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The series Structural Analysis in the Social Sciences presents approaches that explain
social behavior and institutions by reference to relations among such concrete entities as
persons and organizations. This contrasts with at least four other popular strategies: (a)
reductionist attempts to explain by a focus on individuals alone; (b) explanations stressing
the causal primacy of such abstract concepts as ideas, values, mental harmonies, and
cognitive maps (thus, “structuralism” on the Continent should be distinguished from
structural analysis in the present sense); (c) technological and material determinism; (d)
explanations using “variables” as the main analytic concepts (as in the “structural
equation” models that dominated much of the sociology of the 1970s), where structure
is that which connects variables rather than actual social entities.

The social network approach is an important example of the strategy of structural
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influential in all the social sciences, it does not have a coherent identity, and no series
yet pulls together such work under a single rubric. By bringing the achievements of
structurally oriented scholars to a wider public, the Structural Analysis series hopes to
encourage the use of this very fruitful approach.
THE CAPACITY AND CONSTRAINTS OF KINSHIP IN THE DEVELOPMENT OF THE ENGA TEE CEREMONIAL EXCHANGE NETWORK (PAPUA NEW GUINEA HIGHLANDS)

Polly Wiessner and Akii Tumu

INTRODUCTION

We will begin with what will be the endpoint of some of the chapters in this volume: the fact that in pre-state societies kinship structures reciprocity, and reciprocity in turn determines to a significant extent who is regarded as kin. Without kinship, reciprocity is hard to realize, without reciprocity, a sense of kinship fades. That kinship structures reciprocity is not only well-substantiated in the anthropological literature but is also the framework taken by people from many cultures in explaining their own systems of exchange. For example, though worlds apart, both the !Kung San of the Kalahari and the Enga of Highland New Guinea will specify the obligations that one has to close biological kin, including both the benefits and the hassles, for it is close family members who often take the most liberty concerning reciprocation. They will go on to explain that marriage, which produces “instant kinship” without the years of familiarity that usually back such bonds, brings obligations, the most formal and pressing ones. Finally, they will make it clear that because one does not know what is in the hearts and minds of distant or non-kin, the delayed, unbalanced exchange that characterizes giving between close kin gives way to barter with kinship distance. In both societies, the obligations of kinship bring some of the greatest stresses of life and, when successfully executed, the greatest joys and satisfactions.

From the viewpoint of evolutionary biology, the close association between relatedness and reciprocity is predictable: People should invest in those who share their genes. But the situation is not so simple, for kinship is invariably revised by cultural conventions. Accordingly, the association between biologically and culturally stipulated kinship is not one to one (Sahlins 1972). Nonetheless, although culturally defined kinship networks can be nominally broad to regulate marriage or define group membership, only a small subset of such relationships actually structures reciprocity. These are relationships with either
a history of familiarity and cooperation and/or a common interest in the next generation. "Familiarity," as the term implies, is more often than not rooted in the family (Eibl-Eibesfeldt 1989), and so the discrepancy between biologically and culturally defined kinship within this subset of relations narrows.

For most nonstratified societies, primary ties of consanguineous and affinal kinship suffice to guide reciprocity, affinal links opening new opportunities. When a flow of goods from afar is required, it is provided by barter. However, such primary kin ties have their limits - they cannot be expanded quickly or easily by cultural conventions because their effectiveness depends on a history of mutual trust or deeply rooted common interest. The question that we will address here concerns this problem: During times of economic opportunity when exchange networks are expanded to new orders of magnitude, can this subset of intimate kin relations suffice qualitatively and quantitatively to structure reciprocity? In other words, to complement papers in this volume that describe dimensions of networks of kinship and exchange by means of formal models, we will look at the nature of relationships on which such relations are built and how, on the one hand, they open up possibilities for the actors and, on the other, they put constraints on the configuration of networks.

The case study that we will use, the development of the Tee Ceremonial Exchange Cycle, comes from a most fascinating period in the history of the Enga of Highland Papua New Guinea: from the time of the introduction of the sweet potato approximately 250-350 years ago to the first contact with Europeans in the 1930s. It was during this period, according to Enga historical traditions, that the Tee had subtle origins in some 20 clans along the trade routes of eastern/central Enga. By the colonial period (ca. 1950-75) it had grown into a regular three-phase exchange cycle involving more than 350 clans and between 40,000 and 70,000 people. In a single cycle, thousands of pigs, goods, and valuables were distributed through a series of enchainged series of public festivals, starting with that of the easternmost clan in the network and moving clan by clan until it reached the western terminus from which a counter phase was initiated. 1 Prestige, influence, and the necessary resources for polygamous marriage accrued to those who were most successful in channeling wealth to themselves and their clans. This rapid development begs the following questions: What role did kinship play in the development of the Tee cycle? Could primary consanguineous and affinal ties still suffice as the organizing basis of an exchange network that had grown to a new order of magnitude? How were kinship relationships restructured to do so?

**PREHISTORIC BACKGROUND**

Archaeological research has shown that both higher and lower altitude areas of Enga province have been inhabited for at least 10,000 years by hunter-gatherers. Pollen evidence indicates that forest clearance in the Lai valley of eastern Enga for cultivation began about 4,000 B.P. (2,000 B.C.; see Golson 1982; White and O’Connell 1982). Some 200-400 years ago, major changes occurred when the sweet potato first arrived in the Highlands via local trade routes. 2 There it released many of the constraints on production due to its high yield per acre, ability to grow well on poor soils and at high altitudes, resistance to blight, and superior quality and palatability. The sparse population of Enga that had previously subsisted by taro gardening and/or hunting and gathering, depending on altitude, was for the first time able to expand into higher niches, to produce a substantial surplus and store it "on the hoof" in pig populations. Another 200-350 years passed undisturbed before European gold prospectors and prospectors entered the Highlands.

Watson (1965a, 1965b, 1977), who was the first to recognize the impact that the sweet potato had made on Highlands’ agricultural and social systems, described its effect as revolutionary. Enga historical traditions confirm that the post-sweet potato era was one of rapid change (Wiessner and Tumu 1996). During the two to three hundred years or so from the time of the introduction of the sweet potato until 1980, the population increased from approximately 10,000-20,000 to 150,000, roughly 1.5% per annum according to our estimates from genealogy. 3 This rapid growth is noted in many historical traditions, including accounts of new gardens cleared and men’s houses and ceremonial

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1 There are two competing ideas concerning the introduction of the sweet potato. The most widely held view (Golson 1982; Golson and Gardner 1990; Swadbek 1981; Watson 1972; Yen 1974) is that the sweet potato was brought from South America to Indonesia some 250-400 years ago by Portuguese explorers and passed via the local trade to the island of New Guinea. Others (White and O’Connell 1982:163) argue for an earlier introduction from the east on the basis of evidence for the presence of the sweet potato in Polynesia by 1000-1500 years ago (Hallwood 1987; O’Brien 1972; Scaglion and Soto 1994; Yen 1974: among others). There is currently no definitive archaeological evidence to settle the debate. Oral traditions indicate the former: that the sweet potato reached the main island of New Guinea and made its way into the Highlands between 250 and 400 years ago.

2 The rate of population increase in the 1980s is estimated to be 2.5% or more (Lee and Gray 1982). Population growth cannot be attributed to the agricultural and nutritional properties of the sweet potato alone: social factors were also at work. Most importantly, women were esteemed for their productive capacities and the exchange links they formed with other clans. Thus, despite their subordinate status in many public areas of life, women and children were protected: there was no female infanticide, few women of reproductive age remained single, women and children were neither targets in warfare nor for revenge killings, and there were no witchcraft accusations or sanctions executed against women as is the case for many other PNG societies.
grounds established with each generation that passed (see Lacey 1979; Wohlt 1978). Pig husbandry was intensified to meet the demands of ceremonial exchange, and with it patterns of land use changed. Land was cleared farther and farther up the valley sides, and wild game populations in the central valleys declined. Significant social and political developments came hand-in-hand, including the rise of large cults for the ancestors, the Great Ceremonial Wars, and the Tee cycle.

ETHNOGRAPHIC BACKGROUND

The Enga are a Highlands horticultural population of approximately 200,000 today, most of whom live at altitudes of 1,500–2,500 m. They have been the subject of a number of major ethnographic works (Feil 1984; Lacey 1975; Meggitt 1955, 1965, 1974, 1977; Talyaga 1982; Waddell 1972; Wohlt 1978; among many others). Their staple crop, sweet potato, is cultivated in an intensive system of mulching mound to feed large human and pig populations. It is supplemented by a variety of other crops, including taro, banana, sugar cane, and leafy greens. At altitudes above ca. 2,200–2,300 m, there are large tracts of forested land with groves of pandanus and game. Throughout Enga great value is placed on pigs, the major social and political currency.

Politics, which center around land and exchange, occupy much of men’s time and effort, whereas women devote themselves primarily to family, gardening, and pig husbandry. Although frequent and destructive warfare creates sharp divisions between clans (Meggitt 1977), ceremonial exchanges of pork, live pigs, shells, salt, oil, foodstuffs, and other goods forge alliances and are used to reestablish peace. Ceremonial exchange demands the continual supervision of men, as well as the attention and diplomacy of women, who form bridges between groups (Feil 1978b; Kyunas and Wiessner 1992). However, all individuals can make names for themselves and become bigmen (kamangel) by displaying skill in public oratory and in the mediation, organization, and manipulation of wealth. Competition in this arena is fierce, and should they fail, their demise is rapid.

Political units are stipulated by a segmentary lineage system that divides groups into phratries, clans, subclans, and lineages. At the time of Meggitt’s studies in the 1950s and 1960s, phratries were composed of between 920 and 3,400 people, with an average of 7.8 clans per phratry. Clan size ranged from 100–1,000 members (Meggitt 1965:6–9). All male members of a phratry can trace their genealogies back eight to twelve generations through the male line to a common phratry founder, or in the case of immigrants, through the relevant females. Until approximately the early 1950s, phratries participated as a whole in fertility cults, in some forms of warfare, and in making the more general arrangements for the Tee cycle. Today, phratry collaboration is generally restricted to elections. Clan members cooperate to defend clan land, make war, pay war reparations and in most cases, to hold the Tee; in the past they staged cults for the ancestors and bachelors cults. Subclan and lineage members assist each other in subsistence activities and raise bridewealth and funerary payments. In short, the most intensive reciprocity and mutual support among agnatic kin are within a close circle of relatives; entire clans and phratries cooperate only for periodic activities that require greater numbers.

Marriage is clan exogamous. There are, in addition, numerous marriage prohibitions which assure that the spouses of men from one lineage come from different subclans (Meggitt 1965:93). Ideally descent is patrilineal and residence patrilocal, though in practice there is much flexibility depending on region and the status of a clan (Wohlt 1978). Newly formed clans and dwindling ones recruit additional members through female ties, until the group reaches a viable size. Thereafter, patrilocal residence is the rule.

Two axes of kinship embed each person in a network of supportive relationships that fill his or her needs. Inherited clan membership furnishes a pool of potential equals related primarily through agnatic ties. Potential equality is staunchly defended. Agnatic kin compete to become clan leaders on the one hand, and they cooperate in agricultural enterprises, defense of land, procurement of spouses, and appeasement of the ancestors on the other. In most instances, cooperation for clan benefit takes precedence over competition. Right or wrong, capable or incapable, fellow clan members are supported and defended. Women enjoy the protection of both their natal and husbands’ clans. The second axis of kinship, complementary relationships opened by marriage, has to be created and maintained. It is initiated by bridewealth payments that compensate for the transfer of the bride’s productive and reproductive potential, and it serves to equalize the standing of wife-givers and wife-takers. This balance is maintained over a lifetime by means of payments to maternal kin for the growth/injury and eventual death of offspring. Relationships with affinal/maternal kin are virtually the only path to resources or assistance from the outside, with efforts to build and maintain such networks dependent on individual social and economic competence.

Enga kinship terminology has been well described by Meggitt (1964) and Feil (1978a). Enga kinship terms are polysemic, combining patrilineal, matrilineal, and affinal linkages under a single term. Two terms, palingi and imangi, apply solely to affinal relationships, usually a wife’s or sister’s husband’s relatives; behavioral taboos, respect, and strong reciprocal obligations generally categorize these relationships. Terms for maternal kin are not distinguished from agnatic ones. Obligations to maternal kin are similar to those to affinal kin, except having been warmed by a generation of familiarity, they are relaxed and genuinely cooperative.

4 In the Kompiam region where clans are highly dispersed and for some groups of eastern Enga
5 After two generations immigrants are considered full-fledged clan members and called by agnatic kin terms, although their clans of origin are still recalled in genealogies.
The material which we will present here is drawn from a study of the historical traditions, *atome piti*, of ninety Enga phratries and eighteen immigrant clans/phratries who have branches in other language groups. *Atome piti* are a subcategory of Enga oral traditions that are renditions of historical events over approximately the last seven to ten generations; they are distinguished from myth, *tuhi piti*. *Atome piti* of the last four generations are often vivid, but they become more and more sparse in detail as they move back in time. *Atome piti* include tribal origin traditions, locations of all clans in a phratri some 7-10 generations ago, records of important wars and migrations, development and spread of ancestral and bachelors' cults, the history of ceremonial exchange networks, information on agriculture and environmental disasters, developments in dress or song, and so on.

Additionally, all phratri histories include a genealogy that links each member to the tribal founder by descent through the male line (or through marriage and adoption when applicable) and provides a framework within which to date or sequence events. This can be subdivided into two parts:

1. a "representative" one comprising fictive nonhuman ancestors, tribal founders, and clan founders, which lays out tribal structure
2. a "real" one beginning in the generation of subclan founders that appears to record actual people.

Chronology must thus be applied with respect to genealogical structure: For the first four generations before the present, it is possible to roughly date events using first contact as a benchmark; for the fifth to seventh generations before the present, genealogy can only be used to sequence events. Beyond that one reaches the "fictive" generations of tribal founders, a period that begins some 200 years ago and is unlikely to stretch beyond 400-500 years ago. In the latter period, events can neither be dated nor sequenced.

The material presented here is drawn from historical traditions of ninety-two Enga phratries and eighteen immigrant clans/phratries collected between 1983 and 1993 during three consecutive years of fieldwork and several shorter investigations. More than 1,000 pages of testimonies have been translated. Working on such a broad scale yielded a regional perspective and allowed us to check narratives at both ends and to look for consistency. Through the course of our research we found that Enga historical traditions exhibited a high degree of internal consistency and strong regional trends. Comparison of relations described in past historical traditions with more recent politics indicated that history was not rewritten to justify present relations. It was, rather, cumulative in structure, with each new tradition placing former ones in a different perspective.

The most pronounced and frustrating bias was loss of information, particularly in cases where significant events of more recent generations overshadowed the history of former ones, causing many details of their history to be lost.

Historical traditions are passed on in men's houses. Since knowledge of phratri origins, genealogy, dispersal-immigration, and major wars, all topics that affect land rights, are essential for all politically active men, most phratri histories contain information on these four points. Quality and extent of information on other topics is contingent on whether men in generations past have been interested in keeping such traditions alive. Thus, some phratries and clans have extremely rich histories on a broad range of issues, and others relatively sparse ones. Fortunately, the history of ceremonial exchange networks is both rich and included in the repertoire of many phratries.

**The Initial Stages of the Tee Cycle**

The Tee cycle has an extremely complex history (Wiessner and Tumu 1996); the brief outline which will be presented here will only be sufficient to demonstrate the role of kinship. In a nutshell, shortly after the introduction of the sweet potato, substantial population shifts altered former relations between phratries/clans and accompanying pathways of trade and exchange. From such disturbances grew three ceremonial exchange systems: the Tee cycle of eastern Enga, the Great Ceremonial Wars of central Enga, and the Kepele cult network of western Enga; all were the result of the efforts of individuals and clans who were jockeying to channel the trade, solve problems, and take advantage of new opportunities. These networks might have remained contained had it not been for the intense competition released by the new potential to produce a large surplus in the form of pigs. To augment their positions and those of their clans, bigmen in key phratries that bridged eastern and central Enga then took the wealth from the Tee and channeled it into the Great Wars and vice versa, flooding both networks with pigs, goods, and valuables. As these two networks became intertwined, the Kepele cult, the bachelors' cults, and the other cults of the surrounding regions were imported to align tribal goals and mediate tensions caused by increasing social inequalities, a subject that is beyond the scope of this paper (see Wiessner and Tumu 1996). During the first three decades of the twentieth century, the Tee cycle subsumed pathways of exchange created via the Great Wars, thus expanding the Tee network to enormous proportions. With this brief overview for orientation, let us backtrack and take a closer look at the events that occurred.

**Pre-Tee Population Distribution and Exchange**

Around the time that the sweet potato entered Enga, the distribution of population described in historical traditions was as follows. In the high country of western/central Enga above approximately 2,100 m lived mobile groups who
depended heavily on hunting/trapping and gathering. They were attributed with great physical strength and the possession of powerful ritual and magic. Shifting horticulturalists, who subsisted on taro and other garden products (supplemented by pork and game meat), inhabited the steep, narrow valleys below. Historical traditions mention regular intermarriage and exchange between people of the high country and those of the valleys, as well as a good deal of tension and misunderstanding. For areas of central Enga where piranies lived at altitudes between 1,900 m and 2,100 m and had access to fertile agricultural land, there were no apparent divisions by niche — roughly equal emphasis was placed on gardening, hunting/trapping, and gathering. The situation for eastern Enga was again somewhat different. Here, sedentary horticulturalists cultivated taro, yams, and other crops on the flat terraces of the valley floors, and they reserved the upper slopes for pig forage, hunting, and gathering.

After the introduction of the sweet potato, historical traditions tell of experimentation and mixed initial responses. For many groups of the lower eastern valleys, such as the Lai and Saka (Figure 14.1), the sweet potato seems to have had little immediate impact on settlement patterns and subsistence, taro remaining the preferred staple for the next few generations. By contrast, the major trend for western and central Enga clans of the high country (above 2,200 m) was to move down and settle in the valleys, presumably because the sweet potato made horticulture a more desirable subsistence base. Lagaip valley groups, however, settled in the lower reaches of their hunting territories and/or acquired land from affinal kin in the valleys. For central Enga, several piranies of the high country, together with allies from the upper Lai valley, united and expelled the population of the entire Ambum valley and took their land (see Figure 14.1 for locations mentioned). These were initial reactions. In subsequent generations households seeking new garden land or fleeing from conflict cleared land in former hunting grounds and settled higher and higher up the valley sides, drawing on the ability of the sweet potato to grow well in such zones; the contribution of hunting to the diet then dwindled. Unfortunately, there is not enough information from the early generations to determine how kinship affected responses in the east, center, and west, except that in contrast to the east and center, in the west, where piran structure was poorly developed, most responses took place at the level of the family or lineage.

We know little about exchange within hunter-gatherer groups of the high country prior to the introduction of the sweet potato, except that food sharing was of major importance, as was exchange with horticultural groups. For the latter case, it is possible to reconstruct an outline of exchanges that took place from descriptions in early historical traditions. These are summarized as follows (see also Meggitt 1971).

**Food sharing**
- Contents: all food, particularly game meat.
- Source: home production/hunting.
Capacity and constraints of kinship

Bridewealth, pressures for children’s growth/injury, and funerary rites to maternal kin

- Contents: bridewealth: small numbers of stone axes, salt, net bags, aprons, and other trade goods, marmalpals, and/or a few pigs. Children’s growth/injury: net bags, salt, or other goods/valuable of lesser value. Funerary pretensions: marmalpals or pork.
- Source: home production, financed by fellow lineage/clan members.
- Recipients: close affinal/maternal relatives.
- Nature: gifts that receive delayed, non-equivalent reciprocation.
- Purpose: to compensate wife’s natal clan for loss of labor/productive potential and to establish/maintain relations with affinal/maternal kin in other clans.

War reparations

- Contents: land and/or food, particularly marmalpals, pigs, and preferred vegetable foods.
- Source: home production, financed by affinal/cognatic kin.
- Recipients: owners of the fight pay reparations to allies for men killed; organized on the basis of affinal/maternal ties. Reparations to enemy either exceptional or small until ca. the fifth generation.
- Nature: unbalanced delayed exchange, consisting of initiatory gifts given by clan of victim and reciprocated by owners of the fight.
- Purpose: compensate and retain allies; renew exchange ties.

Calls for the ancestors

- Contents: marmalpals, pork, and vegetable foods.
- Source: home production by clan or phraternity and contributions by invited affinal and maternal kin. All families of clan participate more or less equally.
- Recipients: ancestors, ritual experts, clan/phraternity leaders and invited guests.
- Nature: symbolic food sharing with ancestors, distribution of food to all participants and guests.
- Purpose: to maintain good relations with the ancestors, unify clan/phraternity, socialize with friends and relatives from other clans, display strength of descent group.

Trade

- Contents: salt, axes, plumes, cosmetic oil, net bags, aprons, items of self-decoration, food, etc.
- Source: trade partners (generally affinal or cognatic kin) or chains of trade partners; trading parties.
- Participants: agnatic/cognatic kin and trade partners in other clans.
- Nature: barter.
- Purpose: to obtain valuable/utilitarian goods from other regions.

As is clear from these data, most pre-sweet potato exchanges were with affinal and maternal kin outside the clan, with whom households had complementary relationships. Affinal ties offered much room for expansion of social and economic support networks, either through polygynous marriage or by activation of a broad range of affinal ties – i.e., with daughter’s husband’s kin, sister’s husband’s kin, and so on. By contrast, agnatic kin, fellow clansmen, had fewer complementary relationships, but they supported each other in raising the wealth for payments whether they were bridewealth, war reparations, or funeral feasts. These were given in the name of clan interest and not reciprocated, clansmen obtaining name and prestige if they made large contributions. Affinal kin thus had non-competitive relationships; agnatic kin on the other hand competed for status with fellow clansmen (Feil 1984), although such competition was usually put aside when clan interest was at stake. All households had the right to be supported by the clan and more or less equal potential to expand their access to resources through affinal links and trade.

Trade, a topic that receives emphasis in the historical traditions of the sixth to eighth generations, was the only form of exchange that linked nonrelatives, although many partnerships were based on cognatic or affinal ties. Prior to the introduction of the sweet potato, only one well-established trade alliance is named in historical traditions (see Figure 14.1): the one among Yamani of Tumul (designated “1” in Figure 14.1), who was the middleman for axes, cosmetic oil, and other goods coming from the east and south; Yambatane of Saka Valley (2); Itokone of Pomphus (3) in the mid-Lai valley; and Itokone’s brother phraternity Yanaitini. Itokone and Yanaitini owned some of the largest salt springs of the Yandup (15) region even though they were far away; they manufactured salt there and took it to Saka Valley, where they exchanged it for axes. Later Yanaitini, experimenting with the sweet potato and finding that it grew well in central Enga, moved to Tetemanda in central Enga (4) to be closer to the source of salt, thus extending the alliance westward. From this major “road,” goods and valuables were distributed throughout Enga on the basis of household kinship ties or by trading parties. Whether the exchange be trade, bridewealth, or war reparations, in historical traditions prior to the fifth generation (i.e., before ca. 1850), a greater portion of wealth exchanged was made up by nonagricultural goods and valuables (salt, axes, oil, shells, etc), products of the hunt or forest, and, in the case of war reparations, land. During later generations, pigs dominated most exchanges.

THE EARLY STAGES OF THE TEE CYCLE

The Tee cycle, according to all testimonies that we collected, was begun by leaders in the Yambatane phraternity (Saka Valley, Figure 14.1, area 2) as a system of finance to provide wealth to establish relationships that would help them keep control of the trade in the face of population shifts. Namely, groups from valleys to the east and south moved up into higher-altitude areas bordering on Saka Valley after the introduction of the sweet potato, intending to place themselves at the crossroads of the trade routes, where hunting was good and where preliminary experimentation had shown that the sweet potato grew well. However,
of maternal/affinal relationships into chains of finance, wealth could be received from those not related by ordinary kinship reckoning, whose kinship distance would otherwise have been too great for relationships of finance on credit. Although such chains transcended the bounds of ordinary kinship, every link was secured by a primary affinal or maternal relationship. Public Tee distributions to repay creditors assured those down the line that they had received just reciprocation. Skillful use of the chains, although requiring considerable footwork, could draw on a much broader segment of the population and maximize the amount of wealth that arrived at one place at one time. Finally, the Tee as a system of finance opened the way for greater social inequalities to develop, insofar as individuals who successfully manipulated chains of finance could greatly outdo others without infringing on the rights and resources of fellow clansmen.

The introduction of a new system of finance and repayment, appropriately called *Tee lenge*, “to ask for,” is noted in the oral history of some neighboring clans – for instance, in a historical legend from the Itokone Nene clan of the mid-Lai. One day, it says, when Itokone was to hold a war preparation ceremony, the mother of the clan founders inspected the pigs’ stakes laid out by each of her six sons. When she came to those of Nene, her youngest son, she noted that he had many stakes laid out even though he had no pigs in his house. She questioned him about this, and he explained that he was not “old-fashioned” but that he followed the trends of the time and would receive his pigs on finance through the Tee. He then took his brothers to Saka Valley and Tabul to show them how he acquired his pigs through the Tee cycle.

For the next two generations the Tee cycle is said to have had a linear structure, clinging to the trade routes from Saka Valley east to Tabul, from the Saka west to Yamiutini Kia at Tetemanda (central Enga) and from the Saka northwards down the lower Lai (see Figure 14.1). While Tabul and Tetemanda were to remain the eastern and western termini of the Tee for some 4–5 generations to come, the northern branch continued to expand. In these early stages, the Tee cycle did not involve more than 20–40 clans directly on the trade routes, and its primary purpose was to finance marriages and other ventures that would give further control over the flow of trade goods.

The Tee cycle is said to have remained contained until the fifth generation, when neighboring clans in the east saw that it was providing their neighbors with the wealth necessary for social and political undertakings. They sought to join, realizing that without wealth from the Tee cycle, they could no longer compete for brides and allies in warfare. This event coincided with another important development that was raising new demands for finance: the extension of war reparations to the enemy (Wiessner and Tumu 1996). Formerly, most wars had solved problems by spacing competing groups, either within tribal lands or by expelling one party into an outlying area. Reparations were then paid to allies in the form of food for feasting and land gained, thereby replacing hostile neighbors with friendly ones. As tribal land filled and much of the ter-

7 The term *Tee* is also applied to other wealth distributions such as war reparations. When elders say that this was the first Tee, they mean the first wealth distribution in the Tee cycle.
Central Enga experienced rather different developments in ceremonial exchange. Although these also occurred in response to population movements after the introduction of the sweet potato, Phumhi of the Ambum and Lalgap valleys joined forces to form a powerful fighting force against the Ambum valley and then moved into the upper Sepik valley. From there, the Ambum valley expanded to the north and east, displacing people from other linguistic groups. As the Ambum valley expanded, it became a unipolar system of influence, with a corporate group aspect that had widespread appeal.

The strategic advantages of the Ambum valley were not limited to its size and resources. The valley was strategically located near the Sepik River, which served as a major transport route. This made it easier for the Ambum to trade and conduct warfare with other regions. The valley was also abundant in resources, which allowed it to support a larger population.

The Ambum valley's expansion also had significant implications for the surrounding regions. The Ambum's growing influence threatened the autonomy of neighboring groups. This led to a series of conflicts and rivalries between the Ambum and other regions. As a result, the Ambum became a powerful force in the Sepik region, exerting its influence over a large area.

The map depicts the historical movements and exchange networks of the Ambum valley, illustrating its role as a central hub in the Sepik region. The map shows the location of battles and strategic movements, highlighting the Ambum's strategic position and its impact on the surrounding areas. The dynamics of exchange and conflict are evident in the map, providing insights into the historical developments in the region.

Figure 14.2: The Correspondence between Great War Networks and Routes of the Tce Cycle. Great Wns: (1) Momani vs. Yaminini, (2) Lysani Sakalimi vs. Pumana-Aiyata, (3) Malimin-Poealini vs. Itupani-Awini, and (4) Yakani vs. Sene-Yokasi. The Great War arrows roughly designate areas from which clans who were "owners of the figures" came to participate. The stars indicate the location of the battles.
upper Lai and Ambum valleys over access to the trade from the east and to land in the upper Lai.

4. Yalaska versus Sene-Yokasa, whom they had driven out of the lower Ambum valley.

Although the original cause of each Great War is known, the oral record does not tell of precisely how the transition from vicious conventional wars to ritualized ceremonial ones came about. What is known is that the Great Wars were rooted in the dual nature of Enga warfare: fighting to reach certain objectives, followed by war reparation exchanges with allies. Because the exchanges proved as advantageous as the show of force, the Great Wars were fought recurrently, with increasing emphasis on the social aspects and exchange that ensued.

A long time ago, there were fewer people; they were widely scattered, and lived relatively isolated from one another. Now the question is, “Why did people living at that time engage in the Great Wars?” The main reason was the following: they did not fight for the sake of fighting. The Great Wars were not serious ones, but they were mock wars either. Warriors received arrow and spear wounds, and some of them died from their wounds. The underlying purpose of these wars was to bring people together - they were formal and ceremonial. They were fought to show the numerical strength and solidarity of a phratry and the physical build and wealth of the warriors; figuratively it is said that in the Great Wars, “they exposed themselves to the sun.” The Great Wars were events for socializing (between owners of the fight and their allies and hosts, not with opponents). After getting to know each other, they would kill many pigs and hold feasts (war reparation exchanges). (Dapeusona of the Yakani Timah clan, Lenge [Wabag])

The Great Wars were fought for the sole purpose of producing food. In other words Great Wars were planned or planted like a garden to produce a harvest. They were arranged when goods and valuables were plentiful, and there were so many pigs that women complained about their workload. Everybody knew what they were in for, how war reparations would be paid for deaths and what the overall results would be. They were designed to open up new areas, further existing exchange relations, foster phratry unity, and provide a competitive, but structured environment in which young men could strive for leadership. These qualities of the Great Wars made them different from conventional wars which disrupted relationships of trade and exchange, causing havoc and sometimes irreparable damage. The distributions of wealth that took place after the Great Wars brought trade goods from outlying areas into the Wabag area on the trade paths initially established by the salt trade. (Ambonee Mani, Itaponi Onimani clan, Kopena [Wabag])

The Great Wars were fought periodically in episodes, each episode having its own triggering incident, battle, formal closure, and ensuing exchanges. The structure and course of a Great War episode was as follows. The “owners of the fight,” composed of entire phratries or pairs of “brother” phratries, were hosted by intermediate phratries or clans who provided them with food, water, housing, entertainment, and allied warriors. Hosting was organized as follows: Individual families in the hosting groups received close and distant relatives in their own houses or in houses built for the purpose, and each of them provided for their own guests for the duration of the war. Weeks before battle began, warriors gathered to make physical preparations and to sing and dance to brew the spirit of the fight. Meanwhile wattange, bigmen who were chosen as fight leaders, drew up plans for battle and the exchanges to follow.

When both sides had assembled their fighting forces, warriors appeared on the battlefield in full ceremonial dress and a formal beginning to battle was called. By day they fought in front of hundreds or thousands of spectators, while the women sang and danced on the sidelines. At night they ate, drank, talked with their hosts, and counted their daughters. The battles continued for weeks or months until a formal closing ceremony was called, during which weapons and shields were thrown into the river. Since the Great Wars were fought in designated areas, usually on the land of hosting phratries, no land could be gained or lost and no damage was inflicted on property. The Great War episodes were ended without anger; men who died were said to have given their lives for a worthy cause, and their deaths were not avenged.

After a Great War episode was formally ended, a series of large, festive exchanges were initiated to pay the hosts; they would continue for two to four years. Essentially, these transformed the close relationships between hosts and hosted, which had formed during their weeks or months of living together, into exchange partnerships. First, the hosts paid war reparations for allied deaths and then held a feast to mark the end of the war and initiate host payments from the “owners of the fight.” The “owners of the fight” who had raised pigs for the occasion, reciprocated with a large-scale pig kill, during which each of the 10–20 clans involved on each side would slaughter pigs and hold formal distribution festivals for their hosts on a single day. Sides of pork were given to the individual “guests” families to their host families. During the months that followed, hosting families gave another round of initiatory gifts, which were reciprocated by the hosted in the form of five pigs, cassowary, goods, and valuables given in a sequence of clan distributions spread out over a number of days. The courtship parties that had been held by night culminated in numerous post-war marriages - and with them new social ties.

Episodes of Great Wars were fought repeatedly at 7-20 year intervals from at least the sixth generation until the late 1930s, peaking early in this century. The most recent one involved up to 3,000 warriors and the exchange of some 5,000 to 10,000 pigs and many trade goods (if all exchanges are tallied); in contrast most smaller wars drew a couple of hundred warriors and the exchange of 100–300 pigs.

By contrast to the Tor cycle, the Great Wars were group events at the highest level of Enga organization, matching entire phratries or pairs of phratries, plus hosts and allies, against one another in grandiose shows of force, numbers, and wealth. Through competitive display in battle and exchange, these wars deterred aggression, defined fields of competition and cooperation, entertained extravagantly, and brewed the massive exchanges that opened opportunities for all. There were few who were not drawn to join one side or the other, fight, court
women, and exchange wealth with hosts and allies. As a result of the dramatic rule-bound competition and accompanying festivities, the Great Wars expanded to enormous proportions over just a few generations by contrast to the slower progression of the *Tee* cycle. Pigs were the only resource that could be produced in large enough numbers to finance them; not only was the economic value of pigs accentuated, but the spectacle of their presentation during the accompanying festivities gave them new social and symbolic value. In a broader perspective, the Great Wars connected the trade of the Lai with that of the Lagait, Ambum, and Sau valleys, and it put phratries who had been driven to the northern Sau, Wale, and Tarum regions back onto the map of trade and exchange (see Fig. 14.2).

It is interesting to note that despite the enormous proportions of the Great Wars, no new principles of finance were involved, just more in every respect. The experience of fighting as allies and participating in ensuing exchanges resulted in the strengthening of kin relationships, just as it did in smaller, non-ceremonial wars. However, for the Great Wars, which were spectacular and entertaining, more relatives came as allies, more time was spent socializing with hosting families, and because there was no destruction of property, there was more to be exchanged.

**THE MERGING OF THE *TEE* CYCLE AND GREAT WARS**

By all accounts, the *Tee* cycle and Great Wars were independent of one another in their initial stages. The Great Wars are said to have been much larger and more prominent than the *Tee* cycle prior to the fourth generation, occupying the attention of most of the population of central Enga. There were, however, clans in three phratries of central Enga - the Yanalitini (Figure 14.1, area 4), Apulinini (5), and Yakanini (6) - who participated in both and transferred wealth from one network to another. As the fights expanded in the fourth generation, bigmen in these clans sought new pathways through which to finance their Great Wars and to invest the wealth that flowed out of them. The most effective means at hand was the *Tee* cycle. Historical traditions tell of how bigmen from these phratries traveled down *Tee* routes to try to construct longer chains of finance. One of the best known efforts in this respect was that of the Great War leader and *Tee* organizer Yakanini Pendaini of Lenge. Pendaini journeyed to his wife's clan at Linares (7) in the lower Lai, where he met with one of the most influential bigmen of Saka Valley (2). There in the men's house he promised the Saka leaders that he would send initiatory gifts to Saka Valley, if in turn would take the *Tee* that was coming from the lower Lai, and, rather than sending return gifts back down that route, direct it up the western route to Lenge and Tetemanda. They all returned home and campaigned along their *Tee* chains to make this plan succeed. When it was indeed realized, the northern and western routes were joined, greatly increasing the amount of wealth that arrived in the west at one time. The pigs, goods, and valuables from this *Tee* cycle were fed into the Great War exchanges and reciprocated with wealth that flowed out of them.

Similar moves were made by numerous bigmen for this and other Great Wars. As wealth from the *Tee* became regularly channeled into the Great War exchanges and vice versa, it was said that the river of *Tee* flooded, bringing both prosperity and problems. At this time bachelors' cults and ancestral cults that drew together celebrants and guests in a cooperative spirit were imported into eastern and central Enga and used as occasions to plan the *Tee* cycle, phase it in with the Great War exchanges, and mediate problems stemming from growing complexity (Wiessner and Tumu 1996).

For some decades, bigmen who coordinated the two systems kept knowledge of the *Tee* cycle from clans to get them to participate in the Great Wars, and they warned *Tee* organizers who came up from the east that people in clans to the west were hostile and would kill them. However, after some time the *Tee* became so large that its benefits as a system of finance could no longer be concealed. People in clans of central Enga, particularly bigmen, saw that its long chains of finance could bring more wealth into their hands with lower costs in terms of time, wealth, manpower, and lives. Thus, one by one the Great Wars were phased out as the participants opted to join the *Tee*, greatly extending the *Tee* cycle and making its organization more complex.

Nonetheless, even as the *Tee* cycle grew to new proportions, its basis of organization changed little. Bigmen who were *Tee* organizers would travel the entire distance from Tumbul to Tetemanda and then on into the Ambum and Sau valleys for up to a year at a time to convince those in their clans to follow a certain plan and to urge their clanspeople to do the same. They continued to follow Kinalini's strategy, going first to their own affinal or maternal kin and convincing them to cooperate, and then journeying together with them to relatives of their relatives. At each stop it was primarily the job of those in the party with the most direct kin connections to do the talking. When plans had been solidified, bigmen returned home to convince other households in their clans to go to their own relatives and do the same, for the efforts of a few would not make a successful *Tee*. The following excerpt taken from the life history of the great *Tee* organizer Pendaini of the Yanalitini phratry (Figure 14.1, area 6) describes this process. It begins with the campaign for the phase of the main gifts in one *Tee* cycle that occurred ca. 1910, shortly after the Yakanini Great War had been replaced by the *Tee* and the new *Tee* route into Sau Valley had been opened. Particularly noteworthy in this testimony is how during journeys to organize the *Tee*, men of one *Tee* chain developed strong bonds, creating new alliances that were later to become central units of competition.

During one *Tee* cycle, Pendaini went to the Sau region, campaigning for the start of the phase of the main gifts. Pendaini, the great big-man, came to the house of his son-in-law Ipalyone (of the Atuliti Yakanini clan near Sauandu, Figure 14.1, area 8), who was my father. Ipalyone welcomed him and extended to him the hospitality that was fitting to a man of Pendaini's stature — my father killed a pig for him and they slept together in the man's house that night. In the morning the two went to the house of Yakayakape,
who had two brothers named Yaka and Kosepato. They were big men of the Pumani Yaku clan. When the two arrived at their place, the brothers gave them a warm welcome. They spent the night at their house and were entertained and given food. In the men's house Ipaloye explained to them why they had come, and Pendaine explained his plan for the next Tee. The brothers listened to him intently and the next day they set off together for the house of Neowali Yakan (at Kemen, Figure 14.1, area 9). The small group made its way over the mountainous terrain, arriving at Neowali's house on the evening of the same day. He received them and gave them food and water. When they were in the house together, Yakayapaka told them of the purpose of their visit and they talked about the Tee. Neowali listened very carefully, and at the end of the discussions he agreed to their proposals.

Neowali Yakan was the one who was to begin the Tee. For weeks Pendaine stayed in the Sau region with these men, and led by Neowali they campaigned for the Tee. They went from house to house, settlement to settlement, and clan to clan. Occasionally, they went back to the house of Neowali to sleep, but most of the time they stayed with the people they visited. In this way the word spread to every clan about the possibility of beginning the Tee.

Kopio goes on to describe how the phase of the main gifts moved from clan to clan through Pendaine's footsteps. The following passages give the course of Pendaine's major Tee chain and then trace the course of the wealth distributed by Pendaine as it traveled down Tee chains to reach the easternmost clan in the network. Places mentioned are shown in Figure 14.2.

As I said earlier, Pendaine married a Pumali Kandano (Figure 14.1: 10) woman whose mother was from the Kandawali Ambalyini clan (11). Somewhat, his wife's parents were related to Kalepo of the Lengupali Sau clan (12). Sau Kalepo was a Tee partner of Lawali of the Kandawali Anjo clan (13). Lawali was a Tee partner of Lendame of the Iotokone clan (14), and this Tee link continued as far as the Yatapaki tribe (15) of the Minamba valley. What I have described was one of Pendaine's many Tee links, which built his vast Tee network and brought him fame. Such links extended to the Saka valley in the east, as far west as Tatemanda and from the Sau region into the Wale-Tarna...

Most of Pendaine's wealth was given to his wife's kin in the Pumali Kandano clan, for that was his major Tee link. Of course, each of his clansmen also had a major Tee link through affinal and maternal kin of his own, like this one. Pendaine gave Wapakata (one of the largest and most desired pigs of that Tee cycle) to his wife's father; the other two large pigs went to his wife's kin as well. His wife's father gave Wapakata to Kualepo, who in turn gave the pig to a man from the Kandawali Kaeke clan. This man gave the pig to Lendame of the Iotokone phratry (Pomapad), and from there the pig went to Kiona of the Yatapaki phratry (Minamb valley). The pig must have then changed its course to travel along the famous Kojma route and ended up in Kola (Tambor). Through similar Tee links, some of the pigs ended up in the Saka valley, and wherever his pigs went, Pendaine's name was mentioned. The clans of the Saka valley held the Tee, and then it continued to move eastwards to finally end up in the Kola region, from where the great Yae phase must begin.

The Yae was the final phase of the Tee cycle, in which approximately half the pigs received were killed and sent in the opposite direction to retrace the steps of the main gifts, thereby completing one cycle. This phase required less effort to organize, since houses were jammed with pigs and people could not manage to feed them for long if it was delayed. Here, as in the first passage, one can feel how the travels of men on one Tee chain bonded them into a tightly knit alliance, each partner respecting the rights of the others to handle matters with their own kin.

One year had passed since the Tee had been held at Lenge. During this time Pendaine stayed home, looking after the pigs that he had reserved for the Yae. He received news from time to time from his Tee associates about how the Tee was proceeding. When the message reached him that the Tee had finally reached the easternmost end of the network, he sent word that the great Yae pig-killing phase of the Tee should begin. At this word the Yae began, and those involved in the Tee from the west, men from the upper Lai and Sau valleys, went down to see it. They traveled from house to house, settlement to settlement, and ridge to ridge. For example, having received news of the Yae, Neowali Yakan (Figure 14.1, area 9) set out in the morning for the house of Yakayapaka and his brothers. After a long trip, he reached their house and stayed for the night. He told them of the reason for his visit, and they made plans to go to the east. On the morning of the next day Neowali Yakan, Yakayapaka, and his brothers traveled on to the house of Ipaloye at Sauanda (8). The group spent the next night there and were refreshed with food and water. The Yae was the topic of their discussions. On the morning of the next day, they left for Lenge (6) via the bush track that crossed the mountain range. It was a long journey, and they did not arrive until the evening.

At Lenge they went directly to the house of Pendaine. The great Pendaine had been expecting them, greeted them, and brought them to his house. He sent word to his servants to prepare food for the visitors; they did as they were told by the great kmungo (big-man). One of the servants brought a bundle of sugarcane, the first thing required by a visitor who had arrived from a long journey. Others brought all kinds of food to the house, including pork from a fat pig that was slaughtered and roasted for the occasion.

At night, as the men sat in the house eating and drinking, they quite naturally became involved in an intense discussion of the Tee and Yae. Pendaine knew that these men had arranged the main phase of the Tee for him and that he must return their favors. He must take them to the Yae, if he did not, they would not regard him as trustworthy.

In the middle of the night, Pendaine took them to the men's house to sleep, and the next morning they prepared for the trip. Pendaine dressed: He put on his wig and woven apron, which were reserved for special occasions and marked a stone circle in his waist belt. They did not bring any sweet potatoes for the trip, because Pendaine had friends and Tee associates who would provide for them if they were hungry along the way. Just before midday they set out and made their way to the village of his in-laws. Accompanied by his in-laws, they traveled on to the Ambalyini clan, where many other people from clans down the valley joined them. Soon they reached the natal clan of Pendaine's wife's mother, and after having picked up her relatives, they went on to the house of Sau Kalepo. The group grew larger and more men joined. Indeed it was big, and so they stuck to the main trail down the valley. However, Pendaine and his men made a detour via the house of his in-law Lendame of the Iotokone phratry (3).

In this way, they traveled east to see the Yae. Pendaine and his men ended up in the land of Yatapaki (14), where Yatapaki men gave them pork and other food and then took them to the Yae festival of their neighbors. Sides of pork were passed from one

9 Such alliances also played an important role in keeping peace and negotiating taxes and regulations should war break out.
petition was added: competition between chains of bigmen, each striving to structure *Tee* cycles to suit their own interests. When the *Tee* finally subsumed the Great Wars, replacing their networks with *Tee* routes, stakes were very high and the politics of its organization were riddled with devious and obstructive tactics. And so the flourish of the *Tee* began to sow the seeds of its own demise.

**CONCLUSION**

Although we have not attempted to construct a formal model for the development of the *Tee*, from its history it is possible to outline how both the potential of kinship as well as its constraints on the choices of the actors molded the configuration of the *Tee* ceremonial exchange cycle. To review, after the introduction of the sweet potato, competition set off by migration, changing settlement patterns, population growth, and disruptions of the trade resulted in the rise of two systems of ceremonial exchange: the Great Wars and the *Tee* cycle. Both eventually reached enormous proportions due to the potential for surplus production afforded by the sweet potato, among other things.

In the absence of domination by a colonial power and an accompanying imposed economy, values, and institutions, kinship continued to organize exchange in much the same way as it had in previous generations. New networks were constructed along lines of affinal and maternal kinship, with a relationship of familiarity, cooperation, and/or common interest in the next generation forging each new link in the network. In the Great Wars, a preexisting form of exchange — reparations to hosts and allies — was taken and made “bigger, better, and more.” For the *Tee* cycle, bigmen sought to expand affiliative ties through polygamous marriage and by activating their full repertoires of affiliative ties. In order to finance these efforts, they made a simple innovation, which had great repercussions: the concatenation of primary affinal and maternal relationships to form chains that gave access to finance from those who would not be relatives by ordinary kinship reckoning. When the *Tee* became a broader purpose system of finance, more and more clans and households within a clan participated, challenged by competition at both the individual and group levels. This altered its configuration from a linear one that clung closely to major trade routes to one with a meandering course that included the festivals of most clans of eastern and central Enga (see Muggio 1974:173), linked households in different clans through a dense network of ties, and branched out in virtually every direction where there were people. And so kinship relations originally devised to handle exchanges between single families and/or clans remained powerful enough.

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10 The extent to which *Tee* connections were built on affinal/maternal kinship can be seen in Field’s study of 1,631 interclan *Tee* partnerships of men in the Kombes region (Komplin) in the 1970s: 99% of Tsembaga *Tee* partnerships had a female link. Partnerships traced through wife or sister constituted over half of all partnerships, and those traced through the mother’s or father’s sister, another 40% (Field 1984:143–4).
to organize an exchange network of over 350 clans and some 40,000–70,000 people.

Kinship structures not only opened possibilities but also exercised constraints. Quantitative changes, great though they were, never tipped the balance and altered the nature and quality of kin relations used to organize the Tee. For instance, the concatenation of affinal relationships did not bring what might be called a "transitive" restructuring of kinship so that family A on a Tee chain redefined D or E down the chain as primary kin and worked directly through them, an outcome that would have profoundly reshaped the network towards greater centralization. Even when the Tee cycle had reached its height in terms of numbers, the greatest of the bigmen worked down their own female-linked Tee chains over vast distances, negotiating each step in the warm and congenial atmosphere of the men's house with good food and good company. They let their wills be known at each link but left most of the private persuasion to immediate partners and public speech to the bigmen of the clan visited. In other words, participation in exchange that involved risk continued to depend heavily on kinship distance.

Furthermore, in the face of rapid growth, Tee leaders could not tame the sprawling structure of the Tee and bring greater centralization to facilitate its organization, nor could they institute a hierarchy of Tee organization that could be reproduced through time. Men had to work their way up to the position of Tee kannavaga (bigman) and compete with rivals to remain on top; should sons want to follow in their fathers' footsteps, they had to do the same. Status and influence were as transient as the pigs and oratory upon which they were based, and they remained contingent on those on the top served the clan and partners along their Tee chains. And so the system was flexible and expandable but not infinitely so, for certain structures of kinship and exchange restrained the strategies of individuals. These included:

1. A strong ethic of potential equality between all men, instilled repeatedly in bachelors' and ancestral calls, that counteracted the social inequalities fostered by the Tee.

2. The fact that much of the support for individual households came from diverse relatives outside the clan and that within the clan, loyalties shifted between competing bigmen.

There was no group with coherence in time and space that could strive to place its candidate in a more permanent position of power. For these reasons and others, the enormous growth that occurred and the corresponding temporary social inequalities that developed never broke down the principle of potential equality between men, nor did it allow some to usurp the land, labor, and rights of fellow clansmen.

As a final note, by the 1960s and 1970s the dense, sprawling, and decentralized network of Tee was becoming unmanageable. Clans had grown to such an extent that they had two or more powerful bigmen on competing chains who vied to channel the Tee to suit their own interests, using what were often ob-

structural tactics.11 Cycles organized by one chain would be boycotted by another (see Fell 1984). To organize a Tee which would fulfill the interests of all was virtually impossible. Since the last Tee of the late 1970s, numerous attempts at launching a new cycle have been made, but none has succeeded. Some attribute this failure to the cash economy, lack of interest on the part of the younger generation, as well as new priorities and values. However, the bigmen who walked from Tabubl to Tetemanda and deep into the outlying areas to organize the Tee in the past feel that even without such developments, the Tee was doomed to break up under the sheer weight of its ever-growing numbers. Apparently, it had grown so large in scale that it could no longer be organized by intimate personal communication and managed by the power of egalitarian kin relations.

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REFERENCES


11 See Fell (1984) for excellent discussions of competition in the Tee in the 1970s in the Kombian area. The many elders that we interviewed on this topic from the central valleys say that competition between Tee chains began around the 1920s to 1930s and was greatly accentuated in the colonial period.


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**BETWEEN WAR AND PEACE: GIFT EXCHANGE AND COMMODITY BARTER IN THE CENTRAL AND FRINGE HIGHLANDS OF PAPUA NEW GUINEA**

Joachim Görlich

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**INTRODUCTION**

In old Melanesia two different forms of exchange, *ceremonial* gift exchange and commodity barter, are to be found in a great variety. Anthropologists have often emphasized that both exchange forms are fundamentally contrastive and mutually exclusive (see, e.g., Gregory 1982). In the last couple of years, however, as the theoretical discourse in anthropology has been characterized by an increasing relaxation of the older theoretical frames of reference (Biersack 1991:2), there have been some important attempts to reduce the exaggerated contrast between gift and commodity exchange (see, e.g., Appadurai 1986; Gell 1992; Valeri 1994). The present chapter is intended as another step into this direction. The aim of the paper is twofold: On the one hand some game-theoretical models will be delineated that I have used to point out both differences and similarities of the two exchange forms in the central Highlands of Papua New Guinea (Görlich 1992a, 1992b). On the other hand I will discuss to what extent these models can be used to understand and differentiate exchange processes of the Kohn people on the northern fringe of the Highlands of Papua New Guinea. In the central Highlands societies *ceremonial* gift exchanges of pigs and shells play an important role in the politico-economic organization: They enable peaceful relationships and define the power positions of the actors. Beyond that a great variety of barter or trade transactions serve as an interconnecting link between different societies. For the explanation of these two types of exchange processes, I propose three different kinds of game models. The models are designed for the explanation of three different kinds of problems, namely cooperation, bargaining, and coordination problems. Although these problems often do occur together in exchange processes, they differ in regard to their configuration and their significance. As will be shown, the game models can therefore also be used for the differentiation of gift exchange on the one hand and barter on the other.