

Binumarien: Kinship and Cooperation in a

New Guinea Highlands Community

by

Kristen Hawkes

**A dissertation submitted in partial fulfillment
of the requirements for the degree of**

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NOTE ABOUT ORTHOGRAPHY

Following the convention used by Desmond and Jennifer Oatridge for writing Binumarien, words and phrases in that language are spelled with double letters for long vowels, single letters for short vowels, and 'q' for glottal stops, for example, Maqaanoona.

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CHAPTER 1

Introduction

This is a study of social organization, especially kinship, economic, and leadership arrangements, in Binumarien, a small linguistic isolate in the Eastern Highlands District of Papua New Guinea. It is addressed to the structure of interpersonal relations among the adults of the community, in particular, how each is related to the other according to genealogy, kin classification, residential location, cooperation in production, sharing, and authority.

Binumarien is unusual for this area in that it lacks descent groups. The analysis of social organization must therefore be directed to tracing interpersonal relations. However, the regularities revealed by this approach, and the explanations adduced for them, appear to have general application, even for those societies in the Central Highlands of New Guinea (abbreviated throughout as: CHNG) with descent groups. Even in areas where social behavior is reported to be most completely organized by patrilineal descent groups there is a great deal of interaction, cooperation, sharing, leading, and following which cannot be accounted for with lineal models.

This introductory chapter begins with a discussion of the general problem posed by the explanatory limits of lineal models, the problem of 'looseness,' and outlines the orienting perspective of the study. Following background information on Binumarien, data collection techniques are described. The chapter closes with a brief outline of the body of the dissertation.

GENERAL ORIENTATION: THE PROBLEM OF LOOSENESS

It has been the convention in the ethnography of the Central Highlands of New Guinea (CHNG) to begin the description of social structures with the political constructs which define groups within a society and the relations among them, then to present figures which show the degree to which the observed facts of composition, the 'groups on the ground,' approximate the definitions. Whatever is left over, i.e., components of a local group which do not conform to its definition and identity as a group, is an indication of 'looseness.'

Meggitt's excellent Mae Enga account provides an example of this strategy (1965). Having described the lineage system, including copious quantitative tabulations of sample populations, he presents, for example, two tables (1965:240-43, tables 88 and 89) which show the results of sample monitoring of cooperative activities (gardening and house-building). Who provides assistance and how much is reported according to 'lineage' affiliation and 'agnatic connection.' We are told how many of those who cooperated are agnates and how many are not. But we do not know the specific connection between the host and the 'non-agnates,' and we do not know the specific connection between the host and his lineage brothers (who need not, according to Meggitt's usage, be agnates) who helped him, or the connection between the host and any lineage brothers who did not help him. In other words, there is no way to pull from these figures an explanation of the organization of cooperation beyond the general statement that 'lineage brothers' help the most. Certainly that is important but it tells us more about 'lineages' than about the actual organization of cooperation.

Since Meggitt's explicit intent is to describe the lineage system he can hardly be faulted for doing just that. But if we are interested in the regularities of behavior within local groups, the internal social organization of communities, a different reporting strategy is required.

The conventional approach has been to emphasize the structures: lineages, clans, and so forth. The description of their identity and definition comes first and is followed by considerations of the part they play in various activities. But there is an alternative strategy. The activities themselves can provide the focus of attention and the arrangements which organize their performance extracted and examined.

Largely because the former approach has been favored, following a strong interest in descent constructs, we have few sets of specific data on the actual details of interaction among individuals, except statistics on the degree to which various configurations 'on the ground' correspond to the constructs used to identify and define groups.

If we are interested in the regularities of internal local social arrangements, this is not enough. Things which directly affect inter-community relations and the political constructs which organize them and which define communities, are not the same things which produce and organize residential aggregations and their everyday activities. The identity of local groups vis-à-vis other local groups is not a product of, and may not conform to, the composition of these residential groups. This is an old lesson. Evans-Pritchard's remarkable Nuer account separates the two clearly. When discussing the political organization among local groups Evans-Pritchard notes:

Every Nuer village is associated with a lineage, and, though the members of it often constitute only a small proportion of the village population, the village is identified with them (1940:203).

In the absence of political institutions providing central administration in a tribe and co-ordinating its segments, it is the system of lineages of its dominant clan which gives structural distinctness and unity by the association of lineage values, within a common agnatic structure, with the segments of a territorial system (1940:236).

The association of the tribal system with a clan may thus be supposed to influence the form of the lineage structure (1940:247).

But the composition (as the first citation above indicates) is another matter. It is not simply lineage affiliation which produces the residential aggregations, the villages. They are identified by the name of a lineage, but their internal organization and composition is of a different order:

A village comprises a community, linked by common residence and by a network of kinship and affinal ties (1940:115).

Nuer have always felt themselves free to wander as they pleased, and if a man is unhappy, his family sick, his herds declining, his garden exhausted, his relations with some of his neighbors uncongenial, or merely if he is restless, he moves to a different part of the country and resides with some kinsmen ... Nuer say that they usually make for the home of a married sister, where they are certain to be well received (1940:210).

The political apparatus which organizes intercommunity relations underwrites external (and internal) community peace and community claims to territory. Its most significant impact on ordinary workaday arrangements is to allow the productive units of the community 'autonomous' access to basic resources. This wider organization emphasizes certain relations so that "a society of patrilineal lineages is predisposed to patrilocal extended families" (Sahlins 1968:64). But constructs for

organizing interlocal relations do not dictate the arrangements of work, cooperation, and sharing which are the everyday matters of getting a living, the organization 'on the ground.' These last come up against practical requirements which must be met by pragmatic responses.

The pattern of group identity and definition, particularly for settled communities in the absence of the state, must have a certain inflexibility and apparent permanence if it is to provide some degree of intercommunity stability and some security of attachment between the community and its basic resources. On the other hand, the workaday arrangements for getting a living must be patterned by social organizations which have a ready flexibility, i.e., which are constituted to respond quickly to small local demographic changes. The business of livelihood is an everyday matter and, in primitive societies, material production is accomplished by very small sets of producers. Because of this smallness of scale, the loss or gain of one or two producers can quickly make a serious difference in the organization of production. Patterns of cooperation on the ground must thus allow and direct flexible combinations of individuals. For the sake of productive stability there must be variety in the acceptable arrangements of cooperation. Lineage affiliation of any sort is unsuited to this requirement. Unilineal affiliations do not provide sufficient variety, and cognatic descent affiliations, if they are restricted in certain ways (cf. Goodenough 1955) suffer the same rigidity, while, if they are unrestricted they provide insufficient constraints to organize cooperation. An arrangement which offers too many alternatives is as inadequate as an arrangement which offers too few.

The ethnographic record is full of outstanding accounts from around the world which confirm the difference between the organizational form of super-community arrangements and ordinary workaday arrangements, e.g., Evans-Pritchard on the Nuer (1940), Firth on Tikopia (1965), Barth on the Basseri (1961). In these cases matters of descent and lineality provide the framework for the political relations among local groups. And these differ significantly for each: segmentary lineages in egalitarian clans for the Nuer, the ramage or ranked lineages of Tikopia, and the internally egalitarian lineages joined in ranked clans of the Basseri. But for all three cases the arrangements of workaday cooperation above the household are based on bilateral kinship including in-law connections.

This is not simply the mismatch between the 'ideal' and the 'actual,' between the 'model' and the de facto situation. The definition of local groups vis-à-vis each other and the definitions and interrelations of their component parts, while not entirely independent, are different aspects of the cultural system. And they are shaped by different constraints; they do different things. The wider political organization molds to some degree the internal organization of local groups and selectively emphasizes certain relations. But the everyday arrangements must answer to other concerns as well.

Recognition of the mismatch between the descent identity of groups and their actual composition has been stamped a 'New Guinea' problem (cf. Barnes 1962), the result of using 'African models in the New Guinea Highlands.' But this is not a matter of 'African' vs. 'New Guinea' models. Sahlins has argued that the particular political arrangements

of Nuer (and Tiv) which articulate a large number of local groups into relations of explicitly graduated solidarity through the mechanisms of the segmentary lineage (the 'African model' most often at issue) is very rare, even in Africa (Sahlins 1961). The use of descent constructs to organize intergroup relations, however, is not rare. The 'segmentary lineage' is (following Sahlins' restricted usage) only one type among others in a large class of organizational forms. Other types, for example, the 'territorial clan' which is Sahlins' (1968) label for the parish type (Hogbin and Wedgwood 1953-4, de Lepervanche 1973) most common in CHNG, are less 'automatic,' less precise, less extensively effective arrangements for organizing inter-local relations of alliance and enmity. The arrangements are different, but they are, in a sense, alternatives. The territorial clan has functions which are comparable to those of the segmentary lineage and, as with the segmentary lineage, the descent phrased identity of groups organized in this way, is neither a consequence of, nor a necessary match for, their composition.

CHNG is an area where the features of local organization which cannot be accommodated in patrilineal models "have received descriptive cachets like 'looseness,' 'openness,' 'flexibility,' suggestive of a regional peculiarity - even anomaly - but bereft of explanatory value" (Watson 1970:107). The argument here is that a mismatch between the identity of local groups and their composition is not an areally unique phenomenon. And moreover, it is precisely the sort of thing to be expected. The fact that such a mismatch has received a special 'New Guinea' stamp may be to some degree because here in CHNG, more than anywhere else in the world, anthropologists studied societies which were nearest to

being 'pristine' functioning primitive systems. They had not only informant accounts of groups and their definition, they had the composition of the groups displayed before them. And the variety, which in other cases might have been attributed to contact dislocation, had no such apparent source here.

The critical point is that there are two different aspects to social organization. Certainly they are not independent, but neither can be simply deduced from or explained by its degree of match to the other. The conventional emphasis in CHNG ethnography has been on the structures associated with the identity and interrelations of local groups. This study departs from that tradition. Its focus is on the internal organization of a community. Its central questions are: 'Who does what with whom?'; 'What are the social identities of each?'; 'What are the relations between them?'

In addition to the fact that 'looseness' in local organization has come to be associated with CHNG in general, there is a more specific importance to the discovery and explanation of regularities in the internal organization of Binumarien. The tendency to associate regularity and predictability with unilineal arrangements and 'looseness' and 'optation' with deviations from 'unilineal assumptions' is most strongly evident in the work of du Toit (1964, 1975). This is of special significance here because his work was on Gadsup and the seat of his research was the village of Akuna. Binumarien is partially surrounded by Gadsup-speaking communities (it is classified as Gadsup by the government for administrative purposes) and Akuna is one of the

socially significant neighboring villages looking out from Binumarien. Du Toit was unable to account for residential aggregations and patterns of interaction in Akuna with lineal models. He concluded that 'optation' was the 'rule' and that 'individualism' was the 'explanatory principle' of organization:

In other words, the choice is open to every mature individual to develop new interests or to experience new sentiments as regards people or places, and therefore to form new friendships and alliances or to align with a different village ... Mobility and affiliation [as contrasted to filiation] then are the important factors in Gadsup society as they allow for that all important characteristic of individualism to find expression. The person retains the right to align with whom-ever he desires and to settle in whatever village he prefers (du Toit 1964:92).

This seems to me more a statement of the problem for explanation than a conclusion of analysis. The questions are only posed, they are not answered. Why is this choice made and not that one? Why do certain alignments occur and not others? Why settle here and not there? The following account of Binumarien, which is similar to du Toit's description of Akuna in its lack of lineal organization and the emphasis on ego-centric connections, shows that, in Binumarien at least, there is predictability and regularity.

In Binumarien there are no descent groups or categories. From the viewpoint of received models everything is 'left over looseness.' When I went to Binumarien I did not know that descent groups were absent there and I expected and tried to find them. But just as the presence of descent phrased arrangements for defining and identifying local groups turns on the regional relations among communities, so the absence of such arrangements can be related to features of the regional

relations among communities. An argument to that effect appears in chapter two and again in chapter three.

Although the research strategy and data collection procedures were not devised to deal specifically with a bilateral society, in the absence of descent groups there is no alternative but to study interaction, co-operation, authority, and so forth, as sets of specific interpersonal relations. The extensive specifics on which this study is based provide material for the demonstration of high degrees of regularity and predictability in Binumarien social organization. Such findings prompt the suggestion that residual 'looseness' in CHNG societies with patrilineal descent constructs may be a part of equally regular patterns if examined from a similar point of view.

This is not to suggest that Binumarien is in any way typical of CHNG. Rather, Binumarien seems to represent an extreme. Twenty-two years ago Read pointed to an east-west differentiation in Highland societies. A pattern of "cultural intergrading or overlapping" (1954:19) marked by variation in language, rituals (the fertility rituals of the west disappear moving east), settlement patterns, pig exchanges, population density. The pattern of scattered homesteads with (male) members of a single (exogamous) patrician contiguously located, shifts to nucleated villages consisting of (male) members of more than one named clan in the east. The pig exchanges typical in the west are larger, more elaborate, occur at longer intervals, and integrate a wider social universe, than do similar festivals in the east. The population is denser with larger linguistic units in the west, where in the east language groups are smaller and 'more isolated' (Read 1954:20). And Watson referred to

the Highlands east-west gradients, evident in blood group studies (Macintosh et al. 1958), human effects on the biota (Robbins 1963a), residence patterns (Berndt, this issue [1964]), and the increasing size of speech communities (Wurm, this issue [1964]) (1964:17).

Varying Ideas have emerged about the significant elements of variation across CHNG (e.g., Strathern 1969a) and about the geographical locus of important shifts (e.g., Langness 1964). But the idea of a gradient associated to some degree with an east-west axis has held more or less firm (e.g., Sorenson 1972, but cf. Langness 1971).

Binumarien is at the very eastern edge of CHNG. To match this geographical extreme, there are a set of interrelated organizational extremes. The community of 172 people is also the ethno-linguistic unit, the phyle. This is extremely small for CHNG where "there may be sixty thousand members in a phyle ..." (de Lepervanche 1973:1). The absence of patrilineal descent groups or categories is most unusual for the Highlands where "outstanding among the similarities is the prevalent patrilineal ideology" (Watson 1964:13). Binumarien is markedly endogamous while "in most Highland societies each parish consists ideally of an exogamous patri-clan ..." (de Lepervanche 1973:31). But it is the extreme cases which help to sort out the most significant features of any gradient and which provide the material necessary to account for the variation.

GOALS AND THEORETICAL ORIENTATION

The focus of this study is the social organization of Binumarien. The main goal is to describe relations or cooperation, sharing, and influence among the adults of the community, to show how these relations pattern according to kinship and against each other, and to account for

that patterning. Throughout the following chapters the strategy is to report sufficient specific details to allow analysis, then to search this body of specifics for regularities, and always to account for the patterns which appear. And also, on occasion, to account for patterns which, though expected, do not appear. The theoretical orientation of the study follows the general theory of primitive social organization developed by Marshall Sahlins (most notably in 1961, 1965, 1968, 1972) and all the conclusions drawn herein are consistent with that general theory, although there is explicit disagreement with Sahlins in a matter of detail about big-men (chapter five).

Sahlins' theory emphasizes four aspects of primitive social organization and focuses attention on their interrelationship. First, the "structure is generalized; in this lies its primitiveness. It lacks an independent economic sector or a separate religious organization, let alone a special political mechanism. In a primitive society these are not so much different institutions as they are different functions of the same institutions ..." (1968:15).

Second, the organization of production is essentially domestic. Building especially on Marx and on Chayanov, Sahlins elaborates the implications of such an organization. The sexual division of labor, the small scale technology, the autonomous access households have to basic resources, produce an arrangement which "anticipates no social or material relations between households except that they are alike" (1972:95). The Durkheimian notion of mechanical solidarity is elaborated by Sahlins into a segmentary dynamic. On the one hand there is a tendency toward underproduction. The household, producing for its own requirements,

Marx's 'production for use,' tends to halt production as they are met. This poses a serious danger. No cushion is provided for the inevitable bad times. "Almost every family living solely by its own means sooner or later discovers it has not the means to live" (1972:101). On the other hand, there is a tendency toward dispersion of households. "Lacking specialized institutions of law and order" (1968:13), each household, organized to produce its own requirements, has the right to prosecute its own interests with force.

The third related aspect is the role of organizational arrangements in counteracting these tendencies toward underproduction and dispersion. "Everywhere the petty anarchy of domestic production is counterposed by larger forces and greater organization, institutions of social-economic order that join one household to another and submit all to a general interest" (1972:101). Obligations to give, to share, raise production sights. "Kinship, chieftainship, even the ritual order, whatever else they may be, appear in the primitive societies as economic forces" (1972:101). And these same institutions carry a critical political load. They are "diplomatic arrangements for keeping a modicum of peace" (1968:13). "The primitive analogue of social contract is not the State, but the gift" (1972:169).

Finally, the fourth aspect of primitive social organization which Sahlins emphasizes is the influence of the larger social order on the smaller. Intercommunity, regional relations tend to mold internal community organization.

The greater groups are not the smaller writ large; it is rather the other way around. The 'primary' groups and relationships are shaped by their incorporation in a larger system of a

certain type ... The issues ... have to do with the community in a tribe of communities, and with the persistence of the tribe in a world of tribes ... The principles of higher organization are forged by selective forces in play at this level (1968:55).

This perspective on Binumarien social organization proves illuminating throughout. However, since the primary focus of the study is the quantitative data of social interaction in Binumarien, propositions which are not related to Sahlins' work are entertained where appropriate. For example, extensive specifics on interpersonal genealogical relations and kin classification together with some particulars on the transactional content of each dyadic relation shed empirical light on arguments about the 'meaning of kinship terms.'

Leach's classic paper on Trobriand kinship terms (1958) suggested that these were best defined as socio-spatial classifications, for example, tama (classificatory father) he defined for a male ego as 'domiciled male of my father's sub-clan hamlet.' Yet the simple tests of such a proposition could not be performed because the necessary empirical details were not available. How does a Trobriand male's use of this term actually map over the specific individuals in his social universe? What does a specific male ego call the specific individuals who are 'domiciled males of his father's sub-clan hamlet?' Eighteen years have passed since the publication of Leach's paper and the issues of the 'genealogical' versus 'social category' meaning of kinship terms have stimulated every kind of argument except a simply empirical one. Always positions are taken in the absence of the relevant sort of specific detailed data. Recent work by Shaw (in preparation) on a Papuan terminology system puts forth another 'Leachian' interpretation, and once again empirical confirmation

(or disconfirmation) is not provided.

This study seeks to demonstrate regularities in Binumarien social organization and to account for them. In pursuit of these primary objectives issues of general ethnological interest, such as the one just mentioned, occasionally arise. But secondarily, and more particularly, this study of Binumarien has relevance for our understanding of the traditional social organization in other CHNG groups. Such a claim must be evaluated partly in light of background information on the community of study: Who are the Binumarien?

BINUMARIEN

The Binumarien are a linguistically distinct population of 172 people occupying an area at the eastern edge of CHNG just west of the Markham fall. They live in three small hamlets, Maqaanoona, Onikuradurana, and Ubandena, along the north side of a valley running northeast at an altitude of about 4000 feet. They claim about 10 square miles of territory (a loose estimate), most of which is bush. There are no marked seasonal changes but there are two 'rainy seasons,' one just after Christmas and one in late June and July. But it is rare for two weeks to pass at any time of the year without rain. The bush contains a variety of game birds including cassowary, small marsupials, and a few wild pigs. All of these are hunted but game is of minimal importance as a food source.

The Binumarien are swine keepers and gardeners, who rely on sweet potatoes as the diet staple. They are subsistence horticulturalists but

trade-store items are of some importance, especially steel tools. Other goods are also purchased, e.g., rice and tinned fish, which have become a certain component of all feasts. The major source of cash for these things is coffee and most people cultivate a little to provide it (Fig. 4.1, chapter 4).

Coffee was introduced by the government in the fifties. It leaves Binumarien the same way that most trade-store goods enter it. Traveling 'coffee' and 'cargo' cars run throughout the area. They buy coffee which fluctuates in price, depending on the buyer's assessment of its quality and on the international market. This fluctuation is not understood locally and generates great mistrust of the buyers.

Although incorporation into a wider political and economic system is significantly in progress here, this is still much more a primitive than a peasant community. Before the incorporation of colonial control, Binumarien was an autonomous political unit, interacting with neighboring communities which were also autonomous. Although the community no longer controls its own interaction in a wider political network, its internal affairs are still almost entirely an independent local concern. And its economic base, the organization of production and distribution for self-subsistence, remains largely as it was.

SOME HISTORY

Although historical context is always important in understanding the current organization of a community, this is especially true of Binumarien. Its recent history may make it so unique as to be utterly

unrepresentative of any traditional community of eastern CHNG. On the other hand, the general outline of this recent history is perhaps often repeated in the history of other communities in the area. Here war, defeat, the flight of refugees, displaced clusters of people regrouping to return, are commonplace phenomena. This is the pattern Watson has characterized as 'organized flow' (1970).

The last dispersal of Binumarien and their return as a community to their current location were 'post contact' phenomena. The colonial forces played critical roles in these events. But the events themselves were largely matters of course for the Eastern Highlands. And Binumarien does not show 'cultural breakdown' or disintegration at all. Perhaps, with certain qualifications, a visit to Binumarien would give any student of the area "the agreeable sensation of 'I've been here before'" (Pouwer 1961).

In the twenties, European influence penetrated the Highlands for the first time. The first outsiders into Binumarien were coastal New Guineans who came as Lutheran missionaries. There is a story told in Binumarien about how the first of these men survived his arrival. As the exploring missionary approached Binumarien, the first to see him was a man of importance whose brother had recently died. Because the missionary was wearing clothes, the man who saw him thought that this was his dead brother returning, with the grave wrappings still hanging about his body. Only because of this he was not shot on sight.

From the beginning the Binumarien say that their community was fairly open to outsiders. But the initial impact of contact was not very

great. Other routes into eastern CHNG by-passing Binumarien were favored putting it 'behind your elbow,' i.e., a place you cannot see.

But there was a series of events associated with contact which had a drastic effect on the community. In the thirties the colonial government retaliated against Binumarien for breaches of the newly imposed pax Australiana. The Binumarien, as was their habit, had made war on Wompur, a neighboring community. The government sent a punitive patrol. The local story is that through signs the people were persuaded to form themselves into lines. As they understood it they would receive the trade goods, mirrors and beads, and so forth, that the officers displayed before them. Instead the men were tied up and taken off to the coast to prison, never to be seen in Binumarien again. The few men who had not been at home, or who had fled to the bush, and the women and children were left defenseless and forced to take refuge from their neighbors by fleeing to the Markham valley. Here malaria took a further toll. After a year or two in exile the survivors returned. Patrol Officer C. R. Croft from the Ramu Police Post, Madang District, mentioned in a patrol report dated 1937/38 that the 'previous sojourn of the Binumarien in the Markham' had reduced their numbers from 200 to a present population of 69. This put the Binumarien in a 'pro-government' position. Without the colonially imposed peace they could be easily routed.

LINGUISTIC RELATIONS

The Binumarien language is a member of the Eastern family of the East New Guinea Highland stock. It belongs to the Tairora-Binumarien

subfamily, to which Waffa has lately been added (Wurm 1964; McKaughan 1973). Tairora is a language of some 10,000 speakers (Watson 1970). Binumarien is separated from Tairora-speaking communities by surrounding Gadsup speakers. The fact that Binumarien does not border its closest congeners suggests that at some time in the past this group was cut off and pushed to the east. However, Binumarien local history states that the people came originally from the north where they first began as one original population which included Gadsup speakers some of whom remain in that area. The name Binumarien was acquired only within the last 70 or 80 years, after they had moved to their present location: the valley of the river which had long been known to them by that name.

Until fairly recently, there were three communities to the northeast whose members spoke the same language as Binumarien. They were so badly beaten by their enemies (including Binumarien) that all the survivors were dispersed as refugees, some of whom came to Binumarien where they had kinsmen, and others to neighboring communities. Since that time, the Binumarien form a small linguistic isolate, surrounded by Gadsup speakers on three sides with Austronesian-speaking populations to the east in the Markham valley.

RESEARCH STRATEGY

Recently, Meillassoux has noted that:

Though we find in the current anthropological literature information on technology, or, at best, on exchange, we have hardly any information on the social organization of production: who is working with whom and for whom? Where does the product of the laborer go? Who controls the product? How does the economic system reproduce itself? (1972:98).

Concerns like these underly this study. The general questions are 'Who does what with whom?' and 'Why is it they who do it together?' Since the plan of the research was to exhaustively describe interpersonal relations of certain types in an entire system, it was important to find a manageably small community which was quite autonomous. Binumarien was chosen as a research site because of its small size and linguistic isolation. Given the general ethnological convention of using linguistic boundaries to mark social groups (Hogbin and Wedgewood 1953:252-253; Naroll 1964), its linguistic distinctness suggested that, in a certain sense, the community was not a 'representative sample' of a larger whole, but was instead an entire system.

However, to gather data on the 'whole thing,' even for a small whole like Binumarien, an investigator must go beyond his own direct observation. It simply is not possible for one, or even a few, fieldworkers to observe the interactions between each pair of adults in the community in sufficient detail to clearly type and quantify in some way the relations of every pair. If the intention is to map relations of multiple content among all the adults of even a very small community, a technique which uses informants as assistants is required.

The use of informant reports as a central data base introduces a potential for severe distortion. The difference between what people say they do, and what they actually do, may be very great. If the matter of interest is actual patterns of behavior and not individual 'models' of it, the reports must emphasize descriptive rather than normative information.

There is no clear unambiguous line between these two types of informant accounts. The extremes are 'literal' reports of a specific event, and contrarily, generalizations about proper behavior in certain broad contexts. The more specific the referents, the more 'objectively' descriptive the responses. On the one hand are reports about the interaction between specific individuals, in a certain activity context on a particular occasion. On the other hand are normative statements about the interaction between any individuals in a given status relationship, in general. The first sort of report, for example, is about a 'certain x and y,' in the matter of building a given fence, on a specific occasion. The second sort is about 'brothers,' in the matter of cooperation, in general.

Much of the quantitative data herein comes from informant reports which are literally descriptive in the sense that they were about specific other individuals (not, e.g., kinsmen of a certain category), in a definite sort of transaction. The questions which elicited these reports were phrased in the Binumarien verbal construction which means 'habitual,' as, for example, 'does x habitually build new gardens with you?' For every positive response the following question was 'How often?' Each adult was both a subject of study and an observer.

Since there were large numbers of observers, reporting inevitably fails to be uniform. The lack of standardization was most often due to a bias consistent for all the reports of a single informant. That is, some informants seemed to consistently estimate, and so report, the behavior of others toward themselves in an overly generous direction, others seemed to estimate heavily on the pessimistic side and to report as much. These inaccuracies are to some degree compensated in the final coding of data. For symmetrical

relations only a mutual affirmation of a certain sort of transaction, both parties to the dyad reporting positively on the behavior of the other, is counted as evidence of the reciprocal activity. For asymmetrical relations the emphasis is given to the cumulative evidence from all informant-observers reporting on the same subject. For example, one of the questions asked was mifa ani qurlarara fee? "Does this person 'go above' (literally) you?" Which means, does this person 'guide your actions' or 'advise' you. With the question asked in this form, the record of the number of others who advise a single individual depends completely on the report of the 'advisee' himself. Because that gives relatively free rein to individual bias that number is not of focal interest. Instead, the analysis here concentrates on the number of others who are 'advised' by an individual. With the question asked in this form, the recorded number of others who are advised by anyone depends on the cumulative reports of all other informant-observers. It is thus not skewed by the biases of one person. (At least the same multiple biases affect all cases equally.) In other words, informants' literal statements are a means to an end. It is not the statements themselves, but the behavior they are used to record which holds central place here.

An additional check on the accuracy of the reports was the presence of my associate, Sisia, a big-man of the community at almost all interviews. This worked as a check in three important ways. First, the weight of his influence was brought to bear in explaining the necessity of accurate reporting. Second, he acted as interpreter to Neo-Melanesian if my limited Binumarien was inadequate to retrieve additional information

or an aside offered by an informant-observer. And third, his experience and sense of the accuracy of a given report gave me guidance in re-checking a questionable account.

The presence of this man, who was my companion, informant, assistant, and associate throughout the field period, raises questions about his probable influence on the reports of informant-observers given under his eye. That procedure requires some explanation. It may appear to introduce a systematic bias. I think more importantly it reduced random error to manageable proportions. And if any systematic bias was introduced it was minimal.

The adoption of this procedure followed from the eternal problem of the fieldworker: It is a matter of extreme difficulty to generate in others - even for short periods of time - an interest in and commitment to the research in progress. In general, people simply have no stake in trying to be thoughtful and accurate. There are a number of classic accounts of deliberate duplicity on the part of informants, for example, Evans-Pritchard's (1940), Chagnon's (1968). In addition to these I was told a story of special pertinence here.

Des Oatridge, with his wife, Jenny, and family, had spent about 12 years working on the Binumarien language when I arrived in New Guinea. They are affiliated with the Summer Institute of Linguistics and their goal is to translate the Bible into Binumarien. Papuan languages are notoriously difficult for English speakers to master. It was only after those dozen years that Des, who has an unusual natural facility for languages (and an alarming modesty), was ready to state that he was

really beginning to understand Binumarien. Des told me that, having worked for some years on the language, he remained frustrated. (My memory of the details of this story may be faulty. The general point, however, remains indelibly etched on my mind.) He would work through problems with assistants in his study room, only to find that when he entered the Binumarien hamlets and heard people in normal conversation he was unable to understand. Des is a man who had 'proved his good faith,' so to speak. The length of time during which his family repeatedly returned to Binumarien affirmed his commitment to the place. He offered assistance to Binumarien whenever he could. He thought of himself as trusted by the Binumarien who worked for him. One day, years after he had begun his study, he was in conversation with one of his assistants and heard something rather like what he heard when Binumarien talked to each other. From this clue and with patient insistence, he was able to discover that none of the complex verb forms had been shown him. In his years of work all those who had assisted him had used only one of a very complex series of tenses which affect not only the verbs themselves, but other elements in a phrase. He was dumbfounded, and confronted the men of standing in the community, asking them to explain such a thorough-going conspiracy. They gave him the simplest of explanations: when he came and said that he wanted to learn their language they feared such a thing and agreed among themselves to dupe him. The reason was that if he ever did really learn the language he might take it from them.

The moral of this story, and others like it, is that to assume good faith, and commitment to accuracy on the part of one's informants and assistants is naive. I do not assume that Sisla was committed to the goal

of accurate reporting. I am persuaded that he demonstrated that commitment in many settings. His presence at interviews of informant-observers served better than anything else could have done to encourage the best and most thoughtful reports possible. He would give a speech (which I was largely able to monitor) reminding the informant-observer of the importance of his truth. He would say that the things they told me would be going to a very big-man in America (the chairman of my supervisory committee) and the wrath of this man at me and ultimately at them would be great if there were lies. And then, because he is a man with a fine psychological sensitivity, after the threats would come the promise of reward. He would tell them that this account of Binumarien would make their names known to a distance before unimagined. That people in America would know of this small place and its people.

In spite of his efforts, there is a lot of noise in the record. But I remain convinced that because of his help it is less, by several orders of magnitude, than it would otherwise have been. My confidence in the general concordance of informant-observer reports with the actual behaviors they describe is additionally supported by three other kinds of data.

First, my own observations matched the interactions reported herein. Those who are reported to behave toward each other in certain ways did, in fact, tend to do so under my eyes. And contrarily, those who were reported not to act in certain ways behaved accordingly when I observed them. This is hardly an exhaustive check since I did not see all pairs of adults in 'test' situations, but as a 'spot check' it supports the record.

Second, in accounts of various events, in stories, in anecdotes which

I heard in a multitude of contexts there was nothing to disconfirm this record. Individuals about whom stories were told behaved in those stories according to the interaction expectations arising from descriptions in more structured interviews.

And third, I collected for several weeks 'daily activity summaries' from a selected set of informants. By arrangement they reported to me each day a description of their activities of the preceding day. These amount to 540 person-days. My original hope was to analyse the allocation of time among various activities. This quickly proved impossible as conceived since I could find no way to get estimates of the duration of various activities from informants. But the data serves as additional confirmation for the interaction patterns recorded here. The 540 daily activity summaries contain accounts of who each individual's co-participants were in the activities of the day and these match expectations according to the more formally elicited reports.

The final judgment of the general interviewing strategy rests in the value of this study. Provisionally at least, the softness of data collected in the way described, seems a fair exchange for its strengths. The use of informants as observers is the only way to get nearly complete records of the interaction patterns of the adults of a community. The observations that Binumarien report of the concrete, specific, habitual behaviors of others, with emendations as described, stand as acceptable and useful representations of the interpersonal transaction aspect of social organization.

DATA COLLECTION TECHNIQUES

The specific data gathering procedures used here incorporate a technique used by Fredrick Rose (1960) for studying kinship. It consists of taking a photograph of each individual in the universe of study, and using these photographs to ask questions about the relationships and behaviors of the subjects of the photographs.

The first few months of the research were spent collecting these photographs, and collecting standard census data and genealogies. During this period the sorts of behaviors on which informant-observers would be asked to report were identified. And appropriate questions were constructed in the Binumarien language. Then each adult (with the exception of six women, three because of incompetence, and three because they were inadvertently overlooked in the beginning) was individually asked to report his observations on the behaviors of all others toward himself. Adults are locally defined as those who have married. Everyone in Binumarien is married before the age of twenty, girls at least by their middle teens, boys a little later. Since the local status marker of adulthood is so clear and unambiguous, and since it is behaviorally important I used it to define the universe of study.

The observations of Binumarien adults were recorded in a data matrix, one for each informant-observer. The data matrix consisted of columns numbered for certain kinds of behavior and relationships, and rows numbered for each adult. The entry made in a cell showed the presence/absence/frequency of the behavior defined by the column for the individual defined by the row toward the informant defined by the matrix. This recording

technique allows for systematic record keeping and easy data retrieval. And it encourages the closest possible approach to exhaustiveness in the collection of information in a standardized form. Data collected in this way provide much of the basis for the analysis of Binumarien internal social organization: the patterns of interaction among individuals.

Genealogical data and residential and marital histories were collected as self-reports, as well as in lengthy explanatory conversations with many people, most especially Sisia. The record of linguistic competence and the possession inventory were largely self-reports, but they were collected publically with an interested audience offering critical evaluation and demanding amendments where appropriate.

The data on intercommunity relations were collected partially in data matrices, the rows and columns in these representing communities. Old Binumarien men, and, on successive occasions an old man from Abonamo, one from Arona, one from Pundibasa, and one from Kambaira, were asked about fighting and marriages among communities in the set significant to Binumarien. They were each asked about all pairs of communities and discrepancies were pursued for resolution.

BRIEF OUTLINE

The next chapter is concerned with the wider political field, the intercommunity system of relations in which Binumarien participates. The patterns of trade, intermarriage, warfare, and feasting are described for the Binumarien region. In this area traditional intercommunity alliances are absent, and there are no pig cycles or elaborate exchange chains.

The minimal organization of intercommunity relations is largely a matter of geography. These characteristics of the wider field plus the linguistic boundedness of Binumarien have significant implications for the internal organization of the community.

The third chapter outlines the general internal social organization of Binumarien. The composition of residence units is described and a most pervasive kinship construct, oosana (literally source or base), is analyzed. Binumarien patterns of parenthood and marriage are discussed and the kinship nomenclature is reported and analyzed. Data are provided to demonstrate that kin categories labeled in the terminology do not conform to socio-spatial classes. The distinctions in the nomenclature refer to genealogical discriminations, i.e., those based on ties made up of parent-child and spouse links. But the distinctions, also genealogical, which are associated with patterns of social interaction, are overridden in the terminology system. Those distinctions, the basis of their importance, and their relation to the classificatory characteristic of the kin terminology are sought in chapter four.

The fourth chapter is about the Binumarien economy. The organization of production here conforms to Sahlins' 'domestic mode.' Significant production activities are discussed and the cooperation and sharing of individuals is reported. Regularities in the pattern of who cooperates with whom are discovered. Most importantly, it is not kin 'group' membership or kin class as defined by the terminology system which best predicts interaction but the length of connecting kin ties. A special measure of kinship distance, devised to fit Binumarien, is found to be

highly correlated with patterns of cooperation.

The fifth chapter deals with internal politics and leadership within the community. There is a label faigi firaafa here which literally means 'big-man.' It is applied to all men of a certain age. But within this set of men there is significant variation in influence and prestige. The many ways in which these men can be ranked tend to follow two main patterns. One of these emphasizes age and features of personality and other individual characteristics. The other emphasizes productive industry and generosity. The latter marks out big-men of standing. They cooperate more and more widely than other men. But as with men in general, their cooperation is strongly patterned by kinship distance. The political consequences of economic relations, and vice versa, are underlined by these quantitatively significant regularities.

The sixth and last chapter is a summary of findings. It recapitulates the conclusions of preceding chapters, and repeats some of the suggested implications.

CHAPTER 2

Intercommunity Relations

INTRODUCTION

This chapter deals with intercommunity relations, the larger social field of which Binumarien is a part. Warfare no longer occurs in this area, and much else about intercommunity relations has changed in the last twenty to forty years. It is at this level that colonial rule first makes the greatest difference. To understand the internal organization of Binumarien the wider system 'as it was' must be understood. And the picture of this wider system is important for understanding the patterns in CHNG and in primitive societies generally. This chapter swings widely into the 'ethnographic present.' And where the present tense is used to discuss warfare, this is to be understood as the present tense of a time before the fighting stopped.

Unlike the pattern in other parts of the Highlands, Binumarien has no alliance relations, i.e., no relations of traditional amity and aid, with neighboring communities. In this area, if local groups are spatially distant enough from one another, they have no social relation as corporate entities. If they are nearer they fight. Relations are of continuing hostility and mistrust, broken only by periodic feasting and dancing, among enemy communities, and more solidary relations between individual residents and sets of them in trade and intermarriage.

Generalizations about the variations in scale of intercommunity activities from one region of the Highlands to another may be interpreted to suggest a continuum of political variations in scale, complexity, and stability. The Binumarien area exemplifies a ritual and political extreme. There are no elaborate exchange chains, no pig cycles, and no

Intercommunity alliances.

Four significant types of intercommunity interaction are described and mapped: the exchange of goods, the exchange of women, warfare and intercommunity feasting and dancing. Binumarien exchange goods with the residents of eighteen other communities. These communities define the social universe looking out from Binumarien. (Ukarumpa, the CHNG headquarters of the Summer Institute of Linguistics, and Kainantu, the sub-district headquarters of the government, are socially significant but in a different way, and they are excluded here, just as they are excluded in this context by Binumarien.)

Of these nineteen communities, not all exchange women. The presence of this relation of intercommunity marriage is shown to be associated with spatial proximity. And of the nineteen communities, not all fight and not all engage in mutual festivities. These two relations, which occur between the same pairs of communities, are also associated with geographical distribution.

The relationship among these various sorts of transactions is discussed, and the social-political organization of the area is characterized. The linguistic boundedness of Binumarien, a community of 172 people, is suggested to conform to, and perhaps support, the lack of intercommunity arrangements for alliance (however shifting) and the extreme segmental autonomy of this local group.

This chapter begins with a discussion of exchange chains and pig cycles because their absence in Binumarien marks an important aspect of intercommunity relations in this area.

AREAL VARIATION

Describing traditional political organization in the Highlands, Langness makes the following contrast between the Western Highlands and areas further east:

It is obvious that most activities, although similar in outward appearance, are conducted on a much larger scale in the Western Highlands. Exchanges of pig and shell demand months of planning, a staggering amount of concerted action on the part of hundreds if not thousands of people, the raising and killing of extensive herds of pigs, the production of tons of surplus vegetable food, and the construction of enormous guest houses for use during the ceremonies (1973:157).

Having drawn this contrast in scale and complexity, he then goes on to make two extraordinary statements:

Even so, there is little in the literature to suggest that patterns of leadership and authority are significantly different in the two areas, nor has it been widely argued that there may be variations in political organization associated with differing patterns of exchange (1973:157).

Although these matters may not have received the emphasis they deserve, I think Langness is mistaken. Where there are elaborate exchange chains or pig cycles these arrangements are systematically associated with leadership and with intercommunity relations of a certain type. Sorensen notes an associated variation in population density - surely a variable with political concomitants:

As one moves northwestward from the Simbari Anga (6/sq.mi.) to the South Fore (27/sq.mi.), the North Fore (54/sq.mi.) the Usurufa-Kamano (68/sq.mi.), the Benabena (82/sq.mi.), the Gahuku (83/sq.mi.), the Asaro (103/sq.mi.) and the Chimbu (over 200/sq.mi.) the political importance and the elaborateness of the pig-exchange feasts increases (1972:361).

Exchange chains and ritual pig cycles both define and require some degree of community peace. They provide a wider organization of inter-local alliances which, though they may shift over time, are critical for and receive support and reaffirmation through the exchanges. In addition,

the wider political order which is defined by these arrangements provides a field of increased scale and greater maneuver for big-men. This allows an increased elevation of men of ambition and concomitantly a greater disparity between big-men and others and a potential for something approaching clientship. (Binumarien big-men are discussed in chapter five.)

Read, speaking of the Gahuku pig cycles, says:

The integrative importance of the idza nama can hardly be over-estimated ... It seems pre-eminently to acknowledge political alliances and obligations. Traditional ties between groups are renewed ... As many as a thousand people may be gathered (1952: 17).

And speaking of the ceremonial exchange chains of the Kyaka, Bulmer says:

I have tried to demonstrate three main ways in which the Moka is of political significance. Firstly, the exchanges ... create new extra-kin relations with significant consequences to the kinship and descent system as a whole. Secondly, the Moka is a particularly important field for individual enterprise in gaining power and prestige ... Thirdly, at the group level, the festival cycle periodically co-ordinates the activity of the whole of Kyaka society in a way no other indigenous institution does; and in this, in pre-contact days, it limited the physically and socially destructive expression of inter-clan hostility and competition in war (1960:12).

Recent emphasis on the ecological control provided by these events (Vayda 1971; Rappaport 1967, 1968) has received especially wide attention among non-New Guinea specialists. Such models suggest, at least implicitly, that we should expect a degree of uniformity in ritual cycles associated with the general techno-ecological uniformity of the Highlands. Divale (1973:xiii-xiv) has even gone so far as to characterize the New Guinea Highlands as a whole on the basis of Vayda's discussion of the Maring.

But it is empirically clear that pig cycles are not simply reflexes of techno-ecology, that they are variable in scale, and that the political

aspect of these events is one of the most important ways in which they must be understood.

It does not seem likely in Chimbu, nor perhaps in most other central highland societies, that the cycle is determined by the demography and ecological conditions of pig production (Brookfield 1973:136).

[In Chimbu] pig herds are individually owned and raised, but their main use is in periodic group prestations involving whole tribes numbering from 1,000 to 10,000 persons, generally in association with other tribes which kill pigs at about the same time. Each few years, a 'pig ceremony' (bugla gende) is held at temporary village like aggregations of houses built on ceremonial ground... their dominant worldly function is the massive giving of prestations. These 'gifts' are made ultimately by individual to individual, but in such a way that they are also shown to be given by tribal segments, and by tribe, to parallel groups in the surrounding population ... (1973:134).

Reciprocal relationships are thus established or continued, debts are repaid or recognized. At the same time tribes and segments signalize their identity and interrelationship ... (1973:135).

Ritual exchange chains and pig cycles are the most important ways in which relations between local groups are organized in CHNG. A contrast can be drawn along a dimension of variation in the firmness and extent of inter-local alliances. At one extreme are systems which define long-term alliances among large sets of local groups; these are the sites of elaborate exchange chains and large scale relatively infrequent pig feasts. Then there are intermediate systems of shorter-term, more fragile, less inclusive alliances; these are the systems with smaller scale, more frequent pig festivals. At the other extreme are regions where inter-local alliances are absent, in which pig cycles are absent. Here the pattern of interaction among local groups is not mediated by variable political arrangements. In these circumstances relationships between communities are less socio-politically organized and more directly a

function of demographic, ecological, especially geographical variables.

Examples of the former sort of system in which there are the most 'organized' inter-local political arrangements (and associated with this very high population densities) are Enga (Meggitt 1965) and Dani (Heider 1972). The Binumarien region is an example of the opposite extreme. The relations between Binumarien and neighboring communities are not molded by a wider political organization. There are no pig cycles to establish or maintain even brief alliances. Binumarien simply fights all the surrounding communities which are near enough to engage. On occasion, it may have found itself fighting a community which was also engaging a third, but this was only a 'de facto alliance.' It neither followed from nor led to mutual solidarity between the communities fighting a common enemy. Subsequent chapters will argue that the character of Binumarien internal social organization is significantly shaped by features of the regional system in which it is embedded.

THE CONTENT OF INTER-LOCAL RELATIONS

There are four important and distinct sorts of relations which Binumarien individuals and groups have with individuals and groups in neighboring communities. These are: the exchange of goods, intermarriage - often the exchange of women, warfare, and intercommunity feasting and dancing. The first of these, the exchange of goods, is a relationship between individuals. The second, intermarriage, involves not only the individual marriage partners but also the kinsmen of each who involve themselves in arranging the match and in subsequent transactions which follow from the ties created by the marriage. The third and fourth,

warfare and intercommunity festivities, are the only ones which involve the community as a corporate entity.

It is true that individuals who are not members of the belligerent communities may be drawn into the fighting through personal obligations to some of the participants. And it is true that not all the residents of a community actually engage in the hostilities. Nevertheless the fighting is always described as between local groups and any member of a local group is an appropriate target of retaliation from the community to which it has current blood debts. It is also true that not all members of a community participate to an equal extent in intercommunity parties. And individuals who belong neither to the host nor the guest community are usually present. But again, the events are defined, remembered, and described, as intercommunity affairs.

The Exchange of Goods

This sort of transaction is carried on between individuals. Binu-marlen men and women take items like tobacco and oranges to neighboring communities to trade. These two products are known to grow with superior quality here because of the slightly lower altitude. Other vegetable products are traded also, as well as dogs, pigs, and rarely cassowary chicks. These are traded nowadays mostly for money, or for arrows, betelnut, or other animal or vegetable items, and large unglazed ceramic pots which come originally, though not always directly, from the Markham valley.

Aside from the special mandarin oranges which had been introduced

by some of the first entrants into the Highlands from the coast, the special quality of the locally grown tobacco, and the Markham pots, I found no other 'local specialization' in the area. Epstein says that "all barter or trade is based on some specialization unless for ritual reasons identical articles are exchanged" (1973:87). That is too strong a statement to apply here. Although it is possible that the absence of marked local specialization in this area is a recent disintegration of former patterns, the Binumarien who were old enough to remember what it was like 'before' did not indicate that there had been community specialization in the past. The Binumarien used to make their own salt and lime. And again, it was never suggested that these were made in extra quantities especially for trade.

Another unusual characteristic of this area is the paucity of shells, even for adornment. I very rarely saw any shells at all. And although one or two shells about the size of a young child's fist were included in marriage transactions, even when people were most elaborately decorated for dances there were very few shells in evidence. This is likely a recent state of affairs.

The conditions of travel have changed. Even now there is danger in traveling out of Binumarien to trade. Sometimes a man will go by himself to another village, one where he has close kin. But usually people go in small groups, and women never go alone. Still, mobility is immensely greater now than before the colonially imposed peace. And the contemporary social-geography of the area is markedly different than in the past.

Eighteen communities comprise the set of significant neighbors for

Binumarien (see map). Binumarien individuals exchange goods with the residents of these eighteen other places. These are all the communities within about a six- to eight-mile radius of Binumarien, although the traveling distance to the farthest place is much longer.

Five important changes in the past few years have altered the pattern of travel and trade within this area. First, at least four trade stores are within the geographical area described by these places. Second, 'cargo cars' travel among some of these communities, and, during some periods of the year, appear nearly weekly in Binumarien - the 'end of the road.' Third, government organized and supervised (and taxed) markets are held periodically near Arona. Fourth, the unlikelihood of warfare, and fifth, the greater mobility provided by roads affect the movement of people and goods within this area. Certainly it is not the same now as it was in the past.

I suspect that the density of interaction may be shifting because of the location of the roads. In the year I was there I do not think anyone went to visit Wompur or Omisuan (or Merida); nor did I meet anyone from those places in Binumarien. It may be that these places will disappear from the list of socially significant communities, to be replaced by those to the east between the present set and Ukarumpa or Kainantu as trips to these distribution centers continue.

The list of goods exchanged provided above does not include metal pots, cotton clothes, knives, axes, shovels, tinned food, rice, salt, and so on, because these things are purchased from trade stores. And although they can, in fact must, form part of such exchange events as

Figure 2.1 - Sketch Map (numbers refer to matrices)

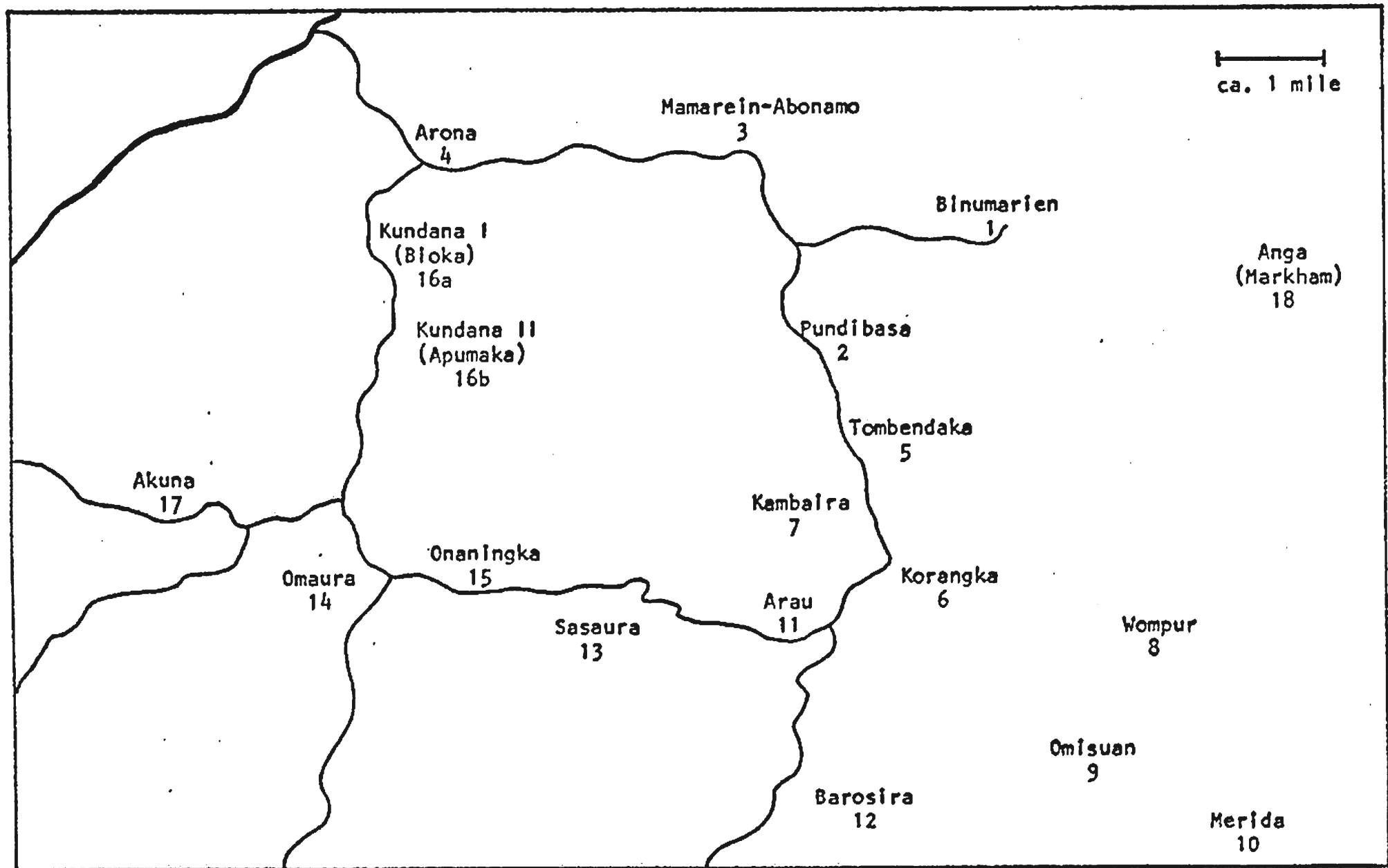


Figure 2.2 - Census figures from Patrol Reports
Kainantu Sub-District

	<u>1950</u>	<u>1955</u>	<u>1959-60</u>	<u>1965</u>	<u>1969</u>
1. Binumarien	111	110	112	134	159
2. Pundibasa	357	418	507	604	751
3. Mamarein	160	152	184	215	232
Abonamo	137	257	200	223	272
4. Arona I	219	241	297	349	436
Arona II	201	237	273	302	368
5. Tombendaka	192	224	262	301	366
6. Korangka	113	138	148	160	197
7. Kambalra	98	95	120	158	185
8. Wompur	114	111	125	?	?
9. Omisuan	96	117	122	?	?
10. Merida	?	?	?	?	?
11. Arau I	117	130	165	205	245
Arau II	155	171	192	195	221
12. Barosira	?	?	?	230	253
13. Sasaura	286	332	361	420	490
14. Omaura	388	455	531	632	767
15. Onaningka	248	298	347	426	486
16a. Kundana I (Bioka)	248	290	339	407	504
16b. Kundana II (Apumaka)	223	250	281	?	296
17. Akuna	270	299	328	395	450
18. Anga (Markham)	?	?	?	?	?

marriage, they are not goods which one ordinarily acquires for other goods. Rather they are purchased with money at a trade store or from a cargo car. And the transactions are both functionally and symbolically outside the transactions among members of local groups which are discussed here.

Intermarriage

In Binumarien there is a strong bias toward intracommunity marriage (see Fig. 2.3), both in the pattern of actual marriages and in local attitudes (see following chapter). Both within the community and between local groups in this set marriage is usually conceived as an exchange of women. When women move between communities the affinal obligations are of immediate significance to the parties involved. Beyond these are the potential matrilineal ties of kinship between the offspring of outmarried women and their collateral consanguines, providing a basis for relatively dense interaction and the likelihood of future marriages, and avenues for demographic readjustment. Used as claims on land and local resources these ties are likely to be not only honored, but actively encouraged by members of a community who find their numbers reduced by warfare or other demographic vicissitudes and who wish to encourage immigration (cf. Kelly 1968).

Although individuals from each of the places in this area trade with individuals from all the others, there have not been marriages between people from each pair of places. The relation 'residents have exchanged women' can be displayed in the form of a matrix (see Fig. 2.4). A 1 appears in the cell defined by the community name of its row and

6

[illegible]

Figure 2.3 (continued) - Residence just before current Marriage

couple (current unions)																	
husband	wife	Ubandena*	Onikuradurana*	Maqaanoona*	Indununa**	Fofondai**	Anasina***	Sasaida***	Omama***	Abonamo	Hairina**	Sakis**	Markham	Pundibasa	Arau	On the Coast	Tombendaka
13	74					13				74							
32	55				32,55												
7	45					7					45						
22	79				22,79												
12	57				12,57												
4	L	L												4			46
1	70					1,70											
20	62	62			20												
3	60																3,60
41	91					41		91									
"	53				41	53											
"	64		64	41													
11	89											11,89					
24	49								24,49								
30	54					30,54											
21	86				21						86						
"	87				21							87					
93	56	56	93														
26	51	26,51															

* - currently occupied Binumarien hamlets

** - Binumarien hamlets now abandoned

*** - communities which spoke same language as Binumarien, now dispersed

1 - men ordered from youngest to oldest

Figure 2.4 - Intercommunity Marriage

Marriages

	16a	4	3	1	2	5	7	6	18	8	9	10	11	12	13	15	14	17	16b	
16a	1						1												1	Kundana I (Bioka)
4	1	1	1	1	1															Arona
3	1	1	1	1	1	1		1												Mamarein-Abonamo
1	1	1	1	1	1	1	1	1	1	1			1							Binumarien
2	1	1	1	1	1	1	1	1	1	1	1									Pundibasa
5	1	1	1	1	1	1	1	1	1	1				1	1			1		Tombendaka
7			1	1	1	1	1	1					1							Kambaira
6		1		1	1	1	1	1	1	1				1	1					Korangka
18				1				1	1	1	1									Markham (Anga)
8				1	1	1		1	1	1	1	1	1							Wompur
9									1	1	1	1	1	1						Omisuan
10									1	1	1	1	1	1						Merida
11				1		1	1	1		1	1	1	1	1						Arau
12											1	1	1		1					Barosira
13						1		1							1	1	1		1	Sasaura
15															1	1	1	1		Onaningka
14															1	1	1	1		Omaura
17							1									1	1	1		Akuna
16b	1														1	1	1	1		Kundana II (Apumaka)

of its column if residents of that pair of communities exchanged women. (Binumarien intracommunity marriage is discussed in the next chapter.)

The communities are arranged in geographical order traveling clockwise along the road which connects them, with the four places which are not connected to that road introduced approximately as it seems geographically appropriate. The clustering of the 1's along the diagonal indicates that marriages tend to occur between residents of communities which are near each other in this ordering, i.e., which are near each other in traveling distance along the road. Roads in this area were usually built along established paths of travel and it is the distance along these routes, not simply direct spatial distance which is clearly associated with the exchange of women.

The average number of places with which the residents of a community intermarry is not quite 6 (mean = 5.7). If we exclude the four communities which are off the road to simplify the geographical calculation, we can divide the remaining communities into neighboring and non-neighboring pairs using the following rules. No community may have more than six neighbors (this number is suggested by the average number of communities with which any single one intermarries). That ceiling means that some places which are off the circular connecting road will have fewer than six neighbors. With that restriction communities are assumed to have three neighbors on each side, and those neighbors are the nearest places by road. Using this calculation there are 41 neighboring pairs among the total of 105 pairs formed by the 15 places. The 37 intermarrying pairs overlap with these in the following way:

	intermarrying pairs	non-intermarrying pairs	total
neighboring pairs	29	12	41
non-neighboring pairs	8	56	64
total	37	68	105

There is a statistically significant relationship between neighboring and intermarrying; chi square = 37.13, p less than .001 by chance. And the coefficient of correlation between them shows that the relation is fairly strong; $\phi = .595$.

Warfare

Warfare has been virtually extinguished in this area since the forties. And it has been eliminated as a major preoccupation of the Binumarien men since the thirties. At that time Binumarien made war on Wompur and in retaliation for breaking the colonially imposed peace, the cream of the fighting men were taken off to the coast for incarceration. At that time, most of the remaining members of the community took refuge from their Highland enemies with people in the Markham valley they call Dadaaaga. The closest identification I could make for this group was with a place called Anga on maps of the area. Binumarien agreed that this is what the place is called by the government. So I use the label Anga (not to be confused with the Kukukuku, cf. Sorenson 1972) to identify this Austro-nesian-speaking lowland group.

After the exile in the Markham valley, the remaining Binumarien

returned to the Highlands. But they built no more men's or women's houses. Husbands lived with their wives and children, and male initiation rites stopped soon after. In the forties the Binumarlen with their reduced numbers relied heavily on government favor and protection. When they turned to the colonial authorities in search of redress for an attack by Arona, the white men were preoccupied with their own war. The Binumarlen were told, so the local story goes, that if they had penes and not vaginas they should behave like men and fight their own battles. So for a brief period it was once again the 'time of fighting.'

Although there was some occasional warfare up until the early sixties, there had been none since. But during my stay war seemed very near on two occasions. One strong threat of intercommunity violence followed on the visit of some Binumarlen to the Anga in the Markham to trade for coconuts. The visiting men had gotten into a brawl and returned home with cuts and bruises to stir up a fighting force and return. It was never clear to me exactly what prompted the brawl. Apparently an exchange of simple insults began it, following on some rudeness of one of the hosts who was a bit out of temper. At any rate the Anga are long-time enemies and where etiquette fails with enemies there is nothing for it but violence. Most of the old Binumarlen men and women tried to dissuade the young men who wished to return and fight. Heated discussion continued most of the morning, with some of the old men dramatizing in a sort of pantomime dance the insecurity of the old fighting days and arguing that this was something for the government courts. But the young men's arguments - that treatment such as this from one's hosts was an intolerable insult - built the anger. Those trying to stop the expedition stood as a sort of road-block to prevent

the men who had gathered their axes and bows from passing. They even hung on to the potential warriors, and one man held back behind the others in this way, finally did give up. But the others did not. They must, however, have cooled somewhat along the trail because they were followed and persuaded to return.

The issue was finally taken to the two sub-district courts involved. It was a difficult dispute to settle because the Anga had always been special enemies. While the fighting between Highland enemies was just as murderous as fighting with the Valley people, Highlanders did not practice cannibalism on each other. But all the local groups in this set who fought Markham valley groups ate and were eaten by them. They were 'game animals' to each other.

The second time war seemed imminent some Binumarien went to a big party given by Pundibasa. Although it is usually the case that only one community is invited as a guest by the host group, there are always a few kinsmen of the participants, both guests and hosts, from other places who are present for one reason or another. They may be currently visiting, or have extended a similar invitation which is being reciprocated. On this occasion, the Binumarien in attendance were in this latter category. The guest community was Tombendaka.

Beer is not a typical item of consumption in any kind of event in this area. It is not easily available and it must be imported from Kainantu. It is fairly expensive, but it does appear from time to time. Like marijuana in the United States, people here - usually men - consume it for the intoxication. And since the drinker is after a real high, his symptoms always seem slightly exaggerated, like a parody of a drunk. Beer was available at

the Pundibasa party. And one of the drinking men from Tombendaka struck one of the Binumarien men. Stories differed on why exactly the blow was struck. Some said that it was an accident. But the victim was an old man whose brother had been killed in a fight with Tombendaka, a death which had never been avenged. The Pundibasa hosts sent everyone home and the party ended. But the Binumarien went home to get their weapons and prepare to fight.

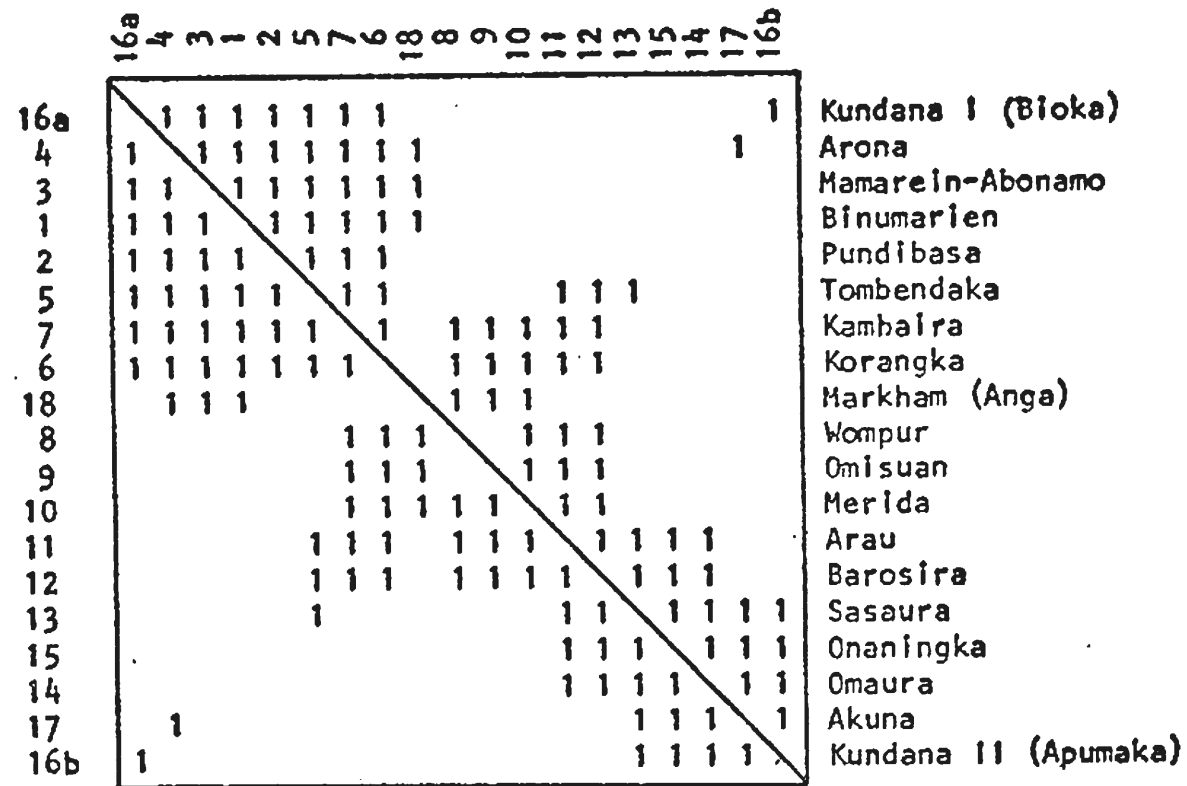
It was night and fighting is a daytime activity. So the Binumarien waited and readied themselves. Before dawn many of the young men covered their faces with ashes, a sign that they were prepared to fight. At dawn and through most of the morning they stood ready on the ridge where the road leads to Tombendaka. Several women with axes and shovels stood with them. Twice it was reported that the Tombendaka were on their way. But Pundibasa lies between Tombendaka and Binumarien. And we eventually heard that the Pundibasa had stopped the Tombendaka war party and convinced them to return home. Perhaps the Pundibasa felt that the government would find them in some way responsible.

It is highly unlikely that warring will occur in this area again. But many of the attitudes, the enmity and mistrust, remain.

The communities in this set of nineteen which fought each other are shown in the matrix (Fig. 2.5). The order of the rows and columns in the preceding matrix which replicates to some extent travel distance is preserved here. Again, inspection suggests that spatial distribution is a significant organizer of these relations. The 1's again cluster along the diagonal, indicating that communities tend to fight their neighbors.

Figure 2.5 - Intercommunity Warfare

Fights



A test of this association can be performed as above. However, here the average number of communities which a community fights is larger than the number of places with which the residents of a place intermarry. This suggests that 'neighborhoods' be defined as larger for this relation. Here the average number of enemies is just under eight (mean = 7.8). So we define an expanded neighborhood of four neighbors (rather than three) on each side. Again we exclude the four communities which are off the road to simplify the calculation of neighboring. And we assign each pair of communities to neighbor or non-neighbor categories according to the following rules. No community may have more than eight neighbors (the number suggested by the mean). With that restriction communities are assumed to have four neighbors on each side. And those neighbors are the nearest places by road. This procedure results in 54 neighboring pairs out of 105 total. And there are 55 pairs of communities which fight. These categories overlap in the following way:

	pairs which fight	pairs which do not fight	total
neighboring pairs	46	8	54
non-neighboring pairs	9	42	51
total	55	50	105

These figures show a statistically significant relationship between neighboring and fighting; chi square = 47.96, p less than .001 by chance. And the coefficient of correlation between them shows that the relation is quite strong; $\phi = .676$. The Binumarien 'marry the people they fight' because they both marry and fight their neighbors.

The relationship between geographical distribution and fighting is stronger ($\phi = .676$) than the relationship between geographical distribution and intermarriage ($\phi = .595$). This difference in the coefficients of correlation, emphasized by the difference evident in inspection of the two matrices, invites the following suggestion.

The exchange of women is a transaction between sets of kinsmen. Not only are the brides' and grooms' parents involved but also many of the kinsmen of each. If it is a first marriage, the parents and probably several of their collateral consanguines make the initial arrangements. And the bride-price and dowry will include contributions from many additional kinsmen. A marriage is not a single event and obligations between the kinsmen of the spouses are continuing. First come the several meetings and arrangements involved in setting up the exchange of women and the potential unions. Then there are the several stages in its consumation. And finally the birth of children, and their rearing, all of which involve repeated transactions between the spouses and their affines and between the consanguines of each.

However, marriage is not a community affair. It is the business of two sets of kinsmen. The members of each set are mostly, if not all, coresidents, but it is an affair of these kin clusters and not the local group as a whole. Geography becomes significant because it involves groups of individuals, groups of sufficient size to inhibit their mobility; and because it involves continuous obligations between the parties. But, because it does not involve whole communities, and the units it does involve are not strictly geographically defined, other factors may intervene.

Warfare, however, is an affair between communities. Whether or not all the men of a community fight, the community as a whole is blamed and subject to reprisal. The interacting units are local groups. The size of these groups makes geography a necessary constraint. But more than that, the groups are defined by geography.

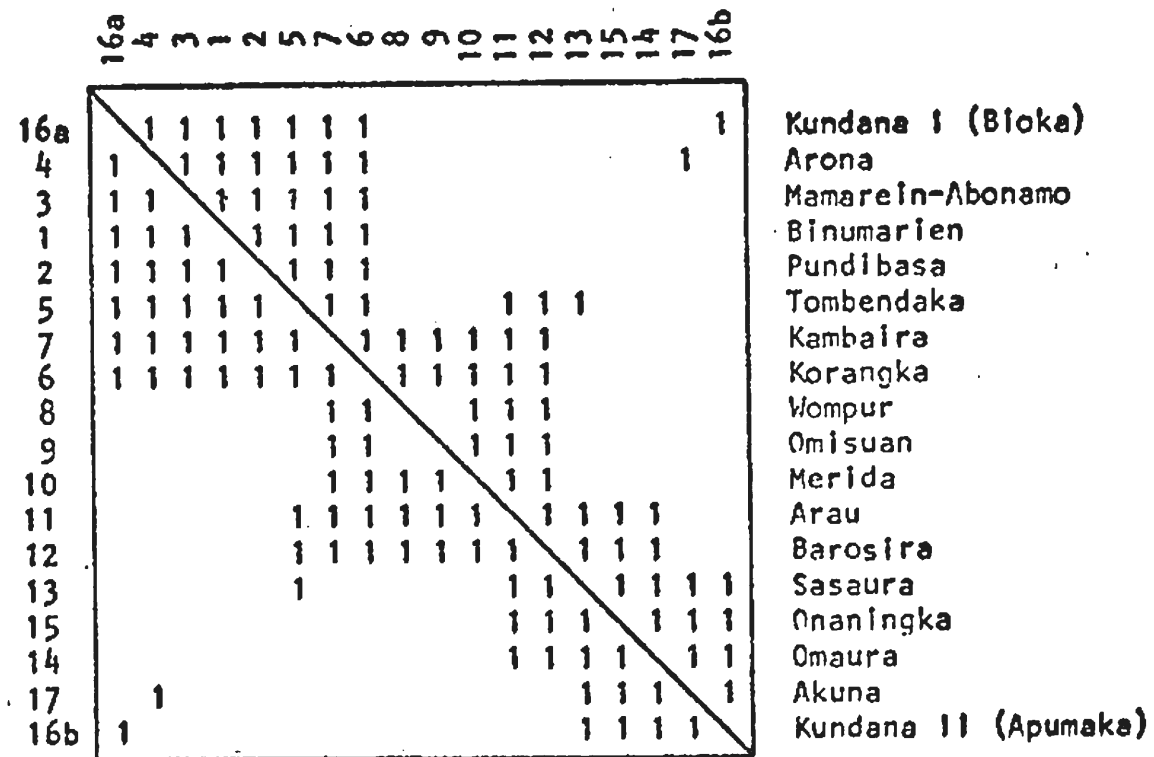
Another feature of the warfare patterns invites comment: the 'step-like' pattern of the 1's in the matrix. If this matrix is taken to represent a linear graph, i.e., the places conceptualized as points and the relations between them as connecting lines, the step pattern suggests a special kind of structure. Each step indicates a complete (or nearly complete) maximal sub-graph, i.e., a set of points (communities) all of which are directly connected to (i.e., fight) each other. This maximal sub-graph may be called a clique (Harary 1959). And since the 'steps' overlap along the diagonal, the cliques are overlapping. That is some points (communities) belong to more than one.

This step-like pattern becomes even more evident when the Anga in the Markham are excluded and only Highland communities are considered (Fig. 2.6).

The presence of these warring cliques indicates that fighting is more than competition for resources between groups who claim adjacent lands. It may be that local traditions of shifting groups and territories make long-range competition for resources an important threat. It is not just nearest neighbors that may try to encroach on adjacent territory, but any group which is 'close enough.' However, the proximate cause for fighting here is not a struggle for land. Among the case histories I have

Figure 2.6 - Highlands Intercommunity Warfare

Fights



for fighting, the initial grievance was most commonly women, then pigs, then other property, e.g., stands of bamboo, gardens.

Reported causes for secondary hostilities illuminate the development of warring sets from another angle. Fighting was almost always between only two communities at one time. But these confrontations could always lead to fights between one of the two adversaries and a third community. This resulted from the devious, sometimes treacherous tactics reportedly employed wherever advantageous by the antagonists.

If it could be arranged by one of the enemy sides, one or two members of a third community would be persuaded to call for a visit from one or two of the Initiator's enemies, and thus set up an ambush. Whether or not the ambush was successful, the wrath of the deceived community would be turned on the community which had allowed the ambush.

A second tactic was a version of the 'frame-up.' In this area one of the few classes of artifacts to be decoratively embellished is arrow points. They are usually made of hard blackpalm wood, although sometimes bamboo is used. There are many styles, some elaborately tanged, some distinctively painted, some wrapped and decorated with intricately braided vegetable fiber - sometimes bright yellow orchid fiber locally reputed to be poisonous. These features in their variations and permutations make certain arrows sufficiently distinctive to be associated with particular craftsmen and communities. The 'frame-up' works like this. Distinctive arrows are obtained from other communities through a series of exchanges. Then these arrows, rather than those of home manufacture, are used in ambush. When the victims or their survivors

use the arrows to identify the guilty man or community, suspicion is cast and retaliation planned on the innocent craftsman and his community and away from the real culprits.

Since arrows are widely exchanged in this area, there is reason for scepticism about the probable success of such a ruse. However, the tactic was described to me on more than one occasion with expressions of admiration for its cleverness and confidence in its success.

Aside from these devious tactics there is a most important characteristic of intercommunity relations in this area which helps to account for the presence of warring cliques. Here, if two local groups have any interaction at all, i.e., have any relationship as corporate communities, fighting is an inevitable part of it. In other words, war is entailed as an aspect of intercommunity relations. If local groups don't fight each other, then they have no relationship as communities. (This, of course, does not preclude individual residents or sets of them from interacting.)

However, warfare is not the only component of intercommunity relations. There are also festivities. In this region feasting and dancing are not carried on among sets of local groups who do not (or are not supposed to) fight. These activities are not expressions of alliance, rather they express a cessation in hostilities 'for the moment.' These activities are carried on among the same sets of communities who fight each other. Focusing on festivities instead of fighting the relations among these communities can be viewed in their 'positive' aspect. The clusters of neighboring groups which form warring cliques, also form

feasting and dancing cliques. Some intercommunity relations may begin this way. Perhaps communities which have been guests of a common host extend invitations to each other. But once relations are established fighting is sure to follow.

Inter-Community Feasting and Dancing

The last relation to be discussed is, like warfare, a relation between communities as corporate groups. During my visit there was one particularly large intercommunity festival held in Binumarien. These affairs involve the preparation of quantities of cooked food, both pig and vegetables for the guests to consume as they sing and dance, the gathering and chopping of great piles of firewood to keep a large fire and a few small ones going through the night, the rolling of innumerable cigarettes and collection of large quantities of betel, and the amassing of quantities of cultivated food and sometimes pig for presentation to the guests to be carried off the morning after. They are a scaled-up version of the sort of community event which the Binumarien have regularly once or twice a month beginning just before Christmas and lasting until July. The guest community was Arona.

The year I was there this feasting and dancing season was interrupted by an experiment: the 'market party.' And it is likely that ordinarily there would have been more occasions comparable to the Arona event. 'Market parties' were held by some Binumarien neighbors as a way to raise community funds. Several local groups in the area were planning to buy or had just bought village cars. Both the purchase price with licensing fees, and the price of up-keep and use, including some sort of salary

for a driver, required community funds. The Binumarlen planned to buy a village car to transport produce to market, and decided to have a market party to bring their car fund closer to its goal. The idea was to have a sort of fence around the party area so that all participants paid an entrance fee. Inside they would sell betel, cooked food, and even beer. Invitations were extended to Pundibasa, Mamarein, and Arona, the understanding being that those who came could expect to have their actions reciprocated by the Binumarlen. Twice the event was disastrously rained out. And the Arona later sent word that they had received their invitational message too late anyway. After all the hopeful plans and work of preparation the double failure was quite a disappointment and it put a gloomy pall over the festival season.

Before fighting was stopped, these parties were important for the peace they entailed. They were also occasions for prospective spouses to attract each other. Arona is the community nearest the Highlands Highway. Recently, work on a hydroelectric project for the Arona valley began, and with it, the development of nearby Yonki into a town. This gives the Arona access to a wider variety of consumer goods than are usually found in the merchandise of a trade store. As a consequence, the status marker used by the unmarried Arona girls who came to Binumarlen parties was a brassiere. Married women did not wear them but the unmarried girls, along with their feathers, paint, elaborate headdresses, dancing reed skirts, and special decorative string bags, also wore (as 'outer-' not underclothing) cotton brassieres. I was aware of no sign adopted by unmarried boys, in fact those approaching marriageable age seemed rather shy and self-effacing at party time. It is the married men

who seem to be the fondest of display and it is usually they, rather than the unmarried men, whose sexual exploits on these occasions are the subject of gossip in the following days.

Before the colonial peace these occasions sometimes marked the temporary end of a period of extended hostility between two groups. But they also sometimes marked the beginning. The dancing begins well after nightfall around the huge pillar of a central fire. The drums with their simple but unceasing rhythms, the chanting, the yelling, the fire-light dancing, all in the tallest of feathers and fiercest of paint, with bows and arrows at the ready, create an atmosphere of high excitement. It is not hard to see the potential for hostile outbreaks. There are stories of parties which ended in extreme tension. Peace barely preserved long enough for the guests to make an exit. With the promise of imminent hostilities and the beginning of fighting just following their departure.

REGIONAL POLITICAL ORGANIZATION

There is only a very precarious and fragile peace in these events.

Berndt's generalization for a nearby area is apt here:

... one district [local group] may be on either friendly or inimical terms with any number of others but the position is likely to change almost overnight. There is no permanency in such matters, except in the expectation of interaction itself ([1969] 1971:393).

This is in marked contrast to the more lasting, sometimes traditionally fixed ties of alliance and relations of enmity further west. In the Binu-marlen region any interactional exchange between communities, i.e., relation or transaction in which the communities as corporate entities are

the participants, is a relation with a fighting component. If communities interact at all here they fight.

In this part of the Highlands it is not possible to construct a map of intercommunity relations which show positive, neutral, and negative relations. In this area regional political organization is both narrower in scale and less complex in form. Here there are no elaborate exchange chains or ritual cycles to establish and maintain intercommunity alliances. Binumarien has no alliance engagements with neighboring communities. It is not part of some larger (even shifting) unit of social peace. It stands alone and it stands against its neighbors. Here it is geography, not social charters which organized community relations. This does not mean that all particular intercommunity interactions are warlike, but there is no continuing political apparatus to counteract potential fights. There are contextual periods of peace. While one community is the guest of another certain requirements of hospitality powerfully constrain against flare-ups of violence. But that hospitality ends with the visit.

It seems very clear that the traditional generalizations about variations in the elaborateness and scale of exchange chains and pig cycles in the Highlands may be associated with generalizations about variations in political organization. The Binumarien area represents both a ritual and a political extreme.

This lack of arrangements for solidarity beyond the community seems to be socio-logically associated with another unusual feature of Binumarien. Unlike the large phyles which are traditionally the focus of anthropological attention in the Highlands, Binumarien is an ethno-linguis-

tic isolate. It is linguistically distinct from all its neighbors and spatially separated from its closest linguistic congener: Talrora. And, although the majority of communities in the set of 19, which compose the relevant social universe looking out from Binumarien, are part of the same phyle, the Gadsup ethno-linguistic unit, there are other communities in this set which, like Binumarien, are linguistically distinct from their neighbors.

Language is such an explicitly identifying feature that it has traditionally been used by anthropologists (and by the people they study) as an indicator of social boundaries. But the language divisions in this area are not social barriers. Nearly 90% of Binumarien adults are either bi- or multi-lingual (see Fig. 2.7).

Berndt's comments on community interaction in the Kamano, Usurufa, Jate, Fore region fit this Binumarien region as well:

From the standpoint of persons belonging by birth or adoption to any one district [local group], everyone outside its boundaries (apart from certain kin) was potentially hostile. Nevertheless they regarded these members of other districts as much the same sort of people as themselves - people with whom they fought, intermarried, joined in peace ceremonies, and so on ([1969] 1971:383).

The relevant social universe is not limited by language borders. But on the other hand language differences are not socially irrelevant:

At the same time, regardless of external ties within the broader configuration, those speaking a common language were on that account assumed to be bound especially closely by common custom and practice ... (Berndt [1969] 1971:383).

And this implies the converse. Those who speak different languages are rather less alike and more distant from each other in custom and practice. The distribution of languages in this area is not the distribution of

Figure 2.7 - Linguistic Competence of Adults

Subject		Languages spoken fluently						Subject		Languages spoken fluently					
Men		Binumarien	Gadsup(Aamu)	'Markham' (Dadaaqa)	Neo- Melanesian	Kambaira (Asaqa)	Arau(Tairora)	Women		Binumarien	Gadsup(Aamu)	'Markham' (Dadaaqa)	Neo- Melanesian	Kambaira (Asaqa)	Arau(Tairora)
							Kâte								Kâte
1		x	x	x	x			42		x	x				
2		x	x		x			43		x	x				
3		x	x		x			44		x	x	x			
4		*	x		x			45		x	x				
5 ?								46		x	x				x
6		x	x		x		x	47		x	x				
7		x	x	*	x			48		x	x	x			
8		x	x		x		x	49		x	x	x			
10		x	x		x			50		x	x	x			
11		x	x	x				51		x	x				x
12		x	x	*	x	x	x	52		x	x				
13		x	x	x	x			53		x	x	x			
15		x	x		x			54		x					
16		x	x		x			55		x	x				
18		x	x		x			56		x	x	x		x	
19		x			x			57		x	x				
20		x	x					58		x	x				
21		x		*				59		x	x				
22		x	x		x			60		x	x			x	
23		x			x			61		x					
24		x	x	x	x			62		x	*				
25		x	x		x			63		x	x				
26		x	*	x				64		x	x				
27		x	x		x			65 ?							

Figure 2.7 (continued) - Linguistic Competence of Adults

Subject		Languages spoken fluently						Subject		Languages spoken fluently					
		Binumarien	Gadsup (Aamu)	'Harkham' (Dadaaqa)	Neo- Melanesian	Kambaira (Asaqa)	Arau (Tairora)			Binumarien	Gadsup (Aamu)	'Harkham' (Dadaaqa)	Neo- Melanesian	Kambaira (Asaqa)	Arau (Tairora)
Men							Kâte	Women							Kâte
28	x	x	x		x		x	66					x		x
29	x	x	x		x			67	x	x					
30	x	x		x	x			68	x	*					
31	x	x			x		x	69	*	x					
32	x	x			x	x	x	70	x	x					
33	x	x			x			71	x		x		x		
34	x	x			x			73	x	x					
35	x	x			x		x	74	x	x					
37	x	x			x			75	x						
38	x	x			x			76	x	x					
39	x	x			x		x	77	x	*					
40	x	*			x			78	x		*				
41	x	x	x	x	x	x		79	x	x				x	
93	x	x	x					80					x		x
								84	x	x					
								85	x	x					
								86	x	x					
								87	x	x					
								88	x	x					
								89	x	x	x				
								90	x	*					
								91	x	x	x				
								92	x	x					

* not really fluently but 'a little'

social interaction. Significant social exchanges occur among linguistically distinct communities. But with no intercommunity alliances to be underwritten, intergroup political charters are minimized in importance. There are no arrangements for an intercommunity sphere of peace. Thus community identities which emphasize autonomy and uniqueness serve the political requirements of defining each local group against the world. Language is a salient social marker.

Where traditional relations of intercommunity amity occur they are supported by descent charters, e.g., the common brotherhood of neighboring clan parishes. But where such binding alliances are absent, other markers of local identity than common descent may serve. For Binumarien, its linguistic distinctiveness provides definition and an identifying marker. Binumarien has a linguistic, not a descent identity. This has implications for its internal social organization, the subject to be taken up next.

CHAPTER 3

Kinship and Community Organization

INTRODUCTION

This chapter deals with the organization of Binumarien social groups or sets and the relations among individuals.

The topic of groups or sets has two aspects: first the organization and composition of residence units, and second, the conceptual organization of other social segments, which may or may not correspond to or be defined by residence. Each of these aspects is discussed in some detail because, while Binumarien conforms to the areal pattern of patrilocality, it is an exception to generalizations about the prevalence of patrilineal ideologies in the Highlands. De Lepervanche observes that "with few exceptions ... all highland social systems have this ideology in varying degrees of brotherhood or patrilineal stress ..." (1973:11). Data are presented to support the assertion that Binumarien is exceptional. And, guided by Marshall Sahlins' suggestion that the smaller units are shaped by their inclusion in a larger system of a certain type an explanation for this absence of patrilineal descent is sought in the character of relations between Binumarien and neighboring communities.

The discussion of social relations among individuals begins with a section on parenthood and marriage. The kinship nomenclature is described and its structural characteristics are associated with the absence of lineal or other corporate exogamous segments. The implications of this explanation for the understanding of other systems is discussed.

The kin classification system is accounted for by parenthood and

the patterns of marriage in Binumarien. Socio-spatial distributions (e.g., residence, relative age) are not argued to account for terminological distinctions here. But, since assumed socio-spatial arrangements are so often used to explain nomenclatural categories (e.g., Murdock 1949, Leach 1958, White 1959), a test of the match between terms in use and residence is of interest. Such a test is provided here.

This chapter shows that there are no clear-cut corporate kin groups in Binumarien, and that labeled kin categories do not organize the community into dyads or groups for ordinary daily activities. The question is thus posed for the chapter to follow this one: how are workaday co-operation and sharing organized?

THE ORGANIZATION OF RESIDENCE UNITS

Post-Marital Residence

As is typical of CHNG societies, the pattern of post-marital residence in Binumarien is patrilocal. Out of 19 living adult son-and-father or -father-surrogate pairs, all but two of them are also co-hamlet residents. Eight of them live in the same house, and five of them are next door neighbors. And both of the exceptional pairs did follow the patrilocal pattern in the past. In these two cases the sons lived with their fathers, and their wives joined them there, but, since then, the sons and their wives have moved. (Although 15 is the son of 1 he lives with 7 in Ubandena where 1 used to live; 7 is 1's matrilineal cross-cousin and has no living sons of his own. And so 15 is his surrogate son.)

The two exceptional father-son pairs are 26 and his son 27, and 32

and his son 6. Immediately after his marriage 27 lived with his father 26. But then, after the birth of their first child, he and his wife, 84, moved from the largest hamlet to the middle one. They also have a house in Indununua where they spend much of their time. This hamlet was abandoned in the last few years but it is closer to most of their gardens, and they now keep a house there where they live part of the time. Some years ago 27 was invited by his father-in-law to garden with him, 41, and although the younger man has not broken with his own father and brothers, he does garden regularly with 41 now.

The other non-coresident father-son pair is 32 and 6; 6 worked for two years on the coast (he and 35 are the only two young men to have done so) and he brought back his wife 80 from there. He says this was because she threatened suicide if he left her, and he believed she was serious since her sister was a suicide. When he brought her to Binumarien it had been arranged by his kinsmen for him to marry N (one of the women inadvertently omitted from parts of this study), the present wife of 25. His coastal wife, 80, threatened to kill herself if 6 took a second wife, but preparations went on despite her protests. And so one day, just before the wedding, she went to the house where she and 6 were living, the house of 32, and tried to hang herself from one of the roof posts. I am told she was found just in time and the event was sufficiently dramatic to cancel the wedding of 6 and N. And N was later married to 25.

While 6 and 80 were still living in the house of 32, 80 bore a child but it died soon after birth (as did another during my stay), and it was after this that 6 and his wife moved to another hamlet. Here they live in the same house - although the two halves are not internally connected - with 6's age-mate 31 and his wife 59 and their young son. This is next

door to 12, 31's father. These men are 6's closest kin besides his parents and sisters.

The patrivirilocal post-marital residence pattern is a strong one and it is dramatized by the part of the wedding which involves the instruction to the bride to give up the home and gardens of her childhood and go to that of her husband. It would seem that residence units based on patrilineal connections must necessarily build up. Whether or not patrilineal descent is considered by the actors to be significant, patrilocal residence might seem to make it the implicit basis of hamlet membership. But in Binumarien while residence just after marriage is patrilocal, patrilineal-like structures in hamlet composition tend not to develop. The new couple's residential position after marriage is not a permanent affiliation. There is no one in Binumarien over the age of ten who has not lived in at least two different named places. Sometime after the birth of their first child (it may be long after) the son and his wife, who have had their own hearth and usually have acted as a distinct domestic unit, build a separate house. Now, although father and son may make the same shifts in hamlet residence, they may not.

Fig.3.1 shows the residential history of Binumarien men moving back from their current residence - numbered 1 - to that just preceding - numbered 2, and so on. Only three hamlets are steadily occupied currently. But every adult male, except 25 who is the youngest and was not yet born, and 4 who just moved to Binumarien in the year before the research, once lived in Indununua, now abandoned. And those who were born and in Binumarien at the time moved there from Fofondal, also abandoned. Onikuradurana, the newest hamlet, now has 68 residents and is certainly flourishing, but it will probably wane in time. During my stay a house

Figure 3.1
Residential History of Men

Adult men ordered from youngest to oldest	Ubandena	Onikuradurana	Haqaanoona	Indununua	Fofondai	Lukuku	Anasina	Onana	Abonano	Hairina	Sakis
25	2	1									
31	2	1		3							
19			1	2							
6	2	1		3							
15	1			2							
2	2	1	3	4							
17	1			2	3						
38			1	2							
8	1			2							
16	2	1	3	4							
40	2	1		3							
23			1	2	3						
18	1			2	3						
35	1			2	3						
39	1			2	3						
29	1/3			4	5						
10		1	2	3	4				5		
28	1			2	3						
37	1			2	5				3		4
5	1	2		3							
27	2	1		3	5					6	4
33			1	2					3		
34	1/4			2							
13	2/10	1	9	3	4				8	5	
32	1			2/5	3						
7	1/5			2	3						
22	1			2	3						
12	2	1		3	4						
4	1										
1	2	1		3	4						
20	1			2							
3	1			2	3						
41	13	1	1/12	2/6	3/5				4/9/11		7
11	2/9	1		3	4				7		
24	2	1		3				4/6			
30	8		1/6	2	3	7			9		
21	1		10	2/9	3/5				4/11	6	7
93	2	1	3	4			8	7/5			
26	11/1			2/9	6/3				10/12/5	8/4	

Figure 3.1 (continued)
Residential History of Men

Adult men ordered from youngest to oldest	Markham	Pundibasa	Binumarien - place by the river with the same name as the community	Arau	On the Coast	Tombendaka	Kambaira	Kurangka
25								
31								
19								
6								
15								
2								
17								
38					1.5*			
8								
16								
40								
23								4
18					1.5			
35				4				
39								
29		2						
10								
28				4				
37							4	
5								
27								
33								
34		3						
13	6		7				6	
32	4							
7	4							
22		4						
12	5		6					
4		2						
1	5		6		4.5			
20		3						
3						4		
41	8		10		5.5			
11	5		8/6					
24	5							
30	5				4			
21	8							
93	6							
26	7	13						

* between 1 and 2

In Onikuradurana, 12's, burned to the ground. And though it may be rebuilt, 12 and his family lived quite satisfactorily for the last several months of my stay in a second house they had in Umuana, near Indununua which was near their gardens (this - at least temporarily - split the nearest neighborconnection between 12 and his son 31).

It is not possible to reconstruct the order of the residence shifts indicated in the table (who moved first, etc.), and so the diachronically shifting composition of these hamlets, the precise pattern of their 'organized flow' is not visible. But just after the return from the Markham, everyone lived together first in Fofondai and then in Indununua.

The individual motives for a move may be various. 12 and his family moved (at least temporarily) because of fire. They may return or they may become fully settled in Umuana and the site of their house may go to someone else to build on. 41 took up residence in Onikuradurana, his second concurrently, when he married 64 whose previous husband had built the house there. Or a whole hamlet may be more or less systematically evacuated because of disease of pigs or people, or just because few children are being born. I was told that Indununua was abandoned because the human population of Binumarlen was not increasing fast enough and neither was that of its pigs. There is a corroborating note in a patrol report submitted by Patrol Officer L. Pursehouse in 1939 that the Binumarlen requested permission to move and gave the same reason to the government at the time. (This does not date the move however. People born well after 1939 were born in Indununua.)

But a residence unit, both as a place and as a set of individuals, is clearly not permanent. Fathers and sons live together, and when the

father dies, brothers may stay together as young men. But this may be almost by default - lasting only until somebody moves. They begin to shape their social space independently. Because of the independence of each exchange transaction for marriage, they probably have different in-laws. They find different kinsmen congenial and so emphasize different connections. Since they are not comembers of a corporate kin group below the level of the whole community, their relations of sharing and co-operation are ego-centrally defined (see following chapter).

Because of the high rate of community endogamy (discussed below), a description of the pattern of post-marital residence requires a qualifying aside. There are fifteen adult women with a living parent or parent surrogate in Blumarion. One of these women was living as a divorcee with her parents for most of my stay. Of the remaining fourteen, eight adult women were living with their husbands in the same hamlet where the women's parent or parent surrogate resided. Nevertheless, I would be tempted in only one of these cases to classify the couple's residence as uxori-local. And that case (27 and 84 discussed above) is a re-arrangement which differs from the residence arrangement of the couple immediately after their marriage. Of the seven women remaining, five are also co-resident with the parents of the husband - two of them in the same house as their parents-in-law. In no instance did a couple live in the same house as the parents of the wife.

The local endogamy makes it necessary to qualify a unilocal classification of the post-marital residence pattern since such a descriptive conventionally means residential affiliation with one of the new spouse's kin and implies spatial separation from the kin of the other spouse. This

latter implication is not entailed in Binumarien.

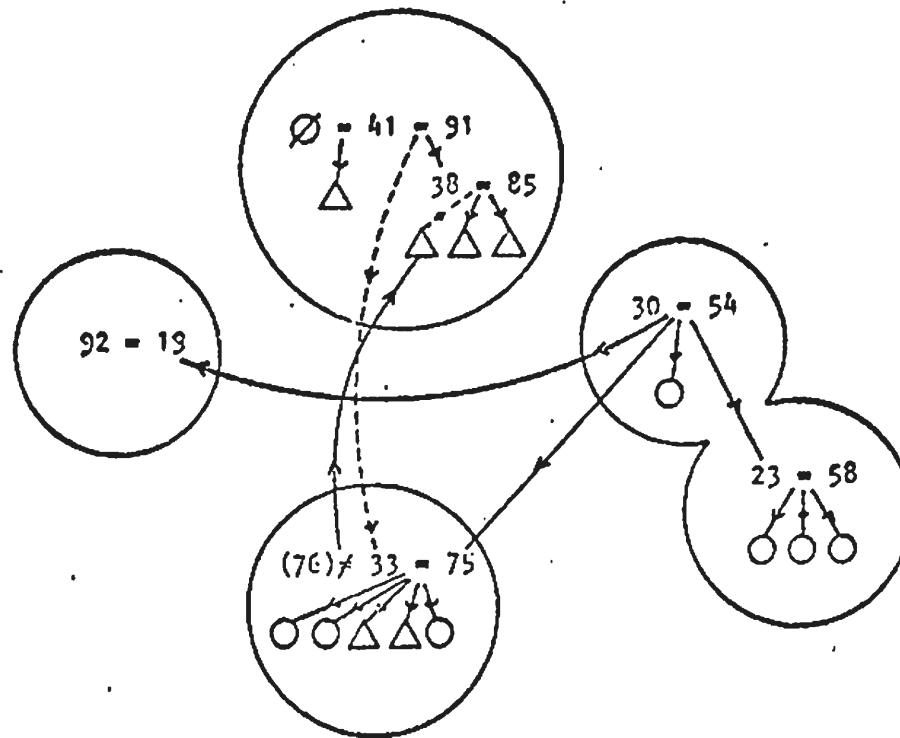
Hamlet Composition

Maqaanoona

Binumarien is currently composed of three hamlets. The smallest, Maqaanoona, has twenty-six residents: six adult men, six adult women, and fourteen children (see Fig.3.2). There are four houses but two of these are divided into distinct sections so that each of the six married couples has its own household space. (During my stay the house occupied by 41, his wife 91, their son 38, and his wife 85, as well as the children of each couple, was rebuilt. The old house had two rooms, each of which was reached directly from a small joint entrance hall without entering the other. However, the new house was not partitioned so that the hearths of each couple were located in opposite halves of one large room.)

The adult men consist of two sets of fathers and sons. And the two fathers, 41 and 30, claim to be consanguines, related through their fathers and their fathers' fathers, although they cannot trace the specific genealogical path which connects them. Although 30 is the older of the two, the presumptive consanguineal connection places him a generation below 41. This is the reason for a discrepancy in their reciprocal kin class assignments. While 41 calls 30 'older classificatory brother,' 30 calls 41 'classificatory father.' These men are often described as moodaa oosana (discussed below), which literally means 'one source' or 'one trunk.' Or they are described in Neo-Melanesian as wan lain - an all-purpose phrase with a very broad range of meanings and usages. From this information it appears that the hamlet is both defined as and composed by

Figure 3.2 - The smallest hamlet, Maqaanoona



1 - 41, 93 = \triangle (male)
 42 - 92 = \circ (female)

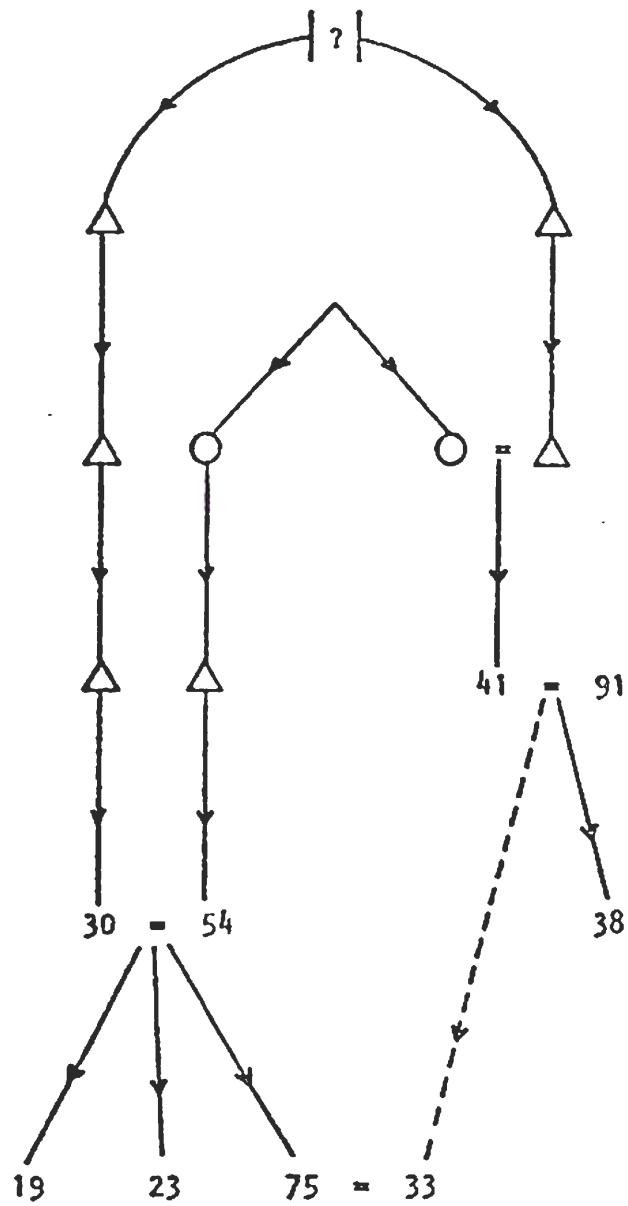
agnatic kinsmen and their wives.

But further exploration shows two things which do not fit perfectly with such a conclusion. First, 33, the son of 41, is married to 30's daughter, 75 (see Fig. 3.3). Such a marriage is problematic because small, unilineally defined groups are often exogamous. However, 33 is an adopted son and it might be argued that this marriage more firmly links him and especially his children to the patrilineal unit, if this were such a group.

The second problem is in some of the kin class assignments. Binumarien kin terminology is of the Cheyenne (Murdock 1949) or bifurcate generation type (Dole 1969) (see following section). Cousin terms are generational, and avuncular/nepotic terms are bifurcate merging. Here the cross/parallel distinction is obligatory in the first ascending generation and optional in the first descending generation.

Besides the putative connection between 41 and 30, there is a traceable connection between 41 and 54, the wife of 30 and mother of 19 and 23 (refer to Fig. 3.3); 41 is 54's father's mother's sister's son. This cognatic connection puts the children of 41 in the same generation as 54. This means that 19 and 23 have a choice. They may trace their connection to 41's son, 38 (33 adds the complication of being a brother-in-law), through either their father 30, or their mother 54. Under any circumstances, at least in the absence of matrilineality, it might seem likely for them to follow their father's usage, particularly so if agnation were ideologically emphasized. However, 19 classifies 38 as 'classificatory mother's brother.' Moreover, while the reciprocal class may be lumped terminologically with parallel kin, so that a man's sister's child may be either 'classificatory child' or optionally 'classificatory sister's child,' 38 uses the special

Figure 3.3 - Genealogical Relations among Men of Maqaanoona



1 - 41, 93 = \triangle (male)

42 - 92 = \circ (female)

'cross' term to place both 19 and 23. He might have chosen the broader term, leaving it ambiguous as to which path was the operative one. But there is no ambiguity here. He classes them both as 'classificatory sister's child.' He uses the cognatic connection rather than the putative agnatic connection to identify them.

Onikuradurana

The next largest and the newest hamlet, Onikuradurana, has sixty-eight residents: fifteen adult men, twenty-three women, and thirty children. The eight 'extra' adult women are accounted for by two wives each for 16 and 13, four old widows, and two young and marriageable divorcees.

Since post-marital residence is patrilocal, the kin connections among the men should be the important ones for defining the structure of the core of the hamlet. There are fifteen adult men in this hamlet. Agnatic connections between these men are of minimal generational depth. All three traceable agnatic sets of adult men in Onikuradurana are composed only of fathers and sons. This reflects the post-marital residence pattern but clearly does not indicate a patrilineal sociology.

In addition to the traceable genealogical links, there are four other sorts of connections which provide a basis for intimacy and cooperation and which are used to make kin classifications.

1 - traceable genealogical connection

2 - assumed genealogical connection but the details forgotten, a connection can be traced to an ancestor (minimally a parent) of each individual assumed to be related to an ancestor of the other but the precise link between these ancestors cannot be specified

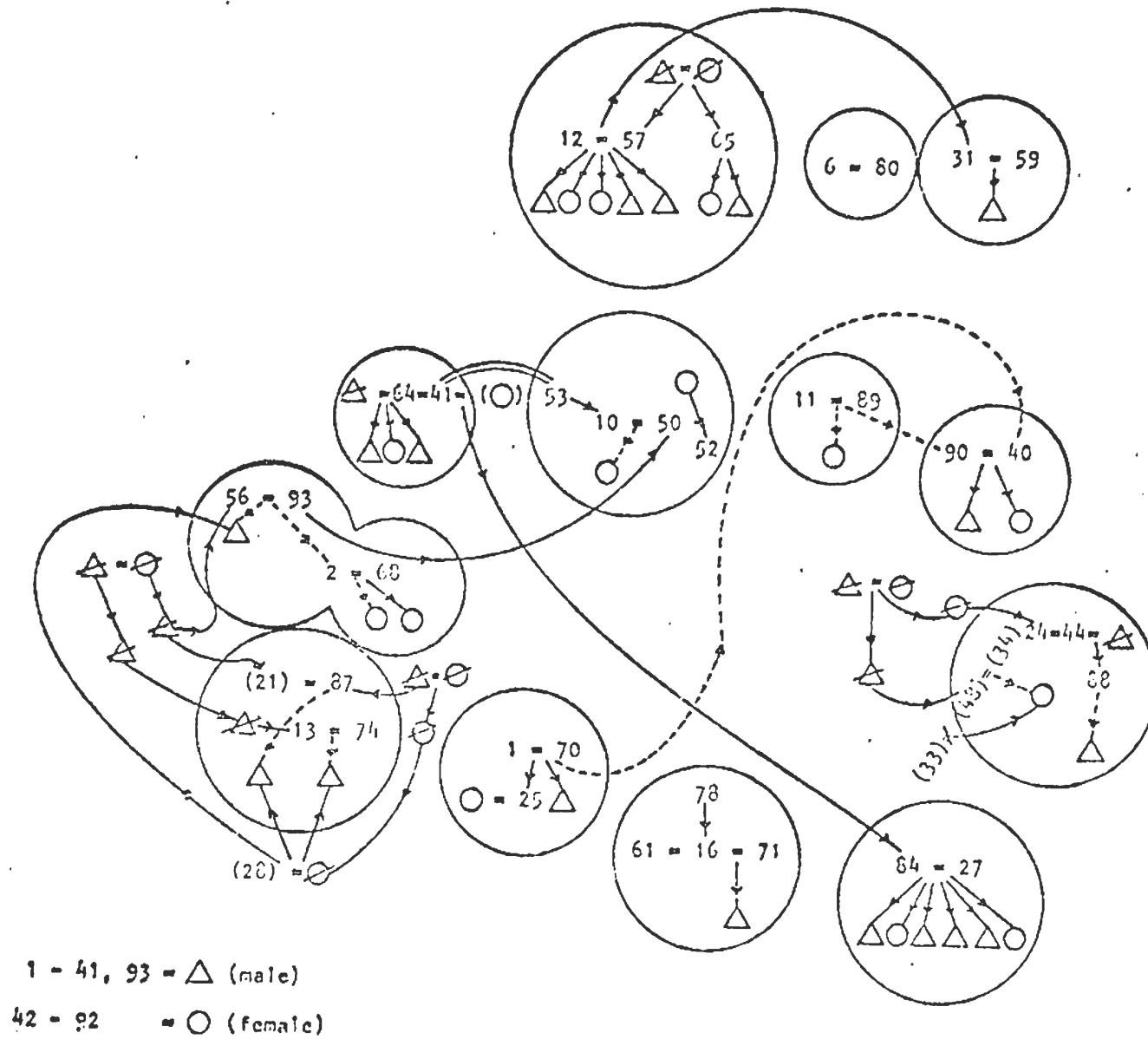
- 3 - ancestors (minimally parents) coresident in another place, an ancestor of each (minimally the man himself) came to Binumarien from the same other place, but no genealogical connection claimed
- 4 - ancestors (minimally parents) coresident in Binumarien, no genealogical connection claimed
- 5 - the minimal connection, coresidence but no genealogical link.

We may ignore the adult sons residing patrilocally, since any patrilineal affiliation they might have would follow automatically from the affiliation of their fathers. Eleven men thus remain. These eleven men form fifty-five distinct pairs. Among these pairs there are twenty-two connections of type 1, eleven connections of type 2, fifteen connections of type 3, nine connections of type 4, and six connections of type 5 (the total of 63 exceeds 55 because in some cases more than one connection is considered important for a pair). The number of these connections in which all the known links are through men are tabulated below:

Type	Total Connections	All Known Links Through Men
1	22	0
2	11	2
3	15	3
4	9	5
5	6	6

What do these numbers indicate? Since a type 5 connection assumes no linking individuals, all pairs with this sort of connection must conform in a trivial sense to the restriction 'all known links through men.' This conformation is not informative since it is by definition. The other four categories are related to each other in the following way. As the restrictions in the definition of the category and the depth of the connection decrease, moving from category 1 to 4, the number of connections tends to decrease (a trend which continues in category 5). At the same time the

Figure 3.4 - The middle hamlet, Onikuradurana



number of connections which are through male links increases (and again the trend continues in category 5).

Moving from category 1 to 5 the genealogical component in the connection decreases from maximal to zero, while the residential component increases from zero (except as implied by genealogical links) to maximal. The distribution of frequencies suggests a preference for genealogical emphasis, but an association between increasing residential emphasis and an increasing proportion of male links (this conforms with the post-marital residence pattern). Any cognatic connection might be reduced to or supplemented by a lower category (type 2 or 1) through men, i.e., for any connection which includes female links, a less specific connection through males can be assumed. But there seems no tendency to do this.

The figures show no special emphasis on patrilineality. Apart from the three individual father-son sets, there is nothing like an 'agnatic core' in this hamlet. Instead its residents fit into an interlocking cognatic and in-law network.

Finschhafen: The Mission

The largest hamlet and the oldest site of occupation in Binumarien, Ubandena, has seventy-nine residents. There are also twelve residents who identify with the Finschhafen area and form a spatially distinct 'mission enclave.' This latter group is excluded from the study. I consider that omission most unfortunate. The following is a long aside which explains that exclusion.

Since I was interested in the patterns of social interaction, I was especially eager to see how this mission group articulated with the Binumarien community. In all my encounters with members of this set they emphasized their distinct identity. This distinctness was also emphasized by other residents of Binumarien. Relative moral superiority was emphatically claimed on each side. And yet, in many ways these people who identified with Finschhafen were very much a part of the Binumarien community, gardening and getting a living side by side with their Binumarien neighbors, cooperating and sharing with them, participating in community events and decisions.

The interplay of solidarity and division suggested organization patterns of special interest. But from the early days of my stay the people in this group parried my questions about genealogical relations. I was so counting on collecting details of interpersonal interaction involving the mission set that I was not prepared to accept their refusal to participate. I was sure that it was only a matter of time and of finding the right approach. But time passed and they refused my requests, so I decided to press the issue.

It was generally known in the community that one man was the most influential member of the Finschhafen enclave. And I was told that it was at his bidding that the others refused my entreaties. One day, when I had been in Binumarien several months, there was a big discussion about payment owing on a case of beer. The man (I had assigned him number 9 for my records) who seemed responsible for the Finschhafen refusal was in attendance.

I sat down next to him, he greeted me, and we talked a bit. Then I asked him about helping me in the research. He said no, they were from another place. If someone were doing this at their place, then they would participate. But, they had another blood. I said yes, it was true that his people were from the coast. But they live here, and he and one of the adult women (assigned number 81 for my records) grew up here. It did not matter, for what I was interested in was where his ancestors had lived. Des and Jenny Oatridge (the SIL couple) were answering my questions and their ancestors were from another place. They even grew up elsewhere, but they had lived here on and off for a long time. Instead of answering he sort of shushed me and said he had to listen to the discussion. So I let him.

We sat there for two hours and when the debt for the beer had been fully discussed from all conceivable directions and was clearly exhausted as a topic some people got up to leave. So did 9. I followed and stopped him. I said I wanted to understand this and would he please explain it to me. Those who had been drifting away regathered around us to watch (something I had hoped to avoid but now it could not be helped). He opened the argument of 'another blood' again. I said, again, that didn't matter. But, alright, I could see I must accept their decision. It was their business. I just wanted to understand why.

By now he was less nervous and more angry. He said, alright, if I gave them enough money they would do it. I told him that I was giving a lot of money for very little work. He knew that. He said no, a large fortune would come to me from this. Only if I payed them accordingly (Neo-Melanesian: hamas handet) would they participate. Very aware of the

audience, I said that this was not a thing for money. Their story would be in libraries so that anyone could come and read of them without paying. (This difficulty of explanation I had encountered before and would again. Each time it seemed to get worse rather than better, a collection of many books telling the story of many things seemed to sound more and more magical each time I tried to clarify it.) He said, if we tell you the things about us, what we know and what we do, then you have our secrets and the wealth of our ancestors, which belongs to us, will go to you instead.

This was an alarming turn to things, one I should probably have anticipated, but had not. There, in a public forum, I was being charged with serious malevolent intent: expropriation of the cargo from the ancestors. I said, I knew nothing of such things. And he continued, to me, and all assembled, if the Blnumarlen were foolish enough to give away their secrets and give up the cargo of their ancestors, that was their business.

Perhaps my alarm was unwarranted. But I felt that the audience weighing his words against mine could so easily be persuaded that he was right. This would make me not only an enemy, but a dangerous one.

One of the Blnumarlen men answered him, saying that it was his (9's) business. If he didn't want to help me, that was up to him. I simply stood there for a bit, trying to calm my racing pulse. Then I slowly walked away. I went home envisioning possible serious trouble and feeling extremely alone and isolated, no motor vehicle, no radio, no help. Most especially I felt a gulf between myself and my neighbors. I had handled the situation badly, but even after lengthy reflection I was unable to

conceive a satisfactory reply or explanation. At any rate, after this episode I accepted the refusal of the mission to participate in this research.

Ubandena

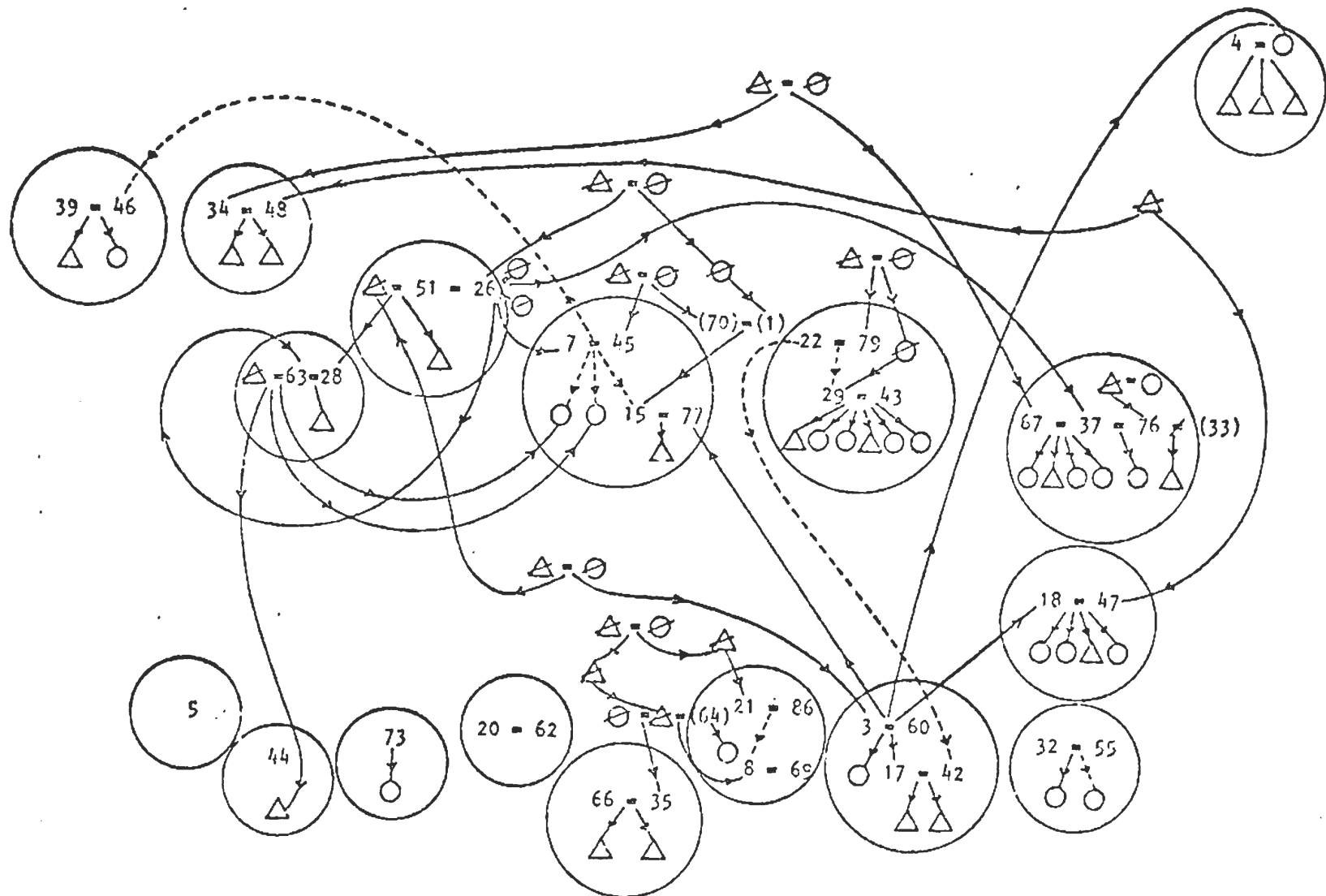
Ubandena is the largest Binumarien hamlet. In the two smaller hamlets the genealogical connections included only the most rudimentary agnatic clusters, fathers and sons. Such generationally shallow sets would not even be counted as patrilineal according to the distinction suggested by Fortes which separates filiation, parent-child connections, from lineality, connections with at least a three-generation depth (Fortes 1959:206-7).

In Ubandena the genealogical connections among men include some agnatic paths of greater length. There are three clusters of adult male kinsmen analytically distinguishable as agnates (though not locally so distinguished). One of these is a set of father and sons only, but the other two show a greater depth.

One of the latter contains 21, 35, and 8. The father of 35 and 8 died when they were both very young; 21 took a significant part in the care and upbringing of the boys, at first particularly for 35 whose mother was dead. The mother of 8, 64, married her deceased husband's brother's son and this couple had five children before 64 was again widowed. Thereafter, 21, who had no living sons acted more and more as surrogate father for 8 as well as 35. Actually, then, the relation between 21 and these two men is that of father and son substitute.

The largest 'agnatic cluster' is made up of a man and his sons and

Figure 3.5 - The largest hamlet, Ubandena



1 - 41, 93 = Δ (male)
 42 - 92 = \circ (female)

deceased brother's sons. The nuclear family in which this cluster began has produced an astounding number of descendants in three generations. There are 49 living descendants of the parents of 3 currently resident in Binumarien, i.e., more than one quarter of the population of the entire community. These people do not share a common name, nor do they act as a unit or claim rights or obligations collectively. But they can be described as moodaa oosana. All the adult males in this set are consistently grouped in the discussion of oosana which follows the next section. Of the 49, 26 are related through males, i.e., analytically agnates (and it happens that all living adult males in the cognatic set fall within this subset). 18 of these 26 agnates live in Ubandena. Of the eight who do not, four are married women living with their husbands in Onikuradurana. And four are children living with foster kin in Onikuradurana. In addition to this transfer of children, four of the adults in this set had been either adopted or fostered by others. There is no positive value placed on very large families so that those who have many children tend to foster them out or allow their adoption.

The preceding discussion was intended to demonstrate that although Binumarien residence is patrilocal, there is not a patrilineal bias in hamlet composition. But residential organization is one thing and structural ideology may be quite another. Ignoring residence, consider the ways in which people talk about their affiliation to social subsets. How, aside from residence, is the community conceptually subdivided above the level of the household?

THE ISSUE OF LINEALITY

In Binumarien there are no unilineal descent constructs of any sort. By that I mean any social units for which membership depends on a claim of unilineal descent from a common ancestor. There are no ancestor focused categories named or otherwise. Since the occurrence and nature of descent concepts in CHNG are matters of some interest in the areal literature, this requires some elaboration.

The great importance of distinguishing between ego-focused and ancestor-focused kinds of kinship constructions has been especially emphasized only in the last couple of decades. The antidote to the confusions of previously common and accepted usage has been slow to take effect. The three landmark publications which appeared at almost exactly the same time, Levi-Strauss's Elementary Structures, Murdock's Social Structure, and Radcliffe-Brown's 'Introduction' to African Systems of Kinship and Marriage, all shared the same errors, the confounding of ancestor focused and ego-focused kin constructs and a mistaken appraisal of the ubiquity of unilinear descent. Murdock's Social Structure, for example, used 'bilateral descent' to describe a characteristic of societies without ancestor focused categories (pp. 44-45), those with non-unilineal descent, and those for which 'bilateral kindreds' were reported irrespective of whatever other structures were present as well (p. 158).

The overemphasis on unilineal descent to the neglect both of other kinds of ancestor focused units and ego-focused constructs has been criticized with salutary suggestions in several papers, notably Goodenough

1955 and 1972, and Freezan 1961. Scheffler (1973) has recently suggested that it is just this confusion which underlies the 'ideology vs. sociology' problem in CHNG. He argues that 'father-son' 'brother-brother' idioms for local group unity which have been interpreted as indicators of patrilineal descent ideology are often better interpreted as Barnes has done: matters of 'patrification,' and this must be clearly distinguished from descent. The significance of the distinction is in the difference between 'ego-focused' calculations and ancestor-focused ones. If local groups are not based on common descent, but rather on ego-focused kinship connections, then the problem of 'accretions' and the accommodation of non-agnates is not a matter of violating descent ideology at all. The problem, Scheffler says, is in the models not in the facts.

However widely applicable Scheffler's reconceptualization is for CHNG (and I have considerable doubts), the distinction he brings into focus is an important one. When we talk about kinship phenomena, it is necessary to be clear whether we are dealing with matters of descent or matters of ego-focused kinship. Structural expectations will vary markedly depending on which of these it is. But I suspect that if Scheffler's discussion contributes to clarification of one problem, it may exacerbate another very important one.

Sahlins has written about the confusion between a group's composition and its social identity, pointing out that the same constraints do not shape both and that most certainly the latter is not simply a reflex of the former. In fact, he suggests that 'where descent is engaged in the political domain, as a charter of territorial communities and

political actions" (1965:104), the direction of dependence may most usefully assumed to be the reverse.

The overlying descent structure is no expression of the underlying descent composition. Something to the opposite: the major descent system orders genealogical facts in allegiance to its own principles ... A serious objection is in order to the popular tactic of perceiving structural principle ('jural rule') as the outcome of how people are associated on the ground and in fact ... (We hear talk of the supposed confusion between kinship and descent. What of the more egregious confusion between descent and residence?) (1965:106).

Watson has emphasized the importance of this distinction.

A patrilineal ideology need not be regarded as incidental or accidental merely because the composition of local groups sometimes poorly approximates the expected norm. An ideology, too may 'have a job to do,' just as, we are so often reminded, a structure does. The job or purpose of ideology, moreover, may not be identical to that of the sociological arrangements (1964:14).

The point is important but the language used here, though conventional, is misleading. The distinction is not so much between composition or sociology and ideology as it is between different levels of organization. Local composition has both 'sociological' and 'ideological' aspects and intercommunity arrangements are a matter of 'composition' and 'sociology' as well as 'ideology.'

Strathern's language is better and he makes a similar point when he says, "In comparing Highland societies we must bear in mind the distinction between dogma applied as a calculus of intergroup relations and as dogmas applied to processes of affiliation to groups" (1971:36). The issue here is the composition and identity of residence units as contrasted with the composition and identity of larger social categories.

There is a long ethnological tradition which derives the latter from

the former, congruent with the tendency to associate residence patterns with composition and descent structure with ideology. Thus, as the classic text has it, ideology emerges from social organization. Marvin Harris has gone so far as to assert that "residence is an etic phenomenon while descent is what goes on inside of peoples' heads" (1971:335). But to the extent that residence is patterned by kinship connections it clearly has a critical ideological aspect, and Harris's distinction cannot hold. Instead it is a matter of different social units, overlapping and contrasting, greater and smaller. Each has a composition and identity, each has structural and ideological aspects, and each may be shaped by different pressures because of the 'jobs' they do. "Each level (each kind of group) has a range of functions: economic, ceremonial, defensive, and so forth - each organizes certain necessary tasks" (Sahlins 1968:16).

There is a long ethnological tradition, much broader than 'cultural materialism' which derives larger social structures from smaller 'on the ground' arrangements, particularly descent organizations from residence distributions (Titiev 1943, Murdock 1949, Goodenough 1955). Unilineal descent categories are seen to develop from unilocal extended families and non-unilineal descent from ambilocal ones. The greater groups are the smaller writ large. The derivation is both structural and evolutionary. It all happens from the individual or from the family out. But ethnographically there is often a lack of congruence between descent structures and local arrangements. It is a matter of record that the same sorts of local arrangements may be associated with alternate descent constructs. The cognatic Maori hapu with its patrilineal

bias and the patrilineal clans with cognatic accretions of some CHNG societies are favorite examples (e.g., Fox 1967). In addition classic patrilineal descent systems present a paradox, the "E.-P. paradox; an inverted relation between commitment to agnation in principle and commitment to it in deed" (Sahlins 1965:105). Both technological and 'structural' 'inside-out' strategies can offer only 'lag' to accommodate such things.

"Why not look from the outside in?" (Sahlins 1965:106).

[Certain] empirical materials intimated a connection between the development of lineality in the intercommunity sphere and its significance within political segments. Where the superstructure turns on segmentary lineage relations, the internal doctrine of participating blocs is more definitely lineal. Where the superstructure is not descent ordered - and alliance, feud and ranking develop more exiguously on other bases - the lineal dogma of political segments is underdeveloped despite a clearcut bias in membership (Sahlins 1965:105).

Sahlins' proposition that intercommunity relations are critical in shaping community components has recently received statistical confirmation. Ember, Ember and Pasternak published the results of "cross-cultural research on the conditions that may lead to the emergence of unilineal descent and some of the major variations thereof" (1974:92). They provide "data consistent with the theory that the presence of warfare in unilocal societies is the catalyst for the development of a conception of unilineal descent" (1974:92). This is clearly an example of the larger system, 'the community in a tribe of communities,' i.e., the wider association of populations and resources, shaping the local 'primary groups' and patterns of face-to-face interaction.

The general emphasis on the features of the wider system as critical

variables in accounting for the form taken by component units, suggests re-examination of the sorts of things unilineal descent arrangements actually do. The overemphasis on unilineal structures in the classic literature was partly a result of the popular assumption that they were uniquely suited for a myriad of social functions. Other structures could not perform these functions because only unilineal descent entails unambiguous membership in units which (given exogamy) are "clearly differentiated, isolable discrete kin groups, which never overlap with others of their kind" (Murdock 1949:60-61), and which exist in perpetuity. On the other hand an ego-focused aggregate of kin "can rarely act as a collectivity" because of overlapping membership. "... It is not a group except from the point of view of a particular individual .. It has no continuity over time" (Murdock 1949:61). Goodenough has pointed out numerous ways in which non-unilineal descent units may be restricted to produce social groups which have the characteristics, enumerated by Murdock, of unilineal descent units. Freeman has shown how ego-focused aggregations may link together to form action groups of surprising size and real effectiveness (1961).

The point of relevance here is that community and intra-community identities - the usual locus of descent constructs in CHNG - have a function different from organizing local day-to-day cooperation and composition. The characteristics of unilinear descent units outlined by Murdock may actually have little relevance for 'who associates with whom' in many societies. Instead, face-to-face cooperation may be guided by pragmatic concerns which may even contradict but do not disturb the descent structure. The latter has other things to do.

All this may seem very tangential following earlier assertions that in Binumarien there are no descent constructs of any sort. The purpose of the excursion is twofold. First, all this provides the background for an explanation of the character of Binumarien community organization which is different from the general areal pattern. Second, this background clarifies the status of the assertion that patrilineal descent constructs are lacking in Binumarien. This is not just an assertion about local composition (which current wisdom would predict to be non-agnatic whatever the local conceptions). It is an assertion about the local definition and identity of Binumarien and its sociological components.

THE ABSENCE OF PATRILINEAL DESCENT IN BINUMARIEN

Ember, Ember, and Pasternak found an association between the presence of warfare in unilocal societies and the development of unilineal descent. But how does Binumarien square with this generalization? Warfare is (or was) certainly present here and the residence pattern is unilocal. And yet there is no 'conception of unilineal descent.' Ember, Ember, and Pasternak "consider a society to have unilineal descent when most people in the society belong to at least one group of persons who conceive of themselves as descended from a common ancestor linked to them (either through the male or the female line) by known and/or presumed genealogical connections" (1974:69). Unilineal descent is absent in Binumarien, why? Another of their findings is suggestive. They distinguish between internal and external warfare following Ember and Ember 1971. Internal warfare is fighting "within the society" and external warfare

is fighting "with other societies" (1971:582).

In deciding where a given society left off and other societies began, we relied upon the ethnographer's judgement. If he spoke of warfare with a group that he labeled with a different tribal or cultural name, and this other group was clearly not the society to which he was generalizing his data, we would classify such warfare as external. (Incidentally it seems that most ethnographers differentiate societies, theirs vs. others, in terms of language differences; that is if two groups are referred to as different tribes or societies, it usually seems that the languages spoken by them are not mutually intelligible, although there may of course be bilinguals in each group) (Ember and Ember 1971:582).

Given this usage Binumarien is characterized by external warfare only.

There is no internal war as defined because the 'society' and the community are coterminous. Using this distinction, Ember, Ember and Pasternak found that "societies with internal warfare tend to have at least one mostly contiguous unilineal descent group, whereas those with external warfare only were not as likely to have such groups" (1974: 92-93). Since Binumarien has only external warfare as defined, it is unlikely to have contiguous descent groups. A descent group is counted as contiguous "if almost all the core members (unilineally related members) live in a single territory (section of a community, whole community, neighborhood, or district) without being separated by people of other descent groups of the same type ..." or if "a substantial number of the core members live contiguously" (1974:78).

If we assume that by 'core members' they mean those of the sex which is brought together by the unilocal residence rule, it would not be possible to actually disperse core members in a 'society' the size of Binumarien. If any descent groups were present, the core members would all live in the same 'territory,' 'community,' or 'district' because there is only one. Thus if Binumarien is unlikely to have contiguous

descent groups, it is unlikely to have any descent groups at all.

The findings of Ember, Ember, and Pasternak (and those of Ember and Ember 1971; Otterbein 1968, 1970; Divale 1974; Divale, Chamberis, and Gangloff 1976) suggest that linguistic boundaries have significant implications for social morphology. Specifically for Binumarien they suggest that its linguistic uniqueness may be the critical factor in accounting for the absence of descent constructs here.

The intercommunity sphere for Binumarien is 'external' only, as opposed, for example, to Tairora, Bena Bena, Gahuku, Chimbu, Enga, Haring, Siane, and so on. That is, all interaction between Binumarien, a community, and other communities crosses ethnolinguistic boundaries. Binumarien is surrounded by neighbors but it is unlike the run of CHNG cultural-linguistic units where "there may be 60,000 members in a phyle, although some are smaller ... Most phylae are divided into a number of ... autonomous local groups. The population [of these local groups] rarely exceeds 500" (de Lepervanche 1973:1-2). Binumarien, the community of 172, which is the 'autonomous local group' is also the maximal 'linguistic unit,' the phyle. It distinguishes itself from its neighbors as individual, distinct, unique. This uniqueness is most clearly symbolized by its linguistic identity. Binumarien's neighboring communities are not 'brothers.' Its intercommunity relations are not lineal. Nor are they 'brothers-in-law.' These relations do not seem to be genealogically conceived. Every Binumarien has kinsmen in neighboring communities, and these are important links. But Binumarien and neighboring villages are either too distant for community level intercourse or they are enemies, with the degree of active hostility always

in flux. And kinship idioms are not used to describe this larger social organization.

Strathern's comments on Melpa are relevant here:

At the highest ['tribe' and 'tribe section'] and at the lowest [lineage] levels a kinship model is used to conceptualize groups and their interrelations, while in between, at the level of the clan and sub-clan, there is additional stress on territorial and residential idioms (1971:34).

But what is perhaps most important in [the kinship] idioms is not their precise patrilineal or cognatic reference, but their rhetorical appeal as charters for group unity, based on the assertion of sharing something fundamental, whether this be common semen or common blood (1971:35).

For Binumarien interlocal relations are not conceptualized in a kinship model because the same political function is otherwise served.

Here local aggrandizement, distinctiveness, solidarity against the world, and freedom of manoeuvre are the overriding structural concerns (Sahlins 1965:105).

And here, a 'facilitating doctrine' of patrilineality is not required, because there is a salient criterion of Binumarien uniqueness: its language. Binumarien clearly 'share something fundamental' which sets them apart from their neighbors and symbolizes their 'solidarity against the world.' Watson suggests that:

Quite likely the patrilineal ideologies of many parts of the Highlands should be regarded, at least in one of their functions, as providing an idiom in terms of which local groups may speak of others and of themselves to others (1964:14).

The very unusual features of Binumarien's ethno-linguistic isolation may provide a 'functional alternative.'

Before the demise of neighboring villages linguistically identified with Binumarien, some intercommunity relations may have been, at least partially, conceptualized in lineal terms. But even then the majority of

neighboring communities were linguistically distinct from the Binumarien set. Most likely that arrangement obviated the full elaboration of a descent ideology as the "charter of territorial communities and political actions." In fact, in all discussions of intercommunity relations, even relations with Sasaida, Omama, and Anasina (the 'Binumarien' speaking villages) kinship idioms were never used.

An Origin Story

The story of the beginning of Binumarien has familiar CHNG elements. Deenoa is the name of the critical figure in this story. He can be connected to the genealogies of some Binumarien as a great, great grandfather of the oldest adults. Some who can name him as an ancestor are connected through cognatic links, some through agnatic links. Deenoa lived in Sasaida, a linguistic congener of Binumarien, now extinct. The story of his arrival at Binumarien and the origin of the community follows.

Deenoa's brother (whose name is forgotten) killed a large pig. He distributed the meat but gave none to Deenoa. When Deenoa saw what was happening, he was angry. He went to his brother and asked him why he, an own brother, had been given none. The brother replied that plenty of times Deenoa had killed pigs and given none to him. Deenoa was very angry. He said, "Never mind me, but what of my wives and children? Everyone else is eating pig and they must go to bed without it. That is a very bad thing." But the brother was unmoved.

Deenoa took his wives and children and walked and walked until they came to Fofondai. He left them there and told them he would be back that

night. Then he carried bundles of tall grass and put it in piles under trees along the path, and returned to Sasaida.

The men were all asleep in the men's house. He crept inside and found his brother. There he shot him as he lay, twice. Then he ran from the confusion in the dark as his dying brother cried out. He ran along the road carrying a length of bamboo with burning grass inside. When he came to the first pile of grass he had left in the path he lit it and ran on. Then to the next pile, he lit it and ran on. And so he ran until he came to the place where his wives and children waited for him and there they lived.

Although Deenoa is identified by this story as the founding father of the community, his name is not used to identify or define either the community as a whole or any component of it. In fact, his name is not even included in the genealogies of those who trace a specific connection to him unless one is very insistent about maximal remembered depth.

The elements are here. A descent identity for the community could be constructed but it is not. Most likely this is a consequence of the character of intercommunity relations. Sahlins' generalization about the "connection between the development of lineality in the intercommunity sphere and its significance within political segments" (1965:105), suggests the following prediction. Given the absence of lineal models for external relations in Binumarien, it is probable that lineal models will not be significant for internal organization either.

OTHER SOCIAL UNITS

Oosana

Quite early in the field period it was explained to me that sons inherited land from their fathers but daughters did not because they would marry and live with a man from another oosana. However, a man may arrange to claim rights in his wife's brothers' land through a simple ritual which includes the presentation of a pig; and if he does so, he then can transmit those rights to those who inherit from him.

This sounded like conventional patrilineal inheritance and I assumed that it implied patrilineally structured land-holding units. At the time I still assumed that Binumarien was typically patrilineal, even if those I talked to were strangely reticent about group membership and group boundaries.

Later on, however, I was told how a boy received the explanation and description of his land rights from his mother's brother as a part of his initiation. This seemed to me in clear contradiction to earlier explanations about the patrilineal inheritance of rights in land. But the contradiction was not in the explanations, it was in my inferences. I took the wrong lesson from the first account. Instead of emphasizing that land rights tend to be held by men - the point intended - I had focused on the father-son transfer and inappropriately assumed it was exclusive instead of exemplary.

Consider another series of apparent contradictions. The term oosana has many meanings. When people are of one oosana (literally 'source,' base)

they may be of the same age, or the same generation, or the same 'patrilocal extended family' (because one meaning of oosana is the family unit of the government census records), or the same 'kin aggregate.' This is the only term I could find in Binumarien that comes close to 'kin group.' To understand its meaning in the sense listed last above, a series of seven Binumarien assertions about oosana membership which exclude 'age' or 'generation' usages are listed in Fig. 3.6.

I begin with presentation of this table to provide a data base for the discussion of the nature of this construct: oosana. Certain analogies may be drawn with 'family' or 'relatives' in American usage, although they are in no sense equivalent to oosana. Like the term oosana, these American labels signify constructs which are flexible in extent, e.g., they can include many sorts of cousins or none at all; but these levels of differential inclusion are not clearly defined, like the levels of segmentation described, for example, by Evans-Pritchard for Nuer lineages (1940). And they are also alternatively partitionable, e.g., they may include or exclude certain in-laws and collaterals, and each of the subsets produced by partitioning may also be 'families' or 'relatives.'

And, like these American constructs, social context of use does not provide a clear specification of the range of reference. It is not the case in Binumarien that alternative oosana groupings are associated with distinctions of context, as different 'structural poses' (Gearing 1958) for different activities. The chapter which follows this one examines the organization of certain activities. That chapter shows that the elements which remain consistent in all these associations about oosana compositions are significantly associated with cooperation in

Figure 3.6

Assertions about oosana composition*

- I. On occasion, e.g., in discussion of a large feast which should just precede clearing bush for new gardens in August, Binumarien was described as composed of the oosana of 41 and the oosana of 26.
- II. In apparent contrast to this, sometimes, e.g., in a dispute about the fate of cash pooled to begin a savings fund for a village car, the oosana of 30 was distinguished from that of 41, both of these from the oosana of 21, and all three of those from the oosana of 7. (This is not exhaustive.)
- III. This division was further elaborated on occasion, e.g., in a discussion of land ownership, by listing all oosana heads which included three of the four men mentioned in II, and some other individuals as well.
- IV. In apparent contrast to assertions II and III above, the members of 41's oosana were, e.g., in a discussion of the payment made to a man's in-laws at the puberty observances of his child, enumerated in lists which included some of the men otherwise reported to be oosana heads.
- V. After innumerable frustratingly abortive attempts to get people to sort photographs of individuals into meaningful sets not defined by age (which was always the first mode of categorization), two young men (38 and 37) provided, and repeated, a sorting into four oosana. The composition of these differs from that suggested by the preceding assertions.
- VI. Contrasting with V above, all the adult men of the community were occasionally, e.g., in a discussion of land rights, grouped into five oosana which differ in composition from the preceding exhaustive division.
- VII. In contrast to the specific assignments of assertion V and VI, 10 was, in occasional conversations both with and about him, assigned to the oosana of 41.
- VIII. Summing all these assertions in search of consistent elements (read the table on the following page down, instead of across), the adult men who are consistently grouped together, i.e., who are never placed in different oosana in a single assertion, form seven sets.

* these eight descriptions refer to the arrangements shown on the following page

Figure 3.6 (continued)
Assignments of Oosana Membership

moodaa oosana → ☐

* Inconsistently assigned

I.

41's

26's

II.

21 30 41

7

III.

12 21 30 41

26 45, 53, 70 3

(sisters, wives of 7, 41 -
 when fa of 10 died - and
 1 respectively)

IV.

12 13, 21 93, 30, 41 fa of 16* 24*

V.

12, 31 13, 21 30, 41
 32, 6 8, 35 19, 33
 5, 34 23, 38
 2, 93

10* 26, 7 1, 15
 16* 27, 37 25, 40
 24*

11* 3, 4, 17, 18,
 20, 22,
 28, 29, 39

VI.

12, 31 13, 21, 24* 30, 41
 32, 6 8, 35 19, 33
 34 23, 38
 89 (wife
 of 11)

26, 7 1, 15, 11*
 27, 37 25, 40

10* 3, 17, 18
 28, 39

VII.

41 10*

VIII.

A B C D E F G
 12, 31 13, 21 30, 19 41, 33 26, 7 1, 15 3, 17, 18
 32, 6 8, 35 23 38 27, 37 25, 40 28, 39
 34

production activities. But the flexibility of oosana aggregates indicated by the data presented here suggests that oosana alignment may not be a good predictor of who cooperates with whom. Chapter four, which follows, will confirm that.

To demonstrate the flexible, in fact ambiguous, reference of the label oosana, the series of specific assertions about oosana alignments are listed in Fig.3.6. This list raises two points. First, each of the assertions is 'true' in the sense that it was reaffirmed and not simply a matter of error, misinformation, or practical jokes on the ethnographer. And second, the set of assertions does have an internal consistency. Oosana in the sense of aggregates of kinsmen are not "clearly differentiated, isolable, discrete kin groups, which never overlap with others of their kind" (Murdock 1949:60-61). The size, extent, and boundaries of an oosana are not fixed. The set of kin which is counted as an oosana may be divided, and in more than one way into sub-sets which are also oosana. And yet there is a tendency toward socio-centric standardizations so that they lack the usual ego-centric characteristic of kindreds which vary in membership depending on the focal ego. These sets are not so much overlapping as nested.

With the exception of three men, all the assertions of internal organization reflect a consistent dual division which is indicated by the line down the center of the list. Within this basic dual division there are several subdivisions. Each of these subdivisions is an alternative way of dividing up the same multidimensional social space. These alternatives are all based on seven consistent groupings, four of

which are father-son sets, three of which are more extensive clusters. These are listed and labeled with letters in the table. (Four more clusters might be extracted: one consisting of 5 only, one consisting of 93 and 2, one consisting of 22 and 29, and one consisting of 20 and 4. But since these appear in only one of the organizational assertions, they are disregarded for the following discussion.)

These clusters are grouped together in ways which are not simply a function of genealogical distance but some more complex measure of social space, adding residence to genealogy and perhaps features of sociability like friendship and compatibility. For 41's side, the combinations are unambiguous. Reading from the bottom up: first C is grouped with D assertion VI (this matches the composition of the smallest hamlet Maqaanoona), contrasting with A and with B. Then B is added to C and D assertion V (41 is married to the mother of 8). This is an interesting order of accretion since 41 and 21 are big-men in the community one might expect - given received notions of competitive big men - that they would first each bid for the affiliation of A. But in Binumarien big men do not compete for followings. Then finally A is added to B, C, and D-assertions IV and I.

On 26's side the combinations show alternative ordering: either E with G contrasting with F assertion VI (this conforms somewhat to residential distribution since most of the members of E and all the members of G live in the largest hamlet Ubandena), or alternatively with F assertion V (most of whose members live in the middle hamlet Onikuradurana) contrasting with G. (The ambiguity of 11's affiliation may come from the fact that he is consanguineally connected to G - agnatically,

as it happens, he is 3's patrilineal parallel cousin and was the foster father of 39. But all the members of G live in Ubandena, while 11's neighbors in Onikuradurana are the members of F. and 40 is married to 11's adopted daughter.) The alternatives depend on the assignment of F. This ambiguity may be partly due to the fact that I came to Binumarien with his father from Sasaida, one of the communities, now extinct, which was linguistically identified with Binumarien. 1's mother was from Binumarien. 26 is his mother's brother's son. But when 1's father died, his mother married out of Binumarien again. Nevertheless, the genealogical connection between 26 and 3 is more distant. Some connection is assumed between 26's father's father and 3's father's father's father - their ancestors were classificatory brothers.

The exception to a consistently drawn dual division are 24, 16, and 10, each of whom appears alternately on the side of 41 and then 26. The ambiguity of 10's affiliation results from the fact that his father was 3's father's sister's son and the brother of 79 (22's wife) and so also the brother of 29's mother. When 10's father died, 53, his mother, married 41. Through his father, 10 traces closest kinship to the members of 26's side. Through his step-father, 41, he traces closest kinship to 41's side.

As for 16, through his deceased father he claims a putative but untraceable connection to 41. 16 married 61, the daughter of 51, who is now married to 26. 26 is 16's mother's mother's sister's husband. (In addition to this, 16 was originally adopted as an infant from Pundibasa. This is the place to which 26 has close ties.) The fathers of both of these men died when 10 and 16 were still boys and this probably contributes to their

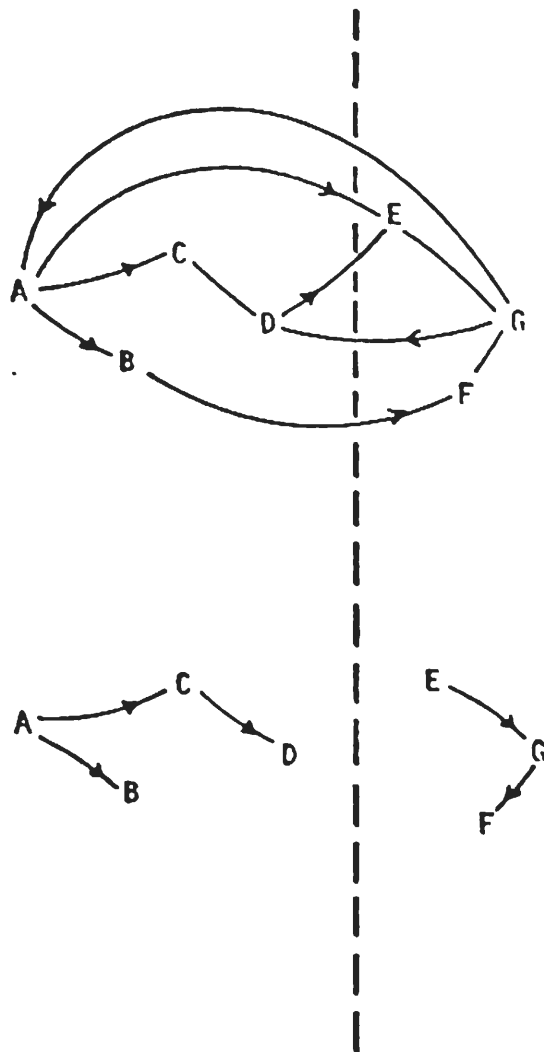
overlapping affiliations.

The ambiguous assignment of 24 has a different source. He and his wife 49 moved to Binumarien as adults. They came from Omama; like Sasaida this community was a linguistic congener of Binumarien and is now extinct. 24's father's sister was the mother of 21; 24's mother married the father of 22. Since 24 lacks more extensive ties, these specific connections, in addition to common ancestral place affiliation with several other individuals, tie 24 widely to Binumarien but not tightly to anyone.

Neither at the highest nor the lowest level are these oosana groupings all ordered by common descent. At the lowest level, the smallest sets are exogamous as incest restrictions require. Above that, more inclusive oosana are not. If only sisters and daughters are considered, and no women of greater genealogical distance, a directed graph which represents the movement of such women in marriages among the lowest level groups can be constructed. All the marriages which define this set occurred before I arrived. Such a graph is shown in Fig.3.7. There are three points to be made about this digraph.

1. There are no symmetrical connections between any pair of points in the graph. This means that although the direct exchange of women is a common and positively valued marriage pattern (see following), the direct exchange of full sisters never has occurred in this set. (There are some examples of literal sister exchange in the genealogies but they are rare.)
2. Of the seven points representing the consistent lowest level groupings, all but one of them (F) have both given women and

Figure 3.7 - Movement of Women Among Lowest Oosana Sets



received them from others in this set. F consists of 1 and his three sons; 1 has no daughters and no sisters so it is lack of 'resources' and not necessarily anything else which makes F exceptional in this way. In other words the graph is connected - each of these groupings is related 'in-law' to some of the others. The heavy emphasis on community endogamy is clear.

3. Subgraphs constructed for each side of the dual division which groups A, B, C, and D in contrast to E, F, and G are connected, i.e., all the lowest level divisions give women or receive them from others on the same side - the sides are not exogamous. However, there are no cycles, i.e., no series of arrows can be traversed so that leaving a point it is possible to return to that point. This means that within each half, women move in one direction - some points only give women (transmitters) and some only receive them (receivers). But when the two sides are considered together the literal 'circulation' of women is evident even in this restricted set. Each point except F both gives women to and receives them from other points in the graph. Thus, while there is no direct exchange of women among the groupings represented by the points in this figure, the exchange of women between the two sides, the largest groupings, is direct.

RELATIONS AMONG INDIVIDUALS: PARENTHOOD AND MARRIAGE

Bilaterality

In addition to 'moodaa oosana' (one oosana), moodaa fidika - literally, 'one blood' - is used for very close consanguines. On several occasions it was explained to me that this phrase meant 'having at least one parent (of either sex) in common,' but the few times I heard it used in conversation, the relationship it referred to was more distant. It may be that in these cases the phrase was used as hyperbole but it seems more likely that in ordinary use it means 'close and clearly traceable consanguine.'

A general CHNG pattern is exemplified by Watson's description of Tairora. "The sibs of Tairora phratry are named, and their members claim descent through male progenitors to a common ancestor, usually male, or more often a group of ancestors who lived in a certain place" ([1967] 1971:230). In Binumarien there is no special label for agnatic kin and there is not even a phrase to indicate such relatives. This is in clear contrast to other CHNG groups, even cognatic societies like the Huli (Glasse 1968), who linguistically mark agnatic connections. Not only is there no special label or even unlabeled construct, but where there are multiple paths of connection between two kinsmen, and this is commonly the case in Binumarien, one path becomes the conventional referent, the conventional tracing between the two, and there is no preference for connections through men.

The metaphor for conception and gestation is a common Highland one:

'A woman is the string bag which carries the child planted by the man.'

It suggests that connections between mothers and their children are different from and less substantial than connection between fathers and their children, but in my experience this distinction was never used to evaluate genealogical links.

Physiological Parenthood and Adoption

It is usually assumed that the father of a child is the man married to its mother. But the Binuarlen are aware of the role of physiological paternity in conception and the possible mismatch between it and social paternity. It seems to be the belief (although my data on this are limited to a single male informant) that several acts of sexual intercourse are required to build up a child, and since it is assumed that the man having regular sexual relations with a woman is her husband, even a few known extramarital encounters do not affect the assignment of physiological paternity.

The tie consequent to physiological connections between parents and children is recognized as having special strength. In two cases where children were adopted while very young, they do not even use classificatory parent terms for their physiological parents but use the cross relative - classificatory aunt and uncle terms instead. Most, perhaps all other adults and many children in the community know of the actual connections but they say that the adopted ones, even though now adults, do not know their 'real' parents. I was told that this knowledge had been kept from them because the adopting parents have put so much time and energy into raising the children and if the latter discovered the

truth they would abandon the parents they know and return to their 'real' parents and the work of those who raised them would not be returned in the care and attention that adult children owe their old parents.

Both the security of the secret and the predicted results of its revelation are difficult to credit fully. The security of the secret seems doubtful since 'everyone else' knows (even I!). And the predicted results might be questioned since on several occasions I have heard some one declare in anger that he is 'disowning' a certain kinsman because of some action that relative had taken or had failed to take. Usually this follows perceived breaches of the ethic of sharing and it has no lasting implications.

In addition to the suggestion in such arguments that ties based on physiological connections have a special power, there was an event during my stay which underlined the local importance attached to these links. A teen-age girl got into a row with her mother's male first cousin's step daughter. The latter is an adult who had been widowed and divorced and who had an adopted son of about 8 years old. The difficulty began when the boy was distressed by some disciplinary action performed on him by the teen-age girl - his classificatory mother. His 'number one mother' (a Neo-Melanesian convention sometimes used in Binumarien, although as in this case, not necessarily to mean 'real' in the physiological sense) sided with the boy. There was quite a fight, both verbal insult and physical blows flew. The older woman included in her attack the following taunt: the man that the girl thought was her father wasn't her real father at all. The girl was disturbed. She went

to the man she had just learned was her real father and asked him if it was so. Caught completely by surprise he denied it. Then she went to an older man, a wise man, a big-man of the community. He told her that the man she had confronted was her real father (and the woman who had opened the secret was lectured and later directed by a public court to pay an indemnity to the girl for disturbing relationships important to her).

Her 'real father' was her mother's first husband, although the two had been divorced before the birth of the girl. She determined to leave the house of her mother and the man who had raised her and move into the house of her newly discovered father and his wife and children. The man who had raised her was very much upset. He loved the girl and had been her father since she was born. The stress of the business was as great for him as it was for the girl. In a few days things were calmer and eventually - a few months later - the girl's marriage was arranged - both fathers having a hand in it.

All this suggests that the tie consequent to physiological connections is of notable importance, importance which is dramatized by hiding it under a classificatory cross term in some cases of adoption. The sort of adoption indicated by the terminological conspiracy is not the only way in which responsibility for children can be shifted, although it is the most radical and permanent sort of shift. There are also several cases in which adults who either produced no children or whose children died took over the care and responsibility of a child born to a close kinsman. Or a widow or widower, unable or disinclined to care for a child, gives up the child to a kinsman. Often the child has full knowledge of the transaction. Sometimes the arrangement is that care and responsibility

are shared out by several relatives, sometimes a single pair, with the 'real' parent or parents re-involved when the child is of age to marry.

So far as I am aware there are no special terms to distinguish these different sorts of adoption or fosterage. And the only ritual marker I know of is that in the most complete sort of adoption the new father kills a pig and presents it to the 'real' parents as a part of the transaction.

Incest

There is a match here between incest prohibitions and exogamy. The connection between the two is emphasized by the rule which says that a man should marry his classificatory brother's widow unless he has eaten pig that was hers. In that case he has treated her as a sister, he must neither court nor marry her.

The exogamic prescription is described and explained locally most often as incest avoidance. And the incest prohibition - which is extended even to second cousins regardless of the sex of any linking kinsmen - is phrased less as a taboo than as an observation on sexual excitability. As they put it, 'one's skin does not get up.'

In keeping with this, there are no avoidances between opposite sex siblings (or parents and children); they may see each other naked and sleep alone together in the same house. In fact, they found my questioning about such things quite silly.

But this is not as tidy as it sounds. Marriages between kinsmen who

are second cousins or closer should be ruled out - or fail to occur - because such kinsmen do not sexually attract each other. But I was also told that occasionally two young people who had not studied their genealogies and didn't know of their close connection became sexually interested in each other and it was the task of their elders to quash the improper liaison. In other words, incest doesn't occur because it wouldn't be fun and nobody wants to, except sometimes when we have to stop them. Like most local explanations for incest avoidance, the Binumarien one is only partly an explanation.

The Binumarien fit Fox's (1967) prediction that a people's attitude toward incest is probably consistent with their attitudes toward sex in general. Sexual abstinence was required in the old days for fighting men. (And this has a quasi-contemporary correlate. An old man who had worked in the gold fields at Wau several years ago told me that he was painfully kicked in the ankle during a soccer game arranged for the workers. He attributed the injury to some sex play the previous night with a woman he was seeing then. He knew the danger and they had not actually had intercourse, but they had come sufficiently close to cause the injury. He said that if they had had intercourse, the kick would surely at least have broken his leg.) But unlike the Highland stereotype, the Binumarien are not obsessed with ideas of sexual pollution. Gossip about sexual behavior is rampant. Of course, sex and marriage are firmly linked, but extramarital and premarital sex occurs. Joking about sex and sexual insults are common and the attitude toward incest seems just as easy going. (I did not, however, hear any joking about homosexual activities.)

However, the attitude toward restrictions on sexual behavior among in-laws is another matter. Two cases of parent-child-in-law offenses came to my attention. One of them involved a man in a neighboring village who was widowed and living with his widowed daughter-in-law. That arrangement in itself was unexceptionable. But after a time the woman made sexual advances toward her father-in-law, explaining that they were living as husband and wife in all other respects, and she had a great desire for him. He was horrified and there was a public outcry, and then a public court. Although the woman did not give up her intentions easily and at first refused to show shame for her action, she finally bowed to public pressure.

The second case involved a Binumarien woman (52) who had divorced her Binumarien husband and married a Pundibasa man. That marriage ended in scandal and she returned to Binumarien when the Pundibasa man began to carry on a sexual relationship with his daughter-in-law. Aside from offenses against the restrictions among in-laws, one other example of sexual behavior was considered revolting. This was a story about an old man raping a prepubescent girl and causing her death.

Except for such rare cases most heterosexual behavior is a matter for public discussion and amusement, but this does not mean that there is no sexual jealousy in Binumarien. On almost any week some sort of commotion growing out of sexual jealousy entertains the community. It may be a fight between spouses or between co-wives. Such fights are common and perhaps the latter are exacerbated by the residence patterns which followed on the destruction of the men's houses with the return from exile in the Harkham Valley years ago. Now, rather than men living

separately and each wife having a house, men live with their wives in the same house.

Community Endogamy

There is a strong tendency toward community endogamy in the actual pattern of marriages (see Fig. 2.3 chapter 2), and it is the stated preference of the people. During my stay, a few young girls just past puberty left Binumarien together to find husbands among either the men working on one of the plantations in the area or those in the work force of the government project just underway at Yonki. When their disappearance was discovered, one of the Komitis (there are three of these positions in Binumarien set up by the government as sort of policemen under the village councilor) went after them. They were roundly cuffed, dragged home, and a court was held. (These courts are described in chapter five.) Here the outrage was not only that young women - a most important local asset - might have been lost without proper payment to the community, but that if something were not done quickly, these girls might marry out of Binumarien. Their senior close kinsmen were entreated to give special attention to arranging matches as soon as possible.

Some indication that this pressure for community endogamy is not a recent development comes from a story told about the beginnings of a fight between Binumarien and Omama. This was one of the other communities in which people spoke the same language as Binumarien. It was located just to the northeast before its people were beaten and scattered by their enemies. The story goes as follows. Some of the unmarried girls

of Binumarien had had occasion to meet some of the unmarried boys of Omama. One day they planned secretly to have a party somewhere in the bush. The Binumarien girls took some food, and, without attracting attention, set off for the meeting place. However, one unfortunate girl had a younger sister who was determined to join the older girls. When they tried to put her off she only followed at a distance - near enough to keep track of them but far enough that they did not see her. The boys and girls met and the festivities began. When the younger girl came upon the scene, she saw not only party trappings and the boys of Omama but also assorted couplings that suggested trouble. She turned and ran back to Binumarien and told her tale. When the older men heard, they were at once upset and amused and they called the Binumarien unmarried boys together and told them that 'someone was poaching their game'. The Binumarien men and boys set off at once to halt the party. When they came upon the scene the boys of Omama were taken - in the classic manner - by utter surprise. They fled in total disarray, without their weapons and without their party finery. The wayward girls were herded home and soon promised to the homeboys. However, the boys of Omama cried of their dishonor to their elders, who sent word that all would be forgotten if the Binumarien would return the items lost. Since the Binumarien saw no justice in that, old enmities were dusted off and the fighting began again.

It must be emphasized that when I was told this story the outrage to the young Binumarien boys was not that their 'sisters' were being taken without recompense, but clearly that their potential wives were being taken from them. The metaphor of game animal for sexual partner is a common one in Binumarien. (The same metaphor is used for enemy

groups that are eaten: sex and food.)

There is a positive value on marriage within the community and a tendency toward it. There is also a positive value on kin ties with neighboring places. The latter follow from marriages with individuals from these places and create avenues of assistance and sharing between communities, safe passage and shelter in 'enemy country.' Both in-marriage and out-marriage are quite proper but in both cases marriage tends to be between individuals who are, at least in some distant way, previously connected. Since women move at marriage, this 'previous connection' means that a woman married in from another place (with the two rare and recent exceptions of wives brought back from the coast) has not only 'in-laws' in her new home but some consanguines as well. Conventionally these classificatory kinsmen of the bride are reclassified as in-laws by the groom, although before his marriage they were his consanguines too. These 'brothers' of the bride are not post hoc or 'fictive' (cf. Langness 1969 on the Nupasafa). It is their connection to the in-married women and her closer kinsmen that allows the marriage to be arranged in the first place. In Binumarien, marriage is usually by the direct exchange of women and women are not exchanged between total strangers. On the other hand women are not exchanged between very close kinsmen. If kinsmen are closely connected to each other, then they are usually mutually connected to the prospective brides and the incest proscription is in play. Besides, one cannot exchange women with another who 'has' the very same women.

Marriage by Exchange

The two most important features of marriage patterns here are 1) the direct exchange of women, and 2) the independence of each set of exchanges. The latter means that the parties to the exchange are not corporate groups which incur lasting obligations. Each exchange is complete in itself, and not a part of a continuing relationship between intermarrying moieties or lineages or continuous discrete kin groups of any sort.

The direct exchange of women is never a matter simply between two brothers exchanging sisters or between two fathers exchanging daughters. Many other kinsmen are always involved. But these kinsmen neither form nor represent a corporate group which continues to exist beyond the one transaction. By 'corporate groups' I mean "groups that exist independently of the individuals composing them. They exist 'in perpetuity;' individual members come and go, but the group goes on. Corporateness also implies that they act as a body ..." (Fox 1967:163). Instead those involved in the exchange on each side participate ad hoc and through their individual connections to the primary participants. In fact, occasionally someone may participate on both sides of the exchange at once. Contributing items to the set given by the groom's kin and at the same time contributing to the things given by the bride's kin.

This pattern is an exception to Murdock's (1949) appraisal of the disadvantages of 'the kindred.' He notes that the absence of unilineal exogamous divisions creates a difficulty for the Tenino. In marriages there is no unambiguous way to assign the people related to the bride

and to the groom to one side or the other. And yet, "they cannot play two contradictory roles at once."

These problems are settled only after protracted discussions among the parties concerned and persons in authority and they not infrequently generate jealousy, friction, and injured feelings (1949:62).

The Binumarien system manages this situation without such serious difficulty. It does not define bride's contributing kinsman and groom's contributing kinsman as necessarily 'contradictory roles.' Those who are not closely connected to either of the marrying pair may contribute to each side. This is not to say that marriage arrangements are simple and always satisfactory to all. But in Binumarien stress usually follows insufficient participation not an excess of it.

The two main features of marriage patterns, direct exchange and the independence of each transaction, can be illustrated only anecdotally. I did not ask the questions which now seem so obvious (e.g., Who was exchanged for this woman? What was her relationship to the groom? Whom did she marry? etc.), and two things prevent a direct extrapolation of this information from the record of unions. The data which would indicate which marriages are a part of the same transaction are missing; and some marriages which were contracted as part of an exchange represented by unions in this set are not recorded here (those that were terminated quickly without issue, those involving individuals who moved away, etc.).

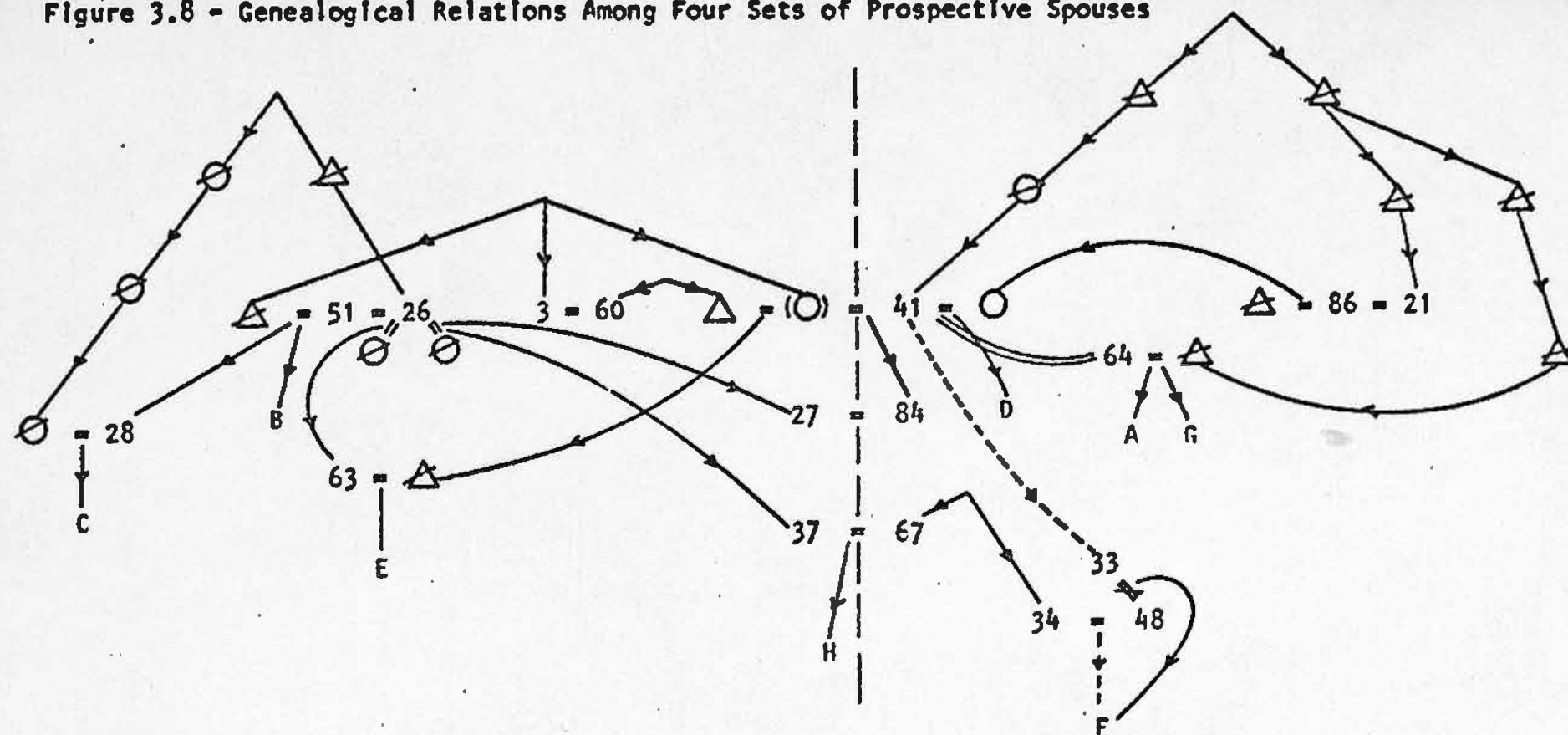
During the year I was in Binumarien there were three weddings held and one betrothal which was contracted and then cancelled during my stay. This set of events not only illustrates the direct exchange of women both as a locally valued pattern and as an observable state of affairs, but it

also shows the complications which prevent working back from a record of marriages and genealogies to sets of exchanges.

Since these were first marriages, none of the new spouses appears in the set of adults who form the basis of much of this study. Since they were not and never had been married when the research began, they were not at that time locally counted as adults (although one of the young men was considered past the age when he should have married, and the fact that he was quite content to put off adult responsibilities earned him a local reputation for laziness). The individuals involved will be assigned letters, A through H, for this discussion. Significant genealogical relations are indicated in Fig.3.8, where numbers correspond to the identification number for adults used elsewhere.

All four of the matches have some connection to each other and they show the marriage of kinsmen. But two of them (A = E, C = G) show the direct exchange of very close kin - A's full sister, C's second cousin or step-sister - while the genealogical connections between the men receiving wives and the 'sisters' being exchanged are longer for the other pair. Two circumstances are of special significance. First, each of the individuals has siblings (actual full) who are not involved in this set of exchanges. Some of them are already married as part of other transactions, some of them are still children. But the marriages of these other siblings, both past and future, are part of exchanges which are separate from this set. If these marriages of siblings were added in and a sort of sum attempted by way of analysis, the pattern of exchanges would be quite obliterated. There must be occasional marriages which are not by direct exchange and to add to the confusion more than siblings

Figure 3.8 - Genealogical Relations Among Four Sets of Prospective Spouses



	males	females
Marriages	A = E	
	B = F	
	C = G	
Cancelled Betrothal	D (=) H	

must be considered since the women exchanged need not be and rarely are actual siblings of the men.

The second matter of importance is that the betrothal of D and H was cancelled without affecting the other marriages and it was not replaced by another pairing to complete the set. The father of D, 41, had agreed to the arrangement under pressure, although he had never been very happy with it. The husband of B's mother 51, 26, is the oldest man in the community. For some reason he became determined to see his young step-son married immediately so that he, 26, could see the boy settled as an adult before he died. His determination was unshakeable, and 41 finally gave in to constant argument. I'm not sure what 41's qualms were; it may have been that he had his eye on another prospective bride for his son D. Anyway, after a short time he cancelled the engagement and made a public speech which was partly to the effect that he need not take this young girl H for his son even though she was owed. He would get the wife he wished for D when he wished to get her, because (and here he held up the arm of his favorite - his step-daughter, the full sister of A and G) he had the wherewithal. This, his step-daughter, was the pay for a wife for his son.

The event is recorded here to underline the pattern of woman exchange, to emphasize the independence of each set of exchanges, and to illustrate that one could not successfully reconstruct the exchange working back from the record of marriages for at least two reasons. First, it is not possible to tell from the record of marriages alone which unions are part of the same transaction. The marriages of some full siblings may be in independent sets (the usual state of affairs), while those of more distant kinsmen may be in the same exchange. And

second, the set of unions which represented the initial arrangements may very likely not appear fully in a future record.

However, evidence of the original exchange may remain in that 'ex-' in-laws and 'ex-' in-laws 'to be' often continue to use in-law terms for each other. Years later a woman who has married someone else and even born children may still be classed as a daughter-in-law by the parents of a man she was once promised to but never married.

The three marriages and one betrothal discussed here perpetuate the pattern of direct exchange in previous marriages between '41's side' and '26's side,' the dual oosana division discussed in a preceding section. The figure shows more details of the pattern condensed in the digraph in Fig.3.7. There are a number of marriages within each of these sides. The parties to these marriage transactions are always conglomerates of interested kin. The closer the kinsmen to either the bride or the groom, the more probable and extensive the involvement. But there are no corporate groups which make the exchanges. Those who are involved in arranging a marriage and organizing its ceremonial requirements are an ad hoc group, involved for that particular set of events but with no tendency to persist as a group beyond it. Those who participate in the exchange of goods associated with the marriage, a more inclusive set of kinsmen, likewise come together for those events only. As noted above, it may happen here that the same individual is engaged on both sides of the exchange, both as a kinsman of the bride and of the groom as well. This must have an implication for the tendency to directly exchange women.

Where kin groups are present, classificatory sisterhood or daughterhood may be determined by group membership. So that two groups may

exchange women on a model of sister exchange with the actual connection between and the number of men getting women and women being given a matter of little interest. The relations of debit and credit between groups may fluctuate rather lazily over time, with no strong push toward immediate or continuous evening of accounts. But with no corporate kin groups to provide a fund of women and to share out a debt that anyone can pay, the problem of reciprocity must be handled in another way. Each man must work his accounts by participating in the exchange arrangements of his close kinsmen. And these arrangements must generally aim to come out even, since a creditor who does not collect now will have no estate to charge.

KIN CLASSIFICATION

The Elements: What Counts as Parenthood and Marriage

Atkins (1974c) has pointed out a distinction between the 'micro-structure' and the 'macrostructure' of kinship calculation. Microstructure has to do with the internal structure of the things conventionally labeled parenthood and marriage, the two relations which are the primitives - the basic elements - of kinship. That is, what are the sorts of relations that are to count as examples of parenthood, what kinds of relations count as spouse links? Macrostructure has to do with the ways in which parent-child relations and marriage relations are combined into ethnographically (or ethnologically) significant strings, e.g., into sets of classes which are labeled to produce a kin terminology.

The microstructure of kin calculation in Binumarien has been discussed above. In sum, the bundle of things which count as parenthood in

Binumarien are patterned on physiological parenthood but include substitutes for it: adoption, fosterage, 'step' parenthood. All these things should set up equivalent domestic relations between adults and children, and they are all kinds of parent-child relations here. There are some additions. When a child has grown to adulthood and set up housekeeping on his own it may happen that one of his parents remarries. If this happens in Binumarien the new spouse of a parent may be classed as a parent as well, even though there is no 'domestic relation' equivalent to that set up by physiological parent-child ties. Just as in American kinship 'replacements count.' In fact, the parental relation in Binumarien is very like the microstructure of the parental relation in America as I know it, although the legal trappings are lacking and there is more flexibility in the number of parents one may have.

The microstructure of marriage, however, is not like that of American marriage. Several things count as marriage in Binumarien. There is the fullfledged exchange transaction with all its elaboration, which is the usual pattern of first marriage. But after that, although the exchange of goods between new in-laws is usual, as is an exchange of goods between a woman's second (or third, etc.) husband and her in-laws through the marriage just preceding, two 'consenting adults' become full spouses just by acting like it. In addition, spouse links as a matter of kin calculation are not necessarily dissolved in Binumarien by the dissolution of the union. 'Ex' in-laws may continue to class each other as 'in-laws.' And not only does marriage cast a shadow well after its passing, it also casts one before. A betrothal, even if it does not culminate in a domestic set-up may be counted as a marriage so that 'in-law' relations are calculated in terms of it. However, these last

two patterns are not obligatory. In some cases divorced spouses reclassify each other as consanguines, as do kinsmen who were calculated as in-laws through their marriage. This, then, is the microstructure of Binumarien kin calculation. Now we turn to the macrostructure of the kin terminology.

Kinship Nomenclature: The Categories

The kin terms are shown in Fig. 3.9, with loose English glosses, more or less traditional definitions which may also be read as approximate glosses of the rigorous Grafik definitions, and finally definitions in Grafik, a notation invented by Atkins (1974a, 1974b, 1974c). This is a classificatory system. In theory, the collateral distance between traceable kin may be very large, although the heavy genealogical involution as shown for example in Fig. 3.8 makes that unlikely. Clearly, all the individuals who might be traced by the genealogical paths defined here - which might include a large segment of the hemisphere at least - are not counted as kinsmen. This is the conventional boundary problem, familiar in English with cousins. The definitions are to be understood like this: if someone is counted as a kinsman, and if the basis of the kinship is a path with the given shape, then the term used will be the one so defined.

The matrix (Fig. 3.13) shows the kin term assignments that all adult men make for each other. Here the rows and columns are defined by the identifying number of the men and the entries in the cells indicate the kin classification corresponding with the Fig. 3.9. These assignments were elicited by showing the man identified by the row number a photograph of the man identified by the column number and asking 'Maa fasiqafa ani naqira fee' (literally - this man you what say?), i.e., 'what relationship

Figure 3.9 - Kinship terms and definitions

Term	English Gloss	Definition (approx. gloss of Grafik)	Grafik Definition*
1. qikoofa	'classificatory father'	any male who is (the spouse of)** a first ascending generation parallel-consanguine*** of ego	$\gamma \sigma_1 M^u \sigma_{ 0-s } q^i p^i \sigma_s P^1 /e$
2. qinoofa	'classificatory mother'	any female who is (the spouse of)** a first ascending generation parallel-consanguine of ego	$\gamma \sigma_0 M^u \sigma_{ 0-s } q^i p^i \sigma_s P^1 /e$
3. falqi	'classificatory child'	any first descending generation consanguine of (a spouse of)** ego	$\gamma M^u q^i p^i P^1 /e$
3a. qinauqi	'classificatory nephew/niece, man speaking'	any first descending generation collateral cross-consanguine of (a spouse of)** a male ego	$\gamma \sigma_1 M^u \sigma_{ 1-s } q^n p^n \sigma_s P^1 /e$
3b. qimaaku	'classificatory son'	any male first descending generation consanguine of (a spouse of)** ego	$\gamma M^u q^i p^i P^1 \sigma_1 /e$
3c. qimaamuqi	'classificatory nephew/niece, woman speaking'	any first descending generation collateral cross-consanguine of (a spouse of)** a female ego	$\gamma \sigma_0 M^u \sigma_{ 1-s } q^n p^n \sigma_s P^1 /e$
3d. qiraamuna	'classificatory daughter'	any female first descending generation consanguine of (a spouse of)** ego	$\gamma M^u q^i p^i P^1 \sigma_0 /e$
4. qitaatoofa	'classificatory grandmother'	any female who is (the spouse of)** a second ascending generation consanguine of ego	$\gamma \sigma_0 M^u q^i p^i P^2 /e$

Figure 3.9 (continued)

Term	English Gloss	Definition (approx. gloss of Grafik)	Grafik Definition*				
5. qineakufa	'classificatory grandfather'	any male who is (the spouse of)** a second ascending generation consanguine of ego	+ /	σ_1	M^u	$q^i p^i p^2$	/e
6. qinaufa	'classificatory uncle'	any male who is (the spouse of)** a first ascending generation collateral cross-consanguine of ego	+ /	σ_1	$M^u \sigma_{ 1-s }$	$q^n p^n \sigma_s p^1$	/e
7. qimaamufa	'classificatory aunt'	any female who is (the spouse of)** a first ascending generation collateral cross-consanguine of ego	+ /	σ_0	$M^u \sigma_{ 1-s }$	$q^n p^n \sigma_s p^1$	/e
8. qinalqi	'classificatory grandchild'	any second descending generation consanguine of (a spouse of)** ego	- /		M^u	$q^i p^i p^2$	/e
9a. qisaifaqafa	'classificatory great grand-kinsman'	anyone who is (the spouse of)** a third ascending generation kinsman of ego and reciprocally	\pm /		M^u	$q^i p^i p^3$	/e
9b. qifaqanafa	'classificatory great great grandkinsman'	anyone who is (the spouse of)** a fourth ascending generation kinsman of ego and reciprocally	\pm /		M^u	$q^i p^i p^4$	/e
10. daiquafa	'sibling-in-law'	any male spouse of a same generation collateral consanguine of ego and reciprocally	\pm /	σ_1	M^1	$q^n p^n$	/e
11. qimaaqifa	'sibling-in-law'	any female spouse of a same generation collateral consanguine of ego and reciprocally	\pm /	σ_0	M^1	$q^n p^n$	/e

Figure 3.9 (continued)

Term	English Gloss	Definition (approx. gloss of Grafik)	Grafik Definition*			
12. qinaaku	'parent-/daughter-in-law'	any female spouse of a first descending generation consanguine of ego and reciprocally	$\neq/$	σ_0	M'q' q' p'	/e
13. qairaamaku	'parent-/son-in-law'	any male spouse of a first descending generation consanguine of ego and reciprocally	$\neq/$	σ_1	M'q' q' p'	/e
15. daraaqi	'co-parent-in-law'	any parent of the spouse of a child of ego, reciprocal [rare]	\neq/p'		M'q'	/e
16. qisookifa	'opposite-sex classificatory sibling'	any opposite sex same generation collateral consanguine of ego	$\neq/$	σ_{11-21}	q' p'	σ_3/e
17. akaqapasaa	'classificatory brother, man speaking'	any male who is a same generation collateral consanguine of a male ego, reciprocal [used for distant kin]	$\neq/$	σ_1	q' p'	σ_1/e
17a. qikaqa	'classificatory younger brother'	a male later born same generation collateral consanguine of an earlier born ego	$\neq/$	σ_1	$\rho q' p' \rho$	/e
17b. qipasaafa	'classificatory older brother'	a male earlier born same generation collateral consanguine of a later born ego	$\neq/$	σ_1	$\rho q' p' \rho$	/e
18. daunanaafa	'classificatory sister, woman speaking'	a female same generation collateral consanguine of a female ego	$\neq/$	σ_0	q' p'	σ_0/e

Figure 3.9 (continued)

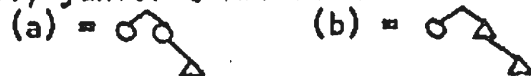
Term	English Gloss	Definition (approx. gloss of Grafik)	Grafik Definition*			
18a. dauna	'classificatory younger sister'	a female later born same generation collateral consanguine of an earlier born ego	+/-	σ_0	$\beta-Q^n P^n \beta^+$	/e
18b. qinasaafa	'classificatory older sister'	a female earlier born same generation collateral consanguine of a later born ego	+/-	σ_0	$\beta^+ Q^n P^n \beta^-$	/e
19. faaqi	'husband'	any male spouse of a female ego	+/-	σ_1	M ¹	σ_0/e
20. qinaaqa	'wife'	any female spouse of a male ego	+/-	σ_0	M ¹	σ_1/e
21. qioonafa	'classificatory co-wife'	any female spouse of (a same generation consanguine of)** a spouse of a female ego	\pm /	σ_0	M ¹ q ⁱ p ⁱ	M ¹ σ_0/e

* This notation is used according to the assumptions and conventions outlined in "Grafik: A Multipurpose Kinship Metalanguage" (Atkins 1974c). For a brief explication see Appendix A.

** Definitions refer to kinsmen indicated when the phrase in parentheses is omitted and when it is included. For example:

1. qikoofa = any male who is a first ascending generation parallel consanguine of ego
and = any male who is the spouse of a first ascending generation parallel consanguine of ego.

*** Parallel here means that the immediate link to the generationally junior terminal kinsman is the same sex as his/her generation mate in the path. The terminal kinsmen (a) are parallel-consanguines while (b) are cross-consanguines. The parallel condition is met in a logically trivial sense with lineals (the immediate link to the generationally junior terminal kinsman is the same sex as him/herself). They are thus counted as parallel kinsmen.



Is he to you?'

Zeroes in the matrix indicate that instead of responding with a kinship term, the man who was asked responded with some sort of 'negative,' most often 'moo oosana' (literally - another line or source). As the rare zeroes in the matrix show, most Binumarien classify each other as kinsmen. One man, 4, is exceptional. Although his wife was born and raised in Binumarien, she had left some years ago when they married. The family had just moved to Binumarien the year before this research and 4 is still somewhat an outsider as the high number of negatives given him shows. If he is discounted, only ten men fail to classify every other man as a kinsman. Of these, seven are young men, and, although this might indicate change, I think instead it is youthful brashness (most especially on the part of 2 and 8).

The specific links in a genealogical path between kinsmen are usually of little interest. In fact, connections are learned not by tracing such paths but by adding a link to the classification used by a parent, e.g., 'he is my qikoofa because he is my father's qipasaafa' or 'she is my qisooki because her father is my mother's qisookifa.' Children, and even young adults, know few of the specific connections between themselves and even fairly close kinsmen, and although most of them learn more as they grow older, genealogical details are simply not significant to most people. This makes the Grafik representation - even beyond its other virtues - particularly felicitous for this case. The unevaluated collateral distance measures, l and n, are very likely to remain unevaluated even in specific use.

Personal names are used in address only by spouses, parents for their children, close age-mates who are not also in-laws, and by the old for the

young (unless they are in-laws). Otherwise either a kin term, or, more often, a form of teknonymy is used in address, and usually for reference as well. The particular form is not rigidly fixed. It may be the name of a child, e.g., 'X's mother,' or of a spouse, a grandchild or grandparent. Since a new bride cannot politely be called by name by the in-laws she lives with, and since she as yet has no children, she may be addressed as the 'mother' of one of her pigs. Sometimes a woman who has married in from outside the community and who is an in-law to practically everybody (except the few 'consanguines' who helped set up the exchange) may be given the name of another young woman whose name it is proper to call.

Structure of the Kinship Nomenclature

Binumarlen kin nomenclature is classificatory with the 'consanguineal system' of a type labeled Cheyenne by Murdock (1949) and recently bifurcate generation by Dole (1969). This type has bifurcate merging (Iroquois-type) terms in adjacent generations, but generational (Hawaiian) in ego's own generation. These terms are applied to step-kin as well. In-law terms are self-reciprocal, marked for sex of the unmarried spouse and for relative generation. First and second ascending generation consanguineal terms have a conventional 'baby talk' or child's form. These continue to be used by adults to address their parents. (And I have heard old men address their wives with the 'baby talk' form of 'mother.')

Rarely I have heard the 'baby talk' avuncular terms used by adult women in address.

As Pospisil (1960) and Lounsbury (1964) have noted (cf. Kay (1965) then Tyler (1966)) the cross-parallel or bifurcation distinction

characteristic of Iroquois is quite different from the cross-parallel distinction of Dravidian systems (cf. Scheffler 1971). In the latter, the relative sexes of generation mates in the entire genealogical path linking two kinsmen are significant for proper classification. In the former, 'ordinary Iroquois,' it is only the relative sexes of one set of generation mates which make the difference. Those are the generation mates in the generation just senior to the generationally most junior terminal kinsmen. It is this Iroquois form of bifurcation that characterizes Binumarien and allows proper classification, figuring only from the classification used by a parent rather than a reconsideration of the entire path. Dravidian terminologies are characteristic of prescriptive marriage systems, or, following Needham (1973), Dravidian bifurcation is characteristic of 'prescriptive terminologies.' Binumarien is not a prescriptive marriage system, and it has the normal Iroquois, not the Dravidian characteristic. Nevertheless, an 'alliance' perspective does prove suggestive of the behavioral logic of the terminology.

To repeat, this is in no sense a prescriptive marriage system. There is not a 'positive marriage rule,' no labeled class of kinsmen which includes potential spouses. It does not have a 'prescriptive terminology,' i.e., a nomenclature in which distinctive in-law terms are lacking. It has no unilineal, or any, descent groups. It is not an 'elementary structure' for which the "one and only criterion rests in the fact that, preferred or prescribed, the spouse is the spouse solely because she belongs to an alliance category or stands in a certain kinship relationship to ego" (Levi-Strauss 1969:xxiv). Here, one's own marriage has no bearing on that of one's children, except in the sense of ruling out certain people as mates through the incest restriction. It does not rule in a class of future spouses. But a basic insight for elementary structures applies here.

In The Elementary Structures of Kinship (1969[1949]) Levi-Strauss suggests that the widespread distinction between cross and parallel cousins might be seen as a simple consequence of sister exchange. So that cross-parallel distinctions follow from relative position vis-à-vis the exchange. Brothers giving up sisters in exchange are in a credit position, husbands receiving wives contract a debt. The men of father's group contract a debt when they receive mother, the men of mother's group gain credit when they give her up. Father and his brothers are on the opposite side of the debt-credit relation from mother's brothers. In the same way mother and her sisters are on the opposite side of the debt-credit relation from father's sisters. Father's sisters are the women given up in return for mother. Siblings of the same sex hold the same position toward an exchange of women by their own group, sisters are given up and received by other groups. Brothers give up sisters and receive wives from other groups. Mother's brothers are wife-givers, father and his brothers are wife-takers. The distinction between cross and parallel cousins results when these obligations are perpetuated into the following generation. The children of same-sex siblings are in equivalent positions in terms of the exchanges in the preceding generation, the children of opposite sex siblings are in opposite positions.

This argument derives cross-parallel oppositions from 'sister' exchange. But the exchange of 'sisters' by itself is only sufficient to produce that distinction in one generation. If cross-parallel distinctions are to extend beyond the generation of defining exchanges, there must be, in addition to the obligations of the exchange, some social entity perpetuated over the generations which is charged with those obligations, with the debts and credits of the exchange. There must be some corporate

group to retain continuing liability. Cross-parallel distinctions in the first ascending generation may derive from the exchange of women in it. So that 'mother's male generation mates' are collectively wife-givers (mother-givers) - Fig. 3.9 term 6, and father and father's male generation mates are wife-takers (mother-takers) - term 1, while father's female generation mates are women given up by father's kin - term 7, and mother and her female generation mates are women given up by mother's kin - term 2. In fact, this is the sort of distinction characteristic of Iroquois (as opposed to Dravidian) bifurcation: all of parents' opposite sex generation mates are classed as cross relatives and all of parents' same-sex generation mates are classed as parallel. But the associated debts and credits are not automatically perpetuated into the following generation. This can happen only if the unit which contracts the debt or holds the credit is perpetuated. Otherwise the debt and credit relations which appear as bifurcation distinctions in the first ascending generation only come into being in the next generation when marriages are contracted in it. And they appear not as cross-parallel distinctions, but as 'own kin' vs. 'in-law' distinctions.

All this suggests that where the parties to an exchange of women are not corporate unilineal segments, a classification system which bifurcates the first ascending generation (and perhaps reciprocally the first descending) but does not bifurcate cousins, i.e., bifurcate generation or Cheyenne nomenclature, would seem to classify kin according to significant 'alliance' distinctions. The 'bifurcation' of ego's own generation will follow on the debts and credits of marriages contracted within that generation.

In the Binumarien terminology the debt-credit obligations of the parental generation are not perpetuated into the following generation. From ego's point of view, these are 'my parents' in-laws' not 'my own in-laws.' There are no lineal groups and so there is no corporate liability as is characteristic of lineage organization. In ego's own generation new debt-credit relations are contracted. These are independent of those in the preceding generation, except in the 'complex structure sense' that certain marriages are ruled out by them as incestuous. In this generation, if ego is a woman, she is exchanged to her husband by her 'brother.' Her 'brother' in turn collects a wife from somewhere else. The same terminological distinctions and equations are made in this generation as in the first ascending but here they are in the in-law categories. Whereas ego's mother's brother's wife is terminologically equated with ego's father's sister - and they both move in the opposite direction to mother, ego's wife's brother is terminologically equated with his sister's husband - and they are both on the opposite side of the exchanges from ego. (The actual transactions are accomplished by the elders of the prospective spouses, not by the spouses themselves. The exception is when a man of some maturity is acquiring an additional wife, but even then some of his kinsmen will be involved in the arrangements.)

This view abandons the conventional separation of 'consanguineal' from 'in-law' terms for analysis. The benefit of such a departure is in showing how the system of kin terms is connected with other aspects of social morphology.

This also illuminates a minor but curious characteristic of the pattern of social restraint. There are some speech restrictions and avoidance behaviors associated with some of the kin classes. These do not seem to be very rigidly adhered to, except the general avoidance of the personal name, although informants say that they once were more carefully observed and that the current moral laxity is a change and a sign of youthful decadence. At any rate, these restraints apply to 'in-laws' who are collectively called amusai (this may be a new usage following Neo-Melanesian tambu) which literally means taboo or forbidden. But a few of them also apply to other classes of kin: grandparents and 'aunts and uncles.' Since these latter are 'parents' in-laws' the logic of their inclusion with own in-laws in this association with restraint is a reflection of the same underlying oppositions which are reflected in the kin terminology system.

A feature of the 'in-law' terms deserves special emphasis. In-laws are those kinsmen linked by a connecting path in which 1) one of the links is a marriage and 2) that marriage occurs in the same generation or a generation junior to that of the terminal positions. In other words, this class includes the spouses of generationally non-senior consanguines and their reciprocals. Within the set of labeled in-laws there are two dimensions significant for terminological discrimination: relative generation (same or alternate) and the sex of the terminal kinsman directly linked by marriage. This latter dimension again reflects the circumstance of the exchange of women. If the terminal kinsman directly linked by marriage is a woman (relations labeled by terms 11 and 12), then the relation between her and her in-laws of both sexes is that of an incomer. She belongs to a new social setting, in a sense replacing

a sister/daughter. And if her husband dies or their union is otherwise terminated, she will be expected to remain in this new setting, to marry his 'brother.' (She should not marry his actual brother but a classificatory one.) She has been exchanged and now belongs there.

If, on the other hand, the terminal in-law directly linked by marriage is a man (relations labeled by terms 10 and 13), then the relation between him and his in-laws of both sexes is that of a receiver. His in-laws have given up a sister/daughter who has left them to join him. If she dies, the loss is to those who received her. Her husband's in-laws are under no conventional obligation to provide another woman. Again, each set of exchanges is independent. There are no corporate descent groups to incur lasting obligations. In Binumarien the levirate is practiced (with the qualifications mentioned), locally phrased: a woman should marry her Imaaqina. But the sororate does not occur here.

The remaining kin terms (excepting self-reciprocals for kinsmen three generations distant and four generations distant, (9a and 9b), neither of which I ever heard used between or in reference to living people) are a set which differentiate relative age between generation mates (17a and b, 18a and b), to be taken up below, and the reciprocals for first and second ascending generation terms. These last are simply generational except for 3a and 3c, the reciprocals for the 'aunt and uncle' terms which are optional specifics. The kinsmen they indicate are often labeled by the inclusive terms for all first descending generation consanguines. This is the only place in the terminology which offers alternative ways of dividing up the genealogical space. Again the alliance perspective is relevant. Parents classify each other's consanguines as in-laws. The exchange

oppositions of these distinctions influence the classification of the children so that the children use bifurcated aunt and uncle terms (6 and 7). But there is no equivalent influence on the classification behavior of aunts and uncles and they may or may not use the special niece and nephew terms. The morphology of these optional terms clearly indicates that they are special reciprocals of the avuncular-amitate terms.

There is a final point to be made about these cross terms. The Neo-Melanesian word kandere, which usually means 'matrilateral kin' (Mihalic 1971:105), has a different meaning in Binumarien. The phrase alo kandere is not used here, 'matrilateral kin' is not a locally significant category. An associated meaning of the word, used to refer to individuals or relations between individuals, is a reciprocal along the nepotic, 'mother's brother' - 'a man's sister's son.' But in Binumarien this meaning is expanded so that the term is used - even as a part of conversations otherwise entirely in Binumarien - to mean 'cross relative in an adjacent generation,' i.e., not only 'classificatory mother's brother' - 'a man's classificatory sister's child,' but also 'classificatory father's sister' - 'a woman's classificatory brother's child.' This is the class of kinsmen defined by the set: qinaufa (6), qinauqi (3a), qimaamufa (7), qimaamuqi (3c).

The Opposing View

This account of Binumarien kinship nomenclature shows how certain features of the social organization, marriage and parenthood, underlie the distinctions made in the terminological system. But such an approach has been criticized. Specifically, the application of 'alliance' insights to

New Guinea systems has been judged unprofitable.

... brief observations on a few New Guinea societies suggests that "alliance system" models are not likely to be of much use in helping us to understand them, whatever value those models may turn out to have in other areas of the world, this being also open to considerable doubt (Scheffler 1971:253).

Scheffler's position on this matter is a part of his general argument about the structure and reference of the nomenclature systems usually referred to as kinship terminologies. The disagreement between Scheffler and others, on the one hand, and Needham and others, on the other, has entered the literature as the debate about the social category vs. genealogical meaning of 'kinship terms.' This debate appears on the surface as a simple polemic. But more than one issue is involved. Those engaged in the debate argue about the things which are signified by words usually called 'kinship terms,' i.e., do they refer to genealogically defined positions or to social categories defined by things like group membership? On this issue I am in agreement with Scheffler and Lounsbury who argue the genealogical nature of kinship. This is in opposition to Needham who has made such extraordinary statements as, for example:

Let me simply adopt the minimal premise that kinship has to do with the allocation of rights and their transmission from one generation to the next. These rights are not of any specific kind ... They are all, however, transmissible by modes which have nothing to do with the sex or genealogical status of transmitter or recipient. Certainly they have no intrinsic connection with the facts, or the cultural idioms, of procreation ...

These jural systems and their component statuses can be genealogically defined ... [but this does not] mean that the relationships in question are genealogical or that they are so conceived by the actors (Needham 1971:3-4).

These statements seem to rule out any criteria for distinguishing kinship from a great number of other things. Needham has adopted a general strategy

which hardly seems likely to advance our understanding of human social organization.

This analysis of Binumarien kinship affirms my agreement with Scheffler and Lounsbury as to the genealogical nature of kinship, and provides additional support for such a position. An examination of the kin terminology in use, as a subsequent section will demonstrate, indicates that it is genealogical connection which determines the assignment of kin terms, not relative socio-spatial position. This quantitative demonstration supports the scepticism Scheffler and Lounsbury indicate about the degree to which kin terms in use fit non-genealogical status distributions.

Most ethnographic reports of a neat and simple correlation between terminological and jural statuses rest on little more than casual observation, not on rigorous independent structural analyses of the terminological and jural status systems, and so it may be that the correlation is less common than a superficial examination of the ethnographic literature might suggest (1971:153).

But after these matters of most important agreement, I have objections to the Scheffler and Lounsbury approach. First they define genealogical connection in the following way:

... let us simply state that by "genealogical connection" we designate those culturally posited forms of interpersonal connectedness that are held to be direct consequences of processes of engendering and bearing children that have the property of indissolubility. To phrase this another way, genealogical connection is employed here as a general cover term for a wide variety of culturally postulated forms of congenital relatedness between persons (1971:38).

For purposes of analysis genealogical connections are represented by kintype notation. "Kintype notations represent nothing more than genealogical chains connecting ego and [other] persons" (1971:69). But since the kintype notation used by Scheffler and Lounsbury includes, as of course it

must, such symbols as H (= husband) and W (= wife) it is clear that there is more to 'genealogical connection' than the 'culturally posited congenital relatedness' of their explicit definition. Not only parent-child links, but spouse links as well are the basic elements of genealogical connection. And just as the local models of parent-child connections are relevant for the construction and use of genealogical models in the analysis of cultural phenomena (Scheffler and Lounsbury 1971 passim), so the local models of spouse connections are also relevant. By the latter I do not mean the social relations between spouses just as by genealogical connection Scheffler and Lounsbury do not mean the social relations between kinsmen. I mean instead the link, the tie, the connection, i.e., marriage as a structural basis of relatedness, the structural arrangement upon which any social obligation is based. As soon as it is agreed that not only parent-child links but spouse links as well are the basic units of genealogical connection, many of the insights of Levi-Strauss's alliance view become relevant.

A second matter of disagreement has to do with the status of the analytical procedures employed by Scheffler and Lounsbury. To the extent that their "structural semantic analyses" are one of a series of alternative approaches to the analysis of the structure of kinship terminologies, I have no objection. But they argue that their approach is much more than a procedural alternative.

They say that many kinship terms, those which are classificatory in the Morganian sense and some others as well, are polysemic. These terms have (excluding metaphorical usages) two distinct senses, a 'primary sense' and an 'extended sense.' 'The root concept signified by a polysemic term

is here described as its structurally primary signification or its primary sense" (1971:11). Therefore, a satisfactory analysis must "discover the primary denotata (or focal types) for each term and the rules whereby the terms are extended from the focal types to the derivative types, i.e., the rules of terminological extension" (1971:15).

The mode of analysis itself predefines which 'senses' are the primary ones. "One or more members of each terminological kin class - the genealogically closest member of that class - are regarded as the focal member or members of that class" (Scheffler and Lounsbury 1971:50). Here is the point of difficulty. The procedures of structural semantic analysis require that certain particular members of a kin class be defined as primary. This says nothing about the empirical status of such distinctions. But Lounsbury and Scheffler have argued that the distinction between primary and extended senses is not just a procedural requirement of the method of analysis. They argue that it reflects a critical fact about the terminologies themselves.

They say that the difference between primary and extended senses, between focal and derivative types is a conceptual distinction indicated by linguistic and semantic clues. It is

... commonly described by anthropologists as one between 'own' or 'true' and 'classificatory' kin. A 'classificatory' kinsman of one kind or another is a kinsman to whom a particular term is applicable but who is not a kinsman of the type or types denoted by the term when it is employed in its primary sense (Scheffler and Lounsbury 1971:44).

As long as the linguistic and semantic clues pick out the genealogically closest members of a kin class as 'own' or 'true,' any argument must be one of interpretation. But, if it should happen that linguistic and semantic indicators such as these fasten on members of a kin class which are not

genealogically closest to ego, we have a crucial case for invalidating some of the assertions made by Scheffler and Lounsbury.

In Binumarien linguistic qualifications which carry a semantic indication of some sort of primacy are used to distinguish certain members of classificatory kin categories. But these qualifications controvert the Scheffler and Lounsbury assumption in two ways. First, they do not necessarily indicate the genealogically closest member of a kin category. Typical of Binumarien usage is the example mentioned above, where a woman was described as the 'number one' qinoofa (classificatory mother) of her adopted son. Or the case of 35, who referred on occasion to 21 (his father's patrilineal parallel cousin) as his 'number one' qikoofa. Since 35's father is dead, 21 has taken on the social obligations of a father to him. Second, this distinction refers to social rather than genealogical aspects of the relation. Scheffler and Lounsbury themselves insist that genealogical connections not be confused with the social relations of kinship:

Relations of genealogical connection, or kinship proper, are fundamentally different from and are logically and temporally prior to any social relations of kin. Relations of genealogical connection may be described as components of "ethnoscience" (sometimes "ethnobiological") theories. In contrast, the social relations of kinship consist of any rights or duties, or privileges and obligations, that a culture ascribes between kin in general or between particular reciprocal kinds of kinsmen that it distinguishes (1971:39).

I suggest that the indications 'true,' 'real,' and so forth, reported in the literature may very often refer to social instead of genealogical aspects of interpersonal relations.

Aside from the Binumarien case, there is another salient exception to the match between linguistic and semantic markers for "focal" members of

a category and the genealogically closest members which the analysis must take as focal, irrespective of other evidence.

One of the most important early papers in the controversy between the "social category" and the "genealogical" models of kinship was Lounsbury's classic analysis of Trobriand terminology (1965) in reply to Leach (1958). Trobriand terminology is of the Crow-type, subvariety III according to Lounsbury's classification based on variations in the skewing rule. For this type, one term, tabu in Trobriand, refers to FM, FZ, FZD, FZDD, and many other kin types as well. According to the calculation of genealogical distance prescribed by structural semantic analysis one must judge that "between FM and FS, the former is the genealogically closer" (Lounsbury 1965:149). Thus Lounsbury must choose FM (and other equally close kintypes) as the focal kin type, the primary meaning of the term tabu (1965:150).

Following the structural semantic analysis of Trobriand kin terminology, when he is discussing the sociological implications of the equivalence rules used in the analysis, Lounsbury himself makes the following reference to Malinowski. "... the Trobrianders are quoted as having told Malinowski ... 'To marry a tabula [cross-cousin] is right; the true tabula [the first cross-cousin] is the proper wife for us'" (Lounsbury 1965:176). In other words, the Trobrianders say that the first cross-cousin is the true tabula. This is a "linguistic and semantic" indication of a Trobriand conceptual distinction, but because it does not distinguish the closest genealogical member of the class, father's mother, it must be ignored in a structural semantic analysis. The choice of the genealogically closest member as the focal referent is dictated by the technique of analysis not by empirical evidence of any sort.

Aside from these criticisms of the internal sufficiency of the argu-

ments made by Scheffler and Lounsbury, I have a more basic criticism of their general strategy. They argue that:

the sole empirical and theoretical justification that can be offered for employing equivalence rules in the analysis of systems of kin classification is "the extensionist hypothesis" (1971:71)

and that

... the attempts of Morgan and later scholars to develop a general structural typology of systems of kin classification have not been successful, largely we think because none of them have taken sufficient account of the factors of extension and polysemy (1971:152).

They affirm the 'extensionist hypothesis' as a model of how kin nomenclature systems are actually built. Their implication is that these systems are constructed through process of extension, with rules of equivalence progressively extending the range of labeled kin categories from ego outward. For the Binumarien case the contrary view, consistent with the general model of cultural systems used in this study, is more useful, namely that kin terminologies are systems of labels for classes of genealogical relations, i.e., those relations formed by parenthood and marriage links. In this view, a kin terminology has a certain organization determined by the wider structure and changed by changes in it. It is an "outside in" rather than an "inside out" model of social organization. From such a perspective the central alliance insight "that kinship nomenclature and marriage rules are complementary aspects of a system of exchanges ..." (Levi-Strauss 1969:xlii) are of critical utility.

Scheffler says that:

The difficulty with alliance-systems models is the same as with some "African models" of unilineal descent systems - they are too holistic, both for the societies for which they were originally propounded and for others as well (1971:253).

I agree that we need a clearer mapping of the structural elements of both terminology systems and social organizations. Only in that way can we specify in greater detail and with more authority which of these elements go together. Our analysis should grow more refined, with a more careful appreciation of variations and continuing attempts to account for the limits on possible combinations, the occurrence of alternative forms, and the order and mechanics of transformations. But Scheffler wants to replace perspectives which see the wider system as decisive with an extensionist, ego-out view. He wants to entirely discard both alliance and descent models. I think the problem is the way the insights of Levi-Strauss and Evans-Pritchard have been used by others. The insights themselves remain of major significance. The Binumarien case is clearly illuminated by an alliance perspective which rejects the extensionist hypothesis and retains the view that the wider system and its reproduction are critical in shaping component relations. In this it opposes Scheffler's negative assessment of the utility of alliance views. But the analysis here also maintains a hold on the genealogical nature of kinship, following Levi-Strauss rather than Needham. On that point it finds agreement with Scheffler and Lounsbury.

Wider Implications

The label 'bifurcate generation' was suggested by Gertrude Dole (1969). 'This variant combines generation cousin terms with bifurcate merging avuncular-nepotic terms' (1969:105). She points out the prevalence of such systems noting that more of the cases which Murdock enumerates in Social Structure (1949) for his 'Hawaiian organization' class have nomenclatures of this sort than any other. Bifurcate generation

outnumbers 'standard generation' 13 to 11. And Dole reports that in her own files, which contain 150 terminology schedules with generation cousin terms "70, or nearly one-half, have bifurcate merging avuncular terms, while less than one-fifth have generation avuncular terms" (1969:106).

In addition to the fact that this sort of system is very common, Dole notes that nomenclatures of this type are "associated with a particular feature of kinship structure with sufficient regularity to suggest a causal relationship. This feature is kin group endogamy, which in turn is associated with demographic disturbances and disruption of the alignment of kin relations" (1969:107).

Demographic disruption causes kin group endogamy; kin group endogamy in turn causes bifurcate generation nomenclatures. It is the latter association which is of special interest here, that between kin group endogamy and nomenclatures of this type. One more case, the Binumarlen, adds little to Dole's impressive documentation. But the Kulkuru case which she uses to examine the mechanics of this association suggests that bifurcate generation terminologies are unstable and transitional, that they appear as a step between other classification systems and the development of full generation terminologies. That they may be transitional is clearly attested in her study. But the sheer number of cases of this type suggests that under some circumstances such a system may be fairly stable. The preceding functional account of the Binumarlen system shows that the connection between community endogamy and bifurcate generation terminology may be of a different sort than among the Kulkuru and that nomenclatures of this type need not be transitional at all.

Dole's explanation of the association between kin group endogamy and bifurcate generation terminology for the Kuikuru system goes like this. Among the Kuikuru "there are no lineal segments, and in fact no corporate groups of any kind other than families and unstable residence groups [extended households]" (1969:109).

... the Kuikuru state some preference for unilocal residence, local exogamy, and cross-cousin marriage. If these ideal customs were practiced regularly, the Kuikuru settlement would have a well defined kinship structure in which ego's affinal relatives would be clearly differentiated from consanguineal kin by residence (1969:109).

Instead it is a "loosely structured deme" (1969:109). "The discrepancy between stated preferences and actual practices suggests that the Kuikuru may have formerly practiced the preferred customs more regularly than at present" (1969:109-110).

Because of drastic population reduction through disease, remnants of formerly independent groups have moved into other settlements. Inter-marrying groups that were once spatially distinct are now represented in the same settlements. Whereas the children of opposite sex siblings, given local exogamy and unilocal residence, would formerly have been members of different local groups, the amalgamation of these groups into single settlements means that cross-cousins grow up "all playmates together."

Thus, as Murdock (1949:152, 159) has concluded, ambilocal residence "tends to counteract the inherent distinctions among these relatives" and "deme organization ... acts as a definite social equalizer" (1969:111).

Ambilocal residence has been added to the causal sequence here but local endogamy remains the direct cause of the nomenclature "... the principal determinant of generation cousin terms is kin group endogamy brought about by ambilocal residence" (1969:114).

Once the social differences are removed, terminological distinctions between cross and parallel relatives tend to disappear also, leaving generation cousin terms (1969:113).

But why does this affect just the cousin terms?

If kin group endogamy is functionally related to the development of generation cousin terms as I have tried to show, one might ask why it is that the Kulkuru and many other nonexogamous groups still use bifurcating avuncular and nepotic terms. The solution of this problem seems to lie in their continued practice of some cross-cousin marriage (1969:113).

So Dole's functional account of Kulkuru kin nomenclature consists of two parts. First an explanation for the terminological equivalence of cousins on the basis of their common residential affiliation. And second, an explanation for the bifurcate merging alternate generation terms on the basis that:

The continued preference for cross-cousin marriage and its continued practice by some Kulkuru inevitably exert pressure to retain the kin terms in which such marriages are discussed. It is in relation to father's sister and mother's brother as prospective parents-in-law that ego learns about this marriage custom. Conversely, ego's father and mother speak of it in terms of their sister's child and brother's child respectively, thus distinguishing them from the man's brother's child and the woman's sister's child, who are not eligible as marriage partners. As long as cross-cousin marriage remains an ideal union, even if many or most marriages are not of this type, it seems to me that we may expect that avuncular and nepotic terms will remain bifurcated (1969:113).

Retention of bifurcate merging terms in alternate generations is a function of the preference for cross-cousin marriage because these are "the kin terms in which such marriages are discussed." But this is a transitional stage.

Continued ambilocal residence and cousin marriage tend to draw affinal relatives more and more closely into the circle of consanguineal kin ... there is a tendency to abandon cross-cousin marriage as a norm and to prohibit marriage with any relatives when other mates are available. As a consequence of proscribing cousin marriage the terminological distinctions between patrilineal and matrilineal relatives are completely lost, and mature generation patterns develop ... (1969:114).

Bifurcate Generation Terminology and Cousin Marriage

Although Dole refers to the assumption "that cousin marriage is not compatible with generation nomenclature" (1969:114), she argues that this incompatibility "appears to be associated most frequently with the mature, or internally consistent, generation pattern of kin terms, while cousin marriage is particularly common among people who still retain bifurcate avuncular and nepotic terms" (1969:114). She gives no figures to support the latter assertion. But, if her explanation were to hold generally, we would expect an association between cross-cousin marriage and bifurcate generation terminology as she asserts. Yet of the thirteen bifurcate generation cases listed by Murdock in Social Structure (1949) and referred to by Dole to illustrate the prevalence of the type, twelve of them, all but one, are like Binumarien in prohibiting first cousin marriage (Murdock 1949:229-230).

Murdock's World Ethnographic Sample ([1957] 1961) again confirms the frequency of occurrence of this nomenclature type. Bifurcate generation terminologies outnumber 'standard' generation terminologies 41 to 22. In this sample there is no significant association between permission of cousin marriage and bifurcate generation nomenclature.

	Bifurcate Generation (Column 13: Hm)	Other	Total
Cross-cousin marriage forbidden (column 12: f, g, h)	21	230	251
Other	20	294	314
Total	41	524	565
(data source: Murdock 1961)	chi square = .83 n.s.		

Perhaps the social function and development Dole outlines for Kuikuru is relatively unusual. The analysis of Binumarien offered here shows that it is possible to account for this system of kin classification without using cousin marriage as a term in the explanation.

Pursuing the Alliance View

The social function of Binumarien kinship nomenclature elucidated here depends on the view of kinship systems which grows out of the 'alliance theory' of Levi-Strauss (1969 [1949]), (and resonates with ideas in White 1959). Fox has recently labeled this the "modern theory of kinship" (1972:283). Dole, focusing on the association between nomenclature and patterns of marriage has taken a parallel perspective. The Binumarien system suggests that there is still more in alliance insights that illuminates the particular function and mechanisms of association between bifurcate generation terminology and local group endogamy.

Here the discriminations in the terminology make sense given the absence of corporate exogamous kin groups. Discussion to support this was presented in the section preceding this one. In the first ascending generation those who gave and received women from each other, those who are in-laws to each other, are all consanguines to ego. So ego makes an 'alliance distinction' among the consanguines who are his parents' in-laws. In ego's own generation that 'alliance distinction' is between his consanguines and his (and their) in-laws. This explanation for bifurcate generation terminology accommodates another feature of Binumarien usage which seems contrary to Dole's account of Kuikuru. She argued that

bifurcated avuncular and nepotic terms are retained because these are the terms in which marriages are discussed. This suggests that nepotic terms, since they would be used by the parents in discussing the marriages of their children, are especially important. In Binumarien however the nepotic distinctions are only optional. The first descending generation terms which are used for parallel relatives are also appropriate as alternatives for cross relatives. And there are no terms which are restricted to parallel first descending generation consanguines only. On the other hand, bifurcation of the first ascending generation - the avuncular terms - is obligatory. This pattern of usage is contrary to the implication of Dole's Kuikuru explanation but it fits the 'alliance distinction' explanation nicely. The distinctions based on the marriages of parents are obligatory and there are associated but optional reciprocals. Children learn their usage from adults, and so are influenced by distinctions made by their parents. But there are no similar pressures on adults to consistently distinguish the children of their opposite sex generation mates. And since alliance obligations are not perpetuated from one generation to the next, there is no powerful sociological reason to make such a distinction.

It seems very likely that the social function of bifurcate generation terminology in Binumarien may not be unusual but typical of at least a large proportion of the many societies which share the bifurcate generation pattern of nomenclature.

SOCIO-SPATIAL DISTRIBUTIONS AND KIN CATEGORIES

Relative Age and Generation

Generational distance is specified in all the kin terms, and in all those that are regularly used (except alternate generation in-law), generational direction is specified as well. For lineal kinsmen, generational seniority must of course correspond with seniority of age, parents must be older than their children. But for collaterals this is no longer a requirement. Though correspondence is probable for close collaterals, it becomes less so as collateral distance increases. The mismatch which must occur at least occasionally between genealogical category and relative age is an eventuality to be faced by all classificatory kinship systems.

Needham has suggested (1966) that this eventuality tends to be handled differently by different sorts of social systems: relative age is dominant in cognatic societies while category is dominant in lineal descent systems because for the latter the organization of descent relations is the basis of the social order. To the extent that his generalization refers to behavior and not classification the Binumarien case fits his prediction. Patterns of interaction are shaped by relative age, not genealogically defined generation. For example, return to the Fig.3.8 above which shows the genealogical relations between sets of spouses. Relative generation is completely beside the point; it matters only that prospective spouses are near each other in age.

This diagram also shows the correction factor built into this system. The probability of mismatch between relative age and generation increases

with increasing collateral distance, but at the same time marriage, at first ruled out by the incest requirements, becomes allowed and in fact probable as the endogamous tendency comes into play, so that distant kin are roped back in and a new tracing is provided. Since spouses tend to be of about the same age, this marriage brings age and generation back into line.

This pattern is also illustrated by the distribution of generation mate kin terms inflected for relative age (17 a and b, 18 a and b). Relative age within the same generation is regularly enough noted to provide almost a complete order by relative age of all adults. The matrix (Fig.3.10) shows this order and the attribution of terms for all men. There are two apparent errors where each man called the other 'older male generation mate' (17b) (27 and 5, 4 and 32) and one in which each called the other 'younger male generation mate' (17a) (10 and 33), and one in which an older man called a younger one 'older generation mate' (17b) (11 and 20). And there are several sets of two individuals near each other in age who did not class each other as generation mate or did not use the relative age specification. Here I have decided on one order or the other, depending on other clues (estimated age of oldest child, etc.). The order shown here, with these qualifications, indicates the relative age of all Binumarien men, and the distribution of generation mate terms used shows that relative age and generation are related - the entries cluster along the diagonal (men near each other in the order across the page tend to call each other generation mate, while those distant from each other in this order do not).

But the relationship between the assignment of terms and relative

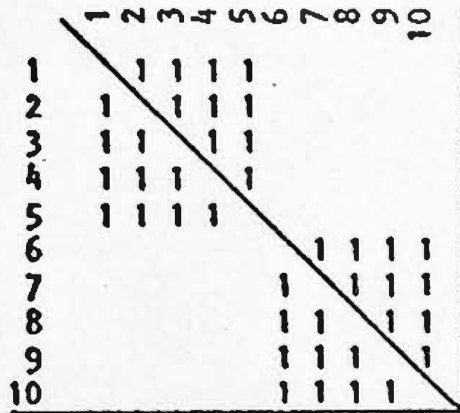
Figure 3.10 - The assignment of consanguineal generation mate kin terms among men

[illegible]

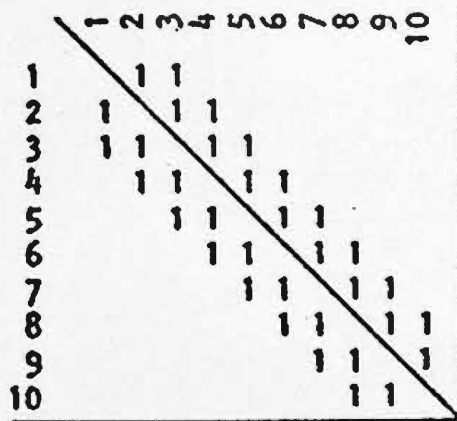
age is not perfect. Moreover, generations - in the genealogical sense - are discrete, i.e., assuming a textbook genealogy, all the positions representing individuals may be divided into mutually exclusive and jointly exhaustive sets of generation mates. The assignment of some individuals may be ambiguous - different generations depending on the defining genealogical path - but this is a different sort of problem. Relative age on the other hand is a continuous variable. An ideal representation of the two relations is shown in Fig.3.11 where A shows the order of the relation 'generation mate of,' and B shows the order of the relation 'age mate of.' The first of these is meant in the genealogical sense, the second in the relative birth order sense. Of these two patterns B more nearly approximates the matrix (Fig.3.10) than does A. In Binumarien, genealogical generation is so heavily biased by relative age that when it is mapped over the community of adult men it looks like generation in the everyday English sense, 'individuals born at about the same period of time.'

But this is a result of genealogical involution (an example of this appears in the diagram in Fig. 3.8), not tucks in the known genealogical fabric. Consider the adjacent generation consanguineal terms in Fig. 3.12. Using the same order, that of relative age - age increasing left to right across and down - adjacent generation terms cluster away from the diagonal with junior generation terms in the lower left and senior generation terms in the upper right, again appropriately correlated with relative age. But again, the correlation is not perfect. There are even some senior generation terms appearing below the diagonal (i.e., classificatory father or uncle terms used for men younger than ego)

Figure 3.11 - Ideal representation of the two relations
generation mate and near-age mate.



a. generation mate of



b. near age-mate of

Figure 3.12 - The assignment of adjacent generation consanguineal kin terms among men

[illegible]

and two junior generation terms appearing above the diagonal (i.e., classificatory nephew and child terms used for men older than ego). Although relative age is a significant predictor of relative generation because of the high rate of community endogamy and the age matching of spouses, these are still kinship terms and the categories they label are genealogically defined.

There are a few cases in which fairly close genealogical connections are known or assumed, but there is no connection which is appropriate to the relative ages of the kinsmen. In these cases the terms used are dictated by genealogical category, not by relative age.

Social Categories

Besides relative age, there are other features of relative social identity often assumed to underly the distribution of labeled classes of 'kinsmen' across the socio-geographic map. For example, in a system of terminology like that of Binumarien, which is not only generational but bifurcating, it might be that the bifurcation correlates in some way with residence. (Although Binumarien and Trobriand could hardly be more different, Leach's analysis of Trobriand terminology (1958) is the sort of thing I have in mind here. In his socio-spatial analysis he suggests that the 'classificatory father' term in the Trobriand kin terminology might be "seen to refer to a 'domiciled male of my father's subclan hamlet'" (1958:132).) Given that post-marital residence in Binumarien is patrilocal, it might be hypothesized that qikoofa (1), the classificatory father term, tends to be used by men for 'older men of my hamlet' while classificatory uncle, qinaufa (6), tends to be used

by men for older men of neighboring hamlets, with dairamaaku (13) the self-reciprocal son/parent-in-law term, appearing occasionally but almost always between men who live in different hamlets.

The matrix (Fig. 3.13) shows the use of kin terms between all Binu-marien adult males. Here the order is by hamlet residence - those who live in Maqaanoona listed first, the first six, then those who live in Onikura-durana, the next fifteen (41 appears twice because he is a resident of both hamlets), and then those who live in Ubandena, the last nineteen. Relative age is retained as an internal order for each set of hamlet co-residents. The hamlet ordering allows the matrix to be divided into sections: three squares along the diagonal which contain kin term attributions among hamlet co-residents, and three squares above and three below the diagonal each of which contains the kin term attributions of all the residents of one hamlet for all the residents of another. The distribution of 6's in the upper half of the matrix (right of diagonal) is random among hamlets (chi square = .673 with 6 d.f.) as is the distribution of 13's and 10's (although this is less striking, chi square = 3.5 with 6 d.f.). Genealogy, not residence, patterns the classification of kinsmen.

Inappropriate reciprocals occur only 60 times out of a total of 741 adult male pairs (8%) (this does not include cases where one man used a consanguineal tracing and so a consanguineal term and the second used an in-law tracing and so an in-law term, or where one man used a kin term and the other responded 'moo'). A few of these are simply informant errors, but most are alternate tracings. Only very rarely are they corrections for age discrepancy. This latter occurs only under

Figure 3.13 - Assignment of kin terms among men

Maqaanoona					Onikuradurana															Ubandena																						
29	23	36	33	30	41	25	31	6	2	16	40	10	27	13	12	1	41	11	24	93	15	17	8	18	35	39	29	28	37	5	34	32	7	22	4	20	3	21	26			
29	17a	6	17a	1	5	17a	10	17a	10	17a	17a	17a	6	1	6	1	5	6	6	1	17a	13	1	13	6	6	17a	6	6	17a	13	5	6	1	1	6	5	5	5			
23	17a	1	17a	1	5	17a	10	17a	10	17a	17a	17a	6	1	13	1	5	6	6	1	17a	6	1	6	1	6	17a	1	6	17a	13	13	6	1	0	3	3	5	5			
36	3a	3a	17a	1	2	17a	3	10	17a	47a	17a	17a	17a	17a	6	1	10	1	1	1	17a	10	17a	17a	17a	0	17a	17a	17a	10	17a	10	17a	6	0	0	13	1	1			
33	10	17a	17a	13	1	17a	3a	17a	17a	10	17a	17a	17	10	17a	17a	1	17a	10	1	17a	17a	17a	17a	17a	17	17	17	17a	17	17	17a	17a	17a	0	1	1	1	1			
30	3	3	3	3	1	3	8	3	13	3	3	3a	3a	17a	10	17a	1	10	10	17a	3	3	3	3	3	3	3	3	17a	3a	13	13	3a	17a	17	0	13	17	13			
41	8	8	3	3	17a	2	8	3	3	3a	8	3	3a	3	3	3	3	3	3	3	3	10	3	10	3	3a	3a	3a	3a	3a	3a	3a	17a	3a	3	17	10	10	17a	17a		
25	17a	17a	17a	17a	1	5	17a	17a	17a	17a	17a	17a	1	10	6	1	5	1	1	1	17a	17a	10	17a	10	10	17a	17a	1	6	1	6	1	6	0	6	5	13	5			
31	10	10	1	17a	5	5	17a	17a	1	17a	17a	17a	1	1	1	1	5	1	1	5	17a	10	1	10	1	10	17a	10	1	6	1	6	1	0	6	1	5	5	5			
6	17a	17a	10	17a	1	1	17a	17a	6	17a	17a	17a	6	1	1	1	1	6	6	5	17a	1	1	1	17a	10	17a	1	6	1	1	1	6	1	0	6	5	5	5			
2	10	10	17a	17a	13	1	17a	0	0	17a	17a	10	0	17a	0	1	1	1	1	1	17a	0	17a	0	17a	0	0	0	0	17a	0	0	0	0	0	0	0	0	1	0		
16	17a	17a	17a	10	1	1	17a	17a	17a	17a	17a	17a	17a	6	1	6	1	1	6	6	1	17a	10	10	17a	10	10	17a	10	6	17a	6	6	6	6	0	6	1	1	5		
40	17a	17a	17a	17a	1	5	17a	17a	17a	17a	17a	17a	17a	1	13	6	1	5	13	1	5	17a	10	1	17a	17a	10	17a	10	1	6	1	6	1	6	0	1	13	5	5		
10	17a	17a	17a	17a	6	1	17a	17a	17a	10	17a	17a	1	6	6	1	1	1	13	13	1	17a	17a	10	17a	17a	10	17a	17a	1	6	6	6	1	6	0	6	1	1	5		
27	3	3	17a	10	17a	6	3	3	3	17a	3	3	3	10	17a	17a	6	17a	13	1	3	3	3	3	17a	13	3	3	17a	17a	17a	17a	17a	17a	0	13	17a	6	1			
13	3	3	17a	17a	1	6	10	3	3	17a	3	17a	17a	10	17a	10	1	6	1	1	3	17a	17a	17a	17a	17a	17a	10	17a	17a	17a	17a	10	17a	0	17a	13	1	13			
12	3a	13	17a	17a	10	1	3	3	3	17a	3a	3	3a	17a	17a	17a	1	10	17a	1	3	17a	17a	17a	17a	17a	17a	17a	10	17a	17a	17a	17a	10	17a	0	17a	10	1	6		
3	3a	3a	3a	17a	17a	1	3a	3a	3	3	3a	3a	3a	17a	17a	17a	1	17a	17	17a	3a	17a	17a	17a	13	17a	17a	17a	17a	17a	17a	17a	17a	17a	0	17a	6	1	6			
41	8	8	3	3	17a	8	8	3	3	3a	8	3	3a	3	3	3	3	13	17a	17a	8	10	3	10	3	3a	3a	3a	3a	3a	3a	17a	3a	3	17	10	10	17a	17a			
11	3a	3	10	3	10	13	3	3	3a	3	3a	13	3	17a	10	17a	10	17a	13	17	17	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0	17a	17	17a	1		
24	3a	3a	3	10	10	17	3	3	3	3	3a	3	13	17a	3	17a	17	17	17	17a	3	3	3	13	3	3	13	3	3	13	13	17a	3	17a	17a	17a	0	17	17	17a	6	
93	3	3	3	3	17a	3	3	8	3	3	3	13	3	3	3	3	3	17	17a	17a	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0	27	17a	17a	17a		
15	17a	17a	17a	17a	1	5	17a	17a	17a	17	17a	17a	17a	1	1	6	1	5	1	1	5	10	17a	10	17a	10	0	0	1	0	0	6	1	6	0	0	13	5	5			
17	10	10	10	17a	0	6	17a	10	3	17a	10	10	17a	1	0	17a	17a	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0		
8	17	17	17a	17a	1	1	10	0	0	17a	17	0	6	17a	17a	0	1	10	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
28	13	3	10	17a	10	1	3	10	3	10	17a	3	17a	1	17a	17a	17a	1	1	10	1	10	17a	17a	17a	17a	1	17a	10	17a	1	1	10	1	1	10	1	1	1	5		
25	17a	17a	17a	17a	1	1	10	3a	17a	17a	10	3a	17a	17a	17a	17a	17a	1	10	1	1	3a	17a	17a	17a	17a	17a	17a	17a	17a	17a	17a	17a	6	17a	17a	0	10	1	1	6	
39	13	3a	17a	17a	10	6	10	10	10	17a	10	10	10	13	17a	17a	13	6	1	1	1	10	17a	17a	17a	17a	17a	17a	13	17a	10	17a	13	1	10	1	1	1	1	1		
29	17a	17a	17a	17	1	6	17a	3	17a	10	17a	17a	17a	6	17a	17a	17a	6	6	0	6	17a	17a	17a	17a	17a	17	17	6	17	17	1	6	1	0	6	6	1	5			
26	10	3a	17a	17	10	6	3	10	0	17a	10	10	17	10	10	17a	10	17a	6	1	0	1	3	17a	17a	17a	17a	17a	17a	17a	17a	17a	17a	1	10	10	1	1	1	5		
37	3a	3a	17a	17a	17a	6	3	3	3a	17a	3a	3	3	17a	10	17a	17a	6	17a	17a	1	3	3	3a	3	17a	13	3a	3	17a	10	17a	17a	17a	0	17a	17a	6	1			
5	17a	17a	10	17a	6	6	17a	3a	3	17a	17a	3a	3	17a	17a	10	17a	6	17a	1	1	17a	17a	17a	17a	17a	17a	17a	17a	17a	17a	17a	10	17a	10	17a	17a	1	1	6		
34	13	13	17a	17	13	6	3a	3	3a	17a	3a	3	3a	17a	17a	17a	17a	6	13	10	6	3a	10	17a	10	17a	10	17a	10	10	10	10	10	17a	17a	0	1	13	1	6		
32	13	13	10	3	13	17a	3	3	3	3	3	3a	3a	17a	17	3	17a	17a	17a	17a	1	3a	17a	3a	17a	3a	17a	3	17a	17a	17a	10	17a	10	17a	17a	1	6				
7	3a	3a	17a	17a	10	1	3	3a	3a	17a	3a	3a	3a	17a	17a	17a	17a	17a	17a	17a	1	3a	3a	3a	3a	17a	13	3a	3a	17a	17a	17a	17a	17a	17a	17a	0	17a	17a	1	6	
22	3	3	3a	3	17a	1	3a	3	3	13	3a	3	3a	17a	17	17a	17a	1	17a	17a	1	3a	13	3a	3	3	3	3	3	3	3	3	17a	0	17a	10	17	0	10	0	1	1
4	3	3	3	3	17	17a	3	3a	3	3	3	3a	3a	0	13	10	17	17a	13	0	17a	3	10	0	10	0	10	3	10	0	17a	3	17a	10	17a	17a	13	0	0	0		
20	0	0	3a	3a	10	10	0	3a	3a	3	3a	13	3a	13	17	17	17	10	17	17a	17	3a	3a	17a	3a	3a	3a	3a	3a	17a	0	3a	17a	0	0	17a	17	6	6			
3	8	8	13	3a	13	10	0	8	8	3	3	13	13	3																												

* 41 appears twice (he is a resident of both Maqaanoona and Onikuradurana)

certain circumstances. For example, 41 and 30 both agree that properly 41 is 'qikoofa' (1) to 30, i.e., that 41 is 30's classificatory father. But 30 is older than 41 and so, although they think it genealogically improper, it makes more social sense for them to use generation mate terms, and 41 calls 30 'classificatory older brother' (17b). The genealogical distance between these two men is great. No one remembers the specifics of a connection between them. If details were known - if all linking kinsmen were remembered, then the correction for age which is not based on an alternate tracing here would probably not occur. (This is another self corrective for mismatches between genealogical category and relative age: genealogical knowledge is not highly valued and as specifics are forgotten readjustment becomes acceptable.)

In all cases where specific genealogical connections are known the genealogically appropriate terms are used whether or not they fit relative ages. In other words, the genealogical meaning of these terms is the dominant one. This is always reaffirmed in conversations about these terms and the classes they label. And the terms are always defined by informants genealogically. For example, I asked about a pair of sisters of widely varying ages. The older of the two, 58, already had borne a daughter, Maqa, when her sister, Naiyo, was born. And, of course, the older sister's children called their mother's sister 'classificatory mother' 'qinoofa' (2). I asked what would happen if the older sister's daughter, Maqa, married early and quickly had a child while her mother's sister, Naiyo, married late and was slow to conceive. Then in the next generation the ages would be even more strongly skewed. What if Maqa had a daughter who was about the age the girls are now when Naiyo's child was born, so that Maqa's daughter would be old enough to care for

the baby, would the baby nevertheless by her qinoofa, i.e., classificatory mother? All informants agreed that of course she would. The age discrepancy would not affect the proper application of the terms.

IMPLICATIONS

The evidence and discussion presented in this chapter have shown that Binumarien is a community of kinsmen. But the community is not composed either spatially or socially of unilineal groups or categories. And while the kinship nomenclature discriminates categories of kin according to relative generation and relative position vis-a-vis connecting marriage exchanges, it does not discriminate according to residential location or directly according to relative age. Here we find no lineal models, and we find a classificatory kin terminology which groups almost all Binumarien into large ego-centric classes not correlated with socio-spatial distinctions relevant for organizing ordinary workaday activities. How then are day-to-day cooperation and sharing organized in Binumarien? That is the subject of the next chapter.

CHAPTER 4

Economics

INTRODUCTION

This chapter is about the Binumarien economy. It begins with a description of general features of Binumarien technology and division of labor and the connections of this community with the wider system of market exchange.

Binumarien is found to conform with the very general model elaborated by Marshall Sahlins as 'the domestic mode of production.' Given that, the central concerns here are the organization of cooperation and sharing above the level of the household. Relations of habitual cooperation and sharing among adult men are reported and these relations are analysed in search of the social arrangements which underly them. Features of social organization described in the last chapter are matched against these relations and found to be significantly associated. The question of kinship distance in Binumarien is discussed and a measure of distance specifically constructed for this case. This feature of distance is found to be an excellent predictor of probable cooperation among men.

Relations of cooperation among women are compared with those among men. And the cooperation patterns of wives are found to correspond with those of husbands. Finally, some contrasts between production arrangements in Binumarien and those found commonly elsewhere in the Highlands are briefly noted.

DIVISION OF LABOR AND TECHNOLOGY

As to livelihood, the Binumarien are typical Highlanders: swidden gardeners who raise pigs and do a little hunting. Their division of labor is based on sex.

Men clear the bush for new gardens, build fences and keep them in repair. They build houses, although it is the task of women to cut and carry the kunai and bamboo for construction. Men are completely responsible for the cultivation of sugar cane and bananas. Men, women and older children of either sex, each cultivate their own yams.

Women do most of the cultivation of other crops although men assist occasionally - some men more than others. And older children are likely to have their own small plots to tend.

Both men and women care for pigs, feeding and grooming them in the mornings and evenings. The animals forage freely during the day, although very young pigs may be kept continuously at hand by either men or women, to be fondled and petted and given choice bits of food. Men kill and butcher pigs, and both men and women cook pork and other meat, either in bamboo tubes or earth ovens.

The task of preparing pandanus fruit as an oily sauce is assigned to men alone. Women and girls usually prepare other vegetable foods although men and boys may do so.

Men hunt and trap, sometimes accompanied by their wives. Women cut and carry firewood.

Women make the string bags carried by both sexes (although most men have now changed to leatherette pouches), and reed skirts, the items of current everyday apparel which are locally produced. Both men and women make pandanus mats. Men make bows and arrows and armlets. The sex distinctions for these crafts are biased in addition by variations in skill and experience. For example, some men are known to make especially fine arrows, some women to make especially fine string bags.

Binumarlen is known among neighboring communities to be the source of the best local tobacco. And, because of the altitude, mandarin oranges, introduced from the coast since contact, flourish here. These two items are traded to surrounding communities by both men and women. While men may go out to trade by themselves, women never do. Both men and women tend coffee, the source of a small amount of cash used to buy cotton clothing, special tradestore food, pots and pans and steel tools and a few other items.

Since the division of labor is by sex, an adult man and an adult woman have between them the skills required for Binumarlen livelihood. They know how to make, grow, or find everything they need. Within this group there are no specialists beyond the bent of individual inclination and talent. And no one, except as age restricts, is exempt from the general tasks of subsistence.

As an important qualification to this: steel tools are not locally manufactured. They are purchased at trade stores and are the most essential of all imported goods. The acquisition of these tools and other trade store items requires a small but essential supply of cash. Most of

this comes from coffee, which is grown but not consumed in Binumarien. It is raised only for cash sale.

While the community is tied through such transactions to a market economy, the production and sale of coffee and the acquisition of steel tools, and other items like cotton clothing and tinned fish, is a process more like the rest of local production and distribution than like usual market transactions. Here the needs are very specific and the items available are of very limited variety (see Fig. 4.1). Adults and older children in Binumarien cannot use many bush knives, axes, spades. And the trade stores and cargo cars carry only such an array of goods. Production of coffee is not production for profit. It is production for provisioning.

Here the classic distinction between 'production for use' (i.e., provisioning) and 'production for exchange' (i.e., profit) becomes meaningful. The competitive market is an eternal dynamo, perhaps not always in working order, but at least designed to generate intensive currents of output. On the producer's side, the incentive to profitable enlargement is continuous, as a matter of jungle survival. But perhaps most of us are more familiar with the push (and pull) on the consumer. The market makes available a dazzling array of products, good things in unlimited quantity and variety, each with its clarion price-tag call: 'this is all it takes to have me' (Sahlins 1968:77).

This aspect of the market does not touch Binumarien. Although coffee is produced only to be exchanged, and certain critical items are acquired only through exchange, these transactions are not geared to an interest in exchange value. The distinction is one of categorical importance. What Sahlins says for the general case is precisely applicable here:

The households of primitive communities are not usually self-sufficient, producing all they need and needing all they produce. Certainly there is exchange. Even aside from the presents given and received under inescapable social obligations, the people may work for a frankly utilitarian trade, thus indirectly getting what they need.

Figure 4.1

Possession Inventory

(for most items husband-wife ownership is joint)

owner(s)	houses	large pigs	small pigs	dogs	chickens	coffee plants	bush knives	axes	spades	lanterns	Markham pots	sauce pans	miscellaneous
10,50	1	1	3	-	-	102	2	4	2	1	1	3	shot gun (10's)
53	1	2	-	-	-	101	2	2	1	-	1	2	
41,64	1	2	1	-	-	242	3	4	2	1	2	3	shot gun (41's)
11,89	1	1	5	1	-	83	4	4	4	2	7	4	
93,56	1	2	4	1	1	51	4	2	2	1	3	4	
13,74	1	2	2	3	-	182	2	2	2	1	3	3	
87	-	1	-	-	-	-	2	1	2	1	1	3	
1,70	1	1	-	-	1	63	2	2	3	1	1	2	
25, N	-	2	3	-	1	-	2	2	1	1	-	2	
24,49	1	1	-	-	-	166	2	2	2	1	1	3	
88	-	1	2	-	-	-	1	3	2	1	2	3	
40,90	1	4	7	-	3	81	3	3	2	1	-	3	
27,84	2	5	10	-	1	183	3	3	3	1	1	3	
78	-	4	-	-	-	-	2	1	1	-	1	1	
16,61	1	-	1	1	-	-	2	2	1	1	-	1	
16,71	1	4	-	-	-	163	1	1	1	1	1	2	
39,46	2	3	-	5	-	75	2	2	2	1	-	3	bicycle
73	1	1	2	-	-	237	3	2	1	1	1	2	
15,77	-	1	-	3	6	154	2	1	1	1	-	2	
7,45	2	2	3	-	-	84	3	3	3	2	1	2	
26,51	1	1	4	-	-	68	4	4	2	2	1	2	
44	1	1	2	-	-	153	3	1	1	2	2	2	
28,63	1	1	-	-	-	48	2	3	1	1	1	3	shot gun (28's)
20,62	1	1	2	-	-	84	1	2	1	1	1	2	chair
35,66	1	-	2	-	-	143	2	2	2	2	1	2	

Figure 4.1 (continued)

Possession Inventory

owner(s)	houses	large plgs	small plgs	dogs	chickens	coffee plants	bush knives	axes	spades	lanterns	Markham pots	sauce pans	miscellaneous
8,69	-	-	-	-	-	65	2	2	1	-	-	1	
37,67	1	-	1	-	-	152	3	4	2	-	1	3	shot gun (37's) cane bed
37,76	1	-	-	-	-	114	2	2	2	1	2	2	fry pan
18,47	1	1	4	-	-	141	2	2	2	1	-	2	shot gun (18's)
17,42	2	1	7	-	-	47	4	1	1	1	1	2	
3,60	2	1	3	2	-	95	3	2	2	1	-	2	
34,48	2	4	1	-	-	92	2	2	1	-	2	3	
21,86	1	4	7	1	4	134	4	2	1	2	3	3	can bed (86's) chair & fry pan
32,55	2	2	6	-	1	272	2	3	1	1	1	3	
6,80	1	2	1	-	2	-	3	2	-	2	-	4	
4, L	1	4	-	-	3	-	2	2	1	1	-	2	
22,79	1	2	-	-	-	196	4	4	2	2	1	2	
41,91	1	1	1	4	2	133	3	4	3	1	9	3	1 cat, wooden chest
38,85	-	1	5	-	-	114	4	2	2	1	2	2	saw
33,75	2	2	3	-	-	144	2	2	1	1	-	3	cane bed
23,58	-	1	5	-	3	96	2	2	1	2	-	3	shot gun (23's)
30,54	2	1	8	-	-	107	4	3	1	1	-	3	
2,68	1	3	9	-	1	72	2	2	1	1	2	2	
12,57	1*	-	-	1	1	120	2	2	2	1	1	1	shot gun (12's) can bed
31,59	1	-	2	1	2	-	1	1	-	1	1	2	

* - 1 house just burned

Still, it is "what they need": the exchange, and the production for it are oriented to livelihood, not to profits[or accumulation] ... It is not merely "production for use" but production for use value, even through the acts of exchange, and as opposed to the quest for exchange value (Sahlins 1972:83).

Any adult man and woman in Binumarlen know how to make, grow, or find almost everything they need for livelihood. The exceptions are trade store items. But any adult man and woman can easily raise enough coffee or take enough tobacco or oranges or vegetables out to market to provide the cash for as many of these trade store items as they want.

THE PATTERN OF WORK

Most everyday work is carried out by small sets of individuals working together. But this is casually arranged and there is no everyday routine for work. No one works all day and no one works every day, even during the season for clearing and planting new gardens, late August to November, and this is the time when work is heaviest. Generally, the two main meals of the day are eaten at mid-morning and around or just after sunset. Members of the same household usually eat together. Except at the full moon when there is enough light to walk about, or on special party occasions, most people are in their home hamlet to stay for the night at dark. But around this pattern of the day there is no regular pattern of work and no formally constituted work groups.

Weeks are marked by Sundays when many Binumarlen gather in the largest hamlet to gossip and in some cases to attend a church service

held there by the pastor. He is from Finschhafen on the coast, and with five other adults and their children, lives in a spatially distinct mission enclave just alongside the largest hamlet, Ubandena. The pastor is not a full-time specialist. He and the other 'Finschhafens' garden, raise pigs, and carry on the other tasks of subsistence. They have been in Binumarien for many years. The children and at least one of the adults were born here, but they maintain their separation and ties to the Finschhafen area on the coast. And, largely by their own choice, they are not integrated into the Binumarien social system. Three of the adults do not speak the language. Since, despite pleading, they were unwilling to cooperate in this study, they are simply left out.

In this small scale technology there is no tool that requires more than one person to manipulate it. There is no ordinary task that requires more than two individuals, one man and one woman, to accomplish it. The organization of production is segmentary, i.e., a series of similarly structured units, households, each carry out the same activities. Clearing, fencing, and planting a new garden or building a house, these seem like large enterprises, but they could be managed by a single couple, although they probably never are. There is nothing in the technology that requires a certain organization of cooperation beyond the household. Nevertheless, such cooperation is a commonplace. A few men tend to work together to clear for a new garden and build its fence, a few women tend to work together in planting it. It is a mechanical combination, each of them doing the same thing, but it is friendlier and seems more quickly done together. As Friedman has observed in another context "a number of necessary technological activities are

organized socially rather than the social organization being determined by those activities" (Friedman 1975:168).

LAND

Land is the most important basic resource in CHNG. In Binumarien there is no shortage of it. All members of the community have rights of ownership in land. There are no corporate groups below the level of the community as a whole which control it. The descendants through men or women of men or women can, if they wish, claim rights in any bit of land that was claimed by their ancestor. And more generally rights of use for gardening are extended merely for the asking. Non-owners need merely request permission to build a garden on land which is currently unused and the request will be granted as a matter of course.

While rights of use for gardening are readily extended, this is not so for the 'products' of the land. Building materials, such as lumber and vines, and most especially the game animals of the forest are to be taken only by those who own the land. A man should only hunt on land in which he has inheritance rights. And breaches of this rule were matters of angry public discussion several times during my stay.

For gardening there is really no restriction. There seems to be no scarcity of water or problem of drainage. And the elevation gradient of Binumarien territory is not sufficient to display significant ecological differences. The territory, although very rough, seems

relatively uniform as to quality and suitability for any kind of garden. All households have rights of ownership in some of this land and are readily granted rights of use to garden in any of the rest of it not currently under cultivation. Each household, by virtue of its membership in the community has direct and sufficient access to basic resources.

THE GENERAL MODEL

Sahlins has developed a model of primitive economies which reveals their special character and focuses attention on the areas of most significant variation among them. Given the characteristics of 1) a sexual division of labor (as the only significant division), 2) a small scale technology with segmentary production, and 3) autonomous access to basic resources, the consequence is production for use. Each household, constituted, equipped, and empowered to produce for its own requirements tends to stop work as they are met. The organization has a "built in cut-off point." It is "underproductive" relative to existing possibilities. And more:

In principle each house retains, as well as its own interests, all the powers that are wanted to satisfy them. Divided thus into so many units of self-concern, functionally uncoordinated, production by the domestic mode has all the organization of the so many potatoes in a certain famous sack of potatoes (Sahlins 1972:95).

"The social economy is fragmented into a thousand petty existences, each organized to proceed independently of the others ..." (Sahlins 1972:95).

These tendencies to underproduction and dispersion endanger the life of the society. Unopposed they would destroy the system.

Left to its own devices, the DMP is inclined toward maximum dispersion of homesteads, because maximum dispersion is the absence of interdependence and a common authority, and these are by and large the way production is organized (Sahlins 1972:97).

Clearly the domestic mode of production can only be "a disarray lurking in the background," always present and never happening. It never really happens that the household by itself manages the economy, for by itself the domestic stranglehold on production could only arrange for the expiration of society. Almost every family living solely by its own means sooner or later discovers it has not the means to live ... Besides, the inherent underproduction and underpopulation posed by the DMP can easily condemn the community to the role of victim in the political arena. The economic defects of the domestic system are overcome, or else society is overcome (Sahlins 1972:101).

This means that the special character of any class of primitive economies, and of any particular primitive economy is to be sought in the arrangements which counteract this tendency to underproduction and dispersion. Attention is focused on the organizational features which concentrate households and which increase levels of production.

Except in the rare cases where techno-environmental limits have been reached, increasing production beyond the amounts required for the more or less immediate consumption needs of each domestic unit is a matter of

the intensification of labor: getting people to work more or more people to work. That is to say the society's economic destiny is played out in its relations of production, especially the political pressures that can be mounted on the household economy (Sahlins 1972:82).

This directs us to look at the social arrangements which, given a set of techno-environmental parameters, 1) determine resource use, e.g., the amount of land under cultivation, and 2) determine the labor input, which people shall work and how much, e.g., every day for six hours,

every other day for two. The arrangements which determine these things are the social relations, domestic and extradomestic which require cooperating, giving, sharing, exchanging. An increase in levels of production beyond the domestic minimum is a consequence of social relations which require that 'extra' product for their initiation and/or maintenance. "Kinship, chieftainship, even the ritual order, whatever else they may be, appear in the primitive societies as economic forces" (Sahlins 1972:101).

The Focus of Investigation

In each society one looks to the social arrangements which engage productive output: the political order (e.g., duties to the chief), ritual observances, and finally kinship obligations.

In Binumarien there are no chiefs and so there are no duties to the chief to raise levels of production. But chieftainship is not the only form of authority which has an economic aspect. Positions of leadership which rest on personal achievement rather than official rank have economic implications also.

In the first case, the existing rank order evokes certain economic relations; in the second, certain economic relations are used to evoke an order of rank. The first is the way of true chieftainship, operating on the principle, "to be noble is to be generous". The second is the way of the big-man, working from the corollary proposition that "to be generous is to be noble" (Sahlins 1968:88).

The contrast in leadership structures is also a contrast in economic intensity. "Different systems of tribal authority ... develop varying impacts on the domestic economy, thus different coefficients of production and surplus accumulation" (Sahlins 1968:79). And Binumarien

stands at the most rudimentary end of a continuum so drawn. There are no elaborate exchange chains for ambitious men to manipulate in Binumarien like the Enga Te (Bulmer 1960) or the Hagen moka system (Strathern 1971). But there are men who command authority beyond the ordinary, called faiql firaafa, literally 'big-man' here. And they are distinctive for the extent of their relations of cooperation and sharing.

Ritual observances are also relatively unelaborated in Binumarien. There are no ritual cycles with huge pig feasts, nothing even vaguely suggestive of the scale of activities common further west. There are observances: new gardens ('first fruits'), appreciation for a service, birth observances, puberty feasts, marriages, seasonal parties, inter-village festivities. All of these have an impact on levels of production. But none of them is of major significance like the Maring kaiko (Rappaport 1968) or the Chimbu bugla gende (Brookfield and Brown 1963).

And so we come to "the less dramatic economic impact of the kinship system, almost imperceptible for its prosaic, everyday character but perhaps not less powerful in the determination of everyday production" (Sahlins 1972:123).

The kinship relations prevailing between households must affect their economic behavior. Descent groups and marital alliances of different structure, even interpersonal kin networks of different pattern, should differentially encourage surplus domestic labor (Sahlins 1972:123).

Marriage payments are important in Binumarien. But they are not very elaborate, and their effect on production levels is not large. The

absence of corporate groups which are responsible for marriage arrangements may have a minimal affect in the following way. Since one may be involved in the marriage arrangements of any kinsman, one is to some degree constrained to be ready to do so most of the time. And so one must carry something like a 'normal surplus' for this purpose. On the other hand since the obligation is so diffuse, it cannot compel groups planning an important transaction to high degrees of productive industry.

All this directs our attention to kinship obligations and the political order as the critical determinants of the use of resources and investment of labor in Binumarien. To investigate how this works relations of cooperation and sharing beyond the household can be used as both an index of labor expended above the domestic minimum and as a map of the social arrangements which cause that expenditure.

COOPERATION IN PRODUCTION

The four production activities of greatest importance in Binumarien are raising pigs, hunting, building new gardens, and garden maintenance. Relations of habitual cooperation in these activities entail solidarity and sharing, interhousehold relations of cooperation dictate an increment of labor expenditure for each of the participants over the minimum domestic requirement. The pattern of cooperation among adult men in these production activities provides a map of the social arrangements which increase the production level for each of these activities. This pattern also indicates the relative amount of production increase

such arrangements cause.

This focus on adult men follows the working assumption that it is obligations between adult males which order the cooperation of domestic units. This assumption will later be tested. It is based on the facts of marriage and residence as described in the last chapter. Women move at marriage, they leave their parents and siblings and go, both physically and socially, to join their husbands. For men on the other hand marriage does not mean the replacement of old obligations with new ones. It means the addition of new obligations. For this reason the organization of cooperation among men will be considered first. We will consider each of these production activities in turn and then the relations among them.

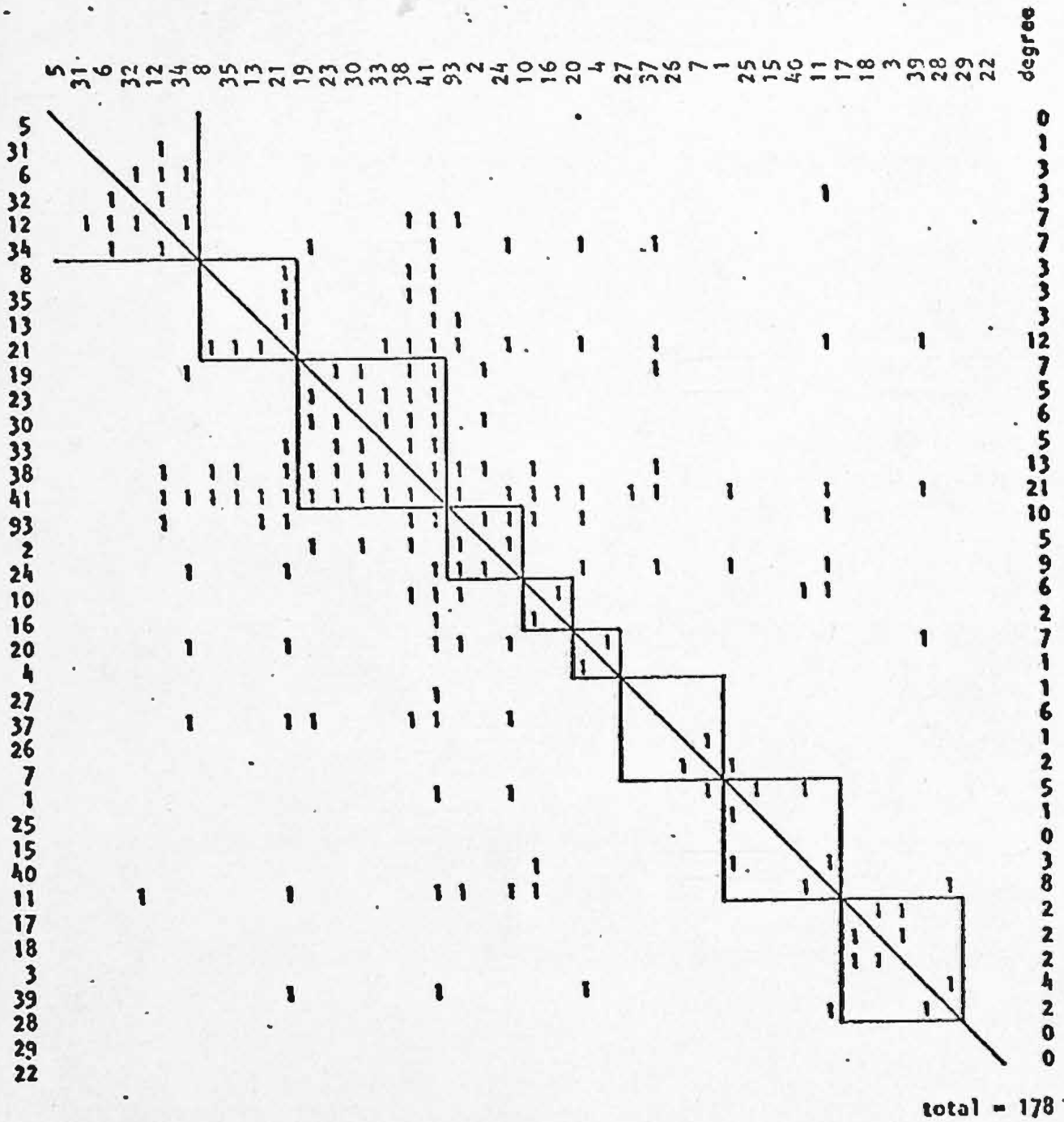
Raising Pigs

The men who habitually care for each other's pigs are indicated in the matrix (Fig.4.2). A 1 in any cell indicates that the men whose identification numbers define the row and column of that cell habitually help each other in caring for pigs. In Binumarien this does not mean that these two men have pooled their pigs, or that they care for them together or that they have formally arranged to alternate husbanding activities.

In Binumarien pigs forage freely in the bush during the day. They are called to be fed early in the morning and in the evening. Sows with new litters are closely attended, and often kept within the hamlet to ensure survival of as many piglets as possible. Piglets recently separated

Figure 4.2

Pairs of men who habitually assist in caring for pigs



from their mothers are specially cared for. They do not forage freely but are leashed by the front foot so they do not get lost. They are fondled and carried, and fed choice bits of food. The most important way in which men assist each other in caring for pigs is by feeding them. Some pigs are fed at the edges of the hamlets; some are fed at the edges of the gardens. I suspect that these feedings function as Rappaport (1968:58) has suggested for feeding pigs in Tsembaga: they are not as important for nutrition as for domestication.

A man may make a definite arrangement to have another watch for and feed his pig. This may entail some commitment for future piglets. Sometimes the cooperation is more informal, one man feeding another's pig because it arrives to be fed with his own and it is convenient to do so. Or a man whose gardens are in an area where another man's pig is presumed to have strayed may watch for and feed the animal.

Gardens are fenced to keep pigs out of them. But if a pig breaks through a fence into someone's garden, and if the animal is caught in the act, the enraged gardener may shoot it on the spot. Under these circumstances a man may even shoot his own pig. If the fence was a strong one, the pig owner gets his dead pig but he gets no redress. However, arguments about whether it was really the pig's industry or a weak untended fence are to be expected. And a man whose garden has been ravaged wants recompense. The pig owner will be expected to make repairs. If the offending animal has not been caught in the act but its identity is discoverable, the owner is again expected to make repairs. An animal with a history of such offenses will be killed by its owner to end the trouble. All in all the problem of pigs in the gardens

gives profit to no one and loss to many. Men who habitually care for each other's pigs tend to know the whereabouts and habits of each other's animals and so assist each other in keeping track of - and thus some control over - the pigs belonging to them.

Oosana

The order of the rows and columns follows the discussion of oosana in the preceding chapter. The set of men who belong to the same 'lowest level' oosana - the alphabetically labeled 'consistently grouped' sets on p.106 of chapter 3 - are placed nearest each other moving across the diagonal. Additionally, 5 is adjacent to oosana A; 93, 2, 24, although not consistently grouped as moodaa oosana, are grouped often enough to suggest that they should be grouped here, and so they are. The same applies to 10 and 16 and to 20 and 4. 11, although alternatively grouped with F and G in the discussion in chapter 2 is grouped with F here.

Since, aside from households and hamlets, oosana are the dominant organizational construct, it is to be expected that they will be associated to some degree with the organization of behavior and particularly with productive activities. But the flexibility of oosana boundaries precludes any expectation of a perfect match between any activity and a certain oosana level. As inspection of the matrix suggests there is an association here. In fact, if moodaa oosana is interpreted as defining the sets indicated by the heavy line in the matrix (5 is excluded because he has a wasted leg from a childhood accident and this directly limits the activities he might be expected to perform), $\chi^2 = 121.32$; p less than .001 by chance. The

coefficient of association for moodaa oosana as here restricted and cooperation in caring for pigs is $\phi = .42$. The association is strongly significant but, as we expected, it is far from perfect. Some men who are moodaa oosana do not cooperate in caring for pigs and some men who are not moodaa oosana do.

In addition to close kinship, there are two other sorts of connections which we might expect to be the basis for cooperating in caring for pigs: coresidence and similarity of age. Consider each in turn.

Hamlet Co-Residence

It seems likely that hamlets would form and be maintained by the relations of cooperation and solidarity among their residents. Sahlins' sectoral plan of kinship and spatial distance (1972 [1965]) relates close kinship to spatial proximity and both of these to gradations in sharing and solidarity. This plan directs attention to the general way in which kinship (and descent) organizations determine the resource use (density and distribution of population) and labor inputs in societies with a domestic mode of production. That is, it applies to societies with a sexual division of labor, with a small scale technology and segmentary production, and with autonomous access to productive resources. Two of his points are directly relevant here. First, those who are close kinsmen and solidary are likely to live near each other. And second, those who live near each other are likely to be solidary and to count their kinship as close. These points are related but different. Not only do we expect these three things to co-occur - close kin are close neighbors are sharers - but we expect each of the three

to constrain the calculation of the other two. Coresidence is significantly associated with cooperation in caring for pigs, chi square = 20.46; p less than .001 by chance. Here however the coefficient of association is even lower than above, $\phi = .17$. There are many men who are hamlet coresidents and yet who do not cooperate in pigs, and there are many men who are not hamlet coresidents who do.

Similarity in Age

Similarity in age suggests a mutuality of interest and shared experience. In Binumarien, boys near each other in age tend to form play groups. It would seem likely that men who have grown up together and so played together as boys would have a basis for continued sociability and so for cooperation and solidarity. In addition to that, the word oosana has as one of its many meanings 'near age-mates' (see preceding chapter). This label is associated with other kinds of connections - kin connections - which seem to be a basis for cooperation. And so there are three reasons to expect similarity of age to be associated with cooperation: 1) the fact that boys tend to spend much of their time with other boys of the same age; 2) the label oosana which is used for kin sets is also used for 'age sets', its connotations in the first usage may also apply in the second; 3) division of the population into 'age-sets' is the inevitable response to requests to Binumariens to group the community population into meaningful sets.

Using the relative age ordering discussed in the preceding chapter, 'age-mates' are here defined as those who are no more than 10 places apart in that ordering. (10 was an arbitrary choice - a higher number would have put together some fathers and sons; and it would have

made the number of 'age-mate' pairs very high. A lower number would have separated some men who have oldest children of about the same age and, on the basis of such clues, seem near in age.) If the range is 10 ranks older or younger, the middle-age men count about half the other adult males as 'age-mates.' The result of a test for association does not bear out the expectation. There is no significant relation between 'age-mates' and caring for pigs, chi square = .007 not significant. Some of the closest kin relations, e.g. father and son, entail a marked age disparity. Any probability of 'age-mate' relations showing up as significant is counteracted by the much more powerful affect of these other relations.

We have considered three factors which might be expected to under-ly cooperation in caring for pigs: oosana aggregates, hamlet coresidence, and similarity in age. Of these, relative age showed no significant association. Coresidence showed a significant association but a very low coefficient of correlation. In other words, coresidents are more likely to cooperate in caring for pigs, but knowing whether or not two men are hamlet coresidents barely improves the chance of correctly guessing whether or not they cooperate in this way. Oosana aggregates were strongly associated with this cooperation relation, but the correlation coefficient, though much higher than for coresidence, showed that this accounted for less than one fifth of the variation ($\phi^2 = .42^2 = .176$).

The Structure of Cooperation in Caring for Pigs: Individual Variability

In addition to these correlations, the pattern of cooperation may be examined in another way. The set of cooperation relations may be

considered as a system. The matrix of cooperation in raising pigs may be taken to represent a graph of this relation. There are two things to note about such a graph: first the degrees of the points, and second the connectedness of the graph. The degree of a point refers to the number of cooperation relations of the man it represents. The connectedness of a graph refers to whether or not the points of the graph can all be reached by passing from one to another only over connecting lines defined by the presence of the graph's defining relation.

The degrees of points in this graph vary over a wide range, from 0 to 21. The wide range of degrees invites attention. Some men have a very large number of relations of habitual cooperation. Some do not. Sahlins includes generalizations about variations in 'kinship rank' in his sectoral model. He points out that the regular relationship among kinship and spatial distance and sharing and solidarity is distorted by the addition of 'kinship rank' differences (and vice versa). Those of higher rank must share more widely than those of low rank, and those who share more widely 'evoke an order of rank.' This means that increasing differences of rank are associated with an increase in the total number of sharing relations in a system and consequently the production level of the system as a whole. Binumarien is not a ranked society but differences of prestige and authority are associated with differences in the size and extent of the set of men with whom a man cooperates and shares.

Although a man must reach a certain age before he can be a 'big-man,' so that age is a necessary condition for this status, age is not a sufficient condition to make a man a 'truly big-man' (see following chapter). As this suggests, increasing age is not significantly

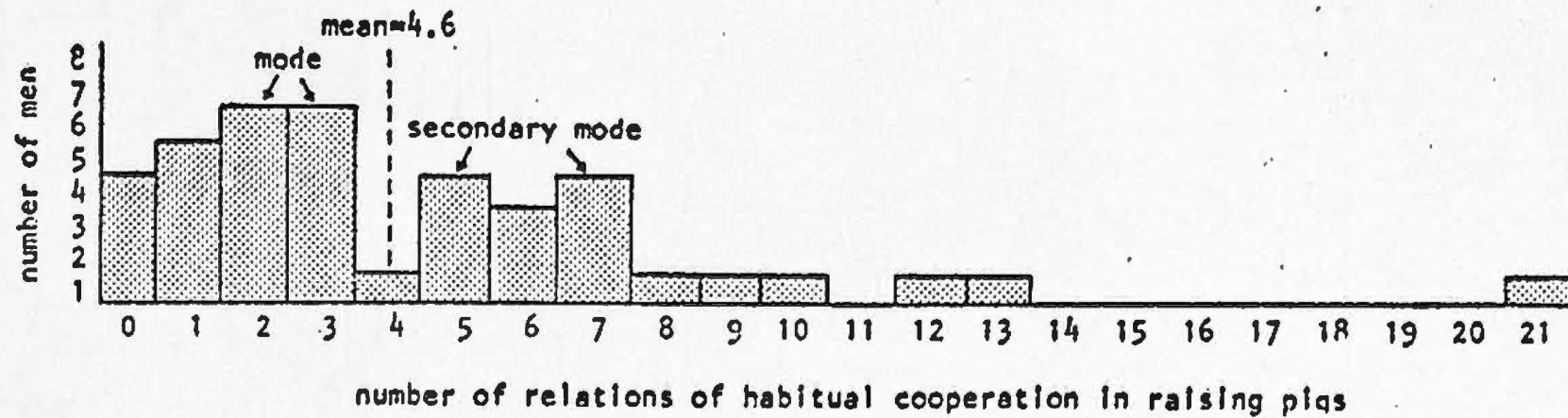
associated with variation in the number of relations of cooperation. Spearman's rank order correlation for rank by age and rank by degree size is $-.04$. Sahlins has suggested that 'big-man' systems of authority may show community production profiles which have a bimodal pattern (1971, 1972). In these systems he suggests there are, in effect, two distinct subpopulations. On the one hand there is the population of politically ambitious and so labor investing, production increasing 'auto-exploiters' - those who set production levels above domestic requirements for the sake of political investment, those who produce to be generous. On the other hand there is the population of the politically unambitious who set production levels more closely in terms of immediate domestic requirements. This bimodal character is suggested in the distribution of degrees (see Fig.4.3). Among the men who have the highest degrees, the most relations of cooperation in caring for pigs, are the men who have the most prestige, authority and influence (see following chapter).

The connectedness of the graph is associated with the preceding point. The points with 0 degree are isolates. These are men who cooperate habitually in raising pigs with no other man. The remaining thirty-five points form a graph which is disconnected: one small component which is complete (i.e., all its points are directly connected) and consists of 17, 18 and 3, and one large component which consists of the remaining 32 points. By far the majority of men in Binumarien cooperate among themselves in a large network.

Just as hamlets are maintained to the extent that their residents are solidary, the community as a whole persists as a community to the

Figure 4.3

Distribution Degrees: The number of habitual cooperation relations in raising pigs per man



extent that its members are solidary, to the extent that it is a community of interests. This is especially true when the organization of production does not dictate economic interdependence among the member households. The large network of cooperation which includes most of the adult men illustrates the ties of obligation which bind the community together. The fact that there are isolates and a small subgraph disconnected from the large component suggests something about the limits of the organizational arrangements in Binumarien. The political organization of Binumarien is fairly rudimentary. The community may be reaching the maximum size that can be maintained under current political arrangements. The fact that the network of cooperation over pigs is disconnected suggests a locus of potential fission. Sahlins notes that "each political organization harbors a coefficient of population density, thus in conjunction with the ecological givens, a determinate intensity of land use" (1972:131). Binumarien is a community - a society - with a very simple organization of authority. This is systematically related to the fact that it is also a 'land rich' community - society - i.e., one with a low population density and so a minimal intensity of land use.

Although I do not have specific information on relations of cooperation in raising pigs between Binumarien men and men in other communities, there is a detail of relevance here. When 22, one of the isolates, was building his new gardens during my stay, several of his kinsmen from a neighboring community, Pundibasa, where he was raised (his mother having married a Pundibasa man) came to Binumarien and assisted him. In turn, he spent time in Pundibasa working on their

gardens. This supports a suggestion that isolation from the large network of cooperation could indicate a potential for alienation from Binumarien, which is near the limits of its political cohesion.

Hunting

The second production activity to be examined here is hunting. Although hunting does not make an important contribution to subsistence - weeks go by with no game included in any meals - it is an activity which men engage in frequently. Unlike other Highland societies, hunting in Binumarien is not a singularly male activity. Husbands and wives hunt and trap together occasionally, although it is only the men who shoot. This activity has a seasonal rhythm. Just after the new gardens have been planted in late November or early December, everyone goes into the bush for weeks at a time to hunt. During the rest of the year hunting is fairly regular, perhaps with more intensity in May again, but only around and during parts of December is it the central activity for practically everyone at the same time.

Men who habitually cooperate in hunting do literally that: hunting and stalking together and sharing the game (which will again be dispersed out by each of them according to wider sharing obligations). But in addition to this, this sort of cooperation means that each man shares his right to hunt in certain parts of the bush. Here men often garden on land which is not theirs, since rights of use are given for the asking. But they should not hunt in bush belonging to others unless they are hunting with an owner. Disputes and arguments are a common consequence of suspicion that a man has been hunting in bush

where he does not have rights to do so. These disputes can be the source of very severe quarrels. Just as I arrived in Binumarien, a man had been charged with this offense. This was not the first time he had killed game in someone else's hunting territory, and as a consequence, a group of men headed for Kainantu to bring him before the government officers there. Although they changed their minds and returned long before they reached Kainantu, their having mobilized to start off is an indication of the seriousness of the offense.

Oosana

The pairs of men who habitually hunt together are shown in the matrix (Fig. 4.4). Here again the diagonal order follows oosana groupings as in the preceding matrix. Whereas there were 89 out of 741 possible pairs of men who habitually cooperate in caring for plgs, there are 117 out of 741 who habitually hunt together.

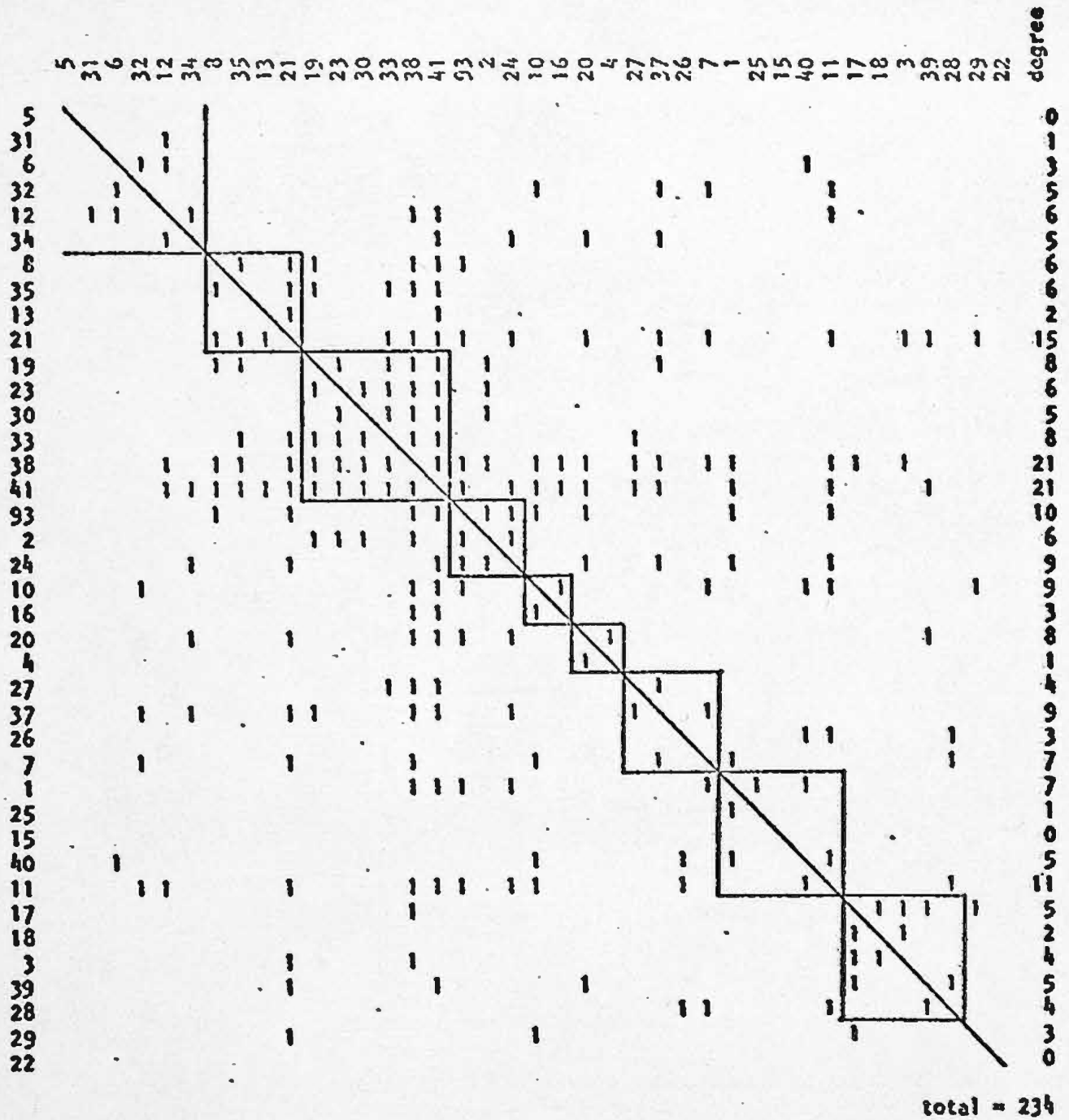
Here again, oosana groupings are significantly associated with the activity; excluding 5, chi square = 90.8, p less than .001. The coefficient of correlation is a bit lower for hunting than it was for plgs; $\phi = .359$.

Similarity in Age

Unlike caring for plgs, hunting is something men do together. This should make a difference in the significance of the similarity in age for cooperation in hunting. Among adult men it would seem that - other things being equal - a man would be especially likely to hunt with others who are near himself in age. Those near in age are more likely to be similar not only in general life interests and similar gossip, but

Figure 4.4

Pairs of men who habitually hunt together



also to be more alike in physical strength and endurance. Since hunting engages men together in physical activity, it would seem probable that those of similar vigor would be better matched hunting partners. Because of these things, the association between near age and hunting together is expected to be significant where the association between near age and caring for pigs is not. However, the data do not give very strong support to these arguments. The chi square for near age and hunting is 3.05 (1 d.f.). Although this is much higher than the .007 for cooperation in caring for pigs and near age, it is not quite significant at the .05 level. Here again, although similarity of age is a much more powerful factor, it is counteracted by factors which cross-cut age groups.

Hamlet Co-Residence

Again coresidence is likely to be associated with this activity. The sociability and cooperation which hunting together entails indicates solidarity. And as noted above, hamlets might be expected to form and be maintained to the extent that hamlet coresidents are solidary. The relationship is significant; chi square = 16.52, p less than .001. But again, the correlation coefficient is very low, $\phi = .15$.

The Structure of Cooperation in Hunting: Individual Variability

If the matrix is conceptualized as a graph, it differs from the graph over cooperation in caring for pigs in two important ways. One, in the graph over cooperation in pigs the non-isolates formed a disconnected graph with two components, one very large one consisting of

thirty-two points and one very small one consisting of three points. In this graph of hunting there are no longer two non-trivial components. Instead, the graph consists of three isolates (one less than the graph over pigs) and one very large component of thirty-six points.

The distribution of degree size does not suggest a bimodal pattern (see Fig. 4.5). Whereas time invested in caring for pigs is directly related to return, this is not so for hunting. An increase in the time spent hunting does not ensure a proportional increase in game (cf. Dwyer 1974). This is not an activity which repays 'auto-exploitation' with a larger product for political investment.

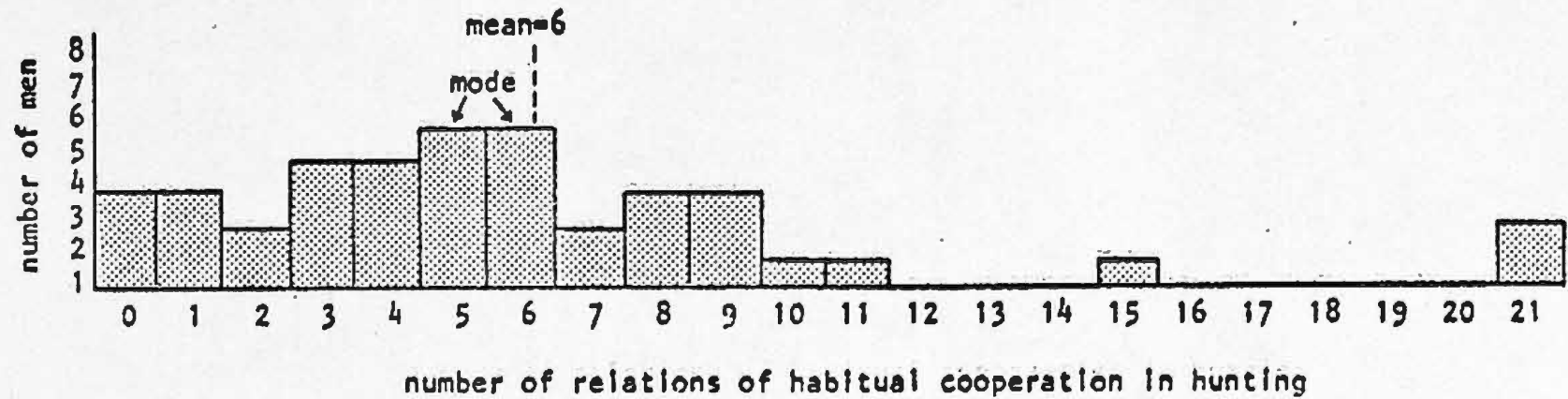
Although there are still isolates in the graph of this relation, the extent of the disconnectedness is reduced. The potential for community fission suggested in the graph of cooperation over pigs remains only potential. As long as the division is not extended to other activities, the community persists.

Building New Gardens

The next production activity to be discussed is clearing and fencing new gardens. This is the heaviest work in swiddening. The bush must be cleared and burned, and fences built to protect the new gardens from pigs. A series of adjacent gardens are often cleared and fenced at the same time. This sort of cooperation reduces the labor required to build a new garden because it is easier to widen a clearing than to clear the same amount of land in the middle of standing bush. Trees have a place to fall and dry, and fires burn better the wider the space.

Figure 4.5

Distribution Degrees: The number of habitual cooperation relations in hunting per man



Most importantly, the length of fence required per unit area of garden decreases significantly as the total area of space enclosed increases. From August through September the new gardens are cleared and fenced. Men tend to build adjacent gardens and perhaps even encourage others to join in the construction of neighboring gardens whether or not those others actually hold rights of ownership in the land. The strong constraints against the use of hunting territory by non-owners do not apply to gardening. The Binumarien say that there is no tendency to deny the use of land for gardening to anyone who wishes to use it - whether or not he can claim hereditary rights in it - because land cannot be used up. There is no loss to the owners if their land is gardened by non-owners because the land will still be there after the garden is finished. Such attitudes may be a consequence of the fact that land is plentiful in Binumarien where the population density is among the lowest in the Highlands. On the other hand, game is felt to be scarcer of late which may well be the case - partly as a consequence of guns in the Highlands. So hunting rights are more carefully conserved than rights to garden. Land is here considered a permanent, inexhaustible resource which gardening cannot use up.

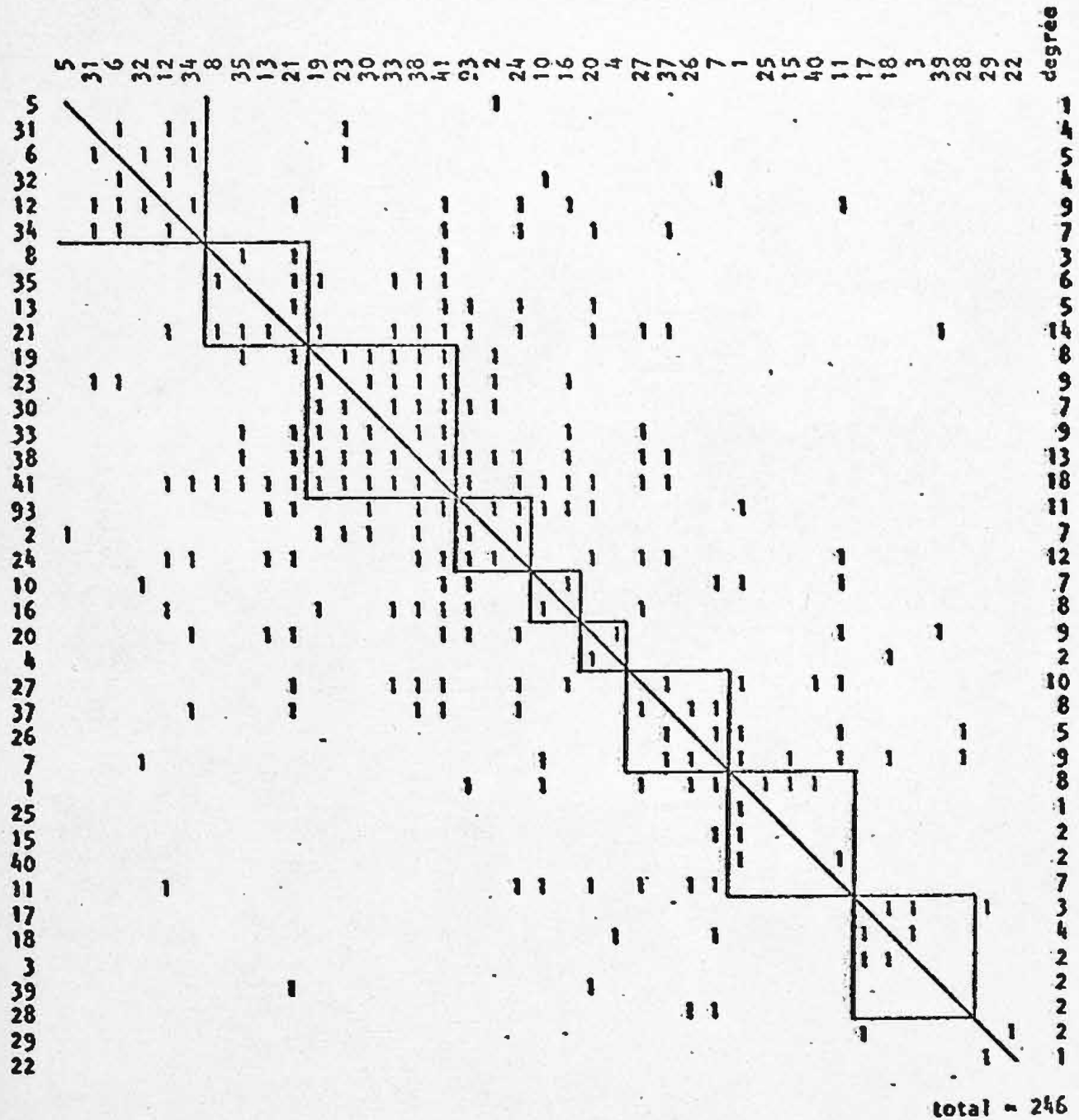
Oosana

The matrix (Fig.4.6) shows the pairs of men who tend to cooperate in building new gardens. Out of the possible 741 pairs, 123 pairs of men habitually build new gardens together.

Men who are in the same lowest level oosana are significantly more likely to cooperate in this way than men who are not; chi square = 120.4, p less than .001. The coefficient of correlation is about the same as

Figure 4.6

Pairs of men who habitually build new gardens together



for cooperation in caring for pigs, $\phi_i = .41$.

Similarity in Age and Hamlet Co-Residence

Here again, as with cooperation in caring for pigs, similarity of age does not even approach significance, chi square = .022 n.s. Co-residence, however, is significantly associated, chi square = 22.7, p less than .001. Although the coefficient of correlation is again very low, $\phi_i = .18$. Again 5 is excluded. His cooperation patterns are exceptional because of his handicap.

The Structure of Cooperation in Building New Gardens: Individual Variability

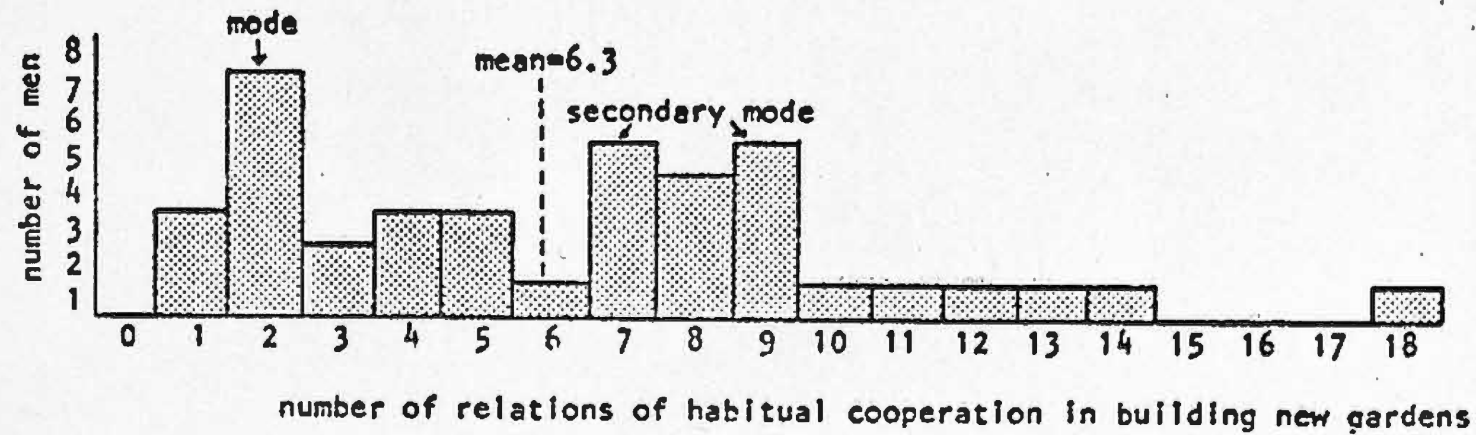
The graph of this relation has no isolates. It is one large connected graph. But here, as with caring for pigs, the distribution of degree sizes suggests a bimodal pattern (see Fig.4.7). Unlike hunting, industrious commitment to building new gardens repays the 'auto-exploiter' with increased production. Here again, the strategy of the politically ambitious is to increase production to allow the display of generosity.

Garden Maintenance

The last production activity also has to do with gardening. Once new gardens are built, the hardest, most intensive work is past, but gardens must be maintained, fences repaired, weeds removed. Sugar cane must be tied up, bananas covered. All the activities involved in garden maintenance are carried out more or less continuously throughout the year. These are not daily activities - no one in Binumarien goes to the gardens every day. And they are not activities which require large

Figure 4.7

Distribution Degrees: The number of habitual cooperation relations in building new gardens per man



investments of time, especially these male activities - men spend much less time in the gardens than do women. But these tasks are a critical part of the work of subsistence.

Men who habitually assist each other in garden maintenance are indicated in the matrix (Fig.4.8). As with other cooperation relations these do not indicate production units, men do not formally engage to produce as a corporation. They do not pool their gardens or their garden labor. They assist each other and this assistance entails an increment of labor expenditure over domestic subsistence requirements.

Oosana

Out of the total of 741 pairs of adult Binumarien men, 183 habitually assist each other in gardening. This assistance is significantly associated with oosana sets, chi square = 69.0 , p less than .001. The coefficient of association is $\phi = .31$.

Similarity in Age and Hamlet Co-Residence

Hamlet coresidence is significantly associated with garden assistance, chi square = 10.8, p less than .01. The correlation coefficient is negligible, $\phi = .12$. Similarity in age is not significantly associated with habitual garden assistance; chi square = 1.4, n.s.

Summary

The four main production activities in Binumarien have been discussed. Social arrangements which underly cooperation in each of them have been investigated and the results are summarized in the table (Fig.4.10).

Figure 4.8

Pairs of men who habitually assist in garden maintenance

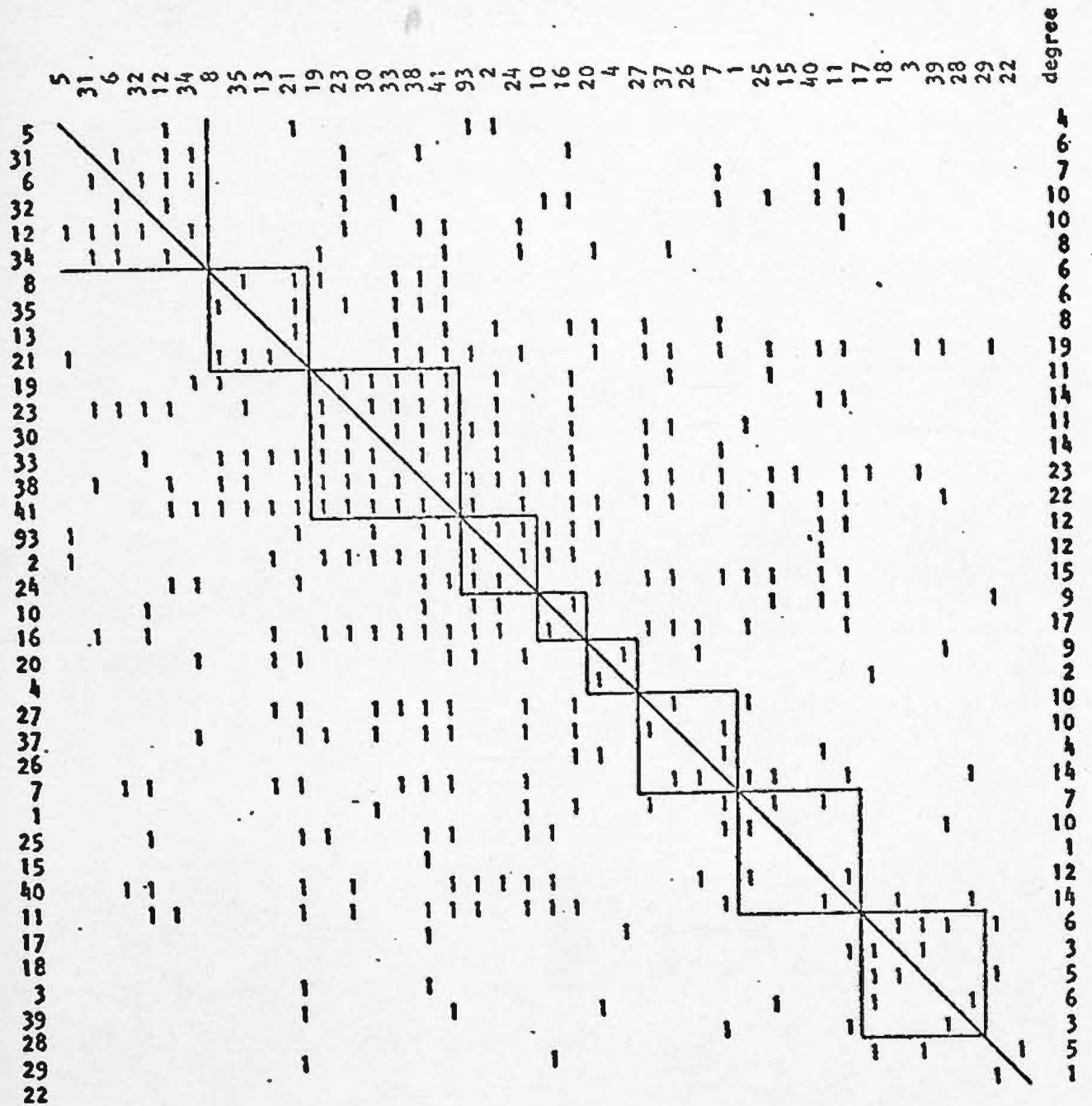


Figure 4.9

Distribution Degrees: The number of habitual cooperation relations in garden maintenance per man

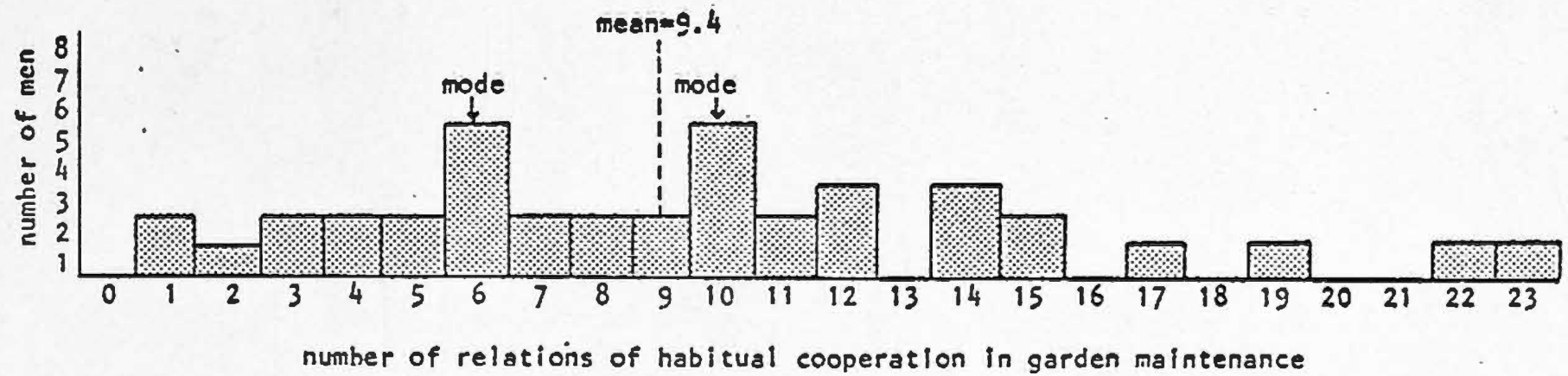


Figure 4.10 - Measures of Association and Correlation

	total pairs	moodaa oosana			hamlet coresidents			near age		
total pairs	703*	.62	χ^2	phi	273	χ^2	phi	315	χ^2	phi
pairs who raise pigs	89	36	126.8	.42	54	20.5	.17	41	.007	-
pairs who hunt	117	37	90.8	.36	65	16.52	.15	61	3.05	-
pairs who build new gardens	122**	42	120.4	.41	71	22.7	.18	57	.022	-
pairs who help garden	179***	43	69.0	.31	88	10.8	.12	87	1.4	-

* 741 minus the 38 pairs which include 5.
5 is excluded because his handicap prevents his cooperation in pig raising and hunting and limits his participation in other activities.

** 123 minus 1
relation which includes 5

*** 183 minus 4
relations which include 5

The table shows the measures of significance and the correlation coefficients for the relations between three social arrangements, oosana sets, hamlet coresidence, and similar age, and the four production activities. The oosana arrangements shows the strongest correlation with cooperation in each activity but in no case does it account for as much as one-fifth of the variation (max. phi squared = $.42^2 = .17$). Nearness in age is not significantly associated at the .05 level of confidence with cooperation in any of these activities but it comes close to that for one of them. For hunting, the one activity in which similarity of physical capacity would seem to be of clear relevance, nearness in age is a more important consideration. Although even here it is powerfully overridden by other factors.

"LOOSE STRUCTURE"

What are these other factors? What is the basis of relations of habitual cooperation here? The correlations so far displayed are quite low. They seem to indicate the looseness of structure which is reputed to be the dominant problem in studying CHNG social organizations. In a kinship society the features (in addition to sex) which are expected to organize interaction are kinship, coresidence, and age. These have been tested here and although kinship and coresidence are significantly associated with patterns of cooperation, most of the variation is still unaccounted for. Our ability to predict who cooperates with whom on the basis of these features is not very impressive. The statistics seem to demonstrate that 'optation' is the dominant structural principle, that perhaps 'personal characteristics,' individual choices, are the best explanation for who cooperates with whom.

There is an important analytical suggestion in the fact that the highest correlations are with moodaa oosana aggregates. The flexible structure of these units did not allow us to expect anything approaching a perfect correlation between one set of boundaries and one activity. These moodaa oosana sets are not sociological groups; and the boundaries are variable. In Binumarien the ties of cooperation an adult man establishes are not dictated by comembership in predefined discrete groups. Although fathers and sons are likely to cooperate with each other in adulthood as a consequence of the interdependence they have already established, they are not constrained to also cooperate with the same set of other men. This means that the men with whom a man cooperates are the men with whom he personally has important connections. This suggests that ego-centric calculation may be the analytical key.

Ego-Centric Calculation

Ego-centric calculation means focusing on ego-centrally rather than socio-centrally defined statuses. If the father-/ son-in-law relation is likely to be an important one for certain kinds of interaction, then we must extract the set of father-/ son-in-law pairs to test that importance. This is not psychological analysis. These are sociological concepts: status pairs, relative social positions; but they are ego-centrally defined.

The difference between socio-centric and ego-centric calculation is a major one. Earlier we expected a correlation between certain oosana aggregates and relations of cooperation. That was an expectation about

a correlation between cooperation and socio-centrally measured kinship distance. Those who are moodaa oosana at a certain level are all 'close kinsmen;' and those who are not are all distant. Measured in this way, the 'close ones' are all equally close and the 'distant ones' are all equally distant. The categories are socio-centric and so all members are equally in and all non-members are equally out. On the other hand, ego-centric calculation discriminates within both the set of close and the set of distant ones. Some who are moodaa oosana are closer than others who are also moodaa oosana. And, perhaps more importantly, some who are not moodaa oosana at this level are nevertheless very close. With ego-centric calculation distance varies with the focal ego.

These are very different ways of looking at social organization. For certain kinds of organizations, and for certain activities, a model of socio-centric categories is the most illuminating, the most parsimonious, the most elegant. This Binumarien organization, and this set of production activities however is not fully illuminated. Such a model shows correlations so low that it suggests more a lack of structure than any clue to the underlying social arrangements. An ego-centric calculation of kinship distance should prove more enlightening.

KINSHIP DISTANCE

Sahlins sectoral plan of kinship and spatial distance is a very general one. It can be expected to vary in specific cases in the way each of its dimensions is particularly defined. Different settlement

patterns and demographic distributions require different referent values of spatial distance. And in different systems the items which are shared and the extent and intensity of sharing will vary. For example, "the Sirlono, everyone knows, parlay hostility and crypto-stinginess into a way of life" (Sahlins 1972:204). And finally, the dimension of 'kinship distance' will be calculated differently in different cases. This last is the issue of concern here.

When the calculation of 'kinship distance' is discussed in the literature, it is usually in terms of the construction of a universal measure of genealogical distance. Sometimes, definitions which are required by a formal analysis, e.g., Lounsbury 1956, Goodenough 1965, or definitions which allow cross-cultural comparison, e.g., Murdock 1949, are a matter of interest. But in addition to measuring genealogical distance uniformly and elegantly for all cases, there is the question of social kinship distance as it is presented by different social organizations, or by the same one on different occasions. Atkins has recently noted the different ways in which consanguineal distance has been measured in Western law (Atkins 1974a, 1974b). The fact that different forms of measurement have been used to calculate legalities in Western civil systems should suggest that a much wider array of calculations may be constructed to describe various distributions of kin in non-civil systems. Distance is not just a formal property of genealogical chains, it is also an empirical variable. The proper calculation of such an empirical variable is a function of the way in which a given social system distributes kinsmen in relation to each other.

In the diagrammatic illustration of his sectoral plan of kinship

and spatial distance, Sahlins uses an example in which lineages are significant (1972:199 and elsewhere). Kinship and spatial distance are displayed as the following ordered array: household (closest), lineage, village, tribe, inter-tribal sector (most distant). For any given society, even one with lineages, a more detailed sequence would be drawn. And in a society without lineages the sequence would have to be differently defined, at least in part. Consider Binumarien, specifically Binumarien men. How does the social organization as so far described distribute adult male kinsmen around each other in socio-geographic space?

Kinship Connections and Cooperation

It has already been shown that socio-centric kinship distance as indicated by oosana arrangements does underly the pattern of cooperation in the four main production activities in Binumarien. But the statistical measures show that the association between socio-centric distance and cooperation, while significant, is not strong. The proposition here is that ego-centrally calculated kinship distance is a more powerful predictor and is much more strongly associated with the cooperation and the sharing it entails. To test this every pair of Binumarien men must be categorized according to the genealogical connection between them.

There are a series of difficulties with categorizing connections between individuals in Binumarien which follow from the heavy genealogical involution. In some cases relations between a pair of men are so multiplex that it is not possible to establish one definitive category for the pair, i.e., more than one connection affects the pattern of their

interaction. These cases are all assigned to a residual 'other' category. Relations which have diminished in significance because the tie which established them has been removed are also assigned to 'other,' e.g., relations 'left over' from a marriage which has ended either in divorce or death of one of the spouses. And because of the small numbers, certain sorts of relations, not precisely equivalent, are lumped. Not only full brother, but adopted, step-, and half-brother connections are classed as brother.

With these qualifications the 741 pairs of adult men can be assigned to 9 categories, 10 if we include the 39 self-pairs. The table (Fig.4.11) shows the number of pairs in each category, the number of pairs in each category which habitually cooperate in each of the four production activities, and the ratio of pairs which do cooperate in each activity over the total number of pairs in that category.

The order in which the categories are arranged in the table shows an order of the ratios of cooperating pairs which is very suggestive. A measure of domestic kinship distance in Binumarien can be constructed to fit this order.

Ego-Centric Kinship Distance in Binumarien

The idea here is to measure kinship distance not in terms of some parsimonious genealogical distance measure, but as 'social distance' between kinsmen. Murdock's measure of primary, secondary, tertiary, and so on relatives (1949) uses nuclear families as units of distance. Here households seem a more appropriate unit because this allows the

Figure 4.11 - Cooperation by kin categories

	total pairs	self pairs 0	father son 1	brother brother 2	father- son-in-law 3	brothers- in-law 4	parent's brothers sibling's son 5	parent's sibling's son 6	more distant consanguines 7	putative consanguines 8	other 9
total pairs	741+39*	39	22	15	14	23	5**	25	83	28	526
pairs who raise pigs ratio	89+39	38 .97	16 .72	6 .40	6 .43	4 .17	-**	4 .16	20 .24	6 .21	27 .05
pairs who hunt ratio	117+39	38 .97	14 .64	9 .60	6 .43	10 .43	-**	7 .28	23 .28	5 .18	43 .08
pairs who build gardens ratio	123+39	39 1.00	20 .91	7 .47	5 .36	12 .52	2** .40**	6 .24	26 .31	9 .32	36 .07
pairs who garden ratio	183+39	39 1.00	18 .82	10 .67	8 .57	13 .57	-**	12 .48	30 .36	7 .25	85 .16

* 741 diverse pairs plus 39 self-pairs

** because of the small entries, these are ignored in calculations from this table

addition of a temporal variable. People who have at some time in the past been members of the same household may later be members of different ones.

The units of this calculation are units of domestic kinship distance. Each adult parent-child link is counted as one unit of distance. Parents and children belong to the same domestic unit until the child reaches adulthood. Adult siblings are two of these units apart (one's siblings are the children of one's parents). They share the same household until one of them reaches adulthood. When they both reach adulthood they live in households different from each other and different from the parental one which they at one time shared.

A spouse link in this calculation of domestic kinship distance counts as two distance units whenever it is part of a longer path. Through a spouse one is connected to people with whom one has never shared a household; connections to them are secondary in that sense. But the fact that a member of one's current household, one's spouse, has belonged to the same domestic unit as some of these makes the ties significantly closer than ties to anyone who has not shared a household with any member of ego's current household. Connections to kinsmen who would not be expected to ever belong to the same household as anyone in ego's current household are more definitely secondary; there are no overlapping domestic affiliations, only intervening ones. For this reason, an increment of two units is added in calculating the distance of such a path. These then are the three rules for calculation of 'domestic kinship distance' between adult men in Binumarien:

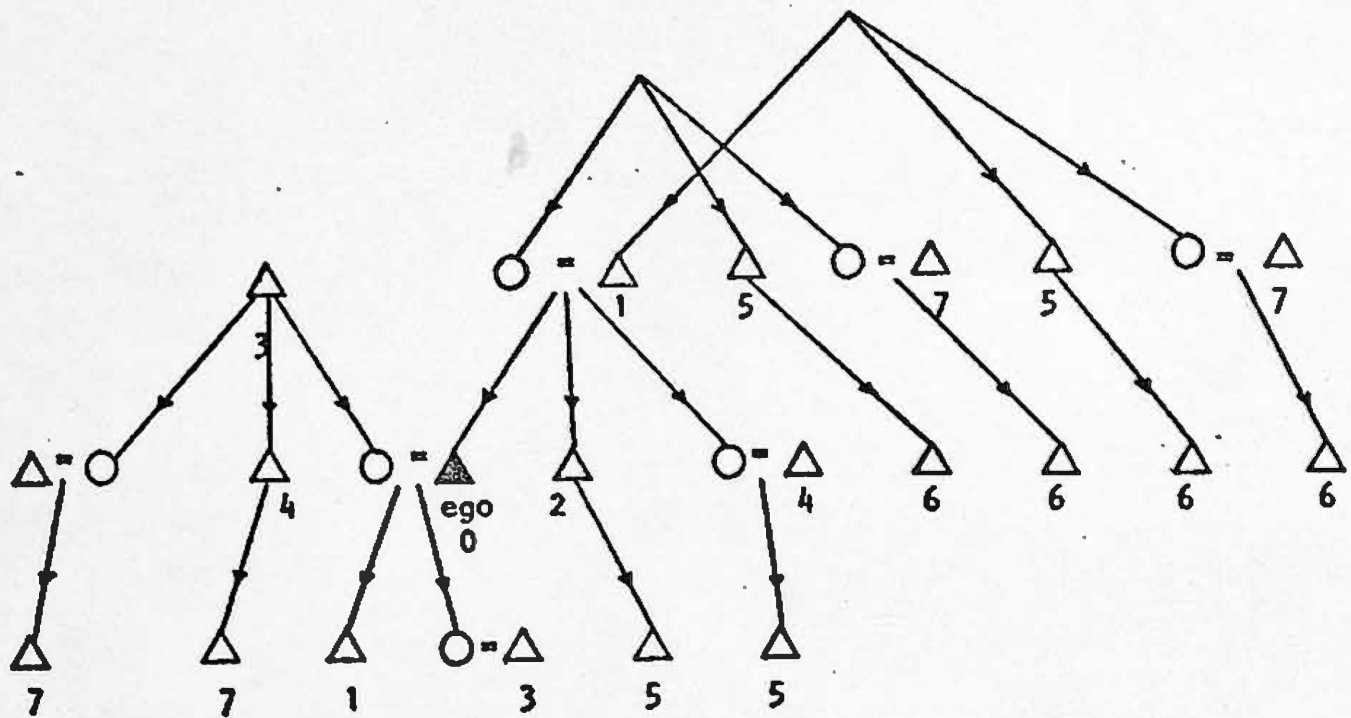
- 1 - parent-child links count as one unit of distance each
(in paths linking adult men)
- 2 - spouse links count as two units of distance each
(in paths linking adult men)
- 3 - two units are added to any path linking adult men if
no member of the current household of one of them
has ever lived in the same household as the other.

The diagram (Fig.4.12) shows the distance of a series of kintypes (assuming all adults) calculated according to these rules.

An adult man has come from a domestic group which included his father and brothers and in which their ties of cooperation and sharing were established. His father represents that group and would seem, other things being equal, to be a man's closest adult male kinsman. If ego himself (and his own household) represents an origin, 'zero distance,' then his father and his adult sons are at the first distance interval. His adult brothers, having left the parental household and established households of their own, are still significant because of previously established ties of cooperation and sharing. They are at the second interval of distance from ego.

But then, rather than more distant consanguines representing the next interval of distance from ego, another set of connections intervenes. Just as ego has come from a domestic group which included his parents and siblings and in which their patterns of cooperation were established, his wife has come from a domestic group which included her parents and siblings and in which their patterns of cooperation and sharing were established. In exogamous communities these ties are radically revised by geographical separation. But in Binumarien, the high rate of community

Figure 4.12



(numbers are units of distance from ego)

- 0 - ego himself
- 1 - father/son
- 2 - brother
- 3 - father-/son-in-law
- 4 - brother-in-law
- 5 - parent's brothers/sibling's son
- 6 - parent's sibling's son
- greater than 6 - distant consanguine

Binumarien domestic kinship distance as measured between adult men

parent child link = one unit (only as part of a path between adult men)

spouse link = two units (only as part of a path between adult men)

kintypes never in one household with a member of ego's current household
(and reciprocally) = above +2

endogamy alters this. In all societies fathers- and sons-in-law establish, through the marriages which create such relations, ties of obligation. But here these are ties between men who may be continually in face-to-face contact. Here these relations might be expected to facilitate cooperation and sharing in a broad range of activities. As with fathers and brothers, fathers- and brothers-in-law are involved directly with ego in significant interaction. And as ego, other things being equal, is closer to his father than his brothers, so the same holds here. Ego is closer to his father-in-law than to his brothers-in-law. The father-in-law belongs to the household from which the wife has come, the household in which she established habits of sharing and cooperation and to which she still holds ties. The marriage connects ego to that household as well. And he is tied to his adult brothers-in-law through their mutual connection to that household. (This also applies reciprocally, for a man's daughter or sister and her husband.) These in-law connections are more salient - closer - interpersonal ties than a man has with his more distant consanguines. At the next interval there are consanguines again; uncles and nephews (grandfather-grandson relations between adults are so rare they can be discounted). And following these, at the next interval beyond, are first cousins.

Three more broad categories can be discriminated, although no longer as part of an interval scale. These are, a) more distant but specifically traceable consanguines, b) those who claim a consanguineal connection but cannot trace it, and c) other Binumarlen men.

This means that the gradient of kinship distance, here 'domestic kinship distance,' can be calculated between adult Binumarlen men in

the following special way:

- 0 - ego, a man himself
- 1 - fathers and sons
- 2 - brothers
- 3 - father- and sons-in-law
- 4 - brothers-in-law
- 5 - parent's brother/sibling's son
- 6 - first cousins
- 7 - more distant consanguines
- 8 - assumed consanguines where the specific connection cannot be traced
- 9 - other Binumarlen men.

These discriminations run counter to the discriminations of the system of nomenclature. Where Binumarlen kin terminology is classificatory in the Morganian sense, these categories distinguish collateral distance. This brings us again to Sahlins' model. The role of 'kinship' as an 'economic force' must be understood in the context of the system characteristics which he labels 'the domestic mode of production.' Kinship obligations play against the tendency for each domestic unit to pursue its own economic self-interest. The classificatory feature of the terminology system which brings kinsmen of the greatest genealogical distance into the closest familial categories admits no separation of family interests from those of the wider community.

It has long been noted that distinctions of distance are important whether or not they are reflected in nomenclature systems. For example, Murdock says:

The fact that a people applies a single classificatory term to a variety of different relatives embraced in one conventional kinship category does not imply, of course, that even the standardized behavior exhibited toward all of them is identical ... There is an attenuation in warmth and responsiveness proportionate to their social remoteness (1949:108).

Sahlins, focusing on a central aspect of this 'attenuation in warmth and responsiveness,' that is, the rules of reciprocity, notes that "closer to home ... there is tolerance of delays or even of complete failure to reciprocate." and he goes on:

To observe that kinship distance plays out in social force as it moves out in social distance is not a sufficient explanation or even a very logical one considering the wide extension of familial categories. More pertinent is the segmentary separation of economic interests (1972:127).

The gradient of sociability is produced by the opposition of two tendencies in the social system. On the one hand the "structure is generalized," the system is one of kinship relations, the same relations fulfilling a multitude of functions. There are not different sorts of relations, only different uses, e.g., economic, political, ceremonial, to which the same relations are put. This means that there is in general only one sort of relation on which sociability is based: kinship. All of those with whom one interacts are kinsmen or they are something outside the system, strangers, enemies. This duality admits no distinction among co-insiders. All are kinsmen, all are solidary, these are the relations on which any interaction is based.

On the other hand, the organization of production isolates household interests, setting each domestic unit apart. These two tendencies, one which includes all the community in the sphere of kinship sociability, one which separates each household, oppose each other to produce a

standard compromise: a gradient of kinship sociability. The tendency to isolation of the household is weakest where over time individual domestic allegiances overlap domestic units and so the generalization of kinship reciprocity is strongest here. The tendency to inclusion of all members of the community in broad kinship sociability is weakest where these members have more intervening allegiances and so the divisions built into the organization of production play more powerfully against solidarity.

It is the organization of the domestic mode of production which "gives this dissipation of kinship solidarity function and definition ... The first premise of 'kinship distance' is the DMP" (Sahlins 1972:127).

Kinship Distance and Cooperation

Using this measure the categories 0 - 6 in the table (Fig.4.11) approximate an interval scale of distance. Assuming that, the ratio of pairs in each category which do cooperate in each production activity can be plotted against increasing kinship distance as here defined and a product-moment correlation computed. The results of this computation are shown in Fig.4.13.

Φ and r are interpretable in the same way. Each varies between -1 and +1, with -1 a perfect negative correlation, +1 a perfect positive correlation, and 0 the absence of any correlation. Values other than -1, 0, and +1 cannot be directly interpreted. But the square of the value of both Φ and r is equal to the ratio of the variation in one variable which is explained by the other, to the total variation in that variable. 'Explained' here does not refer to cause but to association.

**Figure 4.13 - Correlation between ratio of cooperating pairs
and kinship distance**

	product-moment correlation for categories 0 - 6 Pearson's r	rank order correlation for categories 0 - 9 Spearman's r
pairs who raise pigs	-.86	.85
pairs who hunt	-.95	.98
pairs who build new gardens	-.87	.93
pairs who garden	-.98	.97

If knowing the value on one variable allows us to predict exactly the value of the other variable, then all the variation in the second variable is 'explained' by the first. In such a case, r (and ϕ) equals either $+1$ or -1 and so r^2 (or ϕ squared) $= 1$.

The socio-centric categorizations examined before, e.g., oosana aggregates, could account for less than one-fifth of the variation in cooperation (max. ϕ squared $= .42^2 = .176$). But here the lowest correlation accounts for nearly three-quarters of the variation (min. $r^2 = -.864^2 = .747$). The shift from socio-centric to ego-centric perspective altered the picture of cooperation from 'loosely structured,' 'optative' to very structured and highly predictable. Ego-centrally calculated kinship distance, as calculated specifically for this case, is strongly associated with cooperation in these production activities. If we know the kin relation between a pair of men, we have a powerful indicator of the probability of that pair of men cooperating in a certain activity. The closer the relation as here defined, the higher the probability that those men will cooperate. The extremely high correlations give strong evidence in support of two things: first, the utility of an ego-centrally constructed model for a case like this, in fact the necessity of such a model if the underlying structure is to be discovered; and second, the validity of the special kinship distance dimension discussed above.

The first point, the structural importance of ego-centric kinship distance for a case like this, is not meant to suggest that ego-centric calculation is important only where corporate kin groups are absent.

Rather, the suggestion is that the importance of ego-centric ties in kinship societies is inversely related to the importance of descent structures. To the degree that the latter are unelaborated, and to the degree that they are not decisive for a certain activity, ego-centric categories dominate. Where descent structures are important they may organize more activities and overshadow ego-centric discriminations.

The second point is a reminder that this measure of kinship distance is not a universal one. It was predicted to fit Binumarien because of the way that the social organization of this community distributes kinsmen in relation to one another. Specifically, the way kinsmen are distributed as a consequence of community endogamy and the absence of unilineal or other corporate kin groups.

The powerful regularities reaffirm that the dominance of ego-centric arrangements does not mean that cooperative ties appear as a matter of individual whim or that psychological explanations must be sought for their distribution. But for a sociological analysis to uncover these regularities it must shift from socio-centric to ego-centric space.

RELATIONS AMONG THE RELATIONS OF COOPERATION

What is the relationship among the patterns of cooperation in these four production activities? The order in which they have been discussed is also an order of increasing cooperation. There are 89 pairs of men who habitually cooperate in raising pigs, 117 who cooperate in hunting, 123 who habitually build new gardens together, and 183 who cooperate in

gardening. This order, by itself, suggests that these patterns of cooperation may be related by inclusion; all pairs who cooperate in the first being included in those who cooperate in the second, and these included in the third, and so on. Most commonly in the anthropological literature such an arrangement is presented in the form of a scalogram. If such a pattern of inclusion were perfectly realized here, a Guttman scale could be constructed as shown in Fig. 4.14a. The same arrangement could also be represented in the form of a Venn diagram, as illustrated in Fig. 4.14b.

But such a pattern does not appear when the relations among these relations are examined. Instead of the form displayed in Fig. 4.14b a Venn diagram constructed to show the actual relations among the production relations looks like Fig. 4.15. The four production activities are not related to each other by simple inclusion. The argument so far suggests some reason why this should be so.

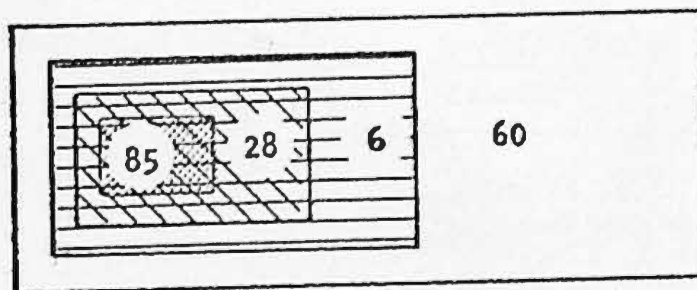
It has been argued that the absence of lineal constructs and of corporate kin groups above the household allows ego-centric reckoning to dominate patterns of cooperation. And it has been demonstrated that ego-centric calculations show a much higher correlation with patterns of cooperation than socio-centric factors. The same set of conditions may have an additional consequence.

The absence of supra-household corporate kin groups is the absence of pre-defined sets of individuals with whom one expects to cooperate. For example, brothers cooperate with each other but there is nothing to constrain their cooperation with the same set of other men. Each

Figure 4.14 - Ideal representation if relations of cooperation in the four activities were related by inclusion

Cooperation in Production Activities				
	<u>cultivation</u>	<u>new gardens</u>	<u>hunting</u>	<u>pig raising</u>
<u>pairs of men</u>				
89	x	x	x	x
117 - 89 = 28	x	x	x	
123 - 117 = 6	x	x		
183 - 123 = 60	x			

a. Guttman scale display



b. Venn diagram display

brother develops his relations of cooperation and sharing independently. And although they overlap, they are unlikely to be perfectly isomorphic. This suggests another possibility, just as the set of cooperating individuals varies with the focal ego, the set of cooperating individuals may vary with the defining activity. Where corporate kin groups are present, the groups are likely to be multipurpose. So that co-membership in a group not only strongly constrains cooperation but it constrains cooperation with the same people in many activities. Where such groups are lacking cooperation between individuals in one activity may be less likely to entail cooperation in other activities.

This is not to suggest that ego-centric calculation and situation specific relations are always tied together (a large part of American social arrangements might be best described as socio-centric and situation specific). But corporate kin groups do two things: 1) they define sets of individuals as units, and 2) they organize those individuals into cooperating, sharing, solidary groups. Certain people are defined as 'one,' as alike, as forming a group, and that group carries out a number of activities. This means that individuals who cooperate with each other all tend to cooperate with the same other individuals, and it means that the individuals who cooperate in one activity are most likely to cooperate in other activities. When there are no such groups, those who cooperate with the same third person may not cooperate with each other, and also those who cooperate in one activity may not cooperate in another. All this must be qualified by the fact that this is a kinship society and kinship relations are relations of general sociability. The difference under discussion is

not one of absolute contrast, merely degree. Additionally, many of the same relations are important for cooperation in different activities, e.g., fathers and sons because of the history of the relationship are expected to cooperate in a whole series of activities as adults. And the gradient of kinship distance has been shown to be strongly correlated with all four activities under discussion. Therefore, the relations of cooperation in each activity are expected to be correlated with each other. But the argument emphasizes that the set of pairs who cooperate in one activity may not be precisely the same or perfectly included in the set of pairs who cooperate in another.

The diagram (Fig. 4.15) shows the extent to which the patterns of cooperation for each activity include the same pairs of men. The numbers in the diagram indicate the number of pairs which have exactly the relations defined by the overlap of the areas indicating a certain activity, e.g., there are 66 pairs of men who habitually cooperate in all four activities, there are 531 pairs who habitually cooperate in none of these activities. Cooperation in any one of these activities is associated significantly with cooperation in the others, but the correlations are far from perfect. When the activities are paired, only one out of six activity pairs shows a correlation which indicates that more than one half of the variation is accounted for (Fig. 4.16).

There is another question to be asked about the relation among the relations. Why are there more relations of cooperation in garden maintenance, fewer in building new gardens, fewer still in hunting, and the fewest of all in caring for pigs?

Figure 4.15

NUMBER OF PAIRS OF MEN WHO HABITUALLY COOPERATE ACROSS ACTIVITIES

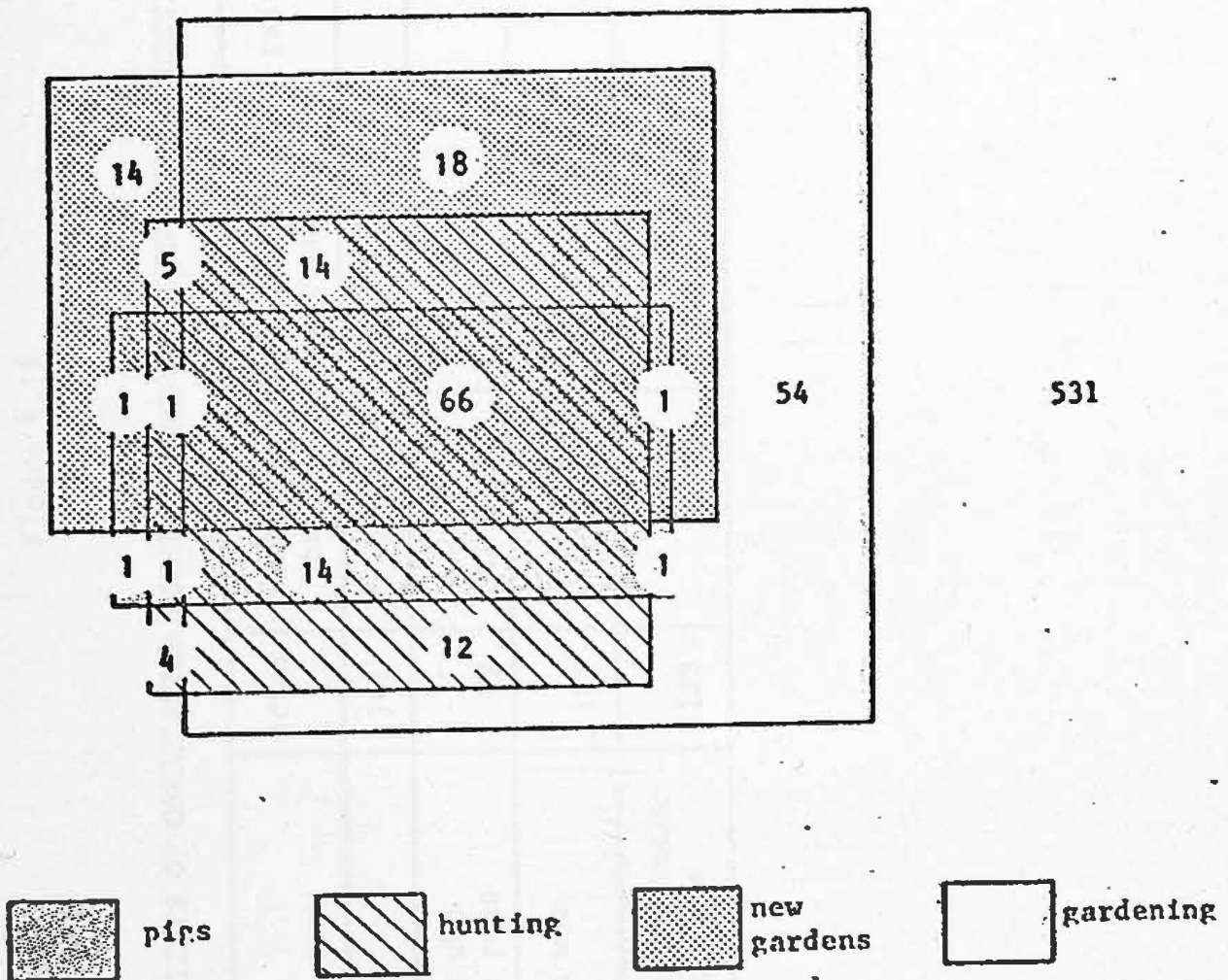


Figure 4.16

COEFFICIENTS OF CORRELATION BETWEEN COOPERATION IN FOUR PRODUCTION ACTIVITIES

	total	pairs who hunt	pairs who build new gardens	pairs who build gardens
total	741	117	123	183
pairs who raise pigs	89	$\phi = .79$	$\phi = .64$	$\phi = .61$
pairs who hunt	117		$\phi = .66$	$\phi = .66$
pairs who build new gardens	123			$\phi = .60$

Sahlins' model directs our attention toward the mechanisms by which production is increased. It suggests that production energy will be increasingly engaged as requirements of use are expanded. The focus is not on technical capacity but socio-political pressure. Requirements of use are expanded as obligations of sharing, generosity, and exchange are expanded. These obligations entail, in Binumarien, first and foremost the stuff of daily subsistence: vegetable food. The larger number of cooperation relations in garden activities can be interpreted to indicate a larger increment of energy expended over the minimum domestic requirement in the production of vegetable food.

The much lower number of cooperation relations in caring for pigs supports this general argument. In Binumarien there are no large pig festivals or long exchange chains. Pigs are important but unlike social systems further west which engage pigs in ritual cycles and elaborate exchange chains there is no comparable use requirement which makes having large numbers of pigs desirable here. Pigs are important for certain transactions, marriage, reparations of various sorts, but there is no arrangement for large political or social return in raising many pigs to slaughter and/or exchange all at once. Note that the possession inventory on p.175 includes pigs. The total number of pigs in Binumarien is quite high: 63 large pigs, 11 medium-young pigs, 115 small pigs. (The fact that rather large populations of pigs can be accommodated with little strain and relatively low labor investment [cf. Rappaport 1968 on Tsembaga] may be a consequence of the relatively large land base in Binumarien and the plentiful bush.) But there is no significant association between number of pigs owned and political standing.

The ambitious men who invest labor in pigs for political return do not accumulate for large periodic transactions. Instead, they continually convert their labor into a reputation for generosity through contributions to community events.

Since hunting is of relatively little importance for sharing and exchange the density of the cooperation relations is higher than expected. An earlier discussion noted that while other production activities show a bimodal pattern in the distribution of numbers of cooperation relations per man, hunting does not. Perhaps hunting is better understood in some other context. The emphasis on hunting out of proportion to its production importance remains to be explained.

COOPERATION AMONG WOMEN

The preceding discussion began with the assumption that sharing relations between men dominate the organization of production above the level of the household. The validity of that assumption is open to test.

When a man marries, his social circle is changed by the addition of 'in-laws' but he remains with his father and perhaps his brothers and his most important sharing relations are not seriously affected. Clearly this cannot be so for women. A woman's first marriage (although this may not be true for subsequent ones) takes her away from the kinsmen with whom she has established interaction and sharing patterns and places her in a new household - that of her in-laws. In exogamous communities the residence change for a woman entails a very clear-cut break. Though she may retain important ties with her close consanguines, she cannot, as

long as she stays with her husband, carry on everyday interaction, mutual assistance, and sharing with them. In such cases, there are clear-cut constraints imposed by the physical barrier of distance on the sharing and cooperation patterns and the social integration of the in-married wives. These wives can either become full members of their husband's community or they can remain 'in between.' But of necessity their role in the community from which they came and their interdependence on the consanguines they left behind must be seriously diminished.

If community exogamy were the pattern in Binumarlen, we might expect the cooperation among women to largely mirror the cooperation among their husbands. With few if any consanguines (aside from own children) around to complicate things, the interaction patterns of women would depend directly on the husband-wife relation. Women are close to their husbands and so close to the wives of the men that their husbands are close to. The sharing patterns of women would follow the sharing patterns of their husbands.

But Binumarlen is not an exogamous community. Of the forty-eight adult Binumarlen women, only fifteen of them were neither born nor grew up in Binumarlen. This means that although a woman moves on marriage to join her husband in the house of his parents, most women are not very far from their closest consanguines. Physical distance does not prevent women from retaining active ties of cooperation and sharing with their consanguines.

The relation 'habitually cooperates in production activities' among

women is shown in two matrices (Figs.4.17,18). This relation is defined as the intersection of three main production activities: caring for pigs, building new gardens, and gardening. The data were collected in the same way as data previously discussed for men. But the content of the work involved differs according to the sexual division of labor. These matrices do not include all adult Binumarien women. They exclude four old widows who have not remarried (there are no unmarried widowers here), one divorcee who has not remarried, and six currently married women. Two of these last were excluded by my oversight (the wives of 4 and 25), and three were excluded because of incompetence. One of these had just married in to Binumarien from Abonamo (the wife of 8). She does not yet speak much Binumarien and is considered by most of the community both too giggly, and too slow to understand, for serious conversation. Another, the wife of 35, was in the throes of a serious behavior disturbance following domestic troubles during my stay (see following chapter). The third, the sister of 5 who was involved in the same childhood accident and crippled in the same way as he, is considered by the community to be mentally retarded. She is the second wife of 13 although not by domestic arrangement - she lives with her sister 57, the wife of 12. 13, however, has admitted paternity of her three children. The sixth woman, 73, is excluded because she and her husband do not share a household (see below). The first matrix (Fig.4.17) shows the women ordered across the page, i.e. along the diagonal, according to the order of their fathers and brothers or other closest consanguineal kinsmen - excluding sons - in the cooperation matrices for men. Here the women are ordered as their male consanguines are ordered (except descendants), the operative connections are those of sister and daughter-

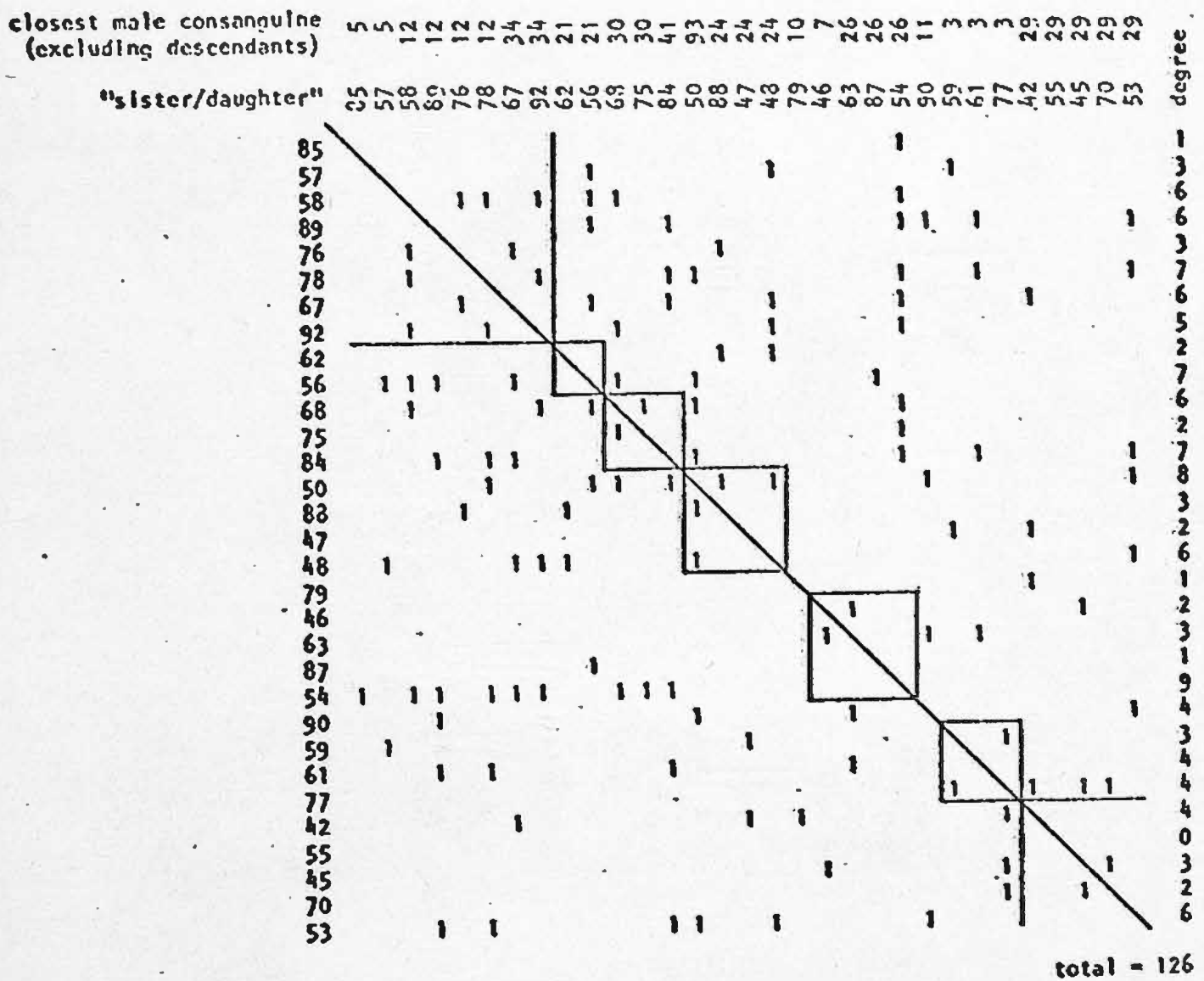
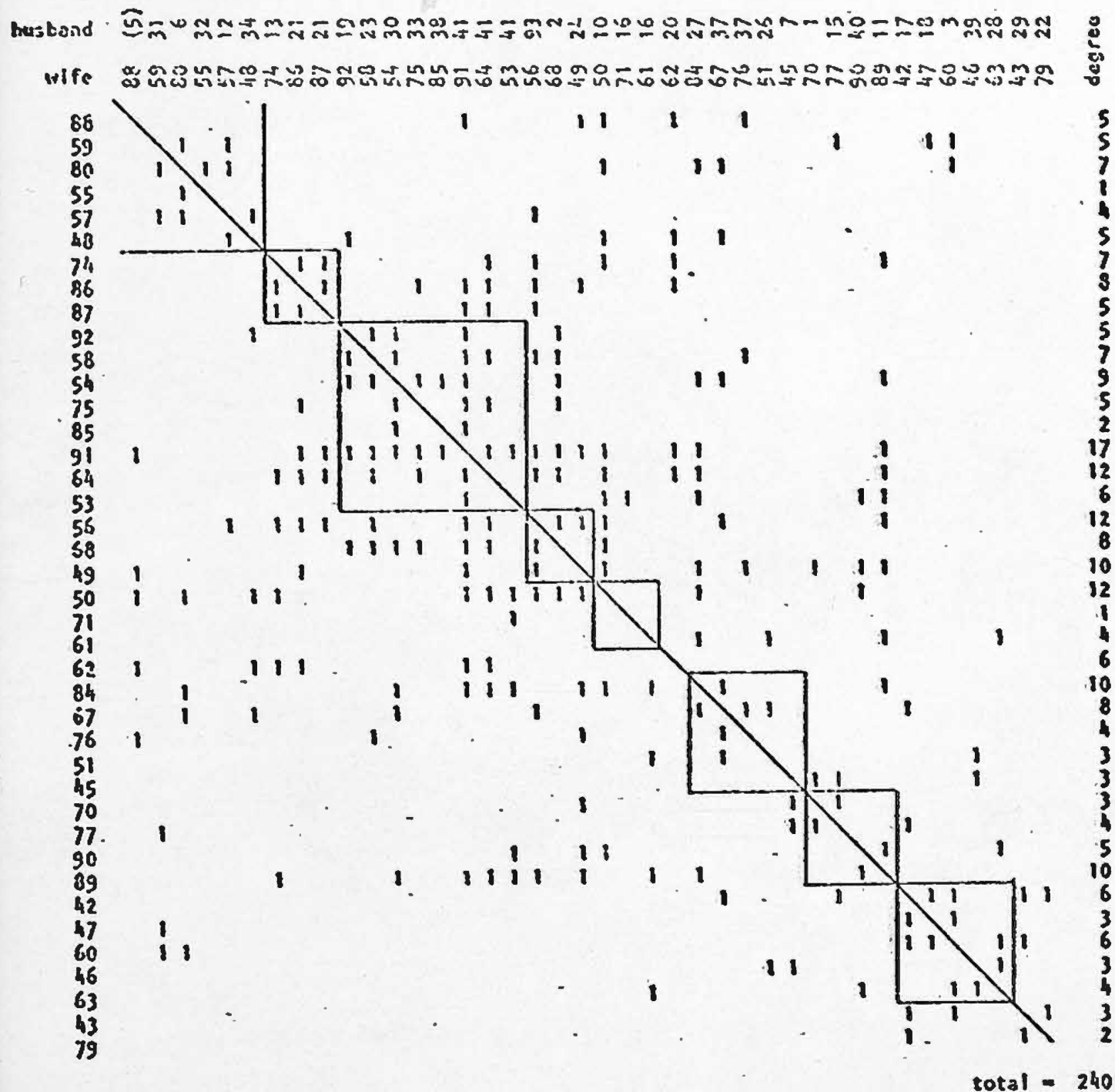


Figure 4.18

**Pairs of women who habitually assist in raising
plgs and building and maintaining gardens**



hood. This matrix includes only women who have close, traceable non-descendant consanguines in Binumarien.

Using the same moodaa oosana aggregates as previous discussions of cooperation among men, the association between the mutual affiliation of nearest non-descendant consanguineal males and relations of cooperation among women can be tested. The association is not even significant at the .05 level, chi square = 3.04.

On the other hand, the second matrix (Fig.4.18) orders the women as their husbands were ordered in previous discussions. Here the association is strongly significant, chi square = 50.61, p less than .001; phi = .28. The women are ordered as their male in-laws and sons are ordered, the operative connections are those of wife and mother. This pattern corresponds with assumptions about the household as a production unit. The cooperation relations of husbands and wives tend to pattern together, they belong to the same production entity, the same domestic group, the same household.

Co-Wives

An interesting complication to this is the case of co-wives. There are four sets of co-wives in the last matrix. Except for the fact that 64 and 53 do not habitually cooperate as defined (and this is because 41 and 53 separated, 53 moving to live with her son 10, before 41 married 64), the only set of co-wives who do not habitually cooperate is the wives of 16. 16 and 10 are the youngest polygynists. 10's second wife is not included in the matrix because this couple does not share a

household. 10 lives with his wife, 50, in Onikuradurana. His marriage to 73 who was the wife of his father's female matrilinear parallel cousin's son, is recent and unstable. She continues to live in Ubandena and no one considers her house there to belong to 10. Whenever he spends any time in it, or elsewhere with 73, 50 gets angry. She has not accepted this second marriage as a finality. And, since she is known for generosity and hard work (qualities less evident in 73) the community consensus is that 10 is foolish to jeopardize his first marriage with this second which is based squarely on sexual attraction. During my stay, 10 and 73 publically announced a divorce and then made up again. 50, angry and humiliated, announced she had had enough and was leaving 10. The situation is not a stable one. These co-wives do not cooperate or share.

On the other hand, 16 lives with both of his wives, 61 and 71, in the same house. This is not altogether a pacific solution either. Although it seems to work quite smoothly in other cases. The older co-wives of older men fight as well. But it seems that as both the participants and the arrangements age, accommodation is reached and domestic jealousies interfere less and less with sharing.

Labor Investing

The match between patterns of cooperation for husbands and wives is born out in another way as well. In addition to kin connections, the cooperation relations of men vary according to political ambition. To achieve and to maintain a position of prestige and authority, some men develop extraordinary numbers of relations of habitual cooperation and sharing.

Watson's description of certain features of the sociology of Abiera, a Tairora speaking community in which Matoto, a man of outstanding power, rose to prominence, fits Binumarien as well.

Every Abiera man operates within a network consisting of the individuals who are personally connected to him and who interact with him in some way, from minimal to intensive. These include the affinal and consanguineal kinsmen with whom he interacts, as well as others, such as co-residents, people raising pigs for him or for whom he raises pigs, exchange partners in other groups, age-mates and friends, or those whom he leads or follows. The network of an individual may be large or small ... It is clear that Matoto had a personal network both wider in spatial terms and larger in number of individuals involved than lesser men. These dimensions serve as a measure of a man's magnitude, just as the areal extent of the network is actually a conventional symbol of his importance (Watson 1971:259 [1967]).

Measures of political standing are taken up directly in the following chapter. But there is an aspect to this which is important for the present discussion. To the extent that production is ultimately a household matter, we expect a match between husbands and wives in the relative numbers of habitual cooperation and sharing relations held by each. If labor investing men are to achieve their political ends, they need labor investing wives.

If men are ranked according to the number of habitual cooperation relations which include all four production activities, and women are ranked according to the number of habitual cooperation relations they have in production, the correlation between the ranks of husbands and wives (Fig.4.19) can be measured. The statistics computed in such a test show that there is a significant correlation; Spearman's $r = .556$, $Z = 3.34$, p less than .001.

Figure 4.19 - Rank by number of others with whom one cooperates in all production activities

Couple N = 37	Husband's rank	Wife's rank
41,91	1.5	1
41,64	1.5	3
21,86	3	10
38,85	4	34.5
24,49	5	6
93,56	6.5	3
20,62	6.5	16
34,48	11	20
23,58	11	13
30,54	11	8
33,75	11	20
2,68	11	10
37,67	11	10
37,76	11	25
12,57	15.5	25
19,92	15.5	20
10,50	17.5	3
1,70	17.5	30.5
6,80	23	13
13,74	23	13
16,71	23	36.5
16,61	23	25
17,42	23	16
18,47	23	30.5
3,60	23	16
39,46	23	30.5
11,89	23	6
31,59	30	20
32,55	30	36.5
27,84	30	6
7,45	30	30.5
40,90	30	20
26,51	35	30.5
28,63	35	25
29,43	35	30.5
22,79	35	34.5
15,77	35	25

Spearman's $r = .556$; $Z = 3.34$; p less than .001

Kendall's tau = .420; $Z = 3.30$; p less than .001
(corrected for ties)

SHARING

In addition to the production increments brought about through (and indicated by) relations of cooperation in raising pigs, hunting, building new gardens, and garden maintenance, there is another set of relations which has an effect on levels of production. Sharing relations (whether or not they are associated with cooperation in production) affect levels of production because such obligations increase the use requirements of the households. The domestic unit must produce its own consumption requirements and also an additional amount to share. Sahlins' model of primitive economies suggests the following system tendency: relations of habitual sharing will be greater in number than relations of cooperation in production. Since, in these systems, production is for the producers, increments in production follow on arrangements which obligate the producers to provide not only for their own consumption needs, but for some other obligations as well.

The pairs of men who habitually share meat (both their own pigs and game) are shown in the matrix (Fig.4.20). And the pairs of men who habitually share cultivated food are shown following in the matrix (Fig.4.21). The density of both these relations is much greater than the maximum density for relations of cooperation in any production activity (garden maintenance had the highest density for cooperation in production, 183 out of 741 possible). The density of sharing meat is 273 of 741 and of sharing cultivated food 289 of 741. The relations between these two sharing relations is shown in the Venn diagrams (Fig.4.22).

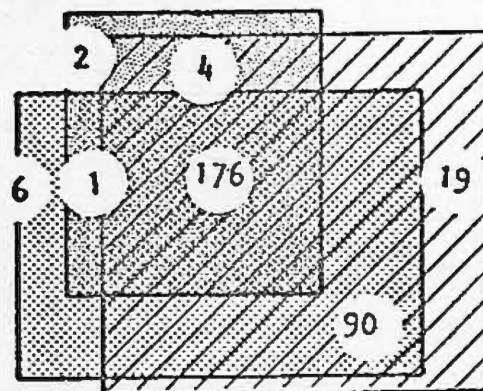
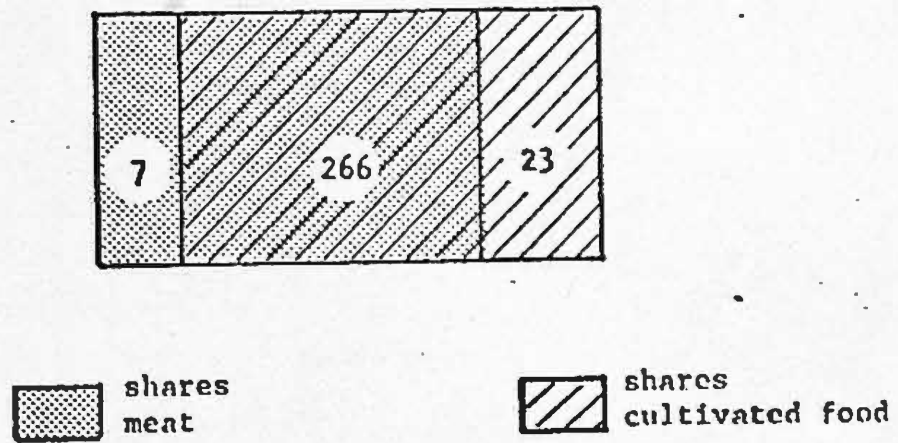
Figure 4.20 - Pairs of men who habitually
share cultivated food

	5	31	6	32	12	34	8	35	13	21	19	23	30	33	38	41	93	2	24	10	16	20	4	27	37	26	7	1	25	15	40	11	17	18	3	39	28	29	22	degree	
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total = 578																																									

Figure 4.21 - Pairs of men who habitually share meat

[illegible]

Figure 4.22 - Numbers of pairs of men who habitually share



The Spectrum of Reciprocities

Sahlins' plan of reciprocity and kinship residential sectors ([1965] 1972) suggests a predictable variation in reciprocity with sectors of kinship distance, residential proximity, and such variables as relative rank. The last three sorts of variation have been discussed but patterns of interaction have been reported as presence or absence of habitual cooperation and sharing, not a continuum of degrees of cooperation and sharing but a binary opposition. Two individuals either habitually cooperate in a certain activity or they do not.

Sahlins' "spectrum of reciprocities" is a continuum, "defined by its extremes and mid-point" (1972:193): generalized, balanced, and negative reciprocity. The negative extreme has no counterpart here since the universe of discussion is the community and this extreme is only reached beyond it. But the habitual sharing relations used to define the organization of production and distribution above the level of the household are relations of 'generalized reciprocity.' Sahlins suggests that 'sharing' is an indicative ethnographic formula for this, 'the solidary extreme.' That is the formula used here and the data underlying this descriptive are the reports of Binumarien adults, asked individually and independently for information of the sort 'does he habitually give you ...?' and so on. Therefore, the report of a habitual sharing relation here rests on the mutual but independently collected positive responses of each individual in describing the behavior of the other.

Members of the community who do not habitually share the labor or

goods of interest here can and do provide each other assistance or goods, but on a more or less quid pro quo basis. An exchange of goods may occur under special circumstances, a wedding for instance, in which the exchange is direct or a feast in return for assistance. In other words, those members of the community who do not 'share' as here defined, do interact and exchange in a manner that fits the label 'balanced reciprocity.' (And they 'share' items which are not focal here, e.g. betel nut.)

This raises the question regarding a continuum. It may seem that the qualification 'habitually' used so liberally here is a rather sloppy discrimination. There must be cases that fall between the generalized extreme and the balanced mid-point of the 'spectrum.' The extremes 'giving every day' and 'never giving' would be easy to classify, but there must be middle cases which one would be hard pressed to judge. However, this was a judgment which Binumarien had no difficulty at all in making. Originally I had hoped to give greater depth to the description of social organization by getting informants to report on the frequency with which others did things to, for, or with them. And I continued throughout to ask for such information. But rather than an indication of a continuum, some variation in frequency, almost every informant had a 'favorite frequency' either 'all the time,' 'often,' or 'rarely,' and for that informant all others were described as taking action either 'never' or with a frequency that did not vary. In other words, almost all activity reports were two-valued only.

What is to be made of this absence of a continuum? While I was collecting the data, it was a matter of great frustration that informant-

observers reported in this way. I now think that their persistence in doing so reflects a characteristic of the sociology of cooperation and sharing in Binumarien and elsewhere. It indicates that there is a definite boundary between those with whom one shares - in the sense of generalized reciprocity - and those with whom one does not. While this boundary can and does vary with the item or activity in question, given the item or activity, it is relatively clear, definite and fixed.

The continuum may apply to the variation in the range across which sharing is extended for different sorts of transactions, but not to a variation which in generalized reciprocity occurs for specific transactions. This seems both logical and sociological. There are certain people whom one expects to count on for certain things, and vice versa. Some critical threshold of solidarity marks the difference between those with whom one's relations of a certain type are generalized and those with whom they are balanced - and then another such threshold marks the boundary between balanced and negative expectations. Sahlins' use of the two extremes and mid-point to define his 'spectrum' may be more than a convenient shorthand. It marks the critical ranges which may have a 'sectoral' rather than continuous character, just as the associated variables of kinship distance and residential propinquity have.

There is a continuum of reciprocities in the extent to which "a one way flow" is tolerated. This "good pragmatic indication of generalized reciprocity" (Sahlins 1972:194) varies from transactions of one sort to those of another. And the number (and distance) of those with whom one tolerates such imbalance varies from one sort of transaction to another. Perhaps that is what Sahlins meant all along.

Binumarien and Other CHNG Production Systems

Both major pig festivals and elaborate exchange chains which appear further west are absent here. Strathern's contrast between 'finance and production' (1969b) suggests arrangements which both differ from Binumarien and from each other in the degree of impact they have on levels of production. Binumarien's ego-centric kinship obligations provide the smallest coefficient of production. Pig festivals which Strathern associates, at least tentatively, with a 'production' strategy, provide a much larger coefficient. Participants depend on their own domestic production as the source of feast goods. (This also provides an impetus to large families, large households, not found in Binumarien, where population density is low.) The ceiling on the amount that can be mobilized for a ceremonial event is set by the amount which can be extracted from the hosts' domestic units. But here the pressure on domestic units is intensified by festival requirements. The presence of the festival cycle is an important spur to production.

Elaborate exchange chains Strathern associates with a 'finance strategy.' Where these occur participants have, in addition to the products of their own domestic units, the production which is mobilized by dealings of credit and obligation between them. This sort of arrangement engages the labor of everyone, even the politically unambitious, at an increased level.

These three variations invite attention. Perhaps with societies of the Binumarien type as one of the points of reference we can more clearly see some of the system tendencies in the range of variation and devel-

opmental limits of political economies in CHNG. Clearly the economic and political variation are two aspects of the same behavioral phenomena. As Sahlins says, 'the structure is generalized.'

The following chapter turns more directly to the political aspect. While chapter two outlined the wider political organization in which Binumarien is fixed, the next chapter focuses on internal politics.

CHAPTER 5

Internal Politics

INTRODUCTION

This chapter deals with the internal politics of Binumarien. It begins by considering the engagement of Binumarien with a state form of organization. Then the general character of community order is described. Local cohesion is based on two things here: kinship and the form of authority. The remainder of the chapter concentrates on this form of authority.

Seven measures of relative prestige and influence are reported. Each of these provides a ranking of men. The seven rankings which are all different, are compared and shown to form two nearly independent but internally correlated clusters. This suggests that there are two distinct ways in which relative political status is counted here. One of them focuses on prestige and respect, and one more directly on influence. This duality is argued to demonstrate the rudimentariness of the big-man system in Binumarien. And this is in turn related to other features of organization and scale discussed in preceding chapters. The pattern of cooperation which characterizes big-men of standing is displayed and compared with that of other men. As with men in general, the cooperation of big-men of standing is associated with kinship distance.

Although its elaboration is rudimentary, this form of authority is critically important for the life of the system. And the importance of organizations of the Binumarien type in clarifying models of the evolution of 'centralized' from 'egalitarian' political systems is discussed.

BINUMARIEN AND THE STATE

Just as Binumarien is literally tied to the world market through the production of coffee and the importation of steel tools and other items, so it is also a part of a nation-state. At the time of this research, New Guinea was under the dominion of Australia. Binumarien 'eighteen and over' were taxed. This was a head tax of \$7 a year and the people were requesting its reduction since recent coffee prices had been very low. They had an elected representative in the Local Community Council, a very new system whose impact so far was negligible. The council was to meet at intervals and the representative from each community would report the government's messages back to their constituency. Binumarien were obliged to obey the laws of the government and were subject to justice under government courts. Warfare had been stopped, communities censused and stabilized. The order of the state had been introduced.

And yet the transition from a non-stratified, non-state society to literal political integration in a nation had not even touched local everyday politics. Disputes were still settled, community decisions still made, through the operation of a system quite unconnected with the state. The cessation of warfare made, of course, a radical difference in intercommunity relations. But within the community the mechanisms which resolved conflict, which prevented the prosecution of self-interest by force, which lead to community decisions, were not the mechanisms of a state society. They were the mechanisms of a kinship society, one which has "no specialized institutions of law and order" (Sahlins 1968:12).

THE CHARACTER OF BINUMARIEN SOCIAL ORDER

No one in Binumarien has the authority to compel the actions of another against his wish. There is no real demarcation here between the public and private sectors of life. Anything from a quarrel between husband and wife to a question of the ownership of a tree may be a matter for public discussion and decision, if a party to the problem wishes to seek redress. But a public decision is never forcibly carried out against the unwilling. This customary and non-legal aspect of public affairs was demonstrated clearly by a series of events which began only a few days after my arrival.

A young man (35) returned to Binumarien after two years contract labor on the coast. (Here this is uncommon practice and he and 6 are the only ones of their age group who have been away for so much as a year.) Just before he arrived his wife, 66, who had been left behind, had a baby - clearly not his. The day after his arrival everyone gathered in the center of Onikuradurana to deal with the matter. Discussion continued from early in the morning until well into the afternoon. Anyone who cared to was given a chance to speak but most of the speeches were given by men. The ultimate apparent consensus was that the father of the child should pay damages to the husband, and, since the husband said that he wanted no more to do with his wife, she would go to the child's father who was not married and was willing although not eager to have her. She protested rather quietly that she wanted to stay with her husband, but some suggested that the baby showed that her interest was not entirely on him. All in all, though things were a bit hard on the wife

and mother, at least they were less so than might have been expected. All were asked if they agreed with the decision and then the adult male kinsmen of those involved shook hands.

It was my first experience with a village court and, given my expectations about the treatment of women in CHNG, I was impressed with the democracy of the proceedings and the fairness of the final decision. The damages - \$30 - were contributed by some of the father's kinsmen and paid to the husband. (The men I was later to learn to expect as major participants in such public discussions as this did not stand out then at all. This may have been because the father of the baby [labeled A in the discussion of marriage exchange in chapter three] and 35 were 'step-brothers' and the step-mother of 35 and mother of A, 64, was currently the wife of 41, who, it will shortly appear, is a very big-man in the community. His ambiguity vis-a-vis the 'sides' of the issue may have kept others fairly silent as well.)

I assumed that the wife would gather her belongings and move to the house of A who lived with 64, his mother, and 41, his step-father, and two other children in Onikuradurana. At the time, 35 was staying with 21, his father's patrilineal parallel cousin who had become his 'surrogate father.' That night, the wife did not move, she and the baby and her two other young children remained in the house that belonged to her and 35. When I asked about it the next day I was told only that she would move when she was ready. Since I had seen the decision made I expected it to be executed and was puzzled. Several days went by and the woman remained in 35's house (although he stayed with 21). I continued to ask about it, waiting for some action, but

I got the same patient response - all things in their proper time.

Eleven days after the public court the wife got into a fight with another woman whom she accused of trying to entice her husband away and the day after this many people gathered in Ubandena where the wife lived, and, as the fight was discussed and the faults of both women enumerated, some young men and boys began to take some of the wife's belongings out of her (and 35's) house to get her moving underway. She protested this and the interchange between her and those raiding her house looked likely to get out of hand. Some of the raiders climbed to the roof of the house and began to pull down handfuls of the kunai thatch. Unable to stop them she cried that they could tear the house to the ground but that even then she wouldn't leave. She would stay in that place 'with no fire, with no protection from the rain.' She would not go to the father of her newborn child and she would not leave her home. One of the older men present suggested that the young raiders desist and others began to repeat the suggestion because 'anyone that determined could not be moved to change her mind.' This time she was told to 'go to Kainantu to talk to the government officers there; although they would probably send her to prison for what she had done.' The following day the wife, who had made no move to go to Kainantu, was told by the councilor (12) that this was not a matter for the government officers there, that this was a small matter and it was his business to deal with it. On such a matter his voice was the voice of government and he was telling her to leave her old husband and move in with the father of her last child who was to be her new husband. She, however, was unyielding and his final word was that if in a while her old husband still refused to take her back, then

she must go with the new husband.

This whole situation has two unusual aspects which should be noted: as mentioned above it is not usual for young men to go away from Binumarien for such long periods of time. In the thirties several men spent time working on the coast, but the practice was not continued after that - although a few young men have spent a few months away at mission schools. And second, the wife in the case, 66, was from the coast, i.e., she not only was not born in Binumarien or a neighboring group but she was not even a Highlander. This meant that the aid and support of close kinsmen was not available to her. (Although she was socially close to the 'mission,' the Finschhafen enclave, and classified as one of them by most Binumarien.) The distance between her natal home and Binumarien was just too great for her to even communicate her difficulty easily, let alone call for assistance. Isolated as she was, geographically and socially, the stress on her must have been immense and she finally reacted in a way which is customary for women in Binumarien - although her case was much more severe and long lasting than any others which occurred while I was there.

She began to behave inappropriately, to show what I assume are symptoms of anxiety hysteria. She sang loudly to herself, even in the middle of the night, and ran about aimlessly through the hamlet in which she lived and the one nearest it. She talked to herself continuously but did not respond to those who addressed her. The baby was taken by one of the Finschhafen women so that it might be fed and cared for and also to protect it from possible violent harm.

Three kinds of therapy were tried: medicinal - she was given special decoctions; shock - sections of bamboo were heated over a fire and then hit sharply on the ground behind her to produce a very loud noise; and 'neighborly' - she was offered tobacco, food, and condolence. The source of her condition was said to be the interference of a ghost who had taken her breath (soul?). If the ghost had had sexual relations with her - something no one could be sure of for the moment - then her case was hopeless and she would shortly die. If the ghost had only taken her breath (soul?) then in time she would recover.

Her condition persisted for several months during which she remained in the house of 35 - although he and their two children remained in the house of 21. There was some talk of taking her to Goroka to a hospital, but the husband, who was beginning to assume some responsibility for her, would be expected to go with her. And he decided against going since he might have to stay in Goroka some time and it was an alien place. Then she began to have some lucid periods and after almost nine months the affair trickled to an end. She and her old husband, 35, for whom she had fully demonstrated the strength of her attachment, were together, the baby was taken (I'm not sure how exactly) to the coast (with much lamentation from 64, its grandmother), and A, the baby's father was married to another woman - one who had not been married before.

This story is told at length because it shows so clearly - or did to me as I watched it unfold - that this is 'a system of men not of laws.' That, in addition to a 'domestic mode of production' Binumarien exhibits a 'domestic mode of order.' Here it is never 'the principle of

the thing' that matters because every situation is made up of extenuating circumstances. Just as familial tranquility is built on the priority of order over justice ('I don't care who started it. Johnny stop hitting your sister') so that those who are grumpier or stingier or touchier or less energetic receive more ebullient, generous, gentle, and active return from 'the rest of the family.' So, peace in Binumarien is built on tailoring expectations and evaluations of behavior to the individual characteristics and idiosyncracies of the people that one knows so well - and always in the context of the special series of events in which they occur. Small scale face-to-face societies have no room for standards of universal application.

This is not to suggest that Binumarien social order turns on tolerance. Certainly it does not. But here rights and wrongs, slights and offenses, are contextually defined. All members of the community are in some certain kinship relationship to all other members. And just as cooperation and sharing are patterned by kinship distance (see preceding chapter) so other appropriate behaviors are defined by those relationships. Here one does not choose to side with someone in a dispute on the merits of the argument. Instead one becomes a partisan or not, and on one side or the other, on the basis of one's relationship to the participants. Everything is contextually qualified by the relationships among the people involved.

In the account above the issue was not that the woman or the father of the baby had done something for which they should be punished, but rather that the relationships among the woman and her husband and the father of the baby had been disturbed. The solution to the problem was not

that 'Justice' - however swift and merciful - be done, but rather that relationships be reaffirmed or be altered to suit the new conditions.

Here when people accept the idiosyncracies of neighbors and are patient with the slow and tolerant of the shrill, it is nothing like in the spirit of charity - Christian or otherwise. In fact, it is precisely the contrary. Tolerance for its own sake would be viewed as a sign of weakness or infirmity. To say that someone has a hot temper is more often a compliment here than not. One is tolerant of close kinsmen not because of a value of tolerance, but because they are close kinsmen.

All this is the opposite of a legal apparatus which provides standards of - more or less - universal application. In fact, here the very idea of universal application is the opposite of morality. All this can certainly be overstated. But recent emphasis on 'the ethnography of law' has often served (cf. Pospisil 1958) to understate it to an extent which misleads.

The scale of things here and the face-to-face-ness of interaction also reduce the likelihood of certain kinds of potentially disruptive behavior. There is no anonymity, no escape to another city or another neighborhood, which makes theft, for example, a workable enterprise. A missing item would be visible to everyone if it turned up in the wrong hands. Discovery would be inevitable. The technological level also minimizes, if it does not eliminate, the utility of theft. Not only does everybody have more or less the same kinds of things in the same quantities (see Fig. 4.1 in the preceding chapter), but most of what one does not have he can make or easily acquire for himself. And the pay-off for

valuables is not so much in the having as in the giving away.

All this is not to suggest an idyllic tranquility. Intercommunity violence has been discussed, the flare-up of sexual jealousy noted as common, and there are many ways in which conflict occurs and must be resolved. Kinship sociability and morality plays against the underlying system tendency never directly visible but always shaping what is apparent. Sahlins says that, given the domestic mode of production, the ethic and etiquette of kinship conceals "a segmentary fragility that lends itself to and reverberates particular local causes of dispute, and in the absence of 'mechanisms for holding a growing community together' realizes and resolves the crisis by fission" (1972:98).

Although interpersonal kin ties counteract a tendency toward household dispersion, this form of interdependence can produce only a limited cohesion. To concentrate not a few but many households and a few hamlets, some mechanism beyond that of interpersonal kinship is necessary. As the last chapter showed, there are two organizational features which counter the underproductive tendency of the domestic mode of production, not just kinship but also the form of leadership. Here we see these two features again as antidotes to the tendency toward dispersion. The last chapter concentrated most on kinship, this one examines the form of authority.

BIG-MEN

In Binumarien there is a label faiqi firaafa which literally translates: big man. It is a label with nuances of meaning, among these is its use as a convention of polite reference for old men. It does not point to

a status which is ritually embellished or unambiguously marked and there is no act or event or set of them which changes a man into a big-man. And there is no commonly agreed upon set of men, all of whom and no others, are called big-men. This is also true for the label apeeka fasiqafa which literally means: strong man, and has an overlapping range of use. Fig.5.1 shows how these labels were accorded to Binumarien men by all other adults (excluding, as before, six women) - men and women.

These two status labels, faiqi firaaafa and apeeka fasiqafa, are to some degree interchangeable, but there are differences in shades of meaning which explain the use of both of them here. In certain contexts they are synonymous. One may refer to an old man respectfully as either a big-man or a strong man, although the former is more frequently used in this way. Each label additionally connotes the ideal personality type and position of a leader. But a younger man who carries out an impressive action, for example, giving an extraordinarily large contribution to a feast occasion, or delivering a powerful and moving oration, is most likely described as proving himself a strong man, apeeka fasiqafa. And for some individuals in certain contexts these labels may be contrasting, as, for example, 'he is a big-man, yes, but not a strong man.'

The fourteen men who are unambiguously classed as big-men and strong men by a clear majority of their fellows are the fourteen oldest men in Binumarien (they are listed in the table by birth order as established in chapter three). The two men who are in equivocal positions, 13 and 32, i.e., classed as big-men by some but not most others, are the two men next in age. More clearly than anything this suggestion of an age threshold shows the strength of the association between the appellation and age.

Figure 5.1

Attribution of labels apeeka fasiqafa and faiqi firaafa to each man

Man (ordered from youngest to oldest)	Number of adults who consider him a	
	strong man (n=83) <u>apeeka fasiqafa</u>	big-men (n=84) <u>faiqi firaafa</u>
25	0	0
31	0	0
19	0	0
6	0	0
15	1	0
2	2	0
17	0	0
38	1	0
8	0	0
16	0	0
40	0	0
23	1	0
18	0	0
35	0	0
39	1	1
29	0	0
10	3	4
28	0	1
37	3	1
5	3	1
27	5	1
33	3	1
34	2	2
13	26	23
32	39	48
7	68	72
22	69	77
12	73	78
4	48	75
1	69	79
20	52	74
3	71	82
41	83	84
11	67	74
24	69	78
30	77	84
21	77	84
93	74	82
26	75	84

But in spite of this use pattern, the characterization 'big-man' has many of the same connotations in Binumarien as it has in the anthropological stereotype: a man who is physically big, one who is strong, a hard worker, good hunter, a fierce fighter, courageous, aggressive, quick to anger, a wise man who speaks well, a man who is generous, and 'has a name.' Clearly age by itself is no guarantee of these attributes and so some men are 'truly big' while others are only nominal big-men. But there is no label or title or unique descriptive for such truly big-men, and they are locally conceived as only primus inter pares.

Unlike the 'potlatch version' of the big-man model suggested by Sahlins (1963), big-men do not compete for a following here. Nor do they, at least in any dramatic or overt way, compete for prestige. There is not a big-man to represent the community to outsiders (although this, and necessarily much else, may change if the village council system becomes politically effective). Nor are there big-men to represent groups within Binumarien to or against each other.

Hierarchy

A formal illustration of this lack of a tidy leadership hierarchy appears in the graph built on the relation which literally translates 'goes above' but which certainly does not mean 'better than' or 'boss of' or anything so invidious. Perhaps the best way to gloss it is 'makes decisions which I follow' or, for brevity, 'advises.' This allows in English the Binumarien sense that some individuals may mutually 'go above' each other, i.e., may each 'make decisions which the other follows' but

at the same time other individuals will not 'go above' anyone, i.e., will not 'make decisions which others follow,' will 'advise' no one. The relation is non-symmetric.

One man is considered to advise another if the second man reports that he is advised by the first, i.e., the form of the question used to collect this data was as 'does he go above you?' The matrix (Fig.5.2) shows this relation in the form suggested by the verb 'advises,' i.e., each column contains the cumulative reports of one man, while the rows show the total reports of all other men on the man defined by the row number. The data in the matrix is to be read so that the row number gives the advisor and the column number gives the advisee. The outdegree, i.e., the number of positive entries in a row, is most useful here since it is the sum of reports from all other men while the indegree, i.e., the column's total, is the sum of the reports of one man only.

The matrix (Fig.5.2) is ordered by relative age. Here again, the significance of this dimension is evident. The outdegree of the points shows a clear correlation with relative age, but not a directly proportional one. For fairly young men - all those who are not counted as big-men by any significant number of others - the outdegree or the number of men that such a young man advises is small, usually zero. For the two men who are on the 'threshold' of big-man status - at least for polite reference - this number jumps way up, and for the fourteen big-men it jumps markedly again; (4 is the old man who just moved to Binumarien and in some ways is still an outsider; 10, although a relatively young man, is a Komiti). The ordering within the categories is not a direct match

with relative age, but the category boundaries are. (The middle one is too small to generalize about. Probably because it is not really a category but a residual intermediate for the two men who are neither quite young men nor old men yet.)

The graph which this matrix can represent provides a demonstration of some of the properties of leadership in Binumarien. The fourteen men who are unambiguously labeled big-men, and who have the highest outdegrees (again excepting the outdegree of 4), and who are the fourteen oldest men in the community, form a strong component in the digraph. That means that it is possible to move along the advises relation, leaving a man for his advisee, and find steps which return to the first man. There is no one big-man at the top with his 'lieutenants' below him. Nor is there a set of big-men at the top who each advise a set of others but are themselves advised by no one.

But it is these big-men exclusively who form the strong component. If the graph is condensed, that is, if strong components are represented as single points only (since reaching any point of such a component means that they are all reachable) what remains is an 'acyclic digraph' - a digraph with no cycles - so that once you leave a point you cannot return to it; there is no path back. In this case the only strong component is the set of fourteen big-men. The twenty-five remaining men are all directly advised by the set of big-men. The big-men 'make decisions which others follow' but not vice versa. Advice passes down but not up.

The hierarchical structure of this digraph is very shallow, each of

the 'non big-men' is directly adjacent from the big-man component - there is no chain of command here.

This system is different from those conventionally described as 'hierarchical' or 'pyramidal.' The contrast is more than that between achievement and ascription. And here leadership positions are not attained through a kind of competition which requires a leader to be ever vigilant and defensive of his status against rivals, by such means as continual competitive feasting (which does not occur). Nor must a big-man be careful of his obligation to his followers lest they defect to another (which does not happen). It is not just the manner of recruitment to statuses within the system nor the manner in which such statuses are maintained which distinguishes the leader-follower arrangements in Binumarien from the leader-follower arrangements in 'chiefly' or 'pyramidal' organizations. It is the very structure of the arrangements that contrast.

Each leader does not have an exclusive group of followers. Nor is the arrangement 'segmentary' in the sense that the occupant of a leadership position is defined by his relations to a group of followers at the operative level of inclusion (i.e., where 'grandfather's brother' being, say, the oldest of the patriline is the leader, except when it's our side against his side and then 'grandfather' leads our side against his brother's side).

In Binumarien leader-follower relations are simply interpersonal dyads. There are no groups of followers. And participation in one leader-follower dyad does not restrict participation in others. Here there is no "coterie of loyal, lesser men" (Sahlins 1963:289). Followers

cannot be exploited because they do not form a group and so cannot be concerned for their own standing or security in the public achievement of a leader. Leader-follower relations are two-sided, they are personal, they are between individuals, not within groups.

Communication Among Big-Men

Within the set of fourteen big-men the organization of regular communication is of special importance. Public decisions are made in public discussion. Ideally, this happens when consensus is reached but more often with general, if not complete, acquiescence among those most directly concerned in the issue. Any adult, though women speak rarely, may participate.

One of the most important political functions that big-men perform is in affecting these public discussions and shaping resultant courses of action. The discussions are of two general types. First there may be some sort of wrong to be righted, amended, or recompensed, e.g., a physical injury, garden damage by another's pig, disputed ownership of a tree. Or second there may be some sort of community action to be organized, e.g., a feast, a dispute over boundaries with a neighboring community.

Although public discussions or 'courts' are always the setting for such activities, much discussion - probably the most significant - occurs in fairly casual intercourse and gossip before these courts. It is mostly in this way that big-men influence each other and also gauge general

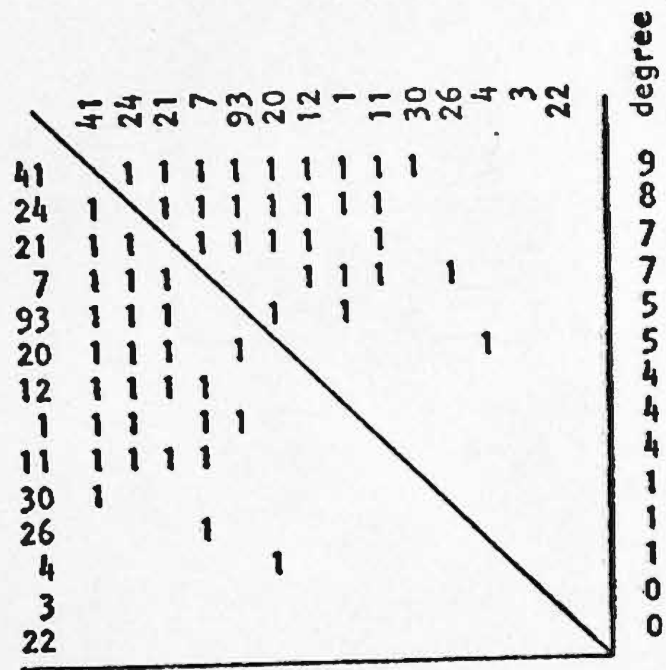
opinion. A reputation for wisdom is based on directing and persuasively backing the proper settlement of issues debated in these discussions. (Although men may fail to involve themselves, and be approved for such action, when it is a dispute between two of their close kinsmen which is debated publically.)

For these reasons the communication network among big-men is of special importance. Those men who habitually place themselves strategically in such a network to be fully informed of and to influence the thinking of their colleagues are the men who will have the strongest affect on public affairs.

A graph of the relation 'habitually consults' was derived as follows: each individual was asked to report 'does he habitually talk to you (of important things)?'; two adults are considered to 'habitually consult' each other if each, independently, affirmed this behavior of the other.

The matrix displaying this graph over big-men is shown in Fig.5.3. Following it is the distance matrix (Fig.5.4), calculated from the adjacency matrix of the graph so that the entries in the cells show the distance, i.e., the number of steps in the shortest path between points which define the cell. A 1 is entered if they are directly adjacent, 2 if there is one intervening point, and so on. All the entries in the last two rows and columns are infinity since these men are isolates, they habitually consult with no one else in this set and so they are not reachable from any other point, i.e., the distance between them and the other points is infinite.

Figure 5.3 - The relation 'habitually consults' among big-men



Adjacency Matrix
on 'consults' relation

Figure 5.4 - The relation 'habitually consults' among big-men

	41	24	21	7	93	20	12	1	11	30	26	4	3	22	number (maximum distance to reachable point)	total distance to all reachable points
41		1	1	1	1	1	1	1	1	1	2	2	8	8	2	13
24	1		1	1	1	1	1	1	1	2	2	2	8	8	2	14
21	1	1		1	1	1	1	2	1	2	2	2	8	8	2	15
7	1	1	1		2	2	1	1	1	2	1	3	8	8	3	16
93	1	1	1	2		1	2	1	2	2	3	2	8	8	3	18
20	1	1	1	2	1		2	2	2	2	3	1	8	8	3	18
12	1	1	1	1	2	2		2	2	2	2	3	8	8	3	19
1	1	1	2	1	1	2	2		2	2	2	3	8	8	3	19
11	1	1	1	1	2	2	2	2		2	2	3	8	8	3	19
30	1	2	2	2	2	2	2	2	2		3	3	8	8	3	23
26	2	2	2	1	3	3	2	2	2	3		4	8	8	4	26
4	2	2	2	3	2	1	3	3	3	3	4		8	8	4	28
3	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞		∞	1	1
22	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞	∞		1	1

Distance Matrix
on 'consults' relation

The rows and columns in the matrix in Fig.5.3 are ordered from the highest to lowest degree, the point (man) appearing first, top and left, has the highest degree, i.e., is directly adjacent to the largest number of points, which means he directly consults with the greatest number of his colleagues. This order of the points maintained for the distance matrix also shows decreasing centrality or increasing peripherality. Centrality can be measured in two different ways. First it can be measured in terms of the associated number of a point. The associated number is the longest distance between a point and any other reachable point in the set. Isolates are not reachable. Those points with smaller associated numbers are more central than those with larger associated numbers. The central point, or points, is the one with the lowest associated number. Second, centrality can be measured in terms of the total distance from a point to all other reachable points, i.e., the sum of the shortest paths which are the entries in the distance matrix (Harary 1959; Pitts 1965)

Centrality is important here since it tells us something about the effectiveness with which a man transmits opinion and receives information. Each intermediary has his own interests and his own view of any matter. This will constrain the influence he brings to bear and his interpretation of other views. The fewer the intermediaries the more effective the transmission of the message between two men. The more clearly they understand each other's position the more strongly they can exert influence.

The second measure of centrality provides a more complete (though still partial) order of the points. It provides the most information about the relative influence of big-men on community decisions.

Five ways in which relative social standing in Binumarien can be measured have been discussed. They are 1) the number of times a man is labeled a big-man by other Binumarien adults, 2) the number of times a man is labeled a strong man by other Binumarien adults, 3) relative age, 4) the number of other adult men a man 'goes above' or 'advises,' and 5) a man's relative centrality in the network of influence and communication among big-men.

Production Relations

There are two other important measures to be considered. In the last chapter the wide range in number of habitual cooperation relations which men have was noted and argued to be associated with variations in political standing. The fourteen men who are unambiguously labeled big-men and strong men can be ranked according to the number of relations of cooperation which they have. Since the bimodal pattern associated with activities which allow labor investing for political return is associated with three activities: raising pigs, building new gardens, and garden maintenance (see Figs. 4.3, 7, 9, in the preceding chapter), these activities are used as a basis for ranking. A single index can be constructed by summing a man's degree on each of these activities. These scores can then be ranked. These relations of cooperation have political importance in two ways. First they may be considered potential avenues of influence. And second they indicate increments of labor expended and so increments of product. More goods mean increasing generosity and "generosity creates leadership by

creating followership" (Sahlins 1968:88).

There is another calculation which can be made from the same data. It is not independent of the index just discussed but it is different and it does focus on an aspect of special importance. Although all the relations of cooperation which a man has are of significance, the ones which extend outside his own hamlet may be especially important for his political status in the community. These are the ties which may give him wide-ranging influence and they may reflect more clearly his community standing and ambitions. These ties are especially critical in Binumarien because in the absence of corporate groups to define an extended solidarity, some arrangement is needed to bolster the allegiances of ego-centric kinship. These latter ties based on ego-centric connection are fragile because they are individual rather than group concerns, and because one tie is not necessarily reinforced by a set of ties running in parallel. The cooperation relations which men of ambition have outside their own hamlet are ties which lace the community together. Some of these are ties with quite distant kinsmen. As Sahlins has pointed out, the regular relationship between kinship distance and cooperation discussed in the last chapter is distorted by features of 'rank.' Ambitious men cooperate not only more, but more widely than do ordinary men. This last tendency is approximately measured by ranking men on the number of cooperation relations which they have outside their own hamlet.

Watson's comments about the political aspect of such relations in the Tairora-speaking community of Abiera apply here.

The network of an individual may be large or small. One could devise more refined measures for such a network, such as spatial range of the network, frequency or intensity of interaction, and possibly a scale of different kinds of interaction The network of an influential man ... involves relations with members of more divisions and with more members of a given division, as a rule, than that of a man of small influence ([1967] 1971:259).

Seven Measures

We have then seven measures of the relative standing of men. Each of these measures indicates something slightly different about a man's social position. The rankings are displayed in Fig.5.5 for the fourteen men most generally agreed to be big-men.

The number of Binumarien who accord the label big-man to someone provides a ranking which tells us something about a man's relative local prestige. It depends first on age but then other factors, other personal characteristics seem to be considered.

The rank on number of Binumarien who accord someone the label strong man again tells us something about local opinions of a man's qualities. This also varies first with age but then other factors of personal identity are involved.

A rank on the number of men whom a man 'goes above' tells us the number of men who are regularly influenced as individuals by his advice and direction. Yet this is not the same as a man's community influence, and this is in no sense the size of his 'following,' for a single man is advised by many men.

Figure 5.5

Values and ranks of 'big-men' on seven relative status measures

Man	home hamlet*	number of times classed big-man	rank	number of times classed strong man	rank	number of men he 'goes above'	rank	total distance to other 'big-men' on consults relation	rank	number of cooperation relations: pigs plus new gardens plus garden work	rank	number of cooperation relations outside home hamlet	rank	age rank (oldest to youngest)
41	M, O	84	2.5	83	1	37	2.5	13	1	61	1	22**	2**	7
21	U	84	2.5	77	2.5	38	1	15	3.5	45	2	25	1	3
30	M	84	2.5	77	2.5	37	2.5	23	10	24	9	9	9	4
26	U	84	2.5	75	4	35	4	26	11	10	11	4	11	1
93	O	82	5.5	74	5	26	11	18	5.5	33	4	12	5.5	2
3	U	82	5.5	71	7	27	9.5	8	13.5	9	12	1	12	8
1	O	79	7	69	9	28	7	19	8	20	10	6	10	10
24	O	78	8.5	69	9	27	9.5	14	2	36	3	15	3	5
12	O	78	8.5	73	6	31	5	19	8	26	6	11	7.5	12
22	U	77	10	69	9	28	7	8	13.5	2	14	0	13.5	13
4	U	75	11	48	14	12	14	28	12	5	13	0	13.5	11
20	U	74	12.5	52	13	23	13	18	5.5	25	7.5	11	7.5	9
11	O	74	12.5	67	12	24	12	19	8	29	5	13	4	6
7	U	72	14	68	11	28	7	16	3.5	25	7.5	12	5.5	14

* M = Maqeaanoona, O = Onikuradurana, U = Ubandena

** 41 is the only man with dual hamlet residence, this, of course, drastically reduces the number of cooperation ties he can have 'outside his home hamlet'

Ranking on the distance a man's opinions tend to travel to reach all other big-men and the distance their opinions must travel to reach him is an index of a man's relative influence on and intelligence about the old men of the community. This is probably the best index of a man's influence on community decisions.

The number of cooperation relations a man has provides a ranking which tells us directly about his productive industry and indirectly about his generosity.

The ranking based on numbers of cooperation relations outside a man's own hamlet is perhaps the best index of his wider political ambition, not just to be known for hard work and generosity but to be widely known for those qualities.

Each of the seven measures provides a ranking of men and none of the seven rankings is precisely the same. That need not mean, however, that leadership, influence, prestige, and so on, are situationally defined, varying from context to context. If the rank order established for each of these seven measures is correlated with all the others, an important pattern emerges. Consider Fig. 5.6. This is a matrix display of the Spearman's r values for the correlation of all pairs of ranks. Although all the rankings are different, the seven measures can be divided into two sets which show strong correlations internally but with minimal or non-significant correlations between them. This suggests that there are two distinct, independent bundles of features which are relevant to political standing in Binumarien. One of these bundles underlies and directs the ranking of men on some of these measures. The other bundle

Figure 5.6




Correlations between seven measures of relative status

	strong	big	advises	age	consults	out of hamlet	degree cooperation
times classed strong man		.92	.84	.57	.22	.33	.40
times classed big-man			.77	.69	.04	.13	.23
number of men advises				.29	.22	.29	.27
rank by age					.18	.36	.46
centrality on consults						.91	.90
degree out of own hamlet							.97
degree, cooperation							

entries are Spearman's r

(+1 = perfect positive correlation)
 (0 = no relation)
 (-1 = perfect negative correlation)

for these data values of

greater than or equal to .441 significant at .05 greater than or equal to .623 significant at .01 greater than or equal to .802 significant at .001 

underlies and directs ranking on the rest of the measures.

Personal Characteristics

The rankings of the first four measures are significantly associated with each other for all but one pair at least at the .05 level. These four measures are 1) the number of Binumarien who label a man a strong man, 2) the number of Binumarien who label a man a big-man, 3) the number of men whom a man 'goes above' or 'advises,' and 4) relative age. These four ranks can be paired six ways. The only one of the six pairs which is not significantly associated is the ranking by age with the ranking by 'goes above.' But each of these two rankings are significantly associated with the other two rankings, i.e., rank by times labeled a strong man and rank by times labeled a big-man.

The bundle of features which underly these rankings seem to be, first, of course, age, and then a set of features which, like age, have less to do with political actions and activities than with other things. Rather than the things a man does to gain or hold a position of leadership these rankings seem to have more to do with attributes and ties a man has or does not have, positions he is in, no matter what his political activity and ambition.

These are things like the number of senior and junior close kinsmen a man has. For example, 7's father, 26, is still alive which prevents him from being in a truly senior position and so lowers his rank. And 3 is the oldest living member of a remarkably prolific family (see chapter three) which underlines his seniority and so raises his rank.

Another variable here is origins. For example, 4 is an outsider only just moved to Binumarien; 93 and 24 came to Binumarien from elsewhere. And so, the relative ranks of these men are reduced.

Another factor is personality. The ranks of 20, an eternal clown, and 11, a very shy man, are lowered due to these character traits.

And finally, positions a man holds in social arrangements not traditionally Binumarien affect his standing according to these measures. The last lulual, following his father before him, was 12. He is now the Binumarien member of the Kainantu village council, and by virtue of that position he is the 'government's representative' in Binumarien. As a result, his rank is raised. The cook and housekeeper for the Oatridges, the family affiliated with the Summer Institute of Linguistics, who have a house in Binumarien and spend several months a year there, is 30. He dispenses medicine from their store when they are away. And so his status is elevated. One of the offices of Komiti is held by 22. This is a government position and his duty is to 'enforce' the rules of the government reported by the councilor. He, 22, is also active in the mission, holding a position in the church. These positions affect the ranking.

Such features are all more like personal characteristics than like personal achievements. They have more to do with what a man 'is' than 'what he does.' They all indicate that certain degrees of respect are appropriate (or inappropriate).

Reputation for Achievement

The other three measures rank men by industry, action, activity. They rank a man by what he does. They are all derived directly from activities: cooperation in production, relations of cooperation outside one's own hamlet, distance in a network of communication from other big-men based on a map of who consults regularly with whom on important matters. Ranking here is established on the basis of action. For these measures high rank comes from achievement. Inherent qualities of age or personality, situational features, or accidents of fertility and longevity are not decisive for a man's rank on these indicators. Standing is achieved, not ascribed. It is self-created, a consequence of ambitious industry and accomplishment.

Implications

There seem to be two independent sets of criteria for evaluating a man's relative standing. The presence of these two different standards of evaluation emphasizes the rudimentariness of Binumarien big-men form of leadership. Strathern (1971) shows that the label 'big-man' is not applied by courtesy to all old men in Melpa. There the second kind of criteria are clearly dominant. In Melpa, a man's standing depends directly on what he does. Personal characteristics are significant for political standing there only to the extent that they facilitate politically appropriate behaviors. The attributes alone don't count. There are no nominal big-men.

The big-man status is rudimentary in Binumarien. Achievement and

generosity are rewarded with prestige, influence, authority. There are big-men of standing,' truly big-men. But prestige comes also in other ways. There are nominal big-men as well. Men whose age and other affiliations suggest they be accorded respect. It seems clear that the rudimentary development of the big-man status here is systematically connected to general features of Binumarien social organization. The size of the political arena is very limiting. Ambitious men in Binumarien have no intercommunity network of competitive feasting or exchange to manipulate. This means that the amount of disparity between big-men of standing and others is limited.

The findings of Wirsing's recent cross-cultural study are relevant here. He says "that the degree of power maximal political authorities can exert is a function of the number of hierarchically structured political teams within a political system" (1973:163).

When a society ... becomes more complex, primary groups, [i.e., the smallest superfamilial territorial units] tend to become politically integrated with a concomitant increase in the power of the maximal political authority. One reason for this increase may be the social and territorial distance that has been created between highest authorities and subordinates (Wirsing 1973:157).

In other words, the scale of the system places limits on the possible differentiation between leaders and others, and so in Binumarien it limits the elaboration of leadership statuses.

Four Men

There are four men of special interest here because of the way they are ranked. Holding the top rank on four of the seven measures is 41.

He is near the middle of the 'big-men' in age, ranks second on relations of cooperation in production outside his own hamlet because he is the only man who is resident in two hamlets, and is just barely outranked by 21 in the number of men he 'goes above.' If Binumarlen were asked 'who is their big-man,' I have no doubt he would be named by the vast majority. In the top three ranks on all the measures and in the top two on five of them, is 21. He is clearly outstanding. Also of interest is 24, because he ranks in the top three on three of the measures and yet is much lower on the others. Finally, 12 is of special interest because he is the one man who holds the official position which the government defines as that of community authority. He is the councilor.

The Councilor, 12

The councilor, 12, gains prestige from his current position and from the fact that he was the last lulual. Binumarlen still refer to and address him by that title. His father, Firla, held the position of lulual before him. Firla was probably a much stronger personality than his son but even during his tenure 41 was a more effective leader. He, 41, had worked on the coast, learned Neo-Melanesian, and was the major force in returning the Binumarlen from their scatter, largely to exile in the Markham after the government took away most of their fighting men in the 30's. He had been given the office, the 'hat,' of tultul by the government officers. And although tultuls were, in theory, to be executives working at the direction of luluals, this was more or less reversed in Binumarlen. There is a note in the 47/48 patrol report K4 of Officer H. H. Jackson that the Binumarlen tultul 'has become a

meddler in everybody's affairs and even travels through neighboring villages attempting to be a kind of paramount lulual" (1947/48:8). When Firia died, his son, 12, was given the lulual's hat, and later the position of village councilor. He is more a 'quiet intellectual' than a man of action. He has learned to read Kâte, the Finschhafen language, which is used by the Black Lutheran Mission. He is respected for his accomplishments and his position but he is not considered a man of great practical wisdom and it is not to him, but other big-men, most often 41, to whom people usually turn for the settlement of difficulties.

The Blondest Big-Man, 41

In every way, 41 is an exceptional man. When he was very young he realized the inevitability of the white encroachment and he contracted to work for the white man on the coast. He was one of the first to learn Neo-Melanesian and when he returned to the Highlands he worked as a carrier, a hunter, and a translator for patrol officers. He is a 'man with a name.' When two men from Mendi came to visit Binumarien in search of feathers, they came asking to see 41. He is not only a man of physical strength and wit but he has a local reputation for generosity and concern for the welfare of others. Even women and children come to see him when they are troubled.

An Old Man of Standing, 21

I did not know 21 well. Unlike most other men in Binumarien, he does not speak Neo-Melanesian. His local stature is entirely dependent on his

old reputation as a fighter and on his patterns of behavior almost entirely within the traditional bounds of Binumarien social action. He cannot talk directly to any of the government's men or any other outsider and yet - because the system does retain its integrity in spite of the end of fighting and the length of contact - he is a very important man of standing. He and 41 are quite close - they are traceable kinsmen (41's matrilineal grandfather's brother was 21's patrilineal grandfather) and this is to the benefit of both: this is not a system of competition between big-men of standing. But in spite of his apparent conservatism, 21 is involved with the mission and holds a position in the church. On the other hand, 41 remains wary of the mission and unconvinced of its teachings.

An Old Outsider, 24

Although 12, 41, and 21 were born and raised among others of the Binumarien community, 24 is a late-comer. He came to Binumarien with his wife, 49, as a refugee from Omama when that community was destroyed in war. In spite of this he is a big-man of standing. Although he speaks fluent Neo-Melanesian - unlike 21 - he is the most antagonistic of the three to whites. Although he was always quite civil to me, he often made it clear that 'different skins' laid down an inviolable barrier.

The Status of Big-Man and Wealth

Big-men of standing in Binumarien are not wealthy. As Fig.4.1 in chapter four shows, variations of wealth are not significant in Binumarien.

Here there are neither rich nor poor. That figure shows the distribution of personal property items in the community. It clearly indicates that the variation is not only low, but that where variation does occur it is not correlated with community status. Big-men are not rich nor are they the richest. This property census was carried out during one continuous period. Numbers of everything, perhaps especially pigs, fluctuate a great deal. But there is no pig cycle and the fluctuations are individual, not patterned in common for the whole community. The particulars of the distribution change but not its general character.

Hard Work and Generosity

The defining importance of hard work and generosity for the status of true big-men is emphasized in the way big-men from 'before' are described. Attributes like fierceness are often mentioned and great size is usually emphasized (and often lightness of skin). But always distinguishing features are labor-investing (and the physical vigor and stature to allow this), and the generosity which results. This was underscored by the praise given to one old woman. She was well past her prime and had a frail look about her, compounded by a palsy which gave her the head and hand tremors of the very old. I was amazed at her physical strength, the incredibly large loads I often saw her carry, and expressed my wonder to 41. He told me that, since the death of her husband many years ago, she had been extremely independent, refusing to marry the men who tried to claim her. He said that she was like a truly big-man in the rich size of her contributions to community feasts and her regular sizeable participation in marriage exchanges.

Generosity is emphasized in the occasional imbalance of exchanges, where the individual of higher standing or greater ambition accepts a smaller return or offers an unusually large one. This same asymmetry is indicated in the behavior of a host at his feast. He provides lavish amounts of food, if it is in excess of the consumption capacities of the guests all the better. But he does not himself eat much, and then only some vegetables. At the same time, late arrival and lack of eagerness to eat are the best manners for the guests. It would be most improper for anyone to attend two feasts in the same day or to eat meat twice in one day. But aside from the etiquette of feasts there is no rule about eating one's own pigs here. In fact, one woman (70) refused absolutely to ever eat any beef, or any pigs other than her own. She maintained that she could only eat an animal whose face she knew.

Big-Men and Kinship

If we examined the cooperation relations of all men on the three activities which show the bimodal pattern of differential labor investing: caring for pigs, building new gardens, and garden maintenance (Figs. 4.2, 3, 6, 7, 8, 9) we see that it is not only some of the men labeled 'big-men' who are in the labor investing half of the distribution. There are some younger men as well.

There are 12 men who are labor investing, i.e., with more than the mean number of cooperation relations in Figs. 4.3, 7, 9, chapter 4, on all three activities. Seven of these are big-men, the big-men of standing, 41, 21, 24, 11, 93, 12, 30. All of the remaining are close kinsmen of these seven labor investing big-men. They are all sons: 38 and 33 are sons of 41;

19 and 23 are sons of 30; 2 is the son of 93. In addition to being the sons of 30, who, though labor-investing, ranks relatively low on it, the two men 19 and 23 are affected by their close ties to 41 with whom they are moodaa oosana (see the two preceding chapters). Strathern speaking of the development of big-men in Helpa where Moka exchanges are critical, makes a suggestion which fits here. He says that fathers do not "ever elaborately teach or train their sons to become big-men; It is a matter of emulation and personal ability. What we can perhaps suggest is that a big-man stimulates others" (1971:211).

There is a kind of devolution amplification at work in the system. It operates to increase the difference between sets of labor investors and those who are non-investing. But because of the scale of the system and the absence of arrangements like competitive feasts or ritual exchanges the disparity between labor investors and others has a built-in ceiling. Nevertheless, this impetus to work, to cooperate, to share provided by the kinship proximity of labor investing big-men is an additional way in which this form of authority counteracts tendencies to underproduction and dispersion in the infrastructure of the system.

The form of leadership in Binumarien takes its character from the kinship base which shapes all aspects of social organization. "The structure is generalized" (Sahlins 1968:15). A big-man of standing does not carry out actions which distinguish him qualitatively from other people, rather he is "a paragon among kinsmen" (Sahlins 1972:133). "Insofar as the society is committed to kin relationships, morally it is committed to generosity; whoever, therefore, is liberal automatically merits the general esteem" (Sahlins 1972:133).

Big-men of standing cooperate more and more widely than do ordinary men. It is not the cooperation itself but rather its intensity which is extraordinary. The last chapter showed that kinship distance is an excellent predictor of the probability of cooperation between men in general. Since the difference between the cooperation patterns of big-men of standing and other men is not a qualitative but rather a quantitative one, the general pattern holds for big-men of standing as well. Again, the three cooperation relations which display the bimodal tendency, cooperation in raising pigs, cooperation in building new gardens, and garden maintenance, are used to demonstrate this pattern (Fig.5.7). The correlation coefficients are as high for the seven big-men of standing as they are for men in general (Fig.5.8).

But there is a difference between the cooperation patterns of big-men of standing and other men. They cooperate with more other people and they cooperate with more distant kin. As Sahlins has pointed out:

Kinship distance, while perhaps significant is not decisive. Something may be said for rank ... It is useful to isolate and separately consider these factors ... But with this proviso: propositions about the covariation of kinship distance or of kinship rank and reciprocity may be argued separately, even validated separately ... but the propositions do not present themselves separately in fact (1972:205).

Political standing makes a difference in the effect of kinship distance. This difference is illustrated by the comparison of two regression lines, one drawn to best fit the association between the ratio of cooperating pairs involving big-men of standing and kinship distance, and one drawn to best fit the association between the ratio of cooperating pairs involving only other men and kinship distance. Only the interval scale, categories 0 - 6 allows the assumption of a straight line as the

Figure 5.7 - Cooperation by kin categories, big-men distinguished from other men

	Ordinal Scale										
	Interval Scale								more distant consanguine	putative consanguine	other
	total pairs	self pairs 0	father/ son 1	brother 2	father-/ son-in-law 3	brothers- in-law 4	uncle/ nephew 5	cousin 6			
total pairs	741+39*	39	22	15	14	23	5**	25	83	28	526
total pairs involving big-men of standing	245+ 7	7	11	-**	7	3	1**	3	30	6	165
total pairs other men	496+32	32	11	15	7	20	4**	22	53	22	361

* 741 diverse pairs plus 39 self-pairs

** because of the small entries these are ignored in the calculation

Figure 5.7 (continued)

		Ordinal Scale											
		Interval Scale											
		total pairs	self 0 pairs	father/ 1 son	brother 2	father-/ 3 son-in-law	brothers- 4 in-law	uncle/ 5 nephew	cousin 6	more dist. 7 consang.	putative 8 consang.	9 other	
pairs who raise pigs	big-men of standing	52+ 7*	7	9	-**	4	1**	-**	1**	15	2	20	
	ratio		1.00	.82		.57	.33**		.33**	.50	.33	.12	
	other men	37+32	31	7	6	2	3	-**	3	5	4	7	
	ratio		.97	.64	.40	.29	.15		.14	.09	.18	.02	
pairs who build new gardens	big-men of standing	65+ 7	7	10	-**	4	1**	1**	1**	16	3	11	
	ratio		1.00	.91		.57	.33**	1.00**	.33**	.47	.50	.07	
	other men	57+32	32	10	7	1**	11	1**	5	12	6	24	
	ratio		1.00	.91	.47	.14**	.55	.25**	.23	.28	.27	.07	
pairs who main- tain gardens	big-men of standing	83+ 7	7	10	-**	7	1**	-**	2	12	2	49	
	ratio		1.00	.91		1.00	.33**		.66	.40	.33	.30	
	other men	100+32	32	8	10	1**	12	-**	10	18	5	36	
	ratio		1.00	.73	.67	.14**	.52		.45	.34	.23	.10	

* 52 diverse pairs plus 7 self-pairs

** because of the small entries these are ignored in the calculation

Figure 5.8 - Correlation between ratio of cooperating pairs and kinship distance, big-men contrasted with other men

		product-moment correlation for categories 0 - 6 Pearson's r	rank order correlation for categories 0 - 9 Spearman's r
cooperation in raising pigs	Big-men of standing	-.995	.94
	Other men	-.91	.90
cooperation in building new gardens	Big-men of standing	-.99	.86
	Other men	-.91	.90
cooperation in garden maintenance	Big-men of standing	-.83	.94
	Other men	-.93	1.00

best fitting curve, and so only these ratios are used in the calculation of the least-squares lines. The Figs. 5.9a, b, c show such a pair of lines calculated for each of the politically significant production activities.

These pairs of lines can be compared by slope and by elevation. The slopes of the lines indicate the way in which kinship distance affects the probability of cooperation. As inspection suggests, and the t ratios confirm, the slopes of the lines do not differ significantly for a given activity. An increment of kinship distance makes about the same amount of difference in the probability of cooperation for big-men of standing as it does for ordinary men. However, inspection shows a difference in elevation which is partially confirmed by the t statistics. While the elevations of the lines do not differ significantly for cooperation in building new gardens, the difference approaches significance for cooperation in raising pigs and is clearly significant for cooperation in garden maintenance. The heights of the regression lines indicate the probable amount of cooperation per distance category. Higher regression lines calculated for big-men of standing show that they cooperate more, with more close kinsmen, with more distant kinsmen, with kinsmen at a greater distance, than do ordinary men.

The similarity of the slopes emphasizes that kinship distance plays a central role in organizing cooperation. But other variables, like political status, affect the probability of cooperation as well. Big-men of standing cooperate more and more widely among their kinsmen than do other men. (This has the evolutionary implication that increasing differences of rank are associated with increasing numbers and breadth of sharing and cooperation relations, which, in turn, are associated with higher levels of production.)

Figure 5.9

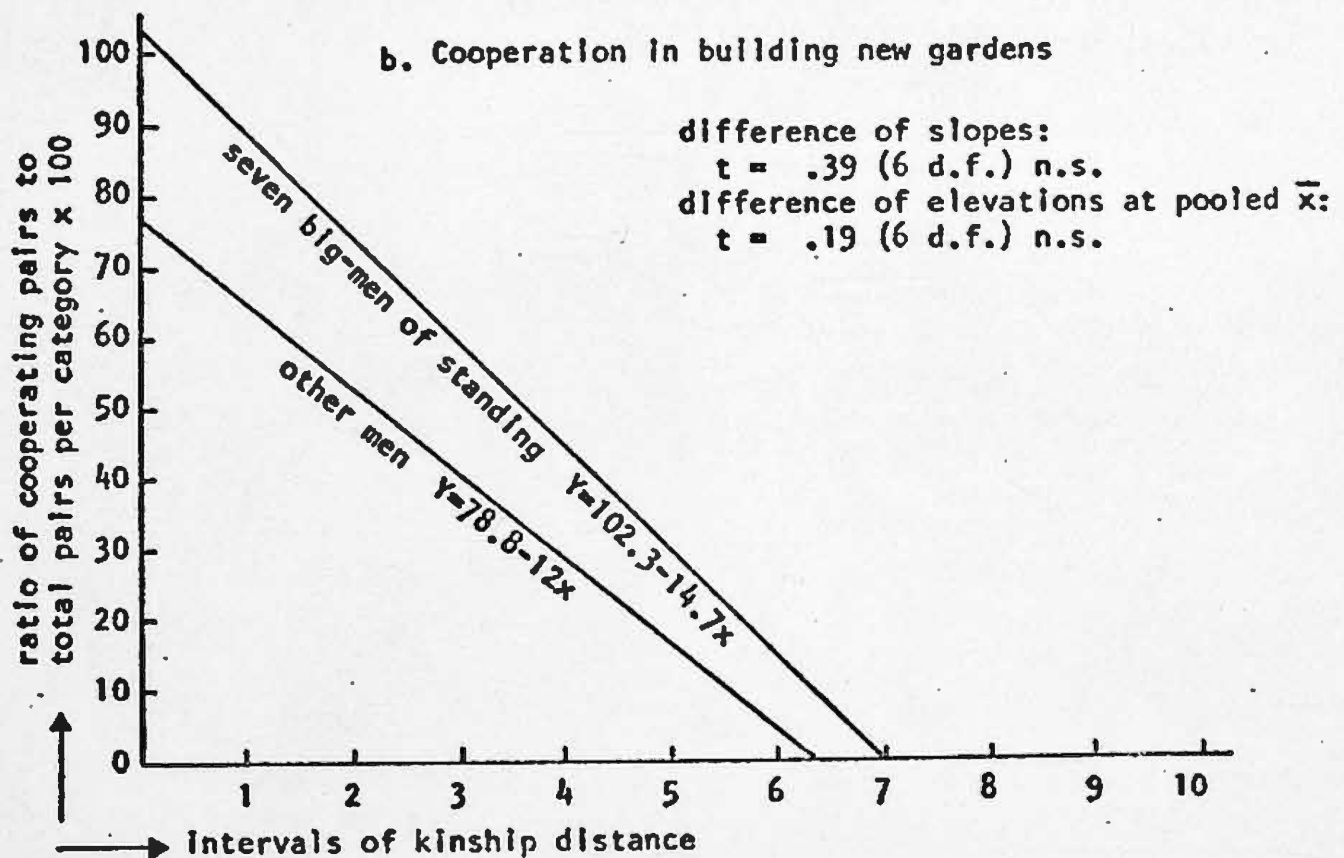
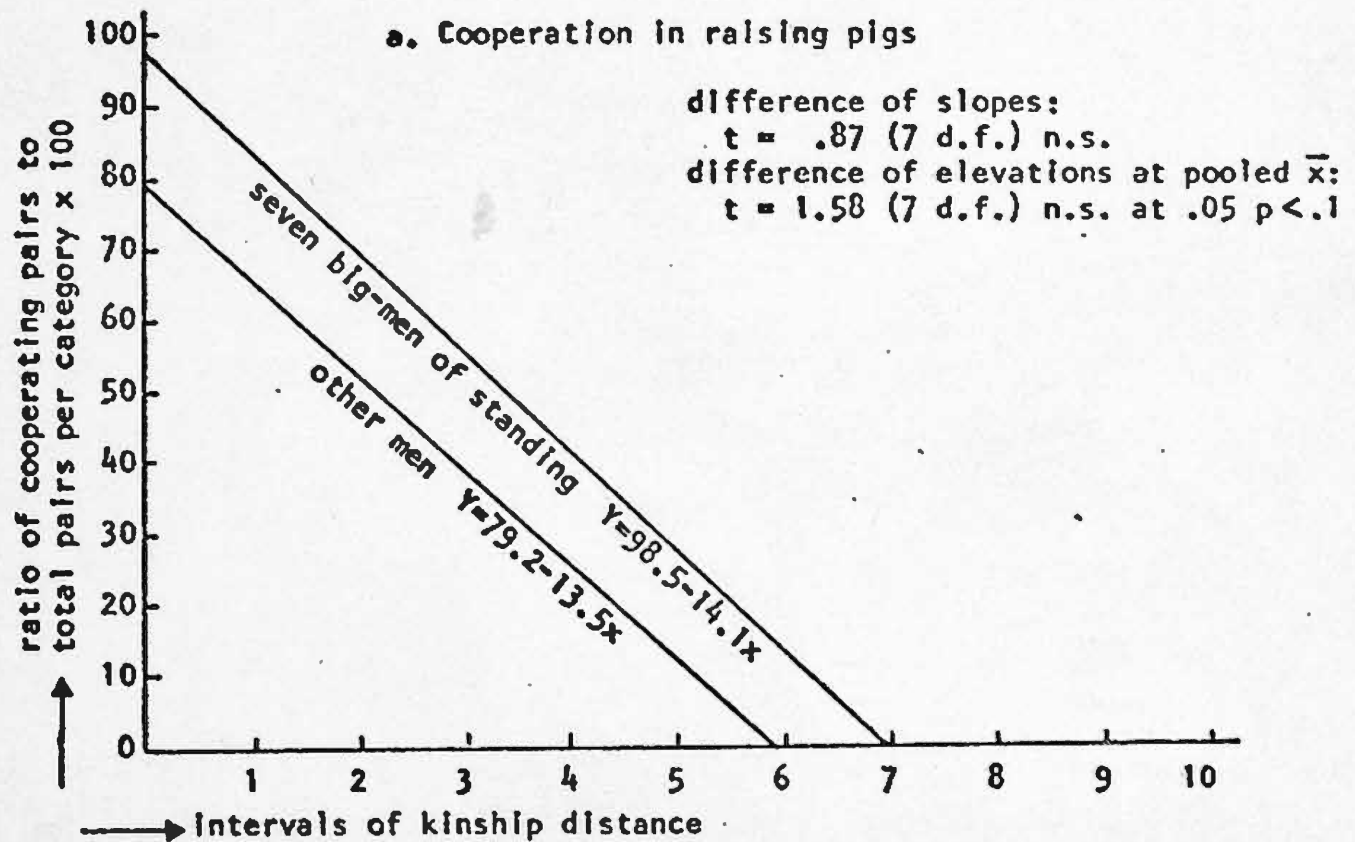
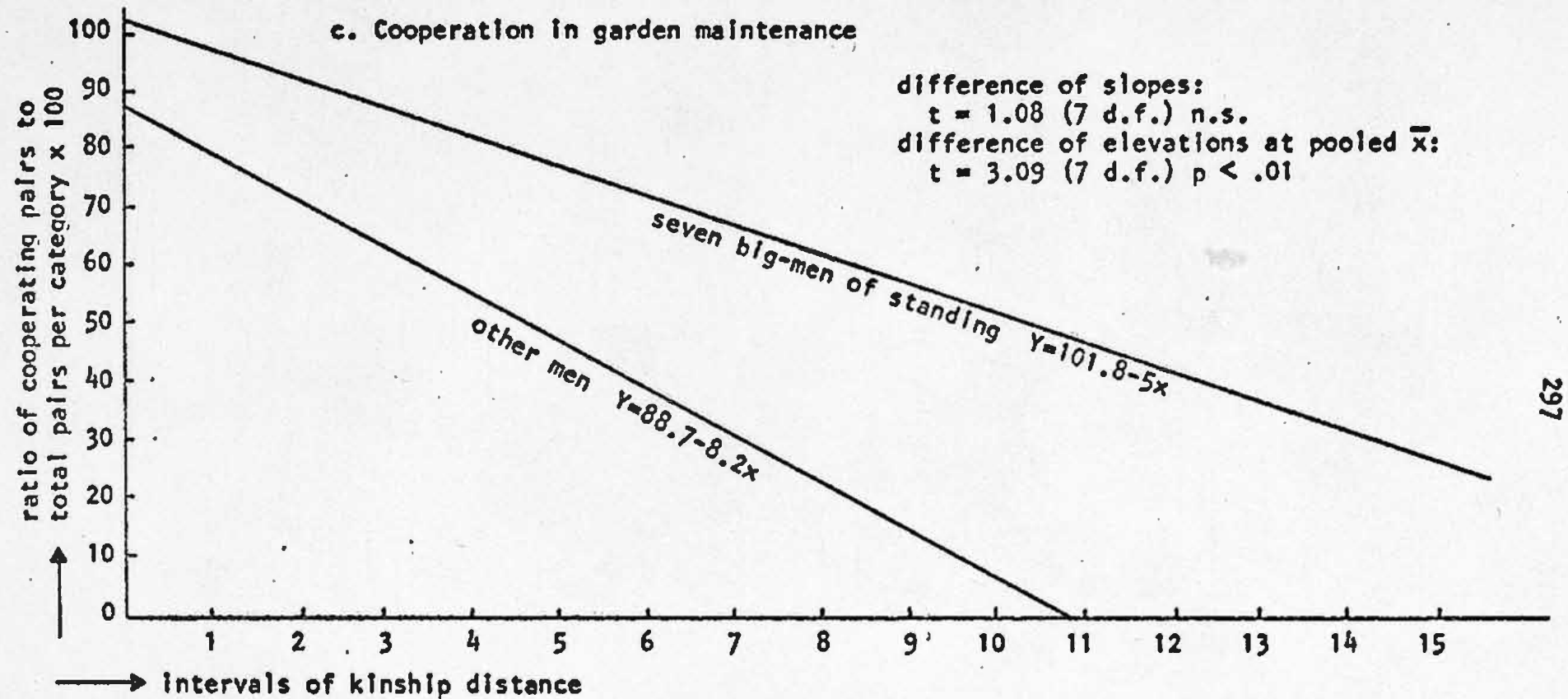


Figure 5.9 (continued)



THE BIG-MAN POLITICAL ECONOMY

In Binumarien big-men of standing (and young men who aspire to gain community respect) display generosity in socially significant ways, e.g., by paying lavishly to compensate wrongs, by refusing compensation which may be owed them. But for the most part relations of significant interaction between adults and certainly habitual cooperation and sharing relations are literally reciprocal. This, in the sense that over time each party contributes a more or less fair share. Generosity in giving requires generosity returned. So it is the number and extent of the sharing relations of big-men of standing which define that status and shape the whole system. Politically ambitious men share labor with more other men and more distant kinsmen and with more non-neighbors than anyone else.

This is a crucial characteristic of both the economic and the political aspects of Binumarien social organization. Economically it is crucial because it is these relations which link most of the separate parts of the community together through a few vital cooperation relations which strengthen the organization of production and do not allow it greater fragmentation. And it is the cooperation relations of these men that multiply the obligations of reciprocity for labor within the community and so multiply the total amount of productive labor expended with a resulting increase in the level of production. Politically it is crucial. The sense of, and the facts of community, of Binumarien as single whole rather than a set of them, is dependent on the relations of these big-men which cross-cut hamlets and which connect small sets of kinsmen.

REDISTRIBUTION

The Binumarien political economy is not a redistributive one (Polanyi 1957, Sahlins 1972). But differences of political standing are just as basic to the operation of systems of the type displayed here as they are in redistributive ones. In Binumarien big-men do not act as a central hand which gathers in and reallocates. And there are no ritual cycles which act themselves as a 'central hand' for big-men to manipulate.

Here differences of political standing rest not on relative centrality in distribution arrangements, but participation in more and wider flung cooperation relations. Without big-men of standing the total number of reciprocal cooperation and sharing relations in the system, the crucial antidote to underproduction, would be drastically reduced. And without big-men of standing Binumarien would dissolve into many unconnected sets of co-producers who would lack any economic or political basis for community and might be routed by other larger groups or digested by them.

Binumarien big-men are not 'center men.' The system at the supra-household level is not one of Polanyian redistribution. Here big-men of standing are men who go beyond the ordinary in the number of obligations of cooperation and sharing they have, and the kinship and spatial distance across which these relations extend.

BIG-MEN AND BIG-MEN

In classic descriptions of big-men and big-man systems such as Sual (Oliver 1955), although the mode of recruitment to leadership positions is

distinctive, the formal, i.e., morphological difference between the pattern of transactions and obligations of big-men and chiefs is not clear. This leads Sahlins to remark that "chiefly redistribution is not different in principle from kinship rank reciprocity ... Chiefly redistribution is a centralized, formal organization of kinship rank reciprocities ... the apparent course of wisdom is to hinge our characterizations - of rank reciprocities versus a system of redistribution - on formal differences in the centralization process, and in this way to resolve the evolutionist issue" (1972:209). What he means by 'centralization process' becomes clearer as he contrasts Siuai as an example of kinship rank with Nootka as an example of redistribution:

The thin line of difference is this: the Nootka leader is an office holder in a lineage (house group), his following is this corporate group, and his central economic position is ascribed by right of chiefly due and chiefly obligation. So centrality is built into the structure. In Siuai it is personal achievement. The following is an achievement - a result of generosity bestowed - the leadership an achievement, the whole structure as such will dissolve with the demise of the pivotal big-man ...

Where kinship rank reciprocity is laid down by office and political grouping and becomes sui generis by virtue of customary duty, it takes on a distinctive character, the distinctive character may be usefully named - chiefly redistribution (1972:209).

The Binumarien case (and others like it) take on a special significance here. Siuai political and economic organization is very similar to chiefly redistribution in its synchronic structure. The followers are clearly a group with the big-man at the center. Powell's emphasis on the role of achievement in Trobriand leadership (1960) suggests an organization intermediate to big-man systems of the Siuai type and chiefly systems of the Polynesian type. The central position of leaders is

established in Siual. There any boy is eligible to compete for that position. In Trobriand, the pool of men eligible to compete for positions of leadership is limited. The classic Polynesian chiefdoms restrict that pool even further. Increasing restrictions on eligibility are associated with an increasingly elaborate hierarchy. But the feature of centrality is evident even in Siual and once organizations of the Siual type are established, redistribution as a form is established.

But where do systems like that of Siual come from? Clearly they cannot spring fully formed from a previous egalitarian organization. This is where the 'kinship rank reciprocity' which is characteristic of Binumerien and which is morphologically quite distinct from redistribution becomes particularly important for evolutionist questions.

It is unfortunate that the label 'big-man' must be given so many things to point to. Most often it is associated with a special personality type - the ambitious man characterized so effectively in Sahlins 1963 paper. But recently, e.g., de Lepervanche (1967-8), interest has focused on the special structural position of men labeled big-men in CHING societies. Perhaps a new label is in order for systems with these positions, like that of Binumerien. Here a big-man's 'followers' are in no sense a group. Each of them has a personal relationship with the big-man and may have none at all with others who are related to the same big-man in the same way. This kind of man is not the center of a group and his relationship with these 'followers' is not that of a man to 'loyal lesser men.' It is not nearly so much complementary as it is symmetrical. The obligations of both participants in the relation are similar. These 'followers'

accept many decisions of a big-man because he persuades them that the decisions are wise, not because he orders and they obey. A personal relationship with a big-man is something between the two parties to the relationship and each is held accountable for his reciprocal obligations pending the termination of the relationship (see Strathern 1971 for a description of the same thing among the Melpa).

Such a relationship has no hint of special allegiances, a man has such relations with other men and it is very likely that he has such a relationship with more than one big-man. If he is himself a big-man then certainly he has special sharing relationships with other big-men. In systems of the type Binumarien exemplifies the sharing relations of big-men are not redistributive in the Polanyian sense.

But on the other hand there is something beyond the simply egalitarian here. The 'differences in rank' associated with the presence of big-men of standing are attached to a higher number and wider spread of reciprocal obligations for these men. The fact that there are such positions, that there are such differences in rank, means that the total number of sharing relations in the system is markedly higher than it would be in an 'egalitarian' system. And the size of the community is greater than it could be without these distinctions of 'rank.' The wider sharing relations of a few hold together a system of this size, preventing its fragmentation. This greater number of cooperation and sharing relations provides both political cohesion and an upward push on the level of production.

The result is less powerful cohesion and less of a production in-

crease than would be provided by redistribution as a form of organization above the household. But, on the other hand, it is more cohesion and more pressure on production than the sort given by the 'kinship rank reciprocity' which is limited to genealogical (or probably most often age) rank, and characterizes 'egalitarian bands.'

CHAPTER 6

Summary of Conclusions

This concluding chapter considers again the role of kinship in CHNG organizations. Then the findings of the study are summarized. And the chapter ends with some remarks on the significance of the research.

KINSHIP IN CHNG

The preceding chapters have shown how significant sorts of social interaction in Binumarien are regular and predictable. Sex, age, and ego-centric kinship relations organize residence, cooperation, and sharing. Prestige, authority and influence are associated with sex, age, personal characteristics, and with productive industry and generosity. Ego-centric kinship ties, more widely activated by men of ambition (and their families) provide a 'generalized structure' which organizes and regulates a wide range of activities.

The demonstration of these regularities and their kinship base is of some areal importance. Assertions that small scale, self-subsistence producing communities are expected to have a kinship oriented social organization are widely accepted in anthropology. But there has been objection to the application of these generalizations to CHNG without special qualifications.

One of the major themes in the CHNG literature of the last few years has been an argument about the use of models and concepts derived from study in other parts of the world to New Guinean materials. De Lepervanche, having softened an earlier (1967) position still says 'New Guineans are flexible in conceptualizing their social relations;

but the anthropological analytical vocabulary is perhaps too rigid and inflexible" (1973:5). And Langness says that "these societies cannot be analyzed in terms of existing theories of political organization. Such theories do not allow for a degree of flexibility unprecedented in the ethnographic literature" (1973:168).

Such particularizing, ideographic positions are maintained in spite of the appearance of lucid and powerful arguments to the contrary (especially Sahlins 1965). La Fontaine reviews the problem as follows:

The origin of the debate was the article by Barnes (1962), 'African Models in the New Guinea Highlands.' It refers to the 'African Mirage in New Guinea' which prevents ethnographers from perceiving the distinctive characteristics of the societies of the New Guinea Highlands (Barnes 1962:5). Despite Salisbury's articles (1956, 1964), the impressive refutation by Sahlins (1965), and documentation of the importance of other forms of kinship by Kaberry (1967), articles repeating Barnes' criticisms continue to be written ... The implications are very serious ... the whole status of anthropology as a generalizing discipline, aiming at statements of universal validity is at stake (1973:35).

The two ethnographers who have found 'African models' the most inadequate in accounting for the social arrangements among the populations they describe are Langness for the Bena Bena-speaking Korofelgu and du Toit for the Gadsup-speaking Akuna. Their arguments have gone beyond the matter of descent constructs and they have questioned, even denied, the organizing role of kinship in their reports. It is especially at this juncture, the matter of kinship, that the Binumarlen analysis is most relevant. De Lepervanche has summarized their conclusions as follows:

du Toit considered abandoning kinship as a major factor in group formation in favor of locality, Langness pointed to the relationship between kinship and locality and demonstrated, though not precisely in these terms, that classification as a kinsman can follow recruitment to the local group (1968:172).

Langness says "the sheer fact of residence in a Bena Bena group can and does determine kinship" (his emphasis, 1964:172).

This is first a confusion between the identity of local groups and their composition. That distinction was not blurred in the best 'African' accounts. For example, Evans-Pritchard specifically pointed to the difference between identity and composition in his classic Nuer account:

Every Nuer village is associated with a lineage, and, though the members of it often constitute only a small proportion of the village population, the village is identified with them (1940:203).

Yet a similar lack of match between the descent identity of Korofeigu and its actual composition led Langness to make his widely cited assertion about residence determining kinship.

There is a second aspect of Langness' treatment which is of special importance here: denial of the significance of genealogy. He questions a genealogical basis for kinship in spite of the following description of the composition of Nupasafa, one of four exogamous groups in Korofeigu:

The members of Nupasafa descent group, living away, mostly live with 'friends.' This means with people who gave them refuge in the past, or gave refuge to their fathers, or even their fathers' fathers.

In most cases a biological kinship tie - or at least an affinal one - can be traced (1964:171).

Langness says of the Bena Bena local group:

It is a group whose personnel are ordered according to a system of kinship terminology and attendant rights and obligations. Everyone who resides in Nupasafa group is called by a kinship term, and all are brothers and sisters, mothers and fathers, sons and daughters, and so on. "Kinship," so to speak, can be achieved. It can be ascribed on the basis of locality as well as biologically (or affinally) (1964:179).

This same tendency to classify all coresidents as kinsmen occurs in Binu-marien. Probably it occurs, at least to some extent, in all primitive

communities, i.e., those in which "the structure is generalized." Kinship ties are the conventional basis for interaction. Newcomers are integrated into the system of classification as they are integrated into the activities of the community. Necessarily so, kin relations and mutual activities are not independent. To participate in social affairs is to participate in a generalized, familistic, solidarity. Just as kinsmen cooperate, so those who cooperate are like kinsmen.

Most importantly, this does not mean that "the sheer fact of residence ... can and does determine kinship." There is more to kinship than a system of nomenclature, and rights and duties attendant on its categories. Even the application of nomenclature and its integration of newcomers can only be understood as one aspect of the interplay between two opposing tendencies in the social system.

First, genealogical distinctions are emphasized by the essential productive autonomy of families. In societies with a sexual division of labor, small scale technology, and unimpaired access to basic resources the household is the basic unit of production. And the household is a family. Brothers and cousins are not the same, fathers and fathers' brothers are not the same because of the division of household, i.e., family, interests. Collateral distance makes a difference. (And newcomers are attached to the community through their kin ties to individuals in it. Such ties provide the basis for their entry in the first place. They are closer to some of their new neighbors than to others.)

Second, the 'structure is generalized.' Economic, political, ritual activities are all carried out by the same social apparatus: a familistic

organization. These are not different kinds of relations but different functions carried out by the same relations.

These two tendencies taken together mean that there are not different categories of people with whom one interacts, as, say, relatives, friends, neighbors, and business associates. One interacts with kinsmen, and all those with whom one interacts are kinsmen, labeled in the same way. But within those broad classes there are degrees of intensity and density of interaction, some are 'more kinsmen' than others. Genealogical discriminations make a difference.

The interaction within a community is not, as Langness (1964:179) says, "ordered according to a system of kinship terminology and attendant rights and obligations" awarded on the basis of residence. It is overwhelmingly ordered by gradations of kinship distance, based on genealogical discriminations.

This pattern is demonstrated for Binumarien with extremely high statistical correlations. There is no reason to think that such an association would be peculiar to Binumarien. In fact, there is every reason to expect that ego-centric kinship is the primary organizing device for most workaday activities in most of CHNG. Yet the focus on lineages and clans has so thoroughly dominated the attention of ethnographers in this area that:

On the interpersonal aspect of genealogy we have virtually no information for New Guinea. Various authors give information on the relations between matrilineal kin, affines and agnates but in the context of relations between groups (La Fontaine 1973:45).

This study is a step in the direction of rectifying that lack of information. Since the regularities discovered here are so marked, the Binumarien research makes a strong suggestion. Studies of social organization which are not entirely dominated by an examination of descent structures may well find regularities of similar magnitude elsewhere in CHNG.

The regularities displayed here are of several sorts, but they are all reciprocally illuminating. And they outline a social organization with features which are not only relevant for problems in CHNG but for wider ethnological questions as well.

A SUMMARY OF FINDINGS

Moving eastward across CHNG pig festivals and exchange chains decrease in magnitude (Read 1954). These events are increasingly important for organizing intercommunity relations as they are larger and more inclusive. The decreasing elaboration reaches its extreme in Binumarien where there are no pig festivals and concomitantly where alliance relations between neighboring communities are absent.

Binumarien use the words namua (enemy) and qaagoondi (friend) for neighboring communities. But when they do, all communities which they relate to as communities, i.e., fighting and feasting, are classified as namua, while those labeled qaagoondi are more distant non-adjacent neighbors. With residents of these last, individual Binumarien exchange goods, but the distance is too great for the communities as such to interact. In other words, communities are 'friends' not because they are allies; they are not. But they are 'friends' because they are known

but they are too far away to flight.

Community identities which are based on common descent are particularly well suited to underwriting alliances, e.g., communities can define themselves as 'brothers' or 'brothers-in-law.' But in the absence of traditional relations of intergroup amity and assistance, community identities which simply define the local group as unique, equally distinct from - and opposed to - all its neighbors, may serve to affirm community solidarity and claims to basic resources. Under these circumstances, descent identities are not the 'only' workable charter. Other salient markers of community identity may serve as functional alternatives, And so for Binumarien its linguistic distinctness defines it as unique and 'solidary against the world.'

Sahlins' proposition that "the 'primary' groups and relationships are shaped by their incorporation in a larger system of a certain type" (1968:55) implies a suggestion of relevance here. In the absence of descent models to define the community, we might not expect to find descent models significant in the internal social organization of Binumarien.

There is a label, oosana, which has among its meanings one which might be glossed 'kin aggregate.' It is neither a group, nor a category of certain extent. An oosana can be divided in several ways into smaller sets, each of which is also an oosana. These are not named, either for a person or a place. People are said to be moodaa oosana, literally 'one source,' if they are traceable consanguines, but also if they have a consanguine in common, and under certain circumstances, in-laws may be included as well. Such a set has many of the characteristics of a kindred (cf. Fox 1967), but whereas kindreds are ego-centric, shifting in composition as the focal ego shifts, these sets are socio-centric. Approximately the same people are grouped together no matter

who is doing the talking, no matter who is the person of reference. The idea underlying these aggregations is genealogical connection. Those who are closest kinsmen, traced through any sort of genealogical tie, tend to be grouped.

The absence of lineages or other corporate kin groups and the pattern of marriage by exchange seem to account nicely for Binumarien kinship nomenclature. It is of the Cheyenne or bifurcate generation type, i.e., an Iroquoisan cross-parallel distinction is made in the first ascending generation and optionally in the first descending generation, but in the zero generation there is no such distinction, cousin terminology is Hawaiian. Since there are no lineages or discrete kin groups of any sort to manage marriage exchanges, the debt and credit distinctions which accompany each exchange are not associated with corporate groups and so are not perpetuated into the next generation. The cross-parallel distinctions which appear in the 'parental' generation are associated with the debts and credits of the marriage of mother and father. In ego's own generation similar distinctions appear only with the marriage of individuals in that generation when the in-law categories are filled.

Since this type of nomenclature is quite common in the world, the Binumarien explanation may have wide implications for the understanding of kin terminologies in general.

The discriminations made in the terminology system can be accounted for by reference to patterns of marriage (and of course parenthood). However, these discriminations do not seem to match socio-spatial

distributions. Even though the post-marital residence pattern is patri-(viri)local, according both to stated preference and actual behavior, it is not the case that parallel relatives tend to be significantly more often hamlet co-residents while cross-relatives live significantly more often in different hamlets. This is especially interesting since one of the usual explanations adduced for cross-parallel distinctions, e.g., Murdock 1949, White 1959, relies on unilocality and the resulting residential distribution. Unilocal residence is argued to produce a socio-spatial distinction which is displayed in bifurcating terminology. The common sense of such an explanation has been sufficient to perpetuate it without empirical demonstration of its validity. But for Binumarien the evidence is clear. The distinctions made in the terminology relate to 'sides' involved in marriages. When it comes to cooperation and solidarity and variations in the intensity and density of social interaction, it is the genealogical distinctions of closeness and distance, ignored in the terminology, which organize behavior.

Binumarien shows a 'domestic mode of production.' Sahlins' construction of such a mode accounts for the importance of kinship distance and its association with decreasing cooperation and solidarity. Since each household is 'constituted,' 'equipped,' and 'empowered' as an autonomous unit of production, its segmental equivalence to every other such unit emphasizes independent self-interest for each. Although within a single household there is a mutuality of interest and a strong 'organic' interdependence, there is nothing in the organization of production which generates interdependence between households. It is the wider organization which submerges the self-interest of individual households. But this wider

organization, of which classificatory kinship is an important element, is counterposed to the underlying tendency for household independence. It is this combination of "the segmentary separation of economic interests" (Sahlins 1972:127) played against the solidarity symbolized in wide-ranging kinship categories which makes genealogical distance a gradient of sociability. On the one hand, there is an isolating tendency, on the other, a tendency to extend the categories associated with positive sentiment to the widest boundaries because there are no other categories except 'stranger' and 'enemy.' Neither of these tendencies dominates, instead their mutual opposition makes kinship distance the critical variable.

In Binumarien there are socio-centric discriminations which are significantly associated with cooperation, residence, for instance, and oosana alignment. But the most powerful predictor of cooperation in production is ego-centrally calculated kinship distance. Cooperation does not follow the terminology system. It follows genealogical distinctions.

Since kinship is the basis of sociability, the activities of politically ambitious men conform to the requirements of kinship morality. A leader is "a paragon among kinsmen." Since a good kinsman shares, an ambitious man shares more and more widely. To do this he must have more to share. An association between political ambition and productive industry is clearly suggested in the 'bimodal' distribution of the numbers of cooperation relations of each man. Some men, ordinary men, cooperate with only a few others. The self-interest of their own household is more strongly revealed. There is a clear distinction between

such average men and those of ambition. For ambitious men the wider organization more strongly submerges the self-interest of their own households. They cooperate with more other men and with men at a greater kinship distance from themselves. They work harder and produce more, and so they are more generous. This sort of leadership adds the extra productive industry of ambitious men to increase community levels of production. It also stimulates the productive output of others. For every relation of cooperation an ambitious man adds there is another man, the other side of the cooperation relation, who has been engaged in greater productive effort.

But this is not a matter of individual men alone. The actual units of production are households. As this would suggest, the cooperation patterns of wives follow those of their husbands.

The political side to the economic differentiation which separates ambitious men from others, is not only prestige awarded to the generous, but influence in community affairs. The men who cooperate the most widely, work the hardest, are the most generous, are also the men who are in the best position to influence community decisions. Just as with ordinary men, the cooperation relations of these men are patterned by ego-centric kinship distance.

The economic differentiation of men is limited by the scale of community affairs. Here there are no exchange chains or pig feasts for men of ambition to manipulate and so increase their control over the distribution of goods. The political differentiation of men is limited as well, the two go together. Here prestige accrues to old men of

industry and generosity. But here it accrues in some degree to all old men. There is a difference between an old man of average productive energy and generosity and an old man who is extraordinary in his productive activity and his contributions to various affairs. The difference is known and is significant. But each is referred to as faigi firaafa, a big-man. There is no special status label to distinguish big-men 'of standing.'

Moving west from Binumarien there is a gradient of increasing local group size, increasing population density, increasingly larger and more elaborate pig feasts, increasing levels of production indicated in larger 'surpluses': goods, pigs, and vegetables, produced and displayed in huge quantities, increasing breadth of manoeuvre for ambitious men, increasing differentiation of big-men from ordinary men, and the development of clientship, widening and emphasizing the difference between men of high social standing and others.

The task of ordering and explaining variation in CHNG is aided by clarification of these gradients and their interrelations. This study of Binumarien contributes to that task, not so much in that Binumarien is 'atypical,' but in that features of Binumarien organization which are either unusual or extreme all fit together in a systematic way showing the patterned covariation among them. Its small size as an ethno-linguistic unit, its lack of inter-community alliances, its lack of pig festivals or exchange chains, its lack of descent phrased identity, its lack of corporate kin groups, extension of the label faigi firaafa as a term of respect for all old men, all these things go together. It is not just that they co-occur. They are interrelated.

SIGNIFICANCE OF THE STUDY

This study of Binumarien social organization contributes to the areal literature in four main ways. First, it describes a community previously undocumented. Second, it demonstrates that the internal organization of this community is regular and predictable and that social behavior here is more than the cumulative product of 'individualism' expressed in mobility and personal choice. This opposes the view of a similar neighboring system proposed by du Toit (1964, 1975). Third, it shows clearly with quantitative data and statistical support the organizing role of genealogical relations in important interpersonal activities. This directly contradicts Langness' estimation of the lack of significance of genealogical relations in systems at the eastern end of CHNG (1964). And fourth, it emphasizes the systematic interconnection between the lack of pig cycles and exchange chains, the lack of intercommunity alliances, and the rudimentary development of the status of big-man. Strathern has said that "to achieve a more detailed analysis of covariation in CHNG ... we need to select a number of variables from which to build simplified models of individual systems which can help us through the initial stages of making hypotheses" (1969a:51). The 'extreme' case of Binumarien helps to outline the features of social organization which are significantly interrelated, and to select the set of variables most useful for model building.

In addition to matters which are of specific interest for CHNG, this study contributes generally to ethnological theory. For example, it is argued here that a lack of match between categories distinguished in the kinship nomenclature and categories significant for everyday interpersonal

Interaction is a predictable characteristic of social organizations associated with a domestic mode of production. The unique contribution of this study is to provide quantitative evidence that finer distinctions among genealogical relations are the discriminations of maximal significance in organizing cooperation. It is not the kinship categories marked out by the terminology system, but it is kinship which orders interpersonal interaction. This report shows that the insights of Sahlins' view of primitive social organizations are more than elegant empirical generalizations; they also have an analytical and explanatory power.

Finally, this study of Binumarien makes a methodological contribution. It shows that a series of conventional assumptions can be tested if and when quantitative data on interpersonal relations are collected. We need not settle for normative descriptions or for purely anecdotal accounts when it comes to patterns of interpersonal interaction. It is possible to collect bodies of data which can approach exhaustiveness for certain standardly defined relations over certain universes. This has the great advantage of turning many assumptions into testable propositions, and adjudicating many 'theoretical' disputes on empirical grounds.

The focus on descent constructs, models, categories, and groups in CHNG has obscured patterns of social organization which are revealed and clarified in this study of Binumarien. The analysis of Binumarien social organization not only adds a point to the map of variation in CHNG; it contributes to our understanding of the systematic covariation in the area. It also shows patterns of importance for our understanding of the social organization of kinship communities everywhere.

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APPENDIX A

SOME BASIC NOTIONS OF GRAFIK (Atkins 1974a, b, c)

In Grafik the basic relations are, as outlined in Atkins 1974c:

P = 'parent-of'

Q = 'child-of'

M = 'spouse-of'

Expressions enclosed by '/.../' define egocentric classes of genealogical relations. The initial '+' qualifier indicates the order in which the relational string enclosed by the slashes is to be read. A '+' indicates it is to be read from left to right. A '-' indicates it is to be read literally from right to left, reversing both the order and the direction of the component relations. Thus '-/PM/e' is equivalent to '+/MQ/e,' i.e., the spouse of a child of ego. This is the converse of '+/PM/e,' i.e., the parent of a spouse of ego.

A '+' indicates that the class defined by the expression is reciprocal, both the relational string as read from left to right and its converse are included. For example, '+/PM/e' is to be read the parent of a spouse of ego and reciprocally the spouse of a child of ego.

Exponents indicate the number of times a relation is to be iterated. Where 'P' (or equivalently 'P¹') is read 'parent-of,' 'P²' is equivalent to 'PP' and is read 'parent-of a parent-of' or 'grandparent of.' 'P⁰' reduces by convention to the identity relation, thus it 'drops out' of the relational string. The exponent variables used here are defined as follows:

$i = 0, 1, 2, 3, \dots$

$n = 1, 2, 3, 4, \dots$

$u = 0, 1$

Thus a relation with the exponent 'u' may be either in or out of the string. A relation with the exponent 'n' must be in and may be iterated. A relation with the exponent 'i' may be in or out and may be iterated. In addition to these symbols which are introduced and defined along with basic conventions in Atkins 1974c, two other symbols (Atkins, personal communication) are used here.

Sigma represents the geneaproperty of sex:

$$\sigma_1 = \sigma$$

$$\sigma_0 = \varphi$$

The expression '+/ σ_1 P'/e' is to be read 'any male parent of ego,' and the expression '+/P' σ_1 /e' is to be read 'any parent of a male ego.' The sex specifying subscript may also be indicated as a variable:

$$s = 0, 1 \quad (| | = \text{absolute value})$$

$$|0-s| = s$$

$$|1-s| \neq s$$

The other new symbol is beta which represents birth order:

$$\beta^+ = \text{earlier born}$$

$$\beta^- = \text{later born}$$

Thus the expression '+/ β^+ P' β^- /e' is to be read 'any earlier born child of a parent of a later born ego,' i.e., 'an older sibling of ego.'

VITA

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