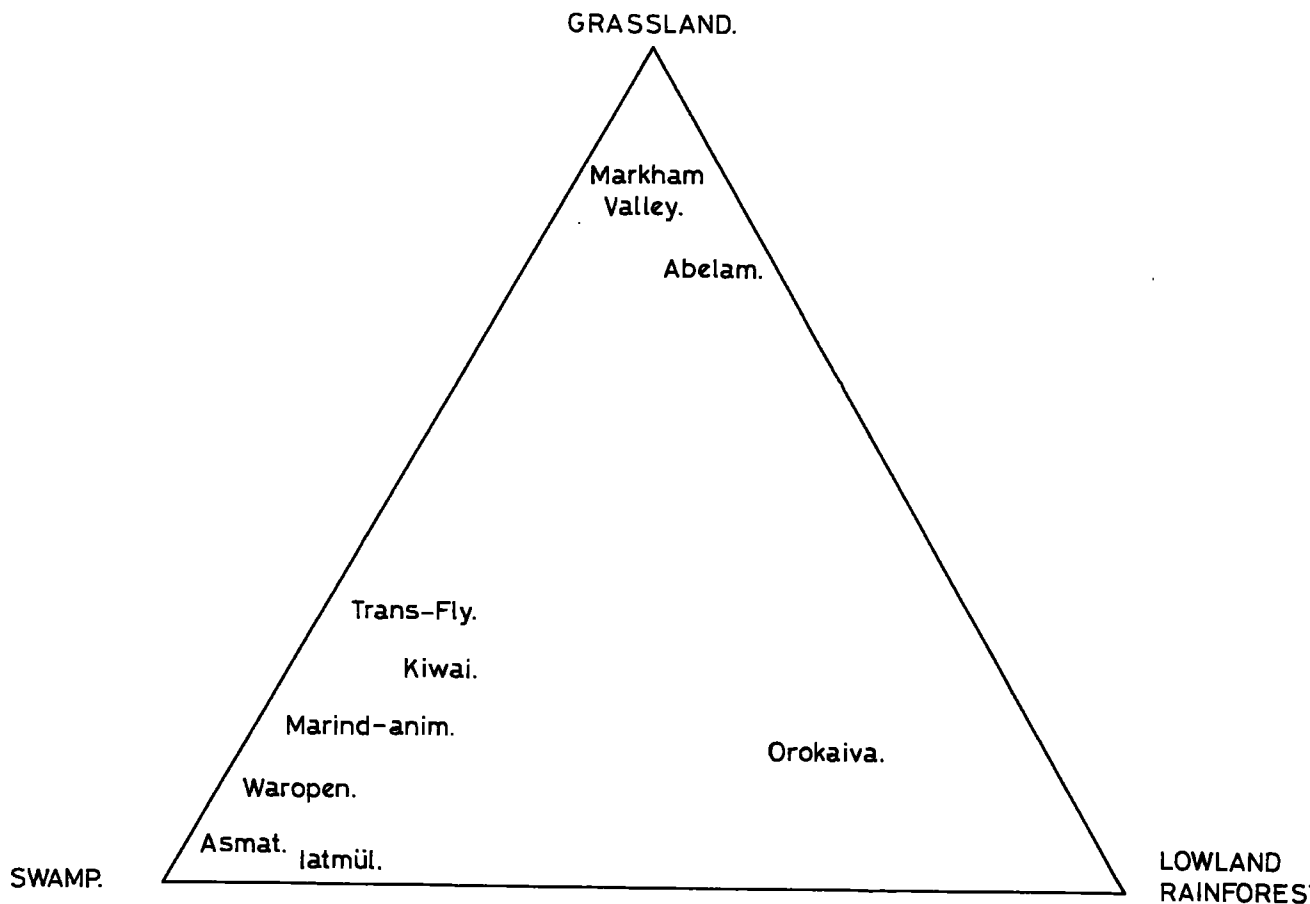


Figure (1): SPATIAL REPRESENTATION OF ECOLOGICAL SUB-TYPE CLASSIFICATION

sub-type flexibility the peoples in this survey are marked onto a three cornered diagram (see diagram 1). The diagram is a spatial representation of the sub-types distinguished within the highlands and lowlands. The peoples are plotted onto this diagram in an attempt to show how they cannot be classified as swamp dwellers but people who live in a swampy region with a certain amount of grassland or forest. This diagram only gives an approximate idea of the differences within the two primary regions and the closeness of the peoples in relation to the discriminating ecological features.

The difficulty of ecological classification can be shown with an ethnographic example. The territory of the Tsembaga Maring is characterized by Rappaport (1968) as a mountainous area of sharp ridges under secondary forest, with patches of primary forest and grassland. The Bomagai-Angoiange Maring, described by Clarke (1971), live in a heavily forested area of primary forest. Regions with great internal diversity such as the Jimi valley, are difficult to classify. The ecology of any region in New Guinea depends, in the first instance, upon natural factors. The terrain sets certain limits; flat, poorly drained areas are swampy, and steep slopes have only a sparse vegetation cover. Above a certain height, generally in the beech woods of the montane rainforest belt and before the "mossy forests" are reached, cultivation is not practicable because of frosts and adverse weather conditions.

The vegetation zones of the upper montane forests and the alpine grasslands are only of importance to men for the game they support.

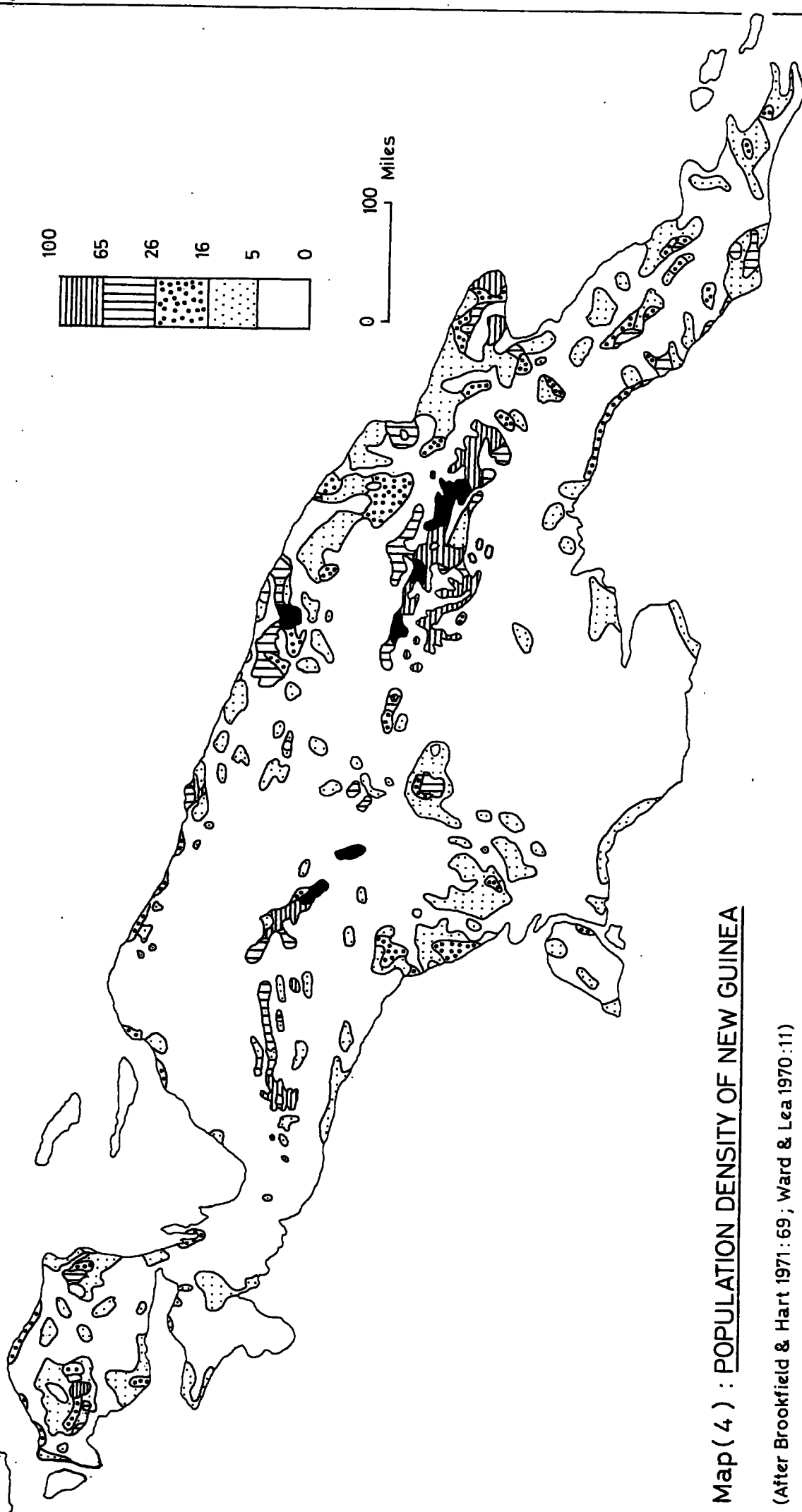
The activities of man changes the ecology of a region to a certain degree and it is upon this fact that ecological explanations of primitive warfare depend. The extent of this modification depends upon the actions of human beings while securing a livelihood (shifting cultivators change the landscape more than hunters and gatherers) and the numbers of people living in a specified area. Regions with a high proportion of cultivated land, secondary growth and grassland are thought to have a higher population density than areas of heavy primary forest. Peoples in regions of high population are predicted to fight for reasons of land shortage. In the next part of this chapter ecological explanations of primitive war are tested.

Simply explained, ecological theories accounting for primitive war suggest that expanding groups experience land shortages and fight neighbours for reasons of territorial gain. Other anthropologists think that this theory is incorrect and that groups fight wars regardless of the demographic and ecological situation; these writers think that war is a sociological phenomenon independent of particular environmental situations.

The theory of "cultural ecologists" is explained by Vayda (1967:135), warfare "breaks out when the

inequalities between groups in their possession of or access to certain economic goods or resources reach a certain magnitude... Similar to these hypotheses about the functions of primitive war in the regulation of economic variables are certain hypotheses about the regulation of demographic variables. In these latter hypotheses, the "resources" redistributed as a result of warfare are human beings." These two approaches are similar and both depend upon population densities. The first hypothesis suggests that when a population increases in size and experiences a shortage of resources it will start a war in an attempt to seize more of the scarce resource. The second hypothesis also postulates an increase in population density but in this case warfare results in a re-distribution of the population vis a vis resources. The population re-distribution is the result of either a high mortality in the war or the migration of refugees to other areas.

In order to test the theories of the "cultural ecologists" with the peoples included in this survey a population estimate for New Guinea is needed. The population figures for the island however, are inadequate and unreliable. Howlett (1967:23) points out that "It is not yet possible to discuss demographic data and trends for New Guinea with absolute accuracy... the indigenous population so far has never been entirely enumerated and...statistics for that section of the indigenous population which is enumerated are not entirely reliable." The population summary which follows



Map (4) : POPULATION DENSITY OF NEW GUINEA

(After Brookfield & Hart 1971: 69; Ward & Lea 1970: 11)

is inadequate for a rigorous check of ecological explanations of primitive war but it is sufficient to indicate trends.

The estimated population for New Guinea is 3,025,000 persons and the native population composes 2,964,000 of this total. New Guinea is sparsely populated; the population density of the island (338,610 square miles) is 8.7 persons per square mile. While large regions have a low population density there are some areas which constitute pockets of high population. The areas of highest population density are the wide valleys of the highlands, the Chimbu and Baliem valleys in particular, The Wabag district and the area around Maprik in the Sepik district are also areas of high population density. Areas of moderate population density are found in the Southern highlands, the Star mountains and along the Papuan coast between Kerema and Abau. The flat Gulf district of Papua and parts of the highlands are sparsely populated. The map (4) gives a general idea of the population distribution of New Guinea.

Table (4) presents the population figures and densities for the people included in the survey. The figures used in the table vary in accuracy. In nearly all cases the figures for culture groups are rough estimates. The reliability of the effective political unit figures vary, in several cases they are based on single ethnographic examples which could be atypical

for the people as a whole; in only a few cases are the figures the average of several groups. The figures are taken from ethnographies in preference to official census material because the former are more reliable; they are based on a long stay and not on an impressionistic, brief visit.

A method of approach, similar to the one used in the ecological classification, requires clarification for the demographic data. Population figures and densities for peoples are given in table (3) but these are unsatisfactory for comparative work because they cover too large an area. The significant figures are those of the effective political unit for the people concerned, (the effective political unit is defined as the largest group which is obliged to unite and fight in war). It is this group, not the people, which fights in wars. The table demonstrates the variation between the average population density for a region and the average population density for the effective political unit of any people. In most cases the latter is a higher figure than the former. The explanation for this variation is twofold. Firstly, the calculation of the total population density is based on the total area occupied by the people regardless of the fact that some areas, such as high mountains, rugged ridges and swampy valleys, are claimed as territory by no group. Secondly, many of the peoples in New Guinea have more than enough land for their needs and large regions,

Table (4) : Population Figures¹

<u>People</u>	<u>Total Population</u>	<u>Total Area (sq. mls)</u>	<u>Total Population Density (per sq ml)</u>	<u>Average Population²</u>	<u>Average Area</u>	<u>Population Density (per sq ml).</u>
Grand Valley						
Dani	50,000	190 ³	263	4,146*	15.8 ³	264
Chimbu	55,000	211	261	1,385	8.5 ³	159.7
Melpa	59,635	528.3	151.4	1,059		
Bokondini						
Dani (Mbogoga)	3,000	20 ³	150	485	2	242.5
Abelam	30,740	290	106	271.2	1.4	193
Mae Enga	21,000	200	105	307*	0.7	439
Kuma	25,000	250	100	1,006		
Siane	15,000	180	80	192		
Usurufa	900	12 ³	75	215		
Jate	20,000	280 ³	71.4	215		
Fore	10,000	240	41.6	215		
Mendi	20,000	50	40	100	1.2	83
Kamano	12,000	320	37.5	215		
Markham						
Valley	17,000			600*	16	37.5
People						
Maring	7,000	190	36.8	200*	5.7	64
Jalé	10,000	284 ³	35.2	463*		
Ilaga Dani	5,000	150 ³	33.3	500	1.25	400
Bena Bena	14,000	500 ³	28	750*	10	75
Gahuku Gama	7,000	350 ³	20	750		
Kapauku	3,000	3,000 ³	20	476*	14.25 ³	33.4
Huli	32,000	1,660 ³	19.3	304*	2.25	146
Arapesh	3,000	300 ³	10	200		
Marind-anim	7,160	750 ³	9.5	179		
Waropen	6,678	1,000 ³	6.6	445.2	25 ³	17.8
Orokaiva	9,000	1,764 ³	5.1	1,300*	294 ³	4.4
Asmat	30,363	10,000 ³	3	394.3	120 ³	3.3
Trans-Fly						
People	2,000	3,800	2	47*	9 ³	5.2

1 Arranged according to total population densities

2 Where possible an average; some figures (marked*) are based on single examples.

3 Estimation of area from maps

4 The Kiwai and Iatmul are omitted because of insufficient data - these people occupy low density regions on the population map (4) (less than 10 persons per square mile)

5 Blank spaces indicate insufficient data on these points.

although classified as the territory of a certain people, are unclaimed by any specific political group.

The table is arranged in decreasing order of magnitude of total population densities. The Grand Valley Dani, at the top of the table, have the highest population density and the Trans-Fly people at the bottom of the table, the lowest. For comparative purposes the peoples in the survey are divided up into high, moderate or low population densities. A high population density is anything over 100 persons per square mile, a moderate population density is between 20 and 100 persons per square mile and a low population density is anything below 20 persons per square mile. The classification is as follows:

<u>High Population Density</u>	<u>Moderate Population Density</u>	<u>Low Population Density</u>
Abelam	Bena Bena	Arapesh (Plains, Beach & Mountain)
Bokondini Dani	Fore	Asmat
Chimbu	Gahuku	Marind-anim
Grand Valley Dani	Jalé	Orokaiva
Huli	Kamano, Jate, Usurufa	Trans-Fly People
Ilaga Dani	Kapauku	Waropen
Kuma	Maring	
Mae Enga	Markham Valley	
Melpa	Mendi	
	Siane	

Table (5) : Population Density Classification

All of the people classified as low population densities are lowland dwellers. Cultivation is less important in the livelihood of these people than in the

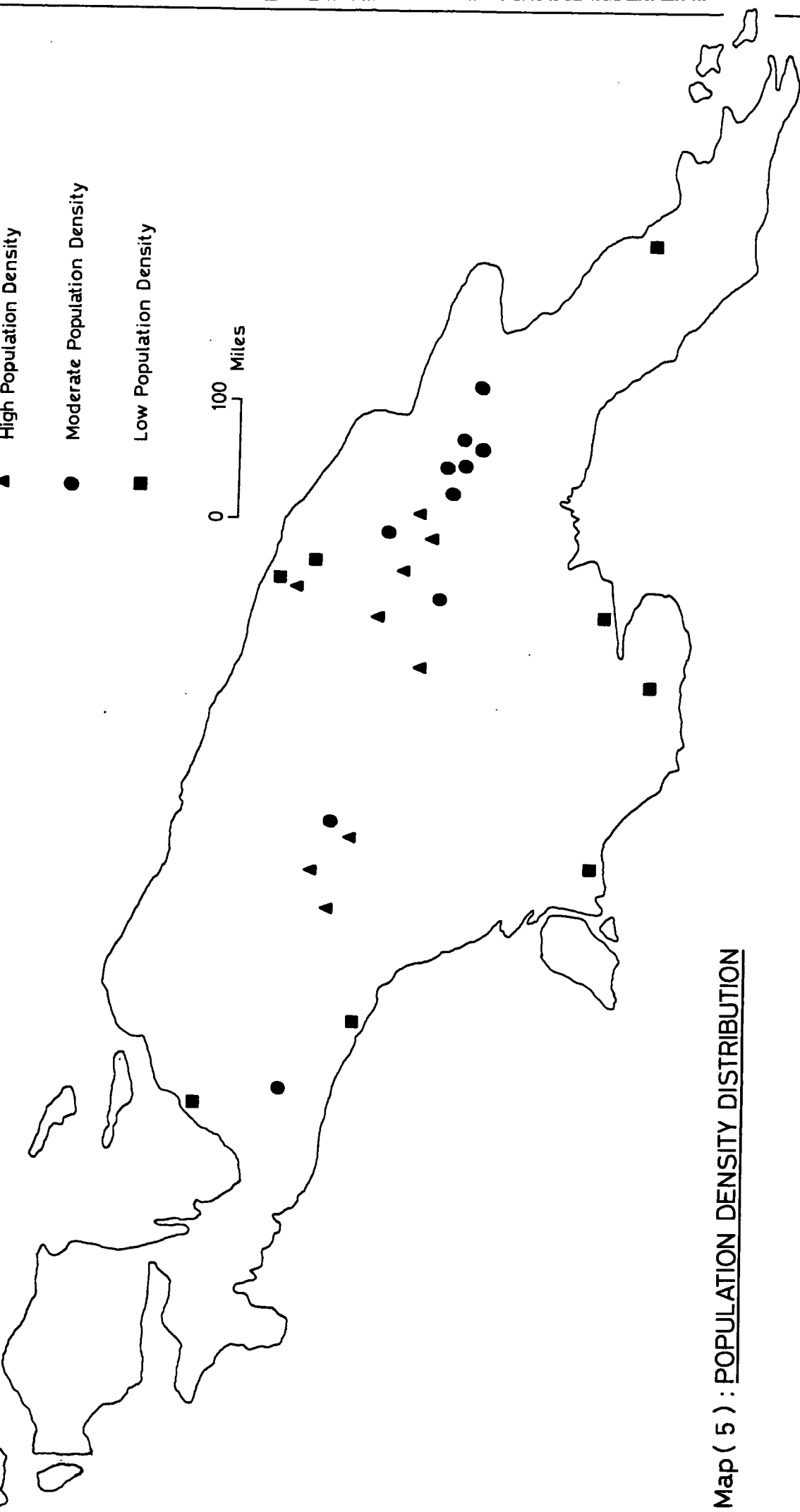
livelihood of those people classified with high or moderate population densities. This correlation verifies the assumption that people who practise a hunting and gathering economy have a lower population density than cultivators. The two lowland peoples with high and moderate population densities respectively are the Abelam and the Markham Valley People; both of these peoples are cultivators, hunting is of minor importance in their economies.

Earlier in this chapter (pp. 48) it was suggested that regions with a high proportion of cultivated land, secondary growth and grassland will have a higher population density than areas of heavy primary forest. Remembering the flexibility of the ecological classification, the correlation between population density and ecological sub-types is as follows:

<u>High Population Density</u>	<u>Moderate Population Density</u>	<u>Low Population Density</u>
Mixed Forest & Grassland = 100%	Primary Forest = 40% Grassland = 30% Mixed Forest & Grassland = 30%	Swamp (& Grassland) = 67% Rainforest (& Grassland) = 33%

Table (6) : Population Density and Ecological Sub-Types

The figures indicate a trend which supports the assumption that the larger area of primary forest the lower the population density. Regions of swamp are difficult to cultivate and people who inhabit these regions are hunters and gatherers who live at a low



Map (5) : POPULATION DENSITY DISTRIBUTION

population density. Possibly the areas of grassland with moderate densities of population are natural and not man made, or possibly they are the result of cultivation by an earlier, high density population.

Plotted on a map of New Guinea (Map 5) the population densities reveal an interesting spatial pattern. The peoples with low population densities are spread around the coast. The high population densities occur in the centre of the island, in the highlands. There is a high concentration of peoples with moderate population densities in the eastern highlands; but overall the peoples with moderate population densities lay between the low density populations of the coast and the high density populations of the highlands. This spatial pattern is difficult to explain.

In an analysis of the "cultural ecologists" theory of primitive war, the crucial test is whether the people who fight wars to secure additional resources have a high density of population. In order to test this hypothesis a classification of the people in this study is made according to the frequency with which they fight for land.

- (1) Those people who never fight for land; the defeated are not driven from their territory, although their property (homes, crops and stock) is sometimes destroyed.
- (2) Those peoples where the defeated are sometimes driven from their territory but where the conquered

land is rarely used by the victorious group.

The Gahuku wars are typical of this type of warfare: "Permanent conquest was not the principal end of warfare, so in most cases the victors did not take over the lands of a defeated foe; indeed, after some time had elapsed, it was not unusual for them to invite the exiles to return to their homes" (Read 1965:35).

- (3) Those peoples where the victorious group, after driving the defeated from their land, sometimes settle on the seized territory. The capture of more land is the result of a war, not the cause; although land conquest is sometimes the implicit aim of war, the explicit cause of war is something else. Among the Mae Enga, for example, "The more common sort of fight was that wherein one clan, using theft of a pig or of pandanus nuts as an excuse, attacked without warning a neighbouring clan in an attempt to seize land" (Meggitt 1957:135).
- (4) Those peoples where the explicit reason for war is to seize more land; scarce economic resources or a shortage of cultivable land is given as the reason for war.

Similar to the ecological classification given earlier in this chapter, the above typology represents a flexible situation. The classification attempted below is a matter of degree, not concrete fact, because some peoples have characteristics which place them

between two of the above types. Among the Jalé people, for example, "territorial gains and the conquest of resources are no objectives in any war" (Koch 1970:43). The Jalé fall between types (1) and (2) because defeated enemies sometimes remain in their territory but at other times they are driven away as refugees. The Jalé are classified as type (2) because the defeated are sometimes driven from their territory, although the resources of the deserted land are never used by the victorious group.

The people in the survey are classified as follows:

<u>Category 1</u>	<u>Category 2</u>	<u>Category 3</u>	<u>Category 4</u>
Asmat	Arapesh	Chimbu	Abelam
Iatmul	Bena Bena	Mae Enga	
Kiwai	Bokondini		
Marind-anim	Dani		
Markham Valley	Fore		
People	Gahuku		
Orokaiva	Grand Valley		
Trans-Fly	Dani		
People	Huli		
Waropen	Ilaga Dani		
	Jalé		
	Jate, Kamano & Usumfa		
	Kapauku		
	Kuma		
	Maring		
	Melpa		
	Mendi		
	Siane		

Table (7) : Classification according to frequency
people fight for land

The correlation between the ecological sub-type and population density classifications made earlier in this chapter (pp. 55) and the typology of frequencies with which various peoples fight for territorial gain, is as follows:

<u>War for Territorial gain</u>	<u>Population Density Classification</u>	<u>Ecological Sub-Type Classification</u>
Category (1)	Moderate Density Groups = $12\frac{1}{2}\%$ Low Density Groups = $62\frac{1}{2}\%$ Unknown = 25%	Swamp (& Grassland) = 75% Grassland = $12\frac{1}{2}\%$ Rainforest (& Grassland) = $12\frac{1}{2}\%$
Category (2)	High Density Groups = $31\frac{1}{4}\%$ Moderate Density Groups = $62\frac{1}{2}\%$ Low Density Groups = $6\frac{1}{4}\%$	Mixed Forest & Grassland = $65\frac{1}{4}\%$ Primary Forest = 25% Grassland = $12\frac{1}{2}\%$ Rainforest (& Grassland) = $6\frac{1}{4}\%$
Category (3)	High Density Groups = 100%	Mixed Forest & Grassland = 100%
Category (4)	High Density Groups = 100%	Mixed Forest & Grassland = 100%

Table (8) : Correlation between fighting for land, Population Density and Ecological Sub Types

The table indicates a trend which supports the ecological hypothesis, that the higher the population density and the greater the pressure on the environment the greater the possibility of war for territorial gain. The correlation however, is not a complete one. Some peoples, for example, with high densities of population do not fight for territorial gain, although this is sometimes the outcome of a war. This is possibly the result of variables not taken into account in this analysis;

agriculture, for example, could be more intensive in these regions and a higher density of population tolerated. Ecological explanations of primitive war will never be accurate or acceptable until all variables are satisfactorily measured and taken into consideration. In order to achieve this there are several difficulties which must be solved. Rappaport (1968:110) dismally records that "the ecological-demographic conditions that may have underlain much fighting must remain hypothetical, since reliable quantified data concerning such conditions at the time of, and preceding, outbreaks of war are unavailable".

Some of these difficulties are briefly outlined here. The difficulty of making an accurate population census has already been mentioned. An accurate regional census, which is essential for a comparative analysis, is impossible. Fieldworkers can accurately enumerate the small political groups with which they live (although this is not always easy because the people in some regions drift from settlement to settlement) but several studies are necessary to ensure that a reasonable average is obtained for any region.

It is not sufficient to record population densities only; the structure of the population is also important. It is not density of population per se, that is important to defeat an enemy, but military strength.

The structure of a population is important because it is able bodied men (who are warriors) that are significant in the military success of any group. A group with a high population density consisting of many women and children is in a weaker position than a neighbouring group with a lower population density but a higher proportion of active males.

The importance of warfare in altering the structure of a population is referred to by Kelly (1968:43): "Although warfare often operates as an important mechanism for the re-adjustment of imbalances in population distribution, it may also promote such imbalances through its effects on the mortality and distribution of reproductive females." The effects of warfare upon a population structure require study, as well as the influence of various population structures on the efficiency of a group to wage war.

Another problem with the collection of accurate demographic data is that wars are no longer fought when the anthropologist makes his census. It is difficult to assess whether a post-war census is a true reflection of the pre-contact, war fighting population. An alien disease could drastically reduce the population or the reverse could happen and improved medical facilities increase the population. Precise demographic figures are impossible, so long as such changes have to be allowed for.

Native informants can supply useful, although rarely accurate, information concerning the situation in

the days when wars were of common occurrence. In the study of primitive war the anthropologist has to rely heavily upon case histories collected from native informants. The collection of adequate material is difficult and the problems outlined for ecological explanations of war are symptomatic of primitive war studies in general - viz., the collection of adequate and reliable information to work on.

Certain ecological factors remain constant or can be scientifically inferred so long as economic change has not progressed too far (e.g. the establishment of coffee plantations). Accurate scientific measurement of the environment is an important part of the ecological approach to primitive war but equally important - and to-date ignored - is the value placed on their environment by the people who fight the wars. The important point is, when do the people consider themselves over crowded and in need of more land? The level of population tolerated by different groups varies and depends upon native values as well as objective facts such as the intensity of cultivation in a region and the fertility of the soil. Although interested in the place of man in nature, some "cultural ecologists" ignore man as they become absorbed by objective criteria, such as sweet potato crops per acre or the number of pigs per acre. The environment sets limits within which man has to choose, but groups

living in similar environments make different choices (e.g. when to fight for economic gain) which are based on different value systems. It is therefore, important that the "cultural ecologist" takes into consideration the native conception of their environment.

Some examples will illustrate the point. The Kukukuku (Ollier, Drover and Godelier 1971) have a great awareness of the soils and earths found in their region. The native classification differs from that of Western science; they differentiate between soils not apparent to us and they group together soils we regard as different. Kukukuku judgement of their soils does not rest solely on objective criteria, "an abundant yield of sweet potatoes is dependent not only on the skilful choice of the best black soil (anyata) but also on the efficiency of magic formulae inherited from the ancestors... Agriculture is thus a subtle combination of technical and magical skills and is lived and thought of as such" (1971:41). If the Kukukuku experience poor crops it may not be a shortage of land, in their opinion, which is the cause, but weak magic. In their judgement it is little use fighting for more land because it will be no good either without strong magic.

It is difficult to judge when people think it necessary to fight for scarce resources because such a situation is not simply a question of shortage but a combination of circumstances. Salt is highly valued by

the Mae Enga (Meggitt 1958) and is traded between groups. The groups with a brine pool in their territory have a valuable source of wealth to exploit and use in the exchange network. Groups without their own salt spring sometimes try to seize a spring in the territory of another group but the invading group rarely manages to maintain control of the salt spring for long. The reason for an attempted conquest of a salt spring, by a group without their own source of supply, is not simply a desire to control a salt spring by a group which hitherto had to rely on trade. If this were the case Mae Enga groups would be constantly at war trying to seize and control the few salt springs in their region. The reason for an invasion and attempted annexation of a salt spring is not only an unequal distribution of ecological resources, but also a combination of unpredictable sociological factors unique to the situation. Perhaps the attacking group, for example, is discontent with the trade network which is their source of salt supply. Alternatively, the attacking group could be led by an ambitious big man who wishes to increase his prestige and influence within the exchange network by controlling a salt spring.

Many people in New Guinea tolerate a poor and monotonous diet, which to a Western scientist is insufficient. This, however, is an ethnocentric judgement based on Western values - the important question is : when do the people think they are

undernourished and consider it necessary to fight over scarce resources? Many highland peoples feed a large proportion of their crops to pigs; the Raiapu Enga (Waddell 1968:175), for example, feed 63% of their harvested tubers to pigs. It is necessary to find out whether people would consider a reduction in pig herds if land became scarce. A reduction in pig herds is unlikely because of the importance of pigs in the prestigious exchange systems. Rather than contemplate a reduction in pig herds men might be willing to fight for land.

The products of the primary forest are important, to some extent, in the livelihood of most New Guinea peoples. In the Eastern highlands, for example, some peoples (e.g. the Fore and Kamano) eke out their lives by gathering products from the forests, and in some lowland societies (e.g. the Asmat and Waropen) people live entirely by hunting and gathering. Even in regions where the people rely less on hunting and gathering, a value is placed on forest products which, in some areas, have to be traded over considerable distances. The plumes of exotic forest birds, for example, are valued in most regions. It is difficult to judge when people think it necessary to fight over scarce primary resources because this is not simply a reflection of a shortage of cultivable land. The needs of such people are difficult to calculate in a predictable way.

Accurate scientific measurement of the environment to complement the study of native values, is necessary.

To a limited extent, assumptions that variations in population density are a reflection of the availability of usable land in a region, are correct. Under a sweet potato crop in the highlands, for example, population distribution is related to altitude and climate, (Brookfield 1964:34). Reliable ecological data is required if ecological explanations of primitive war are to carry any conviction. It is of little value, for example, to record that the population density of the Kuma is 100 persons to a square mile when 50% of their region is of no economic use. It is necessary for "cultural ecologists" to take into account the variations in land use potential, differences in soil fertility, micro-climatic variations and the suitability of particular areas for certain economic requirements. Variations in the intensity of cultivation have already been mentioned (pp. 61) Boserup (1965) argues that the intensity of cultivation increases as the population increases. Brookfield and Hart (1971:120) examine a number of agricultural systems and find "intensive practices in situations where there is no population pressure, and extensive practices in areas where land is short." This conclusion confirms the point made earlier that scientific measurements alone are not enough in an ecological study of war.

In order to rise above the level of a mere speculation on ecological possibilities, fieldworkers will have to take into consideration the variables

outlined above. Some writers (see Vayda 1971; Rappaport 1968) suggest that when a population increases, so that there is pressure on available resources, the group will fight neighbours in an attempt to secure more land. The mechanics of this process are that the overcrowded group get into arguments with neighbouring groups more frequently over the shortage of land - Rappaport calls this an "irritability index". This hypothesis requires careful study in the field because the flexible and fragmented nature of New Guinea group organization suggests the opposite situation arising from population pressure. Vayda and Rappaport postulate disputes between different political groups but a more plausible result is dispute between different rival factions within the large political group. The outcome is segmentation and two small, overpopulated political groups. In New Guinea it is unlikely that increased size is an advantage and that expanding groups will push smaller ones out because increased size spells internal dispute and segmentation.

Heider (1970:132) suggests that war "by creating refugees, may generate more local overpopulation problems than it solves". When a group is defeated and driven from its territory by a neighbouring group the population problems of the latter may well be solved but the refugees of the former group have to flee and join other groups. In this case the population problem

is not solved but merely passed to another group.

The argument is turned on its head by Strathern (1972), who suggests that large political groups initiate war and gain territory for expansion. The groups which experience population problems are not the large ones but the small ones, because the latter are pushed into small areas and form pockets of high density population. These small groups face extinction by encroachment, absorption and dispersal.

All of the above suggestions are plausible and at different times each has probably occurred, but without detailed evidence the value of any suggestion is a matter for speculation only. Ecological theories must be supported with facts. In a Ph.D. thesis Eyde (1966: 79) argues that in Asmat warfare "there can be little doubt that they (other reasons for war) are part of an ideological superstructure which rests upon a solid ecological base : competition for sago and fishing areas." There is a great deal of doubt surrounding Eyde's assertion because his argument is supported by no ecological details at all, other than some superficial comments. Ecological arguments unsupported by facts, like those outlined above, are open to serious doubt.

The brief ecological and demographic survey given earlier in this chapter indicated that there is a certain correlation between ecological factors and

variations in population density. The survey also revealed however, that apparently similar ecological regions have different population densities.

Brookfield (1960:237) makes the same observation, "Neither high nor low density is to be correlated with one type of environment, nor with one type of subsistence, social organization or technology." The ecological approach to primitive war in New Guinea therefore appears to be of limited value. This conclusion is corroborated by further evidence presented in this chapter. If the categories in table (7) are reduced from four to two:

- (a) Rarely occupy the land of defeated groups.
- (b) Sometimes occupy the land of defeated groups.

The resulting table is:

<u>Rarely Occupy land</u>	<u>Sometimes Occupy land</u>
89.3%	10.7%

Table (9) : Frequency people fight for land (reduction of table (7)).

The above table indicates that while some peoples occasionally fight wars to gain land, this in fact, is a rare occurrence. Ecological explanations of primitive war in New Guinea account for only a few of the wars fought. This conclusion is not surprising because as this chapter has shown, and Howlett (1967:28) confirms "most groups do not seem to have approached, let alone exceeded, the carrying capacity of the land which they occupy."

Vayda (1971) tries to demonstrate that, although the victorious group in Maring wars rarely occupied the territory of the defeated group, ecological explanations of Maring wars are still important because fighting could be used to redress ecological and demographic imbalances if the situation should arise. Vayda thinks the important point is that primitive war has latent within it the capacity to adjust differences in population pressure between groups if necessary. The reason why few of the war histories collected by Vayda demonstrate land re-distribution after a rout is because the Maring people have no population problem. Vayda (1971:23) argues that "even if territorial conquests had been only an infrequent rather than a regular aftermath of Maring warfare for a considerable time, the warfare remained the kind that could, through an already institutionalized systemic process, lead again to the adjustment of man/resource ratios whenever demographic and ecological conditions changed sufficiently to make it appropriate for this to happen."

The argument put forward by Vayda implies that warfare in New Guinea derives from a need to have an institutionalized process which can cope with ecological shortages in times of population growth. This is a misinterpretation of the situation. The wars fought in New Guinea might serve, in the rare instances of ecological crisis, as a means of correcting the

demographic balance. One of the results of wars fought in times of population pressure might be land conquest. It is incorrect, however, to think that warfare in New Guinea derives from a need to have a means whereby ecological problems can be solved if they should arise. To hypothesize that primitive wars are fought as part of a process which exists primarily for times of ecological crisis is to conjure the real problem: "What is the reason for so much warfare in New Guinea?", out of existence.

It can be demonstrated ecologically that few regions of New Guinea have suffered from overpopulation under an economy based on shifting cultivation. This fact disproves the speculation of Vayda (1971:22), that warfare in New Guinea has "features that could be interpreted as no longer doing something they had formerly done, i.e. as no longer leading to territorial conquests" because there has been a population decline. If areas of New Guinea were at some time more heavily populated than they are today, more primary forest would have been cleared for gardens. Once cleared, tropical rainforest never returns to primary forest (*). It takes about 200 years for such cleared areas to develop a mature secondary growth, and these secondary forests are denser and have different species from a primary forest. A non-botanist can recognize the existence of such secondary forest from an aerial photograph, (an ecologist can identify the species in such a forest from an aerial photograph). Vayda's argument is therefore,

(*). For verification of these facts I thank Dr. D. Bellamy of Durham University Botany Department.

wrong because it can be proved from aerial photographs that few regions of New Guinea have sufficient secondary forest to indicate that the population density was every any greater than it is today. Vayda is disproved, hoist, as it were, by his own ecological petard.

The facts presented earlier in this chapter reveal a correlation between territorial conquests in time of war and population density. The conclusion of the analysis however, is that ecologically orientated theories account for only a small minority of the wars fought in New Guinea and in some cases the defeated are driven from their territory, not for reasons of ecological pressure, but to demonstrate a convincing victory. In the following part of this chapter, the conclusions of this analysis - that "total" ecological explanations of primitive war are inadequate in the majority of cases and that ecology is better regarded as one variable among several which requires attention in a study of war - are verified by ethnographic examples.

The Bokondini Dani (Ploeg 1969) of the Mbogoga Valley have a total population of approximately 3,000 persons. The valley inhabited by these people covers an area of approximately 20 square miles (my estimate from Ploeg's map). The population density of the



Plate (5) : Mbogoga valley (Ploeg 1969)

valley is in the region of 150 persons to a square mile. There are six political groups within the valley (Ploeg refers to these groups as parishes) which fought each other in war. The parish which Ploeg studied was Wanggulam; a parish with a population of 485 persons inhabiting an area of 2 square miles (my estimate) - a population density of 242.5 persons to a square mile. The Dani of the Mbogoga Valley are classified as a high density population according to the criteria of this survey.

Is there any evidence that the high population density of the Mbogoga Valley has resulted in ecological shortage? The Bokondini Dani are shifting cultivators, their staple crop is the sweet potato, which is supplemented by other crops; pigs are highly valued as a source of wealth. The cultivation techniques of these people "are far less elaborate than those used in many other parts of the highlands" (Ploeg 1969:11), and are similar to the simplest type of cultivation distinguished in the highlands by Brookfield (1962). Despite the high population and poor cultivation techniques Ploeg thinks that the people are well fed and that there is no food deficiency.

The aerial photograph of the Wanggulam region of the Mbogoga Valley (reproduced from Ploeg 1969) shows that there is a considerable amount of primary forest covering the valley. Estimations in a broken landscape are difficult, but the area under primary forest exceeds 50% of the total valley area. Ploeg refers to

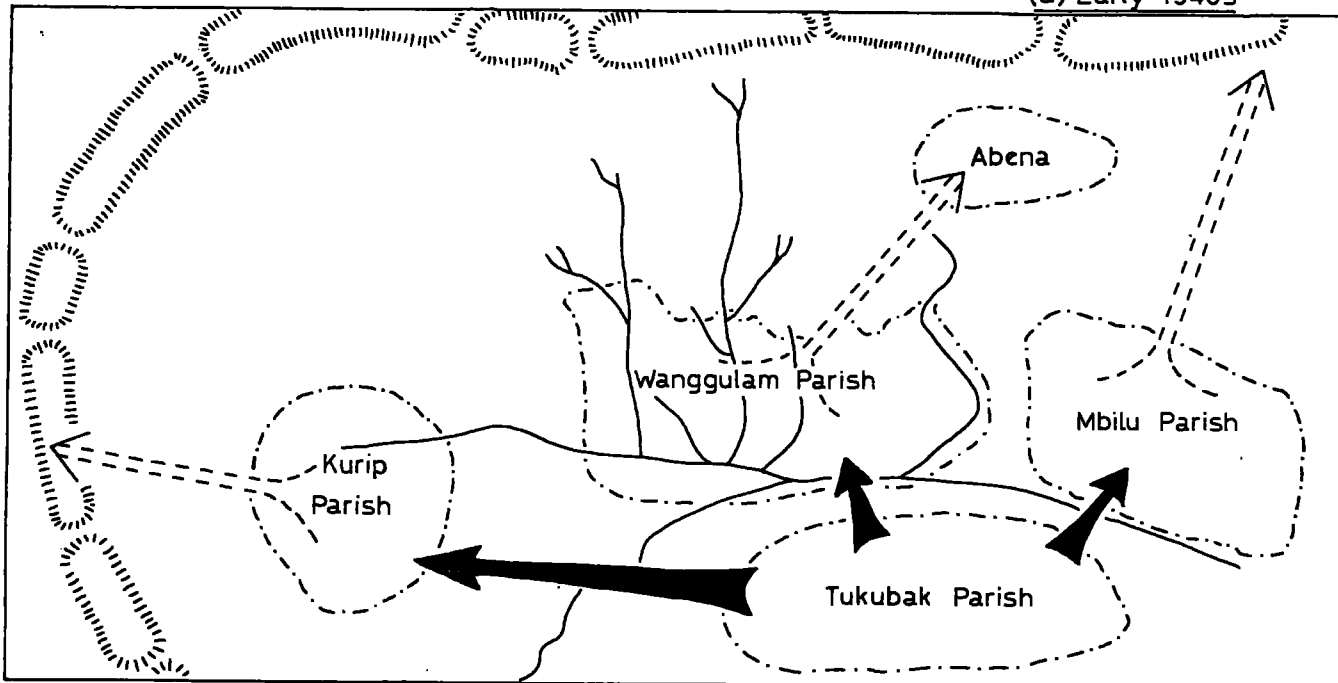
"the rich vegetation" (1969:9) of the valley. The large tracts of primary forest indicate that there is no shortage of land in the Mbogoga Valley. The reason for the large areas of primary forest is not the high value placed on forest products as opposed to garden produce; "hunting and gathering are practised on only a very small scale" (Ploeg 1969:10).

The fact that each parish in the Mbogoga Valley has two territories testifies that there is no shortage of land. In times of war parishes retreat to their second territory if defeated. In times of peace people also migrate to their second territory because a change is sometimes considered a good idea. Although living at a high population density the Bokondini Dani of the Mbogoga Valley suffer from no ecological shortages.

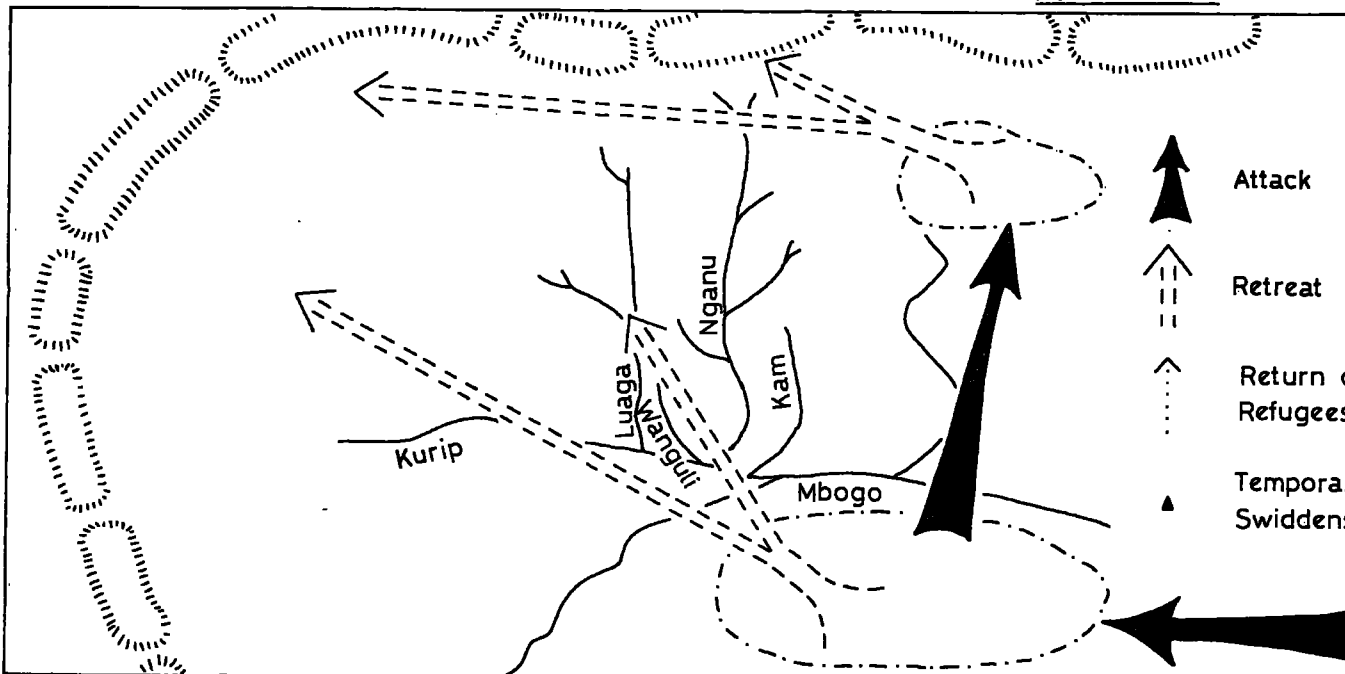
During his fieldwork Ploeg collected information on 131 bow and arrow fights which occurred between 1930 and 1960 and in which one or more Wanggulam persons was a party. 26 of these fights were intra-parish and the defeated group would never be driven away. Only once during this 30 year period were the Wanggulam driven from their land when defeated by another parish. In a region where there is sufficient land and resources, despite a high population density, it is not surprising that few wars entailed loss of land.

The war in which Wanggulam parish was driven from its land is interesting because it is an example of territorial loss which was not motivated by ecological

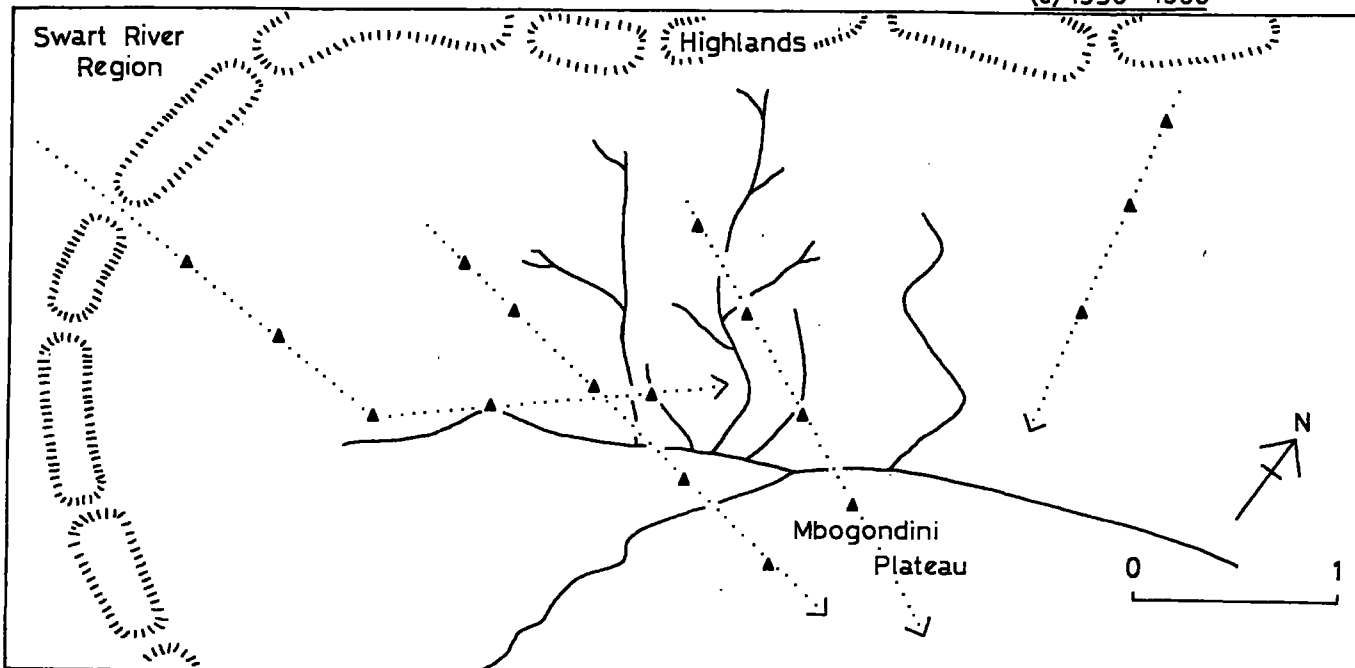
(a) Early 1940s



(b) Late 1940s



(c) 1950 - 1960



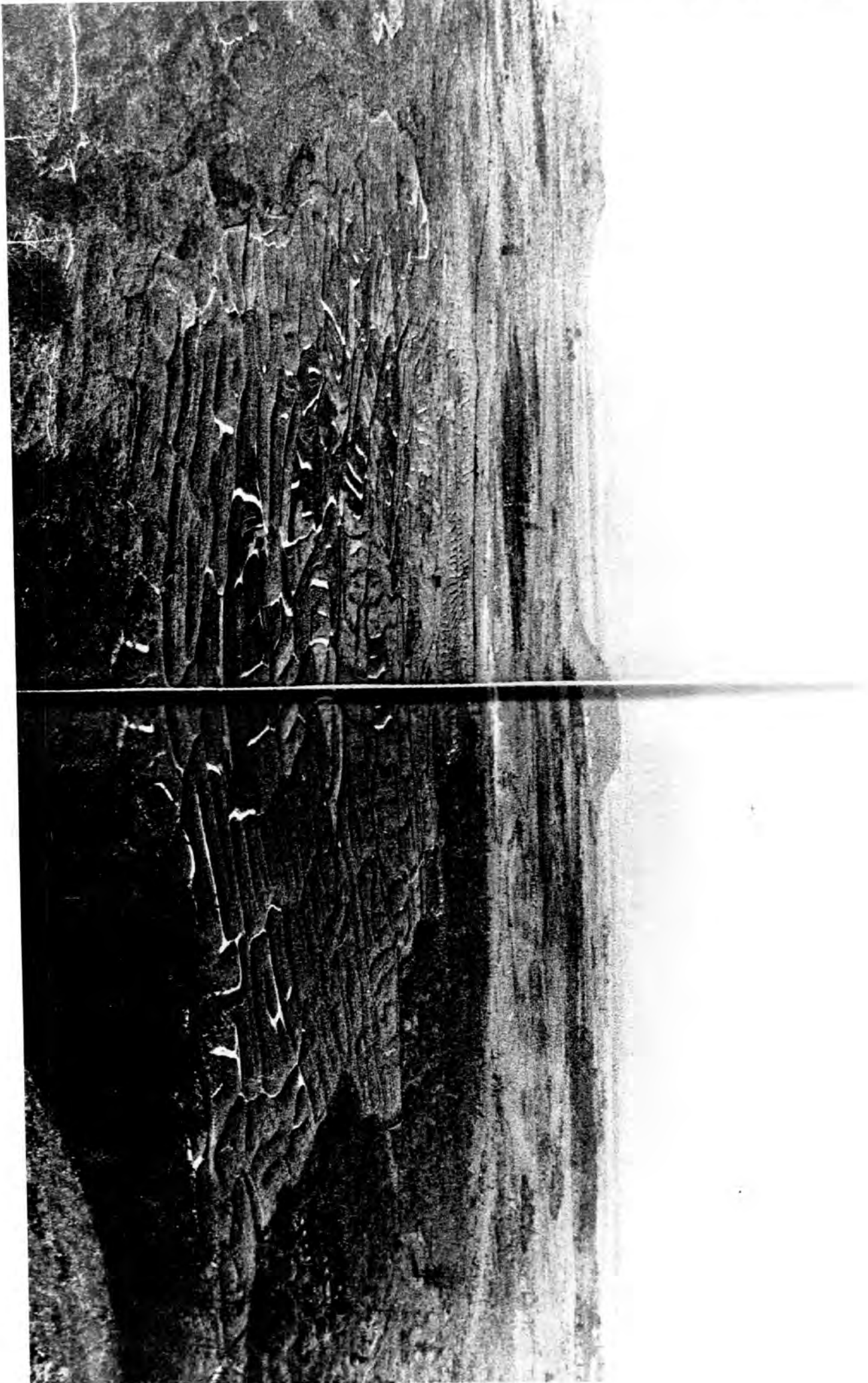
Map (6) : WAR HISTORY OF MBOGOGA VALLEY

shortage (map 61). About 1942 Wanggulam parish fought a war with their southern neighbours, Tukobak parish. In this war Wanggulam lost ten warriors and fled to Abena, their second territory situated in a dip higher up the valley side. After two or three years at Abena, Wanggulam parish fought another war with Tukobak parish and defeated, fled from Mbogoga Valley. Refugees from Wanggulam parish fled to various parts of the highlands, particularly to Panaga in the Swart Valley. About this time two other parishes fled from Mbogoga Valley; they are Mbilu parish, the eastern neighbours of Wanggulam parish and another parish situated on the upper reaches of the Kurip river. While these three parishes were in exile the Tukobak fought a war with their eastern neighbours and lost. Defeated, they fled into the three vacated parish territories. In this case the victors occupied the territory of their defeated and routed enemies, not because of ecological shortage but because they too suffered a defeat. The Tukobak slowly returned to their former territory on a plateau, they made swiddens in the territories of the three exiled parishes as they moved slowly eastwards. After approximately four years absence members of Wanggulam parish settled on the upper reaches of the Kurip river and from there they gradually moved eastwards to their former territory. Ploeg (1969) reports that this eastward movement of the Tukobak and

the slow re-colonization of their land by the Wanggulam continued until the time of his fieldwork (1960-62). The loss of land in these wars was not the result of ecological shortage, although plunder by the victors was considered a pleasant bonus. The route of the Wanggulam was the result of a war fought for revenge. "Whenever I asked people why the Tukobak, led by their biggest big man, Mikwanak, had attacked the Wanggulam, I was always told that this had happened in retaliation for former killings". (Ploeg 1969:134).

A war fought by the Wanggulam in the late 1930's also illustrates that although people lost their land, this was not for ecological reasons. The Wanggulam joined in a battle between two parishes of the upper Kurip area. On arrival, the warriors from Wanggulam parish divided and fought for both sides. When a Wanggulam warrior fell in combat the divided parish united and fought both the original parties to the war. The Wanggulam won the battle and drove the two defeated parishes out of Mbogoga into the Swart Valley. Clearly the Wanggulam did not fight for reasons of ecological gain, although the war resulted in two parishes losing their land.

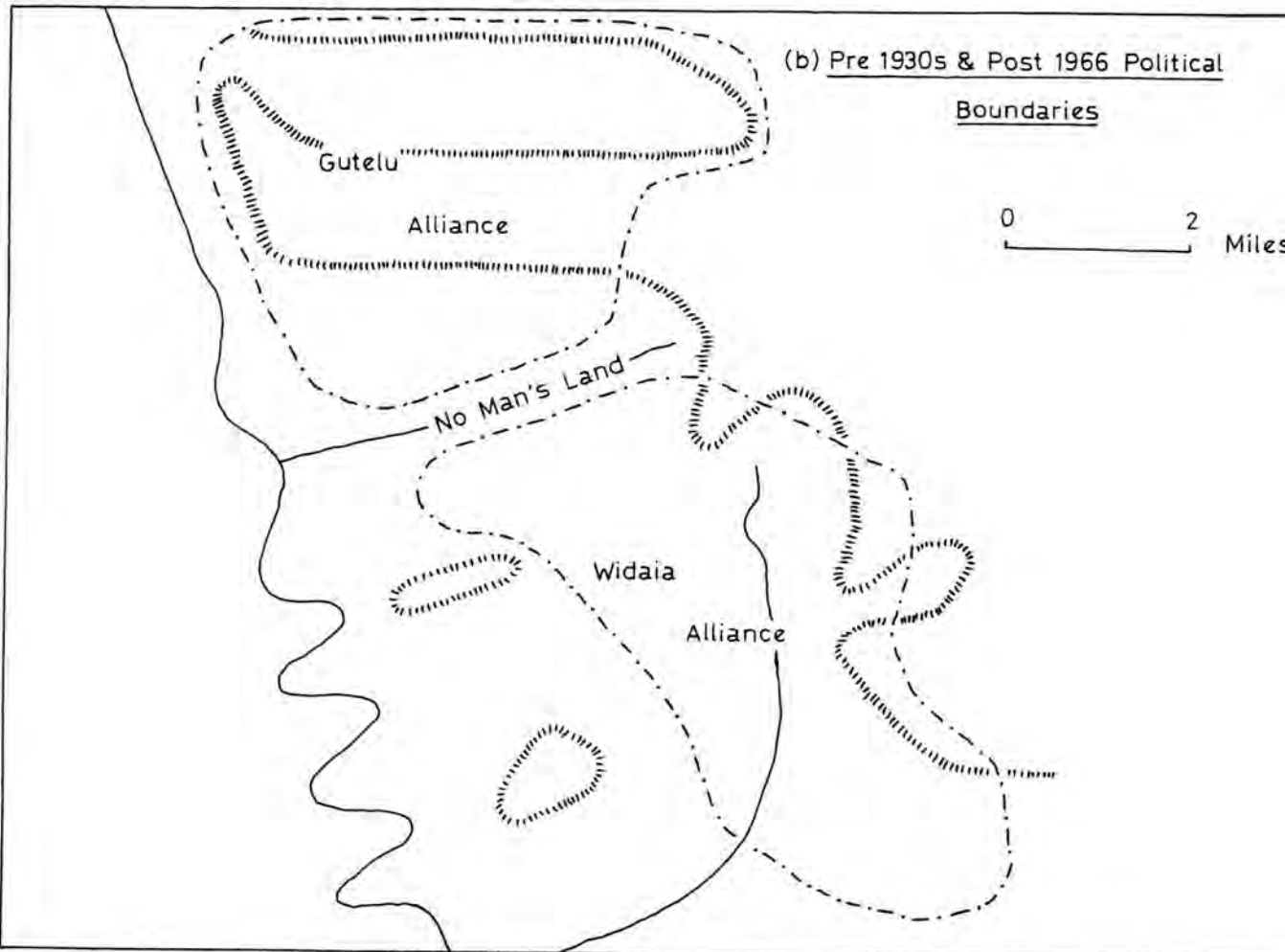
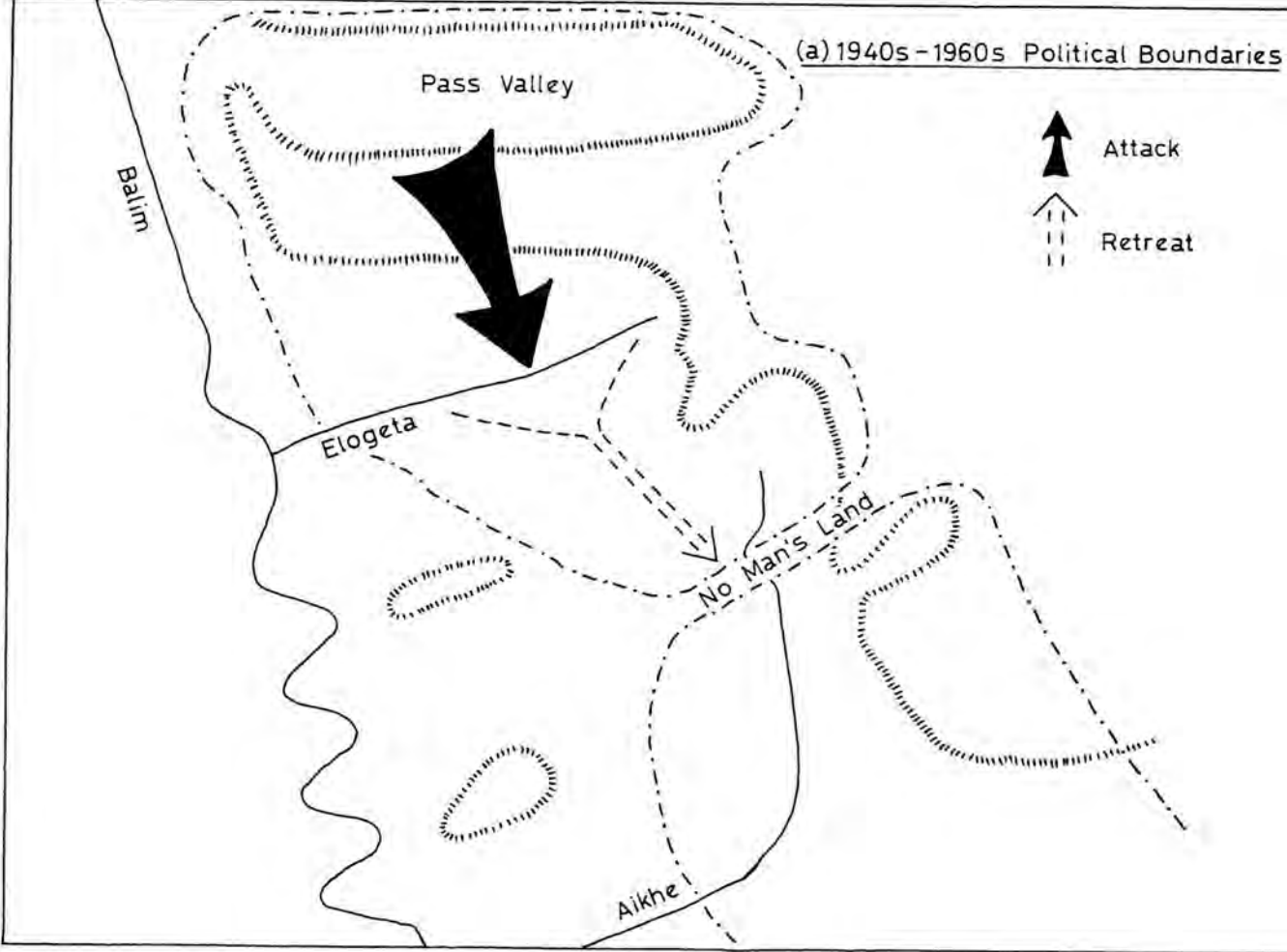
During this thirty year period Wanggulam parish lost 123 people in war. Allowing for catastrophic defeats, such as the defeat of 1942 when ten warriors died, the average number of people killed in war is 4.1 persons a year. Assuming that the population of the parish



has remained relatively constant over this period of time, 0.85% of the parish population was lost a year in war. This figure is too small to support an argument that warfare in the Mbogoga Valley acts as a mechanism of demographic control.

The Dani people of the Grand Valley are classified as a high density population. The average population density of the effective political group is 264 persons to a square mile. The total population of the Grand Valley Darni is estimated at 50,000 people, who occupy a region of 190 square miles (my estimation from map in Heider 1970). The overall population density for the valley is 263 persons to a square mile.

Intensive cultivation techniques are the result of the high population density. The cultivation of the Grand Valley Dani is considered to be among the most intensive in New Guinea, by Brookfield and Hart (1971). An island-bed system of mounds drained by a system of ditches is used to cultivate large areas of natural swamp and dry stone walls retain the gardens on steep mountain slopes. The cover of primary forest is thin in this region and valued forest products, such as fur and feathers, are traded from the forested Jalé region. The high population density of the Grand Valley region has a different result to that of the Mbogoga Valley - there is less primary forest and cultivation is more intensive.



Map (7): WAR HISTORY OF GRAND VALLEY (After Heider 1970:120)

Do the Grand Valley Dani, unlike the Bokondini Dani, fight for land because of the high population density and consequent strain on ecological resources? The Dani refer to the availability of land as gog or muluk, both of which mean huge; the land situation is not conceived as hamalukat, which means small. Despite the pressure on resources the Dani do not think that they are short of land and rarely fight for more. Heider (1970:101) writes that "in the relatively densely populated Grand Valley, land does not often become an explicit subject of contention between groups".

The effective political group in Dani war has an average population of 4,166 persons (Heider calls these groups alliances). The usual pattern of Dani war consists of battles and raids between traditional enemies - land is never seized during these engagements. Occasionally the alliance breaks up because groups within declare war on each other; the result is the formation of new political groups.

Heider (1970) gives in detail such an intra-alliance attack and the subsequent re-aligning of political groups. In the 1930's there was a war frontier along the Elogeta river (see map 7). The Wilihiman-Walalua confederation (the term used by Heider to refer to political groups within an alliance) was in the Widaia alliance and the Dloko Mabel confederation was in the Gutelu alliance. Dissension within the Widaia alliance resulted in a split of the alliance,

the Wilihiman confederation joined the Dloko Mabel confederation in an attack on the Widaia alliance. This attack resulted in a new no man's land south of the Elogeta river. The New Gutelu alliance was consolidated by the mid 1940's and endured until 1966. In 1966, the northern confederations of the Gutelu alliance (Dloko Mabel, Dlabi Mabel, Phaluk Matian and Widipo Alua) launched a surprise attack on the three southern confederations of the alliance (Wilihiman Wilalua, Wilil Himan and Gosi Alua). The attempted usurpation and independence of the Wilihiman confederation in certain important rituals provoked the attack. The three attacked confederations received help from the Widaia alliance which they subsequently joined. The re-formation of the 1930's no man's land along the Elogeta river was the result of the attack.

Although there was a certain amount of land conquest in these political upheavals, this was not the reason for the attacks. The maps show that little land changed from one group to another, the most significant loss was along the new boundary which was land gained by neither side. The cultivation of the previous no man's land compensates for the loss of land in the new boundary. Some Dani wars do result in annexation of enemy land and ecological shortage may motivate some of these wars. The Dani classify wars of destruction and rout separately from other wars, they are called mugoko. The mugoko occurs when an alliance is careless and contracts more enemies than allies; the enemies attack

and wipe out the alliance. Although the aim of the mugoko is to destroy the enemy group and drive them from their land, the victors do not always use the vacated territory. The Wio confederation, for example, was destroyed by a mugoko in 1952 but most of their territory was left as a deserted area. This was not always the case, the Dloko Mabel confederation once occupied the Pass Valley but by a series of successful wars they extended their territory into the Grand Valley.

During a 5½ month period, Heider (1970) recorded the battles and raids fought by the Gutelu alliance against the Widaia alliance. The number of deaths suffered by a group (the Dugum neighbourhood), on the border was four. The population of the group was 350 persons and the death toll for a year was .48% of the population. In the intra-alliance attack of 1966 the three southern confederations lost 125 persons, 6.25% of the population. The aggressors lost about 20 persons, .4% of the population. The significance of these losses in easing population stresses is difficult to assess, overall they are too low to have any real influence on the dense population of the Grand Valley.

The Dani of the Ilaga Valley (Larson 1962) number approximately 5,000 persons. The area of the valley is approximately 150 square miles (my estimate) and the population density is 33.3 persons to a square mile. The population densities of the political groups within the Ilaga Valley are considerably higher than this figure and are in the region of 400 persons to a

square mile. These figures suggest areas of high population density supported by intensive cultivation, surrounded by considerable areas of primary forest.

Larson (1962) collected information on fifteen wars fought between 1915 and 1960; an average of a war every three years. The wars were caused by disputes between individual members of different political groups which escalated into war. Seven of the fifteen wars finished with one of the principal groups to the war leaving the valley. In five cases the defeated group fled from the valley, in one of these cases they tried to return but were driven out a second time. In another case the defeated group fled but returned later, only to leave after a settlement. In another case the war was settled and then one of the groups left the valley. In almost 50% of the past wars the result has been a change in group territories. The inferred ecological evidence suggests that these wars were not fought for reasons of shortage; the defeated groups were probably driven away as a sign of a decisive victory.

The Abelam have the highest population density of any lowland people in this survey, with an average of 106 persons to a square mile. Some Abelam regions have very high densities; the Wosera division, for example, has an average density of 193 persons to a square mile and in some areas of this region the figure reaches 400 persons to a square mile. The North Abelam have much lower population densities. Lea (1965) made a detailed ecological study comparing a Wosera village

with a North Abelam village. The Wosera village was ecologically the poorest. The natives classified the Wosera soil as poor, shallow and badly drained (facts borne out by scientific investigation). The vegetation surrounding the Wosera village was grasses and low trees, whereas the North Abelam village had a richer flora of well developed trees and fallow. The fallow period was shorter in the Wosera village and this was reflected in the vegetation; the Wosera gardens, in comparison to the North Abelam village, were untidy and subject to seasonal flooding. There were also differences in diet, the lending of land, the yam yield and the amount of land cultivated per person.

The demographic and ecological differences between these two regions influence the patterns of warfare. Sorcery accusations cause wars among the North Abelam and groups rarely lose their land; the death toll is low (and in the region of two or three warriors). The Wosera people are different, in fact, they are the only people in this survey to fight regularly with the expressed aim of gaining more land. When the enemy is routed the victors quickly colonize their land. Some villages have tried to colonize the territory of neighbouring peoples and this "expansion was...the result of the hostling together of large, fairly densely packed Abelam villages, fighting each other" (Forge 1965:25). The death rate in Wosera wars is high. In a battle between Serakum and Jambitanga, for

example, fifty men were killed. In the early 1930's (Forge 1965) Nungwaia village massacred the inhabitants of a Gowanga village and took their land. High death tolls such as these might have reduced the rate of population increase to a certain extent.

The Abelam demonstrate that ecological and demographic factors, when they reach a critical level, are important in the way they modify warfare. The Abelam also show that primitive wars are fought when there is no ecological shortage or population problem - to suggest (Vayda 1971) that this warfare is part of a cycle which becomes an ecological control mechanism in times of need is to beg the question.

The Chimbu and Mae Enga peoples, often quoted in New Guinea contexts as high density populations, do not always fight wars for territorial gain. Land conquest is often the underlying aim of wars but the ostensible cause is usually a dispute between individual members of different political groups, for example, theft or a desire for revenge. The Mae Enga fight wars more explicitly for reasons of territorial gain, almost 50% (19 out of a total of 41) of the wars recorded by Meggitt (1965) were caused by land encroachments. The significant point is that while several wars are fought by the Chimbu and Mae Enga in an attempt to gain more land, not all of their wars are fought for land. In some cases a war does not result in territorial gain for either side and in other cases the defeated group are

invited back to their territory. These people are always short of land, yet in some wars land is not annexed - this indicates that even where people fight for ecological reasons, not all wars can be accounted for in ecological terms.

The Kuma are a highland people with a high population density but they never fight to secure more land. A rout and loss of land is sometimes the result of a Kuma war but this land is never occupied by the victorious group because of fear for sorcery traps and ancestor spirits of the defeated group. The defeated group is driven from its land to demonstrate a decisive victory - not because of ecological shortage, although the Kuma have a high population density.

The conclusion of this chapter is that primitive war in New Guinea is rarely the result of ecological factors alone. It is exceptional for war to be fought for reasons of land conquest only, although this is sometimes the implicit aim of war. However, territorial losses sometimes occur when there is no ecological shortage, in these cases it demonstrates a decisive victory. The proposal of this chapter is that ecology is more profitably regarded as one of several important factors which it is necessary to consider in a comprehensive analysis of primitive war. An interesting ecological question, for example, is whether there is any correlation between ecology and different types of war? If so, are specific patterns of warfare a direct or indirect result of the environment? For example, does a

rugged, difficult terrain result in a specific type of war because of the difficulties of communication between political groups? One possible consequence of a rugged terrain is that social contacts are few and encounters between groups are hostile. Another possible result is that the distance between groups reduces the likelihood of war because the groups, not coming into contact often, are unlikely to dispute and fight. It is questions such as this which are asked in the following chapters of this thesis. In this approach ecological factors are relevant in all studies of primitive war, whereas approaches which attribute the root reasons of primitive war to ecological factors are applicable to only a few studies.

SOCIAL ORGANIZATION AND PRIMITIVE WARPart 1: Definitions

The aim of this chapter is to analyse warfare in relation to the social organization of the people in this survey. The chapter is divided into three parts. In the first the terms and concepts used in this thesis are defined because a uniform terminology is essential in a comparative study. In the second part of the chapter a descriptive summary of war in each of the societies included in the survey is given; each summary is illustrated with diagrams. In the third part of the chapter a comparative analysis, based on the descriptive summaries, is attempted with the aid of a computer. Significant correlations are examined and possible explanations offered.

In a comparative study a uniform terminology is essential for precise comparison. A plethora of ill-defined terms plagues anthropology because different writers use the same term to convey different ideas or different terms to convey the same idea. In some cases different writers who live with the same people use different terminologies. In New Guinea, for example, Berndt and Glasse both studied the Fore people but it is difficult to reconcile their different terminologies.

It is not satisfactory merely to equate the various terms used by different writers; for example, as Berndt (1964:187) tries to do with a table, in his study of highland warfare. In this study a terminology is formulated into which the disparate terms of various writers can be translated for comparative purposes. Two sources are used in the construction of this terminology: Notes and Queries in Anthropology (1951) and "Local Grouping in Melanesia" by Hogbin and Wedgwood (Oceania 1952-4; 23)

An important distinction is made in the terminology of social

organization used in this thesis between terms referring to territorial groups and terms referring to descent ideologies. The terminological confusion of these two categories has resulted in a muddled debate over the relevance of descent concepts to New Guinea societies, (see pp.97). The use of a term which conveys a descent concept for an actual territorial grouping is incorrect because rarely, if ever, does a territorial group correspond to a descent group (even where recruitment is conceived in terms of descent). The term "clan", for example, is used in several New Guinea ethnographies for a territorial group and a group based on unilineal descent. Confusion results from this usage because local groups are rarely recruited by descent criteria alone, and this fact has led some writers to question the validity of descent concepts in New Guinea.

The territorial terminology used in this thesis is as follows:

People : refers to a group defined by cultural and linguistic factors. This is not a political group and is a group rarely recognized by the natives themselves. Evans-Pritchard (1940:5) defines a people as "all persons who speak the same language and have, in other respects, the same culture, and consider themselves to be distinct from like aggregates". Few peoples in New Guinea consider themselves distinct aggregates because few of them have the concept of "a people". Europeans introduce the concept of a people for classification and administrative purposes. In a certain area of the eastern highlands, for example, the word siane is a greeting which White administrators heard frequently - the people of the region had no name of their own because they had no need to conceive of such a large group and they were consequently christened the Siane people. Similarly, the people of the Prince Alexander mountains had no word in their language for themselves as a cultural group. In the region the word arapesh means friends and by extension, the people are called the Arapesh.

Parish : is the most important territorial and political group in New Guinea society. Larger political groups are built up from the parish

and smaller groups are the result of division within the parish. The term parish is similar in meaning to the term tribe, which is defined in Notes and Queries in Anthropology (1951:66) as "a politically or socially coherent and autonomous group occupying or claiming a particular territory". The term tribe however, indicates a larger territorial group than is commonly found in New Guinea. The term parish is recommended by Hogbin and Wedgwood (1952-4:243) and is a term used by several writers on New Guinea. The term parish is therefore established in New Guinea ethnography.

Locality : a territorial (and sometimes political) sub-division of a parish. A locality corresponds territorially, to Hogbin and Wedgwood's carpel (1952-4:243) but unlike a carpel a locality is not defined in terms of unilineal descent. A parish which is divided into two localities based on a conceptual division of society into moieties is called a dual division; although these function in the same way as localities.

Sub-locality : a territorial sub-division of a locality

Village : is the largest settlement type found in New Guinea.

Villages range in size from 50 persons to 1,700 persons; the average village population is 290 persons. A village is defined in Notes and Queries in Anthropology (1951:64) as "a territorially separate collection of homesteads, which is regarded as a distinct unit, and of such a size that its inhabitants can all be personally acquainted." A parish or a locality may consist of one village or several villages.

Ward : is a territorial division of a village consisting of a discrete collection of households. In Notes and Queries in Anthropology (1951:64) it is suggested that a "local group (in this case a village)...may be subdivided, and these sub-divisions are best referred to as wards."

Hamlet : is a smaller settlement than a village with a population of less than 50 persons.

Scattered homesteads : is the situation where no compact settlement is discernible. Hogbin and Wedgwood (1952-4:271) write that in some areas

"the members of each parish live dispersedly throughout the parish territory, each individual or compound family occupying a homestead which is usually situated conveniently with reference to its garden land. The homestead consists of a dwelling house together with such accessory buildings as may be erected for cooking, for pigs and fowls, and for a separate sleeping place for males". It is difficult to define with any precision between a hamlet and a scattered homestead; and this is a distinction probably not made by all writers.

Confederation : is a collection of two or more parishes into a large political group. A confederation is defined in Notes and Queries in Anthropology (1951:134) as "more or less equal and autonomous partners not under a superior central political and legal authority and uniting only for specific purposes such as defence against outside attack or periodical ritual celebrations". There is an important distinction between permanent confederations and temporary confederacies, the latter are temporary alliances for particular tasks. The rôle of both types of alliance vary widely, from groups which are pledged to neutrality vis a vis each other in war, to groups which are obliged to actively support each other in war. Only confederations which are important in war are considered in this thesis; gatherings for ritual purposes only (e.g. the Huli) are ignorèd.

The terminology used in this thesis for descent groups is as follows:

Moiety : is a dual division of society; individuals are born into one group or the other. Moieties are important in the regulation of marriage and in religious celebrations - they divide the social universe into two.

Clan : is defined in Notes and Queries in Anthropology (1951:89) as "a group of persons of both sexes, membership of which is determined by

unilineal descent, actual or putative, with ipso facto obligations of an exclusive kind". Clans are usually named, exogamous groups. An important characteristic is that the members of a clan think they are related by unilineal descent, although the actual genealogical links cannot always be traced or the apical ancestor named. There is an important distinction between localized clans, where the descent group occupies a discrete territory, and dispersed clans, which correspond to no specific territorial group but are spread over a wide area, (the terms dispersed and localized are taken from Notes and Queries in Anthropology (1951:90). The ideas of localized and dispersed clans represent two extremes on a continuum and in any study it is necessary to ascertain to what extent a society approximates to one or the other.

Sub-clan : is a segment of the clan; the rôle of these groups varies from society to society.

Phratry : a descent group consisting of several clans. It is usual, though not essential, for a phratry to have a common ancestor from who the member clans descended in the mythical past; thus a phratry forms a rationale for the descent ideology.

Lineage : is defined in Notes and Queries in Anthropology (1951:88) as "all the descendants in one line of a particular person through a determinate number of generations". The fundamental characteristic of a lineage is that common ancestry can be traced by actual genealogical links. A lineage is usually, though not always, a sub-division of a clan; in this case a clan frequently consists of several lineages which are genealogically unrelated but which claim common descent from a remote ancestor.

Sub-lineage : is a small, genealogically precise group which is the result of a sub-division within the lineage.

The terminology defined above is inadequate in two respects. In the first place it does not take into account the finer processes of

fission and fussion between groups; the terminology is only applicable to permanent groups. In New Guinea societies few groups are permanent, the social organization is in continual flux. A large expanding parish, for example, usually divides to form two parishes. Before the division is complete, both segments have specific rôles which they no longer share in common. The reverse process occurs when a parish is defeated in war and small groups flee to take refuge with other parishes. The scattered parish segments retain their parish identity for some time and form enclaves within other parishes. As time passes, however, these parish fragments are slowly absorbed into their host groups. During this slow process of fussion rôles change and at some undefinable point the former parish ceases to exist.

The second inadequacy in the above terminology is a failure to present native ideas on territory and descent. A standardized, technical terminology fails to make subtle classificatory distinctions which characterize native thought. The analysis which follows is unsatisfactory for this reason. In fact, many ethnographies are unsatisfactory for the same reason, anthropologists use ill-defined, value loaded terms to convey native ideas and classifications. Some writers think the occasional native word included in brackets is sufficient; A. Strathern's analysis of Melpa terms (1971) is the type of study required.

The controversy about the relevance of descent theory in New Guinea has already been mentioned (pp. 6). The principal writers on the issue are Barnes (1962), Langness (1964), Kaberry (1967), De Lepervanche (1967-8), and Strathern (1969:1972). Barnes (1962:5) started the controversy when he wrote about "the African mirage in New Guinea", and stated his opinion that highland societies "as a whole appear to be characterized by cumulative patrifiliation rather than by agnatic descent" (1962:6). Kaberry, quite rightly, questions Barnes's assertions, who thinks that he

under-estimates the number of New Guinea societies which have an agnatic descent ideology. Kaberry (1967:114) makes a fundamental point, "what is crucial is whether there exists an ideology of patrilineal descent". Langness (1964) also makes this important point.

The Nuer are the locus classicus in anthropology of a unilineal descent system. In Nuerland there are no tribes which can be neatly dissected into corporate agratic groups which occupy a specific area of the tribal territory. Evans-Pritchard (1940:286) writes that "Nuer lineages are not corporate localized communities". The twenty or so Nuer clans are spread all over Nuerland and villages are composed of members from several clans. Individuals and small groups move freely across Nuerland and settle in other tribal areas where they join agnatically unrelated elements in local communities. Individuals move several times in the course of their lives and "reside for some years with one lot of kin and then for some years with another" (Evans-Pritchard 1940:210). Nuer local groups do not therefore correspond to descent groups - but nobody would suggest that the Nuer lack descent. Barnes (1962:5) warns against "comparing the de facto situation in a highland community, as shown by an ethnographical census, with a non-existent and idealized set of conditions among the Nuer". Despite this warning, several students of New Guinea ethnography wrongly infer that the importance of descent in any society is reflected in the recruitment principles to local groups and the extent to which local groups are composed of unilineally related individuals.

Langness (1964) goes to some lengths to demonstrate that Bena Bena local groups include a high percentage of non-agnates. In this respect Bena Bena society is similar to Nuer society. In New Guinea, although agnatically conceived territorial groups include many non-agnates, the society still has an agnatic ideology. In fact clans in New Guinea are more

localized than Nuer clans because they are smaller and they are thought, ideally, to be localized. On the basis of residence criteria New Guinea clans are paradoxically "more strongly agnatic" than Nuer clans. To think of descent in terms of localized groups alone is incorrect. In order to avoid confusion in this thesis therefore, a different terminology is used for territorial groups and descent groups, even where the latter correspond closely to the former.

An important difference between Nuer clans and the clans of New Guinea society is that a Nuer can never change his clan affiliation, no matter how often he changes his place of residence. In New Guinea a man can change his place of residence and also, over a period of time, he can change his clan affiliation. The first generation descendants of a man from a foreign clan usually become full members of their host clan. Langness (1964:172) makes this point: "the sheer fact of residence in a Bena Bena group can and does determine kinship. People do not necessarily reside where they do because they are kinsmen; rather they become kinsmen because they reside there". A possible explanation of this absorption of persons from other clans is that in order to operate the ideal of localized descent groups foreigners must be slowly assimilated into their host clan or else the ideal becomes too unrealistic to exist.

The idea of descent in New Guinea is not merely a malfunctioning recruitment principle. The important questions to ask are what is the ideology of descent used for and why? (Strathern 1969). Kaberry (1967:121) makes this point: "in the study of societies with patrilineal descent, whether they be in New Guinea or any other part of the world, one must analyse both the ideology and the operation of the principle of descent within the context of the political, economic, and ritual institutions of the society concerned". The functions of a descent principle vary from one society to another and for each society it is necessary to ask:

"To what levels of group structure are descent dogmas applied, and why?" (Strathern 1969:37). De Lepervanche (1967-8) and Strathern (1972) suggest that descent in New Guinea societies is not a significant recruitment principle, although at first it appears to be. The reason for this "mirage" is that the people refer to territorial groups as if they are descent groups, and the reason for this is that descent is an idiom to express solidarity and group cohesion in a fluid social environment. In New Guinea, descent is not conceived as ancestor orientated, as something in the past but it is a present day situation, men in the same group are "as brothers" and are obliged to help one another. Strathern (1972:216) writes that "descent constructs.....are employed as moral symbols, as assertions of stability and solidarity in a world of flux". This explanation of descent dogmas in New Guinea is tested later in this chapter (pp.275), when a correlation between scattered homesteads, ideas of localized descent groups and a need for defence in times of attack is demonstrated. These facts support the argument that descent binds a group together in times of need.

The suggestion (De Lepervanche 1967-8; Strathern 1972) that big men are important in the formation of groups in New Guinea is supported by the evidence in this study (pp. 261). De Lepervanche (1967-8;139) writes that "the role of big men in political action, both within groups and between them has not been thoroughly analysed". The argument is that big men form a nucleus and that groups aggregate around them. A significant difference between descent groups in Nuer society and descent groups in New Guinea is that in the former, feuds are fought by agnatic descent groups but in the latter wars are fought by territorial groups (possibly united by implied descent ties). It is suggested in this thesis that these territorial groups are factions, built up around big men and possibly stabilized by descent, which gives a brotherhood.

In this survey an attempt is made to classify societies according to the importance of descent within them and to find correlations between the importance of descent and warfare. Classifications of this nature are difficult for two reasons. In the first place descent can have several functions. In one society, for example, descent groups may be important for certain rituals but unimportant in the recruitment of local groups. In another society the situation may be reversed with local groups recruited from descent groups but rituals performed by haphazard collections of people. In this case it is impossible to decide in which society descent is most important. Lewis (1965:107) makes the same point: "since descent has multiple characteristics in most societies, to say that one society is "strongly" patrilineal or matrilineal, or is more patrilineal or matrilineal than another, has in itself little meaning, except perhaps as an evaluation of native sentiment". In this study societies are classified as more agnatic or less agnatic on the basis of the importance of descent in recruiting local groups.

The second difficulty with classifications of this nature is that the structural level must be specified. For example, the descent groups at one level may be localized but the descent groups at another level may be dispersed. Any generalization concerning the importance of descent in such a society must specify the structural level on which the statement is made. A Mae Enga lineage, for example, is dispersed but a clan is localized markedly into a parish (Meggitt 1965); on the basis of the former, a Mae Enga society has a weak descent ideology in terms of local group recruitment but on the basis of the latter the Mae Enga have a strong descent ideology. In this study comments concerning the importance of descent in any society are qualified by the group which is referred to.

The warnings of certain writers (e.g. Barnes 1962; Langness 1964), that African segmentary descent concepts must not be uncritically adopted by New Guinea ethnographers, are important. Although certain people in New Guinea refer to territorial groups and their fighting as if this is

between descent groups, they do not conceive of the situation as a Nuer native does. As this study shows, an understanding of warfare in New Guinea will not come from an emphasis on segmentary descent ideology. The notion of descent held by New Guinea people is important in their warfare and it is these ideas of descent which are analysed in this thesis.

The terminology used for primitive military social organization is as follows:

Non-lethal fighting : is fighting where deaths are avoided, to kill a man in such a fight is tantamount to murder. Quarrels between individuals are usually the cause of such fights and the intensity of the resulting brawl depends on the number of men who join in and the weapons they use. Fights in which deaths should not occur are restricted to a small group, such as a village or a locality.

Minor war : is less destructive than major war; for example, the enemy is rarely routed and the hostilities are always settled peacefully (unless there is escalation to major war). In terms of social structure, minor war occurs between groups within the same overall territorial and political group, for example, between parishes of the same confederation, (an escalation to major war usually marks a change in political affiliations). Minor war occurs in approximately 50% of the societies in this survey.

Major war : is the most destructive type of warfare found in New Guinea; for example, where possible the enemy are routed and their property pillaged. In some cases a peaceful settlement of major war is impossible. In terms of social structure, major war is fought between groups which are members of different political groups, for example, between parishes which are members of different confederations. The categories non-lethal fights, minor wars and major wars are made by the natives in the societies where they occur.

Principal group : is the group which is the central party to a particular war. For example, if a war is caused by a dispute between individual members of different political groups, these two groups (which are obliged to support their members in armed disputes with outside groups) are the principal groups to the war.

Ally groups : are the groups which join the principal group. It is important to distinguish between the different reasons why allies help the principal group. For example, they might be obliged to help permanently or they might help for reasons of self gain temporarily. Allies are not always groups, often they are individuals who are related to members of the principal group and who feel obliged to fight - these are called individual allies. A distinction which reflects the principal and not any ally groups classification is principal enemy and secondary enemy. The former is the enemy principal group and the latter are the enemy ally groups.

Fields of war : are the groups included in a war, both principal and ally groups, represented in a diagram to show the structure of relations between the groups concerned. (After Strathern 1971:67)

Cause of war : is an immediate dispute which initiates war between two groups which until that time lived in peace. The cause of a war is usually a dispute between individual members of different political groups which escalates to physical aggression and war between their respective groups; such disputes are theft, adultery and sorcery.

Reason for war : is a deep rooted motive which moves men to fight in a war. Frequently, the cause and the reason for a war operate together to result in hostilities. A theft, for example, is sometimes not enough to start a war, but a theft by a group against which there are revenge obligations to be satisfied will probably result in war. Other reasons for war are a ritual necessity for heads or human flesh, a need for more land and a desire for prestige.

Settlement of war : several terms are used here. There are two types

of peace settlement: secure peace, which means that members of the two groups can safely visit one another once peace is settled and that a resumption of hostilities on unimportant grounds is unlikely, and superficial peace, where members of the two groups cannot visit each other in complete safety when peace is settled and that a resumption of hostilities for the slightest reason is likely. An armistice is a temporary cease fire agreed to by both sides for ritual reasons or a necessity to attend gardens. A truce is a longer halt of the fighting which is often agreed upon for similar reasons to an armistice. Sometimes a truce evolves slowly into a peaceful settlement. The term wergild (after Radcliffe-Brown 1950:17) refers to the indemnity paid between enemy groups for the persons lost by each side in the war; the number of deaths suffered by each side are usually equated and any difference settled by wergild payments. The term reparation (after Glasse 1968) refers to the compensation paid by the principal group to their allies, for the men lost by the latter in helping the former.

Consequences of war : are the results of a war, other than a peaceful settlement. If peace is not settled there are two possible results to a war, either a stalemate where the enmity between the groups remains but active aggression is curtailed, or a defeat where the losers are routed and their property looted. Members of a defeated group either flee as a group or as individual refugees; protection is sought with kin or friends in other groups.

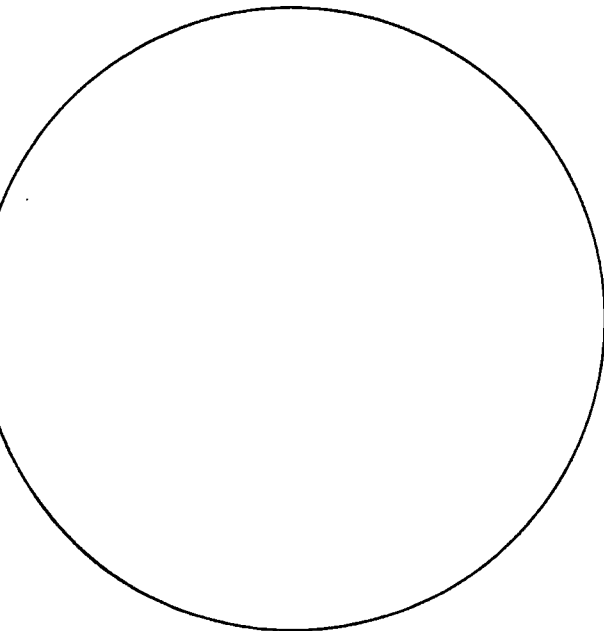
The following descriptive summaries (Part 2 : Ethnographic examples), are arranged according to a standard pattern, (although, in some cases, the available information is insufficient to allow the pattern to be rigidly followed). The primary divisions are non-lethal fights, minor war and major war. The subject matter on minor and major war is divided up according to the following topics:

1. The principal groups to a war.
2. Ally groups and individuals; and the basis of alliances.
3. Principal and secondary enemies.
4. The significance of individual ties in warfare, between allies and relatives in opposed enemy groups. The significance of agnatic descent (as opposed to political allegiance) in the behaviour of relatives in different political groups.
5. The causes and the reasons for war.
6. The settlement of war and the payment of compensation.
7. The consequences of war.

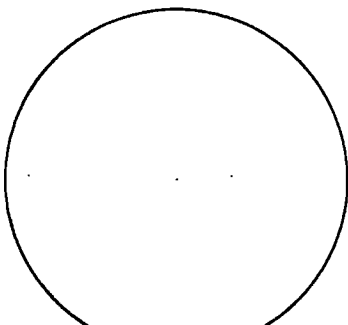
The descriptive summaries are arranged according to the above pattern in order to facilitate easy comparison of various points between different peoples. The task of comparison is aided also by a series of three diagrams for each society.

In the first diagram the territorial and political organization of the society is represented by divided circles.

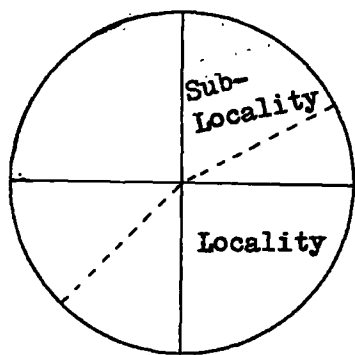
The notation used in the diagrams is as follows:



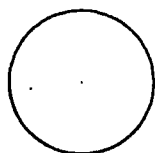
Confederation



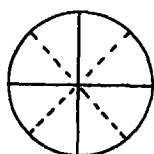
Parish



Parish divided into localities and sub-localities.



Village



Village divided into wards and sub-wards

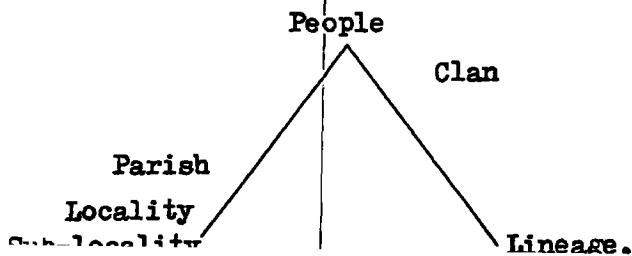


Hamlet




Scattered homesteads.

The second diagram equates the correspondence between different sizes of territorial group with the various levels of descent group, (after Evans-Pritchard 1940). Where a local group is conceived as a descent group (regardless of the number of non-agnates actually present) the local group term is placed opposite the descent group term. When a term occurs on the diagram without a corresponding local/descent group term this indicates that the local group is not conceived as a descent group or that the descent group is not conceived as a local group. In the following example the sub-locality is conceived as a lineage but the parish and the locality are not conceived as descent groups, and the clan is dispersed.





The third diagram shows the fields of warfare, the structure of relations between the fighting groups. Only the fields of major war are shown on the diagram, although the fields of minor war (where minor wars occur) are sometimes included in the same diagram. The field diagrams use the territorial and political diagrams and with specific signs indicate the principal groups to a war and their various allies.

The notation used to indicate the fields of warfare is as follows:


The attack of the principal group(s) to the war, (two opposed arrows  indicate a battle, a single arrow indicates a raid - see pp. 376 for a discussion of the distinction).


 Permanent ally groups (i.e. those groups obliged to fight).

 Temporary ally groups (i.e. groups which choose to fight on occasions which suit their ends).

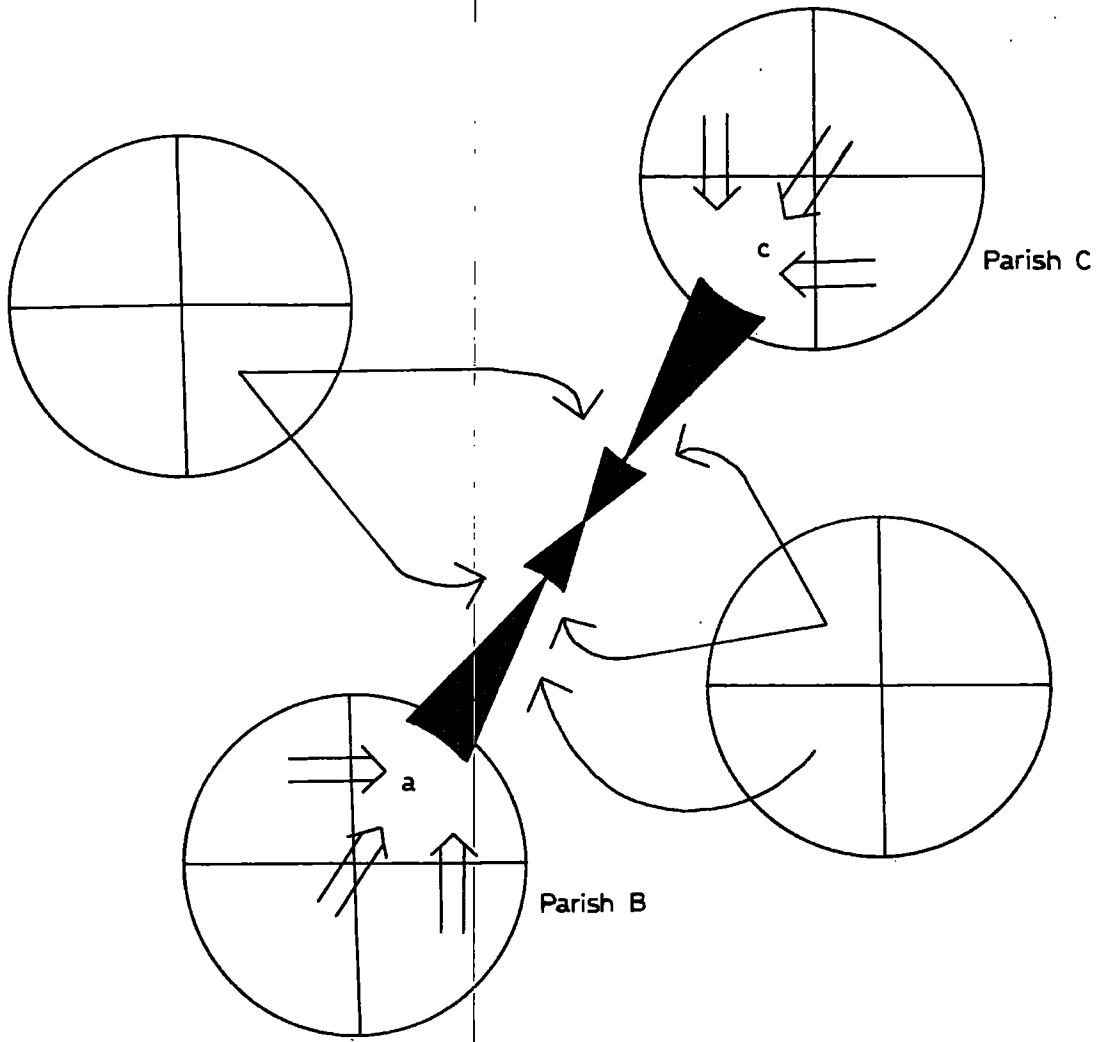
 Permanent individual allies (i.e. individuals obliged to support relatives in the principal group).

 Temporary individual allies (i.e. individuals free to choose).

 Groups which are always neutral when the principal group is fighting a war.

 Groups which sometimes remain neutral when the principal group is fighting a war - their neutrality is usually bribed.

In the hypothetical example which follows, locality a of parish B and locality c of parish C are the principal groups in a war. In battle the other localities of the principal locality's parish are obliged, as groups, to support them. Individuals from neighbouring localities in different parishes, who are related to members of either principal group, are obliged to fight as allies, (this results in members of the same locality fighting as allies on opposite sides).



Part 2: Ethnographic Examples:

ABELAM.

Non-lethal fights.

In anger father and son sometimes rush for their spears but they are stopped from fighting. Brothers fight spear duels, and although this is strongly disapproved, because close agnates should not fight, nobody intervenes. After such a dispute it is usual for one of the brothers to move away. This is very wrong because "brothers must not fight; they are one belly" (Kaberry 1941-2).

Within the village lethal weapons should not be used in a fight. A dispute between two individuals within a village can escalate into a brawl. Men assemble in front of the house tamberan on the piazza and a fight starts, men are knocked about but there are few serious casualties. Disputes are settled in a brawl; men "let off steam" (Forge 1971). Other fights within the village can start during a yam exchange when a man infuriated with his partner may throw a spear and a general fracas develop. A death is rare and should a man die his relatives must be well compensated. Fights within the village are always settled peacefully and men exchange polished shell rings at a reconciliation ceremony. Within the ward big men and elders have the influence to control fights, they wrestle weapons from the contending parties and place the yellow yauwal leaf, symbol of peace, in the centre of the piazza. It is not clear what happens when a dispute between villages in the same confederation results in a fight. Disputes and fights within the confederation are probably similar to intra-village brawls because villages of the same confederation may not oppose each other in war.

Major war.

Principal groups:- Major war is fought between villages of different

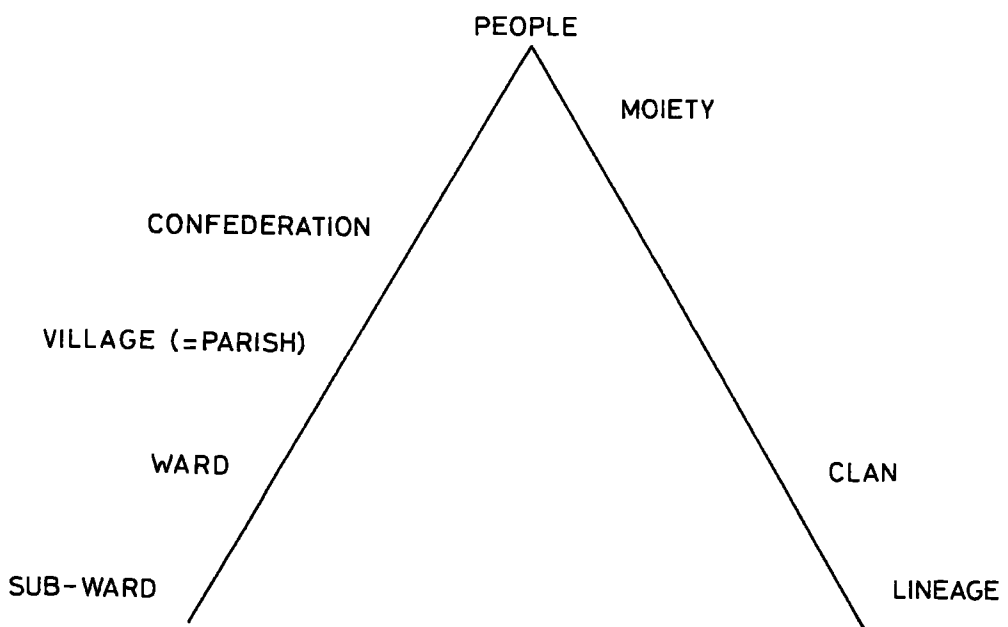
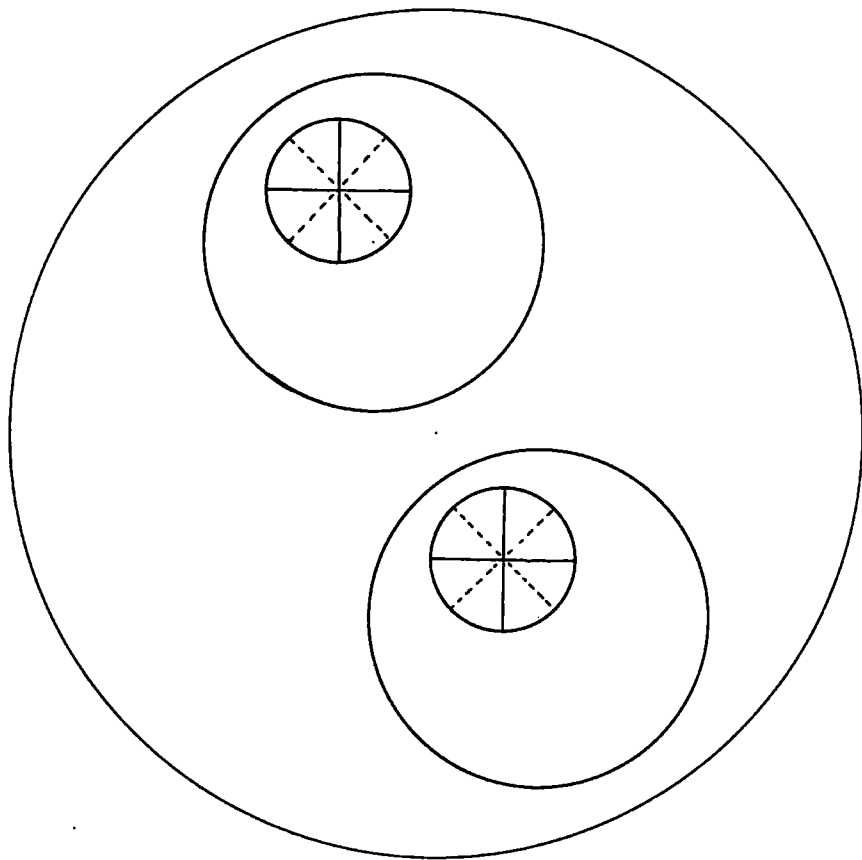


Diagram (2) : ABELAM TERRITORIAL AND DESCENT GROUP STRUCTURE

confederations which are in an enemy relationship.

Allies : Villages in the same confederation are nagura vi (one spear) and are allies in war. If a battle is planned the help of villages in the confederation is requested, they are sent a shell ring with a leaf twisted through it, which signifies a request for aid. It is not clear whether nagura vi are obliged to help as a corporate group, or whether the large number of individual links between them ensure an almost group response. Kaberry: "the formal relationship of alliance between two villages as corporate units is reinforced by a network of dyadic kinship and affinal ties". Villages from parishes in other confederations can be recruited as allies but the principal village has to pay such allies shell rings for the men they kill. These allied villages are friends (ngeindu = place men) of the principal village but their alliance is temporary and based on economic gain. Neutral villages are geographically distant and socially unimportant, however a few men are married to women from these villages. It is not clear whether these men recruit their relatives as individual allies.

Enemies : are nana mama, "people with whom we fight". Mama is a traditional relationship between certain villages. It is not clear whether villages of the same confederation have common enemies but this is most likely because no distinction is made by the enemy between the principal village to the fight and allies from the same confederation. They are all mama. Although villages are permanently mama this does not imply a constant state of physical aggression. Mama make superficial peace settlements which sometimes last for several years. The hostility between mama villages at peace is always present but remains under control. When war breaks out again mama hostility is activated into physical aggression.

Causes and Reasons : Sago thefts cause war between mama villages which are at peace. During the lean months of the year the Abelam eke

out their living on sago. A stolen sago palm is a serious offence and demands retaliation. Once a war starts it is maintained by the obligation of close agnatic kinsmen to take revenge for their relatives who die. The killer's village is held collectively responsible and revenge is aimed at any member of this group. A war is also maintained because it is right to fight mama; the Abelam say, "We fight because we are mama" (Kaberry 1966). Warriors fight for reasons of individual prestige. The Abelam were, on occasion, head hunters but there is no indication that wars were ever fought for heads. Although skulls are important in certain rituals of tamberan construction (see Forge 1965). Villages practice sorcery on their mama but deaths ascribed to sorcery demand individual revenge and not group retaliation. The reason for this is that while enemy sorcerers are responsible for deaths, someone from the dead man's group must supply them with the "dirt" (personal belongings necessary for sorcery). The ultimate culprit is therefore within the victim's village.

Individual ties : Most Abelam marriages are made within the village, some are contracted with villages in the same confederation and a few marriages are made into friendly villages outside the confederation. Few marriages are made with enemy villages, although in times of peace some men obtain wives from mama villages. The rôle of men related to the enemy is not clear but they are too few to influence group action. Kaberry (1966) quotes an example where a lineage from an enemy village settled with a mama group. In war this immigrant lineage fought for their village of residence but were careful to avoid near kin on the other side. This example shows that place of residence, not agnatic descent, decides a man's allegiance and that relatives will fight against each others' group when obliged to but will avoid harming each other. Forge (1971) gave an example which demonstrates that related persons in opposed mama villages can have a friendly relationship even when their groups are at war. A man carried his dead wife back to her natal village for burial although her

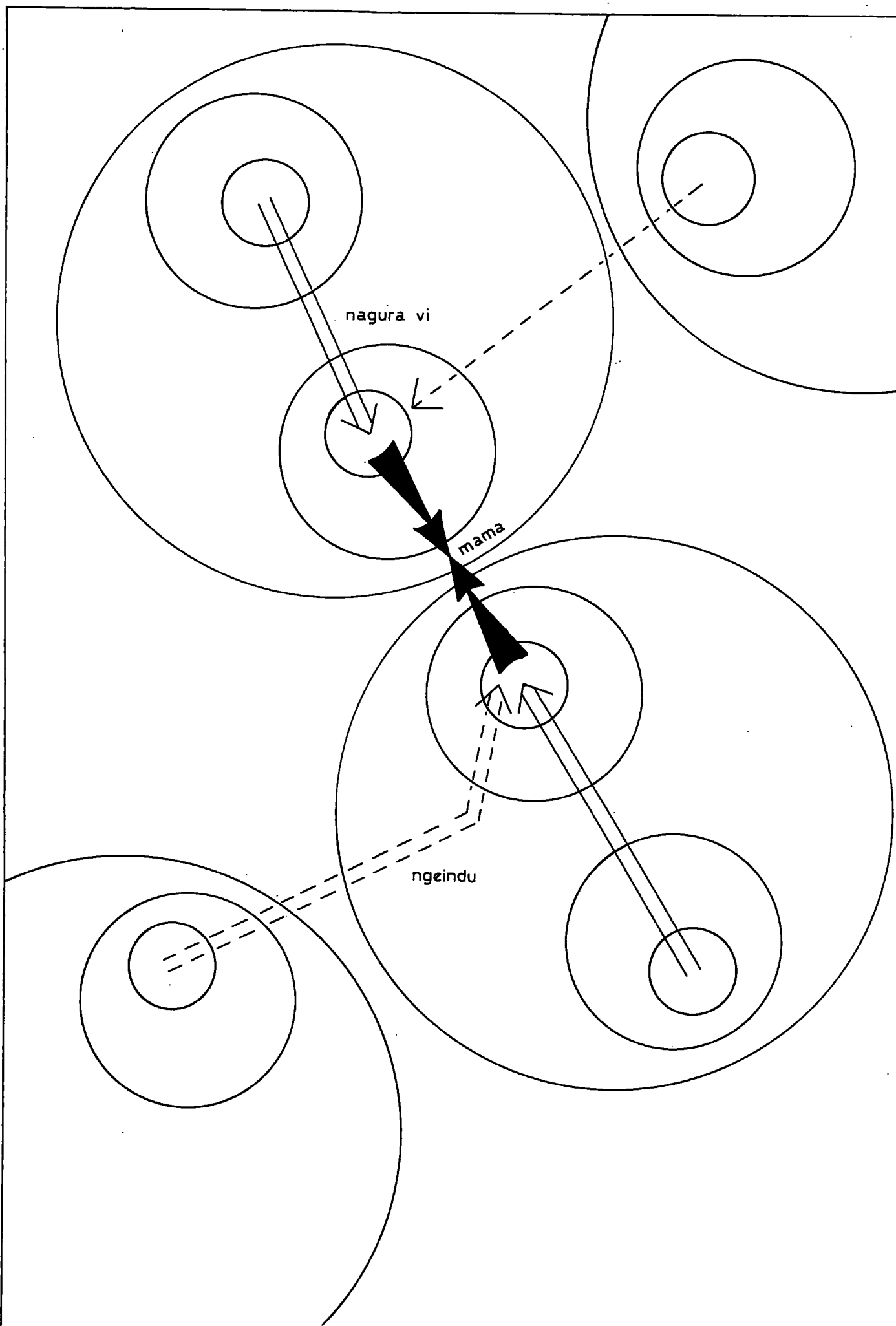


Diagram (3) : ABELAM FIELDS OF WAR

group was mama and actively at war against his village. During the burial and while he was with affinal relatives the man was safe but when he left for home he was attacked and killed by members of his affine's village - not by his affines. Exchanges with a mama village are done on a group basis, men do not have individual trade partners there. Between enemy villages there are few individual links, for most men mama are enemies.

Settlement : Occasionally mama villages settle peace. Negotiations are made through a neutral village. At a peace ceremony large amounts of food and a number of pigs are exchanged. An interesting aspect of Abelam peace settlement is the exchange of men between villages. Men of approximately equal social standing in opposite villages pair off and temporarily swap positions for a few weeks. According to Forge (1971) these men are then "brothers" and help each other in future wars. Unfortunately this relationship is not clear; do the men fight as each others allies or do they look out for each other when their villages go to war again? During the period of peace mama villages competitively exchange long yams and this acts as a vent for their latent hostility. Peace is settled when villages wish to cultivate land on their common border, and disputes over thefts from this area often cause the next war. Forge (1971) mentions the building of house tamberans where certain beams have to be supplied by a village of mama status; peace is necessary before the beams can be supplied.

Although peace may last ten or more years it is of a tenuous nature. Forge (1971) mentions the necessity of an equal number of deaths on either side before peace can be settled. Compensation is paid for unavenged deaths but an actual death, to restore the balance, is sought later. One way to secure a balance is to betray a man to the enemy so that he can be killed in an ambush. Undesireable members of the village (e.g. persistent adulterers) are betrayed for this reason. Other men who

may be assassinated are political rivals. According to Forge (1971) every village is divided into political factions which are centred on big men. While the big men keep up a facade of village unity and hostility to mama villages, they are manipulating the situation in an attempt to increase their influence. An effective strategy is to arrange the assassination of a political rival with a mama village. In this way war becomes a tool of political struggle within the village.

Consequences : Sometimes the regularity of Abelam warfare, the swing between war and peace, is upset when one side is defeated and routed. This happens regularly in the areas of heavy population (see pp 37). Villages are destroyed in large raids or when one side makes a disorganised retreat from battle. Refugees flee to neighbouring villages where they have relatives and are usually welcomed as an accession to the strength of the group.

ARAPESH.

Non-lethal fights.

Within the hamlet disputes ought to be settled amicably; to kill a man within the hamlet is murder. Quarrels are common but instead of resorting to physical violence a wronged man destroys his own property as a protest to shame the offender.

Minor war.

Principal groups : Minor wars are fights of short duration which occur within the parish between two or more hamlets.

Allies : Sometimes friendly hamlets from other parishes are recruited as allies (Fortune 1939:32). Possibly individual warriors are also recruited from other hamlets on the basis of individual links to a member of the principal hamlet.

Enemies : The enemy in minor war is always a hamlet of the same parish.

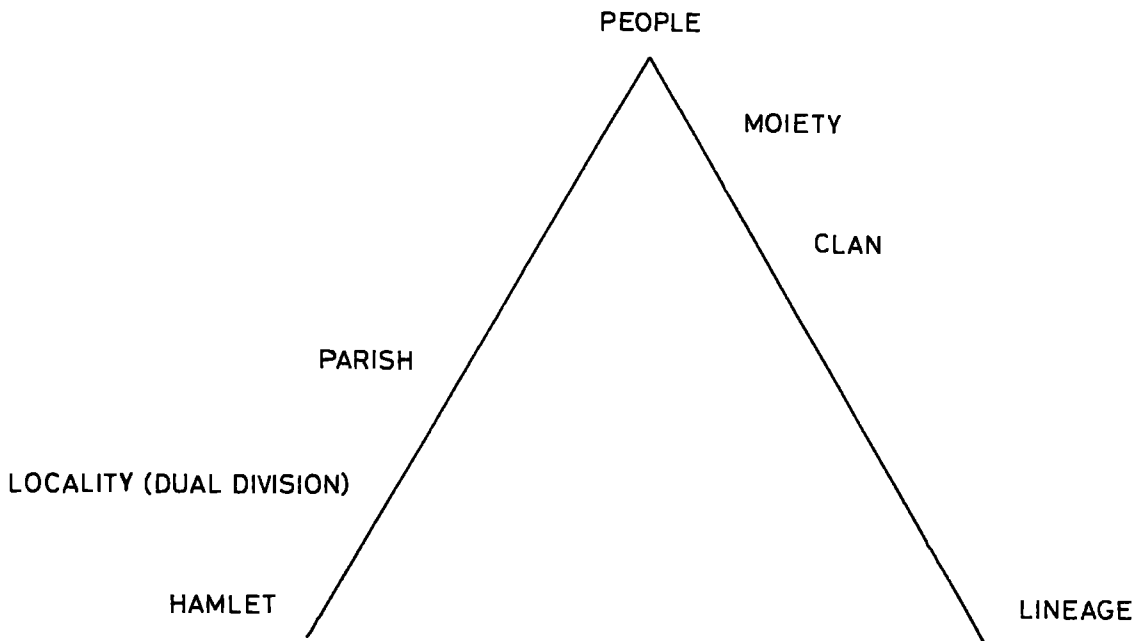
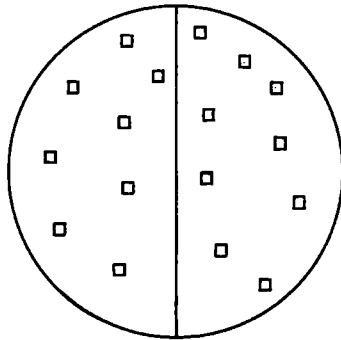


Diagram (4) : ARAPESH TERRITORIAL AND DESCENT GROUP
STRUCTURE

Causes and reasons : A dispute between individual members of different hamlets which escalates into a fight is the cause of minor war. Disputes arise mainly over pig thefts and women. The wronged man, with the support of his hamlet, comes armed into the offender's village and protests. The hamlets line up facing each other and argue over the dispute. Sometimes the protest escalates no further than harsh words. On other occasions feeling increases until a warrior throws a spear. This action initiates a formal battle where each side takes it in turns to throw a spear. Men on both sides are lightly wounded but as soon as a serious injury occurs the attacking hamlet flees.

Individual ties : Hamlets within the same parish are linked by a large number of individual ties. Every member of a hamlet can trace agnatic, affinal and maternal links to several other hamlets and the amount of social interaction between hamlets of the same parish is high. These numerous ties between hamlets ensure that a minor war cannot escalate into a serious fight. In fact minor war within the parish is wrong, redress should be sought by sorcery not violence. If a man is killed in a minor war the chances are that his killer is a relative; the killer attends the funeral and mourns because the Arapesh do not think a man would intentionally kill a relative. The death is the result of sorcery. If the killer is unrelated to the victim he may have to flee the parish for fear of revenge but retaliation is not taken at the expense of his relatives. The network of social ties between enemy groups reduces the effectiveness of any violence, for example, a man, whose wife's desertion caused a minor war, deliberately did not fire on an enemy warrior who was his sister's husband. In a subsequent major war, however, the same warrior fought for his parish and speared a man, in this war he was no party to the dispute which caused the war.

Settlement : Minor war is always settled in peace. Peace is made when each warrior exchanges a polished ring with the man he has wounded.

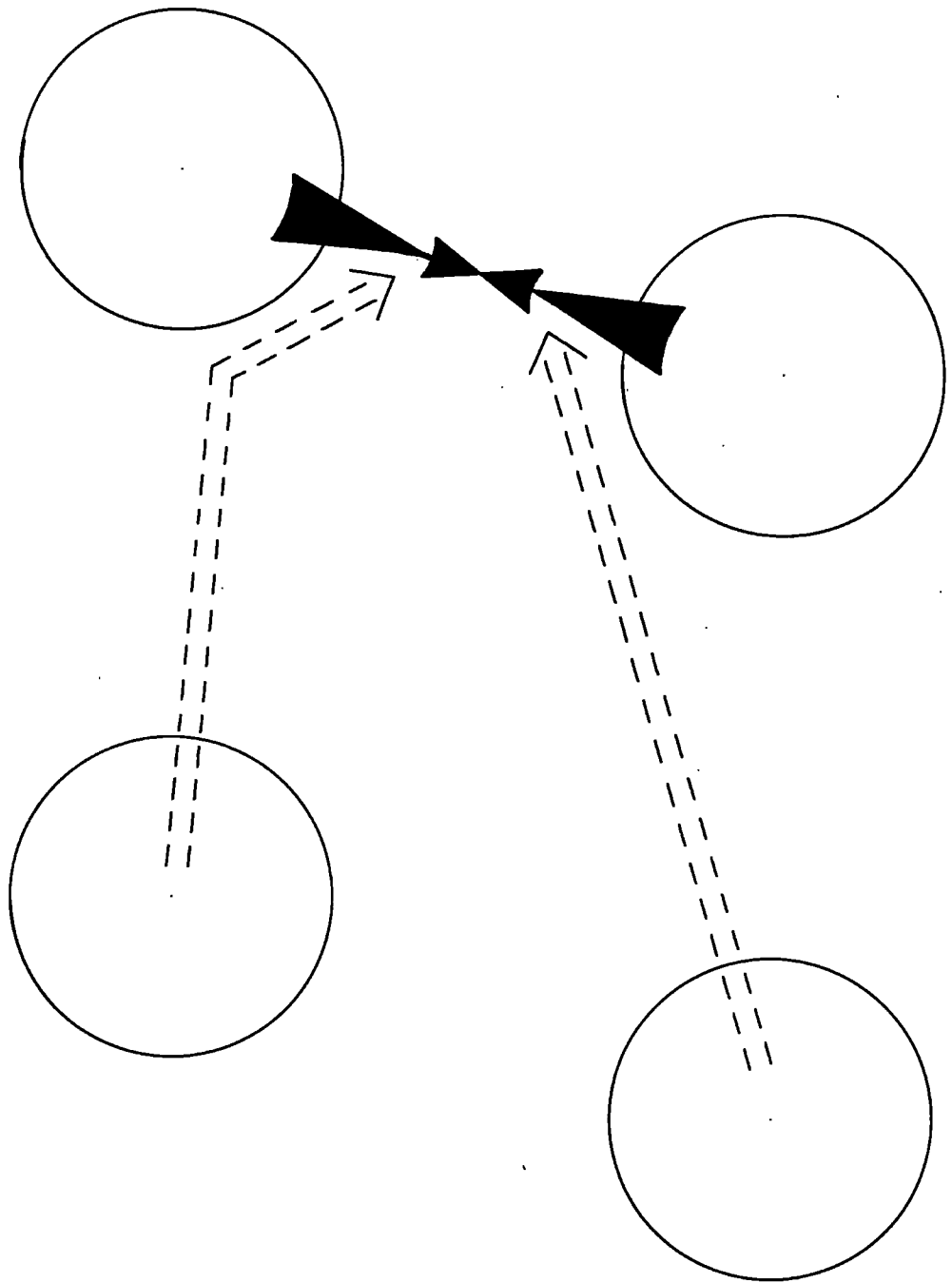


Diagram (5) : ARAPESH FIELDS OF WAR

Consequences : Minor wars are wrong and any man wounded in war has to compensate his maternal relatives for spilling their blood (blood comes from the mother). A belligerent man who causes or takes part in several minor wars loses a lot of wealth in compensation payments which have to be paid for every wound sustained. This loss of wealth is possibly a check on violence.

Major War :

Principal groups : Major war is fought between different parishes. When summoned by a big man a warrior is obliged to support his parish in war.

Allies : The principal parish to a major war requests the help of other parishes as allies. It is not clear on what basis these alliances are made, whether they are semi-permanent alliances between parishes or a temporary alliance based on a collection of warriors recruited by individual links. Sometimes a dispute splits a parish and hamlets joined both sides in a war to seek redress on each other.

Enemies : in major war are other parishes. Possibly certain parishes are in a situation of semi-permanent hostility which sometimes develops into war. Individual men from different parishes can be personal enemies (andin) who never meet except in battle. The redress of a dispute requires the organization of a raid on the offender's hamlet but this is considered an attack on the parish and battles follow.

Causes and reasons : According to Fortune (1939 : 23) major war is caused by "the pirating of women" from one parish to another. Firstly, a man from another parish seduces a woman to judge whether she is willing to leave her husband and join him. If he considers her favourable, a man from the seducer's parish with individual ties in the woman's hamlet, which allow him to visit there safely, approaches the woman with negotiations for her desertion. This secret go-between is called bera libere. The Arapesh place great value on a flourishing and growing clan, but this can only be achieved with women. By promoting the desertion of women from their parishes enemies are robbing clans of their increase and this is the reason for war.

A man had to ensure the support of his parish before promoting the abscondment of a woman. Presumably it is the big men who have the largest say in whether a woman should be encouraged. Sometimes a parish send a woman back rather than fight a war. If the woman is accepted the man can rely on the support of his parish, and the allies they can muster, in the forthcoming war.

Individual ties : The significance of individual ties between enemy parishes is not clear. The bera libere is related to both sides and allowed safe access to any enemy hamlet on the basis of personal relations. Between parishes there is a considerable amount of trading; buanyin trading partners, are inherited. The rôle of these men, when their parishes are at war, is not indicated.

Settlement : Peace is settled between parishes and wergild is paid for dead men. The rate is one pig for each dead warrior. A move towards peace is the marriage of members from enemy groups.

Consequences : The number of deaths in any war is not high. Hamlets are not routed and destroyed; parishes are not displaced.

ASMAT.

Non-lethal fights :

Disputes within the ward should be settled without recourse to fighting but armed quarrels between shouting men are not infrequent. A ward which is divided by a dispute may divide into two wards or split and join two neighbouring wards. In a serious dispute one section of a ward may move to another village. Fights between wards of the same village should not result in death and revenge killings. Causes of fights within the village include adultery and rival claims to freshly taken heads which are important in the initiation of young men. The Asmat have a broad vocabulary to cover the different types of fight which occur for redress (Zegwaad 1953). They distinguish between fights within the family, fights within the jew (men's house)

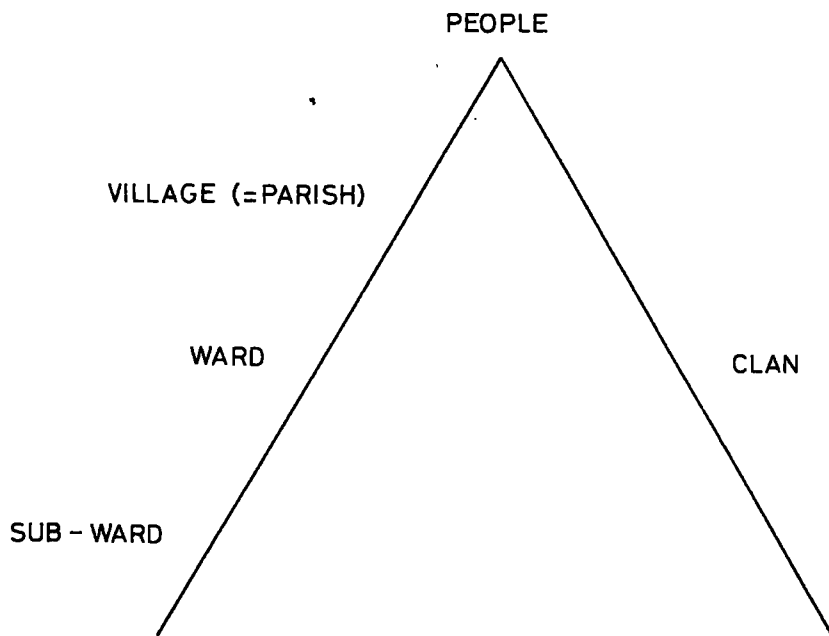
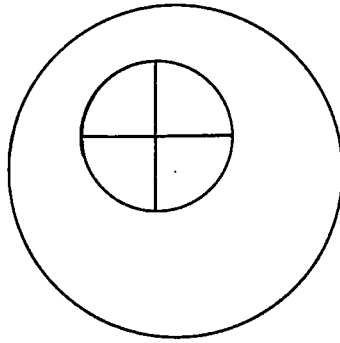


Diagram (6) : ASMAT TERRITORIAL AND DESCENT GROUP
STRUCTURE

and fights between jew of the same village.

Major war.

Principal groups : Fights for redress are clearly distinguished from head hunting raids. The principal group in a head hunting raid is the village. The recruitment of a raiding party within the village is not clear. Possibly one jew initiates a raid and recruits warriors from other wards in the village or alternatively a raid might be organized by a village and warriors from different wards obliged to fight.

Allies : Large headhunting raids into distant regions are sometimes made by an alliance of villages. When such raids do occur, the basis upon which these alliances are contracted is not clear; possibly villages unite to fight a common enemy.

Enemy : All villages within travelling distance are potential enemies and there is continual danger of attack.

Causes and reasons : It is necessary to distinguish between disputes, such as adultery and theft of sago beetle larvae, which cause war between two peaceful villages and the revenge obligations, which maintain a war, once it is started. It is the latter which are most significant in Asmat headhunting raids because all villages think they have unfulfilled revenge obligations against other villages. "Often, headhunting is not motivated by anything more than revenge". (Eyde 1966: 77). Kinsmen are obliged to take revenge and their obligations are sanctioned by fear of ancestral anger, particularly that of the dead man. A great deal of Asmat art is designed to remind men of their obligation to seek revenge, for example the etsjo pok (things that make great), which if given away obliges the receiver to seek revenge for the dead man. Headhunting raids coincide with all the large festivals and the object of raids and festivals alike is to drive away malicious spirits. Heads are also necessary for the initiation of boys. During the initiation ceremony a boy receives the name of a victim and is identified with the deceased, he sits for a

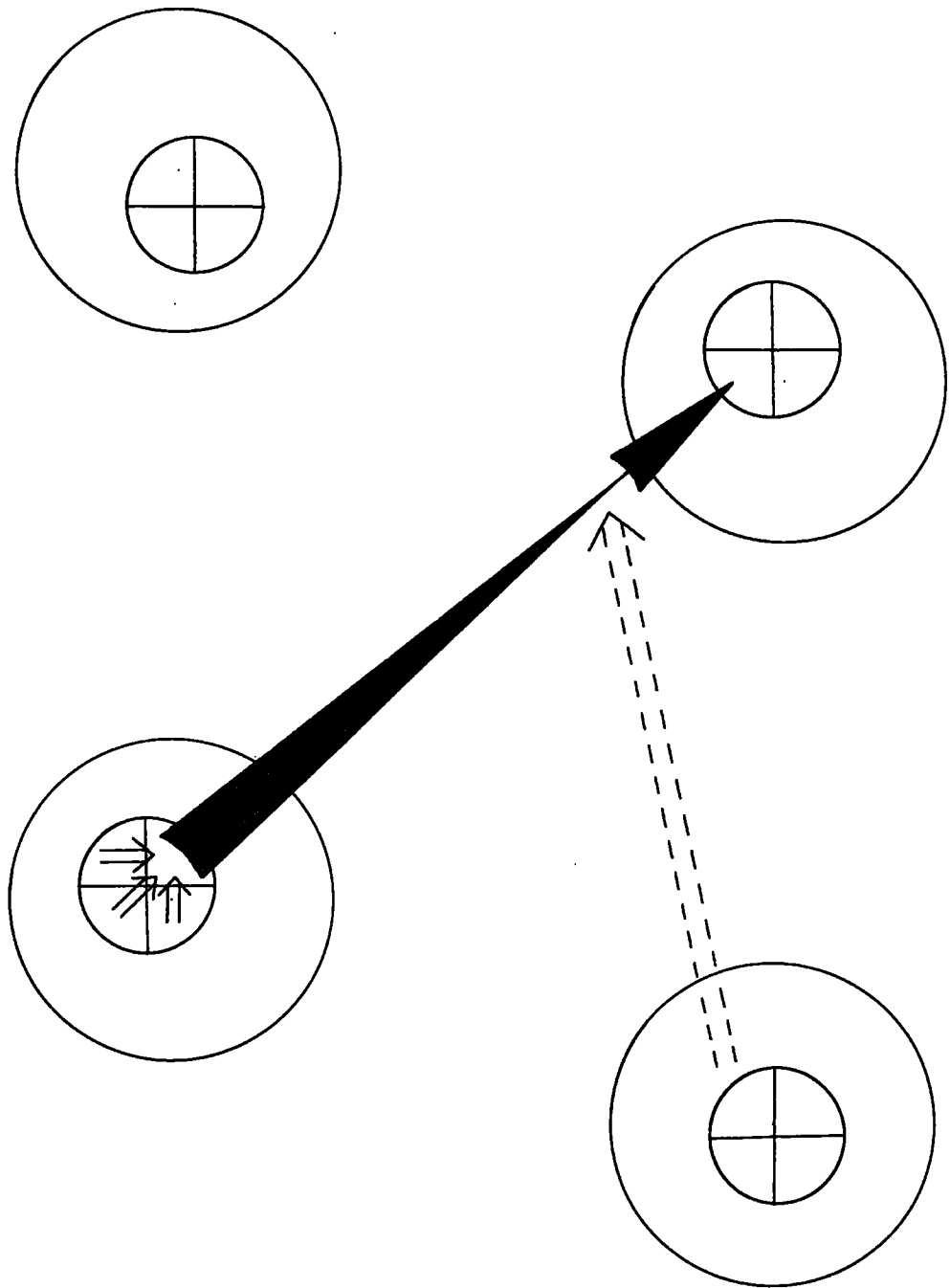


Diagram (7) : ASMAT FIELDS OF WAR

long period during the initiation with the skull of his namesake between his legs. Individual warriors fight for reasons of personal prestige; "A bunch of skulls at the door post is a measure of status" (Zegwaard 1959: 276). A man who has not taken a head is of low status, jibed at by women and is ignored at meetings of the juw. Asmat life, mythology and culture are permeated with the importance and significance of headhunting and the Asmat practice headhunting ultimately because it has always been so. As one old Asmat man remarked, "If Desoipitsj had not pressed the headhunting and butchering on his brother Biwiripitsj, [in the mythical past] we the people of the Asmat would never have been headhunters" (Zegwaard 1959: 261).

Individual ties : Marriages are made preferably within the ward but marriages within the village are also considered safe. Only a few marriages are made with women from other villages. Men who have maternal or other relatives in another village are safe to visit them but the actions of related men in time of war is not clear. Possibly they attend a raid on their relative's village or remain neutral or try to warn their relatives. Another important individual tie between members of different villages is that between the initiate who inherits a victim's name and the kin of the decapitated person. The initiate is treated as a relative and it is strictly forbidden to kill men from other villages who are related to one's own village by a ritual name. An individual tie between members of different villages is also created when persons are given as ransom or in reconciliation by one village to another. The above three categories of person, relatives, initiates related by a head name and persons exchanged in peace are allowed safe passage between two villages which are enemies. These individuals are protected and spoken for by their "relatives" in other villages. The safety of these persons is not always certain although their own relatives never turn on them, other members of the enemy village may decide to kill these visitors. Killing a guest or

travelling person to fulfil a revenge obligation is frequent and less dangerous than a raid. In some cases the relatives of the murdered guest are so disgusted they change villages. The relationships between enemy villages are manipulated by both sides, for example sometimes a man who can safely visit a village is sent to spread rumours which are part of a planned trap.

Settlement : Peace is negotiated between enemies by individuals with ties in both villages. An important aspect of a peace settlement is the exchange of individuals between the two villages. (see pp-374)

Consequences : Headhunting raids are organized primarily to secure heads, which are ritually essential, and to exact revenge, which is also essential. Women and children are sometimes captured and dead bodies are taken home for meat. The aim of a raid is to destroy a village but the actions of refugees are not clear. The Asmat conceive of headhunts as a never ending process which is an essential, and unavoidable aspect of social life. In the long run, no one wins or loses.

BENA BENA.

Non-lethal fights.

There are strong sanctions against fights within the locality. The people think that the solidarity of the locality is essential for survival in their warlike region and value group unity highly.

Minor war.

The Bena Bena call minor war nonogatna. Minor wars are fought between lineages of the same locality, localities of the same parish or occasionally, two parishes in a temporary alliance. Disputes between individuals in different groups cause nonogatna. If the fight continues for a long time or the destruction becomes too extensive a third, neutral group intervenes to arbitrate the dispute and settle a peace - usually

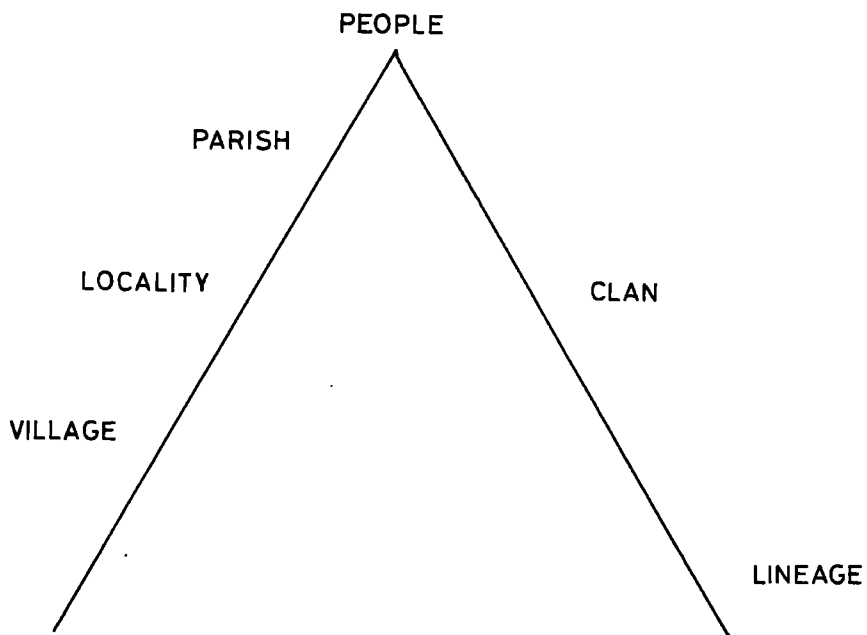
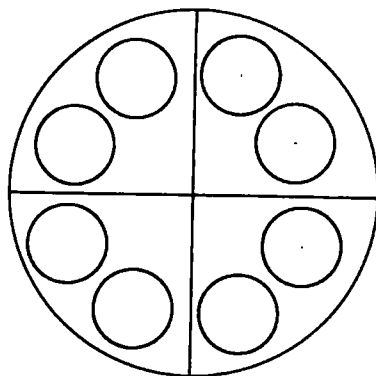


Diagram (8) : BENA BENA TERRITORIAL AND DESCENT GROUP STRUCTURE

both sides are glad of a settlement.

Major war.

Principal groups : the Bena Bena word for major war is luva. The locality is the principal group in luva. Localities fight in the name of the parish, and support is expected - although it is not relied upon - from the other localities in the parish.

Allies : are never parish groups, but localities from different parishes sometimes form temporary alliances. Alliances between localities of different parishes are tenuous because one of the groups invariably fights another locality from its ally's parish and therefore makes an enemy of its former ally which is obliged to support fellow localities from the parish. A principal locality cannot rely upon the support of other localities from the same parish because one of these groups may think that a temporary alliance with a locality from the enemy parish is too valuable, for the present, to break. Self gain is the basis of alliances between localities from different parishes. In the field diagram, for example, locality I is the principal group in a raid on locality F. Locality K remains neutral because of a valuable alliance with G; locality B is an ally because of an outstanding revenge debt against F.

Enemies : in luva wars are localities from other parishes. The Bena Bena have no concept of traditional enemy; an ally in one war might be an enemy in the next. There are two consistent facts. Firstly, luva enemies never come from the same parish, although some of these localities might remain neutral and not fight actively as allies. Secondly, the closer two localities are geographically, the more likely they will be in a fluctuating ally/enemy relationship. The localities of particularly close parishes sometimes develop long lasting alliances but they always end in war.

Individual ties : between enemies sometimes influence behaviour but the Bena Bena are not consistent in avoiding or fighting relatives.

Warriors usually capture, rather than kill, relatives and friends but this is not always possible in the confusion of a raid. The reaction of individuals depends largely on the strength of their ties; close relatives can abstain from fighting altogether. Bena Bena marriages are dispersed over a wide area but this is not a deliberate policy to create several possible alliances in time of war. Nor do "Bena groups "marry those they fight" but fight, in fact, with all groups". (Langness 1967: 176).

Trade links between localities of different parishes modify war. Localities with access to forest products trade for salt from other areas. Trade partnerships are individual ties but it is in the group interest not to fight localities in which they have many trade connections.

Langness (1964) demonstrates that although the Bena Bena have an agnatic descent ideology, in warfare it is local groups which are important. The actual composition of any particular military unit depends upon a series of individual decisions. The local groups only set certain limits within which an individual moves; the local groups define possible enemies and allies. A Bena Bena military unit is an unpredictable collection of warriors recruited firstly, from the principal locality, secondly, from the principal locality's parish, and possibly thirdly, from an ally locality in another parish. This is only a temporary group. The recruitment of a military unit depends largely upon the activities of big men (gipinas). Big men form the nuclei of local groups, men demonstrate their allegiance to certain leaders by residing in their vicinity. The success of a raid depends upon the active interest of a gipina because it is these men who can rouse a sufficient group of warriors.

One result of these individual choices is that warriors from the same locality might find themselves fighting as allies on opposite sides.

Causes and reasons : Bena Bena wars are caused by disputes between individual members of localities in different parishes. Thefts, sorcery accusations and arguments over ownership of trees are common causes of

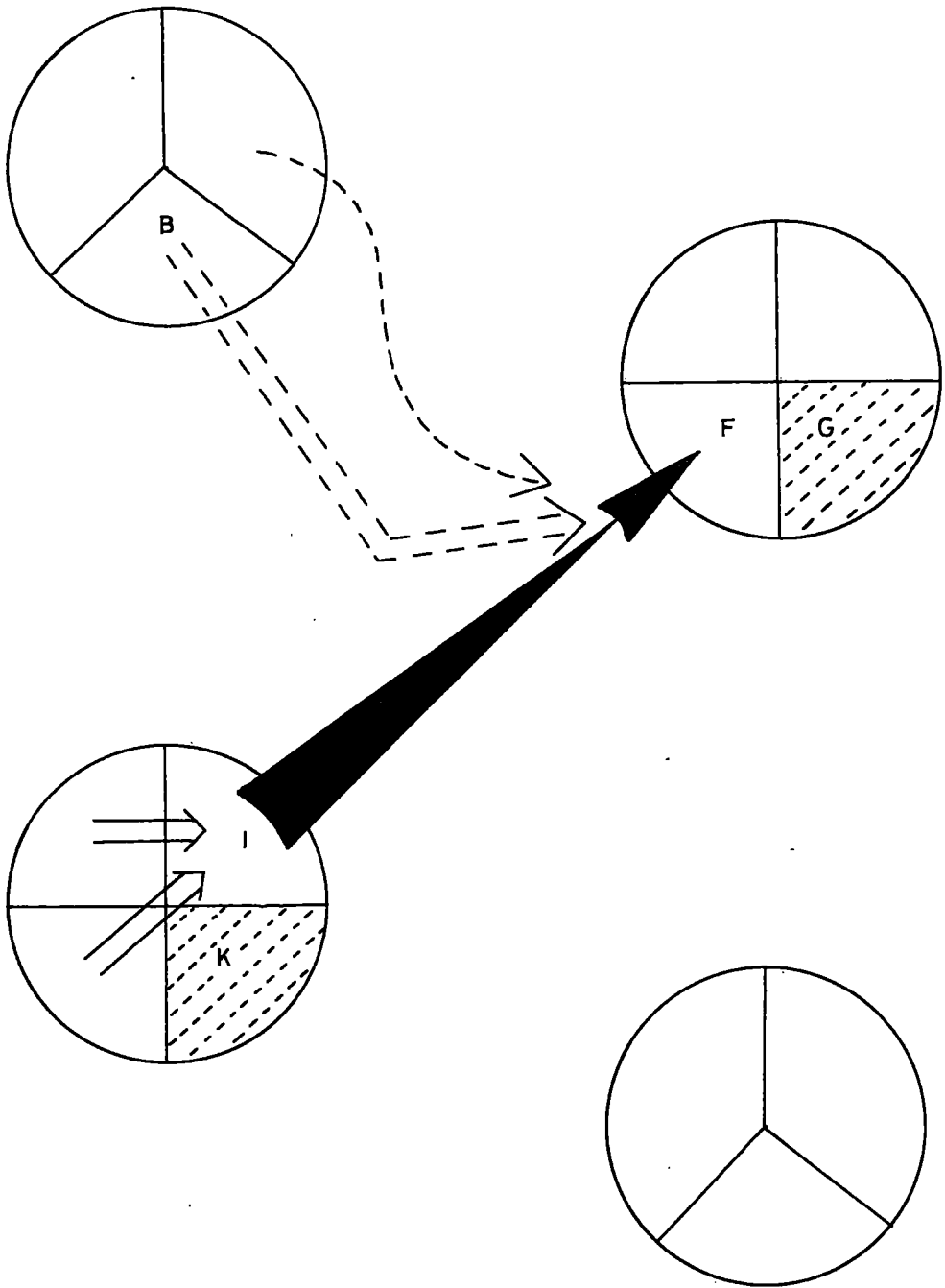


Diagram (9) : BENA BENA FIELDS OF WAR

dispute. A disputant tries to gain the support of his locality in pursuing his claims, the success of an individual in his quest for assistance depends largely upon the support given by big men. If the gipinas support an individual, his claim is more likely to be pursued by the group and a war result. The big men base their decisions on self gain and support a man if it furthers their political ends. Big men support others in their disputes with outside groups if these groups are growing too strong and dangerous because a strong rival group is a threat to the position of a gipina and his group. Cutting rival groups down in size is an important reason for war, the Bena say, "If you do not kill everyone they will have children and be strong" (Langness 1964: 104).

Other reasons for war are individual prestige and revenge obligations. Gipinas emerge as leaders because of their prowess in war. Men fight for prestige, ambitious men fight for leadership and influence within their group.

Settlement : Langness does not mention peace settlements in his work but there must be some form of settlement to allow enemies on one occasion fight as allies on another. Possibly there are also compensation payments. The tenuous nature of Bena Bena alliances indicates superficial peace settlements.

Consequences : the aim of a raid is the total destruction of enemy villages and gardens but the result is usually a stalemate with few deaths. If a village is routed men flee individually with their families to villages where they have relatives or friends. The fate of refugees depends upon circumstances, they are not admitted to other villages simply on the basis of kinship obligations. If the defeated locality is unable to reform refugees are absorbed slowly into their host group. The maintenance of friendly individual ties outside the locality is an important insurance incase of total defeat - individual ties in other localities are important to the individual, not the group.

BOKONDINI DANIMinor war.

Principal groups : Any fight within the parish might develop into minor war. Minor wars start as a dispute between two individuals, usually, but not always, from different localities. Sometimes a brawl starts over a dispute and then other men join in until the fight escalates into a minor war. Exchanges between individuals are important because they bind and hold the parish together.

Allies : A minor war is not restricted to the two localities which are party to the dispute. Other localities in the parish join in a fight and if a battle develops, individuals from localities in other parishes also join in. Allies do not come on the basis of any obligation to the principal fighters - they join in on calculations of self-gain or just for the fight.

Enemies : A minor war is defined by the fact that the principal enemies are both in the same parish. Although allies from other parishes can join in the fight.

Causes and reasons : Minor wars are caused by disputes, such as theft, adultery, or insufficient exchange payments. The reason for war is to seek redress against the wrongdoer and his group. Sometimes the wronged man initiates a small raid which usually develops into a war, but more often, the dispute starts a brawl between the men involved and then others join in until the fight assumes the proportions of a battle.

Individual ties : Minor war is restricted because of the large number of individual ties within a parish. The result is that many warriors remain neutral and urge for a peaceful settlement of the dispute. Also, as Ploeg (1969: 188) notes, "people co-operate in order to avoid serious quarrels in the parish because these would create too dangerous a situation", a parish split by minor war is vulnerable to the attacks of outside enemy groups. The only people obliged to fight are the local group

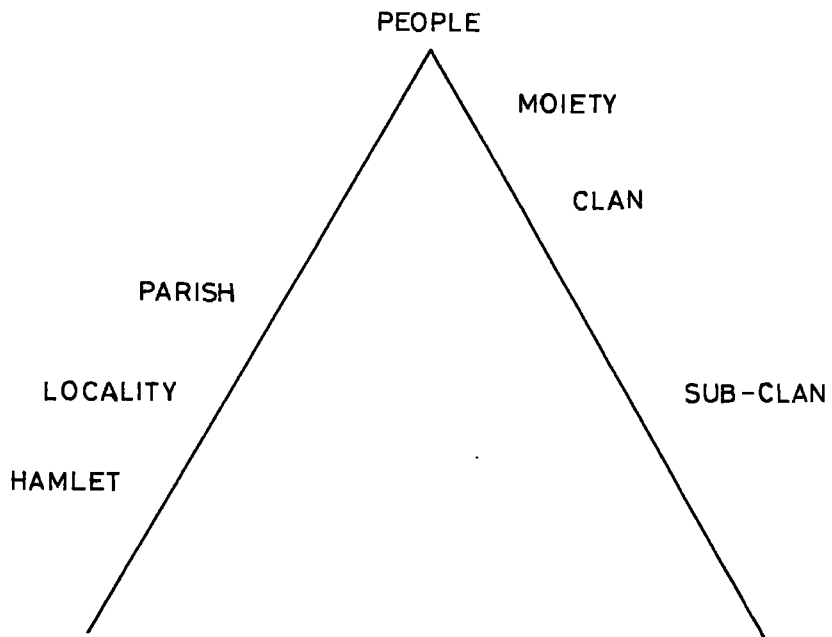
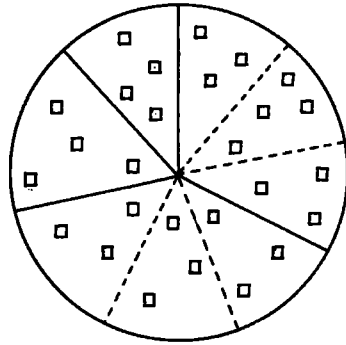


Diagram (10) : BOKONDINI DANI TERRITORIAL AND DESCENT
GROUP STRUCTURE

of the disputant, and even members of this locality can remain neutral when it suits them (i.e. when they have relatives or exchange partners in the enemy locality).

Settlement : Minor wars always end in peace. Compensation (jowam) for dead warriors is always paid between localities of the same parish.

Consequences : Minor war never results in a rout. The number of deaths in a minor war is low, (from a total of 131 fights recorded by Floeg, 26 were minor wars and out of 123 persons killed in these fights, only 13 persons were killed as a result of minor wars).

Major war.

Principal groups : Principal groups in major war are different parishes. An individual in dispute with a person from another parish can look for support firstly to his locality and secondly to his parish. In defence the parish automatically forms the military unit.

Allies : There are no reliable allies, which can be called upon by a principal group for help in war, outside the parish. Parishes not directly concerned with the war, join in for reasons of self gain. A war between two parishes, for example, might be seen as a good opportunity by another parish to attack an enemy which is already under attack. (e.g. on the field diagram, locality M, supported by the other localities in its parish, attacks an old enemy locality G). Men from other parishes also join in a battle for reasons of prestige. A warrior in his battle dress is admired, and the battle is the place for a man to acquire an important social reputation. Again this is a selfish reason for participating in a battle and involves no obligation for the individual, to support the principal parish. The Bokondini say they are "grateful for the fight". In a fight where they are not the principal party, members of a parish may find themselves opposed as enemies; they are careful to avoid each other in the fight, and relatives, on opposite sides, who meet during a battle, warn each other of the danger areas. A man joining a battle must be careful

which side he joins, because he might find one of the other "allies" to be an enemy who will attempt to kill him from behind during a battle.

Enemies : The principal enemy is always another parish. Relatives and members of the same local group often face each other as secondary enemies, but these people do not always join in a battle to fight the principal enemy of their ally. Allies usually join in to fight a personal enemy allied to the other side. It is incorrect to conceive of a Bokondini battle as one between two enemies; this is only how the battle originates. A full scale battle involves several enemies fighting each other and aiming for personal satisfaction. A Bokondini battle is therefore a series of individual or small group vendettas. (e.g. on the field diagram, localities J and G, supported by the other groups in their parishes, are the principal groups. Individual warriors from locality D join in to fight personal enemies on either side).

Causes and reasons : When two parishes have a superficial peace settlement between them, their hostility towards each other is suppressed but eventually a dispute, such as adultery, theft or failure in exchange payments, occurs between two individuals of these parishes and causes a war. When two parishes are at war their hostility is maintained by revenge obligations; their relationship is conceived as a chain of reciprocated acts of violence. Success in war is believed to depend upon ancestral support; the ancestors demand revenge for men killed and the parish is obliged therefore to take revenge if it is to continue to receive essential ancestral help. In the first situation, the disputing individual initiates a fight either by a brawl, or organizing a small raid, or if influential enough, calling for a battle. In the second situation, it is the big men who decide when battle or raids will be fought. This is because the big men have the ancestral support, so necessary for success in war.

Individual ties : Parishes are in a state of either potential or activated hostility (i.e. superficial peace or war) with the result that

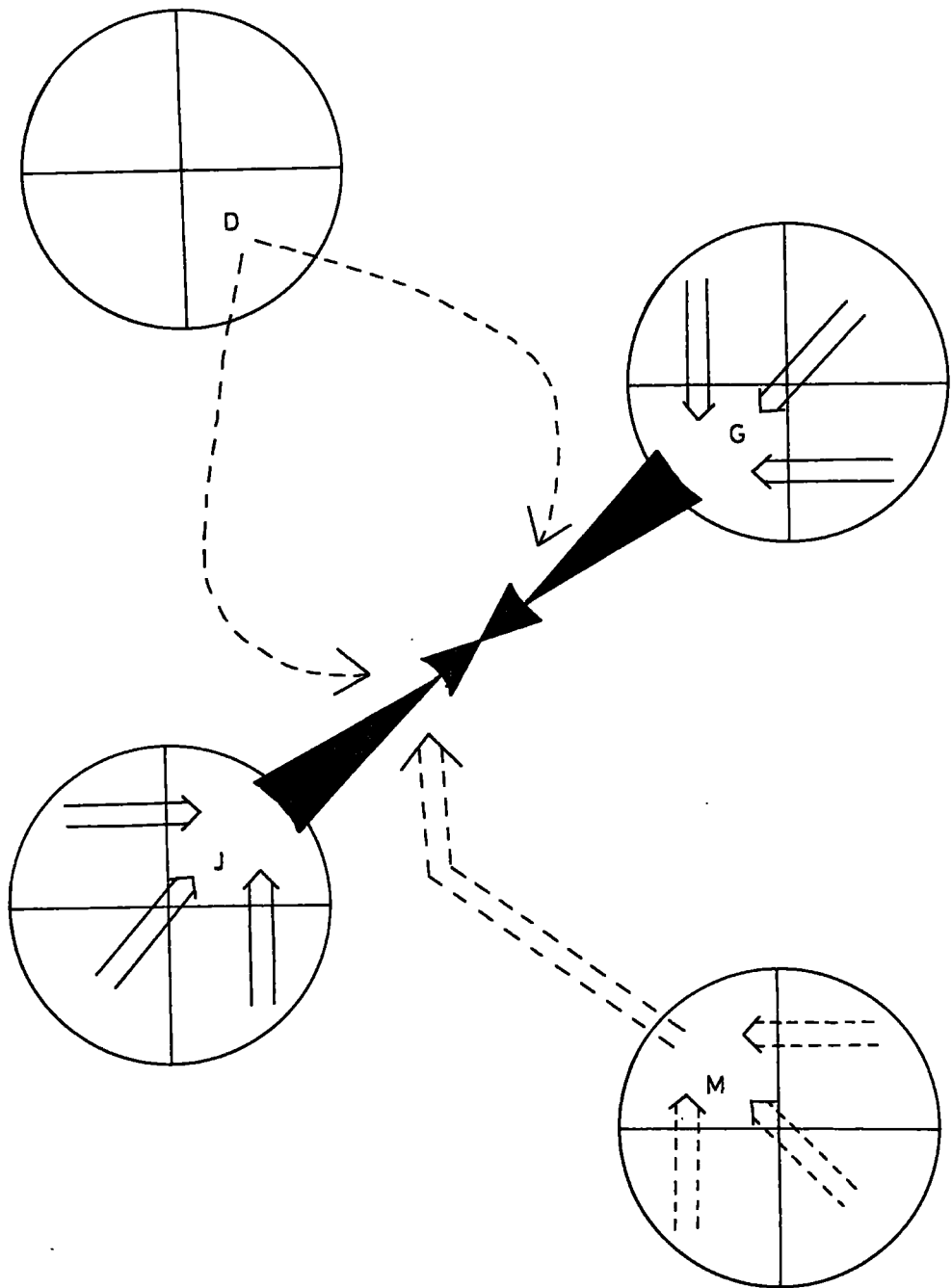


Diagram (11) : BOKONDINI DANI FIELDS OF WAR

most marriages are made within the parish; in fact a parish is built around a collection of localities which give each other their women in marriage. A few marriages are made into neighbouring parishes but these create only a small number of individual ties. The significance of these ties outside the parish is not clear; do relatives remain neutral or do they avoid each other in battle? The recruitment of relatives from outside the parish as allies is not mentioned. Floeg does refer to relatives in one parish warning relatives in another parish, of a planned raid. For this reason plans of raids are kept secret between small groups of men. Similarly, although Bokondini localities are built on an agnatic core (sub-clan) many members are non-agnates. There is no mention that agnates in other parishes fight as allies, or remain neutral if their parishes are the principals to a war. Also there is no mention of trade partners or friends influencing behaviour in war. Members of the principal parish are the only persons obliged to fight - all other allies decide to fight for reasons of self gain.

7 The obligation of a parish to seek revenge for dead warriors is uppermost, and it is this principle which ensures the co-operation of localities within a parish. For example, if a parish, which has split and joined, both sides in a war, loses a man, the parish unites to seek revenge. The result is a three-cornered battle. Another situation is where a warrior from an ally parish kills a secondary enemy. The warriors from the killer's parish who are fighting on either side, have to beat a weary retreat because revenge for the death will be sought on any of them. The principal groups in a fight can therefore change during the course of a battle when a man is killed and his parish unites to seek revenge. It is interesting to note that the principle of parish responsibility for vengeance can cause a minor war. For example, when a man from a different locality within the killer's parish is killed in revenge for a death, the killer's locality must pay compensation to the dead man's locality or a

minor war will develop.

Settlement : Peace ceremonies are rare. Enemy parishes exchange pigs which are slaughtered and eaten. The acceptance of compensation terminates the revenge chain for the duration of peace but revenge obligations are remembered and vengeance is sought in a following war. Compensation is paid only between neighbouring parishes; the most frequent payment is compensation made within the parish (out of 24 jowam recorded only 6 were made outside the parish). It is not clear why, in certain situations, jowam is paid between parishes.

Consequences : Sometimes a whole parish is driven from its territory. Most parishes have two territories and in times of defeat, a retreat is made to the second territory. If defeated a second time, parish members flee individually to take refuge outside the valley. Ploeg is not clear what the basis is for accepting refugees - it is unlikely to be relatives outside the valley but is possibly trade partners or friends. It is usual for defeated groups to return slowly and re-colonize their old territories. (see pp. 79).

CHIMBU

Non-lethal fights.

Personal disputes cause brief fights between individual members of the same locality. These fights are never supported by others and are rarely serious; other members of the locality are concerned to settle the dispute peacefully.

Minor war.

Minor wars are fought between parishes of the same confederation. There are three factors which prevent the escalation of minor war. Firstly, the fragmented nature of parish land within a confederation means that a war makes gardening, the mainstay of life, difficult because the land of

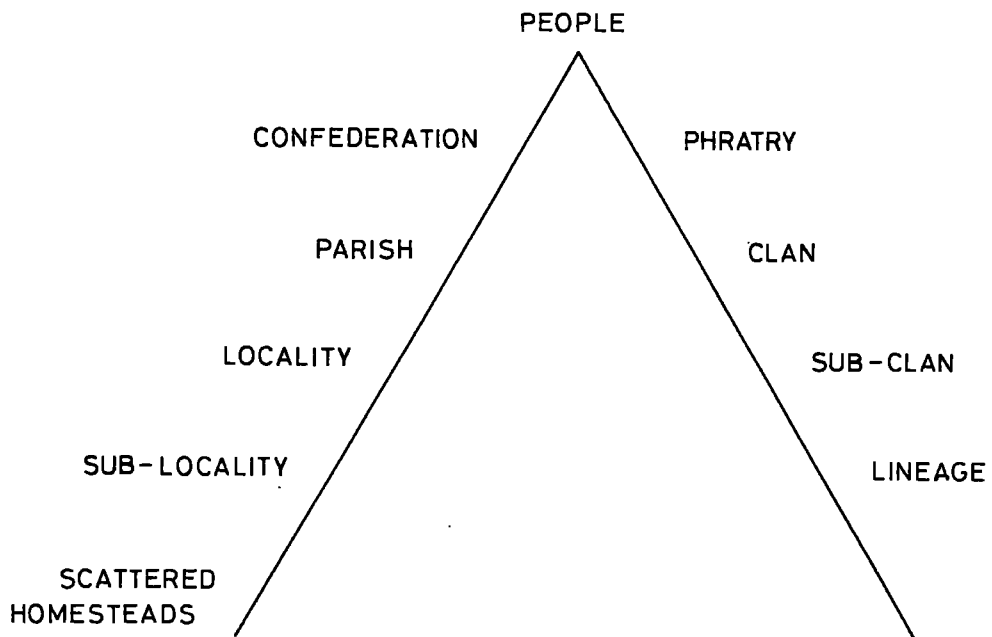
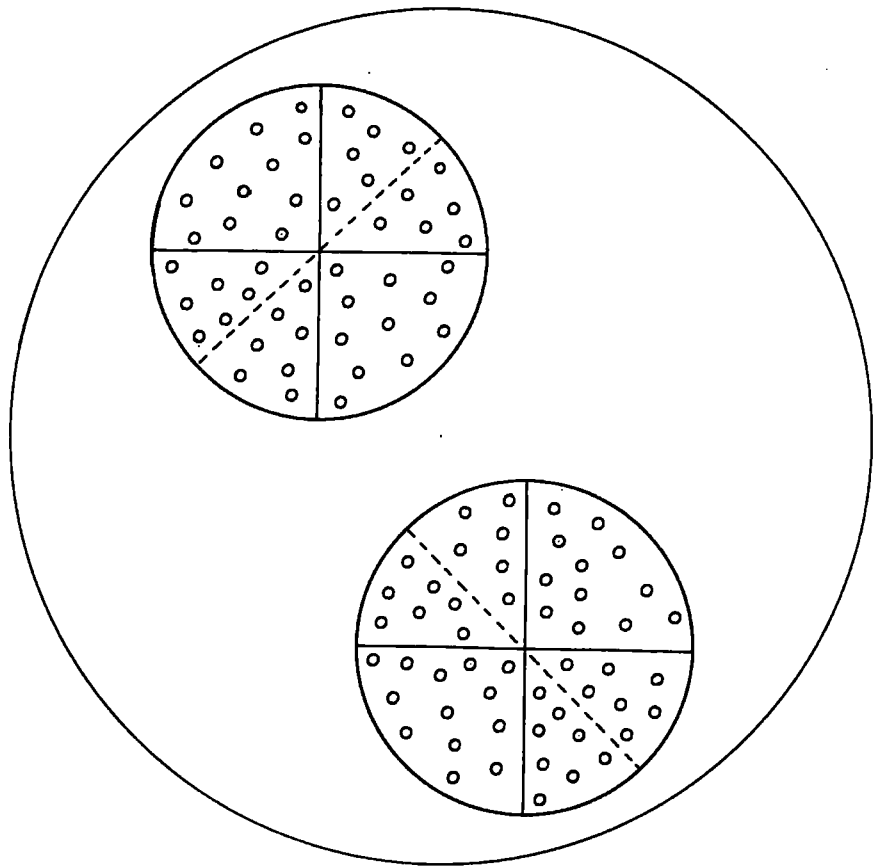


Diagram (12) : CHIMBU TERRITORIAL AND DESCENT GROUP
STRUCTURE

disputing parishes is mixed up together. Secondly, most marriages are made between members of the same confederation. Marriage results in a series of individual ties and when the number of ties is high this controls group action because many people with relatives on the other side, seek a settlement. Thirdly, parishes cannot recruit as allies other parishes from outside the confederation, because outside parishes are either major war enemies or allies of the confederation - if an ally parish joins in a minor war it would have to fight against another parish within the ally confederation and would thus weaken the friendship. Individual friends and relatives from other confederations can be recruited as allies, but minor war rarely escalates to this level because there are too many persons within the confederation pushing for peace. It is wrong to rout a parish from its land in minor war. Minor war ends in peace and compensation is paid between the enemies. Occasionally a minor war results in a parish migrating elsewhere, especially if land is particularly scarce.

Major war.

Principal groups : Parishes fight major wars; in the name of the confederation. A parish can rely on the support (or failing this, the neutrality) of parishes from within the confederation. Several parishes automatically unite if a confederation is attacked because the fragmented nature of land holdings means that any attack is a threat to the land of several parishes. The principle of recruitment is different if a group plans an attack. An individual who has a dispute with a person from another confederation tries to raise support for a raid by looking firstly to his parish and secondly to other parishes within the confederation.

Allies : Alliances outside the confederation are not common. Sometimes a parish from another confederation joins in a war, but such actions are based on past grievances. Relatives and friends outside the confederation can be called upon for help, and these individuals sometimes recruit small groups of warriors from their own parishes. Members of the

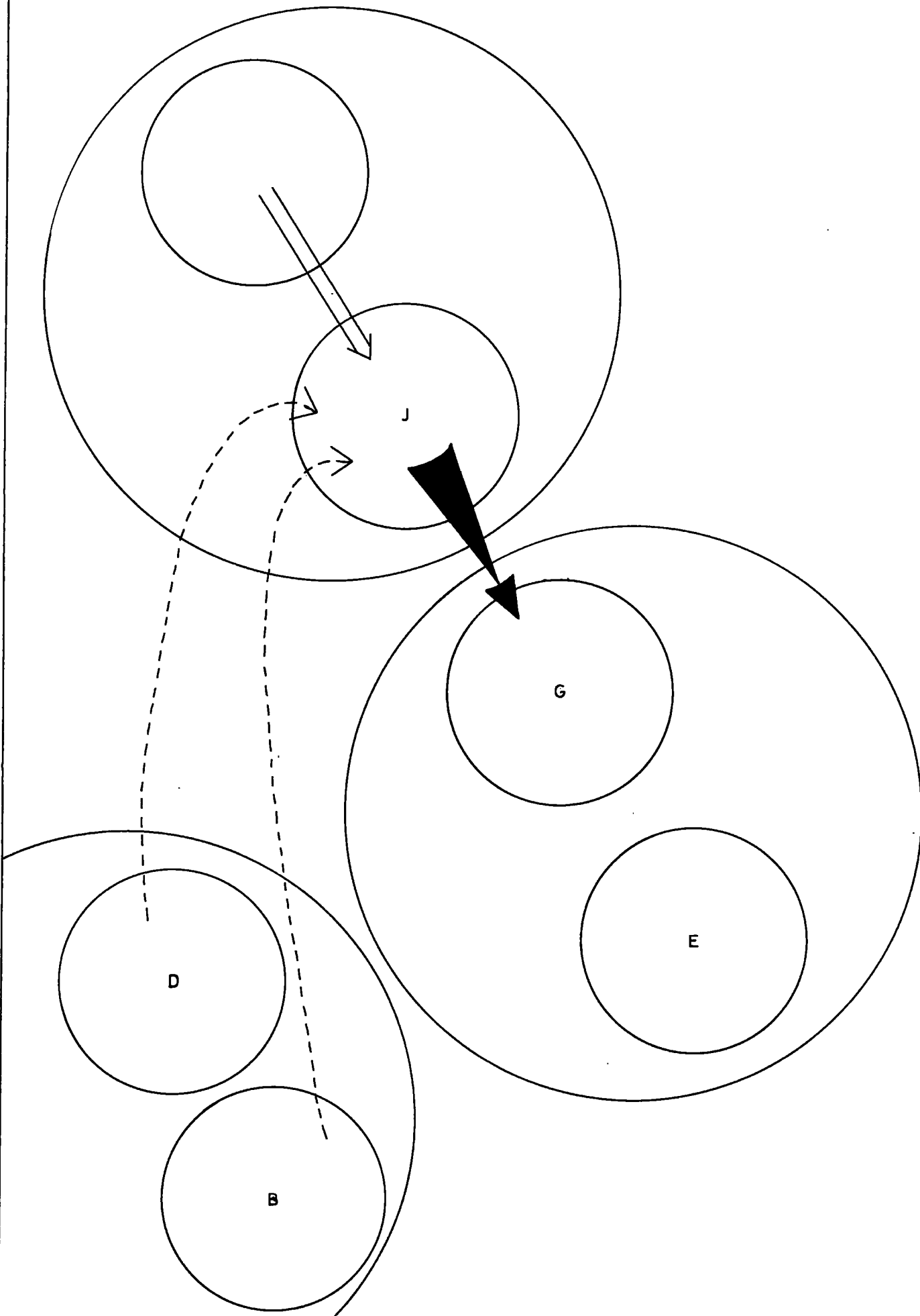


Diagram (13:1) : CHIMBU FIELDS OF WAR

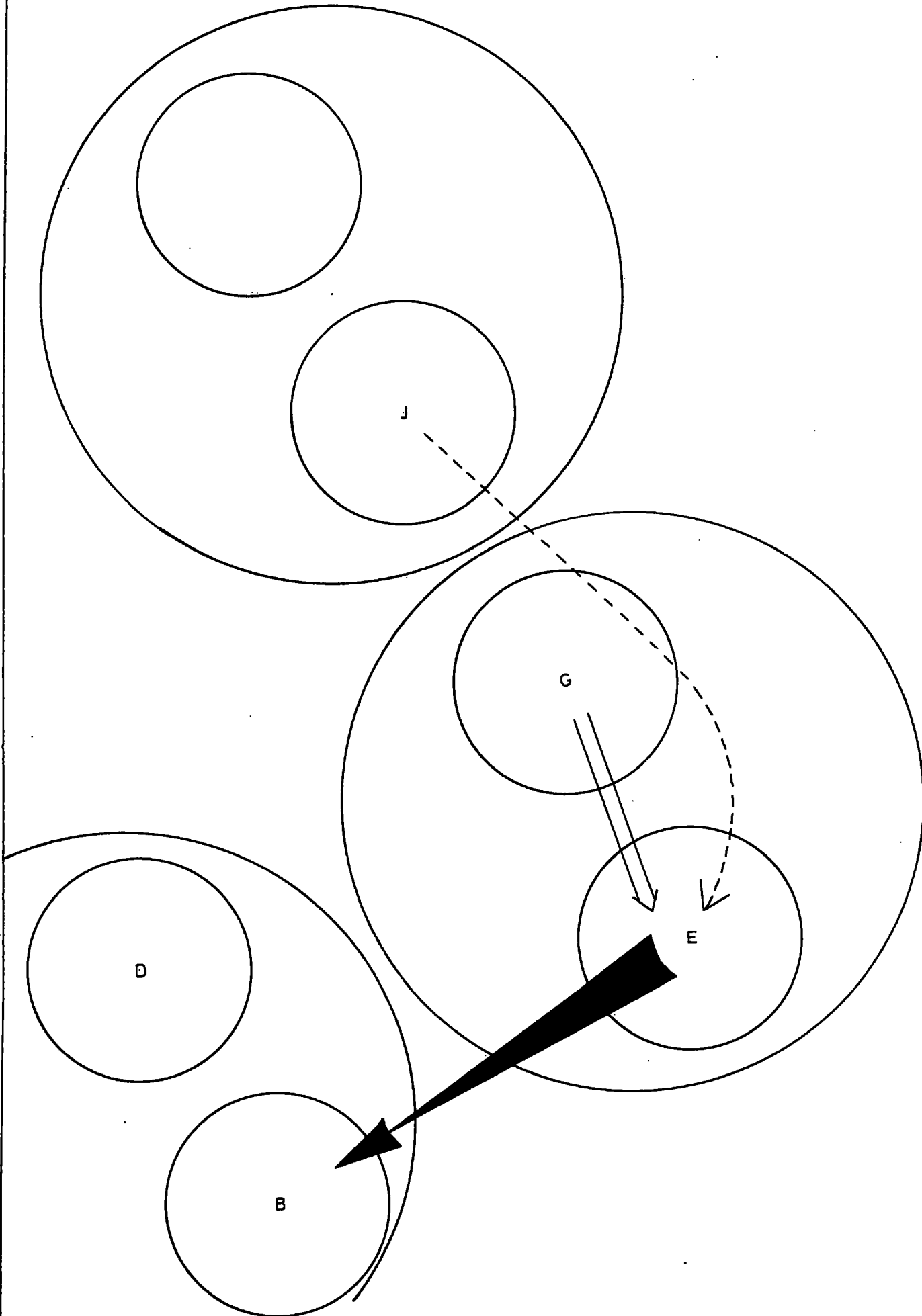
same parish sometimes find themselves on opposite sides but they are careful to avoid each other in the fighting, (this situation is not common because Chimbu wars are fought mainly by raids).

Enemies : The principal enemy in major war is a parish from another confederation. The confederation of the principal parish is a secondary enemy. A war is essentially between two parishes which are the principals to the dispute; other parishes within, and if possible without, the confederation are called upon for aid.

Causes and reasons : Disputes between individuals in different confederations cause major wars; disputes which cause war include thefts, quarrels over land boundaries, adultery, sorcery, and failure of exchange payments. A disputant turns to his parish for support in seeking redress. An underlying reason for Chimbu war is land shortage. Once started, a war is maintained by revenge obligations.

Individual ties : Individual choices are important in Chimbu war. "While groups stand in opposition, individuals may shift their loyalties or be allied with both sides in a conflict". (Brown 1964: 355). It is necessary to realize (Brown 1964) that individual ties do not influence group activity, but only individual actions.

In times of war, agnatic descent is important for the Chimbu, not in deciding who to fight for but who not to fight against. A man who lives in a parish which is not centred on his agnatic clan will not fight against his agnatic parish if the parish in which he resides goes to war against them. Although a person's allegiance in war (particularly defence) is with the group in which he resides, in the above situation a Chimbu warrior will either remain neutral or fight for his agnates. The reason for this is that a man cannot fight against his agnates without coming face to face with an agnatic relative, no matter how distant the relationship. If a man fights an agnate in a major war he repudiates his agnatic ties. A man can fight against his affines' parish because affinal ties, unlike agnatic



Diagram(13:2) : CHIMBU FIELDS OF WAR

ties, do not spread very far, and as long as the warrior is careful to avoid actual relatives, no harm can be done to his relationship. A man is careful not to injure his relationship with affines because of the important exchanges which take place between them. In a war, only a few individuals have to consider their affines because relatively few men marry outside the confederation (50% of Chimbu marriages are within the confederation).

A Chimbu war party is an unpredictable collection of warriors who decide individually to fight and unite within the structure of local groups. Many of the warriors come from the principal parish but some men remain neutral because of individual relationships with the enemy. Allies choose to fight on the basis of individual relations with members of the principal group; the Chimbu do not have formal alliances between groups outside the confederation. All parishes within the confederation are involved potentially in several different fields of war because each parish is a principal group in a different field and this involves the whole confederation as an ally.

The fluid situation resulting from a series of individual choices and the involvement of each confederation in several fields of war is shown in the fields of war diagrams. In diagram (1) parish J attacks parish G. In diagram (2) parish E attacks parish B. In diagram (1) men from parishes B and D, which are in another confederation help J against G. In diagram (2) men from J help E against parish B, their former ally. It is important to remember that these allies are recruited by individual ties. In diagram (1), for example, the warriors from J who ask for help from B are not the same men who fight for E in diagram (2) - some of these latter men will probably remain neutral in the raid depicted by diagram (1) or will be careful to avoid their relatives during the fight.

Settlement : Wergild is not paid between parishes of different confederations. A superficial peace exists between confederations not

actually at war but the peace is fragile and easily broken.

The initiators of a war have to pay reparation to their allies who suffer injury or those men. If no reparation is made, the bereaved group hold their ally responsible for the death and attack them in revenge; the result is another war. Reparation payments, like wirgild, are more likely to be paid within the confederation than without.

Consequences : Defeated foes are frequently routed and their land occupied by the victors, because of the high population density of the Chimbu valley. Refugees flee to relatives in other parishes - parishes do not take refuge as groups. Whether a parish reforms again, depends on the severity of the defeat; the members of a parish which is unable to reform are slowly absorbed into their host parish. Sometimes defeated parishes are invited back to their land after a rout but owing to land shortages their territory is more likely to be colonized by the victors.

GAHUKU GAMA

Non-lethal fights.

Disputes within the village are settled peacefully. Big men exert sufficient influence to prevent serious fights. In a dispute men are obliged to support members of their sub-clan but fights are wrong. Fighting between villages of the same parish is also wrong and disputes between individuals ought to be settled peacefully. Sometimes, however, fighting does occur within the parish when the tempers of parties to a dispute run high.

Minor war.

Principal groups : Minor war is called hina. Villages of two linked parishes within a confederation or sometimes two villages of the same parish fight minor wars. A man is obliged to support members of his village in dispute with individuals from other villages.

Allies : Alliances between villages do not occur in minor war. It is

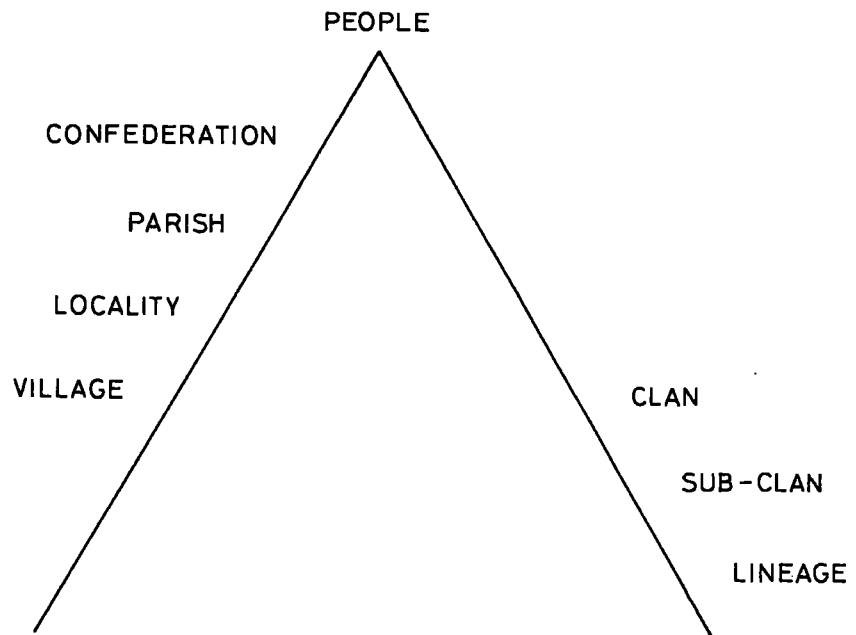
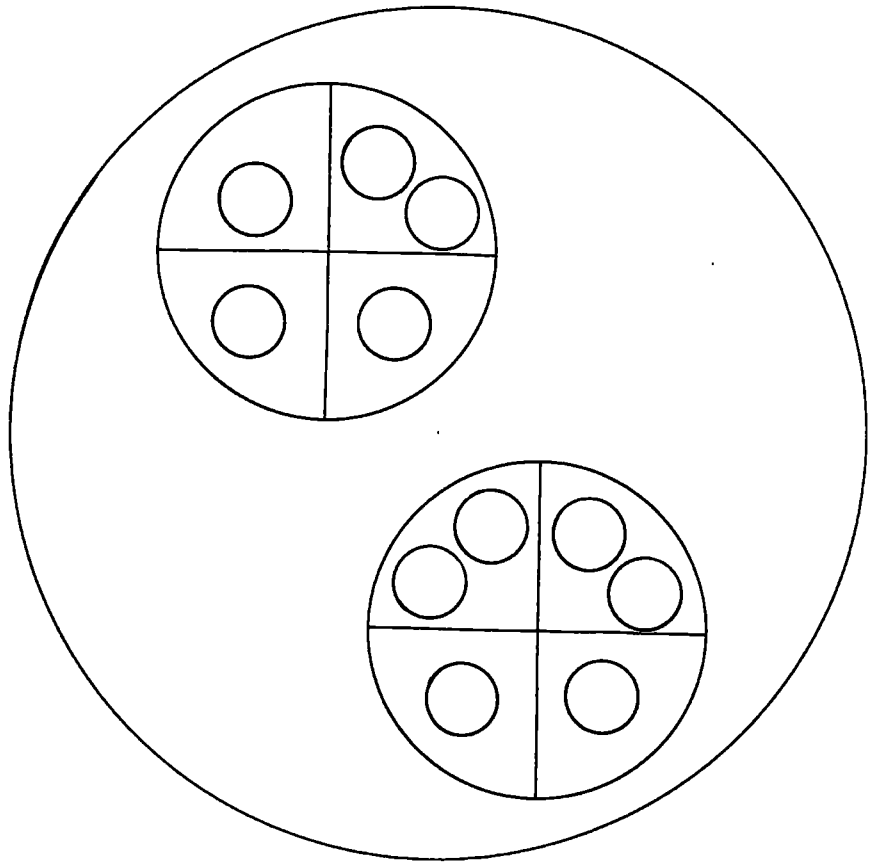


Diagram (14) : GAHUKU TERRITORIAL AND DESCENT GROUP
STRUCTURE

not stated whether persons from other parishes are recruited as allies on the basis of individual ties to one of the principal villages involved in the dispute.

Enemies : Enemies in hina war are always villages within a pair of linked parishes. Villages outside this group fight only major wars.

Causes and reasons : A dispute between two individuals which escalates into fighting between different villages is the cause of hina war. Minor war is fought for redress of wrongs such as theft and adultery. It is not clear which disputes are allowed to escalate to the point of fighting, probably it depends on the distance apart of the villages and their relationship to each other.

Individual ties : Individual ties are important in preventing an escalation of hina war. The majority of marriages are made within the linked parishes, but marriage relations tend to be hostile and affinal links are not strong. Although men are obliged to support their villages against other villages, friendly ties between settlements reduce the effectiveness of the military unit. It is not stated whether men with relatives and friends in the enemy village, fight or remain neutral. Other villages within the parish desire a settlement because hina disturbs their social life and weakens them against outsiders. Although obliged to support their village, many persons urge for a peaceful settlement.

Settlement : Hina always ends in peace with compensation payments between the principal villages. It is not stated how peace is negotiated or settled.

Consequences : Villages are never routed and destroyed in hina. The aim of minor war is to redress a wrong, not wipe out an enemy.

Major war.

Principal groups : Major war is called rova. Rova is war with any parish outside the paired parish group. The parish is the principal group in offensive actions and where possible the parish is the military unit in

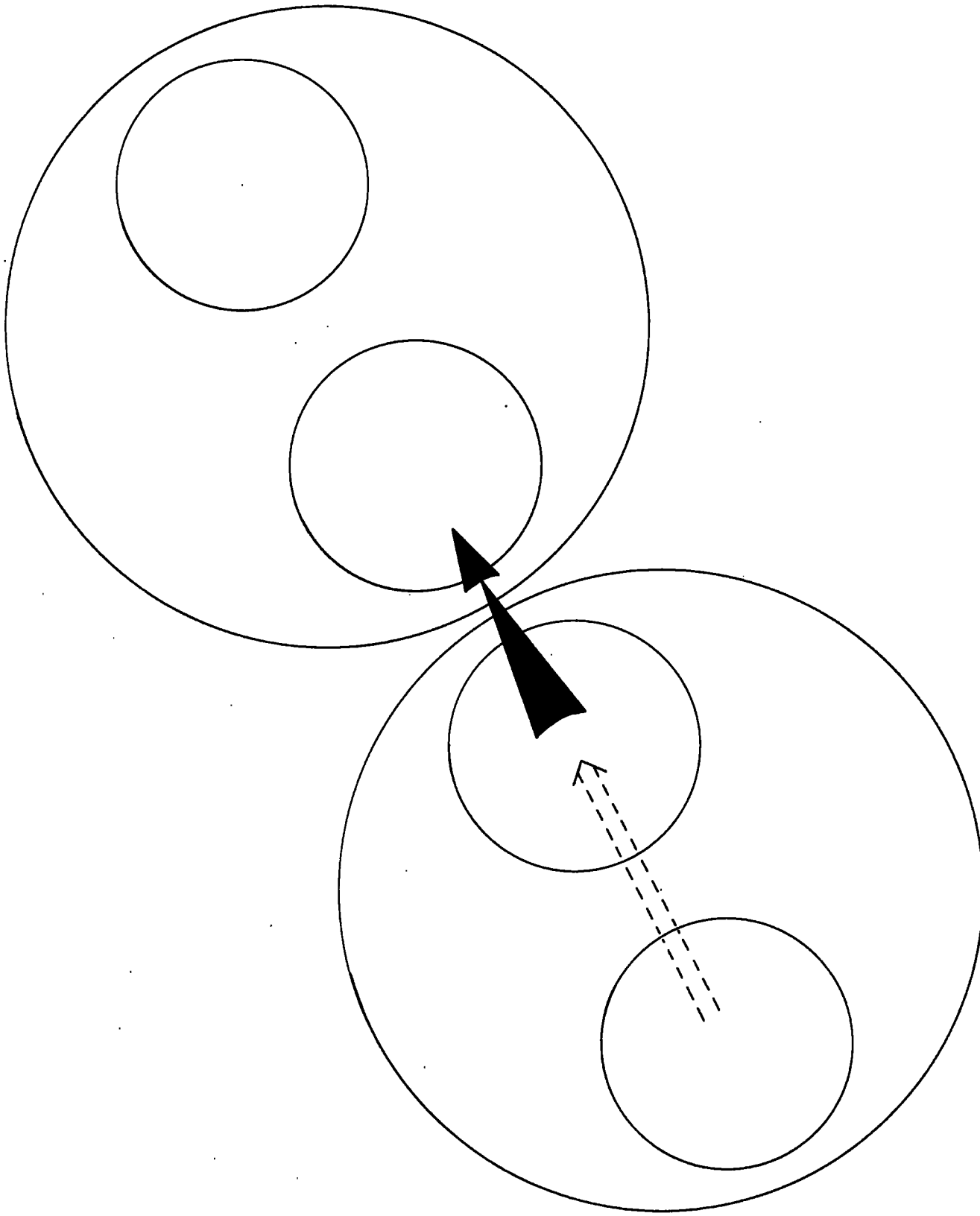


Diagram (15) : GAHUKU FIELDS OF WAR

defensive actions also. It is not stated how villages within a parish unite for war; whether one village initiates actions and then calls on other villages for help, or whether war is a collective action involving the whole parish. Age mates (aharu) are important in war because young men of the gosohave grade are obliged to join war parties. Possibly the Gahuku parish war unit approximates to a rudimentary age regiment commanded by a few respected men. (see pp387).

Allies : In rova, paired parishes within a confederacy sometimes fight as allies. It is not stated whether individual warriors are recruited from a paired parish on the basis of kin ties, or whether the parish is recruited as a group. Sometimes alliances are made with an enemy parish against a common enemy, but they are short lived. This is sometimes the situation when a routed parish makes an alliance with a strong parish in which it has taken refuge. The intention of the defeated parish is to use the host group in a revenge attack on the victorious parish. These alliances are very unstable and sometimes the refugee parish attacks the host parish if it is politically expedient to do so.

Enemies : Enemies are called rova ve or gara ve. All parishes outside the confederation are traditionally enemies and this is a permanent relationship. Rova is conceived as something which continues indefinitely, neither side wins or loses in the long run.

Causes and reasons : To fight rova ve is considered the proper thing to do and raids are caused by nothing more than a desire to fight those it is considered proper to kill. "One fought one's enemies primarily because they were one's enemies". (Read 1951: 157). A pig theft or sorcery accusation sometimes starts a battle. The sub-clan is obliged to seek revenge for warriors killed and in retaliation tries to kill one enemy for each limb of the dead kinsman or ally. Young men (gosohave) fight for reasons of personal prestige, a killer is highly respected. Prowess in fighting is of supreme importance to a young man who aspires, in later

life, to be a big man. "The leader", the "man with a name" (agulizagive), is pre-eminently one who is known for his skill in warfare and his aggressive qualities". (Read 1951: 159).

Individual ties : There are few individual ties between rova ve parishes. Marriages are made preferably within the parish and to a lesser extent with the linked parish. Women from enemy parishes are believed to be the principal agents through which sorcerers work because if requested by their own group they send their husband's semen for sorcery. For this reason, few women are captured in warfare.

Settlement : A peace settlement between rova ve parishes is impossible and compensation is never paid. A defeated parish sometimes forms an alliance with an enemy, but these truces are short-lived.

Consequences : The aim of rova is to destroy the enemy villages and force them to flee. Routed villages are frequently scattered over large areas, as individual refugees flee to groups where they have friends or relatives. Every parish has, from time to time, suffered a rout but refugees are not absorbed into their host groups. A routed parish waits in exile to return when the opportunity arises; and conquered villages never cease to hope for revenge. If they are not a threat to their conquerors, defeated parishes are sometimes invited to return home. In the long run, "to achieve "equivalence" was one of the principal considerations in warfare; ultimately no one won". (Read 1959: 429).

GRAND VALLEY DANI

Non-lethal fights.

Disputes between individuals, which escalate into a group fight, are the cause of brawls; they are rarely fatal. People move frequently between hamlets within a parish and quite possibly the two disputants drift apart after a brawl.

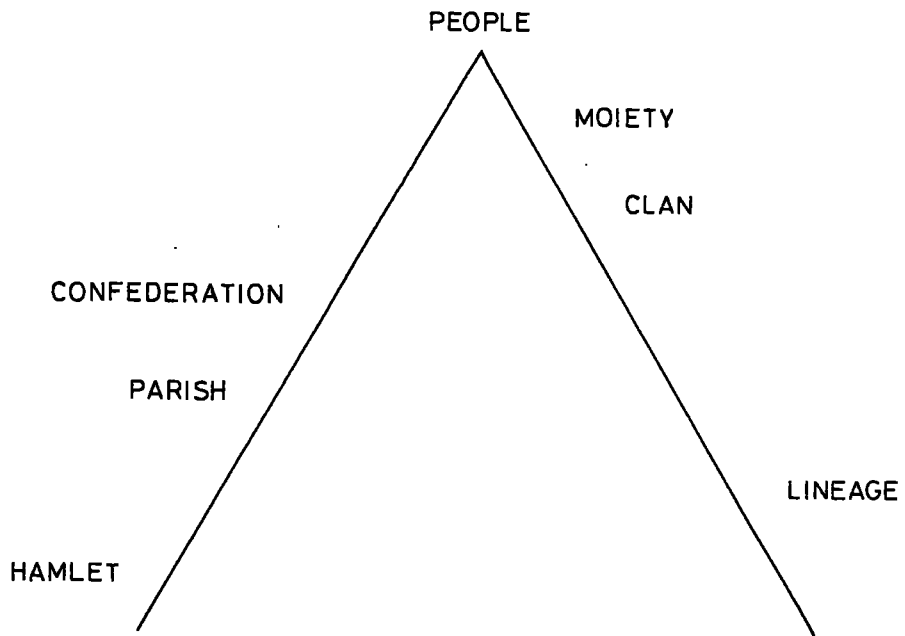
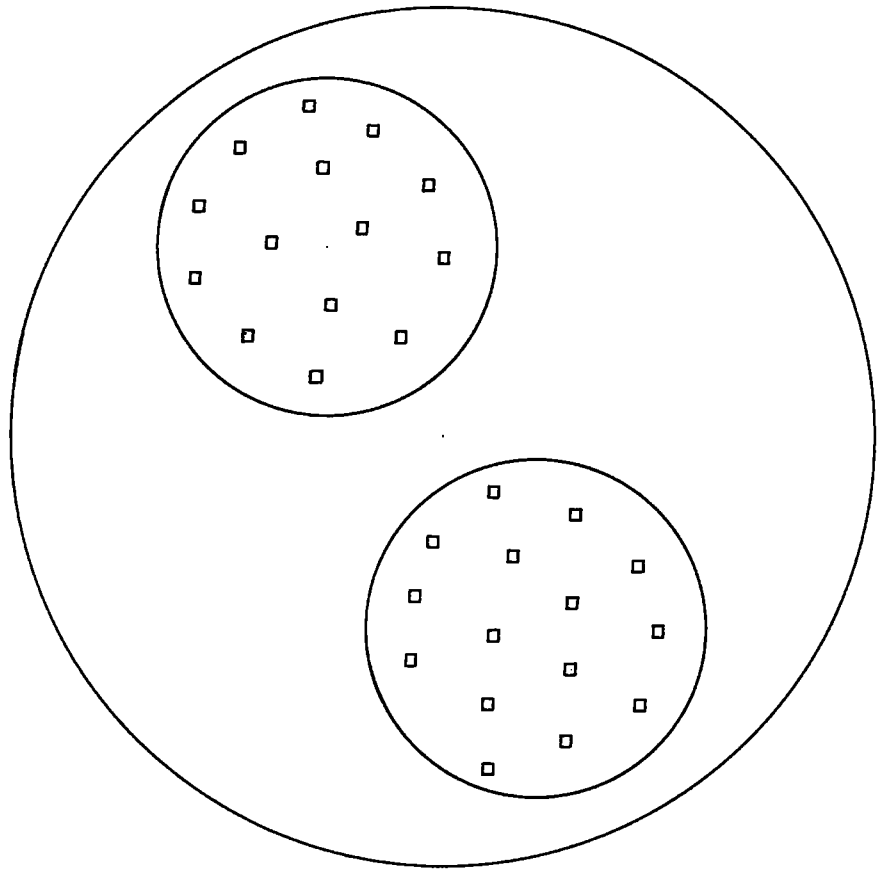


Diagram (16) : GRAND VALLEY DANI TERRITORIAL AND DESCENT GROUP STRUCTURE

Minor war.

Principal groups : Parishes of the same confederation fight minor wars (umai'im).

Allies : Minor wars are fought primarily between two parishes, although individuals from other parishes can join in on the basis of kin ties or friendships. Battles within the confederation are not common.

Enemies : The enemy are aguri juna-mege, or local people; that is members of the same confederation. Minor war is never serious because the enemy are local people.

Causes and reasons : Disputes, such as theft, adultery or rights to land cause minor wars. The two disputants are from different parishes, and unless the dispute is settled the two parishes, face each other in minor war.

Individual ties : The large number of individual ties between minor war enemies prevents an escalation of the war. All marriages are made within the confederation and parishes are united by many individual ties. The large number of kin links between minor enemies results in several people pushing for a settlement. It is not clear whether relatives are obliged to support their parish in minor war or whether they remain neutral.

Settlement : Although peace ceremonies and compensation payments are not mentioned, both are certain to occur after minor war.

Consequences : The desired result of a minor war is redress for a wrong. Nobody loses their land and there is no refugee problem.

Major war.

Principal groups : There are two types of major war (wim). In the first type, battles and raids are fought between two neighbouring confederations. A confederation is in a state of war with several neighbouring confederations; the boundaries between them are clearly marked by strips of country on which battles are fought. A parish is the military

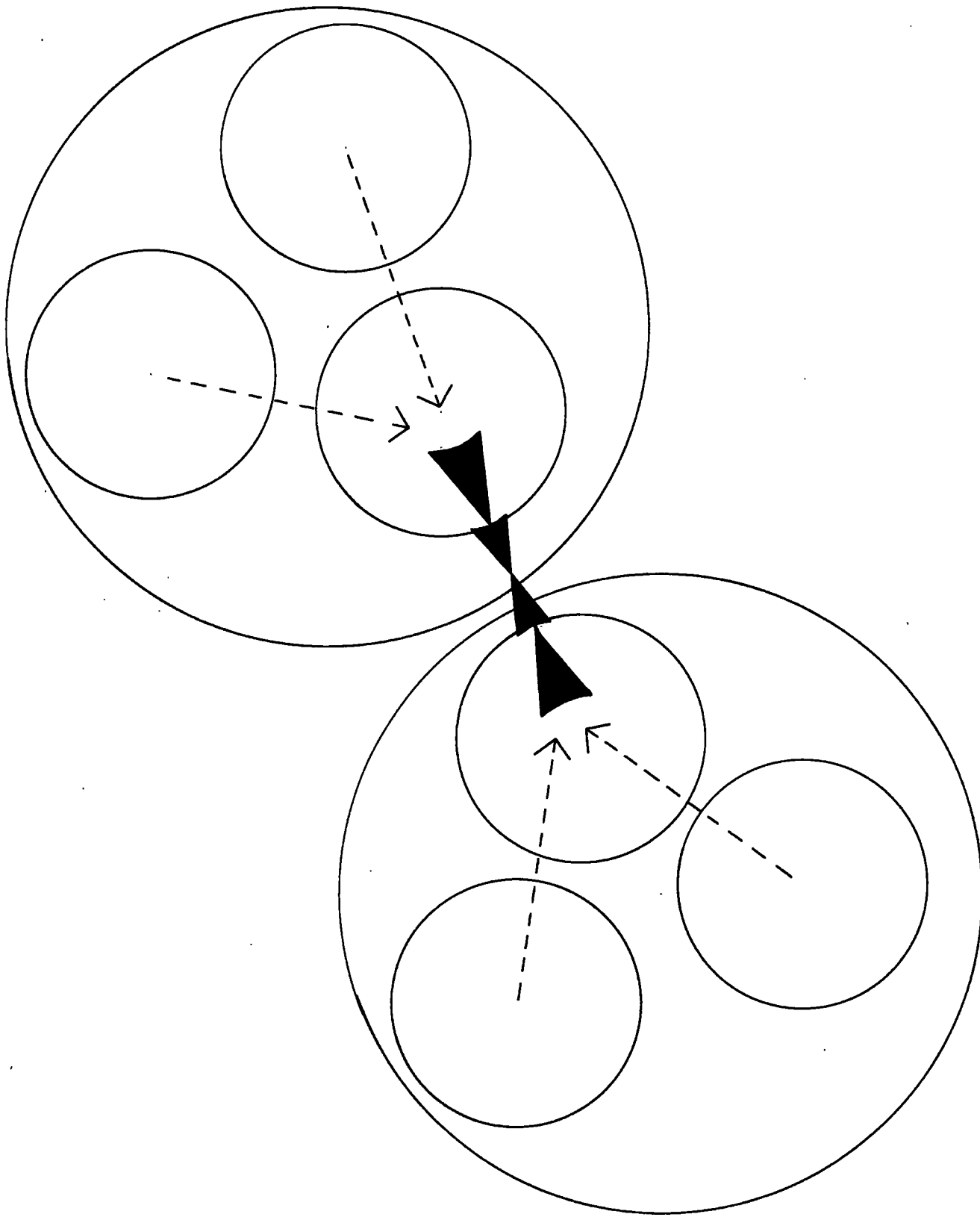


Diagram (171) : GRAND VALLEY DANI FIELDS OF WAR

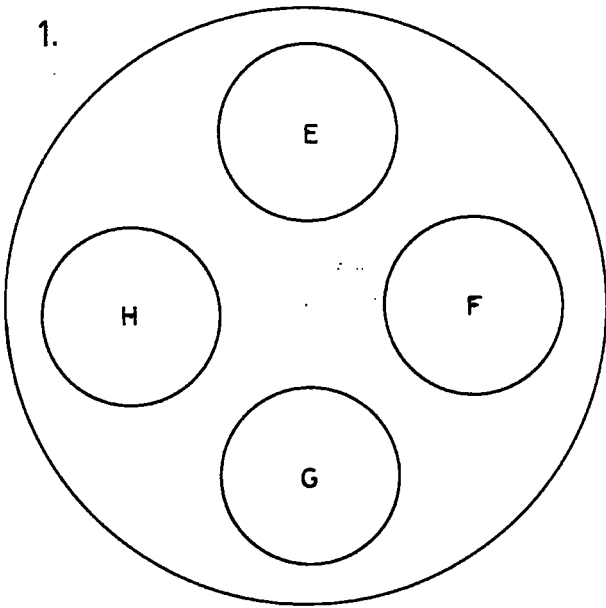
unit which fights in the name of the confederation. Each parish within a confederation is pre-occupied fighting their nearest enemy parish in another confederation. During a battle, assistance is received from the other parishes of the confederation. Requests are sent out when a battle is announced and warriors from other parishes rally to the battlefield. Geographical proximity is important here because the nearer parishes are more likely to send aid.

The second type of major war is where some parishes within the same confederation attack other parishes of the same confederacy. This type of war is a swift raid which has important political consequences because new confederations are formed and the old one destroyed. Diagrammatically, in terms of fields of war, parishes A, B and D of one confederation attack parish C. The confederation is reduced to A, B and D as parish C is driven out (dia. (2)) and becomes allied to a confederation of parishes E, F, G and H (dia. (3)). Confederations are not permanent political groups, but change every decade or so as the result of a sudden internal raid. Heider (1970) refers to the two types of major war as a ritual phase and a secular phase.

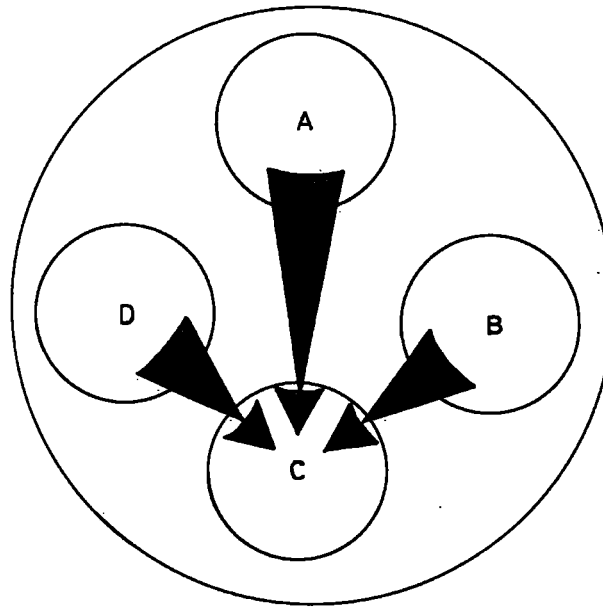
Allies : During ritual war there are no alliances made outside the confederation, although some confederations appear to be in a state of superficial peace, based on the mutual benefits of a trading relationship. Battles are initiated by parishes shouting challenges at each other. The initiating or accepting parish is responsible for the war and most of the warriors come from this principal group; they are supported by allies from other parishes within the confederation. In the brief raid which characterises secular war, parishes from other confederations join in for reasons of self-gain and for what they can loot and pillage from the defeated.

Enemies : Enemies are clearly defined groups which remain stable for a number of years. The enemy are dili-mege or foreigners. Dili-mege are any members of another confederation. The enemy in secular war is not

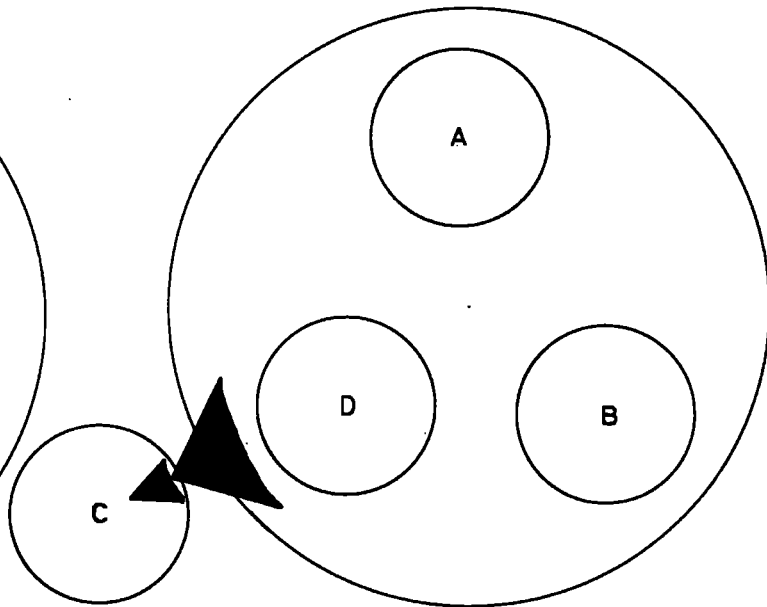
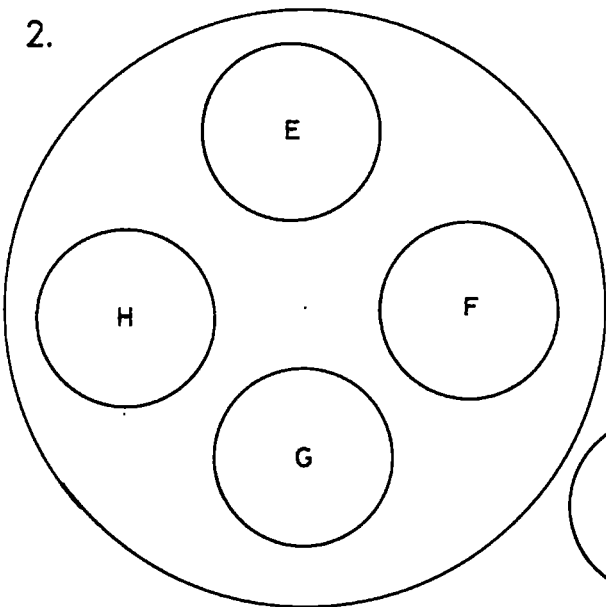
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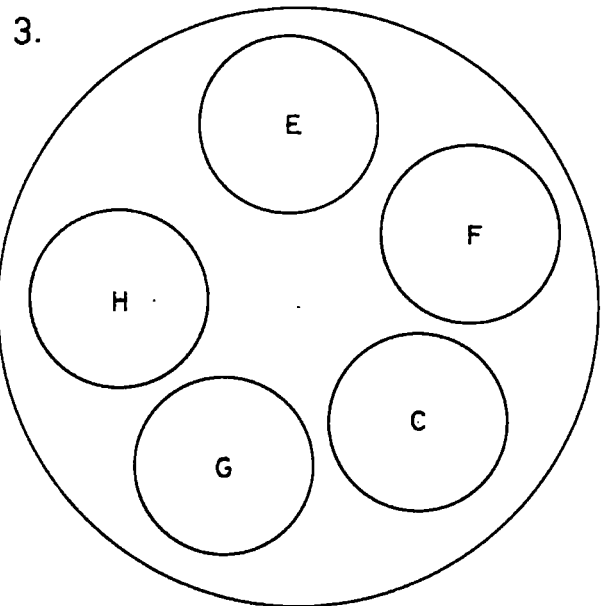
NO MAN'S LAND



2.



3.



NO MAN'S LAND

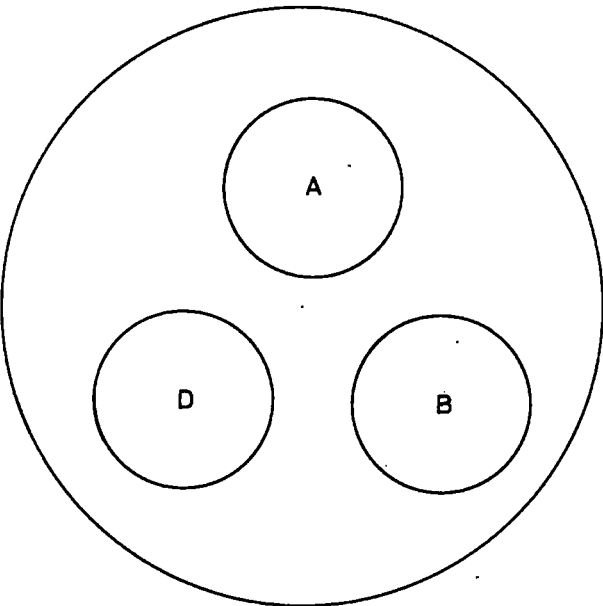


Diagram (17:2) : GRAND VALLEY DANI FIELDS OF WAR (Secular Phase)

clearly defined because the people attacked are in the same confederation and are aguri juna-mege. The outcome of the raid however is to make them dili-mege or enemies.

Causes and reasons : Ritual war is fought because the ancestors demand revenge for men killed in war. Ancestral support is considered essential for the well being of the people, and success in warfare only comes with the help of ancestors. Individual warriors fight for reasons of personal prestige: all big men are successful fighters. Growing tensions between parishes within the same confederation are the cause of secular war. In this aspect secular war is an expansion of minor war. The growing independence of certain parishes under their own big men, combined with a series of personal disputes which become increasingly difficult to settle, cause secular wars to break out. When the tensions reach a certain pitch secular war results.

Individual ties : Marriages are made within the confederation but after a secular phase of war, some related individuals are separated into different confederations. These individuals might remain on friendly terms but social intercourse between them becomes impossible. In a battle they use personal names, but in the context of war, they show no mercy. In fact, when two new confederations form, as a result of secular war, all previous ties are severed. This indicates that residence and membership of a local group overrides all other links. "The many personal ties across alliance boundaries are indeed disrupted during wartime, but this does not seem particularly to concern the Dani". (Heider 1970: 127).

It is difficult to evaluate the role of trading links in warfare. Men have trading friends (atugui) in neighbouring areas with whom they exchange desired goods such as stone, salt and forest products. Although products might come from enemy areas this is accomplished by a series of middlemen who pass the products on, not by direct exchange. In major warfare individual ties between enemy groups are of little, if any significance.

Settlement : During the ritual phase of major war there are no peace ceremonies, no truces and compensation is never paid. The only acceptable compensation for the ancestors is a dead enemy. After the secular phase of major war there are no peace ceremonies or compensation either but previous enemies are now allies in the same confederation and live in peace. Heider thinks that although "disrupted personal ties and trade relations do not have any great effect on warfare itself, their quick resumption at the end of the war makes for an easy peace". (1970: 127).

Consequences : The result of the ritual phase of major war is the placation of the ancestors, which ensures the continuance of their essential help in daily life. There are no defeats, no losers, and no victors in ritual war. The secular phase of major war results in the formation of new confederations as a result of an internal breach in the old confederation. No group is routed or loses land, although there is a considerable movement of people away from the old confederation, which results in the formation of a new no-man's land.

There is a type of ritual war called mugoko which is where several confederations attack a single confederation and destroy it. Mugoko is the result of a small confederation making too many enemies at one time; these enemies combine to drive the confederation out. A confederation crushed in mugoko does not reform. Refugees flee to relatives in other confederations and become members of their host parish.

HULI

Non-lethal fights.

Serious fights within the locality are frowned upon. Some disputes cause fighting within the locality but the first casualty usually has a sobering effect. If the fighting becomes bitter the factions may divide to establish two new localities. Periodically there are ritualized fights (tege) in which men at dispute whip each other. The final result is a

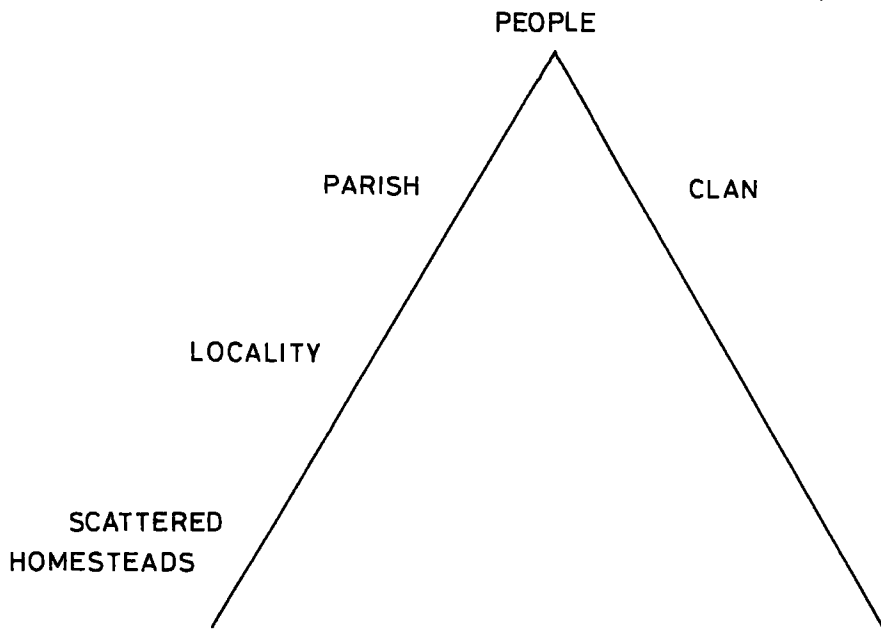
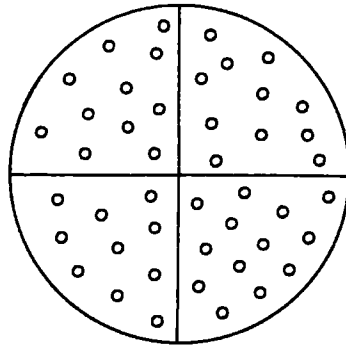


Diagram (18) : HULI TERRITORIAL AND DESCENT GROUP
STRUCTURE

wild brawl which is cathartic and ventilates personal quarrels. The natives confirm this by saying everybody "feels good" after a tege. The group is re-united at the end of the brawl in a victory dance.

Minor war. (wai emene).

Minor war is called wai emene. Two localities of the same parish fight minor wars. Occasionally minor wars escalate into major wars when a large number of allies join in and the fight continues for months. Minor war, unless it is in danger of escalating into major war, is characterized by few allies. The cause of wai emene is a dispute between two individuals which escalates into a group combat. The appeals for parish solidarity by big men and neutral persons related to both sides regulate the extent of minor war and usually result in a peaceful settlement. A parish divided internally by wai emene is in a vulnerable position to outside attack. Settlement is difficult when men are killed because compensation is demanded; wergild is paid only in minor war.

Major war.

Principal groups : The principal groups to a dispute which causes major war are called wai tene (war source). Localities of different parishes fight major wars, (wai timbuni) unless the war is an escalation of minor war. The pattern of wai timbuni is influenced significantly by the fluid nature of Huli local groups. Huli parishes, although conceptually based on agnatic clans, consist of an ever changing group of people which includes agnates of the core clan, cognates, affines and friends. An individual has a right of membership to any locality where he can trace a kinship tie or has a friend. In short, a Huli can settle in any locality which will accept him. A man can be an active member of several parishes at one time, owning gardens in each one. There are two main types of parish member, the person who can settle in the parish but does not (Glasse calls a potential member) and the person who is an active member of the parish (Glasse calls an activated member). In warfare it is the

activated members who are important (although in defeat potential membership becomes very significant to the refugee). In order to be an activated member a man must fulfill three conditions: he must support the group in war, contribute to its indemnity payments and participate in its ritual. As long as these three criteria are fulfilled a man is a parish member, at least theoretically, and may not even garden land there. Full membership, in a practical sense, does involve the use of land; in some cases, where men take only an intermittent interest in parish affairs, it is difficult to be precise on the status of their membership. The units which fight each other in Huli wars are territorial groups, "When warfare threatens, the parish mobilizes without regards to the descent status of individual members", (Glasse 1968: 26). The individual members of these groups however are impossible to predict because men are constantly changing their place of residence. Several men are members of more than one parish and in major war it is the parishes which are enemies.

Allies : The principal locality can rely on the other localities of their parish to support them as allies, a locality of the same parish will not fight against them (unless both war principals are in the same parish) but may remain neutral. Allies are recruited from localities in other parishes on the basis of kin relationships, affinal ties and friendship. The result is that members of the same locality often face each other as enemies because they have links with both sides. Sometimes brother faces brother and father faces son. Opposed relatives are careful to avoid each other during the fight but if they meet they have a recognized method of mutual protection. They run up to one another and warn fellow warriors, "This is my relative. Don't shoot him". These requests are respected, although later in the battle the same man can be shot. The military unit for any battle cannot be predicted with certainty, it is not a formal organization although there are certain rules of recruitment. A locality remains united when it is wai tene to a war. The localities of a

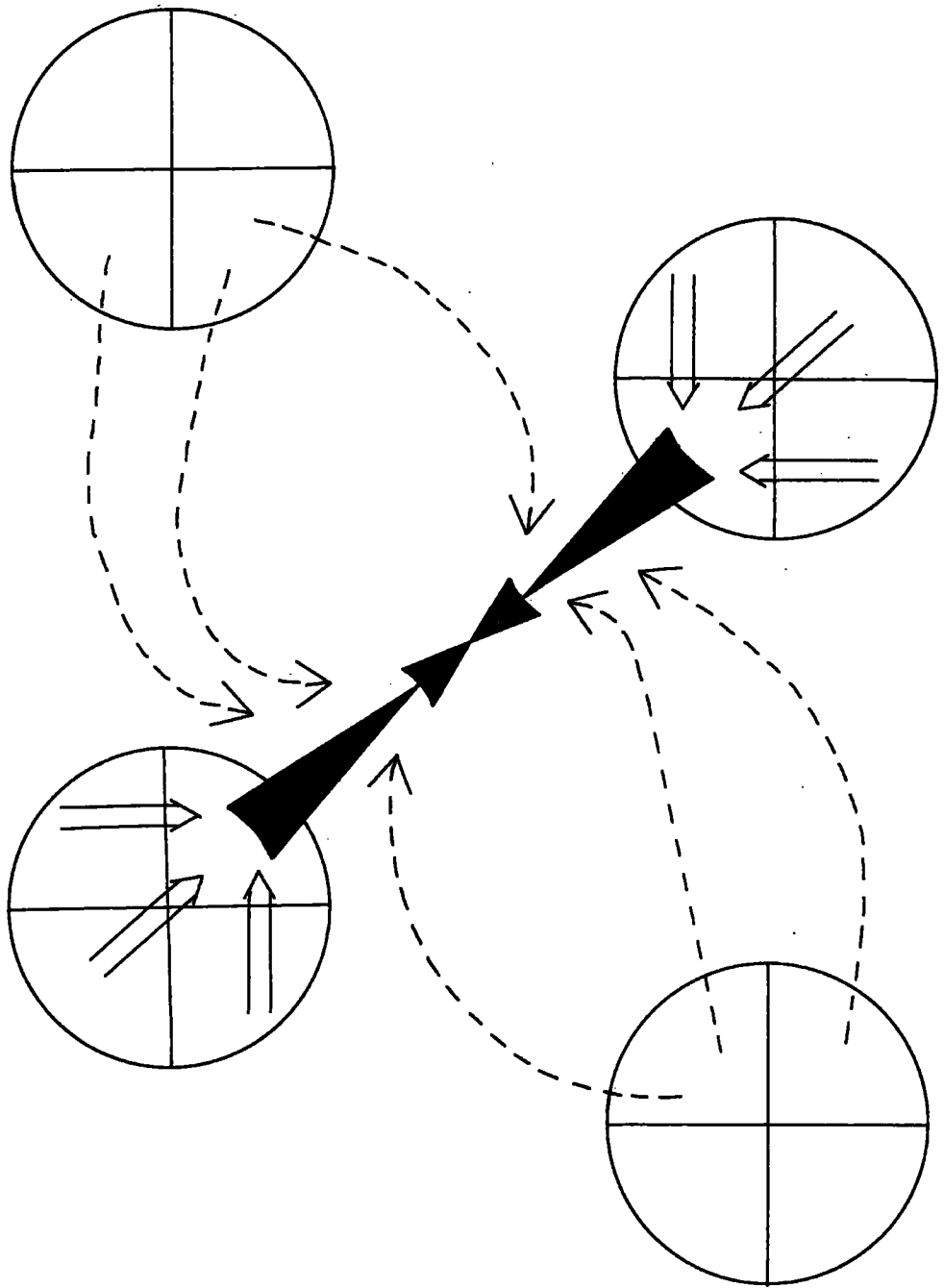


Diagram (19) : HULI FIELDS OF WAR

wai tene's parish are obliged to support them against a locality of another parish. Allies from other parishes are recruited individually; the nearer a parish geographically, the better the chances relatives will fight. The pattern is confused because some individuals are members of more than one parish and all men have kinsmen in several other parishes. In any war each individual, unless associated with the wai tene group, has a series of choices to make - the outcome of these choices produces the military unit.

Enemies : The principal enemy in wai timbuni is the locality which is party to the dispute which causes a war. Secondary enemies are allies of the principal locality (wai tene), and these sometimes include relatives and friends who must be avoided during the fight.

Causes and reasons : Disputes between individuals cause major war. The most frequent cause of dispute is failure to make adequate reparation payments to allies who have lost men fighting as allies for your locality. Other disputes include theft, adultery and poisoning accusations. There are no permanent, traditional hostilities between groups, "groups that are allies on one occasion may be allies on another" (Glasse 1959: 88). Once a war is started the obligation to take revenge for men killed maintains the hostilities. The Huli concept of revenge is not to inflict an equivalent injury, but to pay back with interest. The result is that the people who suffer in revenge do not accept their injuries as just and they seek counter-vengeance. So "the chain of conflict is unending" (Glasse 1969: 87). However, when a war is stopped and the injuries inflicted considered about equal, the seeds for a new war are sown because reparation payments to allies are slow in materializing and former allies become enemies in a new war (see Glasse 1959).

An individual reason for fighting is prestige. The most admired men are successful warriors. The result is that although the "Huli have avenues for settling disputes peacefully, they prefer to take immediate

physical action rather than enter into negotiation" (Glasse 1968: 87).

Individual ties : The network of individual ties between different localities and parishes does not have an inhibiting effect on fighting, men with ties on both sides do not try to settle quarrels peacefully. Glasse (1968) writes that the "Huli are volatile and quick tempered: they lack deliberation and they swiftly resort to arms. Few men in a circle pause to weight their obligations and responsibilities, they take decisions on the basis of current immediate sympathies, often to find their own brothers on the opposite side". (1968: 107).

Once a war is started, individual ties assume an important place in the calculations of any warrior. Although a warrior is obliged to fight for his group when it is the wai tene in a war, he may remain neutral if he is closely related to the principal (not secondary) enemy. A man who is a member of both localities which are wai tene in a war experiences an irreconcilable clash of loyalties and can only remain neutral because which ever side he fights for, he relinquishes membership of the other by his actions. On this point it is necessary to distinguish between principal and secondary parties to a war. Members of the principal group have recognised obligations to follow but when these conflict they remain neutral. Allies, however, do not fight out of any obligation to the groups concerned in the war, but because of individual ties supplemented by a desire to fight as this is a manly, respectable thing to do. It is members of the principal groups which may suffer conflicting obligations because of ties to both sides not the allies. Allies can fight against the group which includes their relatives without experiencing any conflict of loyalties because they are not obliged, by principal to support either side. If a warrior has no individual connections to either principal party in a war, he can join either side and his choice is no doubt based on calculations of self gain. Although individual ties have little or no effect in preventing war they are important for stopping it and settling peace.

Settlement : Wars are terminated by mutual agreement or the disbanding of one side. Rarely is major war stopped by neutrals when men have been

killed because the obligation to take revenge is uppermost. Both sides however, may agree to end the war and this is usually the result of a food shortage caused by the prolonged hostilities. A balance of deaths on both sides is necessary for a peace settlement, because outstanding deaths must be revenged. Even when the number of deaths is considered equal peace is not easy to negotiate, especially when it is not certain which groups are the principal localities to the war. When both sides wish to make peace the actual negotiations are done through persons related to both sides (affines or cognatic relatives). Sometimes a war is ended by the disbanding of one side. This does not necessarily mean a crushing defeat, it sometimes occurs when the principal group to the war disperse rather than face the reparation payments to allies which they are obliged to make.

No wergild is paid in major war. The Huli calculate that if the principal party to the dispute which caused the war had not become involved in a dispute there would have been no war and they, as allies, would not have lost men. The group responsible for their deaths are the initiators of the war who recruited them as allies. The locality as a whole is obliged to contribute to the reparation payments (nogo abi). Huli fighting is a never ending spiral because allies turn on each other when the nogo abi is inadequate or slow in materializing (see Glasse 1959). In most cases it is difficult to decide which locality is responsible for a war because a series of disputes and increasing tension precede any war and it is impossible to locate the dispute which actually caused the war, (for example see case in Glasse 1968: 124-30). Responsibility for reparation payments is blurred and this leads to fresh disputes and more fighting.

Consequences : Huli wars rarely result in a satisfactory redress of a wrong. The usual outcome is further disputes and shirking of responsibility which leads to another war. Sometimes a group is completely defeated. The Huli residence pattern is an insurance policy incase of defeat because men move to other groups where they have residence rights. People flee

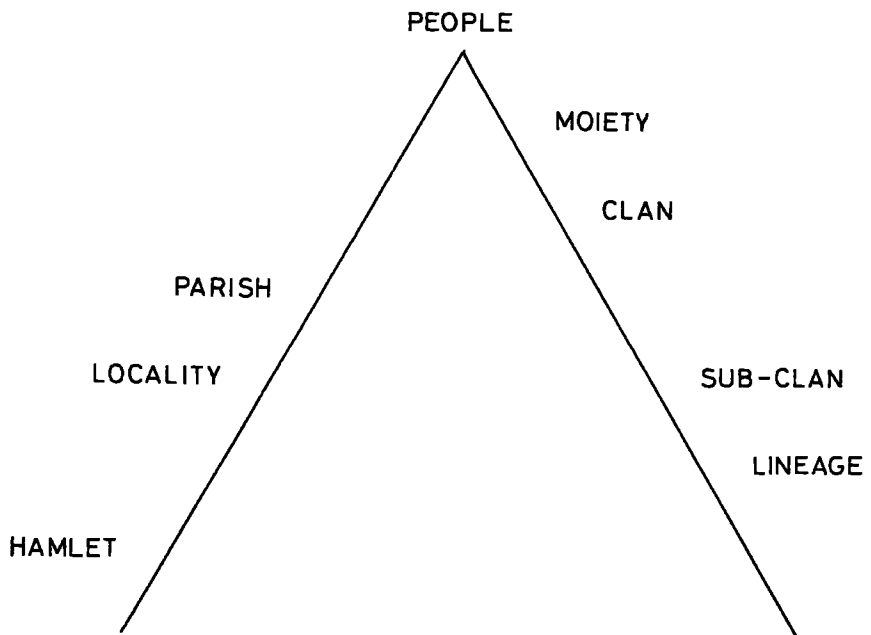
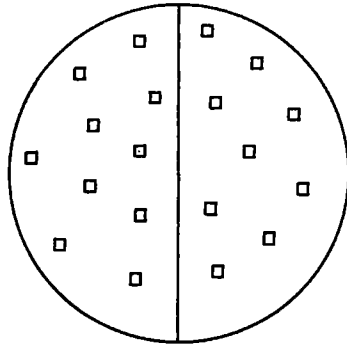


Diagram (20) : ILAGA DANI TERRITORIAL AND DESCENT GROUP STRUCTURE

individually to kin, affines and friends and become full members of their host groups.

ILAGA DANI

Non-lethal fights.

Although Larson (1962) does not mention any groups within which lethal fighting is forbidden, it is probable that the locality based on an agnatic sub-clan, is the group in which only brawls are allowed.

Minor war.

Localities of the same parish or localities of different parishes fight minor wars. So long as no other localities join in a fight, the fight remains a minor war but when other localities become allies of one or both sides the fight has escalated into a major war. A dispute between two individuals in different localities is the cause of a minor war. Minor wars are most likely to occur between neighbouring localities which have many affinal links and friendly ties inhibiting an escalation to major war. The probability of minor war escalating into major war is dependent upon the geographical proximity of the localities and hence their degree of relatedness. Minor war is settled peacefully and compensation is paid between previous enemies. Nobody loses land and there are no refugees.

Major war.

Principal groups : Major war is an escalation of minor war which is caused by other localities, which are not parties to the original dispute, joining the fight. The two localities which start a minor war are dukute and are the groups held responsible. A major war usually develops from a minor war between localities of different parishes, although sometimes a minor war between localities of the same parish escalates into a major war.

Allies : The fact that other localities join a fight as allies defines

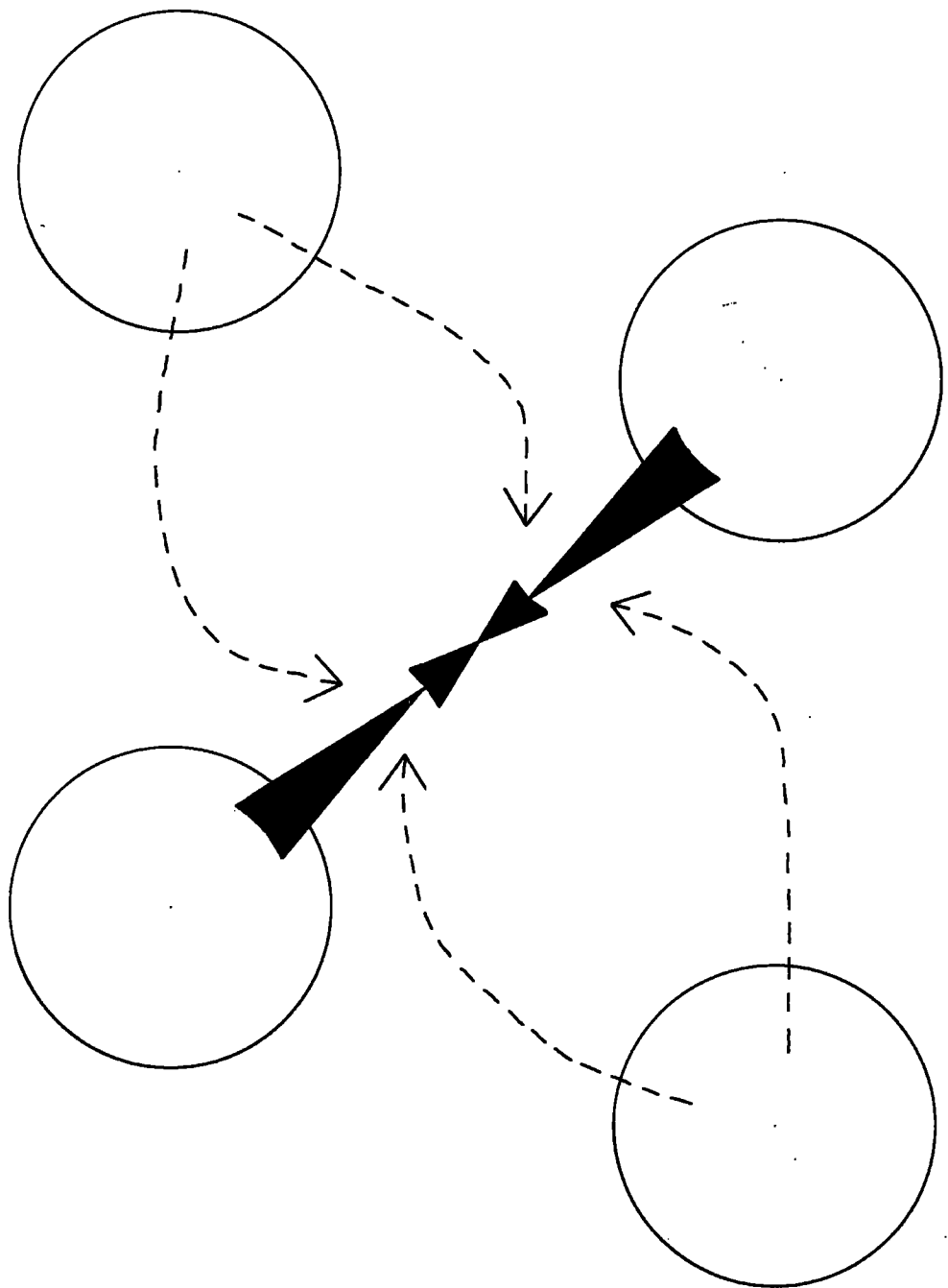


Diagram (21) : ILAGA DANI FIELDS OF WAR

a major war. There is no indication that localities of the same parish are obliged to support each other in major war when one of them ^{is} dukute. The basis of alliances is not clear, but relatives probably support each other as allies when one of them is in a dukute locality. Members of the same locality, so long as they are not dukute, may join opposite sides in a war.

Enemies : The principal enemies are the two localities whose dispute has escalated into major war. The other enemies are difficult to define because the basis of alliance is not clear and these alliances vary from one war to the next.

Causes and reasons : A dispute, such as adultery, theft or unpaid compensation is the cause of war. The disputes which cause war always occur between relatives, either mother's brother and sister's son, husband and wife or cousins. Larson thinks that disputes are the result of insufficient exchanges between groups which leads to tension because prestige comes from exchange. The result is war.

Individual ties : It is interesting that the disputes which cause war are always between relatives. This indicates that kin ties are not important in l'aga Dani warfare and that there is little obligation for kin to support their relatives in the dukute group.

Settlement : After a war the dukute localities pay reparation (je-wam) to their allies who lost men in battle. Je-wam payments are followed by feasting and dancing which is a declaration of peace (most groups in the valley are represented at these ceremonies). Failure to pay je-wam can cause a new war.

Consequences : Sometimes one of the dukute localities is pushed out of the valley but it is not clear where the refugees flee. If there is no rout, both sides offer je-wam payments when they have lost equal members of men and peace is settled.

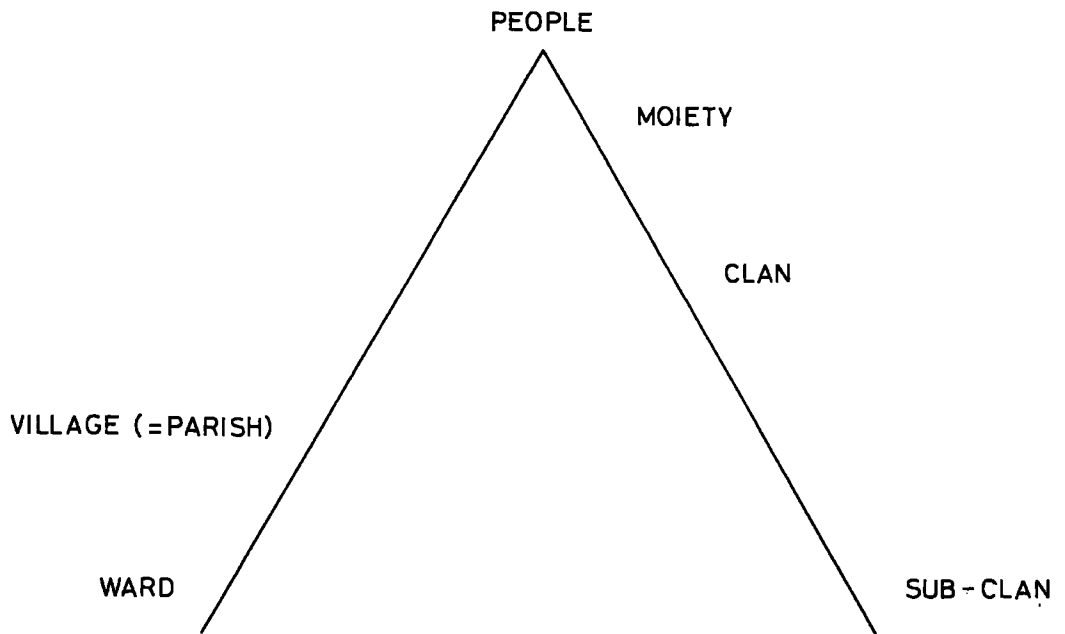
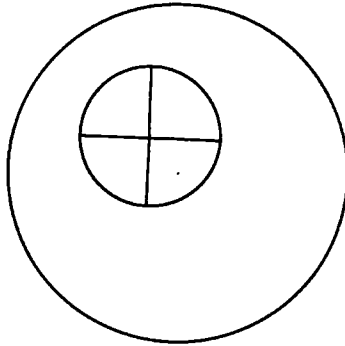


Diagram (2.2) : IATMÜL TERRITORIAL AND DESCENT GROUP
STRUCTURE

IATMUL

Non-lethal fights.

Close agnates should never fight each other. For example a younger brother will never strike an elder brother. Bateson (1932: 288) refers to brawls within the village but the causes of brawls are not mentioned. However, within the village disputes should ideally be settled peacefully and not with a fight.

Major war.

Principal groups : War is conducted by raids carried out by the village.

Allies : Sometimes two villages unite to make a raid on a common enemy. There is also some evidence (Bateson 1932: 284) that villages are bribed to carry out ambushes on behalf of a geographically distant village.

Enemies : Certain villages are traditionally enemies. This is a relationship of permanent hostility, which is openly expressed in war but which remains latent during periods of superficial peace. It is not clear whether some villages are permanently friendly while others are enemies, or whether all villages are friends at one time and enemies at another.

Causes and reasons : An important reason for Iatmül raids is headhunting. Heads are placed in the ceremonial men's house and the natives believe that prosperity follows from a successful headhunt. For example, the ancestral spirits were represented by standing stones (mbwan) upon which the heads of slain enemies are placed. There is some evidence (Bateson 1936: 141) that the names of dead enemies are inherited. Close kinsmen are obliged to seek revenge for men killed in raids and the cane rings worn in mourning can not be removed until this has been achieved. If revenge is not taken, it leads to sickness and death (see Bateson 1932: 426). Individual men fight for reasons of prestige, for example, a killer is entitled to special ornaments and paints, such as tassels which he can hang from his line stick, for every kill. Also a homicide is followed by a splendid dance and naven.

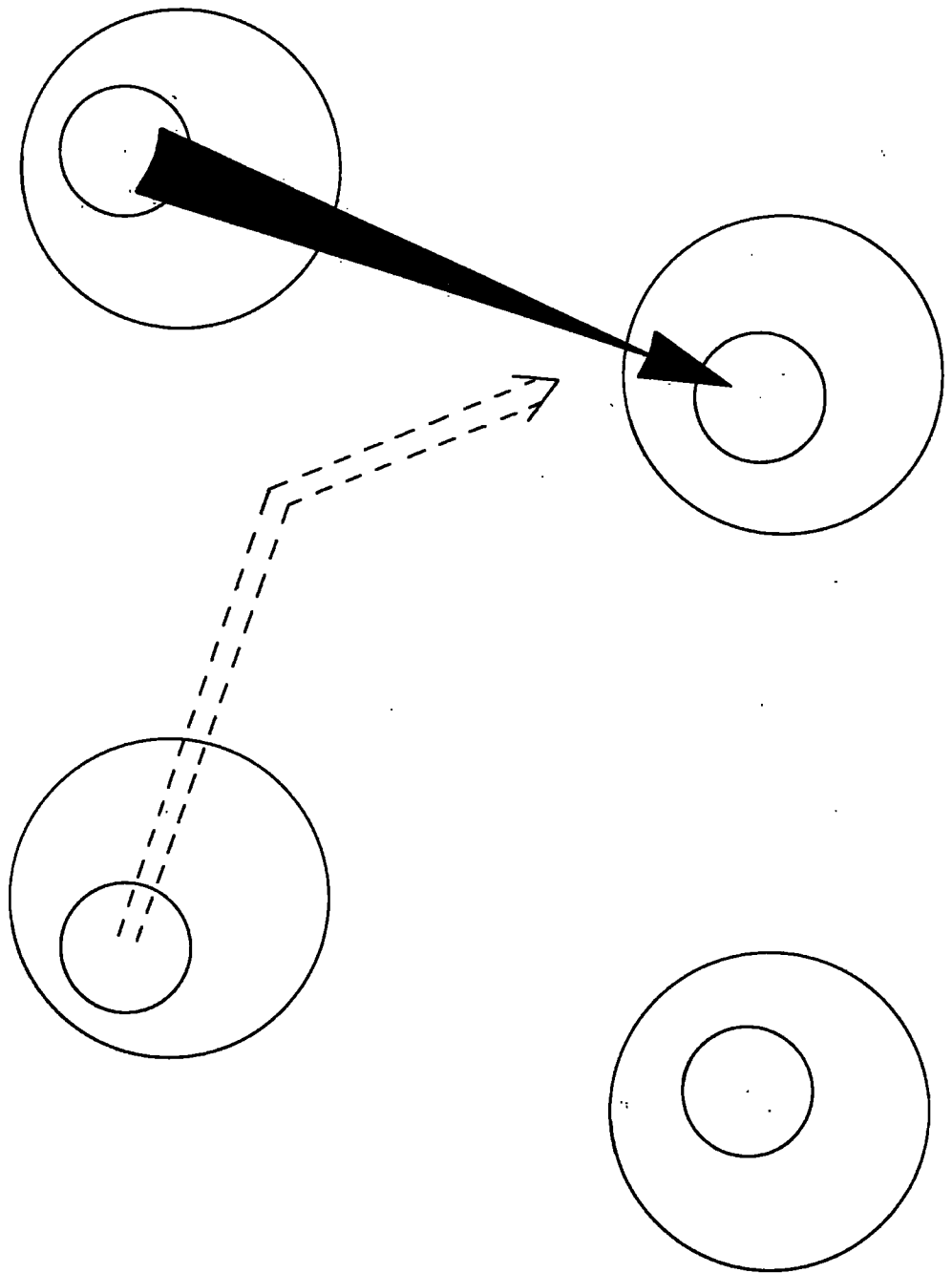


Diagram (23) : IATMÜL FIELDS OF WAR

Individual ties : It is not clear whether alliances are based on individual ties between villages or on a group relationship. Most marriages are made within the village (see Korn 1971) but some are made with the enemy. In disputes a man sides with his mother's or wife's group against his own. Maternal and affinal relations are ideally close and they are strengthened by a constant exchange of gifts. However, the position of men married into enemy villages is difficult to evaluate. Bateson (1936) records an instance of a man killing his wife in revenge for a homicide committed by her parish and such killings are not unusual. Marriages made outside the village during periods of peace are disrupted when war breaks out, but individual affinal ties can conceivably remain intact although women are in a dangerous position in relation to their husband's village (and even, in extreme cases, their husband). It is not stated whether men remain neutral in raids on their wife's village or attend but avoid their affines during the fight.

Trade relationships between villages (not individuals) are carefully guarded and maintained. A village with a permanent trading link with another village which it "jealously guards" (Bateson 1932) is unlikely to attack its trading partner. There is no indication that trade relationships form the basis of war alliances.

Settlement : Peace is sometimes settled between two enemy villages. The exchange of women between enemies is an important part of peace making (Bateson 1932: 284). It is not clear what prompts two enemy villages to settle peace or how a settlement is negotiated.

Consequences : There is no indication that villages are routed and people forced to flee as refugees. Raids are organized for revenge and heads. Every village has revenge debts and every village needs heads for prosperity. The result of war is to fulfill these objectives, by raiding a traditional enemy when it is thought necessary.

JALÉNon-lethal fights.

Disputes within the ward should be settled without recourse to violence. At certain times of the year the ward disperses into garden hamlets and occasionally disputes between members of the same ward living in different hamlets causes minor wars of short duration. Brawls caused by disputes are called jéik and consist of hand to hand fighting. Other men usually try to break up a spontaneous brawl because of the danger that jéik may escalate into war and divide the ward.

Minor war.

Principal group : Minor war is called tok wim. Fights within the ward, between two wards of the same village or two wards of different villages within the same confederation are classified as tok wim. The principal group in minor war is a ward which is a party to the dispute that escalates into war. The duration of a minor war varies from a few days to a few years.

Allies : Alliances in tok wim are of a temporary and shifting nature. Warriors from wards, other than the principal groups in the war, are recruited on the basis of individual ties. Men in the principal ward rely on personal kin connections and individual trading partnerships outside their ward to secure military help. When a man's ward of residence is a principal party to a conflict his allegiance is to his jouée (men's house), but as an ally a warrior supports individual relatives, not a group, the result is that men from the same ward related to opposing sides face each other as enemies. In the individualistic sniping battles which characterize tok wim, warriors from the same ward fighting on opposite sides are probably careful to avoid each other. It is not clear what happens if an ally warrior is killed whether his ward unites to seek revenge or continues to fight on opposite sides.

Enemies : Enemies in tok wim are always within the same confederation.

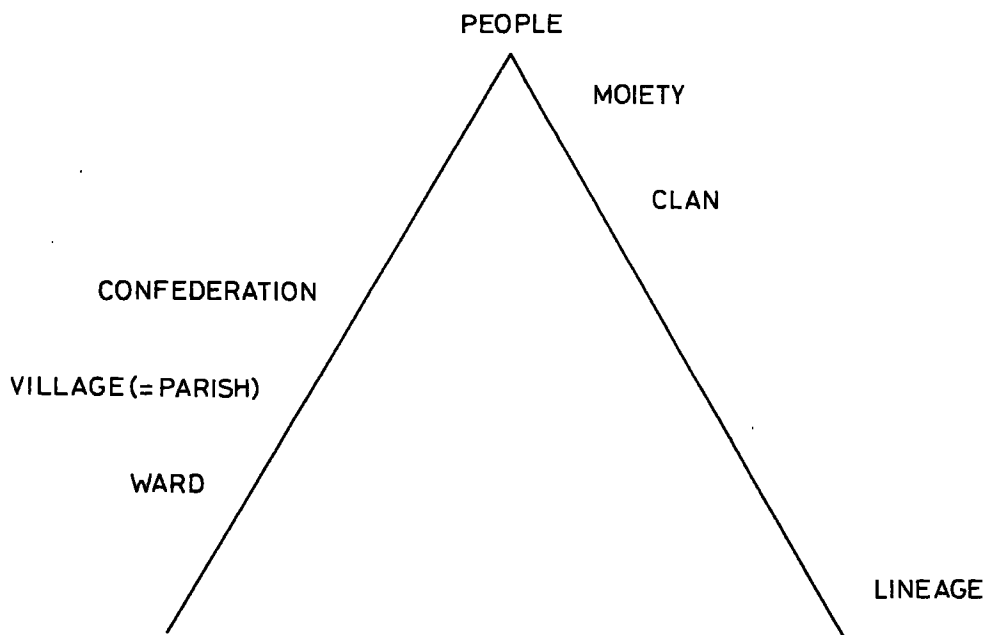
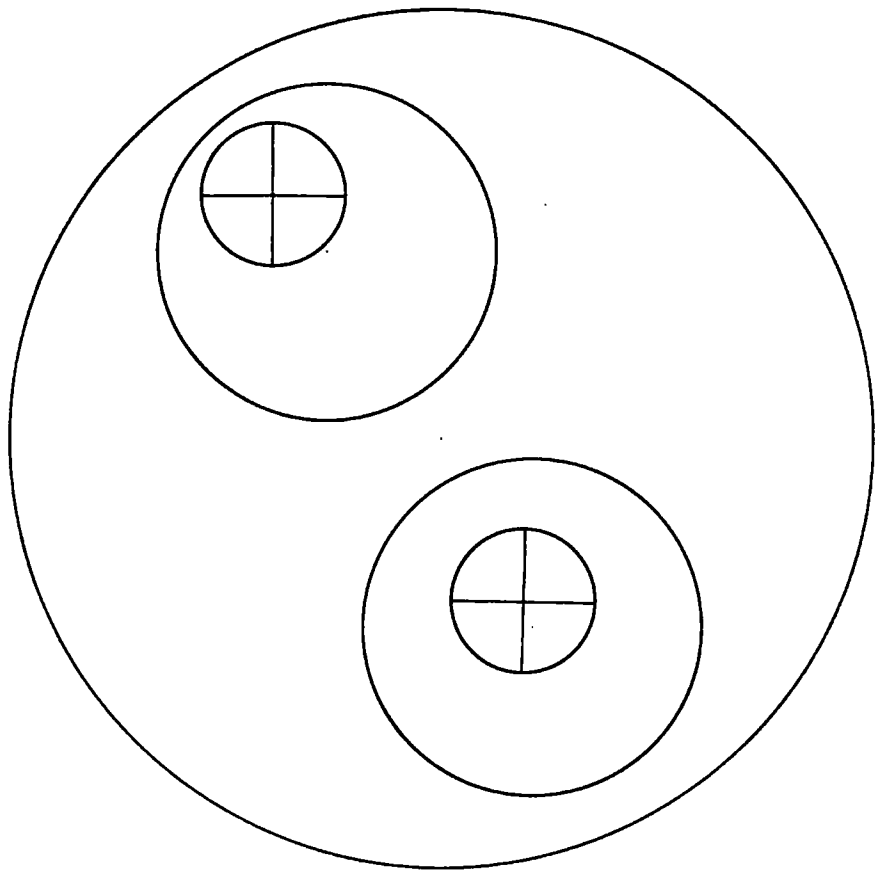


Diagram (24) : JALÉ TERRITORIAL AND DESCENT GROUP STRUCTURE

Principal enemies are the wards at the root of the war, the allies of principal groups are secondary enemies. In tok wim the enemy are "people whose faces are known" and the fact that minor war enemies are not eaten symbolises their closeness.

Causes and reasons : Disputes such as theft, adultery and failure to pay compensation cause minor wars. Koch (1967) refers to the "snowball" effect of disputes because a brawl can escalate into war when sufficient warriors join in and arrows are fired. Once a war starts it is maintained by the kinsmen of dead warriors who are obliged to seek revenge. Only groups too weak to seek revenge, or related to the enemy, accept wergild for dead warriors. Although the acceptance of wergild stops a war, revenge obligations are remembered and fulfilled at a later date, either by ambush or in a future war.

Individual ties : The significance of individual ties in tok wim is not clear. The wards of one village or different villages within the same confederation are linked by individual kin relations and trading partnerships. Do men of a principal ward in tok wim who are related to certain members of the principal enemy ward remain neutral? Or are they obliged to support their ward but avoid personal relatives and friends in the fighting? During a minor war all communication between the principal groups is prevented: relatives and trade partners are unable to meet so long as the war continues. If a minor war continues for a long time there is a re-definition of the "people whose faces are known" because social relations are broken. When this happens there is a re-definition of confederation and tok wim escalates into major war.

Settlement : If no deaths occur in a minor war the fighting is stopped by the principal wards assenting that they have "laid down their arrows for ever". Armistices punctuate the battles of protracted minor war because they allow for "guarded harvesting". Armistices are settled by shouting at the end of a battle. The neglect of gardens which results

from several weeks of fighting breeds a fear of famine. The results of this fear is a truce for an indefinite period of "guarded harvesting". Raids organized by the kin of dead men seeking revenge characterize truces, and as gardens improve the raids increase in intensity until a new series of battles starts. A side which desires peace makes peace offers (jéite) by dancing and singing within earshot of the enemy. If the enemy accepts the jéite a peace ceremony is held and the "kidney pig" (angkerang ampoxom) is cut longitudinally in half, relatives and trade partners also exchange pigs.

In every war there are "the men at the root of the arrow" (antok alem axón) who are responsible for the war. They are the parties to the dispute which escalates into warfare. These men have to pay reparation, ("guilt pigs") to their allies who lose men and suffer injuries when fighting in battles or raids on their behalf Antok alem axón also pay guilt pigs to allies for their services in the war. Failure to pay reparation leads to new wars, allies seek revenge on the principal ward which is at fault. The precarious alliances of tok wim force the root man to pay reparation or lose their allies and gain more enemies.

Consequences : During a battle one side sometimes pushes the other back to their village. Women and children evacuate a village in danger of invasion and take refuge with kin and friends in other villages while their warriors defend the village. Warriors in a defeated village retreat to their men's houses which are never destroyed, while the victors burn and plunder family houses. The extent to which the enemy destroy a ward depends upon the help the inhabitants gave as allies to the principal ward. A defeated ward emigrates to an allied village, this stops the war although hostilities linger until a formal peace settlement.

Major war.

Principal groups : Major war is called tok soli. Villages of different confederations fight major wars. It is not clear whether the ward or the

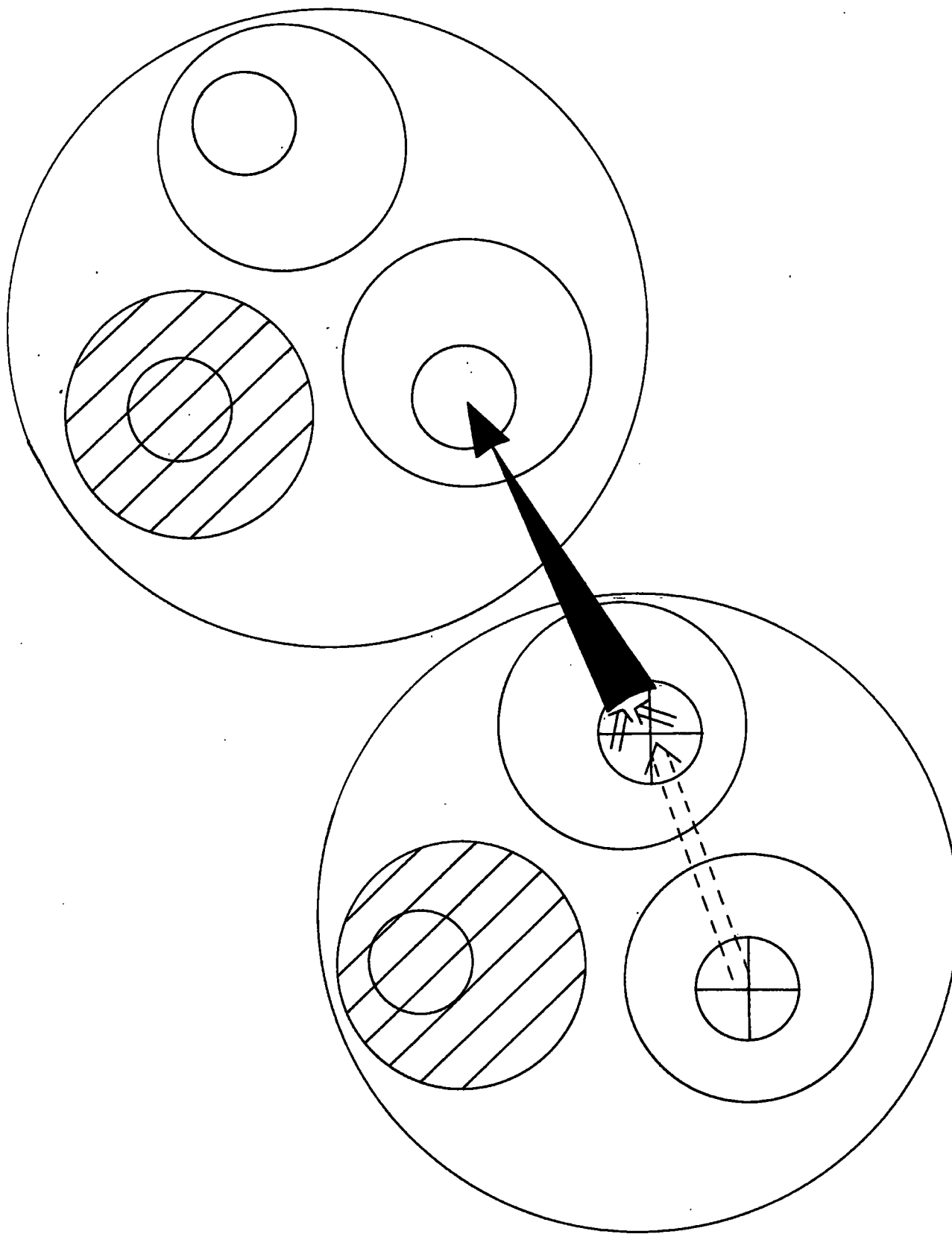


Diagram (25) : JALÉ FIELDS OF WAR

village is the principal group in major war. Either a ward or a village initiates a raid and the principal group recruits warriors from other villages within the confederation.

Allies : Warriors from several villages within a confederation unite for a raid. The alliances between villages of the same confederation are stable and long lasting compared with the temporary alliances of tok wim. It is not clear whether villages of the same confederation are obliged to support each other in a major war against a common enemy or whether alliances depend on circumstances, a ward seeking revenge joining a war party. Groups from other confederations, although not reliable allies, are bribed with pigs to kill members of the enemy confederation. Koch (1967) stresses that tok soli inhibits the escalation of brawls within the confederation because of the necessity for a united group against outsiders, "Hostilities between two units on the same structural level are likely to be mitigated if the opposing groups face an attack by a potentially common enemy from a higher, i.e. territorially more inclusive level" (1967: 293).

Enemies : Enemies in tok soli are other confederations, although the destruction of single villages is the aim of specific raids. The enemy relationship between confederations is almost permanent because tok soli continue for a generation, or longer. In tok soli revenge is taken upon anybody who is a member of the enemy confederation. In revenge for their war victims kinsmen sometimes kill women married into their confederation from the enemy confederation.

Causes and reasons : The primary reason for tok soli is the obligation for kinsmen to seek revenge for their dead relatives and this is the reason why groups initiate and organize raids on enemy villages. A raid on ^atok soli enemy is also considered the right thing to do, it is admirable behaviour. The bodies of dead enemies are carried home when this is possible, and eaten by the kinsmen of a dead warrior to avenge his death.

Sometimes an unrelated man takes revenge for a warrior, he is paid a "head pig" and in future conflicts his group can rely on the support of the revenged warriors ward. Tok Soli starts when a dispute between two confederations escalates into war, or when a minor war escalates within the confederation. The original disputants are "the men at the root of the arrow", and their wards are held responsible for the war in the same way as in tok wim. The root ward, however, does not remain the principal group in the raids which characterize tok soli because other wards which lose men in the war initiate revenge attacks and are the principal groups for specific raids. The root ward is theoretically the principal group for the war but in a long war this group is difficult, or impossible to find.

Individual ties : "Ualé warfare is structured by a complex network of kin relationships.....Links between kin groups created by intervillage marriages - about half the wives of a village are born elsewhere - provide the structure of trade networks and alliance politics" (Koch 1970: 46). Individual ties are more important in minor war because of the larger number of links with villages in the same confederation than with villages outside the confederation. In tok soli ties between villages within the same confederation are important for recruiting allies to a raiding party. In some cases a village of one confederation, which is geographically close to a village in another confederation, has many individual kin relations and trade partners in the potential tok soli enemy village. If their confederations fight a war, closely related villages on either side can remain neutral and sometimes one village changes its allegiance which results in a re-definition of confederation membership. For example, a neutral village was attacked by members of their own confederation because they received from the enemy human meat which had been a warrior of their own confederation.

Settlement : Tok soli is conducted mainly by raids and the arrangement of peace between two confederations takes years of negotiations which are

organised by individuals with relatives on both sides. Peace is formally settled in a ceremony followed by an exchange of valuables. A stable peace however, requires an equal number of deaths on either side because revenge obligations are never forgotten even though wergild is accepted, and attempts to achieve revenge often result in fresh hostilities.

The wards of the root men to a war are obliged to pay reparation to their allies but after a prolonged war there are usually disagreements about which group is the root ward.

Consequences : The object of tok soli raids is to wreak vengeance for dead kinsmen and if possible to destroy enemy villages. Refugees from routed villages flee to relatives and friends in other villages of the confederation.

JATE, KAMANO, USURUFA AND FORE

The cultural similarities among these four societies has led R. Berndt to treat them as a single people. The work of R. Glasse (Fore) and R. Fortune (Kamano) indicate that Berndt is wrong and that these people are different in some fundamental respects. Fore territorial organization and descent ideology, for example, is considerably different from the other three societies. Unfortunately, there is insufficient information on each of these people to allow a separate treatment of each society and for this reason they are studied together in this analysis.

Non-lethal fights.

Disputes within the village lead to brawls but the people realize that fighting upsets village unity, which is essential for survival against enemies. Disputes are therefore settled as quickly as possible and with a minimum of fighting.

Disputes between individuals from different villages (or hamlets) within the parish are difficult to control but these disputes do not develop into fights between settlements. Disputes within the parish

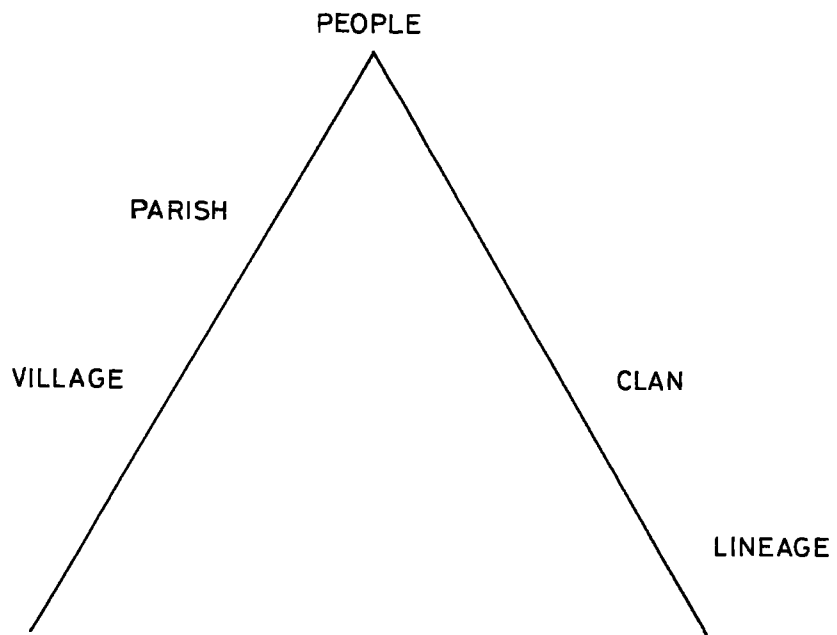
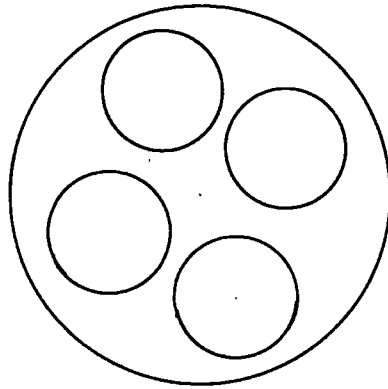


Diagram (26) : JATE, KAMANO & USURUFA TERRITORIAL AND DESCENT GROUP STRUCTURE

interfere with group solidarity; for example, if a disputing village is raided their rival village might be hesitant in coming to their aid. Similarly, two villages which are at dispute will decline to fight together in a raid. The actions of a village depend largely on the influence of the man at dispute and the extent to which his village sympathizes with his quarrel. The extent to which individual ties between two villages of the same parish help settle disputes and prevent fights, is not clear. If anything, according to Berndt, affinal ties are likely to aggravate the situation.

Major war.

Principal groups : The actual fighting unit in major war is a village but settlements fight in the name of their parish. When a village organizes a raid, warriors, from other villages within the parish, are invited to join the raiding party. It is not clear on what grounds men from other villages join a raiding party, whether they are friends and relatives of the organizers or in on the raid for personal reasons. In times of dire trouble the principal group crumbles and the only group which can be wholly relied upon is the lineage.

Allies : Alliances made outside the parish are of a very tenuous nature. Alliances with villages outside the parish are based on bribery and self gain. They are very fragile, for example, allies sometimes warn the enemy of the planned raid and then turn on the "allies" at a propitious moment.

Alliances made in Fore warfare are a little stronger because ally groups are members of the same confederation. The basis of alliance, however, is common interest in a raid and betrayals are not unknown. Segments from the same parish sometimes fight as allies on opposite sides but they are careful to avoid each other during the fight (Glasse and Lindenbaum 1969).

Enemies : The enemy in major war is another parish. Although a raid

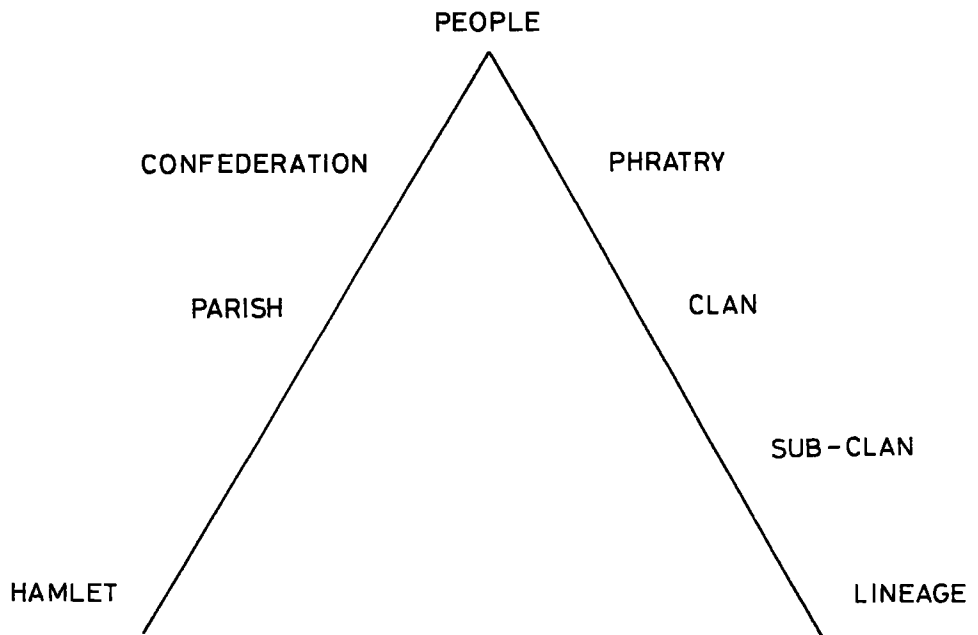
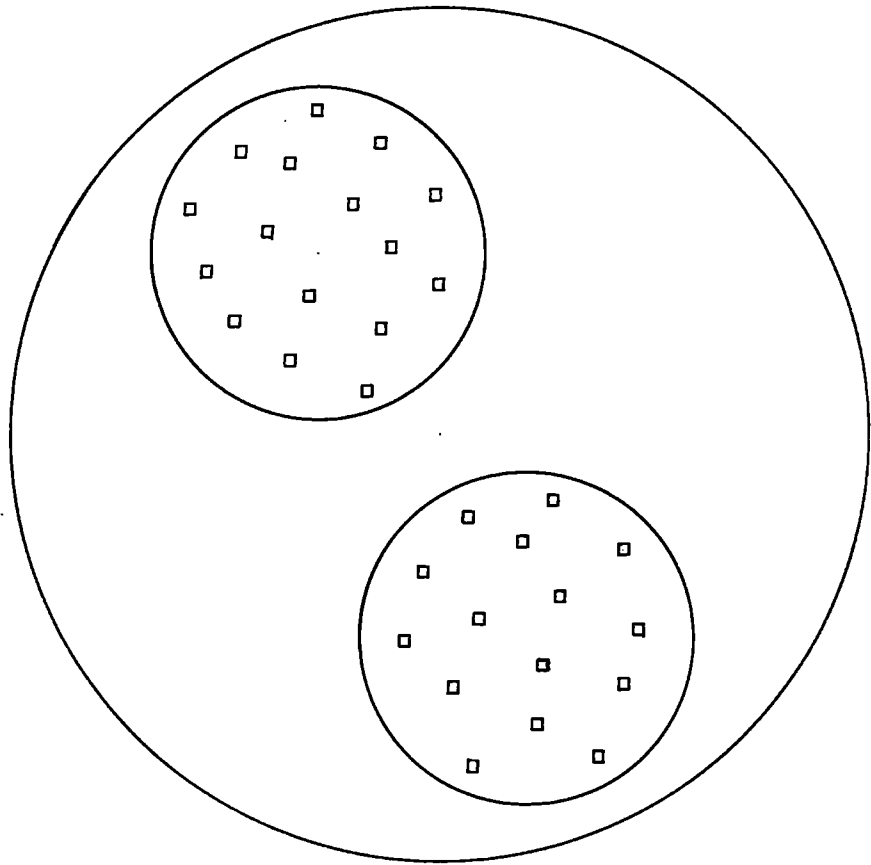


Diagram (27) : FORE TERRITORIAL AND DESCENT GROUP
STRUCTURE

is aimed at one village (only occasionally are several villages attacked) this is conceived as an attack on the parish. Although a village organizes a raid, the parish is responsible and the result is that a retaliatory raid need not be directed at the organizing village but at any village of the same parish. Geographical proximity is a factor here because neighbouring villages of enemy parishes are more likely to suffer retaliatory raids than distant villages. All parishes are in a state of permanent hostility but not all of them are at war. At any one time, some parishes are at war, while others live in an uneasy peace. All neighbouring parishes have been enemies at some time.

Causes and reasons : The cause of war between two parishes at peace is an individual dispute which, combined with a desire for revenge from previous deaths, leads to fighting. The obligation to seek revenge for dead warriors maintains a war once it is started. Disputes which cause war are theft, adultery and sorcery. The latter is particularly interesting because of the motor-neuronal disease kuru which is unique to this region (see Glasse 1967; Berndt 1958). Kuru is transmitted by cannibalism and deaths caused by kuru are thought to result from enemy sorcery. Individual men fight for reasons of prestige because renowned warriors secure the leadership of their groups and become big men. During the periods of superficial peace revenge obligations towards dead persons are remembered until war breaks out again and they can be settled.

Individual ties : Although the whole parish is held responsible in war for the actions of single villages, this is not the result of an ideology of agnatic responsibility but the obligations of residence in the same territorial group. Agnatic descent is apparently of some importance in the military organization of the Fore. A Fore sub-clan, for example, is dispersed among several hamlets and sub-clan loyalty overrides hamlet loyalty. When a hamlet is attacked, the constituent lineages of a sub-clan rally from other hamlets in support of their attacked sub-clan

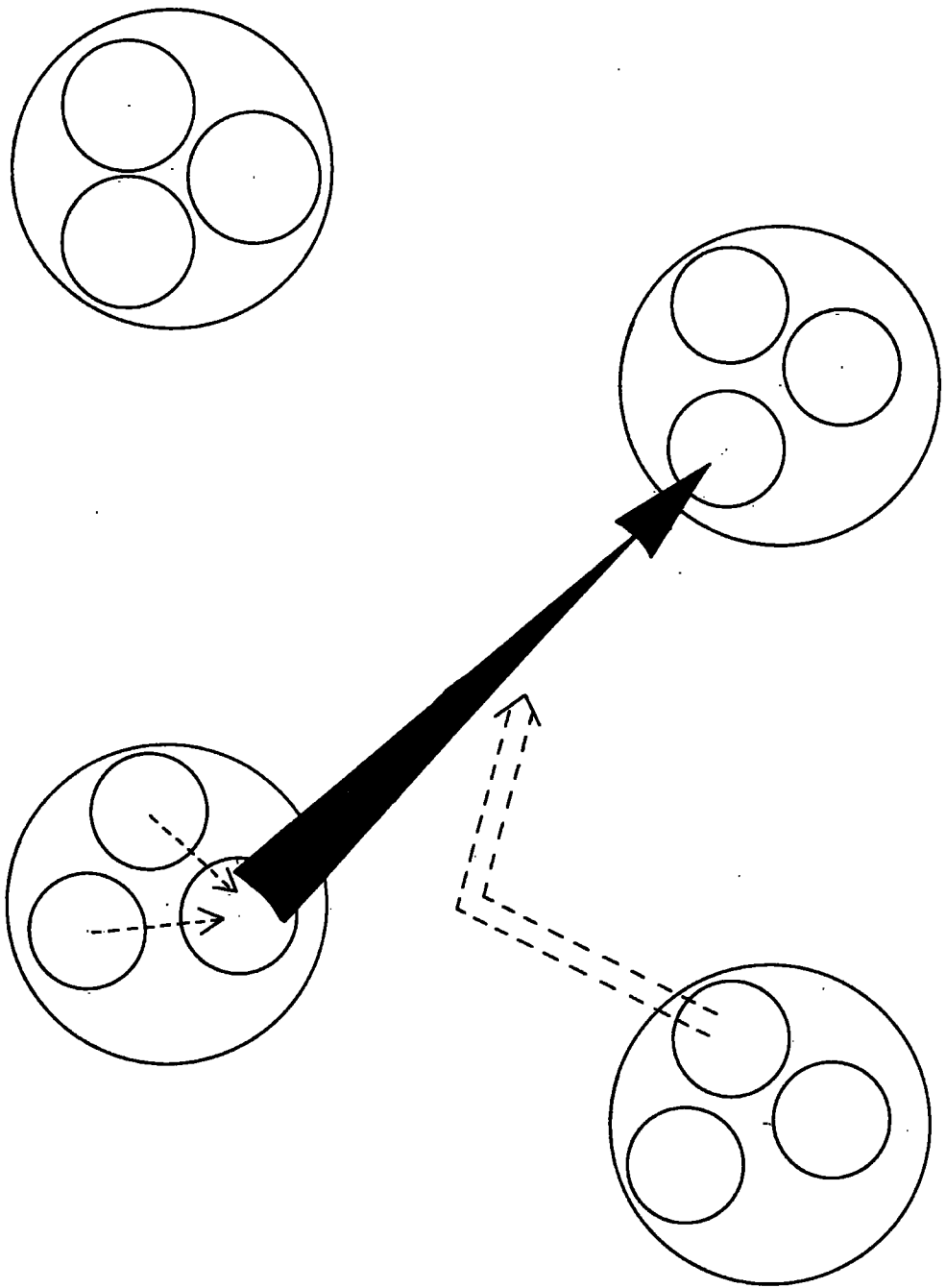


Diagram (28) : JATE, KAMANO & USURUFA FIELDS OF WAR

segment. The result is that several sub-clans are mobilized because each hamlet consists of lineages from different sub-clans. Fore defence arrangements are more effective than the defence arrangements in the other three societies, where disputing villages are often reluctant to help each other.

In some of his writing Berndt (1962) confuses individual ties and feelings with group actions and this reduces the value of his work. For example, he writes that "affinal bonds are much more vulnerable to fluctuations in interdistrict relations" (1962: 394) and thinks that affinal relations fluctuate like a thermometer recording the temperature of social relations between parishes.

The individual ties which are important in war are those between affines, those between brother and sister, and those between cross cousins (nenafu). Men prefer to marry members of their own parish but during peace, individuals from different parishes are able to marry. The people say "Don't trust an affine" (Berndt 1962: 234) because several brides come from neighbouring parishes which at certain times are enemies. The relations between affines are usually tense and hostile, even when they are members of the same parish. Individual members of two parishes which are at war can remain close friends, although social intercourse between them might have to cease for the duration of the war. Some affines "might remain neutral in respect of certain individual members of the enemy or even render them active assistance" (Berndt 1962: 412). Most affines, however, take up arms against each other and Fortune (1947: 109) reports that he "overheard two or three instances of men shouting that they had just made their sisters war-widows, or their wives brotherless". Affinal relations are therefore individual affairs which on the whole are characterized as hostile and unfriendly.

The hostility between affines stands in sharp contrast to the close relationship which exists between brother and sister. A married woman goes

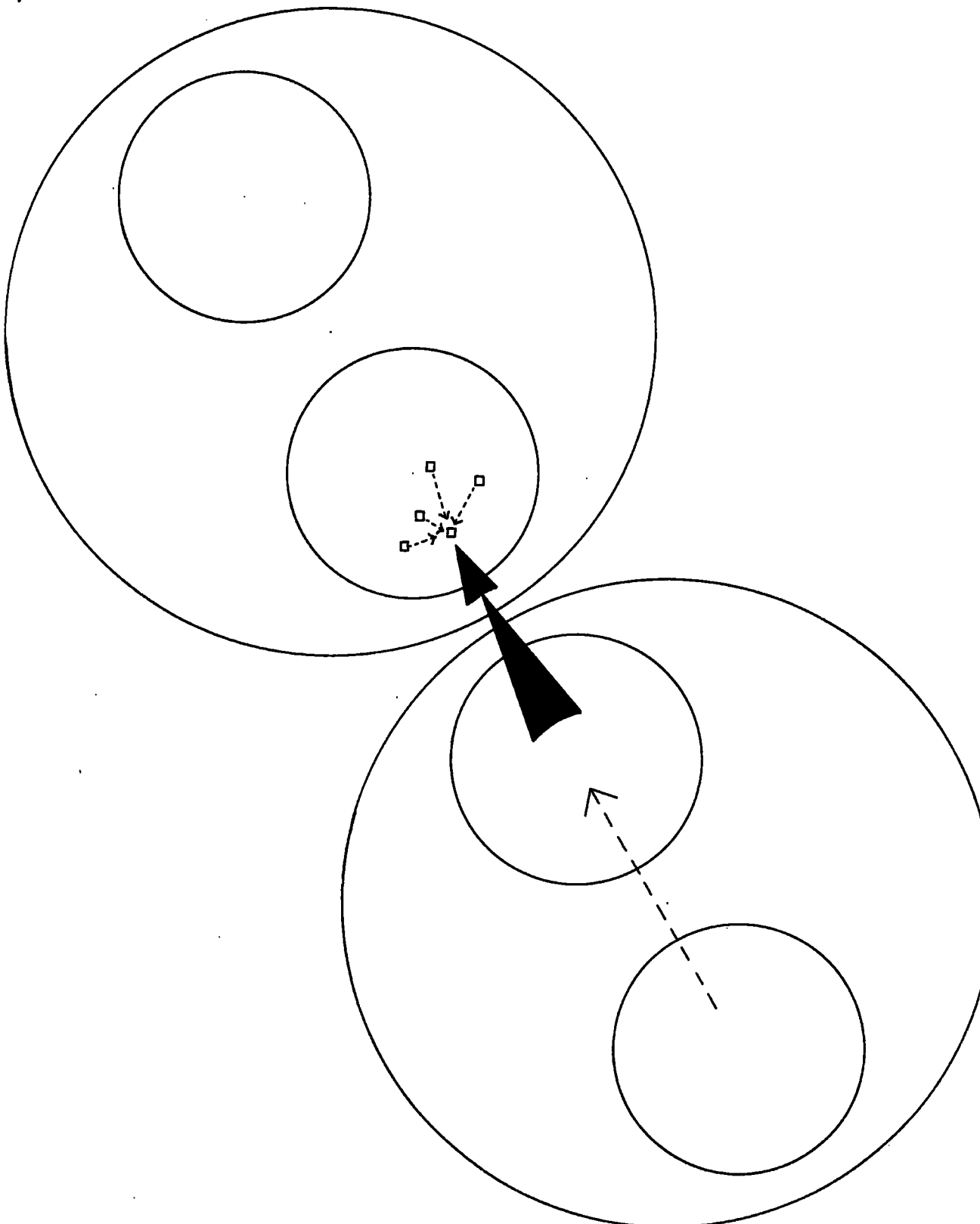


Diagram (29) : FORE FIELDS OF WAR

to live with her husband's group but her loyalty remains with her group of origin. The result is that a parish has several resident female members loyal to enemy parishes and this often results in a tense, suspicious relationship between husband and wife. A woman who overhears plans of a raid will warn her brother and similarly, a brother will warn his sister (who might warn her husband and hence his group) of an attack. A brother will join a raid on his brother-in-law's village specifically to save his sister, whether he will fight against affines depends upon their individual relationship.

Nenafu, even when members of different parishes, are usually close friends. Although a man will attend a raid on his nenafu's village he will not shoot at his cousin but, if necessary, he will protect him. Nenafu is a strictly individual tie between two men and does not influence group activity.

Settlement : It is not clear what motivates two parishes to settle peace but the number of deaths on both sides must balance before peace can be settled. Every man killed in war must be "backed" or revenged but even when peace is settled some deaths are considered to be inadequately revenged and this sows the seeds for a future war. Affines are important for negotiating peace and Berndt (1962) refers to them as a "bridge relation", which facilitates a settlement. Presumably the affines have remained friends throughout the war and their relationship does not approximate to the more frequent one of hostility. Sometimes peace settlements are tricks to attack unguarded men.

Consequences : Sometimes a raid results in the rout of a village and the plunder of their land. Refugees flee to affines for protection; this is difficult to reconcile with the norm of hostility between affines but Glasse writes that local groups welcome non-agnates to strengthen the group. Rarely is a parish routed, although in a full scale attack every village in a parish is attacked. Members of a defeated parish which is

unable to re-form are absorbed slowly into their host groups. Sometimes a defeated group is invited to return to their land. The usual result of a successful raid is one or two deaths which are considered to revenge previous killings. Thus the see-saw of raiding continues because when one side achieves revenge, the other is in debt.

KAPAUKU

Non-lethal fights.

To kill a fellow parish member is murder. A dispute sometimes causes a fight but lethal weapons are forbidden; only sticks are allowed. These fights are an emotional outburst which have a cathartic effect as neutrals join in and fight persons they have a grievance against. Big men usually exert sufficient influence within a parish to control fights and settle disputes. In a parish or village where two big men of comparable status are wrestling for influence, stick fights between their respective political factions are usual and sometimes difficult to control because neither big man has influence over all the men fighting.

Major war.

Principal groups : The parish is the principal group in major war. All of the villages in a parish are obliged to support each other in a war against other parishes. Although in certain circumstances it is possible for a lineage or sub-lineage of a village to remain neutral.

Allies : Allies are recruited from the villages of other parishes not directly involved in the war. Kin, affines and friends from other parishes fight as allies; they have no obligation to help but are usually pleased for the opportunity to fight. Men from ally parishes often fight on opposite sides and sometimes brothers (with affines or friends) fight as enemies. In this situation, kinsmen, affines and friends are careful to avoid each other on the battlefield. "Friends, in-law relatives and even blood relatives may meet on the battlefield as "enemies". To avoid killing

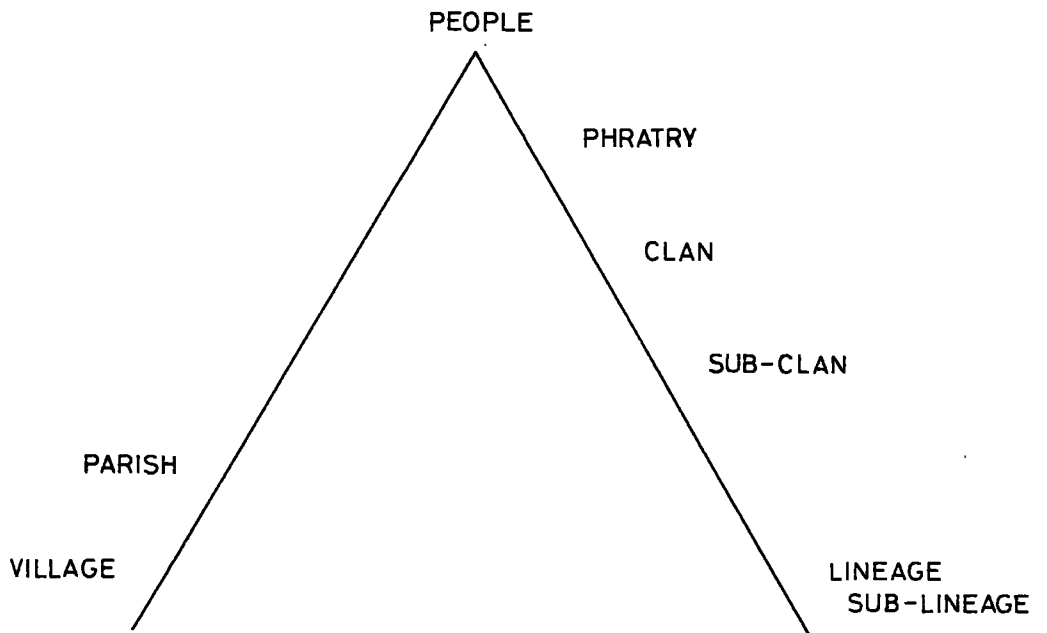
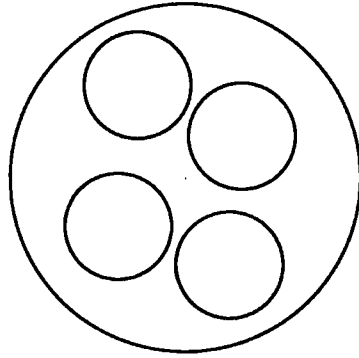


Diagram (30) : KAPAUKU TERRITORIAL AND DESCENT GROUP
STRUCTURE

one's own maternal uncle, wife's brother or best friend, one fights on the other end of the battlefield". (Pospisil 1958: 93).

Enemies : Enemies in major war are other parishes. All parishes are in a state of permanent hostility with each other. Jape means enemy, a relationship specified by tradition and which exists with all other parishes. This is a group relationship, individual ties between members of different parishes are often close and friendly. An attack is directed at any village of an enemy parish regardless of the actual village occupied by the initiating group because an attack on any village is an attack on the whole parish.

Causes and reasons : A dispute between two individuals, who are members of different parishes, is the cause of war. The most frequent cause of war is failure to pay bridewealth on a divorce; other disputes include thefts and sorcery accusations. A man who is wronged by a member of another parish pleads his case with the big men (tonowi) and demands action. If the big men consider the case justifies war, they organize a group of warriors. When the big men decide to fight a war over a dispute this probably marks the culmination of several disputes and growing tension between two parishes. It is significant that the big men decide when war will be declared, it is not the result of a spontaneous fight over a dispute in which men are obliged to support fellow parish-members. A man who starts a war against the advice of big men is frequently executed in an ambush because he is a troublemaker. When the big men decide that war is necessary, all members of the parish are obliged to support their decision and fight. As a Kapauku said, "A man starts a fight and no matter how much one despises him, one has to go and help because he is one's relative". (Pospisil 1958: 89).

Once started, a war is maintained by relatives obliged to seek revenge for dead warriors. The responsibility for a killing falls on the lineage or sub-lineage of the killer; similarly, it is this group which is

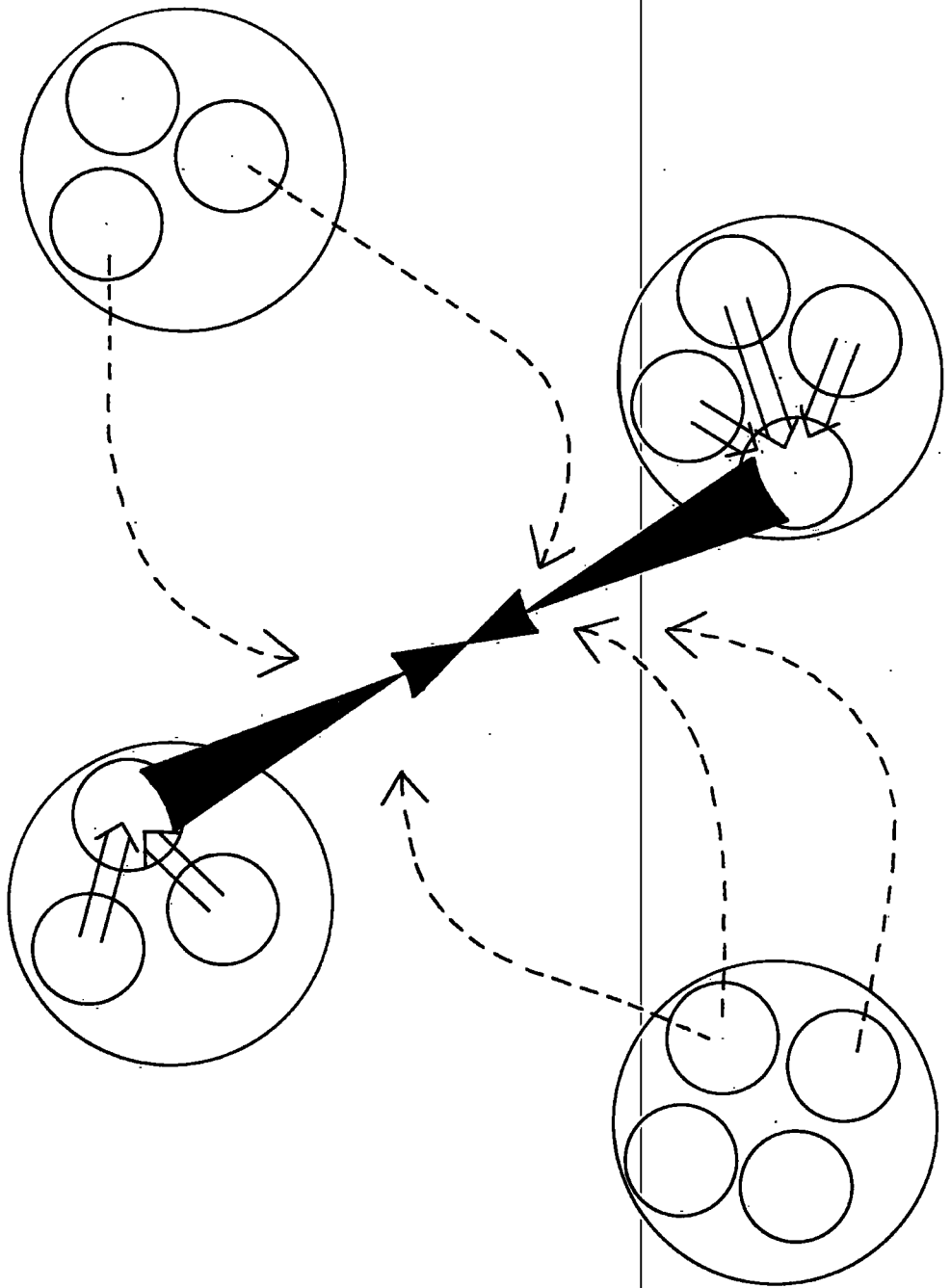


Diagram (31) : KAPAUKU FIELDS OF WAR

obliged to take revenge for dead men. Revenge is not always taken by this group physically but they are obliged to remunerate the man who actually kills on their behalf (dabe uwo) and to bear the responsibility for the revenge killing. Prestige from fighting does not appear to be such an important reason for participating in a war, as it is in other New Guinea societies.

Individual ties : Although agnates from other parishes are recruited as allies, this is not the result of an obligation to support any agnatic group but a desire to help relatives. Men prefer to marry within their parish with the result that affines are not an important source of allies. Trade partnerships which produce debtor/creditor relationships are significant in the recruitment of allies. Individual ties outside the village are of no use in preventing war between traditionally hostile parishes. The ties of big men outside the parish appear to be of some significance however. The successful big man has, by definition, a wide network of ties outside his parish and these ties mean that "even in times of war, his influence persists in the hostile camp and provides convenient channels for negotiating peace", (Pospisil 1958: 21). The individual ties of a big man outside the parish are significant for the groups, whereas the individual ties of an ordinary man are significant only for the individual.

Settlement : During a war there are brief armistices to allow gardening. These are not formalised and a resumption of hostilities is possible at any time. Peace can only be settled when the number of dead is equal on both sides and no blood debt remains. The balance is called uta uta (half/half). Any balance is only temporary as men who die from wounds, even years after the war, are considered to be war victims who demand revenge. Wergild is rarely paid to settle peace but it is paid in order to maintain peace once it is settled; for example,

when a man dies from wounds wergild (me mege) is paid to restore the balance. Big men decide when to settle peace and negotiations are carried out via neutral affines or friends. Peace is settled at a pig feast where former enemies dance together. The original disputants upon whose behalf a war is fought are called jape ipuwe (owner of the enemy). These men have to pay reparation (uwata) to the relatives of men who die fighting as their allies. If the jape ipuwe default in their reparation payments they are in danger of betrayal to the enemy and death. It is therefore an expensive and dangerous business to initiate a war.

Consequence : The objective of war is the complete destruction of enemy property. Rarely can one side muster sufficient support to inflict a conclusive defeat and most wars finish in a stalemate. If a parish is routed, refugees flee individually to kin, affines or friends in other parishes. Pospisil (1963) underlines the economic motives, such as loss of payments, which are behind wars. The result of a war, however, is usually expensive for the jape ipuwe, who has to pay reparation.

KIWAI

Non-lethal fights

There is never war within a village or between villages of the same confederation, although a dispute sometimes result in a fight. Brawls are fought at night and the participants hurl all kinds of missiles and insults at each other but they exercise restraint. "It very seldom happens that a man is killed in these conflicts, and no one fights to possess himself of a head" (Landtman 1927:148). Big men meet to discuss and settle some disputes and a brawl results when they fail to satisfy both parties.

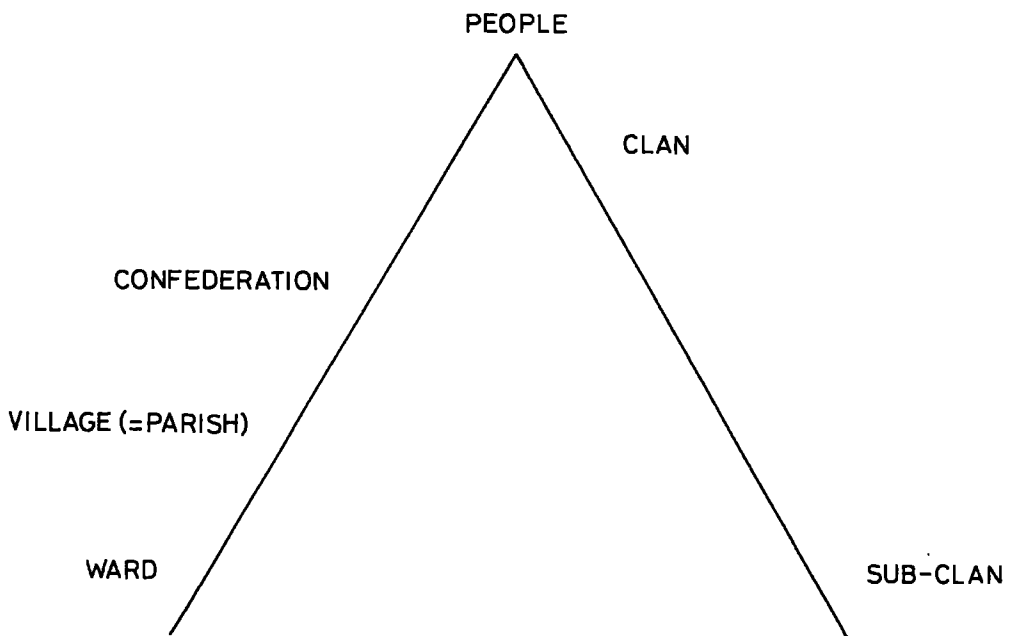
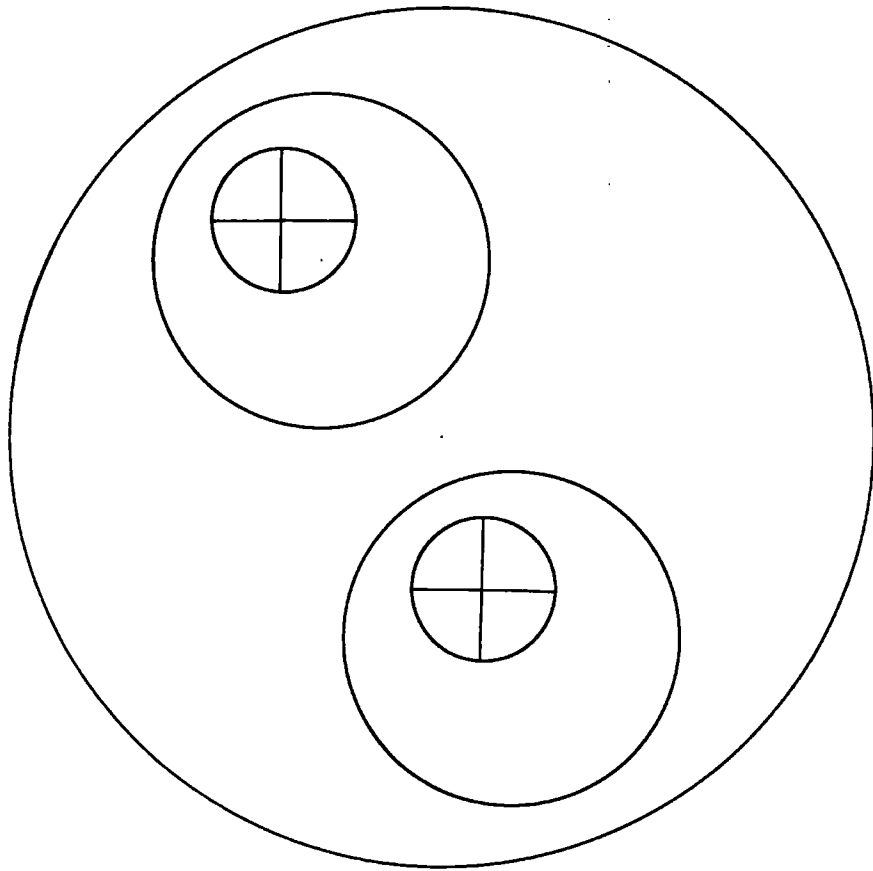


Diagram (32) : KIWAI TERRITORIAL AND DESCENT GROUP STRUCTURE

Major war.

Principal groups : The principal group in a headhunting raid is a village.

Allies : Occasionally several villages unite for a large raid. Ally villages are probably from the same confederation, but it is not clear whether villages are recruited as groups or individuals from these villages fight as allies on the basis of kin and friendship links to the principal group.

Enemies : Certain villages outside the confederation are traditional enemies. Landtman uses the word "bushmen" for enemy (see Landtman 1916:326). Bushman villages are permanent enemies but raids are not frequent and enemy villages live most of the time in a state of superficial peace.

Causes and Reasons : Baxter-Riley (1925) gives four reasons for Kiwai headhunting raids. Firstly, to avenge garden thefts or enemy murders. Secondly, to teach the enemy that a heavy punishment follows a wrong. Thirdly, to acquire valuable head trophies. Fourthly, to gain prestige and leadership because a man with several heads has influence over others. The primary reason for a Kiwai raid is revenge because a village is obliged to take revenge for people killed by the enemy. Peace between enemy villages is sometimes maintained for a considerable period of time but it usually broken when the relatives of a dead man remember their unfulfilled obligation to taken revenge and initiate a raid. A widow, for example, cannot remarry until her husband's death is revenged. Disputes between peaceful enemy villages also foster tension and encourage raids. Another significant reason for raids is prestige. Big men are always successful headhunters because, "The more skulls, the greater the honour", (Chalmers 1903: 123) A young man requires a head before he can marry and prepared heads are important in economic exchanges, "canoes have often been given in exchange for a skull" (Chalmers 1903:123)

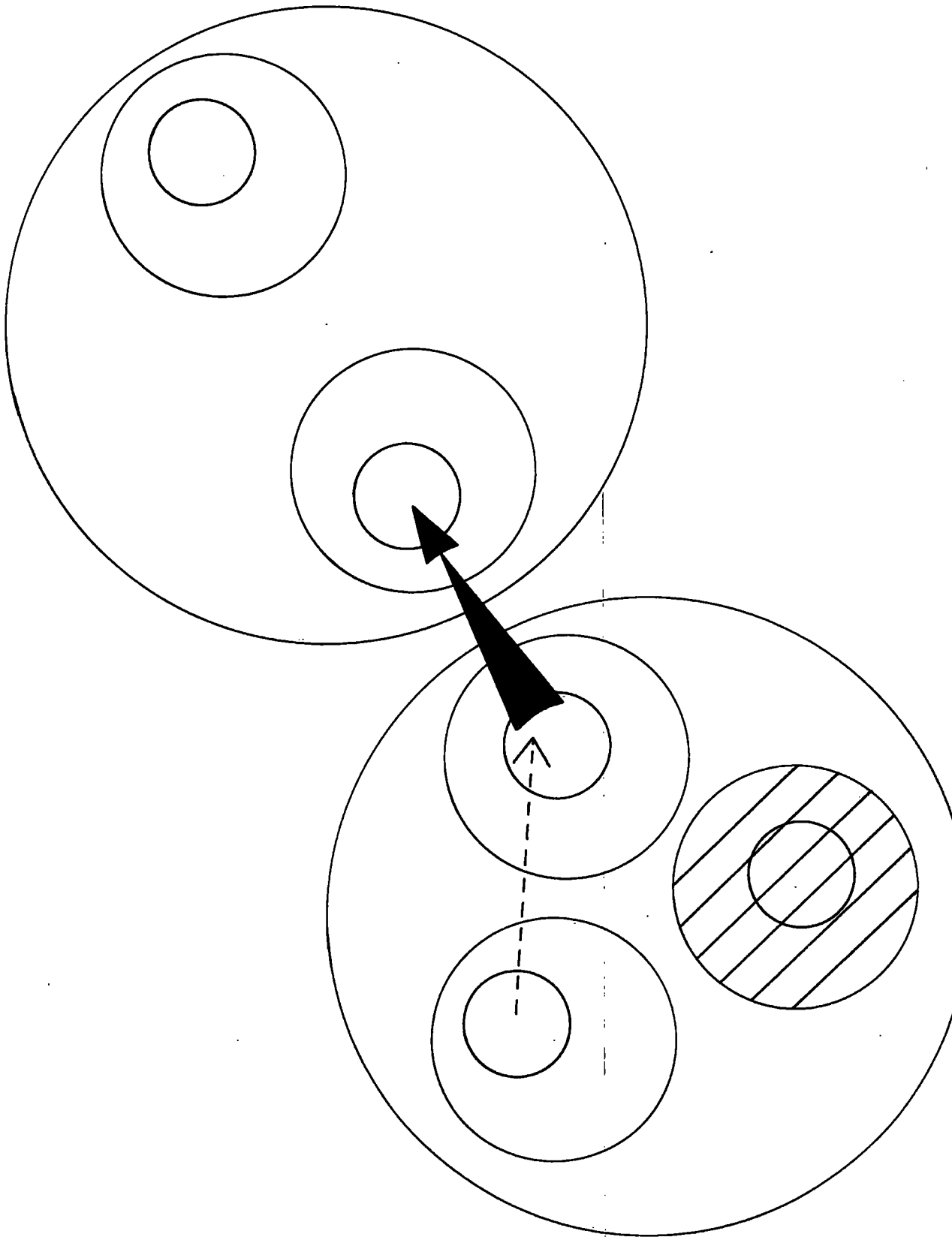


Diagram (33) : KIWAI FIELDS OF WAR

Individual ties : Marriages are made mostly within the confederation although during peace some men obtain wives from enemy villages. Affinal and maternal ties are strong and close, buttressed by exchange obligations but the actions of men with relatives or friends in an enemy village is not clear. Possibly they remain neutral in a raid on their relatives' village or possibly they attend to protect their relatives, or perhaps they place present gains higher than kin ties.

Men visit enemy villages during peace to trade. The mutual dependence of enemy villages on the trade network ensures that war is not total and that peace is sometimes settled. Visiting villages outside the confederation is hazardous because treacherous murders of guests are not unknown. In this context it is interesting to note that members of the same clan (putative agnatic relatives) warn each other of any danger; men also rely upon individual friends within the enemy village for warning. Guests are murdered for two possible reasons: Firstly, when the peace between two bushman villages is floundering, murder is an easy way to take revenge. Secondly, although two villages are at peace, one of them may be at war with a village which is a friend of the other and this third village may bribe its ally to murder a visitor from their enemy. During war, individual relations between members of enemy villages are seriously impaired and if the war continues for a long time they are probably broken off.

Settlement : Enemy villages communicate their desire for peace by means of recognised signals; for example, by blocking a path. Married women related to the enemy village negotiate peace. The enemy villages exchange gifts and young women as compensation for dead men. The people say that the children borne by these women replace the dead men.

Consequences : The objective of a raid is to collect heads and destroy the enemy village. A raid rarely results in the extermination of an enemy village. It is not clear what happens to refugees when their village is routed; they probably flee to relatives within the confederation.

KUMANon-lethal fights.

Disputes within the locality and parish should be settled peacefully. Although impetuous brawls are not unknown, they are usually kept under control. Parishes within the same confederation are as "brothers" and the relationship between these groups is permanent peace. Parishes within a confederation are linked by numerous marriages which inhibit warfare because of the Kuma principle that affinal and maternal relatives must not oppose each other in battle.

Minor war.

Principal groups : The locality is the principal group in minor war but the enemy conceive of the parish (of which the locality is a member) as the principal group in a war. Despite this conception by the enemy, other localities of the parish are not obliged to help the principal locality unless it becomes obvious they are in danger of defeat. In this case the strength of the parish is threatened and the other localities of the parish are obliged to fight.

Allies : Localities of the same parish are obliged to fight as allies only when the principal locality faces imminent defeat. Parishes of the same confederation have no obligation to help each other in war but the numerous individual links between members of the same confederation result in several warriors fighting as allies. Parishes within the confederation remain neutral groups and in this sense are non-participating allies because they are never feared as possible enemies. On the rare occasions that minor war escalates to include a whole parish, alliances are sometimes made, for the duration of a particular war, between parishes. There is no obligation to re-new an alliance in a later war; although two parishes, which have previously fought together against a common enemy, are more likely to enter into an alliance.

Enemies : Minor war enemies are parishes outside the confederation

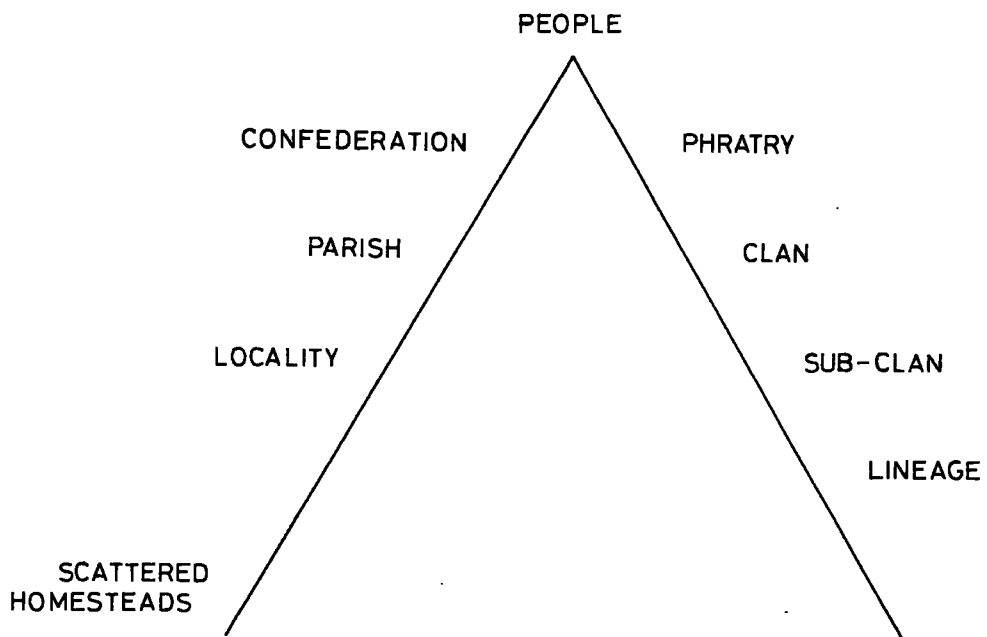
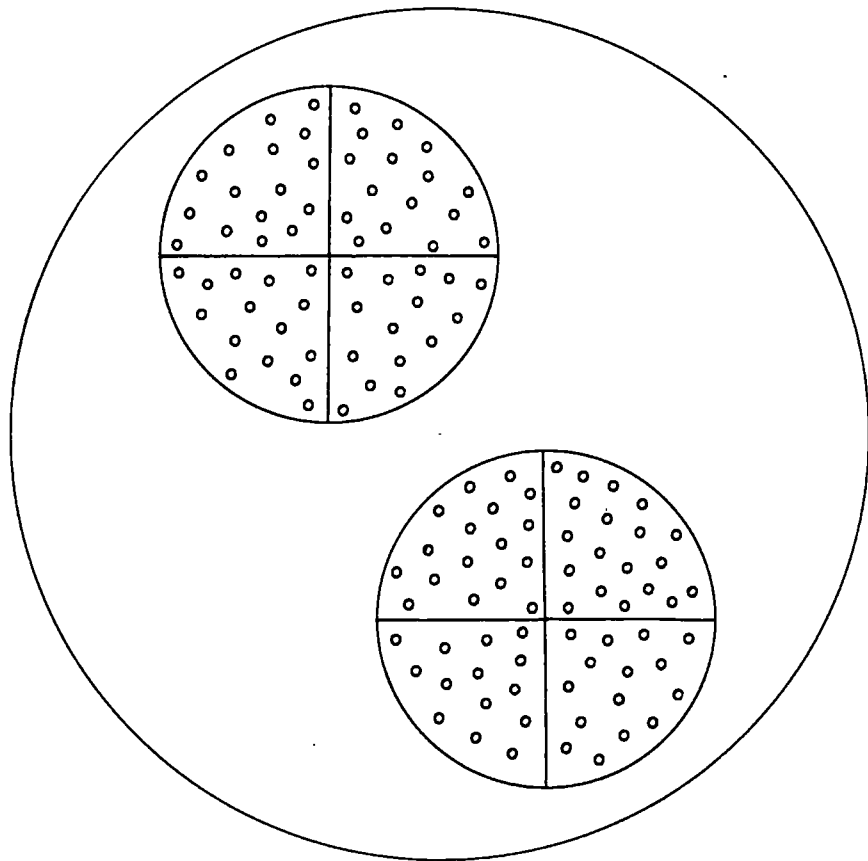


Diagram (34) : KUMA TERRITORIAL AND DESCENT GROUP
STRUCTURE

which are geographically close enough to enter into social relationships in times of peace. Although the enemy is conceived as a parish by groups outside the confederation, unless escalation takes place, the principal enemy is a single locality. Kuma wars escalate to a parish level when a principal locality receives aid from other localities and thereby forces their enemy to follow suit or force defeat at the hands of a larger enemy. Reay (1959) refers to minor war enemies as temporary enemies.

Causes and reasons : A dispute, such as a theft or an elopement, between individual members of different confederations, causes minor war. A dispute escalates into a war when the relations between two parishes are already strained. A locality needs the general approval of the whole parish before initiating a war because if things go badly, the parish will be required to fight. The big men, representing their groups, have the largest say in whether war is declared or not. Individual men fight for reasons of prestige because a successful warrior is the source of admiration and respect.

Individual ties : The Kuma value a strong descent group and a person's agnatic group of origin is important. Non-agnates are welcomed into a foreign parish but it takes a generation before the host clan assimilates the offspring of an immigrant. The first generation of non-agnatic settlers are never fully accepted as members of their resident parish because they have recognised ties elsewhere and belong to another clan. Non-agnates fight for their parish of residence but presumably they remain neutral in fights against their agnatic clan parish. Most non-agnates, however, come from within the confederation and warfare between their clan parish of origin and their parish of residence is impossible. If a parish, which loses a man by immigration, meets the runaway man's parish of residence in war, they try to kill or capture a man to restore the balance.

The individual ties which link men of the enemy groups render minor wars less effective because related warriors are obliged, either not to

fight at all, or to be careful who they actually fight in a battle.

Members of enemy parishes marry during periods of peace and in a battle against his affinal relatives' group a man is careful to avoid direct contact with his relatives. The relationship between affines is normally friendly and a man would not consider actually fighting his relatives. Although a man can fight against his affines' group (so long as he does not fight his affines), he cannot fight in a battle against his maternal relatives' group. "If his clan went to war with the clan of his mother, he had to avoid fighting all together" (Reay 1959: 68).

Settlement : The purpose of making peace is to allow the parishes to resume marriages. The actual peace ceremony is some time after the fighting has stopped. Affinal links with minor war enemies are important for negotiating peace because persons who have ties in both clans act as peace heralds. There is probably a notion of equivalence in peace making and compensation is probably paid for dead men who are not avenged.

Consequences : Minor war usually ends in a stalemate and, after some time has elapsed, a peace settlement. A single locality is never defeated in minor war because the whole parish is obliged to fight when defeat is probable. It is not clear if a minor war can result in the complete defeat and rout of a parish.

Major war.

Principal groups : Localities are the military units in major war but they fight in the name of the parish and can call on other localities of the parish for help.

Allies : Alliances made in major war are similar to those made in minor war. Localities of the same parish are obliged to support each other but parishes within the same confederation are not. Individuals from the latter parishes, however, are recruited as allies on the basis of individual relations with members of the principal group. Alliances between parishes, against a common enemy, are more frequent in major war.

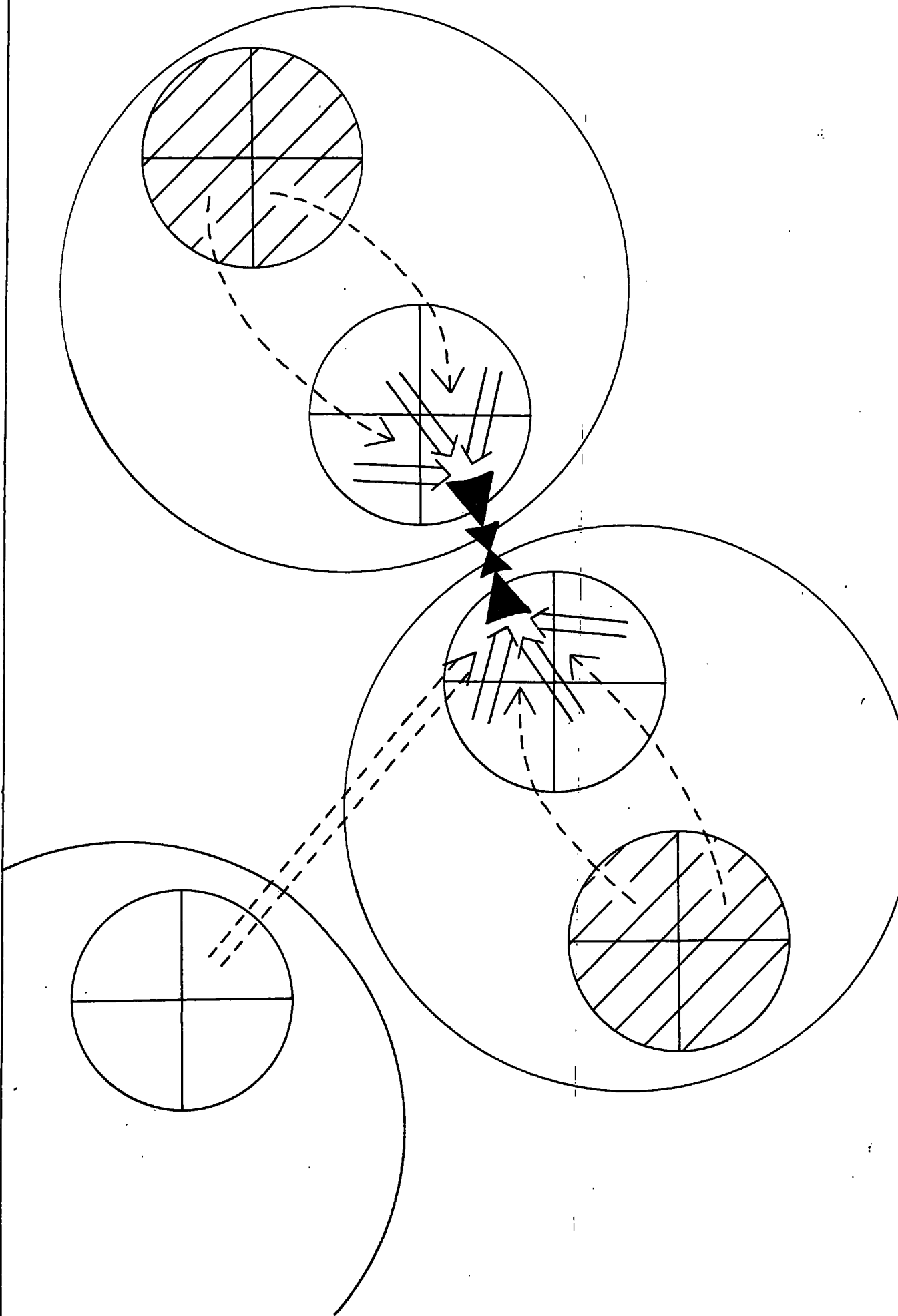


Diagram (35) : KUMA FIELDS OF WAR

Enemies : Major war is a permanent situation between distant parishes and enemies in major war are never anything but enemies. Major war enemies are complete outsiders, who are members or geographically and socially distant parishes. Reay (1959) refers to them as traditional enemies because the relationship between their parishes is sanctified by time and permanent. Every member of a parish is obliged to maintain hostilities and fight against major war enemies.

Causes and reasons : Major war is not caused by any specific event. To fight is right and every man in a parish is obliged to maintain hostilities with traditional enemies because they are traditional enemies. Another reason for major war is revenge; big men remind warriors before a fight, "of their obligation to avenge deaths in previous battles with the same enemy" (Reay 1959: 119). In order to maintain the essential help of their ancestors, men have to maintain their hostility towards traditional enemies and continually seek revenge for war casualties. An individual motive for fighting is prestige.

The Kuma fear the extinction of their local groups and this is an important reason for major wars. The Kuma conceive of strength in terms of agnatic clans which ideally flourish and grow strong. Warfare is necessary to prevent the threatened encroachments of enemy groups on the strength of the clan. The Kuma value war "as a means of intimidating and exterminating enemies who threaten to diminish and destroy the clan. The recognition that warfare has depleted many clans does not prevent them from viewing it as a most powerful means of achieving strength in numbers" (Reay 1959: 159).

Individual ties : There are no individual ties between major enemy parishes. When asked if they could marry into a traditional enemy clan, the Kuma replied, "No, we fight".

Settlement : Peace is never settled between major enemy parishes; their enemy relationship is permanent.

Consequences : Major war is a permanent relationship between distant

groups and a battle rarely results in a clear victory for either side. Sometimes a parish is defeated and routed. A rout demonstrates the decisiveness of a victory and the victors never colonize the vacated land because of sorcery traps left by the defeated parish. Refugees flee to relatives and friends in other parishes. If their parish never re-forms, refugees are absorbed into the clan of their host parish in the following generation.

MAE ENGA

Non-lethal fights.

The Enga distinguish between brawls (fists and sticks) and warfare (bows, spears and axes). Fights within the parish are usually brawls although warfare is not unknown. A fight within the parish is an emotional reaction to a dispute; it is not planned violence. Fights within the parish are usually kept under control and settled peacefully. Warfare within the parish is deplored by the rest of the confederation, although nobody outside the parish can exert any control over the situation. Meggitt (1957) thinks that peace within the parish is maintained by the selfish desires of individuals who require the help of fellow parish members in economic exchanges. Individual prestige is achieved by success within the exchange system, and men are careful not to alienate members of their parish who are essential to them in the exchange network. "The drive towards maximising an individual's prestige through exchange relationships, especially in the moka, seems to be the main factor maintaining inter-group relations, for this goal cannot be achieved alone" (Meggitt 1957: 137).

Minor war.

Principal groups : Groups within the same confederation fight minor wars. Two localities of the same parish, or two localities of different parishes, or parishes can fight each other in minor wars.

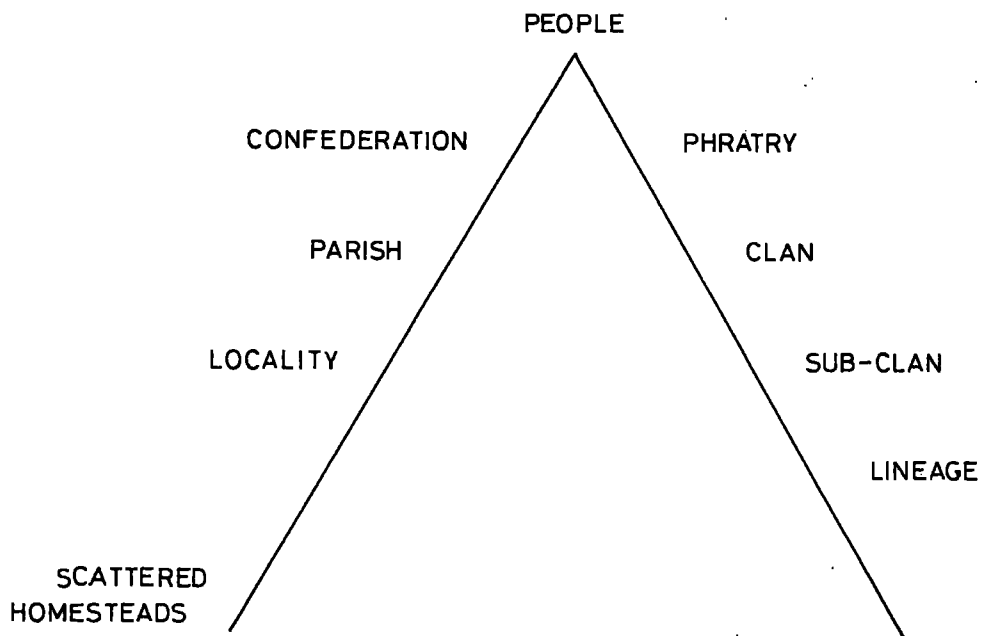
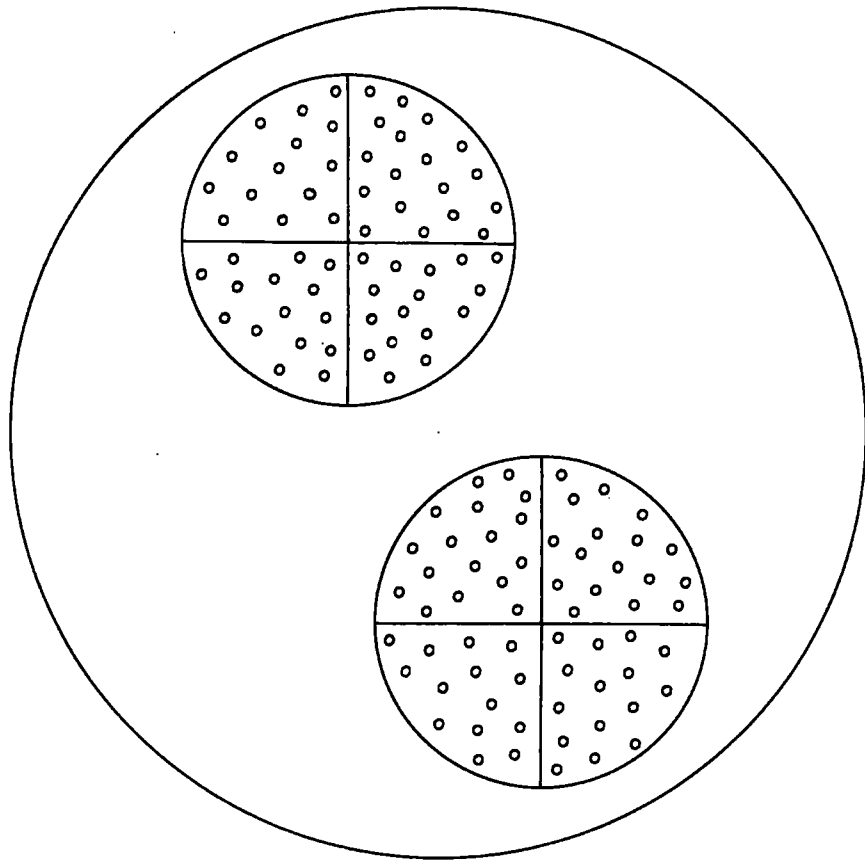


Diagram (36) : MAE ENGA TERRITORIAL AND DESCENT GROUP STRUCTURE

Allies : In minor war no alliances are made outside the confederation. Warfare within the confederation is considered shameful, but at the same time unavoidable in certain circumstances. Relatives of men in the principal group, who are members of groups not directly concerned with the war, are recruited to fight as allies. Although personally obliged to support their relatives in a fight, these men wish to settle any disputes within the confederation peacefully. Big men not personally involved in the dispute which causes a war, are particularly keen for a peaceful settlement, because minor wars weaken the group against major enemies.

Enemies : The original parties to a dispute which causes a war, are the principal enemies. Secondary enemies are allies who are relatives of men in the principal enemy group. Men of the same locality who are related to different sides in a war, sometimes fight as secondary enemies.

Causes and reasons : A dispute between two individuals which escalates into a fight can become the cause of a minor war. Warriors fight for personal prestige, although in minor war they experience some confusion because it is considered wrong to fight seriously within the confederation.

Individual ties : Meggitt (1965) stresses the importance of agnatic descent groups to the Enga. In a war, a man fights for his parish of residence, not his agnatic descent group. Although Meggitt refers to the insecure position of non-agnates within a parish when land is short, their position in times of war is not clear. What, for example, is the reaction of a non-agnate whose parish of residence fights his agnatic clan based parish of origin? A man in this position probably remains neutral.

Parishes within a confederation are linked by numerous marriages, (frequency of marriage is directly correlated with the geographical proximity of two parishes). In a minor war several members of the two principal groups are related. During the fight, relatives are careful to avoid each other and this reduces the effectiveness of the battle. The larger the number of relatives opposed as enemies the less effective the military unit.

Settlement : Minor wars should always end in peace, and wergild is paid for dead warriors.

Consequences : An important feature of minor war is that it never results in one side loosing land to the other. The aim of major war is to gain land, but this is never the consequence of minor war. It is considered morally wrong for one group within the same confederation to take land from another. In a case recorded by Meggitt (1965) a parish agreed to ransom land back to a parish in the same confederation for a payment of pigs. Conquered land is never returned after a major war.

Major war.

Principal groups : Parishes of different confederations fight major wars. However, minor war can escalate into major war if land is alienated from the enemy. This is considered reprehensible but it sometimes occurs. Major war between localities of the same parish indicates the fission of the parish; the two new parishes are "as brothers" when peace is settled. Parishes within the same confederation are "as brothers" and are obliged to support each other in major warfare. In certain circumstances, the support of "as brother" parishes is withdrawn. For example, Meggitt (1965) quotes a case where a small parish recklessly antagonised a large parish within a powerful confederation. When the small parish was attacked only one "as brother" parish fought as an ally. They were defeated and routed. The other parishes of the confederation justified their failure to fulfill their obligation, because, had they fought, their small confederation would have been destroyed. As it was, only two parishes were annihilated.

Allies : Alliances are sometimes negotiated by big men between two parishes of different confederations. The usual plan is for two parishes on either side of a common enemy to attack together and catch the enemy in a pincer attack. The basis of an alliance is to share the spoils of an attack between the two parishes. Usually there is disagreement over the

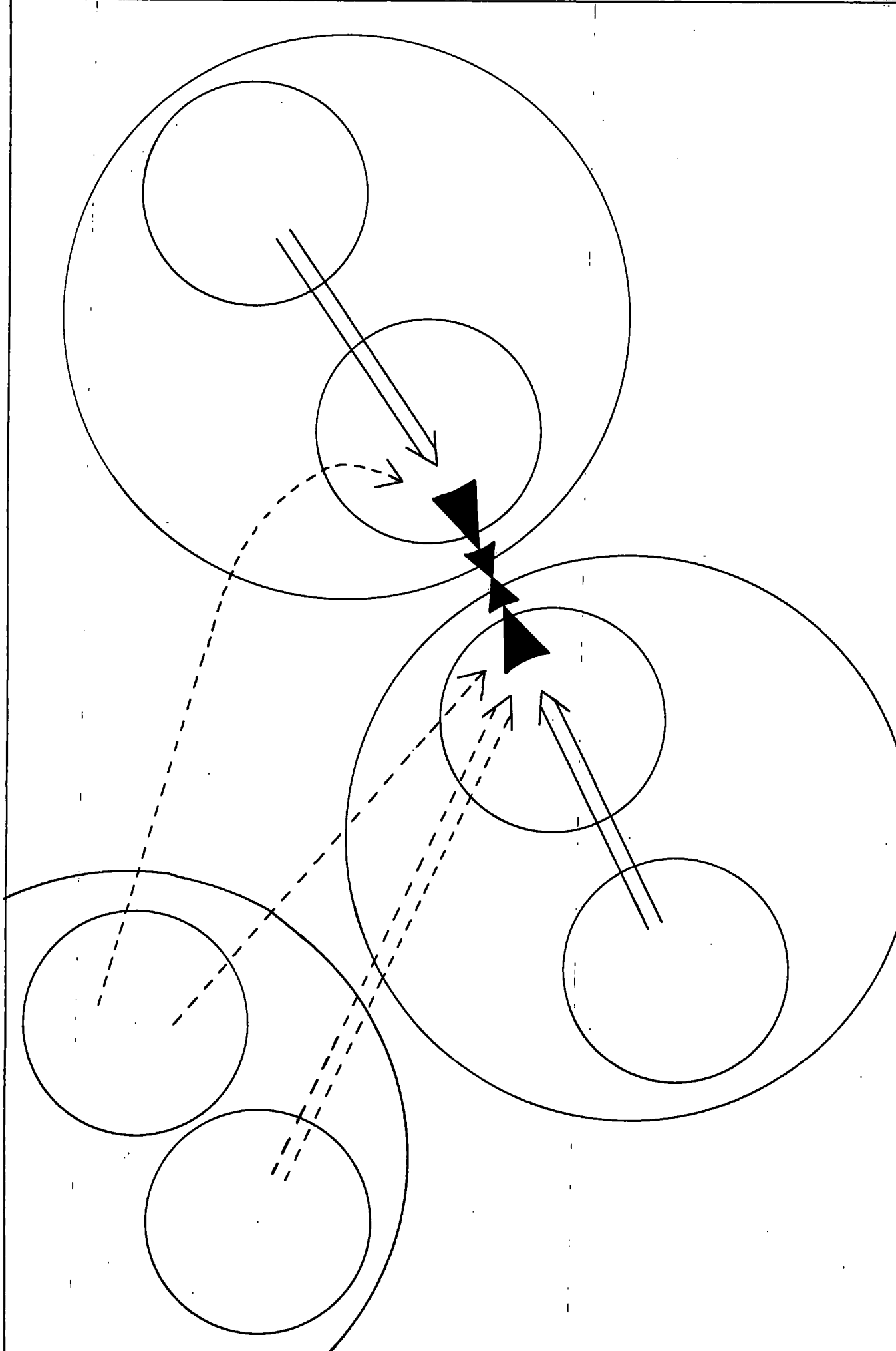


Diagram (37) : MAE ENGA FIELDS OF WAR

division, and another war results.

Allies are usually recruited as individuals. A man is obliged to fight for his mother's, brother's or sister's son's group when it is attacked by another parish other than his own. The result of this obligation is, that members of the same parish, who have relatives in opposite camps fight as enemies. In battle, relatives are careful to avoid each other. Similarly, members of the principal group in a dispute who are related to members of the principal enemy group are careful to remain at opposite ends of the battlefield. It is not clear whether a man is first obliged to support his confederation and then his maternal kin or, so long as he supports his parish (if a principal group) he can choose between maternal kin and confederation (in most cases, these two categories coincide, so there is no problem). Although not obligated to fight for his affines group in war, a man is careful never to come into direct conflict with his affines because of the valuable exchange relationship which must be maintained with them.

Enemies : The principal enemy is the parish which is party to the dispute that causes a war - it is from the principle enemy that a fighting group hopes to conquer land. Parishes within the confederation of the principal group are secondary enemies because they are obliged to support the principal parish. Other secondary enemies are warriors recruited as allies by the principal group from parishes outside their confederation.

Causes and reasons : Disputes between individuals, who are members of different confederations, are the cause of major war. Disputes which cause war include land encroachments, thefts, rape and failure to pay compensation. Although such disputes are the ostensible causes of war the implicit reason is to gain more land. Disputes are used as an excuse to start a war but the aim is to secure land. Individual warriors fight for prestige and respect. Relatives of warriors killed in war are obliged to seek revenge, which is only considered adequate if a greater injury is inflicted than was suffered.

Warriors are buried near the ceremonial ground to remind men of their obligation to take revenge. Revenge is not an all important obligation which perpetuates war, wergild is quite acceptable.

Individual ties : Individuals who are related to members of a parish which it is planned to attack are often not informed of their deliberations. Although persons related to the enemy are expected to remain loyal to their parish, their loyalty is not certain. Sometimes a whole locality remains neutral because of numerous relatives and trade partners on the enemy side. The certain advantages of current exchange relationships are preferred to the doubtful possibility of gaining more land in a war. However, if their parish starts to lose the war a neutral locality joins in. Similarly, if individuals have relatives on the enemy side, they remain neutral when their group is obliged to fight. In a rout, relatives on the victorious side defend their defeated relatives property from destruction in the scorched earth policy which follows a defeat.

Settlement : The Enga say, "We marry those whom we fight" (Meggitt 1958: 278), and relatives desire peace so they can resume their broken relations. If there is no defeat and rout, a war is settled when casualties become heavy. Big men urge for peace when a war is a stalemate and stress the damage done to exchange relations. Peace is negotiated by persons related to both sides and wergild is paid, over a period of months, for unavenged deaths.

Consequences : The desired result of a major war is to drive the enemy from their land, or at least part of it. Refugees are usually forced to flee individually to relatives in other parishes. If their parish fails to re-form after a defeat the descendants of refugees are absorbed into the agnatic descent group of their host parish. In some cases a defeated group tries to acquire new land either by turning on a small, weak parish or by cultivating unclaimed bush or by joining a declining parish. In the latter case weak parishes are sometimes glad to accept refugees as a

valuable addition to their military strength but if both clans maintain separate clan status and expand, friction and war is certain to result.

The Mae Enga fight battles which cannot be classified as minor or major wars, (Meggitt 1957: 135). These battles are large scale encounters between confederations, whereas in major war the parish is the principal group, with parishes from the same confederation as allies. These battles occur once or twice a generation and start when one parish challenges another to a battle because it is irked by their behaviour. No land is seized in these battles and no destruction wrought - the death rate considering the number of men involved (2,500 men in one such battle), is low. When the number of casualties reaches ten or so, the battle is concluded by an agreement between the big men. A large scale exchange of pork and valuables between the enemies marks the peace settlement. Meggitt (1958: 268) thinks that these fights are "jousts, intended mainly as sporting events to enhance phratry military prestige".

MARIND ANIM

Non-lethal fights.

Disputes within the parish are settled peacefully and "very rarely do men of the one and the same village fight each other"(Baal 1966: 692). If a brawl develops within the parish neutral onlookers act as peacemakers.

Minor war.

Villages of different parishes fight minor wars. There are no alliances between villages and there is no escalation of hostilities because fights with other Marind villages are wrong and dangerous, (war with a neighbouring village is doer, a wrong). Disputes between individuals from different parishes cause minor wars. Disputes are usually over sorcery but adultery and garden ownership are also common causes of dispute. If men are killed in minor war their relatives are obliged to seek revenge, (Wirz (1925) refers to the development of a blood feud). Disputes

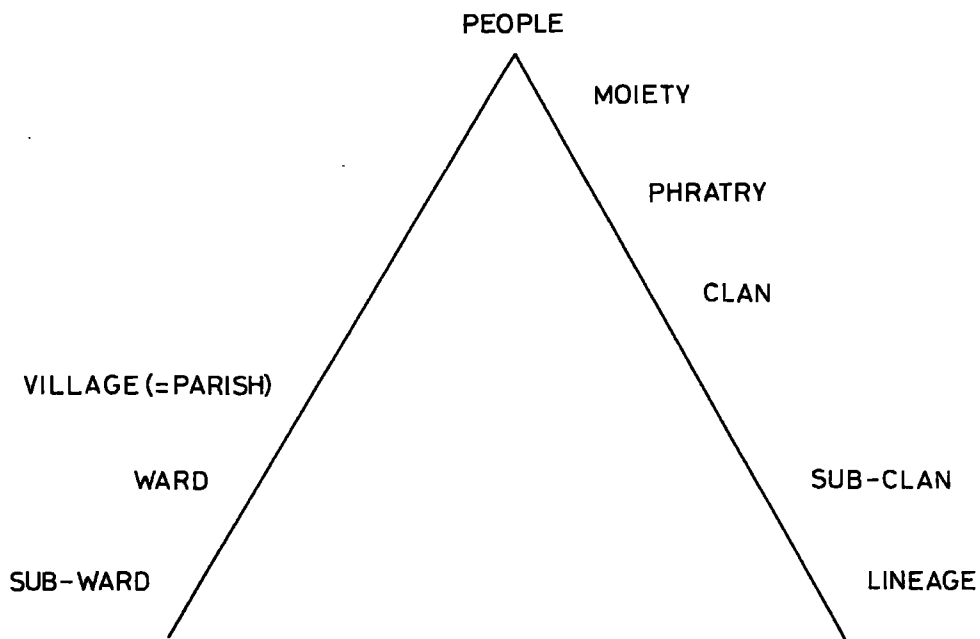
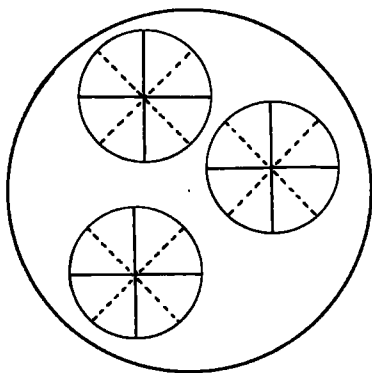


Diagram (38) : MARIND-ANIM TERRITORIAL AND DESCENT GROUP STRUCTURE

between villages are usually settled by recourse to sorcery because fighting is dangerous and demands retaliation. Minor war sometimes results in a bloody confrontation (in one example seven people were killed and mutilated), but this is rare. Men never take heads in minor war. Minor wars are not of long duration and are settled by simple peace ceremonies and the exchange of gifts. Marind villages are poe-ikom, (friends) where men have trade partners, where important ceremonies occur and where they secure wives. Marind villages however, live in suspicion of each other and channel their hostility into sorcery. Only occasionally are the tensions too great, with the result that a dispute leads to a fight. Revenge is conceived as justice rather than war and the Marind realise that fights with neighbouring villages result in reprisals whereas raids on far away villages are safe because the danger of a revenge raid in return is small.

Major war.

Principal groups : Major war is called anim bake, (the headhunt).

The village is the military unit in war. There is always one village which initiates a raid and this principal village is responsible for arranging a large feast to which allied villages are invited in honour of the raid.

Allies : Villages join the principal village for a raid and are considered yaman (brave). Allies do not form a large military unit with the principal village but travel alone and act separately in the raid. There is some co-operation between ally villages however; they follow the same war trail (Kui Kui - cleared passages in the forest) and muster at pre-arranged points en route. After the raid villages retreat separately but when they return ally villages unite with the principal village for a feast. Villages which are geographical neighbours, although not necessarily members of the same parish, are most likely to fight as allies. Sometimes however, neighbouring villages decline to fight while other villages travel large distances to join a raid.

Enemies : Enemies are called ikom-anim, they are people the Marind consider less than human who exist to be the victims of headhunts. The principal hunting grounds (kui-miráv) are the regions of the Digul and Fly rivers (see Wirz 1925; Baal 1966; 697-708 for details of geographical regions raided by Marind-anim). Marind villages never attack Marind villages in major war. It is necessary to distinguish between the hunting grounds of different Marind villages because a region which is on friendly, trading terms with certain Marind villages, is not safe from headhunting raids by other Marind villages. The kui-miráv of different Marind villages vary, for example, coastal Marind villages around the Maro river which trade with the interior Yei-anim people, request Marind villages further along the coast to raid the Yei for heads if they are concerned in a dispute. The categories of enemy and friend also fluctuate for specific Marind villages. At certain times peace is useful for trade (axes, iron goods etc.) and it is valuable to have a buffer zone of friendly villages between the Marind and their ikom-anim. At other times the advantages of peace diminish and peaceful villages are raided for heads.

Causes and reasons : The primary reason given by the Marind for head hunts is "Wir müssen für unsere Kinder Namen haben". Es war Sitte, daß jedem Kind, und zwar möglichst bald nach der Geburt, der Name eines Geköpften gleichgültig welcher Herkunft, als Hauptname (Igiz-ha) oder Kopfname (Pa-igiz) beigelegt wurde" (Wirz 1925: 49). Before a raid, the Marind say, "igis mendap baren" : there are no names left. There is some confusion in the literature over the exact significance of head names, some writers (e.g. Baal 1966) assert they are not essential while others (e.g. Wirz 1925: Van der Kroef 1952) think that persons without headnames are social inferiors. It is clear however, that headhunting is of considerable religious importance to the Marind; heads ensure fertility and births are evidence of the efficacy of heads to promote fertility. Headhunting is also closely bound up with various rituals and the life

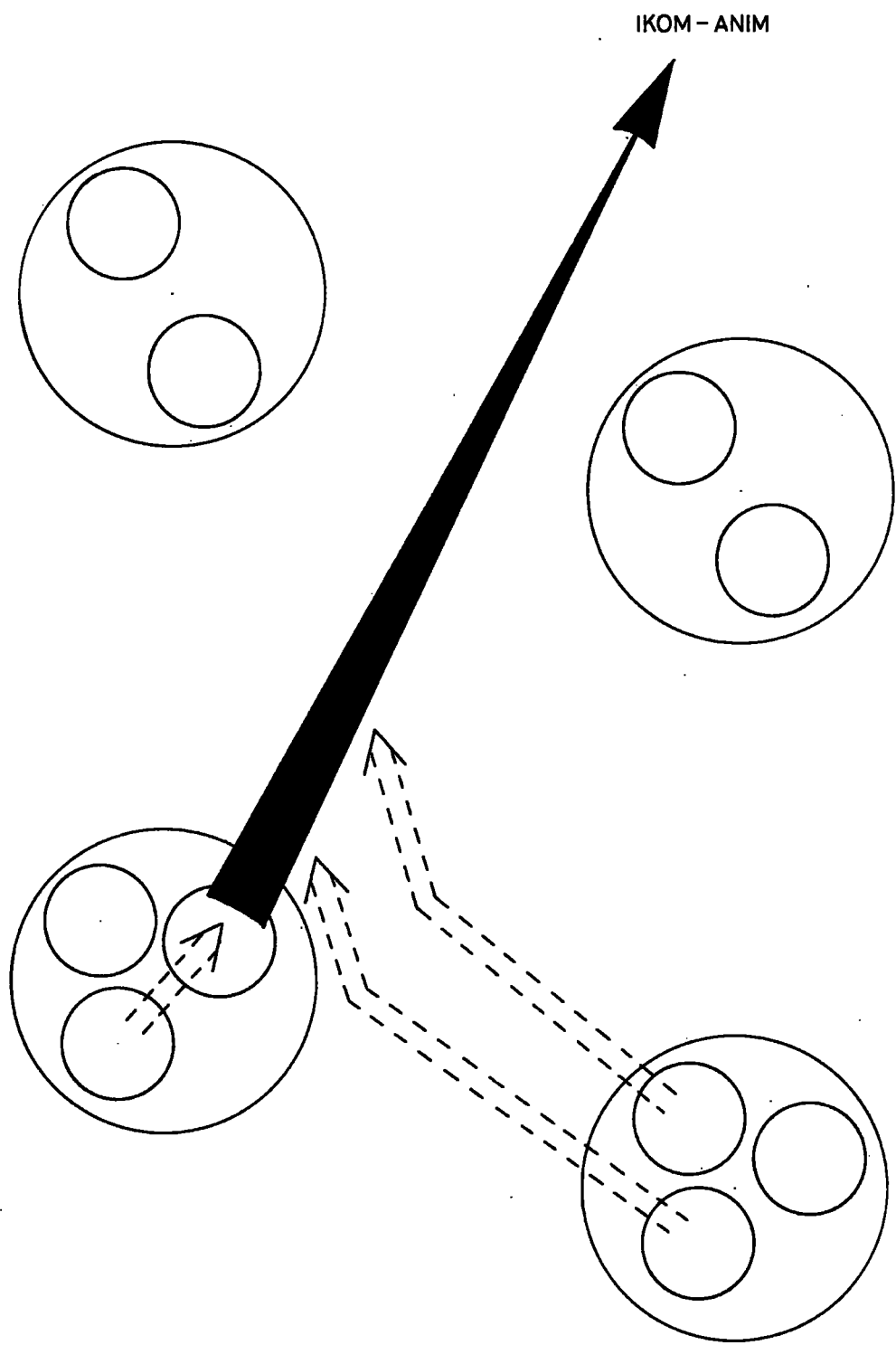


Diagram (39) : MARIND-ANIM FIELDS OF WAR

cosmology of the Marind (see Baal 1966: 752-64) "Their whole life, their history, their legends are saturated with headhunting" (Vertenten 1923: 71). Individual warriors, particularly young men, attend raids for reasons of prestige and respect because a man who has taken a head is admired; he is basik (literally, a pig) which means courageous. Revenge (johan heis ipe) is another reason for headhunting raids; relatives are obliged to revenge dead persons. Ikom-anim are probably classified together for revenge raids and heads from any enemy village satisfy revenge obligations.

Individual ties : Individual ties between parishes within the Marind region are of some importance in social life. Clan members offer hospitality to each other and trade partnerships in other parishes help to maintain peaceful relations and large ceremonies integrate regions because people from far away attend. Between Marind villages and ikom anim there are no individual ties or obligations, these villages are always enemies. The recruitment of Marind raiding parties is not by agnatic descent, individual links or the geographical proximity of certain villages but on the basis of age grades (see pp.386). The Marind have an age grade system of seven stages and each stage bestows a well-defined status which is indicated by a specific ornamentation of the hair (see Baal 1966: 143-4). Young men are éwati, a grade which is secluded from normal village life and which comprises the majority of warriors in a raiding party. Other members of a raiding party are some youngsters (wokraved grade) and a few older, respected warriors (samb anim) whose experience gives them an influential role in the raid.

Settlement : Peace with ikom-anim is undesirable although the benefits of trade sometimes produces a truce of short duration. Occasionally éwati attack a friendly village which is valuable for trade and which serves as a buffer zone against retaliatory raids from ikom-anim. In some cases the older men, who appreciate the value of such links, negotiate peace. Éwati make raids on friendly villages when they are too weak or inexperienced to

push into ikom-anim territory.

Consequences : The object of a raid is to collect heads and to destroy an enemy village. Although the Marind rarely exterminate an enemy village, the actions of refugees are not clear.

MARING

Non-lethal fights.

Fights within the parish are considered wrong but sometimes a fight is caused by a dispute between two individuals. Fights within the parish are called ura amen (inside fight) or gui bamp (brother fights) and they are controlled by four factors. Firstly, a high percentage of marriages are made within the parish and localities are closely tied by numerous affinal and cognatic links. A fight within the parish upsets individual relations and a large number of persons are unwilling to fight but wish a settlement. Secondly, the land of localities is fragmented within the parish; no locality forms a continuous territorial group. The result of a fight is to prevent gardening, because neighbours are enemies. Thirdly, fights within the parish weaken it against other parishes. Finally, there are important rituals which are performed by the whole parish for their collective benefit; during fights these cannot be performed.

Minor war.

Principal groups : Parishes fight minor wars (ura auere = nothing fight or bamp acimp = small fight). Minor wars are distinguished by a specific type of battle where each side lines up behind a wall of shields at either end of the battlefield. Arrows are fired and spears are thrown, but the fight is characterized by a great deal of insulting and shouting. Rappaport (1968: 12) thinks, "The small fight may perhaps be viewed as a debate, held in a setting that minimalized the danger of casualties while

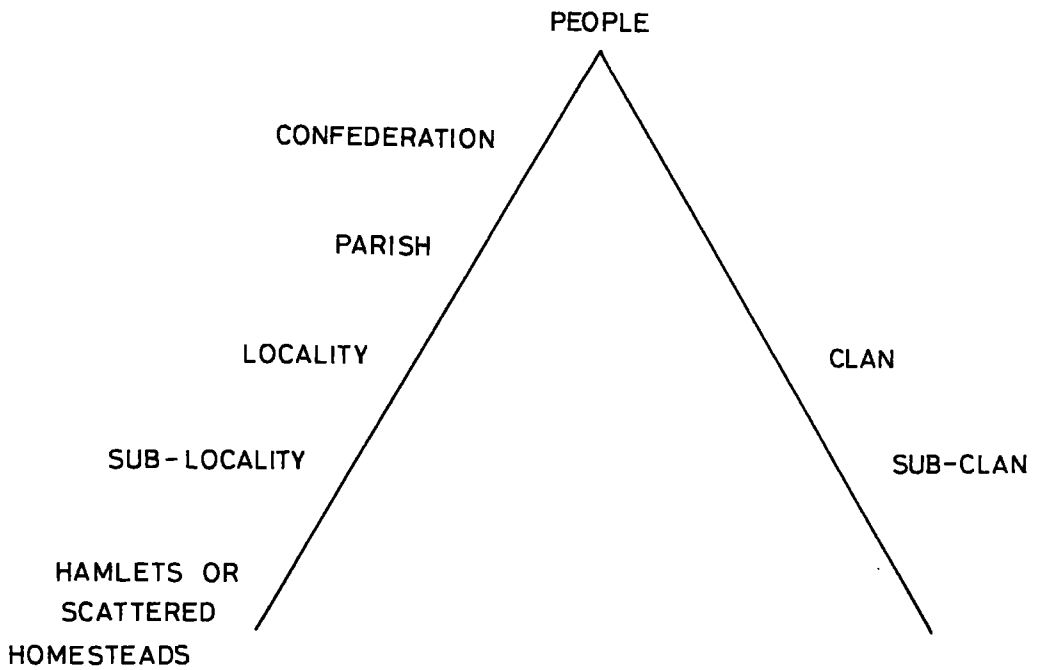
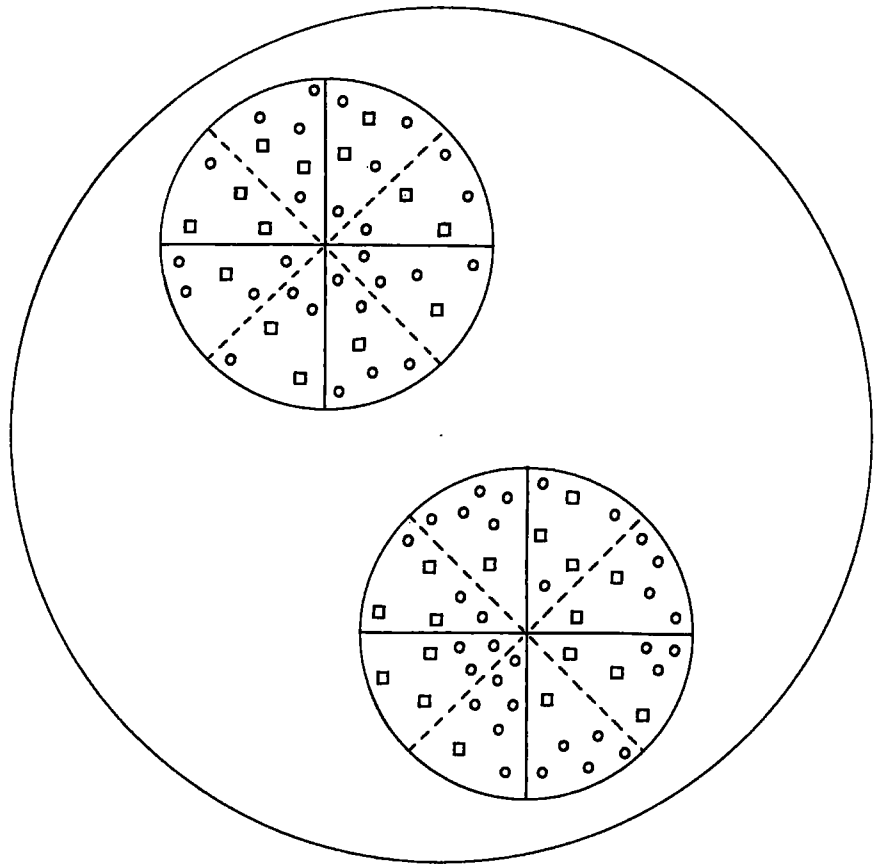


Diagram (40) : MARING TERRITORIAL AND DESCENT GROUP
STRUCTURE

satisfying martial imperatives".

Allies : Individual allies are recruited to minor wars from other parishes. Affines, and sometimes trade partners, are recruited as allies. The result is that men from the same parish, who are related to opposite sides in a war, stand opposed as enemies.

Enemies : The principal enemy is the parish of the individual whose dispute causes the war. Secondary enemies are the allies of the principal enemy.

Causes and reasons : The cause of a minor war is a dispute, such as a theft, a sorcery accusation, the killing of another man's pig or the abduction of a woman without her agnate's permission. Not all disputes cause war. The tension between two parishes increases until a point is reached where a further dispute precipitates war. Rappaport (1968) refers to this build up of hostility as the "irritation coefficient".

Individual ties : The Maring, similar to other people in New Guinea, fight for their parish of residence and not for their agnatic clan parish. The behaviour of agnates who meet as enemies in battle, is not clear; they probably avoid their relatives and fight other members of the enemy parish.

Allies are recruited from the relatives of individual warriors in the principal parish. The significant point is that members of the same parish fight as enemies on opposite sides and these men are keen for a peaceful settlement. Also neutral persons sometimes intervene and urge for peace. In one example, neutrals stoned both sides and rebuked them because brothers should not fight.

Settlement : It is rare that a man is killed in minor war, although several are usually wounded. If a man is killed by the wronged parish, they usually consider this a sufficient redress and settle peace. A death, however, makes peace difficult because of the obligation to revenge men killed in war. The situation becomes complex when an ally is killed because his parish is obliged to seek revenge.

Consequences : A minor war starts as a means of redress. Peace is settled when the wronged side think that justice is done. A settlement of the dispute is facilitated by the shouting and arguing of a battle. If a settlement is not agreed upon in the course of a battle and the pressures from allies and neutrals for a settlement are rebuffed, minor war escalates into major war.

Major war.

Principal groups : The principal group in major war (ura kuñuai = fight itself) is the parish which was a party to the dispute which caused the minor war that has escalated to ura kuñuai. Major wars are characterized by more lethal fighting than in minor wars. Warrior, armed with clubs and stabbing spears, fight hand to hand and are supported from the rear by bowmen.

Allies : Parishes within the same confederation are aman yindok (inside or between people). After the parish, the largest number of marriages are made into aman yindok groups. Parishes within the same confederation are neighbours and major war is unlikely to occur between them. Disputes between aman yindok should be settled peacefully or at the worst, during a minor war. Allies are recruited from the affines or friends of warriors in the principal parish; numerous relatives in aman yindok parishes results in an almost group response when allies are recruited. Allies are recruited from parishes outside the confederation where individuals have relatives or friends. Often members of the same parish are enemies in the deadlier battles of major war; they avoid each other during the battle. Allies are careful which side they support because another ally of the same parish might be an old enemy, with a revenge obligation to settle, and who will take the opportunity to even the score from behind while fighting as an "ally".

Allies are of crucial importance in major war because so long as both sides are equally matched, battles are static encounters but when one side

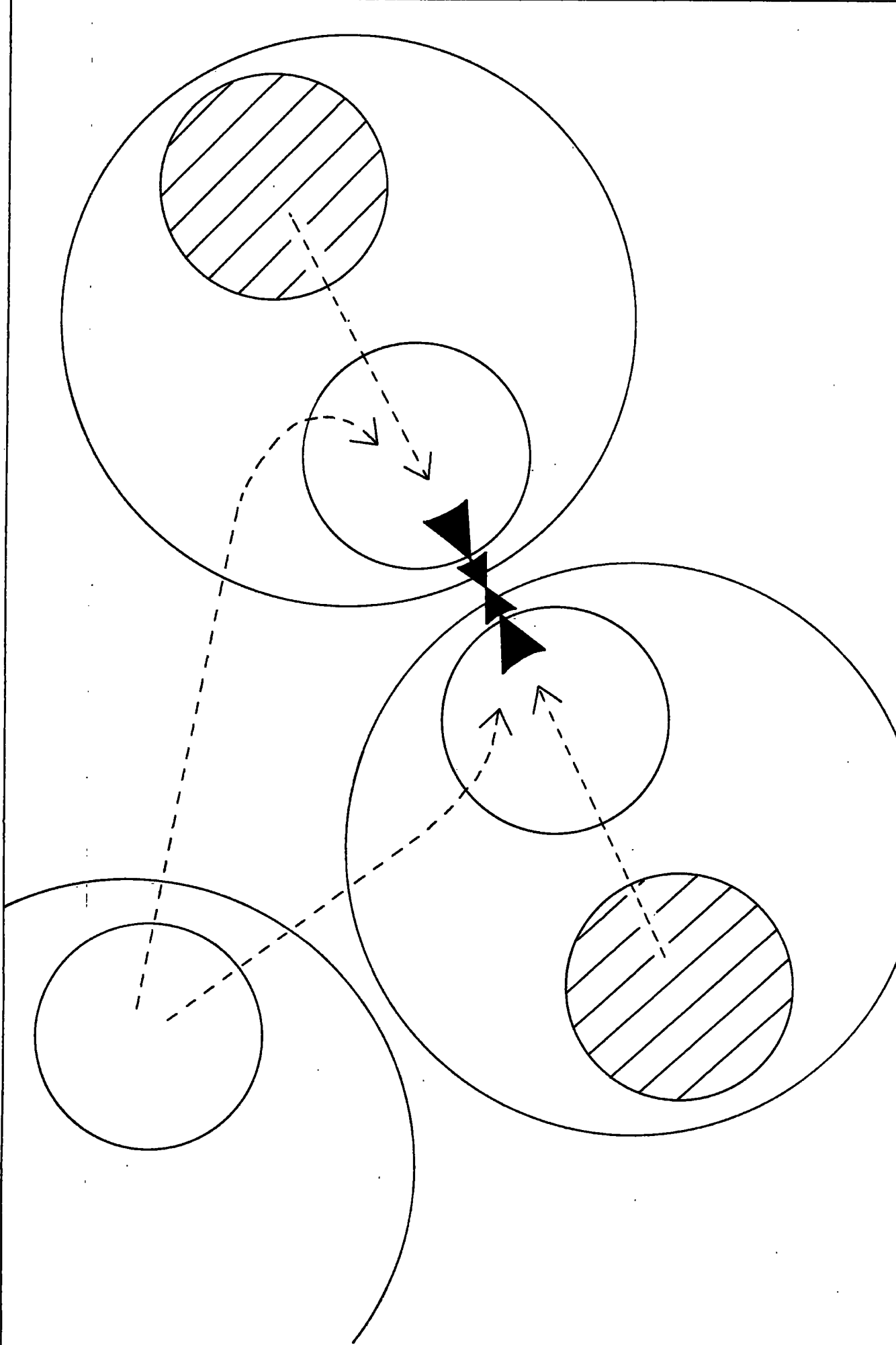


Diagram (41) : MARING FIELDS OF WAR

is weaker, the other seizes its opportunity and charges. The result is a rout. It is therefore important for a principal parish to maintain the support of their allies when their interest dwindles because the side which can do this successfully wins. It is in the interests of a parish for its members to maintain close, co-operative relations with affines and friends who can be recruited as allies.

Enemies : In major war the principal enemies are čenan yu (axe men). This relationship is entered into when the fight stones are ritually hung up, marking the end of minor war and the beginning of major war. Principal enemies can no longer visit each other's territory except to fight, and this taboo endures until peace is formally settled. A principal enemy can visit a secondary enemy, and secondary enemies can visit each other but they have to observe certain taboos on their social intercourse, for example, they may not eat together. Enemies are usually neighbouring groups on the same side of a valley. It is rare for parishes divided by mountains or rivers to be enemies. The reasons for this are that contacts and disputes are unlikely between distant groups and the fact that valuable trade routes run across the line of the country.

Causes and reasons : Major war is an escalation of minor war. Minor war escalates to major war when the relations between the principal parishes are strained and the frequency of disputes is high. When relations deteriorate to a tense situation, ura kuñuai breaks out and one of the hostile groups is driven away. The state of previous relations between two parishes is important; if one group is obliged to seek revenge from a previous war ura kuñuai is more likely to develop from a dispute. Once started, major war is maintained by the obligation of localities to seek revenge for their warriors who are killed. Revenge is aimed at the parish of the killer but responsibility for seeking revenge rests on the locality. The revenge obligation becomes confused when an ally group lose a man because they turn to their principal parish for reparation. If reparation

is not forthcoming, allies become enemies and seek revenge for their dead warrior in battle. The support of allies is critical in a battle and changes of allegiance are prevented at all costs. An individual reason for fighting is prestige since a successful warrior is admired and respected.

Individual ties : The effectiveness of fighting groups in major war is reduced because warriors related to members of the enemy avoid each other during the battle. Major war places a severe strain on individual relationships because members of the principal parishes cannot meet until peace is settled. It is not clear to what extent, relatives on opposite sides warn or help each other during a war.

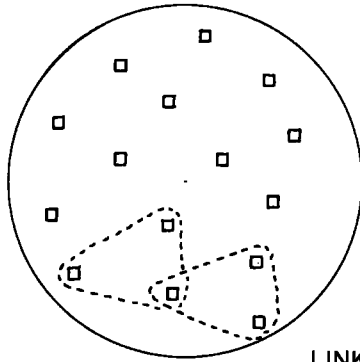
Settlement : A major war is punctuated by armistices. Each time one side loses a man there is an armistice to allow a proper burial and sufficient mourning. Armistices are also called to allow gardening work to proceed or to allow warriors a rest from battle and a chance to repair their weapons. During an armistice, allies return home but as the war drags on, it becomes increasingly difficult to persuade them to return. If a parish thinks it is hopelessly outnumbered in the next battle because several allies have failed to return, it may flee from a lost cause and take refuge elsewhere. Major war is in part a war of nerves because each side encounters growing difficulties in persuading their allies to return.

An armistice can develop into a truce, especially when a war has continued for some time. A truce is not announced but is a slow development. The intentions of each side are relayed back and forth by neutrals. If the revenge score between both sides is not roughly equal, a truce is unlikely. It is an imbalance in the number of deaths suffered by each side which sows the seeds for a future war because revenge debts are never forgotten and unpaid revenge obligations therefore contribute to the tension between parishes which leads to a future war. A rough balance is achieved because an enemy warrior killed by several men is sometimes considered adequate revenge for more than one death.

When it is clear that an armistice has developed into a truce, an elaborate ritual sequence starts. This lasts for an average of ten years. Each side holds a separate truce ceremony where pigs are slaughtered to thank the ancestors for their support and to pay reparation to allies. An important aspect of the ceremony is planting the rumbim. While the plant is in the ground a parish should not fight as a principal party in a war, although individuals can fight as allies. During this time the principal enemies avoid each other and prepare for the kaiko ceremony. At the kaiko ceremony pigs are slaughtered to thank the ancestors for their support and to pay reparation for dead ally warriors. The kaiko lasts a year and at the end the rumbim plant is uprooted and the fight stones are lowered because the parish has now repaid allies and ancestors for their help. A parish is careful not to become a principal party in a war, while the rumbim is in the ground because ancestral help and support from allies is slow in developing before compensation is paid for previous wars. Exactly what happens to a parish which is provoked into fighting as a principal party is not clear. Apparently warriors who fought as allies in a previous war and who stand to receive pigs in the kaiko are unwilling to start a war with the parish because they will lose their reparation.

Peace, as opposed to a truce, is settled at a second kaiko if there has been no war between the enemy parishes in the intervening years. Both parishes attend one another's kaiko and exchange pigs' livers. An important feature of the peace settlement is the exchange of women for every dead man. In this way new affinal links are forged between the old enemy parishes.

Consequences : A major war either results in a truce, and possibly peace, or in a rout. There is some confusion over which is the most frequent result; Rappaport (1968: 142) thinks that most major wars finish in a truce but Vayda (1971: 12) disagrees and thinks routs are more common. When routed, a parish flees and individuals seek refuge with relatives and



LINKED HAMLETS

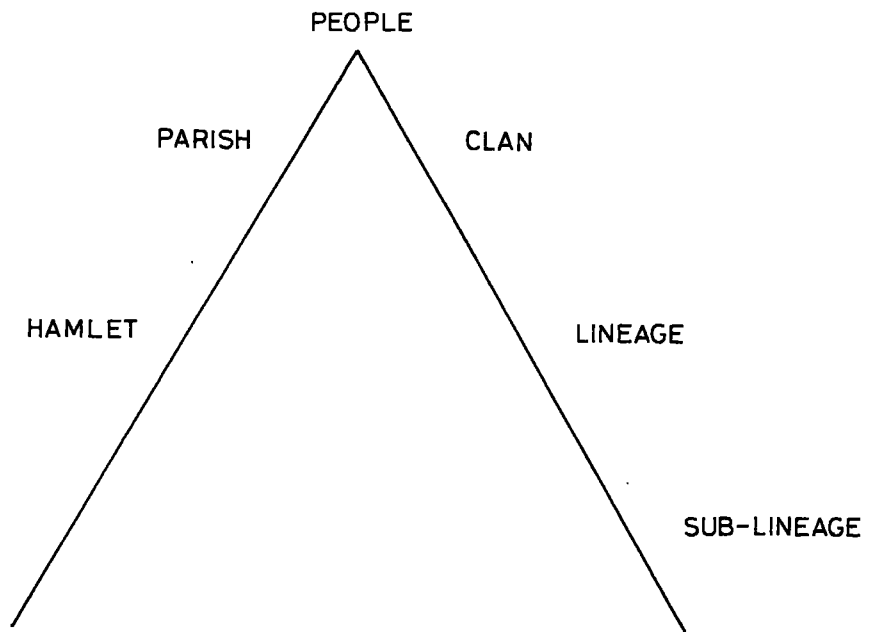


Diagram (42) : MARKHAM VALLEY TERRITORIAL AND DESCENT
GROUP STRUCTURE

friends. Refugees are either absorbed into their host parish or return to their own parish which occupies part of their former territory far away from the enemy border. Planting the rumbim is significant because it symbolizes the successful defence of parish land. If the rumbim is planted in a host parish this signifies a change of parish membership for the defeated group. Boundaries are not redrawn until the kaiko ceremony because until the fight stones are lowered, enemies avoid each other. When the kaiko is celebrated, the defeated parish is usually strong enough to defend its boundary again and land encroachment by the victors is unlikely.

MARKHAM VALLEY PAPUANS

Non-lethal fights.

Hamlets of the same parish never fight wars. Violence is not permitted within the hamlet. Big men sometimes hold informal council and pass a verdict on a wrongdoer - he is then pulled into line by public opinion. Disputes between individuals of different hamlets sometimes lead to fights but big men exert a restraining influence and stop the fight when blood is drawn. People realise the weakening influence of internal fights on the strength of the parish against outsiders. Disputes usually result in a slanging match. The large number of individual ties between hamlets of the same parish ensure that a fight cannot escalate into a serious confrontation; too many people press for a settlement.

Major war.

Principal groups : A raid is initiated by one hamlet of a parish against a hamlet in a neighbouring parish.

Allies : The hamlet which initiates a raid is usually assisted by its linked (brother) hamlets which are obliged to fight as allies in attack and defence. It is not clear whether other hamlets fight as allies or

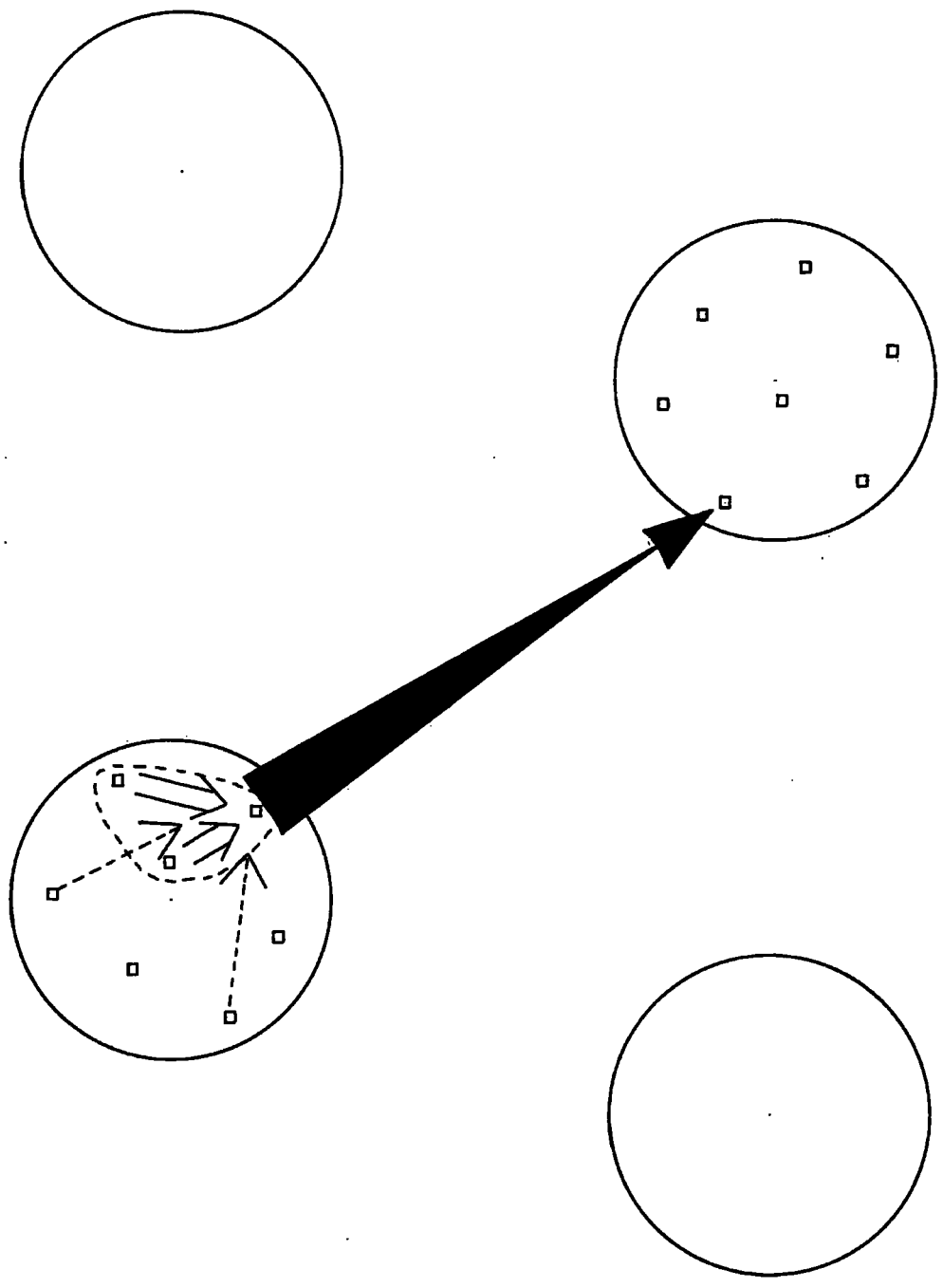


Diagram (43) : MARKHAM VALLEY FIELDS OF WAR

whether warriors are recruited on the basis of individual links to members of the principal hamlet. Possibly there are no allies except brother hamlets.

Enemies : All parishes are traditionally enemies. The nearer two hamlets are geographically the more likely they are to raid each other; although raiding parties sometimes cover long distances. Individual hamlets within a parish can have friendly ties with hamlets in other parishes. These friendly hamlets are unlikely to raid each other but they are raided by other hamlets from their respective parishes.

Causes and reasons : War is a permanent relationship between parishes. Raids are organized to take revenge on enemy groups for persons killed in previous raids. Sorcery deaths are also revenged by a raid on the suspected enemy hamlet. Individual warriors fight for reasons of prestige. A young man, for example, can not co-habit with his wife until he has killed an enemy. All big men have been successful warriors in their youth; ambitious young men who aspire to leadership build in the foundation of their war record. The Markham Valley Papuans are cannibals. "In former times human flesh was prized, and there can be little doubt that raids were carried out for the sole purpose of obtaining it" (Read 1946/7: 94).

Individual ties : Hamlets in different parishes are linked by individual affinal and maternal ties. These relations concern the hamlet, not the parish. Relatives in different parishes can visit one another's hamlet with a fair degree of safety. Exchange between hamlets in different parishes are conducted through affinal relatives. Sometimes marriage alliances are the result of political expediency and when the political advantages disappear, the friendly link is broken (the marriages are usually dissolved) and the hamlets are enemies. These alliances of neutrality are not always successful and one hamlet sometime raids the other. In this situation it is usual for a man to fight for his hamlet

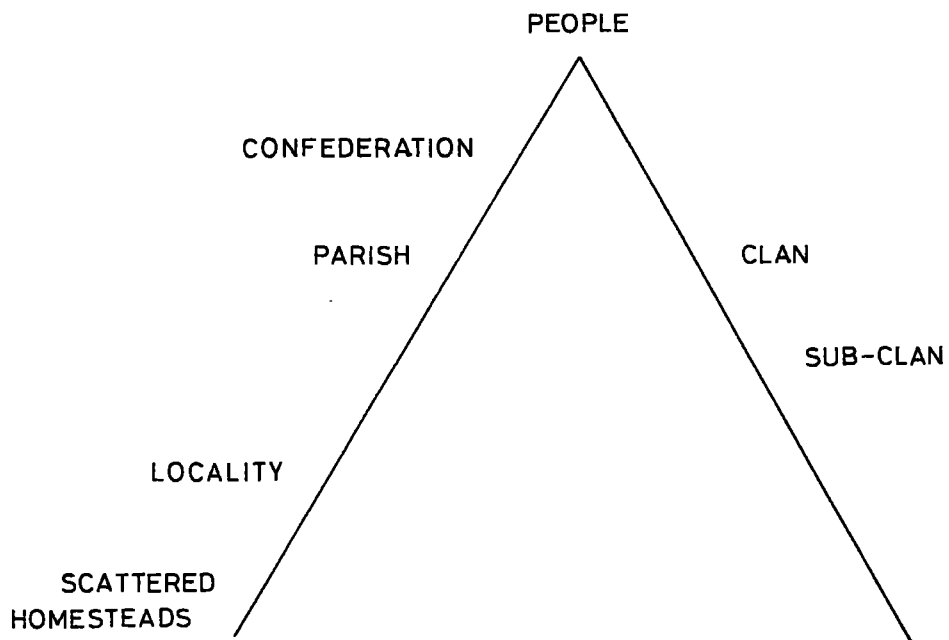
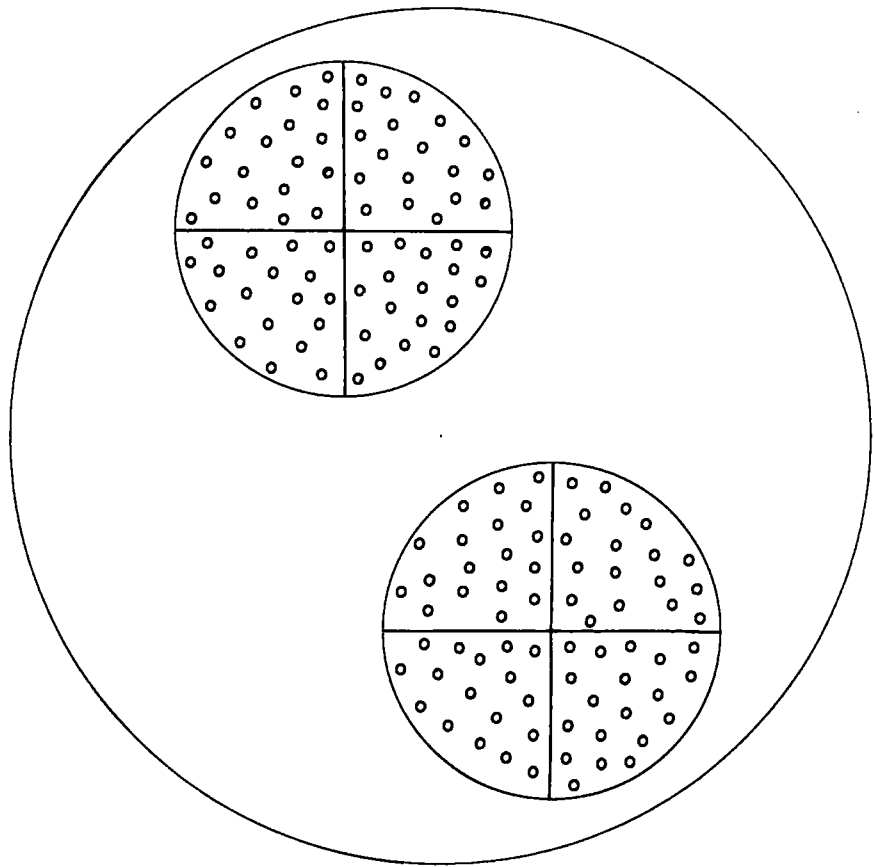


Diagram (44) : MENDI TERRITORIAL AND DESCENT GROUP STRUCTURE

against maternal and affinal relatives.

Settlement : Peace is never settled between parishes. Hamlets in different parishes sometimes settle a long lasting peace but peace relations are not certain and attack is always possible.

Consequences : Sometimes a hamlet is routed and destroyed. Refugees flee to relatives or friends within the parish. Sometimes a routed hamlet re-forms.

MEENDI

Non-lethal fights.

Disputes sometimes cause fights within the confederation. The nearer the disputants socially and geographically the easier it is to reach a settlement. Fights within the confederation are not allowed to develop into war; the mesh of marriage ties and friendships within the confederation prevent escalation.

Major war.

Principal groups : Parishes which are in a permanent enemy relationship fight major wars.

Allies : Parishes within the confederation are obliged to support each other in war. The parish which initiates a raid is the principal combatant in a war, and all other groups are allies. The large number of relatives and friends within a confederation ensure help in war because relatives urge their group to fight as allies. Certain parishes within a confederation are in an amiald (brotherhood) relationship and they are particularly reliable allies. The surest allies are mbalien (brother-sister) parishes which are in the process of fusion into a single parish. Relatives and friends are also recruited as allies from friendly parishes outside the confederation.

Enemies : The principal enemy is the parish which initiates a fight. (Ryan (1961) calls them "fight bases"). Secondary enemies are the allies



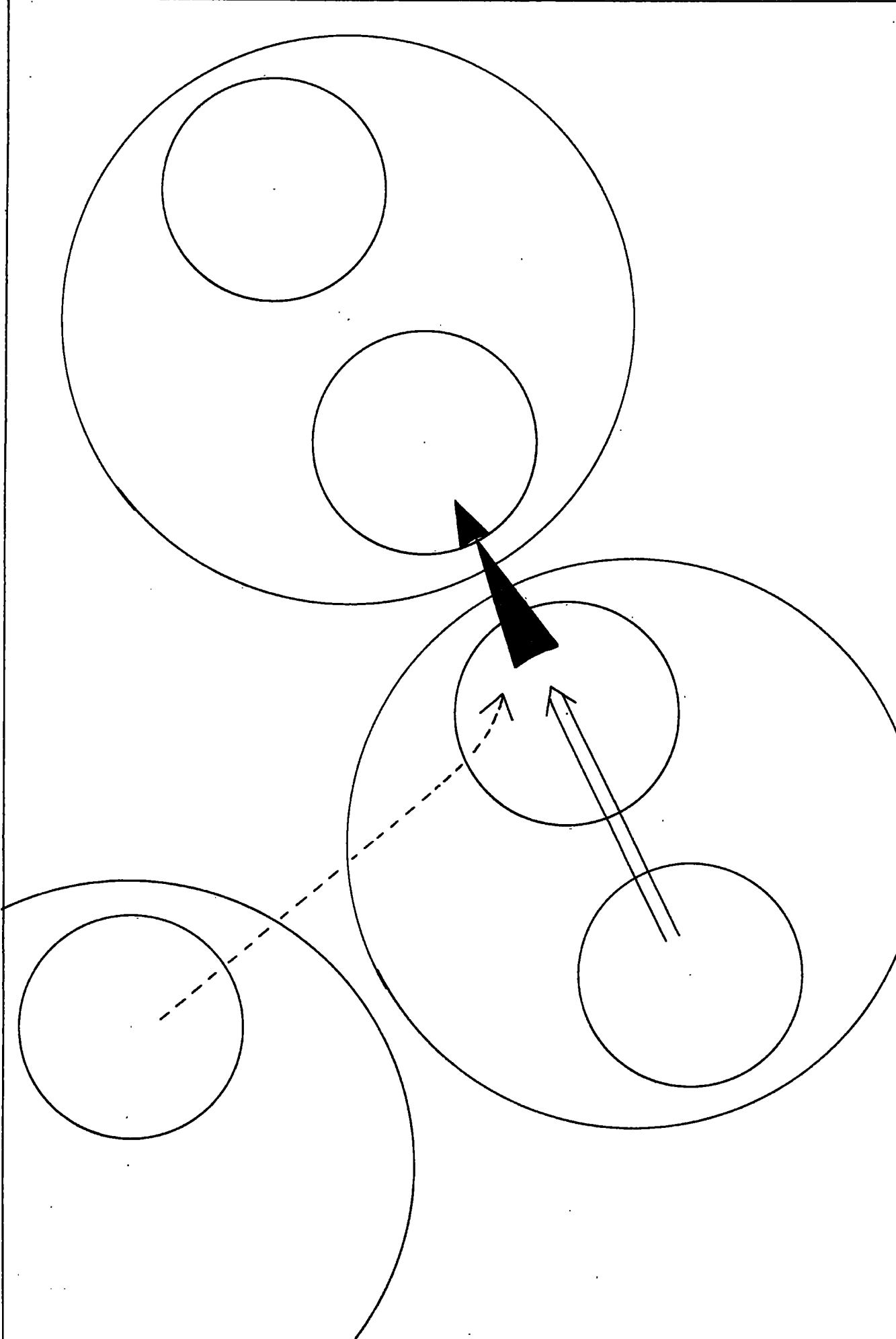


Diagram (45) : MENDI FIELDS OF WAR

of the principal parish. A general Mendi principal is that the greater the geographical barrier between groups, the greater the hostility of their relations.

Causes and reasons : Major war is a permanent situation between certain parishes. Principal combatants fight because of the obligation for a parish to revenge their dead. Allies from the confederation fight because they are obliged to help their relatives. Allies from elsewhere fight to support relatives and for the enjoyment and excitement of a fight. Individual men fight for reasons of prestige.

Individual ties : Mendi never marry their major enemies; most marriages are contracted within the confederation and some with friendly parishes outside. Principal combatants and allies from their confederation are unlikely to have any individual ties with the enemy. Men from ally parishes outside the confederation however, may have relatives or friends on the opposite side if their parish is on friendly terms with the enemy group. Sometimes the parish a man is married into fights a war with a parish from his own confederation. Although obliged to support his confederation, a man in this position remains neutral. If the war continues however, the relationship becomes impossible and the marriage collapses because necessary exchanges cannot take place between affines.

Settlement : Principal enemies never settle peace, their relationship is permanent. A truce, which can last for several years, is sometimes settled between principal enemies. A truce is probably broken by a dispute.

The principal parish in a war is obliged to pay reparation to all allies who loose men fighting on their behalf.

Consequences : The aim of major war is to disperse the principal enemy and destroy their property. Refugees flee individually to relatives in other parishes; an explicit object of the exchanges between affines is to maintain places of refuge. Sometimes defeated parishes reach an agreement with the enemy, and for a payment, are allowed to return to

their territory but usually, parishes fail to re-form and individual refugees are absorbed into their host parishes.

MELPA

Non-lethal fights.

A dispute within a sub-locality sometimes causes a fist fight between two individuals but other men usually separate the disputants and prevent a fight from developing into a dangerous confrontation. The Hageners allow for these fights because, as they say, "brothers are jealous". Fights with lethal weapons within the locality horrify men not concerned with the dispute. Disputes between individuals of different sub-localities, particularly over the division of pork, can lead to stick fights within the clan. Persistent criminal offenders, for example, are put to death by the group in a secret ambush.

Minor war.

Principal groups : Minor war is called el øninga wuð (little arrow) and occurs between two localities of the same parish or between two localities of paired parishes which comprise a confederation.

Allies : Localities within a parish are paired and they are obliged to help each other as allies. Individual members of the principal group recruit relatives from other localities to fight as allies. Men from the same locality, who have relatives on opposite sides in a minor war, find themselves as enemies on the battlefield. The efficiency of opposed groups is reduced in a minor war because warriors related to members of the enemy are obliged to avoid each other. Other factors prevent the escalation of minor war. It is not possible, for example, to recruit major war enemies (although very occasionally, when it is to their advantage, major war enemies fight as allies in an el øninga wuð (Strathern 1971)). Persons related to both sides in a minor war push for a peaceful settlement and

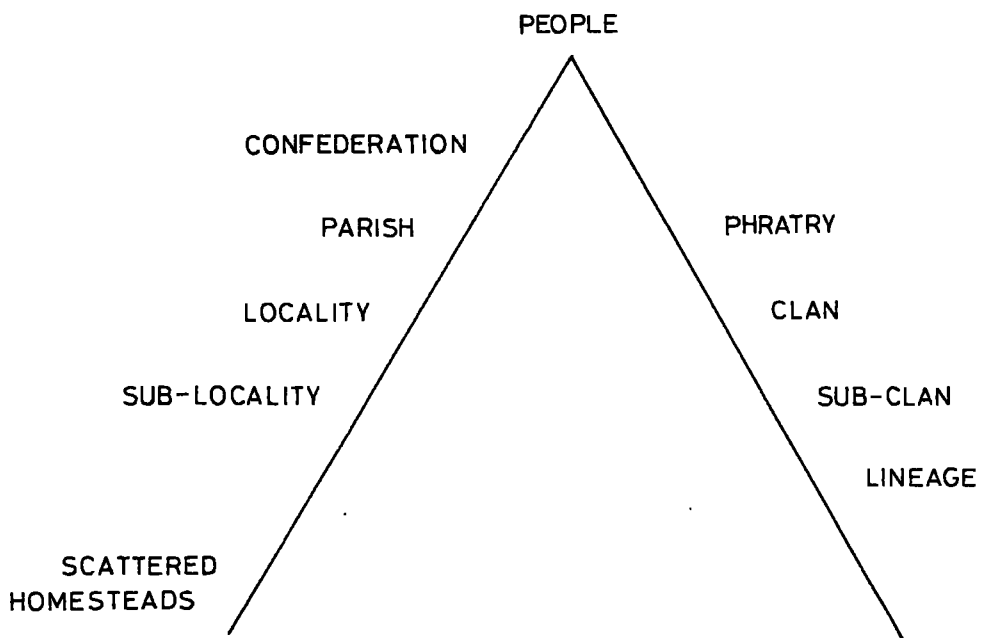
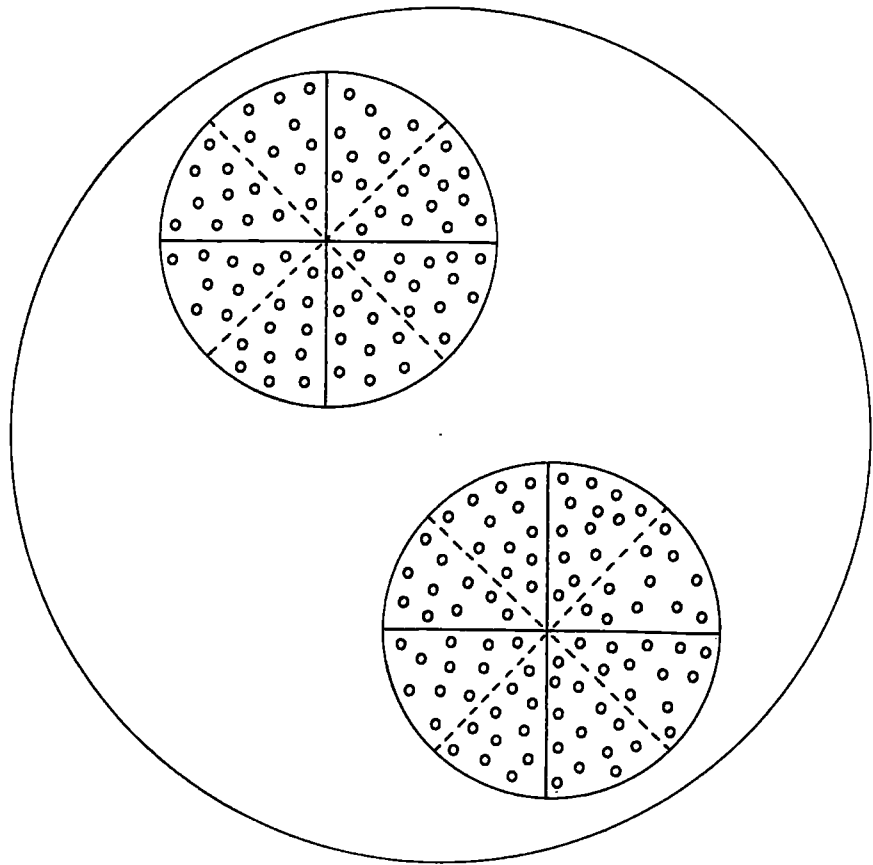


Diagram (46) : MELPA TERRITORIAL AND DESCENT GROUP
STRUCTURE

the whole parish realizes that minor war weakens the group against major war enemies and that escalation is harmful. Although allies pledge their support at a ceremony, they are fickle, for example, if an ally is killed and the principal group are slow in paying reparation, members of the dead man's group join the enemy to seek revenge. Vicedoma and Tischner (1943: 157) write that the principal group cannot rely upon the loyalty of their allies, "Die Verbundeten sind überhaupt sehr launisch".

Enemies : The principal enemy in a minor war is the locality to which the original disputant belongs and members of this group are called el pukl wuđ (root men of war). Secondary enemies are allies of the principal enemy and they are called kui wuđ (literally dead men, because they might die fighting for the cause of root men).

Causes and reasons : Disputes, such as theft, garden encroachment and adultery, between individual members of different localities cause el øninga wuđ. Once a war starts, the obligation for localities to seek revenge for their dead, maintains hostilities. Individual men fight for reasons of prestige.

Individual ties : The large number of individual ties between localities of one parish or paired parishes within a confederation inhibits war. Although men fulfil obligations to relatives in a root locality and fight for them as allies, they desire a settlement. When men of a root locality are related to individuals in the principal enemy locality, they frequently remain neutral. When relatives or friends meet as enemies, they are obliged to protect each other, although in cases where the relationship is unfriendly no mercy is shown. Warriors who fight their relatives not only damage their kin relations but also weaken important exchange relationships.

Settlement : Minor wars always end with a peace settlement. Peace is formally settled at a ceremony some time after the actual fighting stops. Peace gradually develops as men return to their gardens and moka exchanges begin but until peace is formally settled enemies avoid one another. The

numerous relationships between minor war enemies help in peace negotiations which are initiated by women related to both sides. The big men also play an important role in peace settlements by initiating exchanges with the enemy. The Melpa admire a man who can control his popokl (anger and desire for revenge) and settle peace. Peace ceremonies consist of pork exchanges and speeches. Wergild is paid between root localities for dead men but a stable peace requires equal numbers of dead men on either side because unfulfilled revenge obligations result in a new war. Allies receive reparation payments from their root locality (see Strauss and Tischner 1962: 249-53 for details of reparation payments). If allies do not receive reparation they can destroy gardens and property of the root locality and rape their women as a protest. The root locality cannot defend their property. A calmer protest is to go daubed in mourning clay and dance to shame the root locality. Both of these protests preserve parish solidarity while allowing vent to aggression.

Consequences : Minor wars never result in the rout of a locality and the destruction of their property because the people realize that these actions are detrimental to the solidarity of the parish and weaken them against their major enemies.

Major war.

Principal groups : Major war is a permanent relationship between certain parishes outside the confederation. Localities fight as military units in major war but they represent the parish. The locality which initiates an encounter with a major enemy is the root locality.

Allies : Paired parishes from the same confederation usually fight as allies in major war. The relationship between paired parishes varies from close co-operation to open antagonism. Although they usually fight as major war allies their relations are often strained by internal quarrels and minor war. Parishes within the same confederation have a strong relationship when they are small and fighting for survival against larger

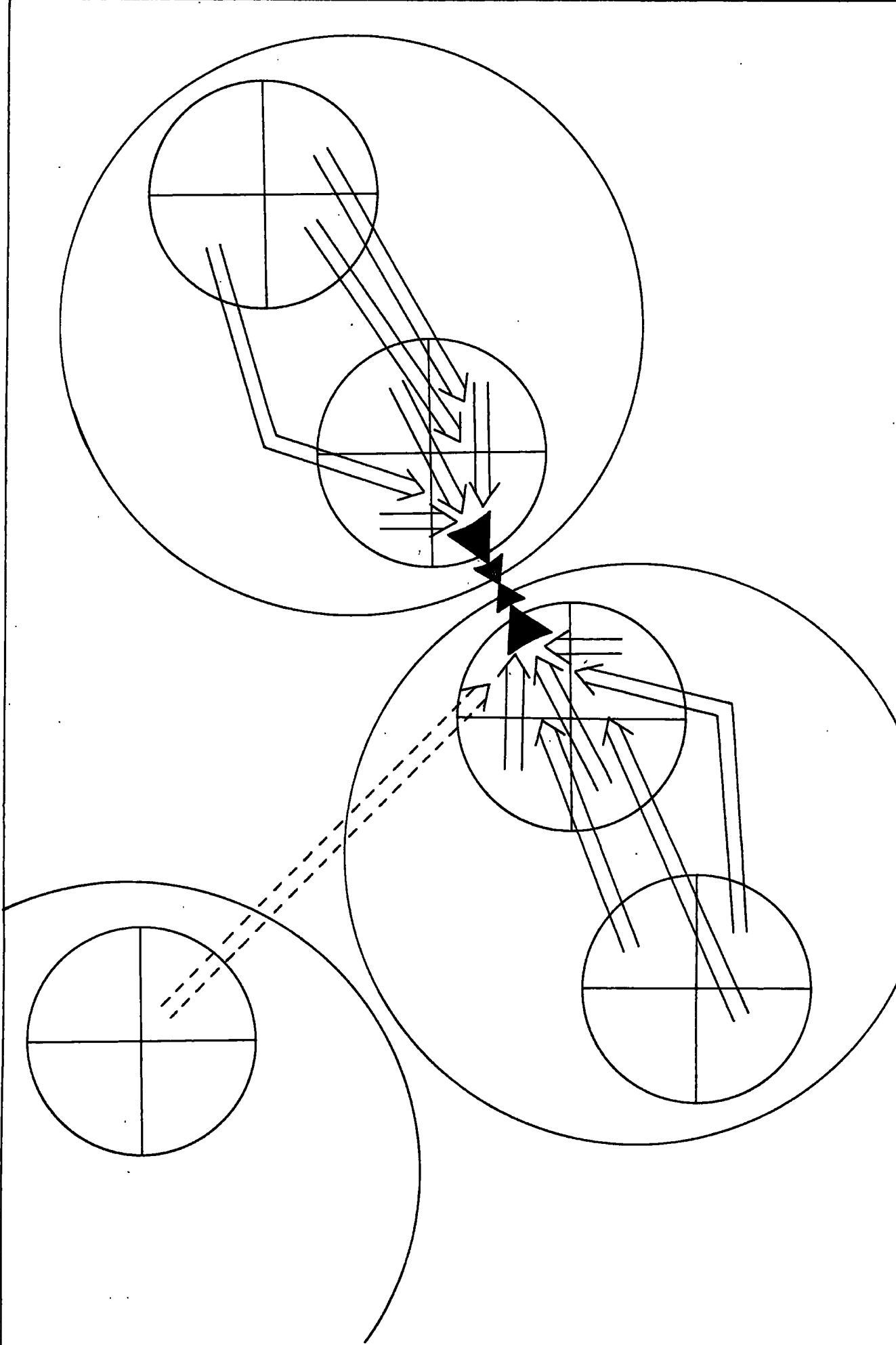


Diagram (47) : MELPA FIELDS OF WAR

neighbours. Strathern (1971) points to the difficulty of finding an adequate terminology to describe the Melpa situation because of the large variation in the size of groups which the natives equate terminologically. This variation, in time, is sometimes the direct result of war, for example, while a successful parish grows, a weak parish shrinks but both groups are thought of as parishes. The result of variations in size is that localities of a large parish choose whether to fight as allies to localities within the parish rather than help each other out of an obligation to support parish mates; whereas a defeated parish which takes refuge within a neighbouring confederation, while retaining separate parish status, is obliged to support the host parish in an alliance equivalent to that between paired parishes.

Geographical proximity influences the recruitment of allies because neighbouring groups are more likely to support each other in war. If an enemy group is distant however, root men sometimes bribe a group near the enemy to kill a man or start a war. Another reason for the recruitment of allies is weakness. A small group which hopes to weaken or destroy a strong enemy has to recruit allies for success. (Vicedom and Tischner 1943: 154). Localities from outside the confederation of the root men sometimes join in a fight to rout the enemy and plunder their property because they have a grudge against them. Big men play an important role in the recruitment of allies because they have influence to secure the help of others and they can afford to make substantial contributions to reparation payments. (Strathern 1971: 71-2).

Enemies : A major enemy is a traditional and permanent relationship between parishes of different confederations. Geographical propinquity influences the classification of enemies because groups beyond a certain distance are outside the social sphere of a parish and are significant in war only when hired as allies. Localities, supported by the allies they can muster, are the military units in el parka wuā because the locality is

the group responsible for the revenge obligations of their dead warriors. The enemy in major war does not distinguish between root localities and their allies: all opponents are major war enemies.

Causes and reasons : Major war is a permanent relationship and it is perfectly legitimate and desirable to attack a major enemy. There are two other reasons for major war. Revenge obligations maintain a constant state of enmity because it is not only war casualties who demand revenge but also fatalities attributed to enemy sorcery and poisoning. The other reason for major war is political. Major enemies are most likely to be attacked "when they themselves have become over-bearing, and are a threat, not just to one, but a number of their neighbours. They will then be cut down to size and driven out and forced to become refugees or to colonize a further area" (Strathern 1972: 145).

Individual ties : Are of little importance in major war because very few men have relatives or friends in a major enemy parish. For most individuals major enemies are outside their social sphere and exist only to fight. In major war no mercy is shown: women, children and old people are killed. The situation is confused however, when a locality has a paired relationship with a locality in a major enemy parish. Paired localities are war allies and are closely linked by marriage. In major war between their parishes, paired localities remain neutral, or if individual men fight as allies they are careful to avoid each other. This situation indicates a change in locality loyalty from one parish to another, otherwise it is difficult to conceive how this situation is maintained, because it is a contradiction to the few rules and obligations which exist in major war.

Settlement : Only in exceptional circumstances is peace settled between major enemies. When peace is negotiated between major enemies, it is of short duration because when one or both sides have achieved the benefits of peace, they declare war again (Vicedom and Tischner 1943: 178). Reparation is paid by the root locality to its allies and failure to pay leads to

protests and minor war.

Consequences : The aim of major war is to rout the enemy and destroy their property. A victorious group plunder the territory of their defeated enemies and the women play an important role in this destruction. "Wenn vertriebenen man Krieg fuhrt, gehen die Frauen den Mannern nach und rauben die Felder der Leute aus" (Vicedom and Tischner 1943: 153). Refugees flee individually to relatives or sometimes a defeated group takes refuge with a weaker parish which welcomes the opportunity to strengthen its military position. If a parish fails to maintain a group status, refugees are slowly absorbed into their host groups.

OROKAIVA

Non-lethal fights.

Brawls within the hamlet are not unknown but they are considered a bad thing. Disputes are usually settled peacefully without resort to violence.

Fights between hamlets of the same parish are called embogi. These fights are brawls in which few casualties occur and cannibalism is never practised. Embogi are "more of a lusty sham fight than a struggle to the death" (Williams 1930: 163). Disputes between individuals of different hamlets, such as sorcery accusations, defilement of water or the depredations of a man's pig cause embogi. An interesting circumstance which sometimes results in an embogi is the symbolic fighting (esu) between hamlets at a marriage. Esu are accompanied by loud threats and yelling of past grievances and feelings sometimes run so high that a real brawl develops. The large number of individual ties between hamlets of the same parish prevent a brawl developing into a serious fight.

Major war.

Principal groups : Raids between hamlets of different parishes are called isoro. One hamlet within a parish initiates a raid and recruits

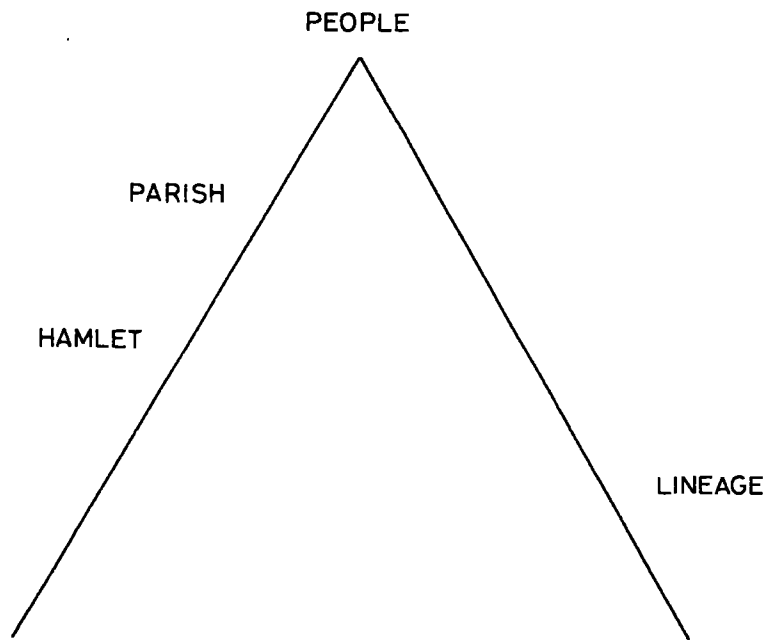
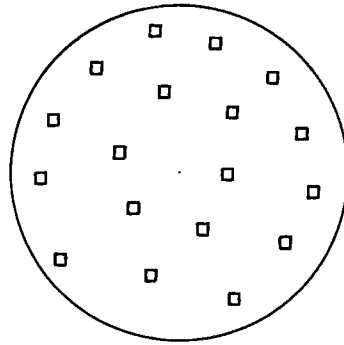


Diagram (48) : OROKAIVA TERRITORIAL AND DESCENT GROUP
STRUCTURE

warriors from several other hamlets within the parish.

Allies : Hamlets of the same parish are toho (friends or allies) and when one hamlet initiates a raid others support them. It is not clear if warriors from hamlets in peaceful parishes are also recruited for a raid. It is unlikely that warriors are recruited because they are related to men of the initiating hamlet because of the significance of age grades.

Alliances between different hamlets are based largely on naname ties. Naname are young men who are initiated together and means "the children of whom I am one". According to Reay (see Reay 1954: 110-8) naname ties override all other kin and friendship ties in importance. "Formerly, the conduct of wars and cannibal raids was determined largely by this institution ...naname had a binding obligation to fight for one another". It is not exactly clear how the naname institution works in war but it appears that men of the initiating hamlet call on their naname for aid and that these men, along with other warriors from their hamlet form an ally group. Possibly Orokaiva warfare is organized according to military units similar to age grade regiments rather than haphazard collections of warriors recruited from local groups on the basis of kin ties. The number of hamlets involved in an initiation and the number of naname a man has, is not clear. Chinnery and Beaver's (1915) article is too vague for any precise conclusions to be drawn (in fact the groups they mention for one initiation cover half of all the Orokaiva parishes).

Enemies : All parishes are ki-toho, (enemies) to each other but they are only in danger of raids during periods of declared war. Although relations between ki toho are always hostile and suspicious they sometimes live in a superficial peace. It is not clear if two hamlets in different parishes can remain on friendly terms when their political groups are actively at war.

Causes and reasons : During periods of peace there are treacherous revenge murders and periods of superficial peace are broken by a desire to

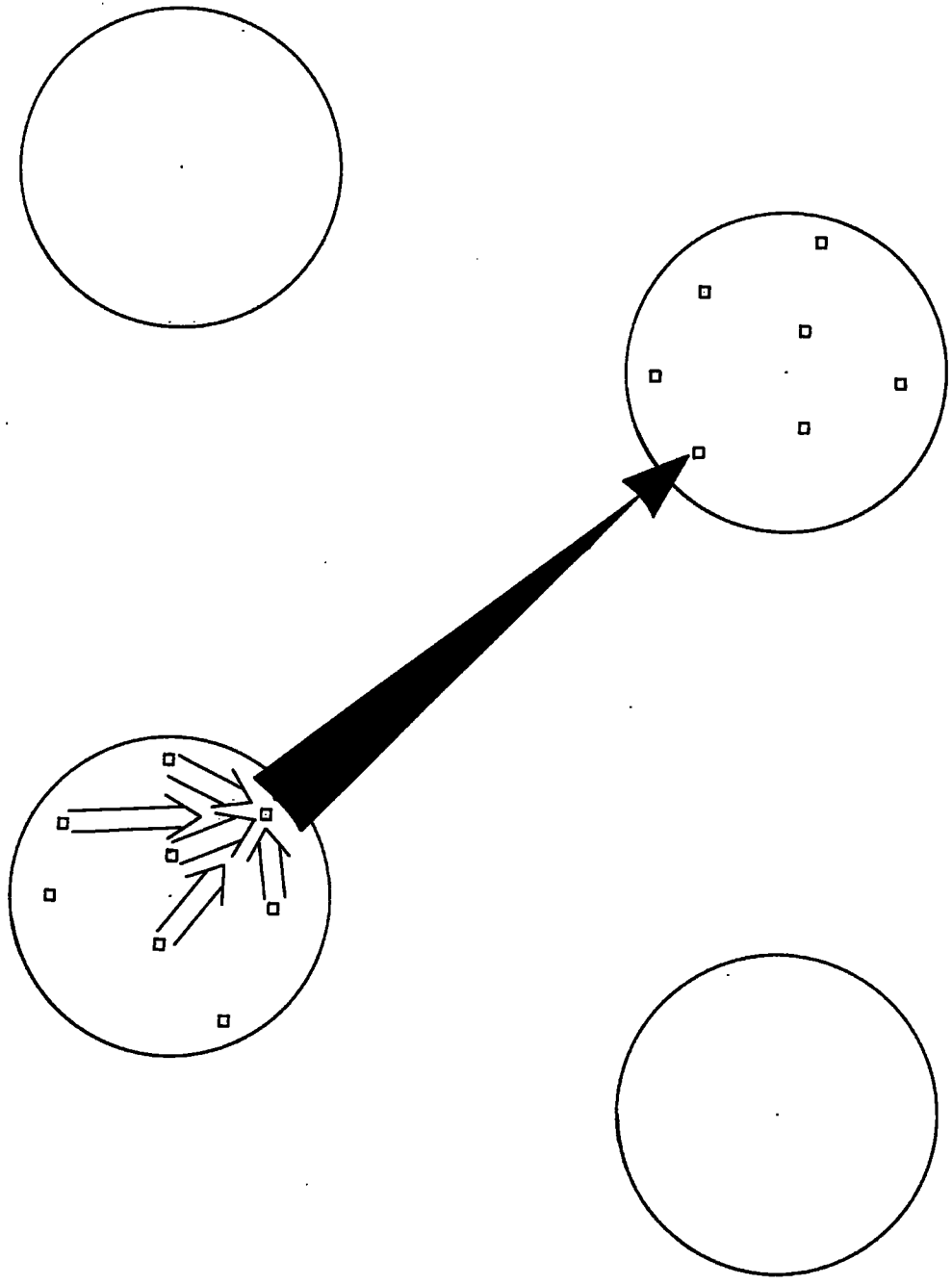


Diagram (49) : OROKAIVA FIELDS OF WAR

seek vengeance. Similarly a state of war is maintained by the obligation of relatives to seek revenge for men killed. A widow of a man, killed in war, for example can not come out of her mourning seclusion until the death of her husband is avenged in a counter raid. The hamlet is responsible for taking revenge which is called diroga mine (an exchange of the spirits slain). The name suggests that revenge is not only a social obligation but also a religious obligation; especially as killers are in danger from their victims' sovai or spirit (see Williams 1930: 312).

Another reason for isoro raids is that newly initiated naname are obliged to pay the officials at their initiation with a corpse ready cut up. Individual warriors fight for reasons of personal prestige; courageous men are koropahuso (strong with the spear) and are very much respected. Successful warriors can give the names of their victims to their children and this distinguishes a warrior as embo-dari (a man slayer).

Individual ties : The significance of individual ties between ki-toho parishes is not clear. The majority of marriages are made within the parish but during periods of peace some men contact marriages and make friends in enemy hamlets. The actions of these men in war is not clear, possibly they remain neutral or take part in the raid but avoid or protect relatives. Williams (1930) quotes an example of a woman, with the help of her husband, warning her hamlet of a planned raid; possibly plans of a raid are not divulged to men with relatives in the ki toho hamlet. Although men related to members of ki toho should place present gains above their relatives, this is not always the case. In another example, a man moved with his wife to her hamlet because he feared she might be killed as a reprisal for a raid by her parish. Parishes might be ki-toho and at war, but individuals, can remain friendly.

Settlement : Parishes at war sometimes settle a superficial peace (peka). Peka are fragile and the hostility between ki toho always results in a new war. Peace is negotiated by women related to both parishes because they can pass safely between both groups; although sometimes peace heralds

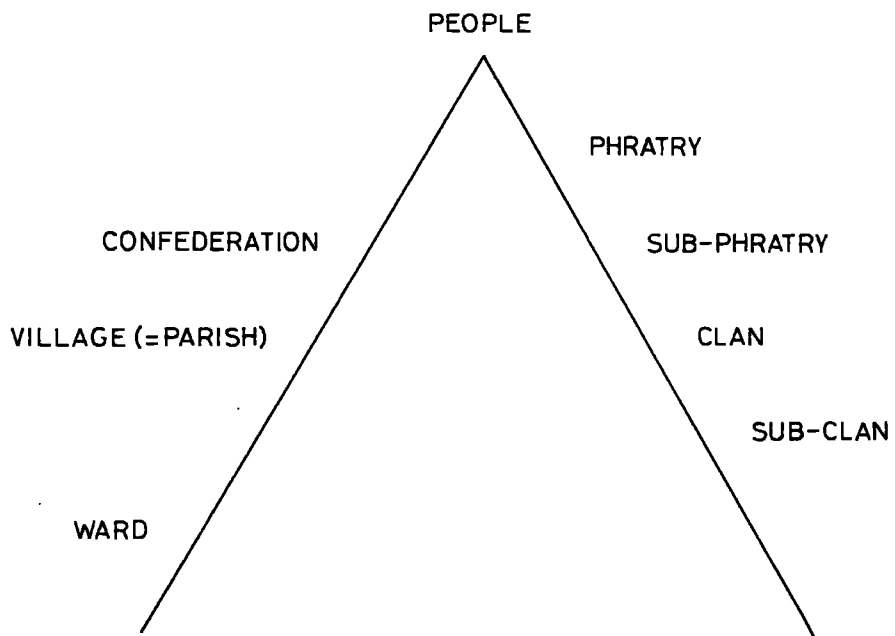
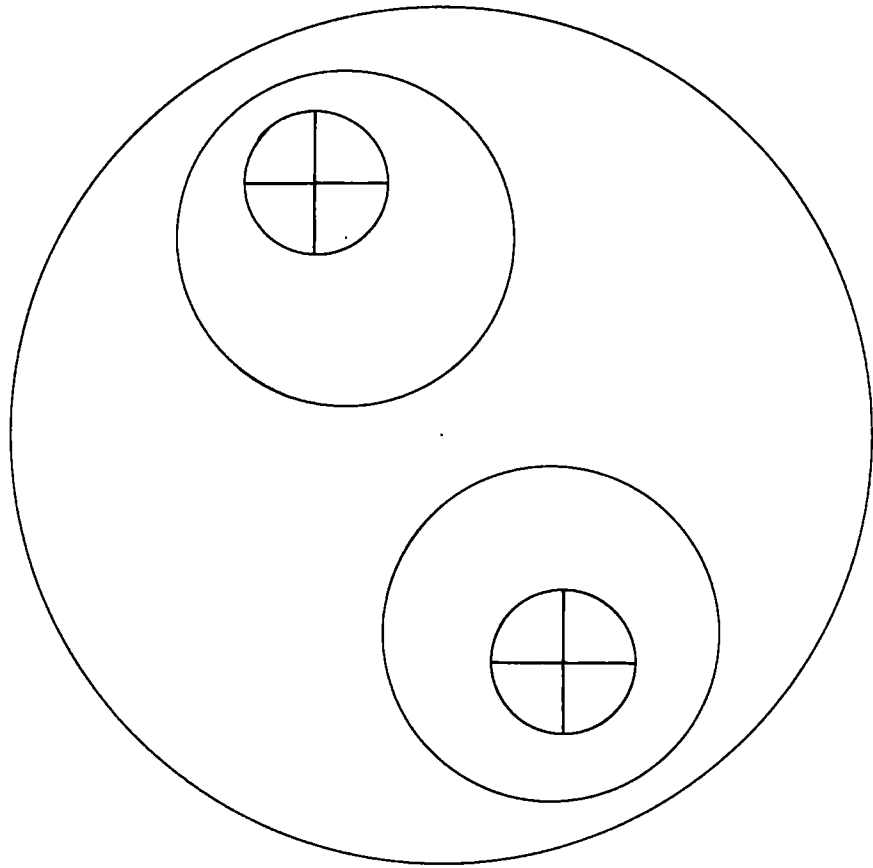


Diagram (50) : SIANE TERRITORIAL AND DESCENT GROUP
STRUCTURE

are killed. During peace individuals can travel with a certain degree of safety between hamlets in the two parishes but treacherous murders are not unknown.

Consequences : Hamlets are rarely routed and the inhabitants forced to flee. Women and children are sometimes captured in raids and when possible dead bodies are carried back to eat. Isoro raids usually result in a few deaths and a quick retreat.

SIANE

Non-lethal fights.

There is no fighting within the ward, all disputes are settled peacefully. Warfare is forbidden within the confederation but disputes between individuals sometimes cause fights with clubs (called fine). In fine the disputing wards form up on either side of a clearing and fight.

Major war.

Principal groups : Parishes from different confederations fight major wars (rowa).

Allies : The parish (village) stands alone in rowa war; allies are not recruited from other parishes. Parishes of the same confederation remain neutral when one of their number is engaged in war. The relationship with parishes outside the confederation fluctuates approximately every ten years from superficial peace (when the parishes inter-marry) to rowa war.

Enemies : Enemies are all parishes outside the confederation although rowa is not fought with all of them at once.

Causes and reasons : The cause of rowa is a dispute, such as a theft, adultery, sorcery accusations or a homicide, between individuals in different confederations. A peace is strained, as time progresses, by an increasing number of disputes which result in fighting and rowa.

During peace, disputes which demand revenge are remembered by placing a knot in a rope. A war is maintained by the obligation of parishes to take revenge for warriors killed. Individual men fight for reasons of prestige; although Salisbury (1962) notes that a man with a "smooth belly" (good relations with people in many other villages) is admired.

Individual ties : During periods of peace men marry into parishes outside the confederation but later the same parishes may be enemies

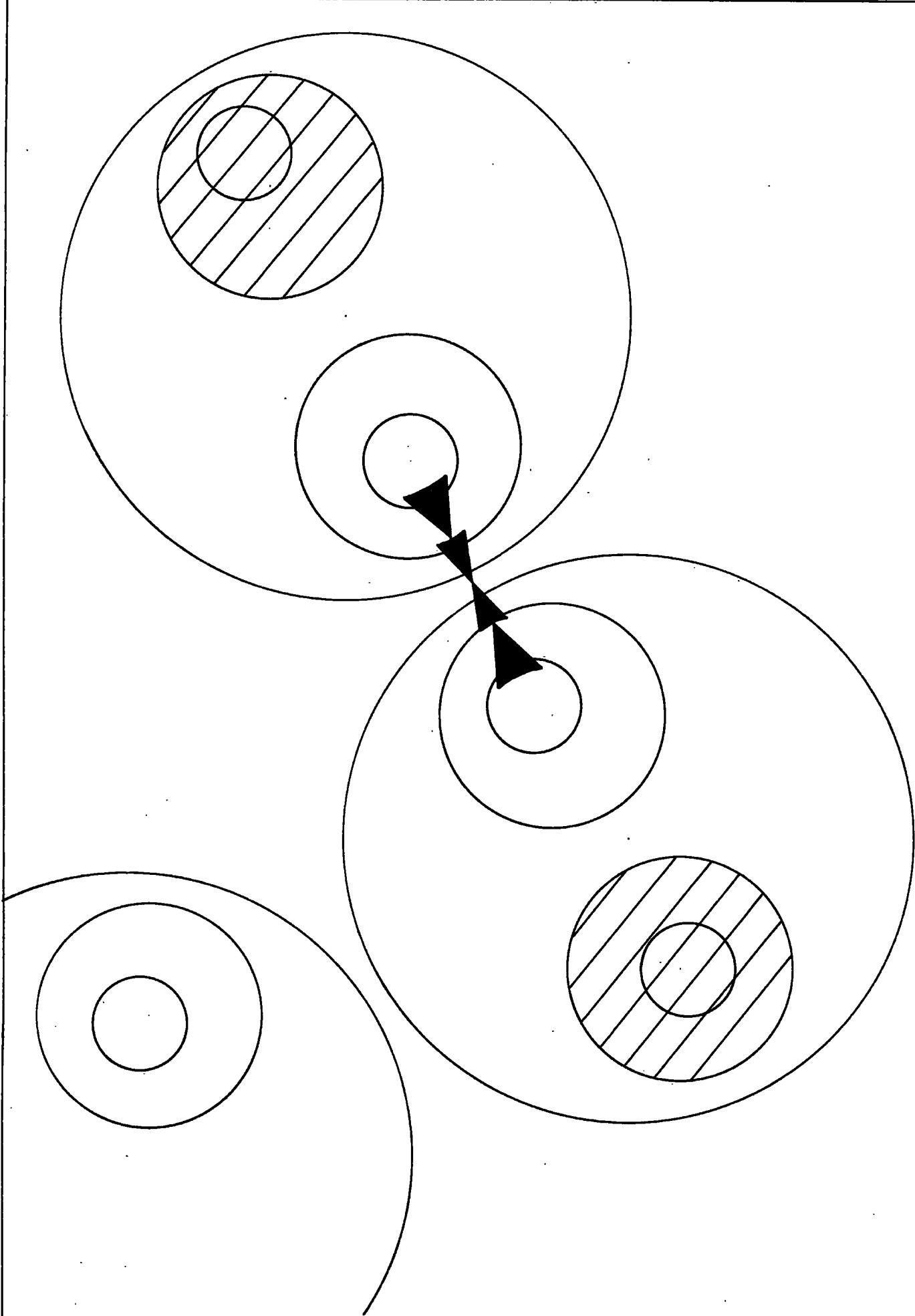


Diagram (51) : SIANE FIELDS OF WAR

in rowa. The Siane realise this when they say "we call them wife's father; with them we fight". (Salisbury 1956 : 642) Salisbury writes that when two parishes are at war, many individuals experience a conflict of loyalties between their parish and relatives in the enemy group. (Salisbury 1962 : 38) The behaviour of related individuals is not clear, affines are niamfa and the parish to which they belong is nitofa, meaning distant affines. Perhaps relatives remain neutral or possibly they are obliged to fight but carefully avoid each other.

Settlement : Neutral parishes from the confederations of the two fighting parishes spectate at a battle and shout advice, for a settlement, when the warriors tire of fighting, the battle degenerates into a verbal engagement and both sides line up their wounded men. Persons from the neutral parishes inspect the wounded and assess the compensation payable to restore a balance. A truce is settled with the exchange of pigs and a feast, followed by hand-shaking. A truce is fragile because revenge obligations prompt further raids and ambushes which culminate in another battle. Possibly peace slowly develops when a truce ceremony is not followed by further raiding.

Consequences : A battle sometimes results in the rout and destruction of a village. The neutral parishes of a confederation are places of certain refuge in times of defeat. Routed villages usually return to their territory when strong enough to defend it. The usual result of Siane war is a see-saw of blood debts between two parishes, whose relations fluctuate over a period of several years from war to superficial peace.

TRANS - FLY PEOPLE

Non-lethal fights.

Disputes between members of the same confederation may lead to a fight

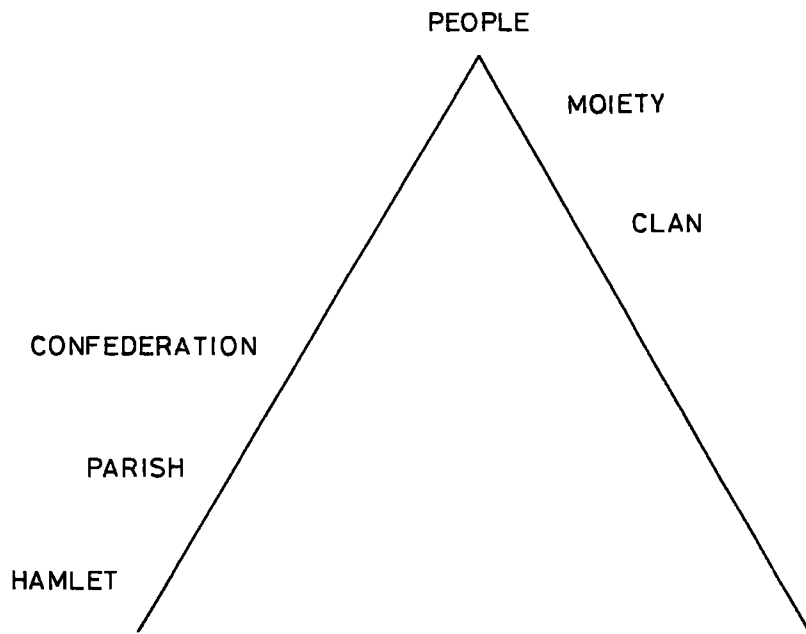
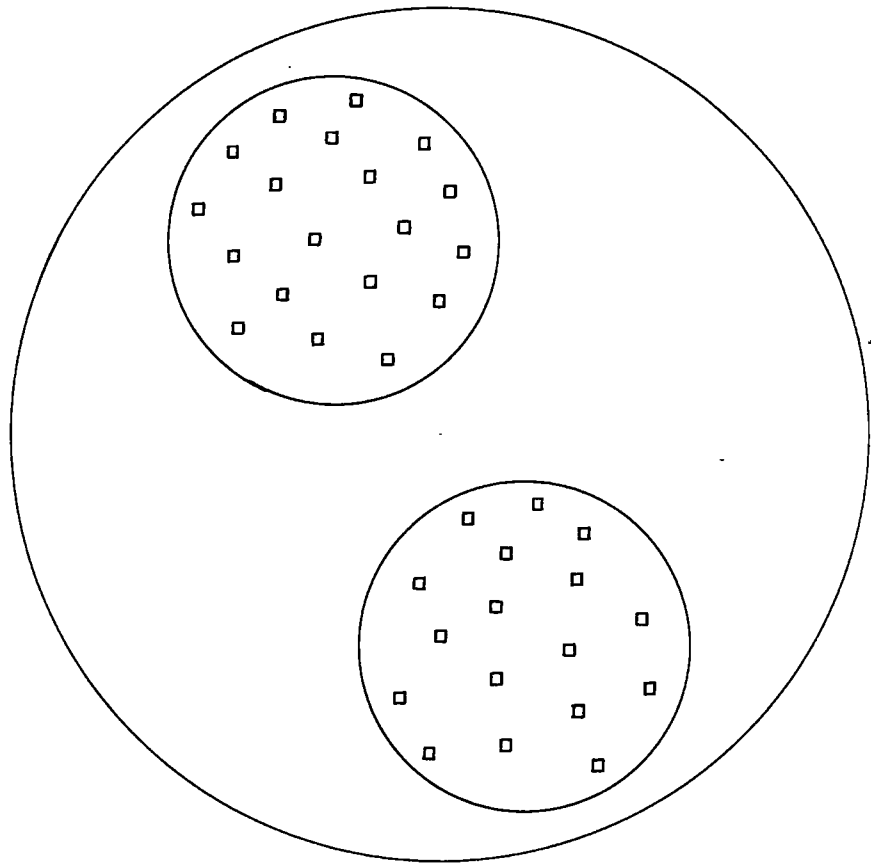


Diagram (52) : TRANS-FLY TERRITORIAL AND DESCENT GROUP
STRUCTURE

but this is an individual affair and the disputants' groups are not involved. If an individual is wronged he beats the wrong-doer. A war can never develop within the confederation, although a dispute between individuals of different hamlets sometimes escalates into a brawl, called guwari. Guwari always end in a meal of reconciliation and although some old heads are broken, "certainly none are cut off and carried home". (Williams 1936 : 265)

Major war.

Principal groups : Major war is called moku: the headhunting raid. Moku are never carried out on hamlets within the same confederation. Raids are initiated by one hamlet which recruits allies from other settlements. The enemy conceive of the principal group in a raid as the parish of the initiating hamlet. Judging from the example quoted by Williams (1936 : 274-5), big men have an important rôle initiating and organizing raids, (although not necessarily leading the actual raid).

Allies : Allies are recruited from hamlets within and without the confederation. It is not clear whether closely related hamlets are recruited as groups or whether all allies are recruited individually. The small size of a raiding party suggest that men of the initiating hamlet invite individual warriors from other hamlets to join the raid. Warriors of the initiating hamlet or ally hamlets are not obliged to fight because of kinship ties, although relatives and friends are likely to attend the same raid. Some men join a raid for the excitement of a fight and the admiration they can earn. The average number of hamlets involved in a raid is three. Allies do not necessarily come from neighbouring hamlets; some warriors travel considerable distances from hamlets in other confederations. There is no indication that hamlets join forces for a raid, because of revenge obligations against a common enemy.

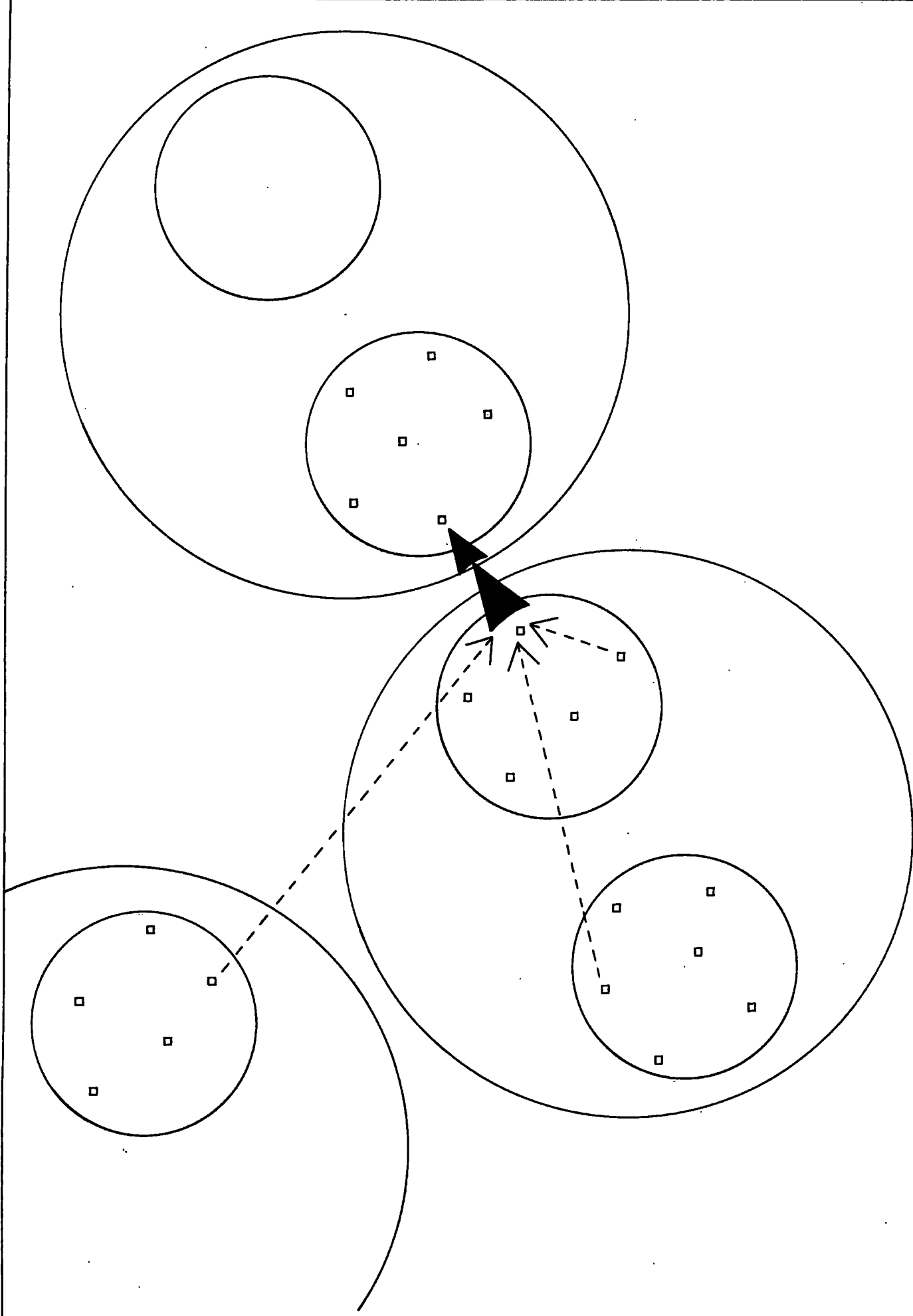


Diagram (53) : TRANS-FLY FIELDS OF WAR

Enemies : Enemies are hamlets in other confederations; they are called moku-devenar, (fight people) and this is a traditional relationship between certain confederations. Friends are called budar; this is a flexible term which not only applies to a small local group but extends to include a whole confederation. A confederation classified as moku-devenar sometimes includes hamlets which are budar. Budar hamlets can become moku-devenar and moku-devenar hamlets can become budar, but the overall classification of a parish remains either enemy or friend. A situation is possible where a budar hamlet from an enemy confederation is an ally in a raid on a moku-devenar hamlet of a friendly confederation.

Causes and reasons : The reason for raids is wende, (to pay back); an obligation to revenge deaths caused in enemy raids or by enemy sorcery. Judging from the infrequency of moku raids (for the Keraki confederation, an average of one every eight years) this is a theoretical obligation which people actually disregard, although when revenge is taken the aim is to inflict a greater injury than the one suffered. The Keraki, for example, took nine Gunduman heads in revenge for two deaths. Individual reasons for fighting in a raid are prestige and admiration. A man who has taken a head is respected. This is illustrated in the "head challenge", where one party to an argument produces a human head and challenges his opponent to match it. If the challenged man cannot produce a head then he must concede the argument to the challenger. Another distinction earned by the headhunter is the right to bestow the victim's name on his child.

Individual ties : The position of men related to an enemy hamlet which their group plans to raid, is not clear. The Pethekaka example (Williams 1936 : 274) suggests that a hamlet can be classified as moku devenar while individuals from this group remain friends with relatives in the enemy settlement. A woman and her two sons, for example,

(Williams 1936 : 274) were saved by men from her natal parish when she shouted the name of her father, and this indicates that warriors attack hamlets where their friends have relatives who they will protect. Possibly a man accompanies a raid on a hamlet where he has relatives so that he can protect them.

Settlement : There is no mention of peace ceremonies between parishes or hamlets. Confederations, however (even moku devenar) live, for most of the time, in peace and pass safely through each other's territory. It is not clear what causes a hamlet to initiate a raid and upset this peaceful situation, but it is probably a dispute between members of two groups buttressed by un-paid revenge obligations and a desire for prestige by individual members.

Consequences : Raids rarely result in the rout of a hamlet. The usual pattern is a surprise raid, in which a few victims are beheaded, followed by a swift retreat.

WAROPEN

Non-lethal fights.

Disputes sometimes result in raids between wards of the same village but care is taken not to injure anyone. The relatives of a man killed within the village are compensated and big men arrange the payment of such debts. If compensation is not offered revenge is taken on the offending ward. Individuals, whose crimes deserve death, are killed in sema raids organised by big men; sema raids are capital punishment within the village.

Major war.

Principal groups : War is called da and consists of raids, (hongi). A raid is initiated by one ward from a village against another village. Wards of the same village never fight da.

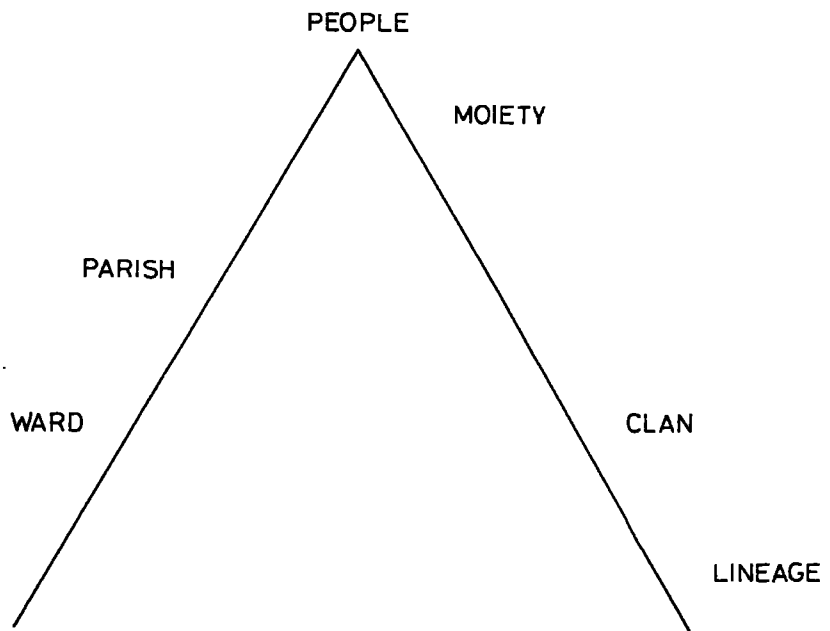
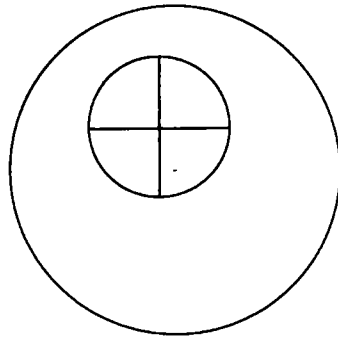


Diagram (54) : WAROPEN TERRITORIAL AND DESCENT GROUP
STRUCTURE

Allies : It is not clear when other wards of a village are recruited as allies, but an important factor is the size of a planned raid. When distant villages are raided, for example, the village and not the ward, is the group responsible. A large village is less likely to require the help of allies but when a small village plans to raid a large village, it summons neighbouring villages to fight as allies with a ghono (knotted cord). The basis of village alliances is not clear, possibly they are founded on the ties between big men who have a key role in arranging Waropen raids.

Enemies : All other Waropen villages are enemies. Villages are in a state of constant hostility and raids are possible from any other village around Geelvink Bay. It is not clear whether neighbouring villages raid each other frequently, or whether neighbouring villages are usually allies and raid distant ones.

Causes and Reasons : Waropen warfare is controlled by the big men (sera) of each ward. The ward of a sera which initiates a raid is the principal group in the attack. Waropen warfare is part of a competitive system between sera of different villages. During a raid men are killed and where possible beheaded, but heads are less satisfactory than live prisoners. Captives (ghomino) are locked in heavy wooden stocks (sunu) in the seraruma (big man's house) until they are ransomed back by their wards for various valuables. "One of the main motives for catching slaves was the ransom" (Held 1947 :223). A ward which fails to ransom back captives considers the person dead and they become members of the principal ward to the raid in which they are captured. A village which is attacked is obliged to make a return raid and ransom any prisoners they capture. A village which fails to mount a return raid provokes further attacks because of its supposed timidity.

Another reason for a raid is revenge. Revenge is aimed at the ward

of the killer but in some cases, a man from the same or another village of the same region is killed in lieu of a better victim. "It is the rule that the shedding of blood has to be compensated by the spilling of new blood". (Held 1947: 217) Even if one of the revenge party is killed, this avenges the dead man because blood is shed, but the new death creates another revenge obligation for the ward of the dead man. Individuals take part in raids for reasons of prestige. A successful warrior, especially a man who has taken a head, is respected. Other reasons for a raid are that a big man whose wife dies is obliged to attend a raid or wear a cap until it falls to pieces. Captives are necessary if a sera wishes to acquire a title or build a new big man's house. Before a man can marry he needs a captive to present with his bridewealth.

Individual ties : The rôle of big men is very important in Waropen warfare. The big man of the principal ward in a raid, is called sera bawa (the prominent big man) and is obliged to give a three day feast (womuna) for the warriors who take part in a successful raid. Although the big man ransoms the captives of a raid he is obliged to reward his warriors well for their services. Warriors who feel slighted by insufficient reward hunt for heads in the next raid and take no prisoners. The big man is obliged to pay wergild for enemy warriors killed by his ward and if warriors take heads instead of prisoners he forgoes gaining ransom valuables and ^{looses} valuables in wergild payment instead. Held (1947) thinks that warriors experience confusion between taking heads and gaining prestige or capturing prisoners and gaining valuables from the ransom. The significance of individual links between villages is not clear. Do men with relatives in other villages warn them of a raid, actively participate but avoid relatives or remain neutral? Held however, thinks, that individual ties between villages prevent fights developing into

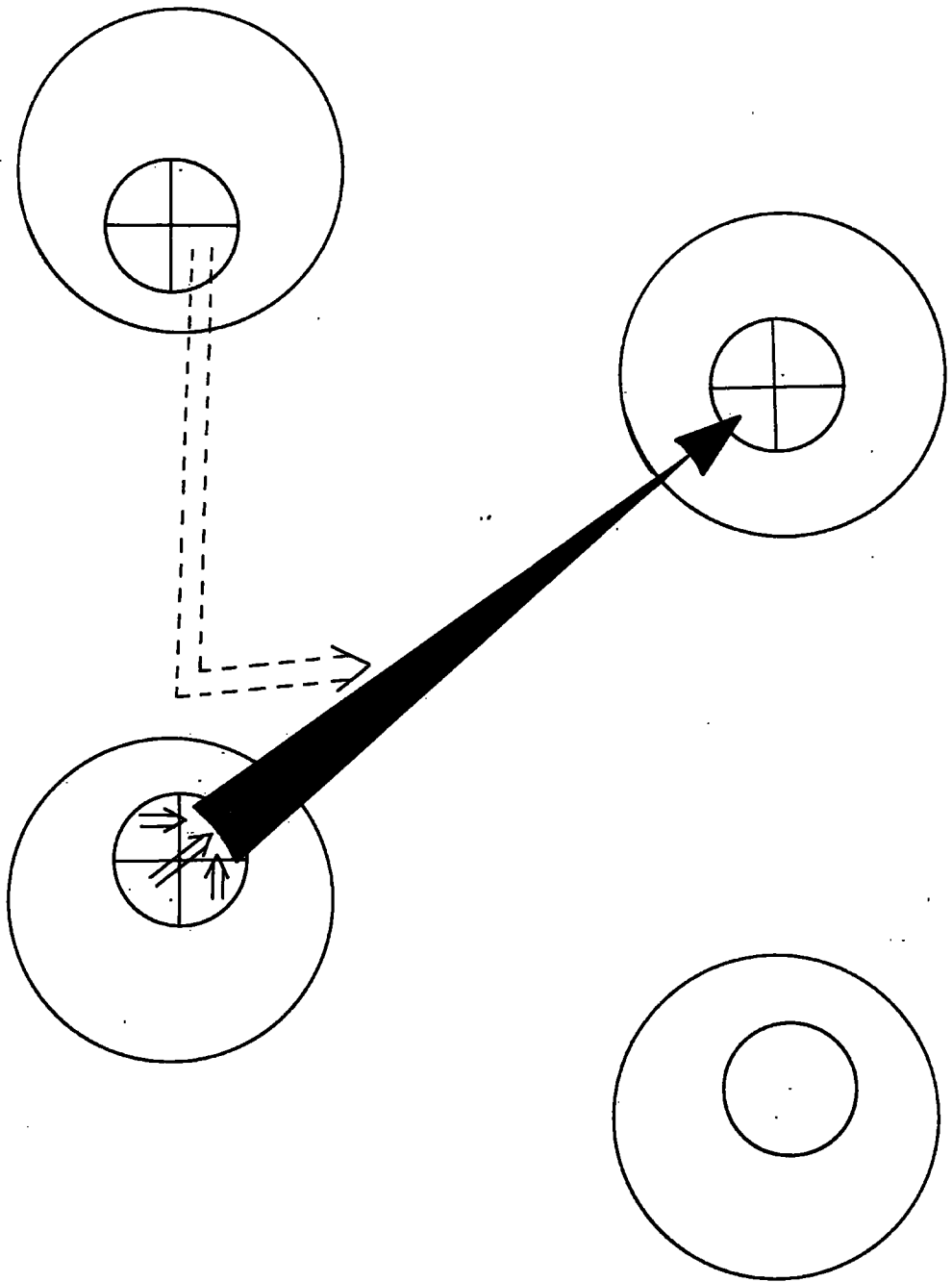


Diagram (55) : WAROPEN FIELDS OF WAR

uncontrolled war. An important individual tie between villages is Kamuki, which is an inherited trade partnership between big men. Kamuki spare each other in a raid and move freely in villages where they trade and have Kamuki. Kamuki are also important in ransoming back captives. One issues a challenge to the other and the challenged man is obliged to exchange a captive in return for certain valuables. Sera who successfully fulfil a challenge receive an honourific titles. It is not clear whether the individual ties of a sera in another village influence his plans for a raid but they are significant because they allow social intercourse between enemy groups.

Settlement : Peace is never settled between villages although at certain times wergild is paid between them for unrevenged deaths. A knotted rope is sent via intermediaries from one village to another as a signal for such a settlement. Goods are exchanged and the big men eat sago from the same bowl, to mark the settlement. These settlements do not result in peace; they are a squaring of accounts between two villages when all previous debts are settled.

Consequences : There are two different, almost opposed results to Waropen warfare. One is the capture of prisoners for ransom, which is a type of potlatch system between big men. The other is revenge and headhunting. A village is rarely destroyed and the occupants forced to flee as refugees.

Part 3 : Comparative Analysis:

The debate on the relevance of descent concepts to New Guinea societies is referred to earlier in the chapter (pp. 97). Another topic of New Guinea ethnography which is currently under debate is the position and rôle of big men (see Read 1959; Sahlins 1963; Brown 1963; Salisbury 1964 and Strathern 1966). Men who possess certain personal attributes, such as wealth, courage and an ability to make speeches, achieve the status of leader in the small groups which characterize Melanesia. There are no specialized political offices which men inherit or elect to fill. People reach decisions informally and a leader acts according to the consensus of opinion within his group (see Read 1959). The study of warfare in New Guinea, as mentioned earlier in this chapter, requires an emphasis on the rôle and influence of big men and not the significance of descent.

Reference to the position of big men explains the problem why descent ideals do not correspond to territorial groups. The ethnographic descriptions of war demonstrate that the significant groups are territorial and not descent groups. People in New Guinea do not conceive of their territorial groups primarily as descent groups (see Strathern 1972) but as political groups which are built up around a big man. Although people in New Guinea tend to reside with agnatic kinsmen this is not the result of descent obligations but the result of convenience. The idea of descent in New Guinea does not serve as a recruitment principle to any group but is a rationale for groups when formed and serves as a principle of group identity and solidarity. The influence of big men is important in the recruitment of territorial groups and a big man is successful and influential because of his ability within the traditional social system. Leaders attract ordinary men to them because of the benefits which the latter receive; for example, relative safety and economic help, plus intangible benefits such as prestige. Although the social environment of

New Guinea is flexible and continually in flux, individuals do not frequently change their allegiance from one group to another. There are several reasons for this stability in group membership. It is not easy or safe, for example, for a man to change his group allegiance. A man who frequently changes his group allegiance is a "rubbish man", a man who is unreliable and disloyal. Big men require a stable, loyal following and they are careful in the recruitment of individuals to their group. A "rubbish man" is undesirable because he is unreliable and a group cannot include him in their descent ideology because of his continual moves, and this serves to undermine the precious solidarity of their groups.

There is a limit to the size of the group which a big man can influence, and this limiting factor is the personal character of the relationship between the leader and the members of his group. Sahlins (1963) touches upon this point, although he misplaces his emphasis, as Strathern (1971) demonstrates. Sahlins proposes that big men have to exploit their followers in order to maintain their position vis a vis other groups and this exploitation sows the seeds for the downfall of big men because they reach a point where their followers will no longer tolerate the situation. Strathern (1971) demonstrates the symbiotic relationship between big men and their followers, particularly within the exchange network which characterizes many New Guinea societies. He does not resort to theories of exploitation but suggests that the close contact between big men and their followers restricts the activities of the former and sets a limit on the size of group which they can influence.

The influence and "bigness" of big men varies according to their skill within the political system. Some leaders are more important than others and different writers refer to them as "despots" or "directors" (Salisbury 1964), "autonomous men" (Read 1959) and "pre-eminent big men" (Strathern 1966). Although writers disagree over the precise rôle and influence of "bigger" big men, they are important in the major wars which concern large political groups.

A point is reached where the successful big men are those who can persuade other big men to urge their groups to fight as allies in a war which serves the political ambitions of the former. In smaller wars it is the influence and activities of smaller big men which are important, because the war concerns fewer men.

Sahlins (1963) uses the term faction to refer to the group which centres upon a big man. Only two writers (Pospisil 1958 and Forge (unpub.) 1971) seriously refer to political factions in the material used to compile this survey. This study suggests that the term faction requires introduction into the terminology employed in New Guinea ethnography. Writers should refer to parish factions or village factions rather than to clans or lineages, because the former terms convey more accurately the political situation in New Guinea.

Sahlins (1963:164) indicates the rôle of a big man in warfare when he writes, "he combines with an ostensible interest in the general welfare a more profound measure of self interested cunning..... to show a standing above the masses that is product of his own personal manufacture." This statement assumes that certain persons desire to carry the burdens of leadership and that a "wish to gain power is a very general motive in human affairs" (Leach 1954:10). Levi Strauss (1944) advances a similar argument when he refers to "natural leadership" and argues there are certain men who "enjoy prestige for its own sake, feel a strong appeal to responsibility, and to whom the burden of public affairs brings its own reward" (1944:31). These assumptions are correct in the context of political activities within New Guinea societies.

In warfare big men use their influence to encourage or prevent hostilities as it best serves their own political ambitions and selfish ends. At root, many wars in New Guinea are political because the small groups, with their big men, fight for their survival against similar groups. Big men try to extend their influence over a larger number of people while seeking to prevent encroachments upon their own group by

rival big men, and one way to achieve these ends is war. This is the reason why several people in New Guinea refer to war as a way of weakening rivals and is the reason why people speak of destroying their enemies. Among the Melpa for example "Wollen die Hauptlinge einen anderen Stamm Durch Krieg Schwächen, dann gibt es verschiedene Wege, den Kampf zu beginnen (Vicedom and Tischner 1943:150). The Bena Bena think that, "If you do not kill everyone they will have children and will be strong" (Langness 1964:104) the Kuma (Reay 1959) fight wars for similar reasons.

The political activities of big men are central to an understanding of warfare in New Guinea. The position of a big man rests on a knife edge because he must suppress threats to his position from within the group while competing externally with other big men for personal influence and the position of his own political group. A big man, however, lacks the power to call upon his group to fight a war which he thinks is politically necessary. Instead a big man must manipulate any situation to his advantage and use the consensus of opinion within his group wisely to further his own ambitions. Big men do not control or initiate wars but they use their influence, within any situation which arises, to facilitate their own ends. The bigness of a big man is directly correlated with his ability to gauge the opinion of other persons and manipulate situations to his own advantage. A big man, for example, can use a dispute between a member of his own group with a man from a rival political group, to start a war which he thinks will further the political position of his group and himself. The activities of big men are important when the escalation of a dispute to war is considered because no ordinary man has sufficient influence to recruit a group large enough to fight a war.

The rôle of big men in war partially explains the value placed on fighting prowess and why leaders require reputations as successful warriors. An admired man with social prestige must be a good warrior

and in societies where the political structure consists of numerous, small groups which fight to extend their influence, this is an essential value. A successful leader however, is never simply a strong warrior but a man who tempers his admirable strength with a realization of the importance of equality in New Guinea society (see Read 1959). Strength alone does not make a leader because a strong man ignores the value placed on equivalence, and a big man who tries to achieve his ends by bullying members of his group soon destroys the basis of his position and loses followers. A leader must consult the members of his group and take their opinions into consideration in any actions he takes. A big man can try to manipulate and persuade his followers, he may even bring subtle pressures to bear on them (such as reducing his economic support) but a leader can never force members of his group to comply with his wishes. Although fighting prowess is a highly esteemed value it can be over exaggerated and in some situations the ability of a big man to settle peace and pay wergild is more important than his ability as a warrior (Strathern 1971).

Questions relating to the significance of descent concepts, the rôle of big men and the importance of certain other related factors of social organization, in New Guinea warfare were analyzed with the help of a computer during the period of research which constitutes this thesis. The information from the descriptive ethnographic accounts was reduced to a series of variables which were considered critical in a study of social organization and primitive war. The variables were binary so that each people could score positively or negatively for each one; for example, a society either possesses or does not possess confederations, or cannibalism. The total number of variables was 376. The individual

variables are not listed in the thesis but an indication of the factors used is given by the titles of the groups into which the variables were classified. The list is divided into three primary groups of titles according to the variables which they discriminate. The first group is social structure and group composition, the second is minor war and the third is major war.

The groups of variables within the social structure and group composition section are:

1. Territorial/Political groups.
2. Relation between descent groups and territorial groups.
3. Descent groups not corresponding to any territorial group.
4. Significance of non-agnatic individuals in agnatically conceived territorial groups.
5. Significance of non-agnatic groups in larger agnatically conceived territorial groups.
6. Rights (other than residence) important in recruiting individuals to principal groups at war.

The groups of variables for minor and major war are the same:

1. Principal groups to war
2. Enemy groups
3. Degree of relationship between individual members of potential enemy groups.
4. Behaviour of related individuals when obliged to fight as enemies.
5. Groups recruited as allies.
6. Individuals recruited as allies.
7. Causes of war
8. Reasons for war
9. Settlement of war
10. Consequences of war.

Variables based on the ecological material discussed in the previous chapter are included under the headings:

1. Ecological regions
2. Geographical regions.

The variables were recorded on a series of tables and this information was translated into Fortran language for programming into an IBM 360/67 computer. The information was coded into two programmes. The first was the Clustan method (see Wishart 1969). This is a Fortran IV Program designed to study a series of variables from a number of cases (societies) and carry out a cluster analysis by multivariate procedures. The computer clusters together the most similar cases first, on the basis of variables programmed and the clustering process continues until the stage where all the cases in the sample are grouped into a single cluster. As the computer forms each new cluster a distance statistic informs the user how close those two clusters were prior to fusion. In this way the user secures a grouping of societies with a percentage record of the variables held by each cluster. The second programme used was the Boolean Subset Extraction Test for multivariate data (see Youngman 1971). Using this programme, the computer analyzes a group of societies suggested by the user. The computer defines the group of suggested societies according to variables held by the group and the frequency with which these variables occur. The computer analyses the variations between groups with various statistics.

There are four statistics used in the tables of this thesis. The percentage occurrence for a variable is a figure which indicates the significance of that factor in a particular group of societies. The standard deviation is a measure of dispersal which indicates the similarity of a group of societies with regard to a certain variable: the higher the standard deviation figure, the larger the dispersion. The t-value is a discriminating measure which indicates the significance of a variable in defining a particular cluster of societies. A high positive

figure means the variable in question is important for defining a group of societies and a negative t-value means the variable is significant in defining a group of societies by its low occurrence in comparison to other clusters. The standard mean is a reflection of the t-value. It is the mean occurrence of a variable in a particular cluster compared to the mean occurrence of the same variable for the whole sample. A high standard mean score for a variable means the factor is significant for its high occurrence in one cluster compared to the occurrence of the same variable for the remainder of the sample. Several tables are based simply on the percentage occurrence statistic and only the significant cluster tables use all four statistics because a surfeit of figures tends to blind a reader to the main argument.

The matrix (diagram 56) indicates the groups of variables which are possibly correlated with one another and which were programmed into the computer. On the basis of variables relating to social structure and group composition there are three types of social organization in New Guinea (see table 10). These three types of social organization are called divided villages, conglomerate settlement and scatter^{ed} settlement (Table 10).

Societies	Standard Deviation				Standard Deviation			
	% Occurrence	Standard Deviation	T Value	Standard mean	% Occurrence	Standard Deviation	T Value	Standard mean
Divided Villages	Village (=parish)	100%						
	Ward	100%	.1059	.2829	.495	.3112	.495	.1205
	Confederation	57.2%	.5556	1.0226	.452			
	Sub ward	28.6%						
Abelam								
Asmat								
Waropen								
Iatmul								
Kiwal								
Jale								
Siane								
Conglomerate Settlement								
Arapesh								
Orokaiva								
Markham								
Valley Hamlet								
Bokandini								
Dani								
Ilaga Dani								
Grand Valley								
Trans. Fly								
Bena Bena								
Gahuku								
Kamano etc.								
Kapauku								
Marind-anim								

Table (10) : Three types of social organization (the lists of societies in this table, and the ones which follow, is according to the order given by the computer).

In the divided village category the central territorial and political group is a parish with a single village settlement. The confederation occurs in a little over 50% of the societies which constitute this category. The village is always divided into wards and in approximately 25% of the societies the ward is divided into sub-wards. Wards are often conceived as descent groups whereas villages and confederations are not equated with descent ideas. Wards which are conceived as descent groups are strongly agnatic and non-agnatic male members are of minor importance in all cases. There is no clear tendency for certain levels of descent grouping to correspond to a particular size of territorial group; for example, in half the societies, clans are dispersed whereas in the other half, clans are localized.

In the conglomerate settlement category the parish is the central, structural political group. Only 25% of the societies in this cluster have confederations. There is a slight tendency for an internal sub-division of parishes into localities. The parish is usually not conceived as a descent group (91.7%) and the confederation, where it occurs, is never conceived as a descent group. Settlement patterns within this cluster are either villages (41.7%) or hamlets (58.4%). Unlike the former cluster the political groups are territorial and not centred upon a settlement; for this reason settlements are not internally sub-divided. In half of the societies the people conceive of their settlements as descent groups and these settlements are strongly agnatic in terms of membership because non-agnatic individuals are either of minor importance (16.7%) or of no importance at all (35.5%). The percentage of descent groups which do not correspond to territorial groups is high in comparison to the other two clusters.

In the scattered settlement category the parish is also the central, structural political group. The grouping of parishes into confederations is a marked tendency (87.5%) and confederations

are usually not conceived as descent groups (50%). The territorial sub-division of parishes into localities also characterizes this cluster (87.5%); in some cases there is a further sub-division into sub-localities (37.5%). The settlement pattern is scattered homesteads dispersed throughout the territory. The conception of parishes, localities and sub-localities as descent groups is significant and the correspondence between territorial groups and descent groups is greater than the other two clusters. Parishes are strongly agnatic because the smaller territorial groups which compose them are usually conceived as agnatically related, and non-agnatic groups are therefore of minor importance (75%) in their composition. There is a trend for the recruitment of persons residentially outside the territorial group as principal members in time of war.

Briefly summarized, the three clusters are firstly, societies in which the parish is equivalent to a single village which is internally sub-divided into wards. The wards, unlike the village, are conceived as descent groups. Secondly, societies in which the parish is rarely sub-divided territorially or conceived as a descent group. This cluster is characterized by conglomerate settlement patterns. Thirdly, societies in which the parish is equated with marked agnatic descent groups. Parishes are grouped into confederations and sub-divided into localities and the settlement pattern is scattered homesteads.

There is an interesting tendency for anthropologists schooled in the British structural descent theories to report on the societies classified as notably agnatic, particularly societies in the scattered settlement category. Although these societies come from approximately the same geographical region there are grounds for the sceptical to conclude that there is more truth in Scheffler's (1966) pithy title "Ancestor Worship in Anthropology" than meets the eye. This emphasis on descent, as argued

in this thesis, obscures the essential character of warfare in New Guinea.

The comparative analysis of social organization demonstrates that territorial groups, even when they correspond closely to descent groups, are the important groups in war. A man does not fight for his descent group but his group of residence, which is a faction group centred upon a big man. The fact that territorial groups are conceptually equated with descent groups does not mean the latter are the significant groups in war. The idea of descent is important for group solidarity and identity, but it is not the recruitment principle in times of war. Although some individuals are recruited to the principal group in a war on the basis of rights other than residence, these warriors form a negligible part of the principal military unit. A minority of societies (37%) recruit some individuals to the principal group in a war by criteria other than residence.

	Number of Societies	Percentage Occurrence
Kind resident in another territorial group	5	(18.5%)
Agnatic relatives resident in another territorial group	5	(18.5%)
Garden rights in different group	4	(14.8%)
Trade rights in different group	3	(11.1%)

Table (11) : Men recruited to principal group on criteria other than residence.

In some cases it is difficult to decide whether recruits from other groups are members of the principal group in a war or individuals recruited as allies. Where men are obliged to support the group because of certain rights there, they are members of the principal group, whereas individual

allies are obliged to fight because of ties to specific members of the principal group. The former are obliged to support the group but the latter are obliged to help individual members of the group. The significant fact, however, is the importance of residence in the recruitment of principal groups to war and the comparative insignificance of other ways of recruitment.

A possible explanation for the emphasis on descent in societies of the third cluster is because in areas of scattered settlement an emphasis on descent and agnatic obligations is a way of securing support in times of sudden attack. In the other two clusters the settlement pattern results in a collection of warriors in one place, sufficient to repel an attack and therefore an emphasis on descent obligations is unnecessary. The higher frequency of wars between neighbouring groups, in certain societies, for example certain people in the eastern Highlands, is facilitated by the weaker descent concepts held in these areas. Societies with a strong concept of descent and agnatic obligations wage wars between neighbours less frequently because of the inhibiting effect of descent links upon aggression.

The idea of three types of social organization in New Guinea will probably throw light on other problems besides warfare but there is not the space to follow the several implications which flow at a tangent from the classification. The tendency for societies with scattered settlement, for example, to organize their parishes into confederations, is possibly the result of an extension of the principles applied to unite settlements; when the value of this principle in war is realized, possibly the people extend it to cover larger and more effective groups. This is speculation however, and possibly several of the variables present in these clusters are the result of pure chance.

It is useful to distinguish the different types of war which are present in New Guinea. Langness (1964) attempts a classification of war into two types, which he calls restricted and unrestricted. Restricted war is found in the lowlands, is seasonal in occurrence and has limited goals because people fight for specific reasons. Unrestricted war occurs in the highlands, it is not seasonal, enemies are not specific and the people fight for a number of reasons. Langness admits that this a tentative classification based on insufficient data. In fact the classification is useless because it is not rigorous and is based on randomly selected variables, some of which are not critical in a classification of war.

On the basis of variables for major war the computer distinguished between three types of war in New Guinea. These three types of war are called wars of redress, wars for deep rooted reasons and permanent war (see table 12).

In societies which fight wars of redress there is a reasonably high degree of social contact between members of potential enemy groups during periods of peace. The number of individual ties between potential enemy groups is, on average, moderate. The result of these close social contacts is a high number of marriages and trading relationships between individuals in enemy groups (100%). The cause of wars of redress is a dispute between members of different political groups which are potential enemies. The most frequent causes of disputes are thefts, sexual offences, sorcery and exchange payment failures. A dispute sometimes leads to a fight for redress and when the original disputants are supported by their respective political groups the result is a war. All individual disputes do not escalate into war and the point at which a dispute escalates into war is of crucial importance in an understanding of wars of redress. There are two reasons why certain disputes, and not others, escalate into war. Firstly, there is the significant rôle of big men (see pp.264) who encourage or repress war according to their own political plans. Secondly, a number of disputes between different individuals of opposed political groups results in a strain on the relations between these groups. As the number of disputes increases the strain on relations increases until several men bear a grudge against certain members of the opposed group. This is a volatile situation because the opinion of several men is important in the political decisions of their group and if they urge for war the big man is in a weak position. The tense situation culminates in a war, started by a particular dispute which group opinion thinks requires redress.

It is necessary to distinguish between the start of a war between two groups previously living in peace and the maintenance of a war once started. Disputes start wars of redress but they are maintained by

obligations to secure revenge for dead persons. A revenge obligation outstanding from a previous war can contribute to the desire of an individual to start a war but revenge obligations are most significant in the maintenance of hostilities, which sometimes last for years. Also a war, once started, sometimes continues for political reasons. Individual relations between enemy groups are curtailed and big men urge members of their group to permanently weaken the enemy so that they can no longer be a nuisance. Prestige is not an important reason for individuals fighting in wars of redress (t value = -2.2747) and a possible reason for this is that when men think war is for redress they do not require personal incentives, such as prestige, to fight.

Wars of redress usually finish in a peace settlement and the resumption of social relations between the two groups, (The Bena Bena are the exception but it is probable that Langness's term truce is in fact a period of superficial peace). The considerable number of individual ties between enemy groups facilitate the negotiation of a peace settlement. The payment of reparation and wergild characterize the settlement of wars of redress and this is in keeping with the stable form of peace usually settled after a war. Although half the societies have superficial peace these settlements are stronger than those made in other types of war; an important reason for this is the number of individual ties between potential enemy groups. In wars where men can trace the cause to a specific dispute, reparation is commonly demanded.

The possibility that a war of redress ends in a rout and pillage, is high. The fact that defeated parishes sometimes reform is a reflection of the political aims of many wars, because once the rival group is weakened their reformation is no longer a political threat.

In societies which fight wars for deep rooted reasons, the social contact between potential enemy groups is less and the number of

individual ties is, on average, small. The number of marriages contracted with enemy groups and the number of trading partners there, is small. Although the cause of a war is sometimes an individual dispute which escalates into a fight, this is not the primary reason of wars for deep rooted reasons. The peace settlements which characterize this type of war are superficial and marked by hostile feelings because the small number of individual ties between potential enemy groups encourages fragile peace settlements. The result of these tenuous peace settlements is that war is not declared over a specific dispute but is a permanent threat. The reasons for war are deep rooted and always present. Revenge obligations are never forgotten and wars frequently start because one side has a blood debt to settle from a previous round of hostilities. In some societies the reasons for war are religious, for example, the heads or names of enemy victims are essential for the development of children and continuance of society. Individual prestige is a significant reason for warriors to fight in wars (81.9%). The respect given to warriors is closely associated with the fact that it is right to fight enemies because they are dangerous and a threat.

The social and political threat of enemy groups is an explicit reason for fighting wars in the societies grouped in this cluster. It is not necessary for big men to manipulate relations with a potential enemy group to their political advantage because the threat of enemy groups is an institutionalized reason for war. Not all wars, possibly not even the majority of wars, result from a political threat, but the deep rooted reasons which characterize this type of war facilitate the political aims of big men when necessary, because the enemy threat is always present. The rout of a defeated group occurs frequently but the low occurrence of pillage is difficult to explain; possibly the journeys

which characterize the military engagements of this type of war preclude pillage on a large scale (see pp.341). The high frequency of cannibalism (63.7%) which occurs in wars for deep rooted reasons typifies the hostile relations between enemies, although some of this cannibalism is for religious reasons as opposed to reasons of revenge and spite (see Volhard 1939).

In societies which fight permanent wars social contacts between enemy groups are nil and individual ties are rare. The result is that men never marry women from enemy groups. As the title suggests, people who fight permanent wars never settle peace, although tenuous truces are sometimes settled. The reason for permanent wars is that it is right to fight enemies all the time because the only relationship with them is war; they are, and can only be, enemies. An obligation to seek revenge for dead warriors serves as a buttress to this type of war and ensures continual hostility. Individual prestige also ensures that warriors fight against their traditional enemies because the weakening of enemy threats is an admirable deed. Enemy groups are a continual threat to the existence of a group and big men play a small rôle in manipulating situations to their political advantage. The enemy is always the enemy and it is desirable to weaken them.

Sorcery can cause a fight, not a war, because sorcery is mystical aggression aimed at the enemy, and any sudden deaths are interpreted as the result of enemy sorcery which demand revenge. Permanent wars frequently end with the rout of the defeated and the pillage of their territory but the fact that defeated parishes are allowed to reform again demonstrates the importance of weakening the enemy politically and not completely destroying them.

In table (12) some societies are misplaced because of the material programmed into the computer. The Maring fight wars of redress but are

classified in the second cluster because the computer failed to discriminate the causes of major war, which is an escalation from minor war. The Jale are classified in the second cluster because of the length of their major wars, which results in hostilities more like wars for deep rooted reasons than wars of redress, although fighting is originally caused by a dispute. The Arapesh are classified in the second cluster because the reason for their wars (abduction of women) suggests the superficial type of peace settlements which characterize wars for deep rooted reasons.

The occurrence of different types of war in New Guinea is not easy to explain but their recognition solves some of the problems which surround the patterns of war found on the island. Berndt (1964:203), for example, is curious why some people marry their enemies while others do not marry into enemy groups. The answer is, people who do not marry their enemies fight a different type of war (permanent war) to the people who marry enemies.

In several lowland societies there is a correlation between swamp ecology and the presence of wars for deep rooted reasons. The environment results in a low population density where people practise a hunting and gathering economy which requires large areas for the support of small groups. The low density of population results in infrequent social contacts between potential enemy groups and the possibility of individual disputes causing war is reduced. There is no apparent ecological explanation for wars of redress and permanent wars in the highlands, other than the environment allows a density of population which ensures social contact between potential enemies. Variations in social organization do not explain the presence of different types of war in the highlands. People with larger political groups (confederations), for example, are not more likely to fight one type of war than another; neither are people

with internally fragmented political groups characterized by a specific type of war.

All minor wars fall into the major war category of wars of redress, but the increased number of individual ties and greater degree of social contact between potential enemy groups marks off minor wars of redress as a different type of war from major wars of redress. Minor wars are of shorter duration than major wars and the peace settlements are more reliable. The high incidence of wergild (77%) is a reflection of these durable peace settlements. The rout of a defeated group and the pillage of their property never occurs in almost all minor wars (92.3%).

Although minor wars are sometimes the result of the political manipulations of small big men struggling to extend their small field of influence, they are more usually the result of increasing strain between members of neighbouring groups who desire redress and a chance to teach their rivals a lesson.

Minor War Cluster	Relations between Indiv. Enemy	Immediate Causes of War	Reasons for War
Arapesh	Marry enemy=100%	Theft = 62.9%	Redress = 100%
Chimba	Trade with enemy=100%	Sexual Offence=62.9%	Indiv. prestige=23.1%
Gahuku	Many indiv. links=77%	Dispute between indivs of different groups=100%	Revenge obligation=23.1%
Maring	Mod. indiv. links=15.4%		
B. Dani	Small no. indiv. links = 7.7%	Sorcery = 15.4%	
G.V. Dani		Exchange payment failure = 15.4%	
Salé		Property dispute=23.1%	
Huli			
Mae Enga			
I. Dani			
Kuma			
Melpa			
Marind			

Table (13) : Classification of minor war as war of redress.

There is no correlation between the three different types of war and the presence or absence of minor war in a society.

Type of War	Presence of Minor War	Percentage Occurrence
War of Redress	5	50%
War for deep-rooted reasons	3	27.2%
Permanent War	5	83.3%

Table (14) : Presence of minor war correlated with types of major war

Table (14) indicates a slight correlation between the presence of minor war and the occurrence of permanent war, which indicates that where certain groups are permanent enemies, neighbouring groups fight minor wars over disputes. In societies with major wars of redress half the sample also fight minor wars of redress and the presence of minor war is not therefore dependent on a particular type of major war. The three societies which have minor wars and major wars for deep rooted reasons are from the highlands and the low occurrence of minor wars in lowland societies is explicable in ecological terms. The low density of population results in limited social contacts between groups and this reduces the likelihood of disputes and minor war.

There is a slight correlation between the presence of minor war and the groups of societies based on the variables of social organization.

Social Organization Cluster	Presence of Minor War	Percentage Occurrence
Divided Villages	1	14.3%
Conglomerate Settlement	6	50%
Scattered Settlement	6	75%

Table (15) : Presence of minor war correlated with types of social organization.

There is a tendency for societies with large, compact settlements not to engage upon minor war. Perhaps larger settlements refrain from minor war and fight only major wars because men living together restrain each other in disputes in order to prevent war between neighbouring groups, which is recognized as detrimental to success in times of major war.

There is no tendency for societies with large political groups to experience minor war within the confederation rather than major war, because the former does less damage to the political solidarity of the group.

	Societies with Minor War	Percentage Occurrence
Confederation	8	62%
No Confederation	5	38%

Table (16) : Presence of minor war correlated with size of political groups.

Neither is there any correlation between the size of the groups within which lethal fights are forbidden and the occurrence of minor war.

The fact that minor war is found primarily in the highlands (92.4%) suggests an ecological explanation. Minor wars occur mainly in societies situated in regions of mixed forest and grassland which is an environment that allows a high population density and places neighbouring groups close together. The closer small political groups are, the higher the probability of disputes and minor war. The geographical proximity of groups and the probability of disputes is reduced in regions of heavy forest and swamp; for example, the Jalé are the only people in a heavily forested region to fight minor wars, and they fight minor wars between wards of the same village. In regions of grassland the population density may be high but the need for unity in defence against an attack by a major enemy makes minor war imprudent because of the defensive difficulties experienced in these regions. The Cahuku are an exception, but they maintain defensive arrangements because other villages within a confederation

remain neutral during a minor war.

The size of the groups within which lethal fights are forbidden varies from wards (3.7%), hamlets (3.7%), sub-localities (3.7%) and localities (18.5%) to large groups, such as parishes (33.3%), villages (18.5%) and confederations (18.5%). In societies where lethal fights are forbidden in large political groups the military unit is not necessarily stronger because the component groups do not always make a single military unit. The social norm against killing men within a certain group only ensures the neutrality of the smaller political groups which compose this group and not their active support of one another in war. In defence against an enemy attack however, the larger the group within which lethal fights are forbidden the safer the small political groups composing it because the enemy probably have to cross the territory of groups which are friendly with the group it is planned to attack.

The size and composition of principal groups to war are important distinctions in a study of social organization and primitive war. The size of principal groups to major war varies from hamlets (14.8%), wards (3.7%) and localities (22.2%) to larger groups, such as villages (29.6 %) and parishes (29.6%). In some societies it is possible to distinguish minor war by the small size of the principal groups compared to the larger principal groups which fight major wars. The principal groups in minor war range from wards (7.6%), hamlets (7.6%) and localities (46%) to parishes (23%) and villages (15.2%). In several societies (69%) however, the principal group in minor war is the same group as the principal in major war and the variation in size between minor and major war principal groups is not a satisfactory variable by which to distinguish these types of war. Although smaller principal groups characterize minor war there is no correlation between the different types of war and the size of the principal group; major wars of redress, for

example, do not occur more frequently between smaller principal groups than larger ones.

The principal groups in war are conceived as either settlement groups (48.1%) or territorial groups (51.9%) and this is a distinction which occurs throughout the social organization of war in New Guinea (see table 21). The recruitment of warriors in the societies which conceive of their principal groups as territorial groups is not based on descent and the idea of descent is not stronger in these societies than those which conceive of their principal groups as settlements.

During the computer analysis a distinction was made between the groups people conceived as enemies and the groups which they actually fight in a single engagement; the former are usually larger than the latter, although in some cases, both groups are the same size. This is a significant distinction which few writers make carefully and for this reason no comparative material is available on the importance of this conceptual distinction. In societies which have permanent war, for example, the group conceived as an enemy is probably much larger than any group fought at one time.

The structural distance between enemy groups distinguishes minor war from major war because in the former, enemies are socially closer groups; a fact supported by the large number of individual ties between enemy groups. In minor war, enemies range from groups within the same parish (53.2%) to groups in different parishes but within the same confederation (60.8%) - the Maring are exceptional with minor war enemies outside the confederation. In major war the enemy is either a different parish or a group within a different parish (48.1%), or in societies with larger political groups, the enemy is a group within a different confederation (51.9%).

Other than the correlation between the structural distance of enemy groups and the occurrence of minor war, there is no correlation between the type of war and the structural distance between enemy groups. Although all the societies which fight permanent wars have their enemies in different confederations, this fact is offset by the occurrence (40%) of enemies in different confederations in societies which fight major wars of redress. Although exact geographical information is unavailable, it is probable, regardless of structural distance (a factor of the social organization), that enemy groups in permanent war and war for deep rooted reasons are geographically more distant than enemies in wars of redress, because a degree of proximity is necessary in the latter to facilitate social contact and disputes. The diminishing number of individual ties between members of enemy groups, from wars of redress through wars for deep rooted reasons to permanent wars, supports the suggestion concerning geographical proximity and types of war.

Table (17) is a comparison of enemy groups, the number of individual ties between members of these groups and their behaviour in times of war when faced as enemies. The five clusters are listed in descending magnitude of social relations between enemy groups and although there is no correlation between the structural distance of enemy groups and the number of individual ties, there is a correlation with types of war. At the top of the table, in clusters one and two, societies which fight wars of redress occur, where a considerable number of members from enemy groups have individual ties and their behaviour as enemies is either neutrality, avoidance or help. In clusters three and four the number of individual ties diminishes and societies which fight wars for deep rooted reasons occur in these clusters. In the final cluster are societies which fight permanent wars and in these societies the few individual relatives who meet as enemies fight each other.

CLUSTERS	ENEMY GROUP		INDIV ENEMY RELATIONS		BEHAVIOUR OF RELATED INDIVS AS ENEMIES	
	Group in diff. parish	Percentage Occurrence	Large number indiv. links Moderate number of indiv.links Small number of indiv. links	Percentage Occurrence	Relatives fight & avoid Relatives - neutral	Percentage Occurrence
Cluster (1) Bena I. Dani Huli B. Dani	Group in diff. parish	100%	Large number indiv. links Moderate number of indiv.links Small number of indiv. links	50% 25% 25%	Relatives fight & avoid Relatives - neutral	50% 75%
Cluster (2) Chimbu Maring Fore Kamano M. Enga Orokaiwa T. Fly	Group in diff. confed. Group in diff. parish	71.5% 28.6%	Moderate number of indiv. links Small number of indiv. links	57.2% 28.6%	Relatives fight & avoid Relatives warn & protect Relatives neutral	71.5% 71.5% 71.5%
Cluster (3) Abelam Siane Jalé Kiwai	Group in diff. confed	100%	Small number of indiv. links	100%	Relatives fight Relatives fight & avoid Relatives ward & protect Relatives neutral	25% 25% 25% 75%
Cluster (4) Arapesh Kapauku Markham Asmat Iatmul Waropen	Group in diff. parish	100%	Moderate number of indiv. links Small number of indiv. links Very small number of indiv. links	33.4% 66.7% 16.7%	Few social contacts Relatives fight Relatives fight & avoid Relatives warn & protect Relatives neutral	16.7% 33.4% 16.7% 16.7% 16.7%

Cluster (5) Gahuku Kuma Mendi Melpa Marind G.V. Dani	Group in diff. confed	100%	Very small number of indiv. links No indiv. links	66.7% 33.4%	Few social contacts Relatives fight	83.4% 16.7%
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Table (17) : Relations and behaviour of individuals in opposed enemy groups

The insignificance of descent in structuring war in New Guinea is demonstrated in table (18), where the behaviour of related individuals who are members of opposed enemy groups, is compared with the significance of descent. There is little indication that in societies where descent concepts are of some importance related individuals remain neutral and avoid direct conflict.

Significance of Descent	Behaviour of Related indivs. as enemies
1. -descent concepts not imp. for conceptualization of relationships during war.	Relatives fight = 28.6% Relatives fith & avoid = 14.3% Relatives warn & protect = 14.3% Relatives neutral = 42.9% Few social contaäts = 28.6%
2. -descent concepts of only minor imp. in conceptualizing relationships during war	Relatives fight = 25% Relatives fight & avoid = 33.4% Relatives warn & protect = 25% Relatives neutral = 50% Few social contacts = 16.7%
3. - descent concepts of some imp. in coneptualizing relationships during war.	Relatives fight& avoid = 37.5% Relatives warn & protect = 25% Relatives neutral = 37.5% Few social contacts = 37.5%

Table (18) : Significance of descent correlated with behaviour of related individuals as enemies.

An interesting aspect of war in New Guinea, is where relatives stand opposed as enemies but avoid each other during the engagement; this behaviour appears to contravene established kinship norms. This behaviour characterizes societies where wars of redress occur (50%) and where it is important to distinguish between members of the principal group to a war and members of ally groups. The explanation of this situation, where relatives can fight as members of enemy groups, is ideological. Members of the principal group to a war, who are related to members of the principal enemy group, experience a confusion of values because they are obliged to support their group in a dispute with the enemy, and their probable reaction is to remain neutral. Allies do not experience this

ideological problem because the dispute is not theirs and they are not seeking redress against the enemy, but fulfilling an obligation to support relatives. Relatives can fight for opposed enemy groups, as allies, because they are not fighting each other as enemies but as opposed allies who are recruited to different sides by relatives in the principal enemy groups.

The different ideological values behind wars for deep rooted reasons and permanent wars facilitate direct, aggressive contact between related individuals in enemy groups, although it is incorrect to think that group relations always dictate to the activities of individuals. There is a tendency for men to forget their fragile relations in other groups during war because all enemies are a threat which needs reducing.

The idea of equality found in New Guinea society is important for an understanding of war because no man can command others to fight and although individuals, in certain situations, are obliged to support members of their group, they are free to remain neutral if circumstances make this a prudent action. Big men lead because of their influence and ability to use group opinion to their advantage but they cannot dictate to anybody that he must, as opposed to should, fight. The unpredictable composition of a military unit is the result of the ideal of equality. Men are free to choose whether to fight or not and they base their decisions on personal criteria, such as relations with the enemy and self gain, which vary from one person to the next. The individual behaviour of warriors is the result of the political situation and their behaviour is only influenced by descent group obligations to the extent that descent groups correspond to the territorial factions centred on big men.

It is important to remember that war is a group activity, whereas the ties which exist between enemy groups are individual concerns and

individuals cannot influence group actions, unless there are several individuals with the same opinion. It is for this reason that individual ties between potential enemy groups are not important in the prevention of war; unless there are several individuals related to the enemy group, which in effect, precludes the use of the term potential enemy group. An influential big man, with ties in a potential enemy group, can influence group activity to a limited extent but when the number of disputes with the enemy reaches a certain point and several men think war is necessary, the big man's influence diminishes.

Pospisil (1958) demonstrates the extent and significance of a Kapauku big man's ties outside his own group. By contracting marriages and exchange relationships with potential enemy groups, a big man extends his influence and tries to manipulate these relations to his political advantage but he cannot prevent war. Individual ties between members of enemy groups are not important in the prevention of war but in the negotiation of peace, because persons related to both sides can meet safely to negotiate a peace settlement.

Several writers (e.g. Berndt 1964; Strathern 1972) comment on the variation in the recruitment of allies throughout New Guinea. There is a significant distinction between the recruitment of groups as allies and the recruitment of individuals as allies. Strathern (1972:74) makes this distinction by creating models based on the Melpa, Mae Enga and Huli. In his first model there are stable alliances between localized groups which are strengthened by intermarriage and exchange. In the second model, although there are localized groups, there are no stable alliances. In the third model, political responsibility rests with individual men and not the group and men recruit their allies via their individual ties. The significance of this model

for other societies in New Guinea is difficult to gauge because few ethnographies contain sufficient information on ally relationships. The model, however, is more a difference in degree than type because in several societies allies are recruited both as groups and individuals; while in other societies people conceive of their allies as groups when in reality they are individuals; a result of the choice afforded by the flexible social situation.

Table (19) indicates a correlation between the three types of social organization and the recruitment of allies. In societies of the divided village category, individual allies are rare and settlement groups, usually villages, are frequently recruited as allies. Societies classified in the conglomerate settlement category also recruit few individual allies but there are a variety of groups recruited as allies. Societies in the scattered settlement category frequently recruit individuals and groups as allies, which indicates that these societies possess the most extensive and reliable ally network.

The greater emphasis placed on descent ideas and agnatic obligations probably accounts to a certain extent for the reliable ally situation in societies with scattered settlement. The scattered pattern of settlement encourages the maintenance of reliable ally relationships, whereas large settlements tend to form independent military units and ignore ally relationships. The scattered pattern of settlement is also the probable reason for the emphasis on individual allies, because in times of war the quick recruitment of ally groups is difficult, whereas individual allies are easier to muster.

<u>CLUSTER</u>	<u>GROUPS RECRUITED AS ALLIES</u> <u>Percentage occurrence</u>	<u>INDIVIDUALS RECRUITED AS ALLIES</u>
<u>Divided Village</u> Abelam Asmat Waropen Iatmul Kiwai Jalé Siane	Village(=parish) same confed. 85.8% Village(=parish) diff. Confed. 28.6% Village(=parish) 42.9% Wards, same village 28.6%	Relatives-choose 14.3%
<u>Confederate Settlement</u>		
Arapesh Orokaiva Markham B. Dani I. Dani G. V. Dani T. Fly Bena Gahuku Kamano Kapanku Marind	Locality same parish 33.4% Locality diff parish 8.4% Hamlet same parish 33.4% Hamlet diff parish 8.4% Parish same confed. 33.4% Parish diff confed. 16.7% Village same parish 25% Village diff parish 16.7% Diff parish 16.7% No Ally Groups 25%	Relatives-choose 33.4% Relatives-self gain 8.4%
<u>Scattered Settlement</u>		
Chimbu Maring Melpa Fore Kuma Mendi Mae Enga Huli	Locality same parish same confed. 50% Locality diff. parish same confed. 25% Locality same parish Hamlet same parish same confed. 25% Parish same confed. 87.5% Parish diff confed. 50%	Relatives-choose 87.5% Relatives-obliged 25%

Table (19) : Clusters based on social organization correlated with recruitment of allies.

Ally support is given for various reasons, for example, some allies are obliged to support relatives or remain neutral, others are free to choose whether to support a group or not and others fight simply for reasons of self gain. There is a direct correlation between the structural and territorial distance between the principal group and their ally groups and the reasons why the latter support the former.

Ally Group	Frequency Neutral	Frequency Obligated	Frequency Choose	Frequency Gain
Village, same parish)	1		1	1
Wards, same village) = same	1		1	
Hamlet, same parish) parish	3	2	1	
Locality, same parish)	5	4	1	
TOTAL FOR SAME PARISH	10	6	4	1
Village (=parish) same confed.)	3	2		1
Hamlet diff parish, same confed)				1
Locality diff parish, same confed)	1	1		
Parish, same confed. diff)	7	4	3	
parish =)				
same confed.)				
TOTAL FOR DIFF. PARISH, SAME CONFED.	11	7	3	2
Village, diff parish)				5
Hamlet, diff parish) = diff			1	
Locality, diff parish) parish			1	1
Diff Parish)			1	1
TOTAL FOR DIFF. PARISH	0	0	2	7
Village (=parish) diff. confed				2
Parish, diff confed.				6
TOTAL FOR DIFF PARISH DIFF CONFED	0	0	0	8

Table (20) : Reasons allies fight correlated with distance of ally groups.

Neighbouring groups are more likely to remain neutral and avoid a possible confrontation with a friendly group or fight because of obligations to support the principal group, than more distant groups, which are more likely to fight as allies for reasons of self gain. As mentioned previously, the reasons for ally support vary from one type of war to another. In wars of redress, close allies fight because they are obliged to support the principal group, whereas distant allies fight, more often, for reasons of self gain, (without the added responsibility of acting as principal group to the war). In wars for deep rooted reasons and permanent wars, allies unite to fight a common enemy and thus fight for reasons of self gain mixed with an obligation to support friendly groups against their common enemy.

The societies with a larger territorial and political organization do not have a more elaborate and reliable ally network than societies with smaller political groups. In the large societies, the nearest groups usually remain neutral, which is not an entirely negative action because it assures the principal group a place of refuge in times of defeat.

Ally groups occur infrequently in minor war (30%) and the probable reason for this is the value of presenting a united front to major war enemies. If groups which usually fight as allies in major war are locked in minor combat, they are in a vulnerable position with regard to major enemy attacks. This situation is significant because it demonstrates that in New Guinea societies, small groups do not automatically form up into increasing military units as the threat of a distant enemy group increases, like certain acephalous societies in Africa. In New Guinea allies are political groups which wax and wane with the fortunes of war.

There is a significant distinction between societies which conceive of their social organization and the groups concerned with war as territorial groups and those societies which base their social organization on settlement groups, (see pp.288). In table (21) the first two clusters are societies which base their organization on settlement groups and the second two clusters are societies which base their organization on territorial groups. There is a correlation between the way people structure their group organization, and the type of war they engage upon. Societies in which wars for deep rooted reasons occur tend to have their social organization based on settlement groups, whereas wars of redress and permanent wars occur in societies which base their organization on territorial groups. The Siane are an exception to this pattern but the Kamano, Kapauku and Fore, although classified in cluster two, are not exceptions, because their military units are based on territorial groups, while their social organization is based, to a certain extent, on settlement groups.

Cluster (1)	Occurrence		Occurrence		Occurrence		Occurrence	
	Village(=parish) Wards	100% 100%	Village(=parish) Ward	85.8% 14.3%	Village (=parish) diff. confed. Village (=parish)	57.2% 42.9%		Village(=parish) same confed. Village(=parish) diff. confed Village(=parish)
Abelam Jalé Kiwai Siane Asmat Iatmul Waropen							85.8% 28.6% 42.9%	
Arapesh Kamano Kapauku Marind Fore T. Fly Markham Orokaiwa	Parish Hamlet Village Confed.	100% 62.5% 37.5% 25%	Hamlet Village Parish	50% 25% 25%	Hamlet, diff parish Hamlet diff. parish diff con fed. Village, diff people Diff. parish Parish diff. confed.	25% 12.5% 12.5% 37.5% 12.5%	Hamlet same parish Hamlet diff parish Village same parish Village diff parish None	50% 25% 37.5% 25% 25%
Bena B. Dani Huli I. Dani	Parish Locality Hamlet Village Scattered Homesteads	100% 100% 50% 25% 25%	Locality	100%	Locality diff. parish	100%	Locality same parish Locality diff. parish None	100% 25% 25%
Chimbu Enga Mendi Gahuku Maring G.V. Dani Kuma Melpa	Confed Parish Locality Scattered Homesteads Hamlet Village	100% 100% 87.5% 75% 25% 12.5%	Parish Locality	75% 25%	Parish, diff. confed.	100%	Parish same confed Parish diff. confed Bocality same parish Locality diff. parish	100% 75% 50% 25%

Table (21) : Conception of groups as territorial or settlement groups
(Major War)

The groups concerned in minor wars of redress support this pattern because they are based largely on territorial, as opposed to settlement, groups, (Table (22)).

<u>CLUSTER</u>	<u>PRINCIPAL GROUPS:</u>		<u>ENEMY GROUPS:</u>		<u>ALLY GROUPS:</u>	
	Parish	Percent Occurrence	Locality same parish	Percent Occurrence	None	Percent Occurrence
Arapesh	Parish	22.8%	Locality same parish	38%	None	69.6%
Ganuku	Locality	45.6%	Locality diff. parish	30.4%	Locality same parish	22.8%
Marind	Hamlet	7.6%	Village, diff. parish	15.2%	Locality diff. parish	7.6%
Maring	Village	15.2%	Ward, same village	7.6%	Parish same confed.	7.6%
Chimbu	Ward	7.6%	(= parish)	7.6%	Parish diff. confed.	7.6%
G.V. Dani			Hamlet same parish	7.6%	Hamlet diff. parish	7.6%
Huli						
I. Dani						
M. Enga						
Jalé						
B. Dani						
Melpa						
Kuma						

Table (22) : Conception of groups as territorial or settlement groups
(Minor war)

There is a correlation between types of war, the basis of social organization and different types of military organization (see chapter 4). Infrequent raids which result in a high number of casualties characterize wars for deep rooted reasons, whereas battles and frequent raids which result in few casualties characterize wars for redress and permanent wars. The former type of military engagement is difficult to carry out upon groups other than compact and isolated settlements, because the danger of retaliation by allies is too great to facilitate the thorough destruction which typifies this form of engagement. The causes which characterize wars of redress occur more easily where the social organization is based upon territorial groups, because disputes can develop, and the strain can grow between groups spread across a territory, without a big man having full realization of the situation. In a compact settlement, where big men are cognizant of disputes, they can take evasive action and manipulate the situation to prevent a war, if it suits their political aims. The reasons for a conceptual distinction between social organizations based on settlements and social organizations based on territorial groups are complex and concerned with aspects of culture outside the brief of this thesis, but this conceptual distinction is significant and may facilitate the understanding of other aspects of social organization in New Guinea.

Table (23) demonstrates that there is a direct correlation between the settlement of war and different types of war. The payment of wergild is correlated with the settlement of stable peace because enemy deaths are compensated and an exchange relationship is usually started or renewed. Reparation is paid between allies in wars of redress because in these wars the people can identify the original party to the dispute

which escalated into war. The article by Glasse (1959) concerning the function of reparation payment failures in preventing the establishment of large military forces is only partially correct, because reparation payments occur only in a few societies, but there are no large military units anywhere in New Guinea. The reason for small military units in New Guinea is the restricted size of political groups, which is the result of the political system. The political system restricts the influence of a big man to a small group which has to fight for its survival against rival faction groups. Where reparation payments occur, disputes over their allocation contribute to the maintenance of small military units, but this is not the reason for small political groups, which are an inherent aspect of New Guinea society. The necessity for an equal number of dead warriors on either side, before peace can be settled, is reminiscent of the feud but the exact significance of this requirement is not clear, although it is an indication of the importance of revenge obligations in the maintenance of New Guinea wars. The exchange of persons between enemy groups during a peace settlement (see pp.374) is restricted to wars for deep rooted reasons and is a reflection of the peace settlements which characterize this type of war. The exchange of individuals is possibly an attempt to correct the inherent instability which characterizes superficial peace settlements.

Types of War	Secure Peace	Superficial Peace	Never Peace	Armistice	Truce	Reparation	Wergild	Equal No's dead for peace	Indiv's exchanged in peace
War addressed	40%	50%	10%	10%	40%	40%	40%	50%	-
For Rooted ones	18.2%	63.7%	18.2%	9.1%	9.1%	-	-	27.3%	45.5%
Permanent	-	-	100%	-	50%	-	-	-	-
War addressed	100%	-	-	7.6%	7.6%	22.8%	76%	7.6%	-

Table (23) : Peace settlements correlated with types of war

The possibility of a rout and the destruction and pillage of a defeated groups' property is a common feature of wars in New Guinea (85%). The rout of a defeated group, however, is rarely for ecological reasons (see chapter 2) but is a demonstration of political strength by the victors over a rival group. Refugees usually flee individually and seek refuge with relatives and friends in other groups; it is rare for a defeated side to flee as a group (14.8%). The length of time it takes to absorb refugees as full members into their host groups, varies according to the importance of descent in the society concerned. Societies classified under the social organization cluster called scattered settlement, place emphasis on descent concepts and refugees are absorbed slowly into their host group (87.5%). In other societies, refugees are absorbed more quickly, that is, in the same or the following generation. Langness (1964:174) suggests that the flexibility of descent concepts is important in a region where groups are decimated and forced to seek refuge in other areas, but it is not advisable to suggest that this is a reason for flexible recruitment principles. The political organization of New Guinea, where small groups are struggling against each other for existence, means that big men are willing to place men in their debt and accept them into their group. Every additional warrior is an increase in military strength, which is essential for the survival of a political group. The position of refugees in their host group supports the interpretation that political groups in New Guinea are factions centred on big men and not descent groups. Although refugees are absorbed slowly into the descent group structure of their host group they are practically full members of the group and fight for their group of residence in times of war. The working of a genealogical fiction takes more than a generation because a shorter period would reduce the

value of descent concepts in New Guinea, and the people (and not only anthropologists!) would comment on the putative nature of their descent. Fictions created in less time would fail in their basic function, which is giving solidarity to groups in a flexible social environment.

The significance of ceremonial exchange systems in New Guinea society is commented upon by several writers. Success in ceremonial exchange, for example, is important for the reputation and influence of big men, and exchange is a significant factor in relations between groups. Possible connections between war and ceremonial exchange are suggested by some writers. Strathern (1971), for example, postulates that when the Australian administration establish peace, exchange transactions increase between former enemies because the competitive nature of exchange allows the "war of status" (1971:95) to continue. The compensation payments which follow a war, are important in a study of exchange, because they initiate an exchange cycle and are interwoven into the exchange pattern, (Elkin 1953:199; Strathern 1971:94). On the theme of warfare and exchange in New Guinea, Berndt (1964:184) generalizes that "the more stable the alliances, the more highly developed and formalized the system of economic exchange".

An approach from the subject of warfare can throw new light on some of the old problems surrounding ceremonial exchange. The articles people exchange are not only valuable goods of wealth which have little or no utilitarian use. Although wealth forms the pivot of an exchange network, the people also exchange utilitarian articles. Uberoi (1962:148), in his reappraisal of the Kula exchange network, thinks that "the importance of the trade which follows the flag has been greatly minimized." The significant point about these utilitarian subsidiary exchanges is that they allow the trade of goods from areas where they are abundant,

to areas where they are scarce. Lashing creepers, for example, are found only on the Trobriands, clay pots are made only on the Amphletts and good quality greenstone for axes occurs only on Woodlark Island, (Malinowski 1922). Similarly, in the Hagen region of the highlands, stone for axes is abundant but salt has to come from the Enga region, valuable shells and body oil from the Mendi region, and forest products, such as plumes and fur, from the Jimi Valley. (Strathern 1971:101)

Ceremonial exchange is part of an extensive network of individual ties which indirectly unite several groups; some of these networks have graphic titles, such as the "kula ring" or "rope of moka". Warfare is significant in ceremonial exchange because the groups which exchange goods are potential enemies and anchoring utilitarian exchanges within a ceremonial context is a safeguard. Trading with potential enemies is a precarious pursuit because they might turn up in force and take what they desire. Trade partnerships are relations of competitive prestige and success in exchange is equivalent to the respect a man can earn on the field of battle. Trade partners are thus an insurance for the safety of each other because neither wishes to see the other injured and in a hostile environment this safeguard is important, not only because it facilitates the exchange of mundane goods, but also allows a greater amount of social intercourse between members of potential enemy groups.

Table (24) indicates the significance of trade with the enemy, during periods of peace, in all types of war, (except for societies with permanent wars) and this supports the above argument concerning war and ceremonial exchange.

<u>Type of War</u>	<u>Significance of Trade</u>
Wars of redress (minor war)	100%
Wars of redress (major war)	100%
Wars for deep rooted reasons	91%
Permanent wars	-

Table (24) : Significance of trade compared with types of war.

Chapter 4

PRIMITIVE MILITARY ORGANIZATION

The object of this chapter is to analyse military organization in New Guinea. Military organization is defined as the ordering of a group of warriors to carry out an act of aggression and is distinguished from the subject matter of the previous chapter which dealt with social organization and warfare. In this chapter the military group and the organization of acts of aggression are discussed. Some students quibble over the use of the word organization because they think warfare in New Guinea is manifestly not organized. Although in comparison with modern armies, New Guinea people have a weakly developed military organization, this does not mean they lack organization altogether. What appears as chaotic fighting does have a thread of order running through it which is adequate for the aims of New Guinea warfare.

The separate societies in this survey lack sufficient information on military organization to permit a short description of each people. Even if the information was available it is doubtful whether this approach would be of particular value because the general pattern of military organization is the same for large areas of New Guinea and to account for each people separately would introduce an unnecessary element of repetition. The approach of this chapter is to analyse a number of critical military principles and illustrate each one with

some ethnographic examples from the sample of this survey. In this fashion, a general picture of military organization in New Guinea is built up. An attempt is made at the end of the chapter to compare the variations in military organization found in New Guinea.

The military principles used in this thesis are a modification of those given by Turney-High, in his book Primitive War (1949:25-26;30). These principles are divided up under the following topics: preparation for war, approach to an engagement, the actual engagement, retirement from an engagement and post-war activities.

Although the aim of Turney-High is different from the aim of this thesis, his military criteria form a good basis for the type of comparison attempted here. Turney-High points out that "successful warfare is a matter of social organization, not of superior weapons" (1949:257) but his main objective is to demonstrate that the cultures he defines as primitive lack true war because of a deficiency in social organization with regard to military aspirations. The intention of this chapter is not to show that true war, however this is defined, does or does not exist in New Guinea. The aim is to clarify the variations in military organization found on the island and explore how these variations compare with other variables defined in this thesis.

In a study of military organization it is necessary to distinguish between different types of aggressive engagement. Firstly, there are campaigns, which are planned, long term offensives carried out against a

specific enemy, with defined ends in view. Turney-High (1949:30) thinks that the campaign is necessary for true war - the campaign is not found in New Guinea.

Secondly, there are battles, which are encounters for combat between two opposed groups of warriors, in which both sides are prepared to make war. Thirdly, there are raids, which are sudden attacks by a group of warriors on an unprepared settlement. Finally, there are ambushes, which consist of a concealed group of warriors lying in wait to make a surprise attack on an unsuspecting and outnumbered group of the enemy. Deceitful murders and assassinations of unsuspecting individuals by supposed friends are classified as ambushes.

Preparation for war: Rituals, which the people believe give protection to warriors and ensure success in the forthcoming encounter, are found in various forms throughout New Guinea. Two ethnographic examples are briefly presented to illustrate the form these rituals take. One example is from the highlands, the Maring, a people who fight by battle; the other example is from the lowlands, the Kiwai, a people who fight in raids.

A Maring ura auere (minor war) is always preceded by a certain amount of ritual. Firstly, a shaman enters a trance in which he is possessed by the "smoke woman" who will inform the ancestors of the forthcoming fight and secure ancestral protection for the warriors.

The shaman takes the hands of each warrior and wipes sweat off them from his arm pit to impart ancestral protection and strength. The morning before the battle bamp kunda yu (fight magic men) recite over the weapons and press small bundles ("fight packages") on the head and heart of each warrior to diminish his fear. These bundles contain leaves from a thorny tree, mixed with personal leavings from the enemy (such as hair and nails) which are passed on by neutrals or persons of the enemy group with a grudge against a particular individual. The Maring believe that persons who have some personal rubbish in the "fight package" are easy prey in the forthcoming battle. Next, grey clay is daubed on the legs of warriors to give them strength for the duration of the battle. Finally, lengths of green bamboo are placed on a fire and the warriors gather round as the bamp kunda yu call for ancestral aid. When the bamboo explodes the men leave for the battle ground.

The ura kunu'ai (major war) is more serious and consequently demands more elaborate ritual preparation. When the Maring declare major war they uproot the rumbim plant. This plant signifies the right of a group to their territory and when uprooted, the plant cannot be replanted until ancestors and allies are repaid in pigs for their aid in the war. The hanging up of the "fighting stones" (a few prehistoric mortars) is an important act because it places the principle group in debt to ancestors and allies for their help in the

forthcoming war. When the stones are in position a fight magic man climbs the roof of the ringi house (in which hang the fighting stones) and lights a piece of red wood which the Maring believe supports the red spirits. The man climbs down and lights a fire with the red wood and the warriors believe the ash of this fire has supernatural powers. Next, two pigs are slain, one for the red spirits and the other for the earth spirits. During the slaughter the fight magic men inform the spirits that the pig is offered to them in return for help in the forthcoming war. The smoke woman possesses a shaman in the men's house and tells the warriors which enemies will be easily killed. The shaman also warns members of his own group who are in danger but warriors who are warned of any danger enter the battle knowing their reputation will be enhanced if they survive because they have a strong life force.

The head of the pig sacrificed to the red spirits is cooked in a separate oven where it is believed to collect enemy miñ (life force) wandering in dreams. Men whose miñ is collected are easy to kill and the names of these unfortunate men are divined by putting names to the oven which whistles an affirmative at the name of a trapped miñ. The fight bundles are again pressed on the warriors. Two rumbim plants are planted in the ringi house where they keep the warriors' miñ when they go to battle because a warrior who approaches the enemy, with his life force powerfully

bespelled by them, is certain to die. In the morning the pigs are taken from the ovens and the fight stones are placed on them. The warriors then enter the ringi house and take some supernatural ash from the stones which they smear on their faces and bodies for protection. The warriors believe their min is replaced by the hard fire of the red spirits which makes them strong, hot and revengeful. The warriors have to observe stringent taboos, after smearing on the ashes, to maintain their strength; for example, they cannot eat cold, damp vegetables because these extinguish the fires in the head. After a meal of salted fat and leaves, the warriors form a circle of shields round a fire upon which they place green bamboo. The shaman is once again possessed and warns the men of his group who are in danger and names the enemy who are weak. When the bamboo explodes the warriors leave for battle, confident with their ritual preparations.

The Kiwai precede a raid with several rites they believe ensure success and protect warriors. A man whose wife is pregnant cannot attend a raid or else he and his comrades will die; the Kiwai equate the blood of his death wound with the blood of childbirth. Before a raid warriors abstain from sexual intercourse and avoid certain foods, for example, turtle is not eaten because it is a shy creature and the enemy will be shy also and run away before the raid. Shark is a desirable meat for a warrior because the creature is ferocious.

The Kiwai paint their canoes with various designs to protect themselves and ensure the slowness and unawareness of the enemy. Arrows are prepared by sticking them in rotting corpses or wrapping the hair of a previous victim around the shaft. An arrow from a friend killed in a previous raid, which is allowed to fall naturally from the rotting corpse, is considered a particularly deadly weapon. The Kiwai also believe that the secretions of a woman's vulva are potent in the preparation of weapons.

Young men who have never attended a raid are carefully prepared. Certain stages of their initiation are designed to make them warriors and before a raid the young men are given various medicines. One medicine consists of the eyes, talons, beak and tongue of a hawk. The eyes help warriors to find their enemy, the beak helps them catch their victims and the tongue symbolizes the fury of fighting. Another medicine consists of the young warrior's father's semen, which his mother collects in a coconut bowl and mixes with some dried flesh and blood of a previously killed enemy. The woman dips her fingers in the medicine and strokes her son's eyebrows upwards so that he can see the enemy well and she applies some of the mixture to his feet so that he can run quickly. Sometimes the penis and vulva of victims are cut off and dried so that before a future raid bits of these organs may be eaten to help warriors kill more enemies. Eating vulva has the added advantage of ensuring that the enemy are

preoccupied with their women and remain unaware of the approaching raid. Prior to the attack a man chews a piece of ginger which has been kept inside his wife's vulva. He spits the juice on himself and brushes his eyelids upwards to ensure vigilance in the raid. Some of the rites performed before a raid have a long effect and can benefit a man for years.

Before a raiding party departs all the warriors taking part collect in the men's house where an old woman lies down with her head towards the east and the rising sun. An old man places an ibáia, a swamp creature which moves with a limp, on her vulva. The limping of the reptile symbolizes the stumbling of a wounded man. The warriors, one by one, crawl between the old man's legs, snatch the ibáia and walk away. To ensure the safe return of the raiding party, the ritual is repeated with the old woman's head in the west.

The Kiwai also have rituals which they believe weaken the enemy before a raid. An old man, for example, chews ginger and squirts the juice in the direction of the enemy while he mutters some formula. A similar formula is uttered over an object, particularly an old beheading knife, which is thrust in the direction of the enemy. Some men are capable of bíamáí, where they send their spirits to defeat the enemy before a raid. A dried penis and vulva are sometimes used to increase the effect of bíamáí. They are laid on a path and an old man spits medicine on them, he then lies down and



Plate (7) : A Trans-Fly warrior with head trophy (Williams 1936)

the warriors step over him. The old man is then joined by his wife and they lie together to "teach" the enemy to be "lazy". The skull of a departed relative is sometimes used to weaken the enemy. A man catapults the skull from the branch of a tree in the direction of the enemy and calls upon the dead person to attack the enemy.

The Kiwai are also anxious to divine the result of a projected raid. If a raiding party, for example, meets a snake which is crawling in the same direction as the warriors, the enemy will not be found but if a snake meets the raiding party head on, the warriors will meet the enemy unawares. Another method of divination is to tie up the paddles from the canoe used by a raiding party. If, in the morning, any of the paddles have been moved by the spirits, their owners will die in the forthcoming raid. Another method of divination is for an old man to inhale the smoke of a pipe deeply into his lungs. If he chokes this is a bad omen because it signifies defeat and the warriors running until they are breathless. If the old man blows out the smoke this is a good omen and the raid will be a success.

Although the symbolism and details of rites vary from one people to another, certain underlying factors remain constant. A desire, for example, to ensure supernatural help for victory and to divine the outcome of a fight, are common. The belief that rituals protect warriors from harm is also widespread and in some cases,

warriors in danger are warned before the fight. There is little point in discussing the ineffectiveness of these rituals from a scientific point of view, and without concrete data, there is little point in discussing the psychological benefits of these rituals. Men warned they are in danger, for example, possibly suffer a loss of confidence which can result in their death but without detailed psychological evidence this remains an untested supposition. The study of ritual preparations for war are valuable in determining the attitudes and values of New Guinea people to war. In their ritual preparations these people show certain martial values, such as fear of death and a desire to ensure victory. There is, however, insufficient ethnographic data to allow a study of primitive military values and in anthropology generally, the study of values is poorly developed.

The material preparation for war is not so thoroughly organized as the supernatural preparation and proceeds in a casual fashion. The preparation of weapons is an individual affair; each warrior knows what he requires and is free to choose the weapons he carries into war. There is no indication that warriors try to improve their armoury in an attempt to secure a technical advantage over their enemies and some field-workers remark on the conservative attitude of warriors to their weapons. Heider (1970), for example, comments on the fact that no Grand Valley Dani group use flighted



Plate (8) : Tadmül warrior with distinctions of a successful warrior. The pendants on his lime stick are a tally of the men he has killed (Bateson 1936)

arrows or fire arrows in a volley; two techniques which would greatly improve the efficiency of an archer. This does not mean New Guinea natives are disinterested in their weapons. In many cultures, for example, there is an elaborate classification of several types of arrow and other weapons (see Heider 1970:283-6). The construction of weapons is not in the hands of specialists; each warrior is responsible for making his own equipment. The almost perpetual nature of war in New Guinea means that warriors are always well equipped and damaged or lost weapons are continually replaced. A war does not herald a work bee with men fervently making weapons.

Men are also responsible for their own attire and decorations during a fight. The dress of war varies from a colourful attire of shells, feathers and ochre for a battle (see Strathern and Strathern 1971) to almost nothing in a raid, except for a colouring of the skin which serves the purpose of identifying friend from foe in the ^{early} morning mêlée, (e.g. the Maring-anim and Kiwai use lime). Few writers remark on the supply of weapons during a period of hostilities and it is probable that all societies have only a haphazard flow of supplies. During a Kapauku battle, for example, old men are kept busy producing arrows for warriors on the battlefield. The casual attitude towards weapons is shown in Ryan's (1958) discussion of Mendi shields. The Mendi make shields when they think it necessary and repaint them occasionally - when not in use shields are used as front doors or are thrown to the back of a hut.



Plate (9) : Vomiting induced by forcing a cane down the throat -
part of male initiation in the Eastern highlands (Berndt 1962)

The intangible preparations for war, like the tangible preparations, are always prepared and on hand. Plans, like weapons, are not prepared at the outbreak of a war but are always ready. The people of New Guinea are as conservative with their plans for war, as they are with their weapons. The stereo-typed nature of war renders elaborate plans unnecessary as fights follow conventional patterns within which groups manipulate for advantage but outside which they will not venture. Big men suggest approaches within the set pattern and the attention paid to their advice depends on the extent of their influence. The weak nature of leadership contributes to the ineffectiveness of elaborate plans because warriors ignore commands in the heat of a fight. Among the Bokondini Dani, for example, a group of big men make the decision to fight and their support is essential because only big men can ensure ancestral help with the arrow rite. Big men also suggest methods of approach but a Bokondini battle is stylized and in the turmoil no warrior heeds any plans but fights according to his own judgement. The stylized battle plans are known by both sides; the degree of choice within these limits is small and the lack of discipline renders any plan, outside the accepted format, a failure.

An important aspect of preparation for war is the training of warriors. Formal training in discipline conduct in battle and the use of weapons, is absent from all the societies in this survey. The initiation of

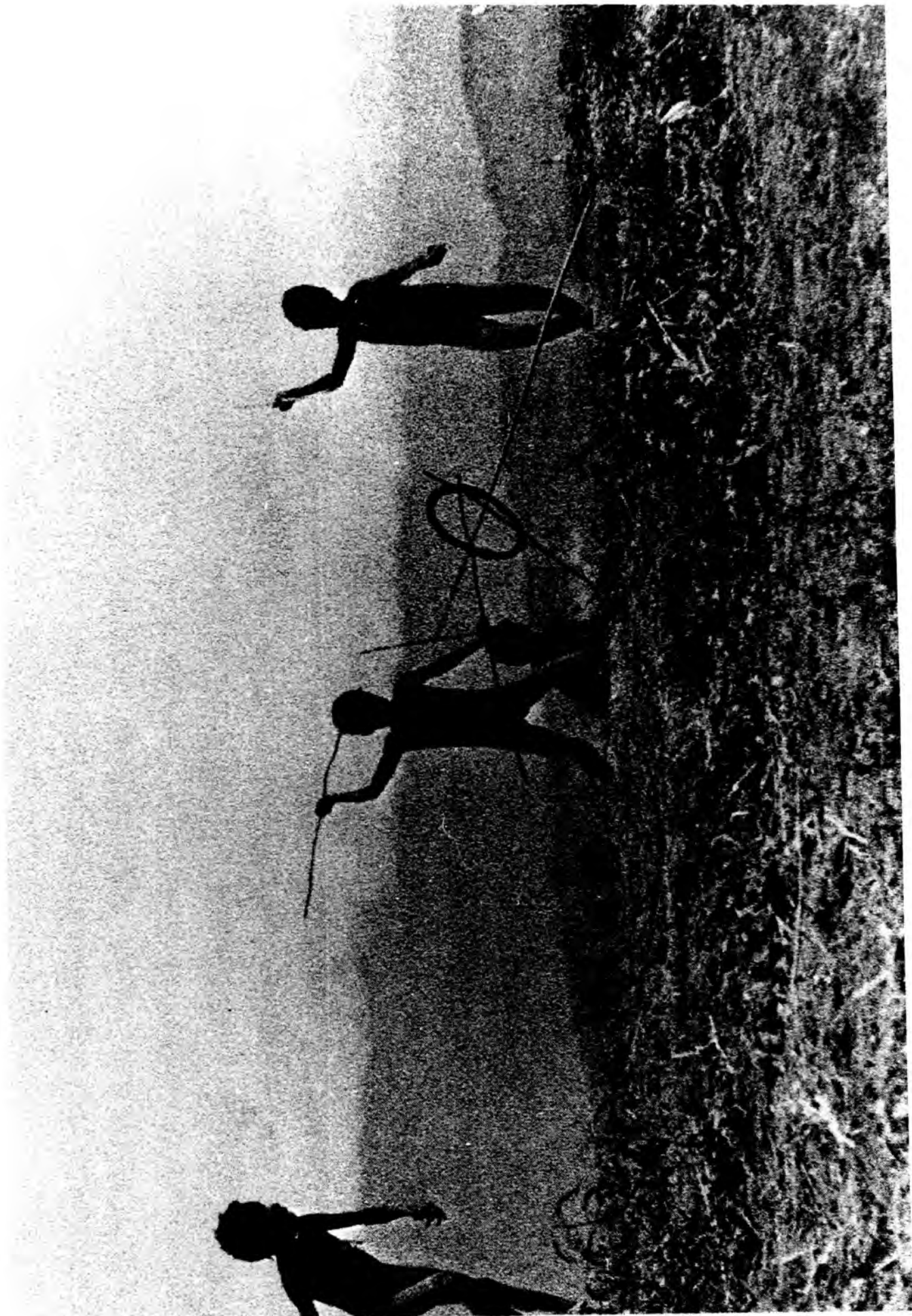


Plate (10) : Dani boys learn the skills of war in play (Heider 1970)

young men into adulthood, however, is conceived as a training period in some societies. The initiation ceremonies of the Kamano, Jate, Usurufa and Fore, for example, inflict a considerable amount of pain on the initiates with nose bleeding, vomiting and operations on various parts of the body, notably the septum and the penis. The expressed purpose of these rituals is to make the young man a strong warrior, a person who can ignore pain. These painful operations "develop, not immunity to pain, but what appears to be acceptance, accompanied by a show of indifference" (Berndt 1962: 108). The initiation operations are closely associated with the ritual preparations for war because the drawing of blood is thought to encourage ancestral help. During the rituals men carry their weapons which they sometimes brandish in front of the youths to demonstrate the value and use of arms. The skilful use of weapons and efficient conduct in fights, however, are subjects a male learns from early childhood and which he is constantly encouraged to perfect.

Among the Bokondini Dani there are no initiation rites to mark the passage of a youth to adulthood; young men slowly develop to the status of an adult. At about four years of age a boy is given a small bow to practise with. At first a child fires at inanimate objects, then he fires at birds and when big enough he joins hunting parties. The culmination of the informal training of a boy is when



Plate (II) : Dani boys learn the tactics of war by watching battles

(Gardner & Heider 1969)

his father or an elder brother calls him up to fight in a battle. The boy fights alongside a relative who watches him closely and criticizes his faults. Other men watch the boy, not to offer advice, but to judge his potential because it is on the battlefield a man wins social esteem and can acquire sufficient influence to rank as a big man. Sometimes an enemy is caught and a young man called upon to shoot him and "to learn it" as the Dani say. The idea that a young man can benefit by making his first kill on a captive enemy is found in several societies; for example, Bateson (1932:276) reports that among the Iatmul small boys make their first kill on a captive.

The training of warriors is an informal process which starts with the play of children and develops gradually until the young man is considered capable to take his place as a true warrior. Among the Melpa for example, young boys learn the practical skills of war in sham fights with harmless reed spears (Vicedem and Tischner 1943:152). During this period of growing up and martial training a boy lives in a situation where fights are common. In some societies, boys too young to fight in a battle watch from a safe distance and learn the techniques of the battlefield. Among the Grand Valley Dani, for example, boys sit well clear of the battle ground, with wounded men and other non-combatants, to watch the fight.

In preparation for war the recruitment of warriors is important. Members of the principal group to a war are soon aware of the impending fight and are obliged to fight, unless related to members of the enemy side or seriously wounded. There is no orderly call up of warriors and the fighting force grows as men casually drift in from other groups. Sometimes a formal request for help is sent by one group to an ally group; for example, the Abelam send a shell ring with a leaf twisted through it, as a request for help. The Melpa send a messenger to ally groups, with news of a battle and the Waropen request the aid of allies by sending the ghone, which is a knotted rope. In any particular engagement it is impossible to predict beforehand exactly how many warriors will be present. The fighting force varies, like a kaleidoscope at every twist, as warriors come and warriors go. Men base their decisions to fight on individual factors and it is this element of individual choice which makes generalizations about groups so difficult.

The declaration of war varies from area to area and depends largely on the type of engagement and the relationship between enemy groups. Where groups are permanently enemies, for example among the Mendi and the Kuma, there are no declarations of war because enemies are always at war. Similarly, people who fight by raids do not declare their intention to fight because this would ruin the element of surprise.

Societies in which declarations of war occur are those where groups live for a period of time in peace or where enemy groups fight battles. Declarations of war vary; the Abelam, for example, issue a formal challenge for a battle whereas the Maring agree to a major war battle after a bout of minor war. The Melpa declare their intention to fight a battle by lighting a fire on a hill near the battlefield. In some cases there is no formal declaration of war. Among the Kapauku, for example, the group of an aggrieved man march on the village of the wrongdoer. The approaching war party is usually spotted and the cause of the war is shouted to the enemy. If the attacked village consider the cause unjust they dance the waita tai and then rush to prevent the invaders from entering their village. The attacked villagers summon their allies by shouting to other villages and they form a battle line in their gardens or on an area of grassland. This method of initiating hostilities is a ritualized declaration of war because the invading group could defeat the outnumbered village before their allies arrive.

An important preparation in case of attack is defence and defensive arrangements vary from one area to another. Table (25) demonstrates there is no simple correlation between type of settlement, defence arrangements and type of military engagement. Scattered settlements and palisaded villages are effective defence arrangements against sudden attack. The Chimbu explain

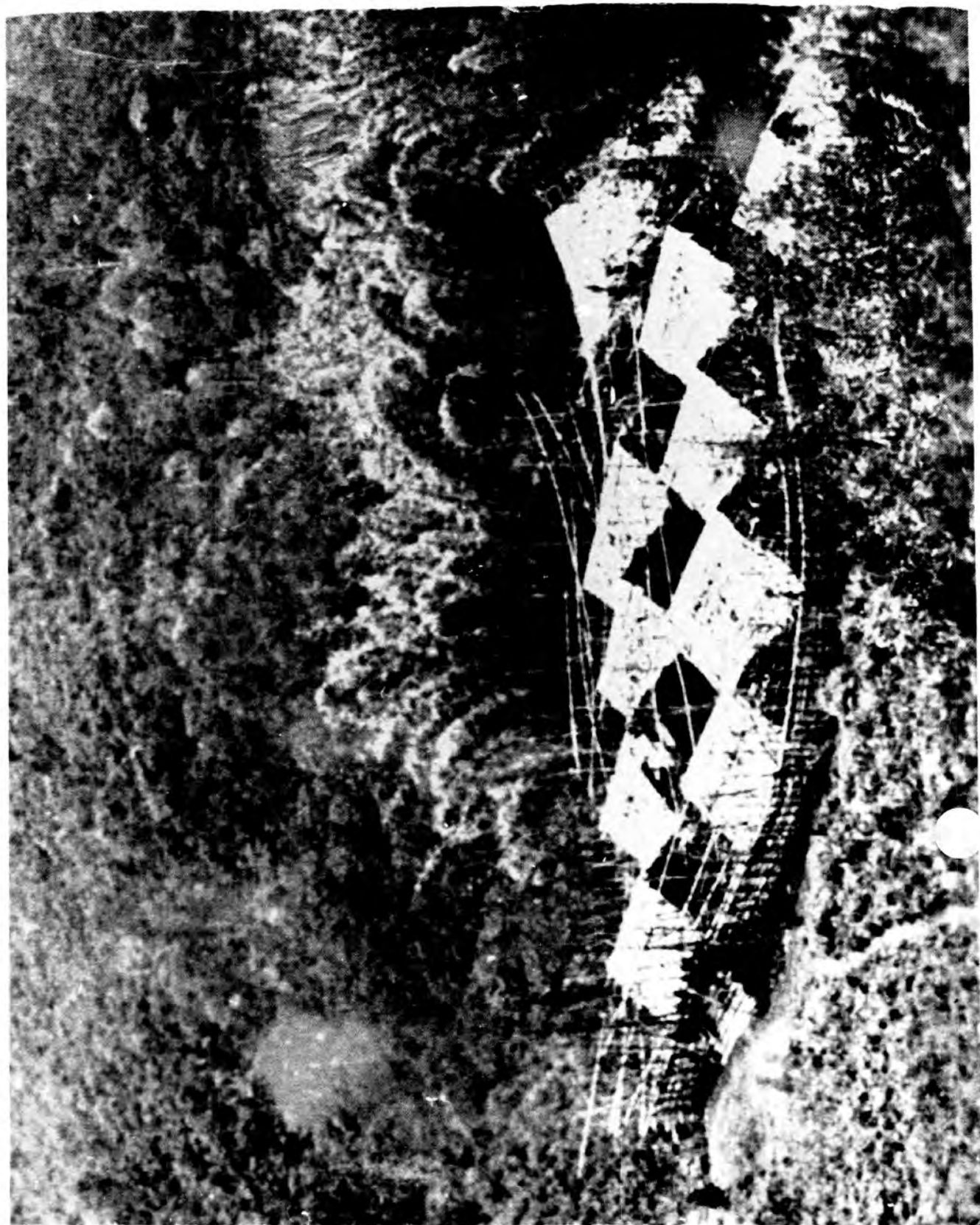


Plate (I2) : Village surrounded by stockade (Wright 1967)

their scattered settlement pattern "as an adaption to former conditions of warfare and attack. They say that the women, children and pigs were scattered and hidden for their own protection" (Brookfield and Brown 1959: 5). In a scattered settlement pattern, men's houses are usually situated with a commanding view because they are the targets of a raid. Women and children are relatively safe, raiders do not seek out dwellings for attack because this is tactically unsound and dangerous when there are warriors living in men's houses nearby. The Huli people supplement the defensive arrangements of scattered settlement with drainage ditches and cane thickets as an additional line of defence.

Some people supplement the use of a stockade with other defense arrangements, such as look-out towers and escape tunnels. The Abelam, for example, clear an area between the stockade and the forest which they spread with dead leaves so that an enemy approach is heard on the noisy mat of dead foliage. In the Bena region there is a high frequency of raids and the people supplement their palisaded villages with escape tunnels, secret doors from men's houses and sentry houses disguised as menstrual huts. This level of specialization in defence arrangements is uncommon for New Guinea. Orokaiva hamlets have tree houses which form useful posts for sentries or as places of refuge during a raid. Similarly, the Asmat use their look out houses as places of refuge in times of danger and as weapon armouries. Along enemy frontiers the Grand Valley



Plate (I3) : A Dani watchtower (Heider 1970)

Table (25) : Type of settlement and defence arrangements compared with military engagements

	Settlement Pattern			Defence Arrangements			Type of Engagement			Frequency		Casualties		
	Village	Hamlet	Scattered Homesteads	Palisaded settlement	Watch Tower	Tunnels etc.	Raid (always)	Raid (sometimes)	Battle	Battle (=accident)	Frequent Engagements	Infrequent Engagements	Few Casualties	Several Casualties
Abelam	*			*		*		*	*					
Arapesh		*						*	*					
Asmat	*			*	*		*				*		*	
Bena Bena	*			*		*	*			*			*	
Bokondini Dani		*						*	*					
Chimbu			*				*		*				*	
Fore		*		*			*			*			*	
Gahuku	*			*				*	*	*			*	
Grand Valley Dani		*			*			*	*	*			*	
Huli			*					*	*		*			
Iatmul	*						*				*			
Ilaga Dani		*						*	*					
Jalé	*							*	*					
Kamano, Jate Usurufa	*			*			*		*	*			*	
Kapauku	*							*	*				*	
Kiwai	*						*				*		*	
Kuma			*					*	*					
Mae Enga			*					*	*					
Marind-anim	*						*				*		*	
Maring		*	*					*	*					
Markham Valley		*						*	*	*				
Mendi			*				*		*					
Melpa			*					*	*				*	
Orokaiva		*		*	*		*			*			*	
Siane	*							*						
Trans-Fly		*					*				*		*	
Waropen	*			*						*			*	



Plate (I4) : An Asmat watchtower (Saulnier 1961)

Dani erect a system of look-out posts which consist of a column of poles lashed together with a small platform at the top. While people work in the surrounding gardens a sentry sits perched at the top of the column and a group of warriors relax in a small hut at the base of the tower in case of an alert by the look-out. When nobody is gardening, men leave the towers unattended and enemy raids can penetrate their territory, with the result that watch towers are sometimes destroyed. Artificial ponds are an additional defence arrangement used by the Dani because the approach of a raiding party scares the ducks which frequent the ponds and this serves as a warning. The Dani believe their ancestor shrines afford ritual protection because the spirits wave the tops of trees to warn of an approaching raid.

In areas where there is a constant threat of enemy raids it is difficult to understand why the people do not make use of more effective defence arrangements. Some people for example the Asmat, Trans-Fly and Iatmul, are in constant danger of decimating raids and yet there is no evidence that these people attempt anything but the crudest measures of defence. Table (25) indicates an approximate correlation between the frequency of raids (a variable difficult to evaluate because of a shortage of information) and defence arrangements. The higher the frequency with which raids occur the more likely are the people to take defensive measures. This

correlation is offset to some extent by the fact that infrequent raids result in more deaths per raid than frequent raids, (a fact which suggests the need for defence) - possibly the high casualty rate is the result of poor defence arrangements.

Approach to an engagement: The use of intelligence forces is important in an approach to an engagement. In New Guinea, war intelligence takes the form of scouts and spies who inform the main body of warriors as to the enemy's whereabouts and activities. A more sophisticated intelligence network is not practicable because of the poor command in military actions. There is a correlation between intelligence activities and the type of military engagement. In battles there is little scouting before the fight because there is no element of surprise. Scouting is also rendered unnecessary in a battle because both groups have a fair idea of the numbers on the enemy side, the terrain of the battlefield and the conventional tactics warriors use in an engagement.

In a raid the element of surprise is essential and the information of scouts on the location and strength of enemy settlements is necessary for success. The Marind-anim use scouts who sneak up to enemy settlements, judge the situation and report back to the main group of warriors before the final decision to attack is made. The Kiwai refer to scouts as óboro-rúbi (ghost people) because unknown to the enemy they hide close to their houses and assess the strength of the enemy settlement. Asmat and Marind-anim scouts not only

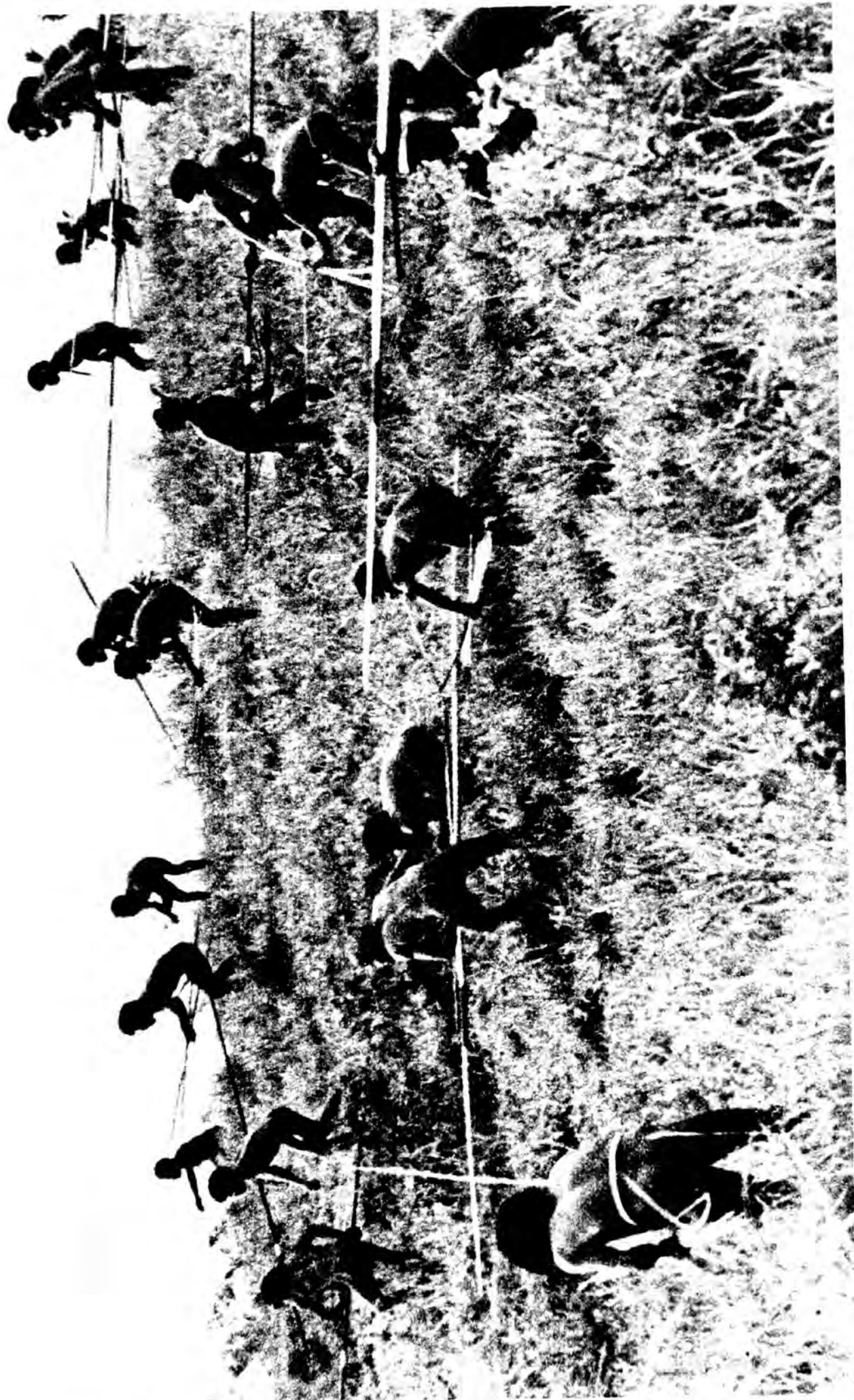


Plate (I5) : Dani warriors approach a battle (Gardner & Heider 1969)

reconoitre an enemy settlement but also listen for the names of enemies because when a warrior takes the head of an enemy he must know the victim's name so that he can bestow it on a child. Williams (1936:274-5) gives details of the reconoitring activities of scouts for the raid on the village of Pethekaka. The spies, called minjar, sometimes travel a day ahead of the main party on a large raid and they watch the enemy closely to observe where they sleep. One of the spies on the Pethekaka raid feared that the enemy would awaken too soon and he broke off and buried a twig for each voice he heard because this symbolized the deep sleep of the victims before the raid. The scouts returned to the other warriors and reported in whispers, for example, they advised against the use of bows because of the thick bamboo around the settlement and suggested close combat with clubs.

The approach formation of the main body of warriors is important, particularly in raids. Some people have no approach formations and warriors proceed in a haphazard way to the field for engagement. Grand Valley Dani warriors, for example, are casual in their approach to a battle, as groups of chattering and excited men make their way to the battlefield. Similarly, the Bokondini Dani run to join in a battle, 'grateful' for an opportunity to fight. Turney-High (1949:26-9) refers to the column and line and "people who do not avail themselves of these two single sociological devices



Plate (16) : The approach of a raiding party - Eastern highlands

(Berndt 1962)

are below the military horizon without argument."

The column is an approach formation and in New Guinea is not elaborated beyond a single file of warriors.

The Maring, for example, their ritual preparations completed, leave for the battlefield in single file, with a prancing gait and brandishing their weapons.

The remark by Turney-High that people without the column are "below the military horizon" is unjustified because many people in New Guinea have no formal approach column but their approach is efficient for the type of fighting engaged upon.

The Marind-anim, for example, have no approach columns but their approach to a raid is efficiently organized. The Marind-anim have kui kai, which are cleared passages through the forest that lead into enemy territory. Along these trails warriors have prepared camp sites and at rivers they have canoes concealed. A war party travels as a number of village groups along the kui kai and warriors rendezvous at appointed places en route. A crude generalization is that raids have more organized approaches than battles and this is a reflection of the necessity for surprise (which requires a reasonably organized approach,) in the former

Associated with approach formations is the principle of mobility. There is little difference in the military mobility of the people included in this survey and all warriors are mobile to the extent their legs carry them swiftly from place to place. Other than running, the only

other means of transport found in New Guinea is the canoe and some lowland people, for example, the Kiwai, fight sea battles in canoes (Baxter-Riley 1925). The heaviest piece of equipment carried by a warrior is his shield and in an emergency he can discard this to facilitate greater speed. Kiwai warriors, for example, throw away their bows after a raid to allow a quicker retreat. Mobility is important in a raid because after a strike in enemy territory it is necessary to escape swiftly. In a battle, unless routed and forced to retreat from the field, mobility is not so crucial, (except to avoid danger on the battlefield). New Guinea warriors travel light and with regard to their environment they are extremely mobile.

The actual engagement: The successful conduct of a war requires an adequate supply of essential goods for the warriors. A raid into a distant territory requires a more elaborate supply network than other types of engagement found in New Guinea because of the long approach and withdrawal. The Marind-anim make thorough preparations for a raiding expedition. The women collect large quantities of sago which is stowed aboard canoes for an expedition by river or carried by warriors on an overland expedition. The Marind-anim have their prepared camp sites near coconut stands or beaches which are rich in crabs and the warriors also visit friendly villages en route and stock up their supplies of sago. The Waropen, on the other hand, experience difficulties in supplying a large raiding party and for this reason

expeditions rarely travel large distances. The big men are responsible for supplying the canoes on a raid and sometimes a fleet of canoes establishes a supply dump of sago in the uninhabited forests around Geelvink Bay and this allows them to venture further afield.

In highland societies the problem is not supplying warriors for their journey but maintaining an adequate supply of food for the duration of hostilities. In regions where fights between enemy groups sometimes take place almost daily for certain periods and where there are frequent raids, there is a problem in attending to gardens. The Jalé experience this problem during minor war and after neglecting their gardens for several weeks, the people begin to fear a famine. When this happens, both sides arrange a truce for "guarded harvesting". Similarly, the protracted major war battles of the Maring are punctuated by cease fires which allow for essential garden work and rituals. During these lulls in the fighting men produce new weapons to replace those lost and broken in action. There is a distinction therefore, between the supply problems surrounding a raid on a distant settlement and the supply problems in an area where fighting is of a longer duration. As Turney-High (1949:31) points out, it is the inadequacy of supply which makes campaigns impossible in New Guinea and reduces wars to a series of raids or battles.

In a discussion of primitive military command it is necessary to distinguish between leadership before a fight and leadership during an actual engagement. Turney-High (1949:66-67) distinguishes five types of war leadership. Firstly, societies where there is no military leadership. During an actual fight in New Guinea there is usually no leadership because warriors fight as individuals and not as part of an organized team. Behind the front lines of a Grand Valley Dani battle, for example, there is a group of warriors resting from the heat of battle. The battle leaders stand here and shout unheeded advice to warriors, who are too busy dodging arrows and stalking the enemy to pay any attention. The command in a raid is usually good up until the surprise charge when warriors rush forth to bring down an enemy. Waropen big men, for example, have an extraordinary amount of influence for New Guinea leaders but during a raid they cannot command warriors in the heat of a fight. The leadership of a big man is limited to giving the signal for attack and divining the opinion of ancestors. A Kapauku battle is more organized, with the tonowii (big men), distinguished by carrying a large arrow, fighting on the front line and commanding their warriors. A Melpa big man rallies warriors for a battle but during the fight he has no control. In fact, some Melpa big men avoid fighting a battle because they are desirable targets for the enemy.

Secondly, there are advisory war leaders. The leadership before a fight is advisory in New Guinea. Big men can use their influence to prevent, or alternatively to encourage, a war and they can exert indirect pressures on warriors to fight but the extent to which a big man can influence military organization is small because military engagements follow conventional patterns. The military advice of big men is limited to suggestions about possible advantages of terrain or approach and the extent to which warriors listen to their advice is directly related to their reputations as successful warriors; men are more likely to heed the advice of a good warrior. The Grand Valley Dani, for example, have a limited number of battle approaches, a couple of which are surprise pincer attacks, and big men can use their influence to secure a certain approach when their position is strengthened by a number of outstanding revenge obligations. The advice of the leaders on the Pethekaka raid (Williams 1936:274), that clubs, not bows, should be used in the raid because of the cane thickets surrounding the enemy settlement, is an example of advisory leadership.

Thirdly, there are councils of important men. The big men of a group meet informally and discuss matters of military policy, especially the decision to fight in an engagement and these informal discussions between big men are an extension of advisory leadership. The

influence of big men is increased when they act together in military matters and it is possible that the attention paid to the advice of big men is directly correlated with the number of them who give it.

Fourthly, there are sacred leaders. Sacred leaders offer advice on the basis of supernatural advice which guides them in their decisions and big men commonly buttress their position by controlling this spiritual power. In Bokondini Dani society, for example, men secure the help of their ancestors by performing amulok kunik, a rite where a man squats over a ritual arrow which faces the enemy and concentrates on his victim saying "waro, waro" (kill, kill). The warriors most successful at gaining ancestral help in this rite are the brave men and in this way, Bokondini big men strengthen their leadership. In Maring battles, on the other hand, the "fight magic men" who perform the essential rituals of war have no leadership functions at all. During a battle, these men remain to the rear where they are heavily guarded because their death is an omen of defeat. Melpa big men strengthen their position by supervising the oracles which divine success or failure in a forthcoming battle. The etl kon kakli (cooking of upright weapons) oracle, for example, where weapons are stuck in a circle around a fire upon which green leaves are placed. If the smoke passes vertically between the weapons this signifies victory but if the smoke spreads across the ground this indicates defeat.

A ritual expert is the only person capable of interpreting certain Melpa oracles, such as the whistling of a dead warrior, and this freedom increases the influence of a big man.

Fifthly, there are special war leaders who are men chosen on the basis of their success as warriors to lead others in war. War leaders may not have any position of influence, within the group, during peace but this is unlikely in New Guinea where big men are usually successful warriors who achieve an influential status because of their reputations as brave men. In the Markham Valley, for example, a successful young warrior builds up a reputation to become a big man in later life. By the time a man reaches an influential status he is too old to fight and secures his position on the basis of his reputation built up as a young man. The war leaders in the Markham Valley are young men who are potential big men because of their military success. A similar situation exists in the Trans-Fly region. In the Pethekaka raid (Williams 1936:274), for example, a big man initiated the raid in revenge for his wife's death but the attack was led by three zealous young men who were marked as future big men because of their military successes. Leadership in New Guinea warfare is therefore, closely bound up with the position of influential big men who are at the centre of their groups (see pp. 261) This is not surprising if war in New Guinea is part of a political process which centres on factions collected around big men.

Modern armies are based on a hierarchy of command which passes from generals to N.C.O.'s. but in New Guinea there is no clearly defined hierarchy of command. Troop specialization is weakly developed and this renders a hierarchy of command unnecessary. Although the people can rank their big men in terms of "bigness" and influence, this does not amount to a hierarchy of command because less influential big men do not command small groups which dovetail together to form a larger military group under the command of an important big man. A hierarchy of command requires a division of the fighting force into regiments, battalions and companies, which is something never found in New Guinea.

The tactics of war in New Guinea are simple but a military engagement is confused because warriors fight according to their own judgements and not according to an organized plan. The challenge for a Grand Valley Dani battle, for example, is shouted to the enemy and a battle ground is agreed upon, early in the morning. A battle is preceded by a leisurely breakfast, after which warriors prepare to fight by greasing their bodies and putting on a few ornaments. The principle group to a battle recruit their allies with the whooping invitation of a cuckoo dove and warriors slowly drift to the battle ground, which is a strip of land on the frontier between the enemy groups. A battle starts between 9.00 a.m. and 11.00 a.m., when both sides are ready, and continues until dusk or rain. The first move

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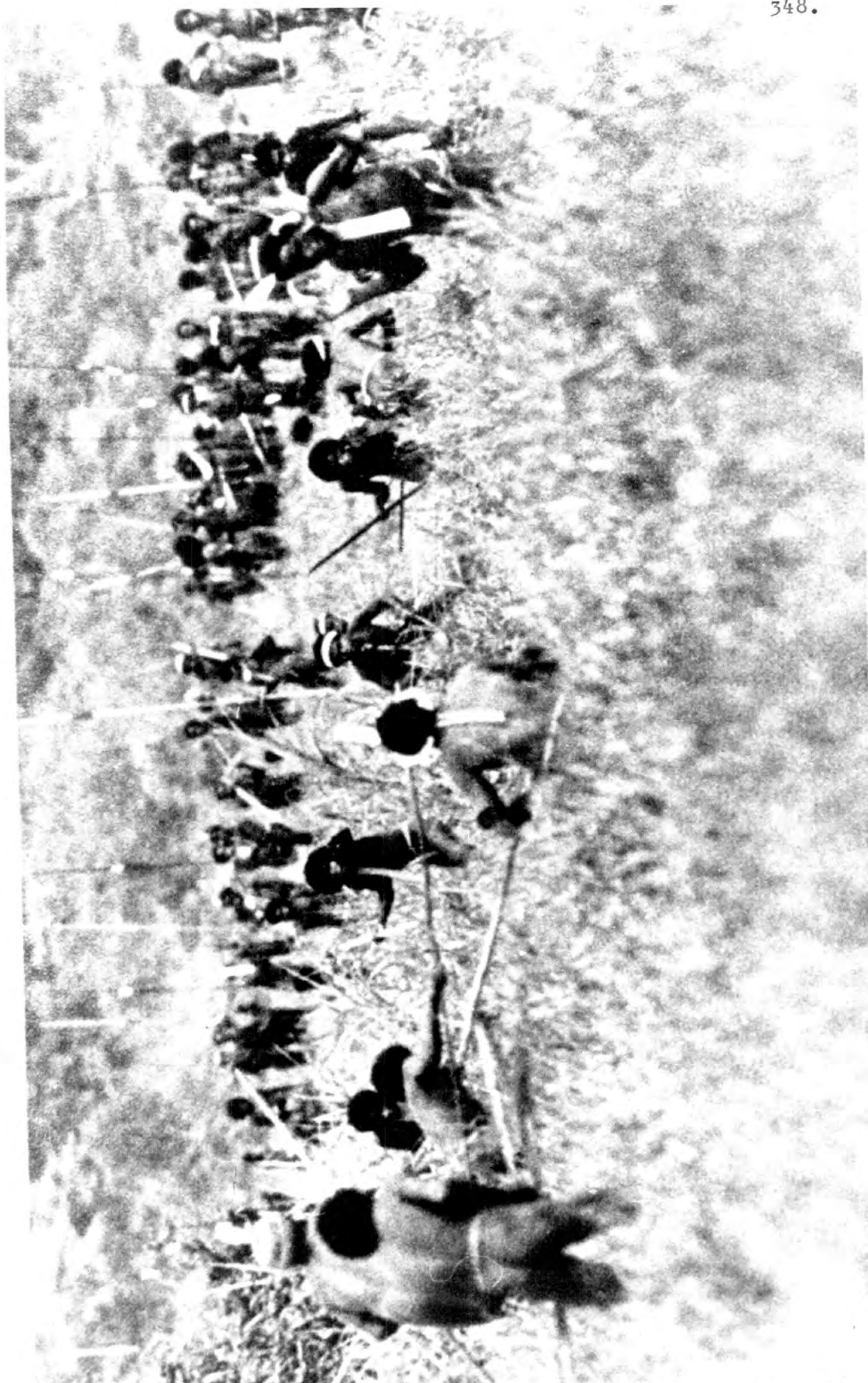


Plate (I7) : The front line in a Dani battle (Gardner & Heider 1969)

in a Grand Valley Dani battle is called weemiya and this is a ceremonial charge by thirty to forty warriors.

Although some warriors fire arrows, weemiya is a ritual thrust in which nobody is hurt and after three or four ritual sallies the battle proper starts.

The Dani have some tactical variations on their basic approach but these variations are known by both sides and rarely is it possible to coax the enemy into a trap. One tactic is weem ape palek, which is a surprise attack from two sides; another tactic is weem lapularek, which is a surprise attack from one side. These approach tactics usually fail because of insufficient cover, the caution of the enemy and inadequate planning, which is worsened by inadequate command. There are three battle positions strung out for half a mile behind the front line. Firstly, the front line, which is about thirty yards deep and composed of young warriors. Secondly, men resting from the front line or on their way to fight. Thirdly, a group of wounded men and old men plus boys too young to fight, who watch the progress of battle out of enemy range.

Although the front line usually remains stable and rarely moves more than one hundred yards either way, the warriors composing it are constantly in flux as men move up to the front line while others drop back in a continual flow. Warriors advance in a crouched position so they do not present a large target, they release their weapons and drop back. The need to keep on the move and not present an easy target to the enemy is tiring. The result is that a single encounter along the front line rarely exceeds fifteen minutes and never



Plate (13) : A Dani battle (Heider 1970)

involves more than 200 warriors of one side at any time. The periods of fighting are interspersed with periods of rest when the warriors shout insults at each other. Punctuated by these long interruptions for rest, a battle averages between ten and twenty clashes. A rout is rare in battle but in case this should occur each side maintains a lo pilili (going quickly) or a retreat route.

As evening approaches, many warriors leave for home and the remaining men station themselves about 200 yards apart and amuse themselves by shouting insults at each other. Finally, only a few young men remain as a rear guard against an unlikely surprise attack. The number of men killed in a battle is low, although several warriors sustain wounds as they advance or retreat from the front line; deaths usually occur because these wounds turn septic.

A Maring battle is tactically different to the fluid lines of dodging warriors which characterize a Dani battle. The strategy of a Maring battle demands a specialization of warriors into shock troops and fire troops. Warriors in the shock troops are protected by large shields and the front line forms a solid wall of shields. The warriors advance as a phalanx to engage the enemy and men in the front row fight duels with their opponents. Men from the rear ranks constantly replace tired or wounded warriors in the front row. In

the rear of the shock troops are bowmen who shoot at the enemy front line and try to hit men behind the shield wall. Fatalities are few and usually occur when a warrior is hit with an arrow and falls. The enemy front rank then closes in to club the wounded man to death, while his own side try to defend and rescue him. Maring battles maintain this static position for weeks, until one side either fails to turn up or arrives at battle heavily outnumbered by the enemy. The side which has a clear numerical advantage moves forward in a charge and steam rollers the enemy into a rout.

Melpa battles are similar to Maring battles with specialized shock troops supported from the rear and on the flanks by archers. "In der Mitte der Menschaft befinden sich die Schildträger, die mit dem grossen Dreizackspear oder mit anderen Spearen kampfem... An den äusseren Flanken und hinter der Linie der Schildträger befindet sich dan die Masse der Bogenschützen ohne Schild" (Vicedom and Tischner 1943:153). A battle starts with both sides shouting insults at each other, singing and dancing. Eventually one side loses their patience and shouting their war cry advance under a hail of arrows and spears. Each encounter is brief and the battle proceeds as a series of charges and withdrawals. Tactical variations on this pattern are few, although a popular tactic is to arrange a pincer attack with an ally so the enemy are forced to fight along two fronts.

A Jalé battle is loosely organized and consists of dispersed fighting across a battlefield. There is little co-ordination between warriors and the fight consists of a series of individual encounters. Combat is of the shoot and run technique as warriors stalk across the battlefield under the cover of grass and bushes until they are near the enemy lines. When in range a warrior quickly fires some arrows and then hurriedly retreats. A battle is punctuated by tranquil periods, when only sporadic shots are fired. During these lulls men light fires, rest and smoke while discussing the battle; they boast of successes and lament over wounds incurred. The warriors adjust their weapons and the armoured vests and nets which they wear around their necks for protection. People from villages not concerned with the war spectate at battles from foothills which are out of arrow range. Sometimes one side forces the other back into their village and when this happens the fight develops into a series of sniping encounters. In the last resort defeated warriors retreat to their men's houses which a convention stops the enemy destroying. The victorious side then plunder and burn the village.

A Kapauku battle consists of two irregular lines of warriors which move backwards and forwards as the battle progresses. Warriors fight with a bow and for protection they wear a small shield suspended from their necks. The warriors use the long grass for cover and jump up to unleash an arrow at the enemy. Warriors also

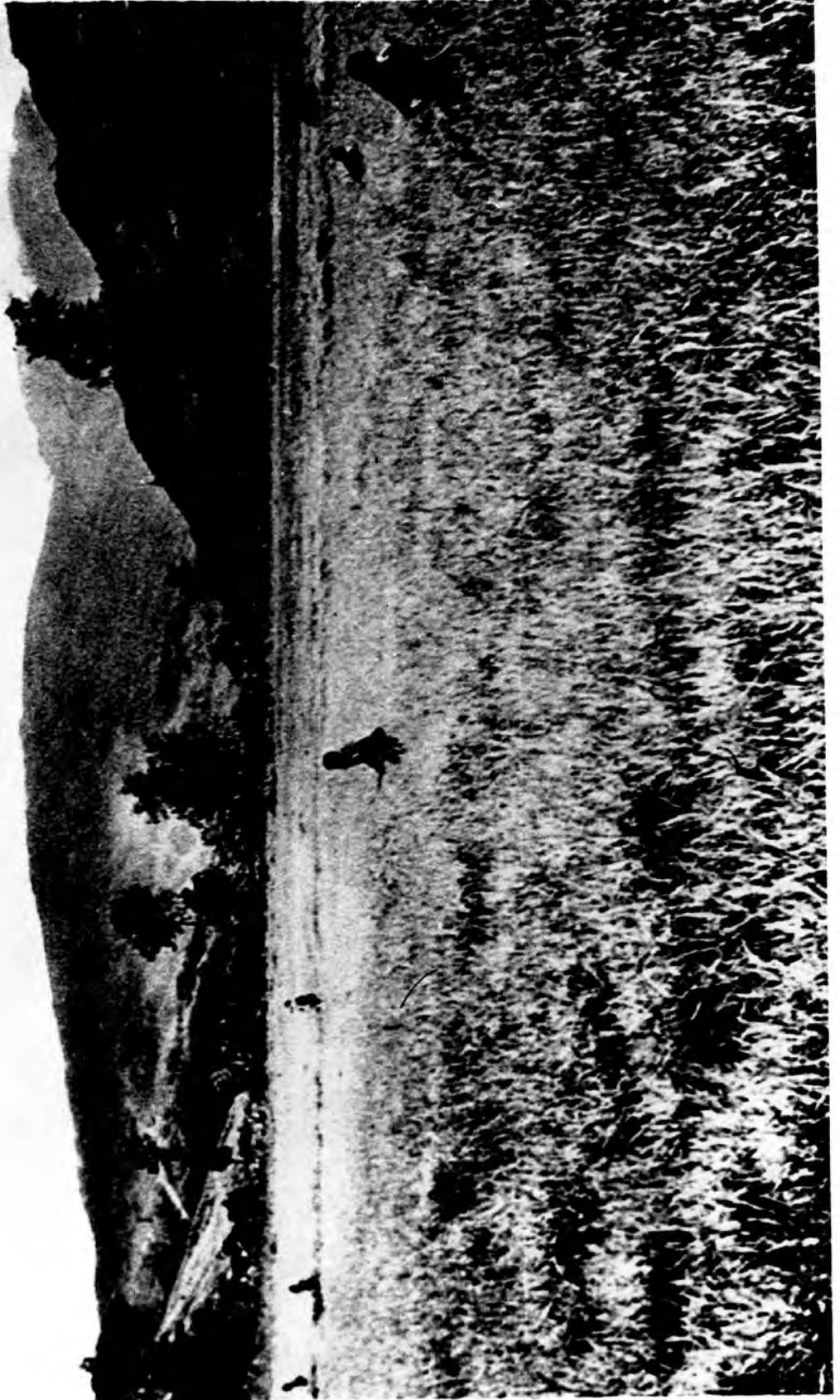


Plate (19) : A Kapauku battle (Pospisil 1958)

have to dodge about so they do not present a static target to the enemy. The tonowi (big men) are the bravest warriors, they do not hide or wear shields and they advance to within twenty yards of the enemy lines. The tonowi gauge the progress of a battle and plan ahead as they issue orders to warriors along the front line.

Women wander back and forth between the front lines of a Kapauku battle and collect spent arrows. They are never shot. "It is highly immoral for a man to shoot at a female during a battle and even an accidental injury to one may deprive a brave of all the prestige he possessed before," (Posposil 1958:91). Women also climb hills overlooking enemy positions and shout advice to their menfolk about enemy movements. Although enemy warriors rush off to push the women away, they are not always successful and sometimes, outnumbered by the women, they suffer a thrashing with digging sticks. A war can drag on for weeks and each morning both sides proceed to the battlefield surrounded by women who are a protection against an enemy ambush. Sometimes one side gains the upper hand in a battle and pushes the enemy back to their village. The tonowi try desperately to stop a landslide because the victors plunder the defeated village, rape young women and kill any male prisoners.

The day before an Abelam battle both sides clear their half of the battlefield of long grass. The following day warriors from both sides form lines at

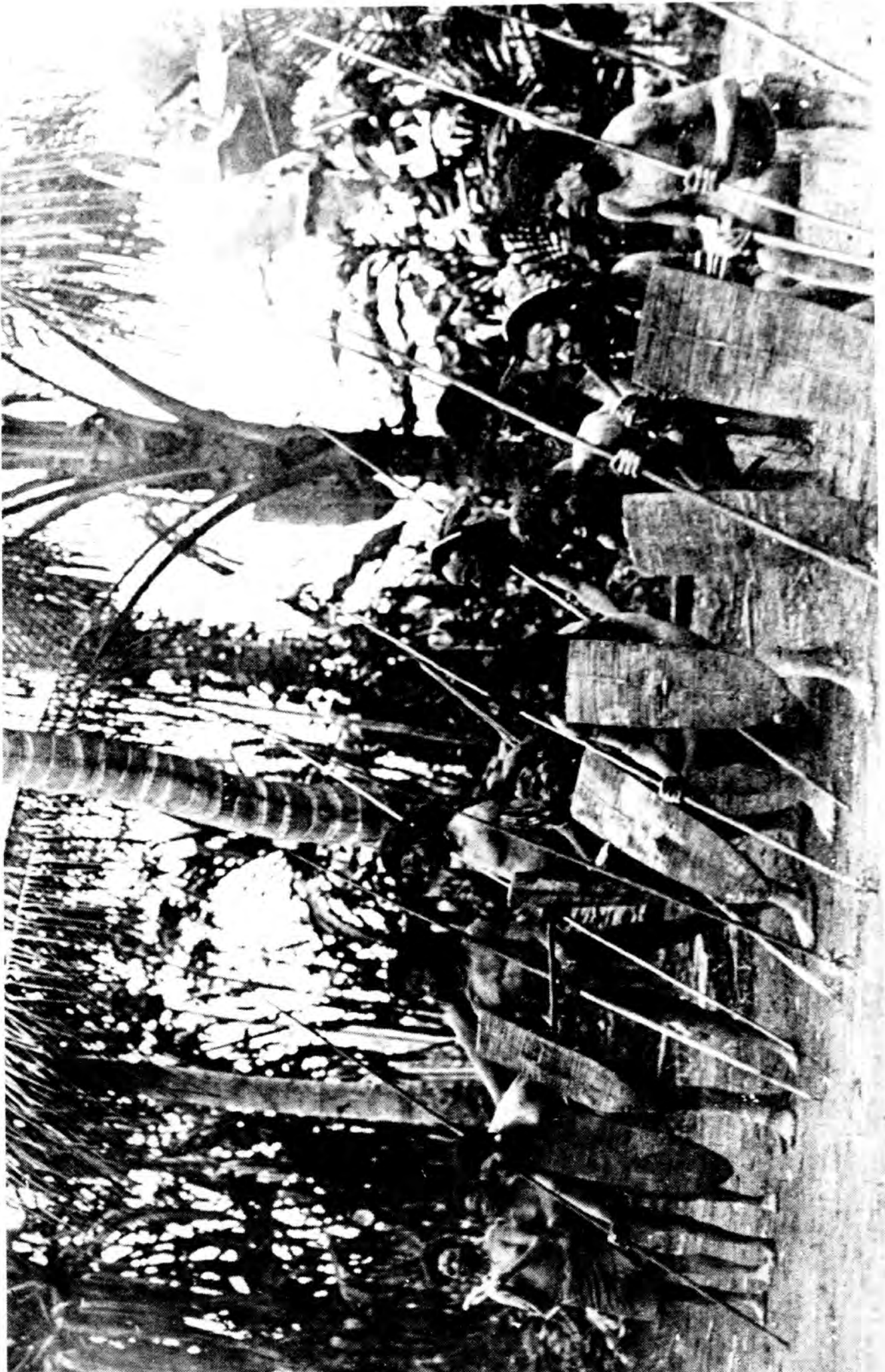


Plate (20) : An Orokaiwa esu (Williams 1930)

either end of the battlefield. The Abelam have a specific specialization of troops and each side has a battle formation, consisting of two lines. The warriors in the front line carry shields and are a protective troop parrying and dodging enemy spears; they also collect thrown spears. In the rear line are the fire troops who are warriors throwing spears at the enemy. Warriors from either line change places as those in the front collect a number of spent spears to return at the enemy. A battle proceeds in this fashion until a warrior is speared and then both sides converge on him; the enemy with the intent of finishing the wounded man off and his own side with the aim of protecting him. A battle usually ends in a strategic withdrawal but if the ranks of one side break there is a rout in which several warriors are killed because of the disorganized retreat.

There is another type of battle found in New Guinea which is stylized and governed by several conventions, this is the formal battle. The Orokaiva have a formal battle which is called an esu. These battles are shams between enemy groups which are embarking on a social transaction, such as a marriage. An esu is characterized by a lot of noise and hitting of shields. The sides form lines opposite each other and maintain an aggressive attitude while speakers from either side shout insults and threats.

The Arapesh fight a similar type of formal battle. One group proceed armed into an enemy hamlet to protest about a dispute and two lines of men stand opposed and insult each other. Sometimes the situation does not develop any further, but on other occasions an enraged warrior throws a spear. The battle then starts properly and spears are thrown first by one side and then by the other. This return of spears, one at a time, continues until somebody is badly wounded; at this point the attacking party flee. Both sides settle peace later with an exchange of rings.

A raid is tactically a different type of military engagement to a battle because the element of surprise is important. An Asmat raiding party, for example, is composed of three specialized troops. Firstly, there are the older men whose experience marks them off as leaders and who give advice about the conduct of a raid. In a raid, the essential tactical advice given by these men concerns the approach, as they direct warriors to creep silently to their positions before a raid. Secondly, there are the fire troops, middle aged men who open the raid by firing arrows into the village from one side. Thirdly, there are the shock troops, young warriors with shields and spears who form a semi-circle at the rear of a village and catch people fleeing from the archers fire at the front. The killing is usually done by the shock troops. The attack starts when one of the enemy realizes there are people in

the forest and asks, "who is that." Charging forth the attackers reply, "Your husband Sjuru" (the name of the attacking village.) Panic breaks out in the village as people try to escape and the attackers must quickly push home their advantage because the enemy often feign retreat and then return with a counter attack. The success of a raid is announced by blowing a shell horn. When the attackers have overpowered their victims kus jetet begins, which is an outburst of joy. Prisoners are tortured and beaten to find out their names and then loaded into canoes for the return journey. During the return journey the warriors behead their captives, one at a time, at specific places where they believe spirits dwell.

A Kiwai raiding party advances as a body, the old men in the lead, the mature warriors and the youths at the rear. When the leaders sight the enemy village they immediately take cover and the rest of the raiding party quickly hide. Not a word is spoken because the warriors discuss a plan of attack, on the basis of spy reports, before the advance. The mature warriors silently file off to left and right to surround the enemy. The Kiwai call this tactic sái-wóipi which means iguana neck and likens the actions of the warriors to those of an iguana bending round to look at something. The elder men, who are the leaders, watch the enemy closely and when the mature warriors launch the attack they keep the enemy occupied with arrow fire. Once a

village is surrounded outstanding warriors sometimes move silently into the settlement and club persons in their sleep and behead them. At other times bowmen fire flaming arrows into houses and when the enemy panic, both wings of the sái-wóipi open fire from the flanks and rear, while the elders fire from the front. Warriors club to death and behead the disabled enemy and plunder their village.

The warriors in a Marind-anim raiding party stealthily surround a village at night and at daybreak launch an attack from all sides. The Marind-anim have three specialized troops. The Kadahab-anim, the warriors who behead victims and own the heads. These men are also the Samb-anim, the leaders of the raid because of their experience. The Hakev-anim, are mostly from the éwati age grade and are the warriors who seize the victims. The Déh-anim are the archers and are the younger members of the éwati age grade. When the Marind-anim attack at dawn they shout, "Come out of the huts, here we are to cut off your heads, come forth and fight" (Wirz 1925:57). The Marind-anim are a little unusual because women attend their raids; women also attend the raids of the Trans-Fly people,

Similar to the Kiwai the warriors of a Trans-Fly raiding party divide into two groups and surround the sleeping village. At a signal the warriors attack, victims are first hit with a parasi (a harmless carved club which is also found among the Marind-anim, see Baal

1966:727-45) and then clubbed to death. Warriors quickly cut off heads and thread them onto tingi (head carriers). An attacked hamlet rarely reforms for a fight because the sight of their friend's severed heads unnerves them.

There are two different types of raid in New Guinea. The first type of raid (outlined above) occurs infrequently, the enemy settlement is destroyed and as many inhabitants annihilated as possible. The second type of raid occurs frequently but the amount of destruction is small and the number of deaths is low; although the aim of these raids is to destroy the enemy, this aim is seldom realized. There are correlations between the type of raid, the extent of the political organization and the ecological region. Where settlements are linked into a larger political group, a raid on one settlement brings allies from others and a raid must be quickly executed and followed by a swift retreat. Where a settlement is part of a weak or widely dispersed political group, assistance in time of attack is slow to materialize or never develops and the raid can thoroughly destroy enemy property because reinforcements are unlikely to arrive. The infrequent type of raid characterizes lowland military organization where the environment forces a hunting and collecting economy on the people. This type of economy inhibits dense collections of population and the development of effective political groups beyond the settlement.



Plate (2I) : Breaching a stockade during a raid - Eastern highlands

(Berndt 1962)

The subsistence economy of the highlands, on the other hand, allows the development of larger political groups and raids are of more frequent but a less extensive type. There is also a correlation between the size of a raiding party and the terrain because in heavily forested regions larger raiding parties can move without fear of detection.

Grand Valley Dani raids are of the frequent type. Younger warriors attend a raiding party which numbers between ten and twenty men. Although the actual raid is often not led by a big man, the support of a big man is necessary because they organize raids. The Dani people prefer to launch a raid on dull, wet days when the enemy are not alert and so as not to arouse the attention of the enemy with a group of men heading for no-man's-land, the party leaves by a circuitous route to meet at the frontier. The raiding party stalks carefully through the grass which covers no-man's-land and penetrates enemy territory. Raiding is dangerous because an enemy sentry is likely to spot the group from his watch tower and arrange weem mugisik, which is a counter-ambush. The raiding party either set an ambush or attack a small group of the enemy. Once the attackers have sprung their trap they must swiftly retrace their steps before the enemy block off their escape route. While the raiding party is away there is a slow build up of armed forces along their frontier because the enemy quickly mobilize for revenge after a

raid and the usual outcome is a battle. One of the difficulties facing a Dani raid is that their support forces must be near at hand to give help but at the same time they must conceal their presence or warn the enemy of the raid. An unsuccessful raid is not uncommon and sometimes the raiders lose men in a counter-ambush, but despite the dangers, raids are the most effective way of killing people in Dani warfare.

A Kapauku raid is of the frequent variety and a raiding party consists of three to ten men who penetrate enemy territory. The bravest man in the raiding party stalks to the enemy village alone and shoots a male victim. After quickly dancing the "killer's dance", the sniper retreats and with the support of his companions flees quickly from enemy territory. Sometimes a raiding party sneaks to a village at night and ambushes a man who leaves his house to relieve himself.

A type of military engagement similar to a raid is an ambush. An ambush differs from a raid because warriors conceal themselves to surprise a small group of the enemy outside a settlement, whereas a raid is a surprise attack on a settlement. The warfare of the Fore, Usurufa, Jate and Kamano people is characterized by the frequent use of ambushes. The Abelam use ambushes in political assassinations arranged with the enemy where a big man lures a rival into a trap.

Precision is difficult when referring to the types of military engagement found in New Guinea. The killing of one person in an ambush, for example, is close to murder. Murder, however, is only possible within the group where lethal fighting is forbidden. When one side in a war kill a single member of the enemy group this is not murder but a brief military engagement against an outnumbered enemy. Kiwai hosts frequently kill their guests who they lead into the dárimo (men's house) and sit on a mat. At first, visitors are safe because of their host's curiosity but when they send their women and children away and roll up the mats from the blood-stained floor, the situation is critical for the visitors. A leader gives the signal for attack by pushing the finger of a dead man on the victim or standing up and stretching himself. If the host feeds his guest or gives him a woman he is safe.

The brief descriptions of the various types of military engagement illustrate the principles of military organization found in New Guinea. The principle of troop specialization is the division of a group of warriors into specialized fighting groups designed to fulfill a specific military task and the degree of troop specialization found in New Guinea varies. Some people have no troop specialization, for example the Jalé and the Kapauku. In military engagements among these people all warriors carry the same weapons and fight

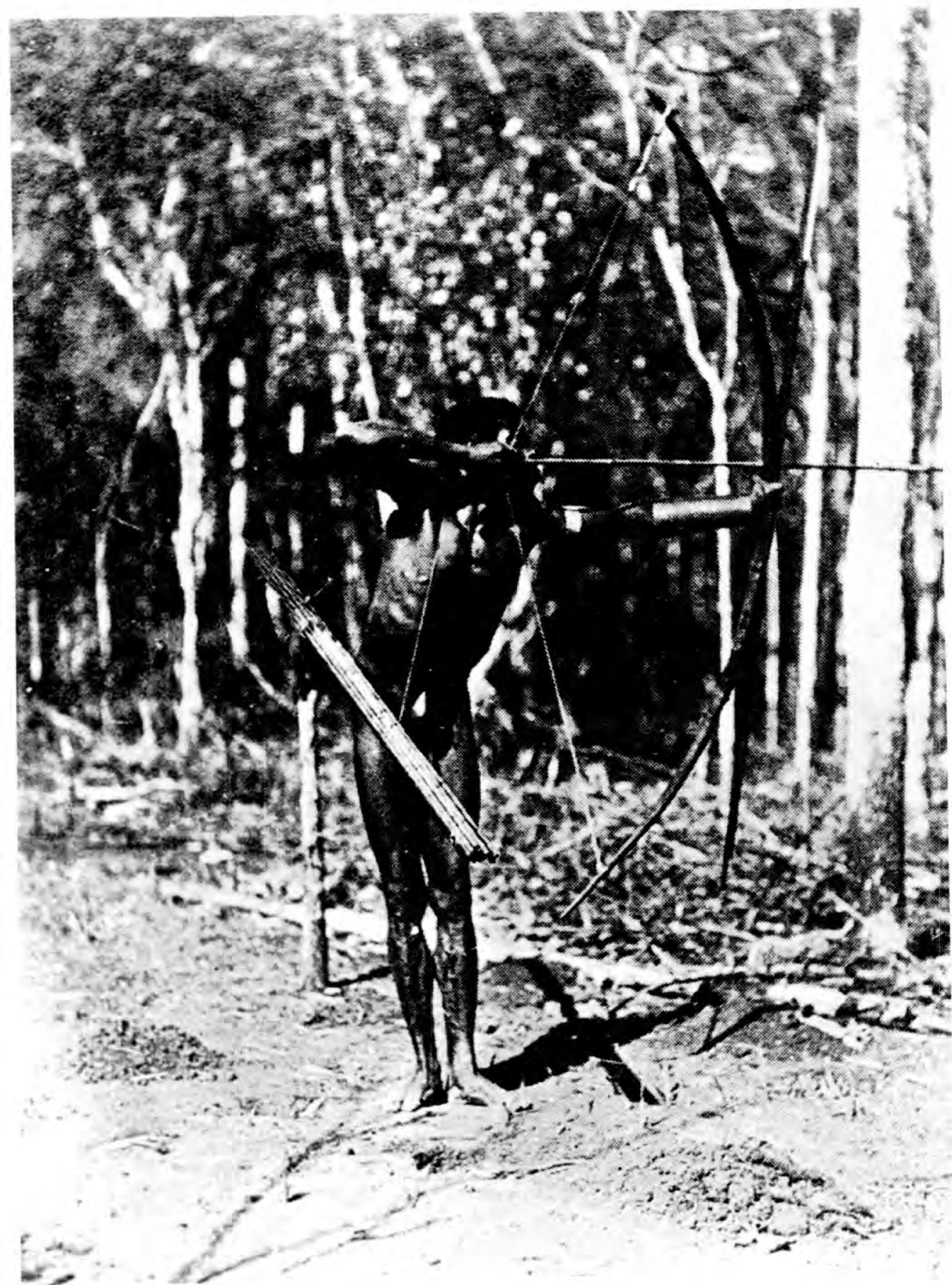


Plate (22) : First troops - a Trans-Fly warrior (Williams 1936)

according to the same tactics; men stalk individually across the battlefield and fight in sporadic outbursts. The Grand Valley Dani also lack a specialization of troops, although warriors use different weapons this is not the result of tactical strategy and does not result in the co-ordination of different arms. The Maring, Melpa and Abelam have a specialization of troops into different arms which are essential for their military engagements. The Asmat and Marind-anim, who fight infrequent raids, also have a specialization of troops, whereas other people who fight raids lack any specific troop specialization, for example, the Trans-Fly and Waropen.

The principle of troop specialization is closely linked with the military functions of different arms. There are four basic military functions: fire, shock, protection and mobility. The latter is discussed under approaches to war and the conclusion is that there is no troop specialized for mobility anywhere in New Guinea. All of the societies in this survey have fire troops, which vary according to the type of weapon employed; either the bow and arrow or spear or a combination of both. Fire troops need never come into physical contact with the enemy but inflict casualties with projectiles and some societies fight engagements solely with fire troops. Shock troops consist of warriors who come into direct contact with the enemy and kill with crushing hand weapons, such as clubs, axes and heavy spears. It is rare in New Guinea to find

military engagements which consist solely of shock troops and the usual combination is shock troops supported by fire troops. Raids commonly use the fighting combination, although in several cases the fire and shock troops are the same warriors who fire first and then move in for close combat with shock weapons.

The final type of troop specialization is warriors specialized for protection. It is rare to find troops specialized for protection with the sole purpose of supplying defence to other arms; the Abelam are an interesting exception. The fact that individual warriors in another arm are usually responsible for their own protection means it is difficult to talk in terms of protection troops. A Jalé warrior, for example, wears a number of cane hoops as armour and wraps a net bag round his neck for protection. The usual form of protection carried by warriors in New Guinea is the shield. The Mendi, for example, have specific types of shield depending on the engagement (see Ryan 1958). They carry large, heavy shields into battle but in an ambush, where surprise and speed are essential they carry small, light shields.

The principle of troop specialization is closely linked also with the use of formations. The formations of approach are columns and the formations for an actual engagement are lines. The line is a row of warriors arranged facing the enemy and all other military formations are an elaboration on this simple arrangement.

Variations on the line formation are few in New Guinea. The usual line of formation displayed in battles is an irregular placing of warriors who do not present a uniform or static target for enemy fire. The common formation found in raids is a single line which surrounds an unsuspecting enemy settlement. In general, fire troops, which face enemy fire troops use the dispersed, irregular line, while other troops, including fire troops not expecting enemy fire (e.g. in a raid), use more compact and uniform lines. The most uniform and elaborate battle formation is found among the Maring and Melpa people, where shock troops with heavy protection are arranged in lines several ranks deep and are supported from the rear by lines of fire troops.

Surprise is the mainspring of all raids and ambushes. There is evidence that the element of surprise is also used by some people in a battle; for example, the Grand Valley Dani. The rigid conventions which govern a battle, however, preclude any devastating use of the surprise principle because both sides are aware of the various forms which surprise tactics can take.

Utilization of terrain is important in a military engagement. Before a raid or ambush warriors use the surrounding cover with maximum efficiency to facilitate a surprise attack but during the actual fight they make little constructive use of the terrain, other than hiding behind natural objects (such as trees) for protection against fire. The use of terrain to secure a

tactical advantage in battle, for example, by occupying higher ground and firing down on the enemy, is little developed in New Guinea warfare. People fight battles on recognized battlefields which are familiar to both sides and which present few tactical problems to either side. The utilization of terrain is correlated with the stability of the lines in an engagement. It is in battles where dispersed and fluid lines of fire troops face each other that warriors make the most use of terrain. The Kapauku and Jalé warriors, for example, use the long grass and foliage which covers a battlefield as cover when approaching or retreating from the enemy line.

The Grand Valley Dani have a number of battlefields situated on the no-man's-land which separates enemy groups and warriors try to use the terrain of these battlefields to their advantage. The Watabaka battlefield, for example, is an L-shaped ridge raised above the surrounding swamp. Individual warriors stalk in the cover of the swamp to shoot at the enemy but the main fighting force remain on the firm, grassy ground of the ridge. The warriors fight battles on the inside of the L and the lines of each side are pushed back and forth along the ridge. The warriors realize the advantage of the higher ground but in a battle neither side pushes vigorously to gain this advantage and when they occupy the higher ground they do not push home their advantage to gain a victory. Warriors use the terrain

of the Watabaka ridge during a battle but they rarely secure a military advantage and inflict a defeat because both sides knew the battle ground too well.

The remaining three principles used by Turney-High (1949:25-6) in his study of primitive military tactics are inter-related. These principles are those of concerted effort, the combined employment of all forces and concentration of force at the critical point. In New Guinea warfare these three principles are obeyed to a marginal degree but the lack of tactical organization reduce their significance. Although the warriors of one side fight together, the co-operation between them is small because they lack a commander to co-ordinate their activity.

Retirement from an engagement: There are two types of retirement. A withdrawal, which follows a stalemate and a retreat, which follows a defeat and rout. The former is a planned movement, in the sense that it follows certain conventions recognized by both sides. Warriors withdraw from an engagement in an orderly fashion and sometimes use formations similar to those used in approach. The result of a withdrawal is a tactical and secure removal of troops from the field of war. The withdrawal from a Kapauku battle, for example, is similar to the advance. When the battle ceases the warriors dance waita tai and then, surrounded by women (a precaution against ambush), they return home.

A retreat in the face of defeat is a far more

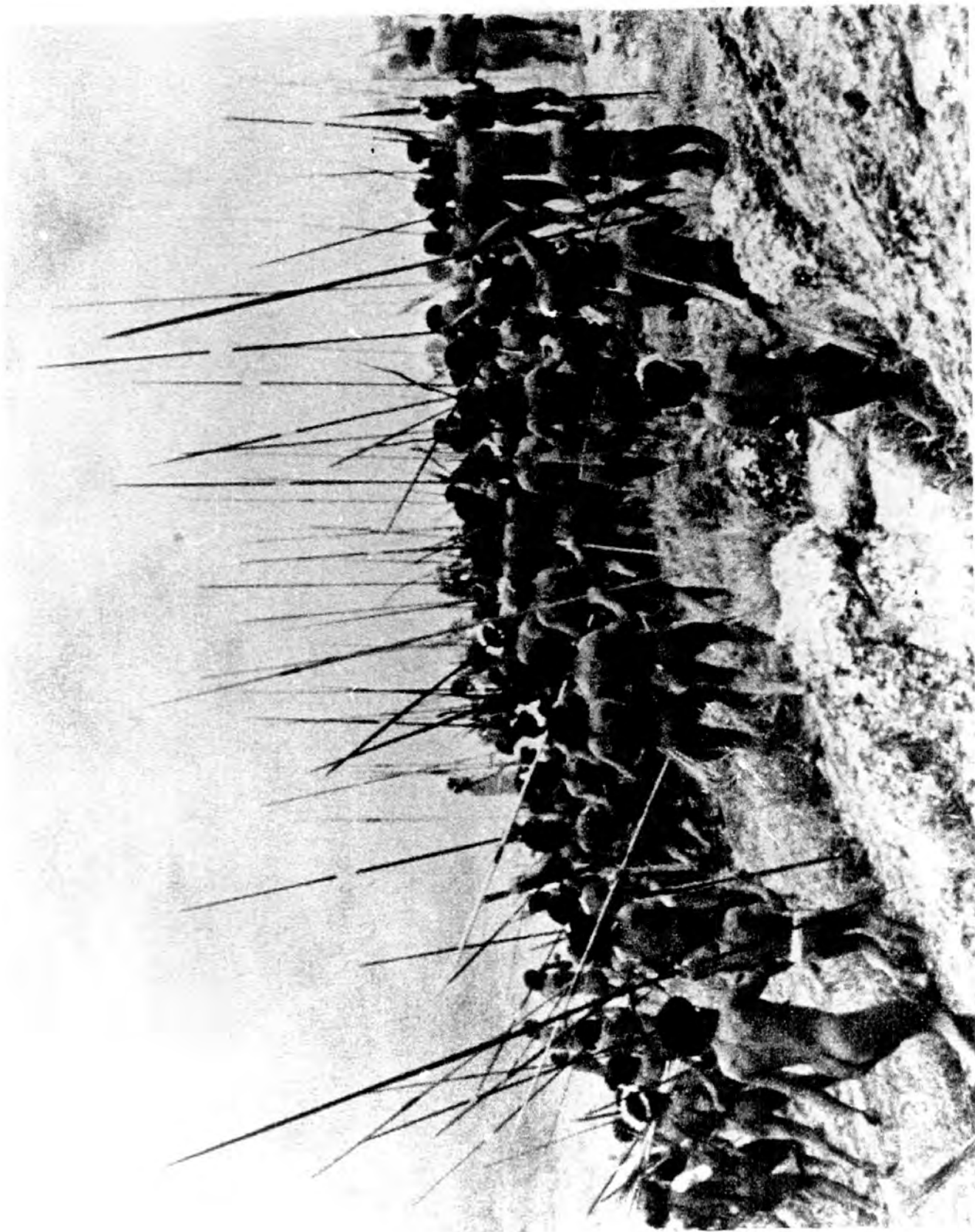


Plate (23) : Dani warriors withdraw from the battlefield
(Gardner & Heider 1969)

serious type of retirement. Rarely are retreats orderly; warriors simply turn and run. The retreat is not secure for the warriors because lines break up and disperse, allowing the enemy to advance unhindered. The conventional military organization which co-ordinates the side into a military unit disappears in a retreat and the result is numerous individual warriors fighting a disorganized rear guard action to save their lives and flee.

The Melpa, for example, similar to other people in New Guinea, believe that ancestral support is essential for success in war. The Melpa believe that a casualty is the result of the ancestors withdrawing their support and when one side suffers a casualty they are afraid and panic. If a big man is seriously wounded it can unnerve the warriors to such an extent that they retreat and the enemy surge forward plundering property. Not all retreats are disorganized and dangerous. Melpa warriors sometimes retreat to their cemetery where they make a sacrifice and dance before making their final stand. Similarly, although the Jalé retreat to their village, they continue a sniping fight until defeated, when they retreat to the sanctuary of a men's house. The advance of victorious warriors is more orderly than the retreat of defeated warriors but the excitement tends to produce a breaking up of ranks as eager men rush forwards.



Plate (24) : A wounded Dani warrior carried from the battlefield

(C. J. S. P. H. 1960)

In a raid the attacked persons are taken by surprise and forced to retreat. The escape from a raiding party is a reaction to panic and is consequently disorganized. In some cases the men of an attacked settlement feign a retreat and mount a counter attack which defeats the raiders. These retaliations are the result of a big man rallying warriors to himself and organizing resistance against the enemy.

An important aspect of a withdrawal or retreat is the care of wounded warriors. A wounded Grand Valley Dani warrior, for example, limps from the front line or is carried out of arrow range on the shoulders of another man. The point of an unfetched Dani arrow breaks off in the wound and a skilled man has to dig the barb out of the wound. A warrior with a serious wound requires an operation to release the mep mili (dark blood) and prevent the etai eken (soul matter) from leaving his body. The operation consists of a series of holes on the stomach into which a knife is inserted for about two inches. The wounded man is then placed on a rough stretcher, covered with grass so the ghosts cannot see his wounds, and carried home. The Melpa also hide a wounded warrior, not from the spirits, but from the gleeful eyes of the enemy who rejoice at their success. While a "doctor" removes the arrow point and binds up a wound with leaves, the elder men contact the ancestors for help, but wounds frequently turn septic and the wounded man dies. An Enga warrior



Plate (25) : Operation on wounded Dani warrior to remove mep mili
(Gardner & Heider 1969)

whose wound turns septic because an arrow point is still inside him has his chest punctured or a bamboo stake forced up his rectum to draw off the "stinking blood" (pus).

In regions where people practise cannibalism the retrieval of wounded men is not the only consideration. After an engagement the number of bodies collected depends upon the likelihood of a counter attack and where the situation is safe cannibals carry large quantities of flesh home, which they tie to poles like slaughtered pigs. Reasons for cannibalism vary (see Volhard 1939), for example, the *Marindanim* like a few limbs for food en route, while other people, for example the *Jalé*, collect whole bodies which the revenged relations eat to insult the enemy.

The collection of dead bodies is important, not only to cannibals but to all people in New Guinea who believe dead warriors deserve proper mortuary rites. Some people leave the corpse on a platform with the fatal weapons still in place. The *Kapauku* and *Kiwai*, for example, believe that when the arrow is free it is especially lethal. The *Huli* place war victims in an elevated, painted coffin which reminds the living to take revenge. Reminders of revenge obligations are common elements in war burials. The *Kamano*, *Jate*, *Usurufa* and *Fore* people, for example, plant a croton leaf over the grave when they have successfully taken

revenge. The Maring call for a truce of a week or more to allow the performance of proper funeral ceremonies for war victims. It is not only the dead man's side which performs ceremonies during a truce. The killer is in danger from his victim's miñ (life force) and the "fight magic men" protect him by driving the slain man's spirit back to his own territory. Fear of attack by a slain man's spirit is quite common in New Guinea; an Orokaiva warrior, for example, who kills a man, is in danger from his victim's sovai (spirit). An Orokaiva warrior who kills a man must observe certain taboos for his own safety, such as sitting in a tree where green ants bite him.

Post-war activities: It is necessary to distinguish between the actions of a victorious side and the actions of a defeated side. In the former case, an important military principle is the exploitation of victory. The utilization of a victory by New Guinea warriors is different from the exploitation made by modern armies because it is of a short term nature. People in New Guinea do not fight wars with any long term objective in view, such as the political subjugation of an alien group or the monopolization of certain resources, and for this reason the exploitation of victory is short term.

A victory usually means the rout of the defeated group but the victors rarely occupy the land vacated by the defeated. Exploitation consists of the pillage and

destruction of enemy crops and livestock, homes and valuables. The people consider the defeat of an enemy group as their primary achievement and the looting which follows a victory as a pleasant bonus.

The members of a defeated group flee as refugees but the victors do not hound them. Once clear of the victorious sweep onto their property, the defeated are safe so long as they can secure refuge elsewhere. The usual pattern is for individuals to flee and take refuge with relatives and friends in other groups. The future of the defeated group depends on various factors. Sometimes the defeated group never reforms but on other occasions small groups drift slowly back to their former territory (see pp. 79). The Gahuku are not exceptional, when "after some time had elapsed, it was not unusual for them (the victors) to invite the exiles to return to their homes" (Read 1965:35). This fact reveals an important fact relating to New Guinea military values and the exploitation by the people of their victory. Big men frequently encourage wars to weaken a rival group which grows too large and becomes a military threat, but so long as the group is weakened and no longer poses a threat, it matters little if they return to their territory.

An important aspect of victory is the celebration ritual. It is necessary to distinguish between the celebration of killing an enemy in a particular engagement and the celebration of a victory which concerns the rout of a whole group. Only the latter is correctly a victory



Plate (26) : The victory dance of Jalé warriors (Koch 1970)

celebration, the former is the celebration of only one or two killings. The people of New Guinea, however, draw little distinction between the celebration of a successful kill and the celebration of the defeat of a whole group. This is a reflection of the type of warfare found in New Guinea, where the rout of a rival political group is not frequent but the celebration of revenge deaths helps maintain the enmity between rival groups.

The Jalé, for example, carry the corpse of a dead tok soli enemy back home, or failing this, a chunk of his body and present the flesh to a family which has lost a man in war. The people praise the killers and present them with seasoned pigs. After a kill there are several days of dancing and singing in celebration. The people close the eyes and mouth of the corpse with the bones from the wings of a bat so that the victim's ghost cannot guide back a revenge party. They wrap the severed head in leaves and drag it round by a length of vine, while men shoot reeds into the bundle to ensure future killings. While an enthusiastic audience praise the meat, the corpse is butchered by specific cuts and some choice pieces of meat are roasted, while most of the flesh is cooked in an earth oven with leaf vegetables. After the meal, which is "a symbolic expression of spite incorporated in an act of supreme vengeance" (Koch 1970:55), some of the chewed bones are placed in a tree to remind people of the deed.

After the feasting and dancing, the men remove the victim's ghost from the village in a special ceremony. An arrow, piercing a piece of pig fat, is fired into enemy territory and the ghost is told that it has been on a successful trading journey and must now return home. The men exhale deeply to expel the ghost. They have eaten and then barricade the path to prevent it from returning.

The Marin-anim build a ceremonial house, the kui aha, before a raiding expedition leaves and this ceremonial house serves as the centre of the victory feast. The Marin-anim also prepare forked sticks, kui ahat, upon which they hang their freshly cleaned heads decorated with an artificial grass hairstyle and with a rattan cord through the nose. The raiding expedition returns to the village which initiated the raid where a large pig feast is given to celebrate success. The people sing their headhunting songs, called ayasé, and dance in celebration. People admire the fresh heads and a great deal of celebration takes place around the kui ahat. Symbols referring to the glory of headhunting are many and warriors recount epic fights in which they glorify their own heroism. At one stage in the celebrations the elder men form a long serpent which weaves about the feast. The éwati (young warriors) are slowly absorbed into the serpent and this is interpreted as the merging of their courage and success, in the recent raid, into the invincibility of the whole group.



Plate (27) : A floor of living bodies - part of an Asmat peace ceremony
(Saulnier 1961)

Sometimes, the post-war situation is a peace settlement which means a demobilization of armed encounters between two groups. There are various types of peace settlement (see pp.305). The ritual of peace settlement, as an aspect of post-war military organization, is briefly illustrated with some ethnographic examples.

An Asmat peace settlement requires the exchange of members between the two enemy villages. A couple of men and a couple of women leave their village and are adopted into the settlement of their enemies. The peace ceremony consists of a symbolic birth to mark the adoption of the persons into their new group. The ceremony takes place in the men's houses where the natives construct a double hedge of coconut leaves. Within this leaf enclosure men form a floor of bodies on which women stand with their legs apart. The adoptees, decorated with long, false hair of coconut fibre, wriggle along this living tunnel while the women groan as if in labour. At the end of the tunnel the adoptees are wrapped in coconut fibres like new born children and their symbolic umbilical cord, represented by a reed round their waists, is cut with a sharp shell. Members of the adopting village then carry the "new born babies" the length of themen's house. Adopted men are required to fire three arrows into a corner of the house where their real father is, thus repudiating their clan of origin. The ceremony

clearly marks, and is interpreted by the Asmat, as the rebirth of adopted individuals into a new social group.

People frequently settle peace with an exchange of valuables and the payment of wergild for dead warriors. Strathern (1971) suggests that the moka exchanges, which the Melpa initiate at a peace settlement, are important because the moka is a peaceful channel for competition between enemy groups, which is otherwise vented in war. Neutral persons, who have relatives on both sides usually negotiate peace. A Kapauku big man, for example, uses his large network of social ties to negotiate peace with the enemy after prolonged hostilities. The necessity of uta uta (half-half) or equal numbers of dead men on either side makes peace settlement difficult. The Kapauku settle peace with a pig feast at which former enemies dance together and the big man exort them to live in peace. Peace is tenuous because of the necessity for a balance of deaths; the relatives of men who die from old war wounds have to be compensated years after the war ends. The Kapauku pay me mege (wergild) to maintain peace once it is settled.

A comparative study of military organization in New Guinea reveals five types of military engagement each of which is characterized by a particular constellation of military principles. These five types of military engagement are battles and formal battles, frequent raids and infrequent raids, and ambushes; the significant types of engagement are battles and raids.

A battle is characterized by a declaration of hostilities and the arrangement of an appointed place to fight, where prepared warriors rally to support their side. The approach to a battle is usually haphazard, and formations, stealth and surprise are not common. On the battlefield there are fighting formations but these vary in their elaboration from fluid lines of dodging warriors, to tightly drawn up lines of specialized troops. The extent of the battle formations is a reflection of the degree of troop specialization which varies from no specialization, to specific fire, shock and protection troops. There is little tactical planning because battles follow conventional rules of combat and battle variations are known to both sides. There is a lack of military command in battles and although some men try to lead they rarely meet with success. Although a battle is a group action, it is not the result of concerted group efforts but is the result of a series of individual acts which have a common aim. Battles are deficient of supply lines.

Withdrawals from battle are orderly and secure but retreats, in the face of defeat, are disorganized and dangerous to life. The frequency with which battles occur varies but the level of casualties is usually low, unless a rout occurs.

A raid is characterized by the care warriors take before an engagement to ensure surprise. The use of formations to ensure a silent approach, plus the use of scouts, are common. Although the conventional nature of raids renders leadership to an insignificant position there is a certain amount of command prior to a raid and the reports of scouts result in the formation of rudimentary plans concerning the use of terrain and available cover. Troop specialization varies but raids usually entail the use of a combination of fire and shock troops. The actual engagement is chaotic and all the care found in approach disappears as warriors rush upon their unsuspecting victims. Raiding expeditions which travel some distance are characterized by a reasonable supply line where warriors carry their own supplies. The retreat of people who are surprised in a raid is usually disorganized but in some cases the surprised warriors re-group and counter-attack. Unless the enemy organize an effective retaliation the raiders withdraw safe and victorious.

The presence of two types of raid has already been referred to in this thesis. The distinguishing features between these two types of raid are the frequency of

raids and the number of casualties which result from a raid. One type of raid, referred to as infrequent raids, result in a high number of casualties which reflects the use of shock troops. In the other type of raid, referred to as frequent raids, the death rate is low and this is a reflection of the use of fire troops in preference to shock troops. Table (26) although incomplete and based upon fragile evidence, is an indication of the frequency and number of casualties resulting from these two types of engagement.

PEOPLE WHO FIGHT BATTLES & FREQUENT RAIDS:		
	FREQUENCY	NO. CASUALTIES
Bena	Very frequent	-
B. Dani	5.25 fights a year	0.93 per engagement
Fore etc	Frequent	-
G.V. Dani	36 fights a year	0.39 per engagement
Huli	33 fights a year	0.18 per engagement
I. Dani	1 war every 3 years	-
Kapauku	2 wars per year	49.2 per war
M. Enga	1.5 wars per year	-
Maring	1.3 wars per year	23 per war*
Melpa	-	65 per war
PEOPLE WHO FIGHT INFREQUENT RAIDS:		
Iatmul	1 or 2 per wet season	-
Marind	1 raid per year	Annihilate settlement
T. Fly	1 raid per 4 years	22 per raid

* Figures based on single example.

Table (26): Frequency of engagements and number of casualties.

There is a tendency for battles and frequent raids to occur together as alternative military engagements within the same society, (table (27)). The reason why battles and raids occur together in some societies but singly, as battles or raids, in others, is not clear.

Type of Engagement	Percentage occurrence	No. of cases
Battles and frequent raids	52.4%	11
Frequent raids	33.3%	7
Battles	14.3%	3

Table (27): Tendency for battles and frequent raids to occur together as alternative engagements

The frequency with which the three principle types of military engagement occur is shown in table (28).

Type of Engagement	Percentage occurrence	No. of cases
Infrequent raid	25.9%	7
Frequent raid	66.6%	18
Battle	51.8%	14

Table (28): Occurrence of different types of military engagement

In table (29) the occurrence of different types of military engagement for the people in this survey is plotted. An accidental battle is not planned but occurs when two opposed forces meet unexpectedly; they do not constitute the normal form of engagement for the people concerned.

Peoples	Formal Battle	Battle	Battle an Accident	Infrequent raids	Frequent raids	Ambush
Abelam		✓		✓		✓
Arapesh	✓	✓			✓	
Asmat				✓		✓
Bena					✓	
B. Dani		✓			✓	
Chimbu			✓		✓	
Fore					✓	✓
Gahuku		✓			✓	
G.V. Dani		✓			✓	
Huli		✓			✓	
Iatmul				✓		
I. Dani		✓				
Kapauku		✓			✓	
Kiwai				✓		✓
Kuma		✓			✓	
M. Enga	✓	✓			✓	
Marind				✓		
Maring		✓			✓	
Markham		✓			✓	
Melpa		✓			✓	
Mendi			✓		✓	
Jalé			✓		✓	
Kamano			✓		✓	✓
Orokaiva	✓			✓		
Siane		✓				
T. Fly				✓		
Waropen					✓	

Table (29): Occurrence of different types of military engagement according to people

The two important analytical clusters developed in the previous chapter were based on social organization and the three types of war. In table (30) the typology of military engagements is correlated with the three clusters computed on the basis of social organization.

Type of Engagement	Divided village	Conglomerate settlement	Scattered settlement
Battle	26.6%	58.4%	62.5%
Formal Battle	0%	16.7%	0%
Accidental Battle	14.3%	8.4%	25%
Frequent Raids	28.6%	66.7%	100%
Infrequent Raid	57.2%	25%	0%
Ambush	42.9%	8.4%	12.5%

Table (30) : Type of engagement correlated with social organization

The table verifies the generalization made earlier in this chapter that settlement patterns are not influenced by the type of engagement; for example, the occurrence of raids does not result in palisaded settlements. There is a correlation between compact settlement and infrequent raids because scattered settlement renders swift raids, which usually result in few casualties, a military necessity. The correlation, between the two different ways people conceive of their social organization, as either territorial groups or settlement groups, and military organization, is referred to in the previous chapter. Table (31) verifies these generalizations on social organization and different types of military engagement.

Type of Engagement	Military units based on settlement groups	Military units based on territorial groups
Battle and frequent raids	27.3%	72.8%
Frequent raid	57.2%	42.9%
Battle	50%	50%
Infrequent Raids	100%	0%

Table (31) : Conception of military groups correlated with types of engagement.

There is a correlation between ecological regions and types of military engagement (table (32)). Battles and infrequent raids characterize the highland regions of forests and grasslands, whereas infrequent raids characterize the lowland regions of swamp. Military organization, if it is successful, has to adapt to the environment where fighting occurs and even modern armies have to vary their tactics according to the terrain over which they fight. In swampy regions battles are tactically impossible. The environment of lowland regions results in a low density of population and the distance between enemy groups probably serves to reduce the frequency of raids.

Type of Engagement	Highland	Lowland	Heavy Forest	Forest & Grassland	Grassland	Swamp
Battle	12=66.7%	2 = 22.2%	3 = 50%	8=72.7%	3=75%	0=0%
Formal Battle	1=5.6%	1 = 11.1%	1 = 16.7%	1=9.1%	0=0%	0=0%
Accidental Battle	4=22.2%	0 = 0%	2=33.3%	2=18.2%	0=0%	0=0%
Frequent Raid	16=88.9%	2 = 22.2%	5=83.3%	9=81.8%	3=75%	1=16.7%
Infrequent Raid	0=0%	7 = 77.8%	0=0%	1=9.1%	1=25%	5=83.3%
Ambush	2=11.1%	3 = 33.3%	2=33.3%	0=0%	1=25%	2=33.3%

Table (32) : Different types of military engagement correlated with ecological regions

Infrequent raids occur with the highest frequency in societies which have wars for deep rooted reasons, where the high casualty rate reflects the aims of war. There are few correlations between military organization and factors of social organization. There is a tendency for fewer ally groups in infrequent raids, which is the result of the wide dispersal of groups and the fact that raids require fewer warriors for success.

Type of Engagement	War of Redress	War for deep rooted reasons	Permanent war
Battle	6 cases =60%	4 cases =36.4%	4 cases = 66.7%
Frequent raid	8 cases =80%	5 cases =45.5%	5 cases = 83.4%
Infrequent raid	0 cases =0%	6 cases =54.6%	1 case = 16.7%
Accidental battle	2 cases =20%	1 case = 9.1%	1 case = 16.7%
Formal battle	0 cases =0%	2 cases = 18.2%	0 cases = 0%
Ambush	2 cases =20%	3 cases = 27.3%	0 cases = 0%

Table (33) : Different military engagements correlated with types of war

There is a correlation between different types of military engagement and the presence or absence of minor war. Minor war occurs less frequently in societies where raids are the only type of military engagement. The reason for this is that battles serve the ends of minor war because the risk of deaths is low but the show of violence facilitates the redress sought by the wronged party.

Type of Engagement	No. of cases with minor war	% occurrence
Battle and frequent raid	9	81.8%
Frequent raid	2	28.6%
Battle	1	50%
Infrequent raid	1	14.3%

Table (34) : Type of major war military engagement correlated with occurrence of minor war

There is a correlation between peace settlements and different types of military engagement. Where raids occur the peace settlement is usually of a superficial nature and this indicates the treachery which surrounds a raid and the constant danger of attack from nominally peaceful groups.

Type of Engagement	Secure Peace	Superficial Peace	Never Peace
Battle and frequent raid	4 cases = 36.4%	2 cases = 18.2%	5 cases = 45.5%
Frequent raid	0 cases = 0%	4 cases = 57.1%	3 cases = 42.9%
Battle	2 cases = 100%	0 cases = 0%	0 cases = 0%
Infrequent raid	0 cases = 0%	6 cases = 85.7%	1 case = 14.3%

Table (35) : Peace settlements correlated with different types of military engagement.

The contrast between infrequent raids and other types of military organization suggests a re-grouping of societies which fight wars for deep rooted reasons (table (36)). The significance of this classification is not clear, but headhunting and cannibalism characterize the societies which fight infrequent raids and these aims are found where groups are widely dispersed.

Wars of Redress	War for deep rooted reasons		Permanent wars
	Battle and frequent raid	Infrequent raid	
Bena Chimbu Mae Enga Fore Kamano B. Dani I. Dani Siane Kapauku Huli Maring	Markham Jalé Arapesh Waropen	Abelam Asmat Iatmul Kiwai Orokaiva Trans-Fly	Gahuku Melpa G.V. Dani Kuma Marind Mendi

Table (36) ? Re-classification of types of war according to military engagements

A significant aspect of military organization in New Guinea is the importance of age grades in war. In comparison to some African societies, for example, the chiefly kingdoms of South Africa and the acephalous Nilo-Hamitic societies, the significance of age grades in New Guinea has received scant attention.

Several writers have commented upon the presence of initiation in some New Guinea societies and absence in others, (see Allen 1967; Strathern 1970).

The presence of male initiation ceremonies in some societies is tentatively accounted for by a greater stress on warfare in these societies, which results in an emphasis on warriorhood. The ordeals of initiation are designed to produce strong men and able warriors, (Berndt 1962; Langness 1967; Strathern 1970). This suggestion is speculative and unsupported by facts because we do not know in which societies the frequency of war is highest or how to measure these frequencies

if the data was available. Initiation ceremonies are not important simply for the values they inoculate into young men; in some societies initiation ceremonies are significant because they form age groups which play a rôle in military organization.

The Marind-anim have one of the most elaborate age groups organizations in New Guinea which is represented in diagram (57). The young men, called éwati, constitute the bulk of the warriors in a raiding party. Elder men with experience and skill lead a raiding expedition and some youngsters, called wokraved, attend to learn. Although the age groups from different villages do not unite to form a single military unit, the age system functions to integrate Marind villages because men from one village have a reference group in another village, which is characterized by a distinctive hair style and ornaments. The strength of the age grade system is possibly a reason why the Marind-anim travel so far to raid complete strangers.

AGE	AROÏ-PATUR	WOKRAVED	ÉWATI	MIAKIM	AMNANGIB	MES MIAKIM	D E A T H
(Yrs)	(10-13yrs)	(13-16yrs)	(16-19yrs)	(19-25yrs)	(Middle Age)	(Old Age)	

WITHIN GOTAD (Boys' House)

Diagram (57): Marind-anim age grades.

The Orokaiva base their military units on age grades. Young men initiated together are called naname and are obliged to fight together in the same military unit (Reay 1954). Several settlements are united by

holding initiation ceremonies together and forming a single military unit on the basis of common age groups. There is evidence that age groups are also important in Trans-Fly and Kiwai societies. Williams (1936: Ch.11) gives a description of initiation ceremonies for the former and Landtman (1927:237) lists the age grades for the latter. The exact significance of age groups in either society is not clear but they are probably of some significance in warfare.

The greatest emphasis on male initiation to produce strong warriors is found in the Eastern highlands of New Guinea. The Gahuku (Read 1952;1965) have an elaborate age group organization where boys are slowly initiated into the zagusave (men's house) and taught the responsibilities of adulthood. Aharu (age mates) are equals who remain close throughout their lives and as warriors they fight together. Among the Bena Bena age groups are important and "the deployment of troops is on the basis of age grades" (Langness 1964: 101). Each grade has a specific task in a raid, for example, while one group fires an enemy stockade, other groups cover the flanks. Age groups are important in the organization of Kamano, Usurufa, Jate and Fore warfare because nefaru (age mates) are closer than siblings (Berndt 1962:36). Siane age mates form a social group which is identified even when all the members are dead.

The societies included in this survey are grouped in table (37) according to the presence of age groups, the occurrence of male initiation without the formation of age groups and the absence of male initiation.

Age Groups	Initiation but no age-groups	No initiation
Bena Fore Gahuku Kamano etc. Kiwai Marind Orokaiva Siane Trans-Fly	Asmat Iatmul G.V. Dani Huli Kuma M. Enga Waropen Jalé	Abelam Maring Arapesh? Melpa B. Dani Mendi? Chimbu ? I. Dani? Kapauku Markham

? = no evidence either way, therefore classified in group (3)

Table (37) : Societies with age groups, initiation and no initiation

In a comparative study of African age groups Eisenstadt (1954:102) suggests "that age-set systems arise and function in those societies in which the basic allocation of roles is not overwhelmingly determined by membership in kinship groups, and where some integrative functions remain to be fulfilled beyond these groups." In the previous chapter societies classified in the group formulated on the basis of social organization and called scattered settlements have strongly formulated ideas concerning descent and agnatic obligations. In the light of Eisenstadt's observation it is significant that some New Guinea societies with weakly formulated ideas of agnatic descent have developed age group systems (the Siane are a possible exception). There is a

trend therefore, for societies with weakly developed ideas of descent to achieve solidarity in military organization with age groups. Bernardi (1952), in a study of Nilo-Hamitic age systems, suggests that groups based on age have a cohesive effect which counter acts the dividing and unite groups to a certain extent. In New Guinea, some people with large settlements achieve stable relations with other groups through links based on age, whereas smaller settlements achieve solidarity through descent. Table (38) shows that age groups characterize larger settlements.

Type of Settlement	Presence of Age Groups
Village	77.8%
Hamlets	22.2%
Scattered Homesteads	0%

Table (38) : Type of settlement and presence of age grades

Groups based on age are not the military groups in the societies where they occur because other factors are at work, for example, the influence of big men to persuade warriors to fight and real or imagined obligations to support kinsmen. Age groups are, however, a significant factor in the military organization of some societies, although in war their functions depend upon the political factions collected around big men and the activities of these leaders. Age groups probably serve to consolidate the groups under the influence of a big man but hinder attempts by leaders to extend their influence over neighbouring groups.

The study of military organization is instructive, but the study of primitive war is not simply the study of military organization (see, for example, Vayda's (1960) study of Maori warfare). It is not correct to classify primitive war by differences in military organization alone, as some anthropologists do in New Guinea; for example some writers distinguish between highland and lowland patterns of warfare. This chapter demonstrates that military organization is a means to an end and is designed to achieve a specific goal. The same type of engagement however, can achieve different ends and for this reason it is misleading to classify primitive war solely from the aspect of military organization. It is important to consider social and ecological factors, as well as military factors, in a study of primitive war. Military organization is a mirror which reflects the social and ecological configuration behind war and like all reflections, this is not the true situation, but only a clue to it.

Chapter 5

Conclusion

In the first chapter, after a brief outline of the comparative method, a definition of war is discussed. Malinowski's minimal definition, that war is organized violence with political aims, is used as a starting point, but primitive war is distinguished from advanced war. In primitive war the absence of leaders with sanctioned powers means that the political aims of war are often implicit and that in some cases war occurs for no apparent political reasons. Advanced war, on the other hand, occurs for explicit political reasons.

The second chapter is a discussion of ecological theories which postulate that war occurs when the population increases and there is a shortage of resources which results in men fighting for more land. The ecological evidence, demographic information and ethnographic examples presented in this thesis demonstrate that few wars in New Guinea can be explained by ecological factors alone. The conclusion of this chapter is that ecological factors are important in a study of primitive war when used in conjunction with social factors, because the environment sets limits within which man, a social creature, makes his choices.

The third chapter is a discussion of social organization and primitive war. The confusion of terminology, which makes accurate comparison in anthropology an impossibility, is discussed and as a

preliminary to further study a uniform terminology is defined. In the following section of this chapter, warfare in twenty seven New Guinea societies is described with the aid of a series of diagrams. The final section of the chapter is a comparative analysis of the descriptive accounts of war. The computer study revealed two significant clusters of societies and several other interesting correlations. The first cluster concerns factors of social organization and consists of three groups of societies called divided villages, conglomerate settlement and scattered settlement. The second cluster reveals three types of war in New Guinea, referred to as war of redress, war for deep rooted reasons and permanent war. An important argument which runs through this chapter is the relatively unimportant rôle of descent in New Guinea war and the crucial rôle of big men and their small political factions struggling for existence. This argument follows on from the definition of primitive war given in the first chapter.

The fourth chapter is a discussion of primitive military organization. The first part of the chapter gives a descriptive outline of military organization in New Guinea, which is illustrated with selected ethnographic examples. The second part of the chapter is a brief comparative analysis which distinguishes three major types of military engagement in New Guinea,

these are battles, frequent raids and infrequent raids. A certain combination of military principles characterizes each type of engagement. The conclusion of this chapter is that military organization is an important aspect of a study of primitive war but that it is incorrect to classify different types of war on the basis of military organization alone because the same engagement can characterize different types of war and achieve different ends.

The arguments of this thesis suggest several problems relating to war which require further field research. The problems include:

1. A study of the rôle of big men in New Guinea warfare to support or refute the argument of this study that war maintains the operation of the political system.
2. A study of the suggestion that exchange relationships facilitate the bartering of essential goods between enemy groups. Although exchange systems in New Guinea have been studied for a long time, from Malinowski (1922) until the present day (e.g. Strathern 1971; Young 1972), ritual exchange as an insurance for essential exchanges (which would otherwise be impossible in a hostile environment) is not fully documented.
3. The values which people in New Guinea place on war is a subject which requires further investigation in the library and in the field. (see introduction).
4. The psychological aspects of warfare in New Guinea require careful analysis. The problems suggested in the introduction to this thesis are an example of the questions which deserve closer study.

5. The chapter on ecology and warfare points to the necessity of a detailed ecological study in relation to war. Theories based on ecology and demography must rigidly be controlled and documented unless they are to be a mere speculation on possibilities.

6. A topic for museum and field research is the manufacture and use of primitive weapons, before these skills are lost forever. The study of primitive martial values can be associated with a study of primitive weapons and the symbolism of their design, (see introduction).

7. An adequate study of primitive military organization is necessary and should be based on a set of military principles, such as those used in this thesis.

8. The formulation of a theory of primitive warfare is necessary. If any theoretical advances are to be founded upon fact and not supposition field studies of war are essential. The importance of war in New Guinea is acknowledged by numerous writers and a detailed field study of war is essential before it is too late.

The political basis of primitive war in New Guinea is of crucial importance. Warfare in New Guinea operates within the political system in a similar way to the feud in certain other acephalous societies. Among the Nuer, for example, "the balanced opposition of political segments is, we believe, largely maintained by the institution of the feud" (Evans-Pritchard 1940:293).

In New Guinea, the small political factions centred on big men struggle against each other for their existence and the balance of power between two factions remains equal so long as leaders can influence approximately the same number of men and recruit equal numbers of allies. War is the institution which drives the political system of small, independent political groups competing against each other to extend their influence.

The people of New Guinea would appreciate the two quotations given on the fly leaf of this thesis. The political system of New Guinea requires war in order to function and Milton's observation, "For what can war but endless war still breed" is particularly apt for the pattern of war in New Guinea. Similarly, the quotation by Vegetius, "Let him who desires peace, prepare for war," is apt for the political situation in New Guinea, where the small factions aim to reduce the threat of enemies.

The characteristic nature of war in New Guinea suggests that possibly a new anthropological term is in order to signify the situation because the phrase "primitive war" is too vague and subject to misinterpretation. The suggestion of this thesis is that the word bellum is introduced into anthropology to signify the poorly organized military encounters which are the result of no absolute leadership but only influence harnessed with group opinion. The political

aims of bellum are implicit and hidden beneath overt reasons for war, such as redress or revenge. The term bellum is suggested for two reasons. Firstly, it is respectable to use classical terms for new concepts within a subject. Secondly, two English adjectives bellicose and belligerent (which originate from the latin) are apt descriptions of the type of war found in New Guinea, where fighting is endemic and men are aggressive.

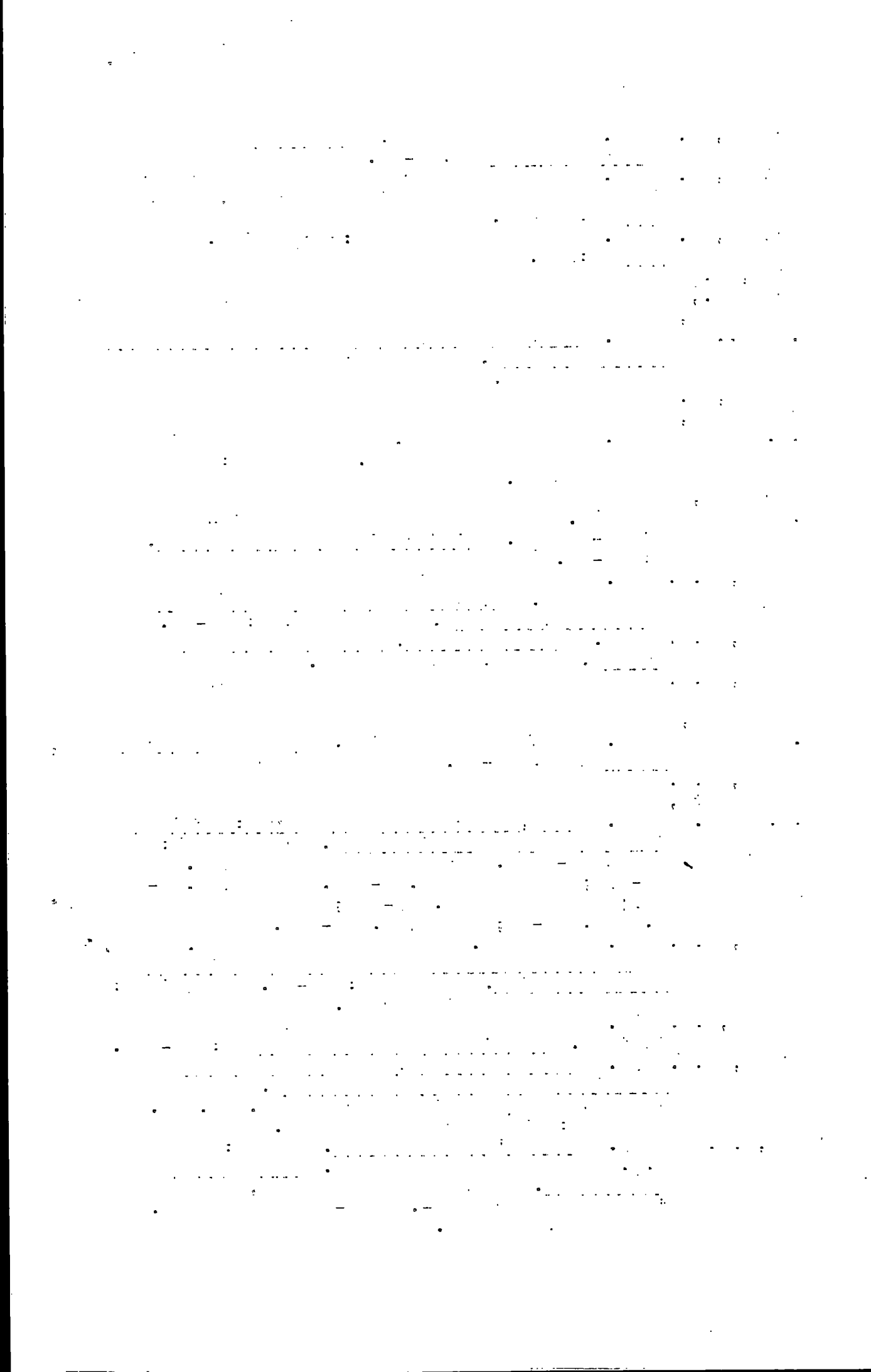
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