THE ENGA SYNDROME*

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1. *Introduction*

Life on the Roof and the Unseen City

The Enga live on the roof of New Guinea. From their homeland high on the spine of the central cordillera, the Lai, Sau and Maramuni Rivers drain via the Sepik north into the Bismarck Sea and the Lagaip, Wahgi and Andabare drain via the Strickland and Purari south into the Gulf of Papua. In the valleys of these rivers and their thousand tiny tributaries the Enga live their mountain lives in what is now the newest administrative District of Papua New Guinea.

Not counting resident expatriates or native people of non-Enga ethnic origin, the population of the Enga District is 160,000. This makes the Enga the largest ethnic group in turbulent times before and after Independence.

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* The ethnographic present of this paper is 1973. Since then, the situation in the Enga District has changed considerably, partly because police and Magistrates implemented some of the suggestions contained in this paper and partly because the Papua New Guinea Government on its own initiative responded to the situation then existing by introducing new legislation in relation to Village Courts, compensation payments, and land dispute settlements.

The present value of this paper is its example of how a situation of violence can be examined, diagnosed and cured, and the simple fact that the Enga District is now experiencing an unprecedented era of peace is proof that the systems of administration and law advocated in this paper do work. The same systems therefore could be implemented in varying degrees anytime in the future, whenever any other situation of violence threatens elsewhere in Papua New Guinea.

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While prominent in numbers, the Enga are also to the forefront in various fields of human endeavour. The leader of the Opposition, Mr Tei Abal, is an Enga, and a quirk in the present alignment of parties in the House of Assembly could easily elevate him to the position of Chief Minister. The Chairman of the Liquor Licensing Commission, Mr Phillip Paney, is also an Enga, and other Engas can be found throughout Papua New Guinea employed as magistrates, policemen, clerks, drivers, nurses, and in other skilled occupations now considered to be within the province of the rising local elite. Meanwhile, in Australia, one Enga man is training as a pilot with the Royal Australian Air Force and at home, Enga Big Men, complying with Finney's[1] profile of New Guinean entrepreneurs, are prominent in communal investments in coffee gardens, cattle projects, vehicles and trade stores.

It is 400 miles from Laiagam to Lae, and for its first sixty miles through the heart of the Enga District, the Highlands Highway is a ribbon city. It is an unseen city in the sense that not much of it can be seen from any one point along its total length, yet it has all the attributes of any other modern Melanesian urban community --- division of labour, social stratification, personal anonymity, reliance on indirect modes of social control, normative deviance, and high territorial mobility.[2] It is only a few hours' road journey from Wabag to Mount Hagen, and Lae is a comfortable two days' drive from Wabag.

All Engas, traditional or modern, are mountain people. Most of them live between 4,500 and 7,500 feet above sea level. Some live a lot higher, but above 9,000 feet, life is harsh and cold and the daily temperature might range from 30°C at noon to freezing point at night. Wabag, Laiagam, Kandep and Sirunki, the centres of administrative activity, are high and bleak by any Pacific Islands standard. This is, indeed, life on the roof of New Guinea.

Across this roof, strung out in a narrow ribbon of urban development, winds the medley of settlements and establishments which together and in company form the corporation of the unseen city ---- four hospitals, two high schools, a multitude of primary schools, churches, missions, workshops, trade stores, garages, offices, and most other trap-

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1 B.R. Finney, New Guinean Entrepreneurs (1969) *New Guinea Research Bulletin* No. 27.

2 A. Reiss, "Urbanism" in Gold & Kobl (eds.), *A Dictionary of Social Sciences* (1965).

pings of a modern society, including a hotel at Wabag, and even a yacht club at Lake Iviva, 8,000 feet above sea level. The unseen city has a European population of about 400; a non-Enga indigenous population of about 1000, and as mentioned earlier, serves and threads its way through an Enga population of 160,000. It has a large and largely indigenous owned enterprise something like *Namasu* called "WASO" (an Enga word meaning "to create") which buys primary produce from Enga farmers and sells imported merchandise to anyone at three branch stores at Wapenamanda, Wabag and Laiagam. Every week WASO exports by road and air 13 tons of vegetables to the centres of Lae, Wewak, Madang, Port Moresby and Mount Hagen, and in 1972 paid out to Enga employees and farmers a total of $210,000.[3]

Yet all in the Enga District is not as it should be. For out of the unseen city and its tangled mountain hinterland has come a recent and perplexing upsurge of violence unmatched elsewhere in Papua New Guinea except in parts of the Western Highlands and Chimbu Districts which are also subject to periodic outbursts of violence.

From February 1972 to February 1973 in the Enga District there were 17 large riots of the kind more particularly described in Appendix A.[4] Twenty persons were either killed during these riots or died from wounds thereafter. Hundreds of people were wounded and untold damage was done to gardens, cash crops and buildings.

In this essay I describe in detail, as Standish[5] has done for the Chimbu, the reasons for the upsurge in violence. I also put forward a number of proposals designed to reduce the level of this violence. Section 2 deals with the historical reasons for the present violence; these reasons can be summarised by what I have called the Enga Syndrome, an increase in population combined with a reduction in the gardenable acreage. The first part of Section 3 describes the nature and consequences of the violence by means of extracts from

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3 (1972), Directors' Annual Report (mimeo).

4 *Infra*, p. 258.

5 B. Standish, "Warfare Leadership and Law in the Highlands" (1973) *Seventh Waigani Seminar*, Port Moresby; now published in P. Bayne and J. Zorn (ed.), *Lo Bilong Ol Manmeri* (1975).

court records and a detailed Critical Path analysis of the events prior and subsequent to a major battle between two opposing clans. The Critical Path Analysis is included as Appendix A. It is of crucial importance to my argument and should be considered an integral part of the paper. In the second part of Section 3, I deal extensively with the legal causes of the violence, and in Section 4, I suggest some remedies directed mainly towards simplifying the judicial process by introducing a system of dispute settlement more acceptable to the Enga situation. I also suggest how the police could be better deployed and how their role could be changed to meet the exigencies of the present situation in the Enga District. Finally, in the conclusion of this paper, I suggest how the incidence of violence might be reduced by the better use of *all* the existing resources now available in the Enga District.

2. *Threads from the past*

The Reason Why

In order that we can find a way to prevent violence among the Enga in the future, we must look briefly into the past to see why the Enga are what they are today. And the reason can largely be attributed to the sweet potato.

Westermann[6] says that crops traditionally grown in Papua New Guinea other than the sweet potato could not support populations with densities anywhere approaching those of the present. And not only were people sparsely distributed before the coming of the sweet potato, but so also were the pigs, since it would have been difficult to maintain large herds of pigs if they were fed on taro, for example, since taro must be cooked before pigs will eat it. But pigs can eat sweet potato raw, and, Westermann continues, there is reason to assume that the number of pigs increased sharply after the sweet potato came into general agricultural production.

All this happened comparatively recently, for although carbon dating of stone implements and lexicostatistical dating of Highlands languages suggests that the Highlands have been occupied since 8400 BC, the sweet potato has apparently been in the Highlands for only about 300 years.[7]

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6 T. Westerman, *The Mountain People* (1968) (mimeo) 14.

7 *Ibid.*, 13.

How the sweet potato got to the Enga District and what happened to the population thereafter is still the subject of much academic interest. Watson[8] supports the "revolution" argument that there was a population "explosion" following the rapid spread of sweet potato cultivation through the Highlands. Brookfield and White[9] argue a much slower evotionary process. Whichever way it did happen, it must have happened within the last ten generations, and must have been accompanied by a change in settlement pattern, which probably reached critical mass about the time coastal Papua New Guinea was being settled in a permanent way by Europeans late last century.

The process continued until at least fifteen years ago in the lower altitudes of the Enga District where staple crops other than sweet potato previously grew. Waddell[10] found there that the last extensive plantings of taro were on land now used for other crops, mainly coffee and sweet potato.

We can assume that before the coming of the sweet potato, the higher altitudes where taro, bananas and yams do not grow well were only sparsely settled if at all, and were more likely used for intermittent hunting or gathering expeditions by people then living in the lower areas. A periodic shifting of residential sites probably accompanied the slash and burn techniques of taro, yam and banana culture, but a more sedentary settlement pattern evolved with the progressive use of sweet potato.

Waddell says:

> Simple shifting cultivation may, intially, have been practiced by Highland societies. However, an expanding population and a slow rate of forest regeneration resulted in a progressive deflection of the natural vegetation to a grassland dis-climax unsuited to this type of agriculture. Equilibrium within the ecosystem was restored, and at the same time the general level of production increased, by segregating the staple from the subsidiary crops

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8 J. Watson, "From Hunting to Horticulture in the New Guinea Highlands" (1965) *Ethnology* Vol. 4, 295-309.

9 H.C. Brookfield and P.J. White, "Revolution or Evolution in the Prehistory of New Guinea Highlands" (1968) *Ethnology* Vol. 7, 43-52.

10 E. Waddell, *The Mound Builders* (1972).

> and evolving special techniques for its cultivation. These techniques of intensive cultivation resulted in the substitution of labour for land as a major factor in production by reducing per capita land requirements for sweet potato.[11]

Elsewhere Waddell also states that basic to any understanding of the Enga sweet potato mounding system is that it is designed to permit continuous cultivation of the soil.[12] Therefore, with garden plots now under intensive and continuous cultivation, the need to move residential sites is dictated only by the mechanics of housebuilding so that relocation seldom involves a move of more than a few metres and the abandoned house site is utilised as a kitchen garden. The Enga are now rooted to the soil.

And what we now see of the Enga is not an ageless, changeless society whose customs have obtained since time immemorial, but a society which has been changing rapidly over the last three hundred years. Salisbury says:

> If the adoption of manioc in Africa and the American adoption of the horse are guides, similar rapid changes in non-industrial societies were common in other parts of the world.[13]

It is highly probable therefore that the introduction of sweet potato into the Highlands generated such a chain reaction of social change and that the Enga have had to contend with such a state of continuous social upheaval for so long that they have not had time to establish a set piece plan for the settlement of their conflicting or at least competing claims.

Thus, simple and supposedly unimportant incidents can spark off a sequence of events which might snowball into the most violent and ugly results. As an example of how this happens, Appendix A shows in the form of a Critical Path Analysis the sequence of events which occurred in the Tchak

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11 *Ibid.*, 209.

12 *Ibid.*, 44.

13 R.F. Salisbury, *Vunanami* (1970) 2.

Valley of Wapenamanda in February 1973 which ended with one man killed and thirty buildings destroyed by fire following two days of fighting, which all began with a dispute about the construction site of a small Enga dwelling house.[14]

As in this example, the overt source of most of the collective violence among the Enga is the land dispute. Almost every land boundary between Enga political groups must now be regarded as a potential source of trouble, given the probable pattern of settlement which followed the transition to sedentary agriculture.

Before population pressures dictated otherwise, we can well imagine that land boundaries must have fluctuated with relative freedom in accordance with the formula described by Brookfield and Brown:

> Intertribal relations were characterized by a continuing state of inactive hostility or armed truce frequently broken by raids and warfare. The territorial block held by a tribe was generally separated from others by an open frontier ne of unoccupied land.... Most commonly the frontier battle ground and in periods of peace by members of both tribes for pig grazing and occasional gardens and houses.... Many intertribal frontiers consist of land of poor quality: brief periods of cultivation are separated by a long fallow.[15]

In relation to the time before the arrival of the sweet potato, a considerable proportion of land on the frontiers in the Enga District would have then been considered as "of poor quality" as at these altitudes, on even the best land, tropical fruits and vegetables could hardly survive. There was no great loss or gain, if such land happened to change possession during a skirmish with the adjoining clan. The adjoining clan would then not have been able to do much more with it and in turn would not consider there to have been a great loss if the same land was repossessed by the previous owners some years later when the fortunes of wat so decided.

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14 *Infra*, p. 259.

15 H.C. Brookfield and P. Brown, *Struggle for Land* (1967) 143-144.

To use the modern terminology, confrontation during these times was of law "escalation".

But by mounding cultivation, sweet potato will grow at these altitudes. Even at Sirunki and Kandep, at altitudes of 8000 feet or more a staple will grow now where one never could grow before. The yield is lower, since the altitude is higher, but by building higher mounds, and by planting higher up the mounds, people at these altitudes can grow what food they need within close proximity to their dwelling houses.

To get better results, the Enga compost their mounds, and this composting has the effect of increasing the ground temperature of the mounds which wards off the threat of frost. A fringe benefit of this composting is that the fertility of the soil in the mounds is being constantly restored, and this allows for continuous cultivation. Waddell's detailed examination of mounding at Sirunki concludes that mounding within open fields not only reduces the risk of crop damage but also permits the intensive use of the best soils and therefore the support of large populations.[16]

Where fallow is necessary, it need not be carried out by building new gardens on a different site, but can be achieved simply by rotating mounds in the same permanent garden. Thus the average Enga garden contains some mounds which have been recently prepared for planting; some recently planted; some growing sweet potatoes; some from which sweet potatoes are currently being harvested, and some under fallow, all within the same permanent enclosure.

With a yield of about seven tons per acre, the average family of five would require only half an acre of sweet potato plantings per year[17]. Freund agreeing with this, says that a recent survey near Wabag showed that on the average, a terraced acre of sweet potato mounds was feeding ten people, and Waddell's figures for the Wapenamanda area support this figure.[18] That is to say, if one acre of terrace feeds ten

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16 Waddell, *op. cit.*, 153-167. See also Westerman, *op. cit.*, 140. R.P. Freund in a personal communication in 1973 has suggested the same to me.

17 Westerman, *op. cit.*, 141.

18 Freund, *op. cit.*, Waddell, *op. cit.*, 42.

people, with 640 acres per square mile, Enga land can support a population of 6,400 persons per square mile of terrace. But terrace land occurs only in small isolated patches, unjoined one to the other, and due to steep slopes and rocky cliff faces elsewhere in the terrain profile, not all land si gardenable. We can understand therefore, that because so much of the land is ungardenable, those areas which were, and are now under such intensive cultivation, are now so important to the people now in possession of them that these people would not retreat from these areas as easily as they would have done 100 years ago.

In other words, the value added to the land by the mounded sweet potato means that to get someone off the land now requires confrontation at a relatively higher degree of escalation. And where the boundary between two clans runs through a mounded terrace which can support a population at the rate of 6,400 per square mile, it will be defended, in many cases, to the death. For this reason, a successful attack on terrace land must be accompanied by the same steadfastness of purpose, and if one clan wants to nudge an adjoining clan back from its present common boundary, each knows that the other must employ this higher escalation in offence or defence. Alliance and solidarity are both imperative in this sort of situation for the side without either does not stand a chance.

As the Enga population increased over the years and the pressure on the fertile but scarce sweet potato patches increased with it, the higher degree of alliance and solidarity necessary to maintain control over the land may have precipitated a greater coherence and elaboration of the lineage system largely as a consequence of limited availability of arable land.[19] In its general form, the hypothesis is that Highland societies with the least land to spare possess the most clearly defined agnatic descent systems. These in turn enable individuals and groups to be systematically combined

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19 The decline in the potential garden acreage per head can be seen from the table relating to a selected community below :

Year	Total Gard. Acreage	Total Population	Gard.Ac.Pr. Hd
1957	9800	3417	2.8
1973	9800	4600	2.1

Figures derived from: Bureau of Statistics, *Report on Intensive Agricultural Surveys in the Wabag Sub-District 1962-64* (1967); Department of District Administration, *Census* and Council Tax Records. As to the general point, see M.J. Meggit, *The Lineage System of the Mae-Enga of New Guinea* (1965).

for any social situation with almost mechanical ease and regularity.

Meggitt's thesis is supported by Waddell but from the different view that:

> Agnation emerges as a mechanism by means of which intensive agriculture is possible within the framework of an inherently unstable political system. In effect, by defining a territory in descent group terms, it serves to bind loyalties to land rather then to individuals.[20]

Brookfield and Brown's observation[21] that a strictly unilineal pattern of inheritance within fixed territories might lead to great inequalities of land holding within a few generations is apparently applicable to the Enga situation, with the periodic land disputes being aimed at a realignment of boundaries to accommodate demographic changes. Their description of the process of "encroachment and conquest"[22] is fortified by Meggitt's account of how neighbours, although recognizing each other's rights to a territorial locus, generally contest the location of the boundaries, which they assert enclose land wrongly taken in the past. Consequently, he says, all phratries intermittently use force, deceit and nowadays litigation, in attempts to encroach on land of adjoining groups.[23]

It is not hard for the Enga to think up an excuse to encroach, since the boundaries of frontier land probably changed frequently in the past in the manner described by A.J. Strathern for the Melpa people where "settlement has never been static ... groups have continually been expanding in some directions, giving way to others to share territory with allies, and migrating back and forth."[24]

In this sort of situation, each claimant can refer to the last time that a particular phratry was in possession as the "proper" boundary alignment for a particular position

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20 Wadell, *op. cit.*, 215.

21 Brookfield and Brown, *op. cit.*, 172.

22 *Ibid.*, 158.

23 Meggit, *op. cit.* 224.

24 A.J. Strathern, *One Father One Blood* (1972) 76.

of land. As any other point in time will reveal a *different* boundary situation in the past, neither claimant will accept the other's version of what the "proper" situation is, and dispute is inevitable.

Meanwhile, although the Enga post-partum taboo[25] effectively spaces the birth of siblings at least at two-year intervals, the absence of any form of Administration-sponsored family planning scheme, even within the immediate vicinity of Wabag, now guarantees that the Enga will have large families, given the excellent health services supplied by the Administration and two missions throughout the District. It is now common for Enga parents to be survived by six healthy children. If this pattern continues-it will lead to certain disaster and Freund refers to this as "The Cost of Low Cost Death Control."[26] Briefly, the actual cost of keeping people live, is for the Enga, relatively low, but the effect of them not dying, on the demographic patterns, is astronomical.

Although *we* can see what is happening, and measure the changes in population pressure and work out sophisticated carrying capacities for the Enga situation, the Enga themselves, without any accurate quantitative data of their own, are limited to their understanding of the overall demographic patterns, by what they see on the ground ... hordes of little children everywhere, who some day, somehow, must be housed and fed as adults.

This rising population, superimposed upon the legacy of unsettled land boundaries, must excite among the present Enga a level of anxiety not found elsewhere in Papua New Guinea. We can imagine how those Enga must feel, whose terraces adjoin those of traditional enemies, and both terraced areas are now at maximum production.

Their problem is a cyclic one, beginning with the introduction of the sweet potato, which allowed for higher food production per acre than was possible with previous crops, which in turn could support a higher population, which then increased population density, which put a higher value on agnation, which then encouraged patrilocal residence, which meant that the patrilineage land had to carry a greater population, and it could only do this with a high density staple

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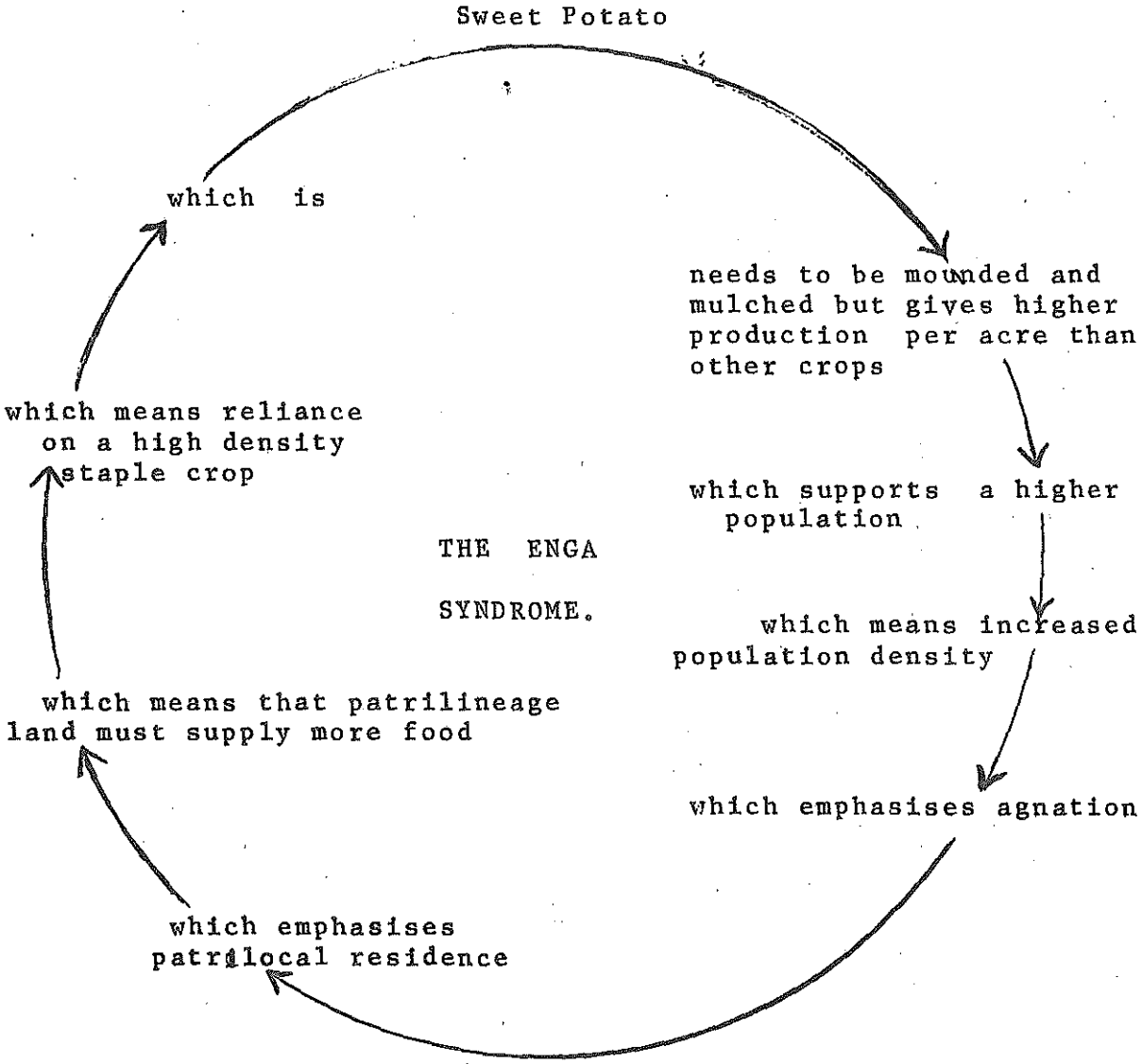
25 Meggit, *op. cit.*, 164, 167.

26 Freund, *op. cit.*

crop such as sweet potato, which needs to be mounded and mulched to survive in this climate, which increases its yield which means it can support a greater population etc.,, etc.,,

All this might be described as the Enga Syndrome, and which might be depicted thus:



But comparing the Chimbu and Enga situations, Waddell says that in spite of the Chimbu population density averaging 138/km^2 open field location is less fixed than in the Enga area, and no distinctive agricultural techniques are associated with the cultivation of sweet potato. Instead, there is a general but lower degree of intensification throughout the

Chimbu system, and the reasons Waddell gives for this are that there are differences in terrain, with fewer level surfaces with good top soil in the Chimbu District, and differences in pig populations per head. The Chimbu have a maximum pig to human ratio of 1.5:1, whereas the Enga maximum pig to human ratio is 2.3:1, with pigs consuming up to 66% of the crop.[27]

Freund has pointed out that

> there is very little land in the Chimbu which is as intensively cultivated as *some* Enga land. Also, the Chimbu area does not have the deep black soil of the Enga terraces. The Chimbu must rotate, given the land available to them. Therefore the Chimbu have a greater degree of shifting cultivation and a lesser degree of permanent cultivation than the central Enga achieve on their mounded terraces. This means that a given area of Enga terrace probably supports more people than the same area of most Chimbu land.[28]

In other words, there is no land in the Chimbu which can support the 6,400 people per square mile achieved by an Enga terrace, and Meggitt's thesis, seen in the light of an Enga terrace at full carrying capacity, appears to have considerable validity today.

3. *The knots of violence*

Added to the problems of the Enga Syndrome has been the burden of the contemporary economic background. The development of cash cropping has increased land values further and disputes over land are now more likely because of this. Furthermore, greater mobility along the ribbon of highway brings into contact groups who formerly had nothing to do with each other. Outbreaks of disputes between these people are now likely, whereas such disputes would have been impossible before.

Greater mobility beyond the limits of the highway has had a similar effect. For example, fights arising from drinking in Port Moresby between Engas from Wapenamanda and Engas from Laiagam who in the past would have had little or no contact with each other now involve the entire clans of

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27 Waddell, *op. cit.*, 62, 212.

28 Freund *op. cit.*

both parties in Moresby as well as in the Enga District, particularly if a death results from a drunken brawl or a traffic accident.

Accompanying this contemporary economic background has been the decreasing image of the *kiap*.[29] The shedding of police duties by the *kiap* has long been deliberate Government policy, but the replacement of the *kiap* in the field with police officers untrained and uninterested in handling dispute situations has been a bad mistake. It can hardly be supposed that an officer whose training has been in ballistics, traffic or fingerprints, and who is town-oriented, can be expected to handle a traditional-type land disputes situation with the same degree of expertise as one would expect from a *kiap* with fifteen years' rural service in the Highlands.

It is to the Government's credit, however, that it has acknowledged the mistake and has made an attempt to remedy the situation with the establishment of District Law and Order Comittees.[30] Under this new Committee system, when a breakdown in law and order appears likely, the District Commissioner can order the police to take certain action. This might now enable the police to be deployed more sensibly than in the past, but may not remedy the image situation, aggravated by the gradual withdrawal over the years of *kiaps* from field duties. The modern *kiap* is chairborne and office bound[31] and his inability to meet the people is nowadays reflected by general lawlessness in the towns as well as in the rural areas.

Following, are two typical examples from the Wabag District Court records. They show what Oram would call "open hostility towards law enforcement agencies, which is not related to a specific situation such as discontent over land alienation".[32] In the first example, the police, having charged a man with drunkenness,were taking him out of a hall at the Wakumare High School near Wabag in which movies were being shown.

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29 A.J. Strathern, *When Dispute Procedures Fail* (1973); N. Oram, "Law and Order" (1973) 8 *New Guinea* 2.

30 *Papua New Guinea Post-Courier* 10 April 1973.

31 Standish, *op. cit.*, 15.

32 Oram, *op. cit.*, 6.

> The Defendant was arrested at Wakumare High School on another charge. The movie theatre at which Defendant was arrested had not yet been cleared of its audience at the end of the showing when Defendant was shouting "I did not make any trouble. Why did you put me in handcuffs." The Defendant in handcuffs was being held by the Informant (a police constable) by the handcuff chain. Defendant said "I don't want to go with you, I will go back to my house in handcuffs. I don't want to go with you." The Defendant pulled away and ran into the crowd. The Informant ran into the school laundry and on to the car park. The Defendant called out,"I know you, you are a Chimbu. I will get my one talks to kill you." Informant managed to hold Defendant and attempted to drag him back to the Police Car. Defendant struggled violently, trying to hit the Informant with his handcuffed wrists. He shouted, "Let me go. All my one talks are ready to kill you." Having arrived at the vehicle, the Defendant then called out to the crowd in Enga, which the Informant did not understand. The crowd gathered menacingly around the Informant, who began to fear for his safety. Unable to escape into the Police Car, the Informant bundled the Defendant into a DIES Toyota Land Cruiser which was closer, and got in himself. The Police Car came through the crowd, approaching the DIES vehicle. The Informant then transferred his prisoner and himself to the police vehicle, putting the Defendant in the middle of the front seat, next to the driver. The Defendant was still shouting to the crowd as the police vehicle drove off.[33]

Standish also has stated that police and public relations are strained and allegations of police brutality often follow arrests;[34] the following case, also a simple drunk case, illustrates this. The Defendant here was defended by the Public Solicitor on the subsequent charge of assaulting a police constable:

> Constable MULIAP of Wabag, sworn, states: I am a policeman stationed at Wabag. I remember 20th January, 1973. There was some trouble at the Coltra Store. I know the man who caused the trouble. He is the Defendant. Some men came out of the hotel

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33 Wabag District Court, *Case No. 108 of 1973*, extract from the *Record*.

34 Standish, *op. cit.*, 31.

> at 10 p.m. I saw the Defendant behind the Coltra Store and afterwards again near the school. Constables First Class PINIAS and URE and I were in the police car. I was the driver. We drove up behind Defendant. The lights shone on him. I saw him holding a stone. I drove on and stopped the car beside him, close beside him. As I stopped the car he threw the stone inside. URE was looking towards the direction the stone came from, and the stone struck him on the head. The man ran away. A Councillor held him. I got out quickly and helped the Councillor. PINIAS came up behind. The three of us tried to hold the Defendant but he was strong. URE was disabled and remained in the car. Afterwards URE came to assist us. URE took my baton and struck Defendant across the thigh and forearm. Defendant went limp and we handcuffed him. We then took Defendant to the lockup and URE to the Hospital.[35]

It is a sign of the changing times that the *kiaps*, once welcome at the scene of fighting to bring about a settlement are nowadays themselves liable to be attacked. Appendix A gives an account of the fighting in the Tchak Valley of the Wapenamanda Sub-District in February, 1973. The Critical Path Plan of the riots and the accompanying network analysis was compiled from accounts of those who took part in the actual fighting, from those who watched, and from those who planned. Activity 22-23 entitled *Police and Kiaps arrive from Wapenamanda* was described in the subsequent court hearings thus:

> John Edwards, ADO Wapenamanda, sworn, states: On 12/2/73 after reports of tribal fighting I went to Laipas, arriving there at 1230. On my arrival I saw three houses recently burnt. I walked a short distance from the road and found ADC Fanning retreating through heavy scrub together with District Officer O'Brien and the member of the House of Assembly, PATO. I understand the ADC had been fired on with arrows by the Pindagins. The police were issued with ammunition and advanced. I saw about sixty people, some sitting some standing, some hiding behind pitpit: all armed with bows and arrows or spears. I found they were the Pindagin group of people. Their adversaries had retreated

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35 Wabag District Court, *Case No. 111 of 1973*, extract from the *Record*.

> onto a hill called Toporop. I was informed that they were the Yanuns. The groups had been fighting before my arrival. The Yanuns had apparently retreated after having been routed by the Pindagins. The ADC talked with the Pindagin people, asked if they had finished the fight and several people replied, "No we haven't finished fighting yet, Kiaps and police must keep out of the way. We want to continue fighting." I had with me at that time a camera, and I took several pictures. At the same time that I was taking photographs, several Pindagins were brandishing spears and arrows and were making threatening gestures at us. Police retrieved sixteen arrows which were fired at the ADC. The Pindagin people finally retreated through their own singsing grounds. The police followed. There was no further fighting that afternoon.[36]

In relation to similar fights Strathern has said:

> The extent and frequency of violence must not be exaggerated. Given the numbers of men potentially involved in conflict the killings which have actually taken place are very few and this in itself indicates that there are many forces working for a kind of "social control" in the area, quite apart from the efforts of the riot police.[37]

This is true also of the Tchak Valley fighting. Only one man was killed, and although many others were wounded, they later survived without any apparent permanent injury.

But it could be suggested that the anguish caused by this one death is overshadowed by the anguish caused by the extensive damage to property. The Court Records continue the story:

> Edwards returned to Wapenamanda that night and the following day returned to Laipas to find a fight in progress between the two grops. He

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36 Wapenamanda District Court, *Case No. 775 of 1973*, extract from the *Record*.

37 A.J. Strathern (1972), *op. cit.*, 19, 20.

> observed about 160 people on the Yanun side. The Yanun group made many sallies against the Pindagins and vice versa. The fight ended when the Pindagin group retired, and the Yanuns advanced burning twelve houses. The fight ended at 3 pm.[38]

After the fighting was over, officers investigating the damage found that a total of thirty buildings had been destroyed by fire and extensive damage had been done to 21 gardens. About 100 Casuarina trees had been ring-barked and about the same number of coffee trees had been damaged.

The court hearings of the Tchak Valley riots had not yet ended when the Wapenamanda area again erupted in violence with two men killed and fifty houses destroyed by fire,[39] and from then on, through 1973, similar riots, inflicting similar damage occurred at various places in the Wapenamanda Sub-District at roughly six-weekly intervals.

Thus, although casualties are light in terms of numbers of combatants, property damage is heavy, and the question which may soon be asked is "How long can the country afford to have its assets destroyed in this way?"

Moveable assets in the form of pigs and cash may be evacuated in time, and may sometimes survive the fighting. But gardens, coffee trees and buildings and anything left in the buildings are particularly vulnerable. House fires during sudden attack destroy bank books, money, clothing, bicycles and all manner of property stored in the houses and which people on low incomes can ill afford to lose. Trade store looting is a frequent occurrence during tribal fights, a crippling loss if the store is well stocked at the time.

It is sometimes possible to continue to obtain cash income within a few months after a riot has destroyed coffee trees and other assets by sale of quick-maturing crops such as vegetables. The excellent Highlands climate of the Enga District and the fertile soil of the terraces produces all manner of European type vegetables from asparagus to

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38 Wapenamanda District Court, *Case No. 625 of 1973*, extract from the *Record*.

39 *Papua New Guinea Post-Courier*, 10 April 1973.

zucchinis. All such vegetables delivered by the Enga in marketable condition will be bought by WASO at Wapenamanda for resale to the coastal centres of Papua New Guinea. But there is an almost insurmountable delivery problem for all growers other than those with gardening rights near Wapenamanda due to the perishable nature of these vegetables. The result for most Enga in the areas of endemic tribal fighting is that once their one and only durable and easily marketable crop, coffee, is destroyed, they are without hope of any reasonable cash income for years.

Since it takes an average of 23 men and 43 man days of work to build the average house[40] it is usually some months before all victims of a fifty-house fire are rehoused again. After that, the replanting of gardens and other restoration work which might be necessary after severe tribal fighting effectively precludes any significant economic development for a year or more. In the case of destroyed coffee gardens which were productive at the time, the recovery period might be anything up to seven years. Before this recovery time is complete a payback attack often recycles the trouble so that thousands of Enga are perpetually caught up in this recurring trauma of violence and destruction in a ceaseless climate of economic stagnation.

Compensation claims which, if met quickly, could halt this tangle of turmoil are thus compounded when overtaken by the next cycle of violence. Counter claims and set-offs then so complicate the tally that it is difficult to determine at any point of time exactly who owes what to whom.

With this build-up in the bank of inter-group tension comes an ever higher degree of escalation whenever violence erupts. Standish says:

> there has been a ritual aspect to many of the fights which seems to be declining as fights grow more serious. Where previously men stopped fighting at a killing, now they fight harder.[41]

This applied also to what happened in the Tchak Valley riots. The Critical Path Plan of these riots in Appendix A shows that a man was killed before event No.(19) and that thereafter the situation snowballed on into the next day with the ranks of both sides swollen with contingents of

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40 Meggit, *op. cit.*, 43.

41 Standish, *op. cit.*, 35.

allies. Just before the man was killed, beginning at events Nos. (16) and (17) the combat zone of the major participants was being cleared for action. After the death, these preparations were not halted, but were continued by both sides until completed at approximately 8:30 pm that night, thus precipitating the attack which followed at dawn the next day.

And whereas one death stopped the fighting previously, it is now common among the Enga for fighting not to end until there have been three or four deaths.[42] Furthermore, the Enga say, large scale tribal fights usually occurred throughout the Enga District one at a time in the past, and seen as a whole, the District did have intermittent periods of relative peace. This might not have been the real life situation, given the then smaller geographic area of social range in relation to any one group. It might then have been that a particular group then at war with its neighbours might not have been aware of a similar war in progress at the other end of what is now the Enga District. What has probably changed over the years with greater territorial mobility and more rapid flow of information is the Enga awareness of fighting occurring concurrently at different parts of the District.

This must have its worrying aspects to those who have been led to assume that the police generally have everything under control. For example, in October 1973 four separate riot squads were hard pressed to contain two separate but concurrent riots while another simmered in the offing. In September 1973,103 persons were charged with riotous behaviour in the Wabag courts. In October, 200 more were charged. Hearings in relation to one outbreak of tribal fighting are generally not finished before the Wabag jail is again flooded with persons arrested from the next spate of fighting, and police are so preoccupied with quelling these riots that other police duties are neglected.

In October 1973, official recognition of the continuous state of inter-tribal tension in the Enga District culminated with the permanent establishment of a riot squad at Wabag. Although these squads had been imported from Mount Hagen from time to time and used often in the recent past in the Enga District, one had never been permanently established at Wabag before.

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42 *Papua New Guinea Post-Courier* 19 October, 1973.

At present there is no evidence, as Standish would suggest,[43] that fighters are being led by former Pacific Islands Regiment soldiers. Certainly the tactics used by combatants in the Enga tribal fights would not be those a trained soldier would employ against a force using modern weapons. They are, however, good tactics for a bow and arrow war. The Enga are so practised in the art of bow and arrow warfare, that when such tactics are used, the mutual devastation of property and the protracted reconstruction pains of both sides so tangle the issues involved that no Western-type court procedure under the existing Papua New Guinea laws could possibly arrive at a final settlement acceptable to both sides. With each succeeding cycle of violence, therefore, the final solution becomes ever more complicated, and further unfathomable under our existing form of court procedure.

One reason why the Western-type court is unsuitable in these circumstances is that quite often what the court thinks it is discussing and what the Enga thinks is being discussed are two different concepts. It is easy for the legal profession to understand that Clan A might have rights of a proprietary or possessory kind over land X as opposed to Clan B. Not so easy to convince Clan B after having been recently dispossessed of that land by Clan A.

Most Courts in Papua New Guinea are also burdened by a procedure known as "Trial by Interpreter", the iniquities of which are now so well-known that little need be said of them here, other than to point out that the ponderous procedure of the Supreme Court, burdensome enough in Australia or England whence it has been imported, is protracted further in Papua New Guinea by the necessity of translating the evidence into languages different from that in which it is delivered.[44] Furthermore, skilled cross examination by counsel is not always possible when question and answer have to be relayed back and forth through two interpreters with necessary pauses while the learned Judge writes down everything said in his own longhand. The result of the sum total of such minor delays and pauses means that a trial often progresses so slowly that a whole day is required to examine a single witness.

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43 Standish, *op. cit.*, 35.

44 S.H. Johnson, "Criminal Law and Punishment" in J.J. Brown (ed.), *Fashion of Law in New Guinea* (1969).

The interpretation problem is not solely caused by the retention of expatriate judges or magistrates, since it would still be with us with indigenous judges or magistrates unless these could speak Enga. Direct Enga to English interpretation speeds up the process a little, but even so, it is rare for the Supreme Court to dispose of more than three cases in any one sitting week.

This brings us to what may be described as the "impossible case backlog problem" of the Supreme Court and another reason why the Western-type court system is unsuitable in the Enga situation. For example, the Report of the Committee Investigating Tribal Fighting in the Highlands (Papua New Guinea, 1973) gives details of deaths and damage resulting from fighting throughout the Enga District up to 1972. But during the first six months of 1973 in the Wapenamanda Sub-District alone, a total of 106 houses were destroyed deliberately by fire during tribal fighting,[45] and in the Wabag Sub-District for the month of October 1973 alone, 50 buildings were destroyed in the same way.

Arson is an indictable offence, triable only in the Supreme Court following a preliminary hearing in the District Court or Coroner's Court. As the burning of each house constitutes a separate offence and as the Supreme Court trial of each offence would probably last several days, even one year's continual sittings of the Supreme Court at Wabag would never clear the backlog of arson cases now pending. If we were to add to these arson cases, the other indictable offences of murder, grievous bodily harm, unlawful wounding, robbery, looting, theft, rape and so on, which also occur during fighting,[45] two Supreme Courts sitting separately, simultaneously and continually at Wabag would still be unlikely to be able to keep up with the case load at the current rate at which these offences are occurring in the Enga District.

Even if the Supreme Court could keep up with the case load, it is debatable if the country could afford the cost, for in fares, accommodation and salaries of the court staff involved, witnesses' transport and other expenses, two concurrently sitting Supreme Courts would cost together something like $10,000 per week, and at least half a million dollars per year more than what the Law Department now pays out for its administration of justice in the Enga District.

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45 Thirty were destroyed in the Tchak Valley riots described above; the destruction of a further 50 and 26 was reported respectively in the *Papua New Guinea Post-Courier* on 10 April 1973 and 7 June 1973.

Meanwhile, in the absence of the present court system's ability to cope with the case load, most indictable offences committed during tribal fighting never come to the notice of the Supreme Court, and those who commit them go completely unpunished. Of the 156 cases of arson mentioned above, none has been through the Supreme Court, and of the 19 murders committed during the course of tribal fighting in the Enga District in 1973, the only two suspects to have been indicted for the one murder in the Tchak Valley (Appendix B) were acquitted for technical reasons. If fear of punishment ever was a deterrent to tribal fighting in the Enga District, there is no reason why it should be now, since to anyone bent on committing arson or murder during the course of a tribal fight, the probability of being punished is nil. In spite of its costly pomp and ceremony, the eminence of its judges and learned counsel, and the diligence with which all matters before it are tried, for all practical purposes in these perplexing Enga situations, the Supreme Court is a failure. The lower courts, less costly and less formal than the Supreme Court, have their own drawbacks, mostly in connection with procedure, and the pointless dichotomy between civil and criminal actions.

Marilyn Strathern's comments on these matters in relation to Hageners are absolutely applicable in relation to the Enga and little more need be said about them other than to elaborate here and there.[46] For example:

Different Jurisdictions: In most cases, the Defendant in the Local Court can elect to be tried in a District Court. If the magistrate has jurisdiction in both, he simply declares the Local Court closed, and the District Court open, and the trial continues without a pause. The Enga reaction to this masterpiece of hocus-pocus is a classic study of puzzlement.

Cross Examination: When asked if he has any questions to put to a witness, the Defendant customarily launches into his version of what happened. None of this is recorded since it is not in question and answer form, and the magistrate is preoccupied in trying to interrupt the Defendant to explain that he can have his say later. This process is repeated with every witness, the Defendant attempting to get his message across, with the same results. When the Defence case finally opens, the Defendant then says that he has nothing further to say, since he has said it all several times already. The complete defence record might then read, "Defendant has nothing to say".

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46 M Strathern, "Official and Unofficial Courts" (1972) *New Guinea Research Bulletin* No. 47, 129.

Guilt and Innocence: Such legal niceties as "I find that A did hit B but that A is not guilty of assault" are often meaningless to an Enga, especially if it is found at the same court hearing that C also hit D and is convicted of assault. The technical complexities of guilt and innocence are easily lost among the Enga expectations about the settlement process, in which, as in that of the Hageners, there is no specific point at which a disputant is pronounced to have done wrong and no relevance is seen in the civil-criminal distinction. To the Enga, as to the Hageners, the central emphasis is on patching up damaged relationships.

Disparity of Penalty: During dragnet arrests following large scale riots any number up to 200 persons might be arraigned before the courts. When this happens several magistrates sit separately and concurrently to clear the case backlog, and as neither magistrate can tell the others what to decide, each decides alone what to do with the Defendants then before him. It sometimes happens that having played an equal part in the preceding riot, different Defendants, brought separately before different magistrates, receive different sentences, and one magistrate might convict while another might acquit, given the same evidence.

Preliminary Hearings for Indictable Offences: Of all the judicial proceedings, these must be the most exasperating for the Enga. When a murder is committed, for example near Kompiam, the witnesses must first assemble for a police investigation at Kompiam and there wait for the matter to be brought before a District Court. A magistrate visits Kompiam for this purpose as soon as his case load allows, and the waiting and the hearing may last several weeks, given one or two adjournments. If the Defendant is committed for trial, the witnesses some months later will be gathered at Wabag for the Supreme Court sittings, there to tell the Judge exactly what they told the police officer and magistrate, separately, twice before. If the sittings are adjourned before the Kompiam case is heard, the witnesses are returned to Kompiam to await the next sittings, two months later. They are then reassembled at Wabag again, having already spent a total of six weeks' absence from their gardens, families, homes and clan activities, with corresponding interruptions in their daily lives. When the Defendant is finally acquitted at his trial for a purely technical reason, the witnesses might be excused if they were to wonder what it was all about, since they could have settled the matter to their satisfaction by compensation, back at the village, in one day.

4. *Untangling the knots*

For all its shortcomings, the existing court structure does serve some useful purposes. It is unlikely, for example, that the kind of offences known as "street offences" could be settled in any other non-traditional situations such as the passing of valueless cheques, unmet insurance claims, unpaid grocery bills, disputes over electricity accounts, workers compensation claims and traffic violations.

These sorts of court cases will always be with us and there is no reason why they should not continue to be dealt with under the existing courts. But these cases are in the distinct minority in the Enga District and account for less than five percent of all court cases. The vast majority of cases involve the purely Enga situations of tribal fights, assaults, land encroachments, pig and marriage disputes, theft, robbery and so on, and the problem is, what to do with these.

The pure statistics of the situation would suggest that because the greater percentage of matters brought before the courts are Enga-oriented, there would seem to be little reason why the court procedure should be *Inner Temple*-oriented. As Lord Denning said:

> The Common Law has many principles of manifest justice and good sense which can be applied with advantage to peoples of every race and colour all the world over; but it has also many refinements, subtleties and technicalities which are not suited to other folk. These off-shoots must be cut away.[47]

The first off-shoot to go should be the original jurisdiction of the Supreme Court. O'Regan suggests that there is no need to scrap the whole of the imported Supreme Court system on the grounds that most of the absurdities in its application to Papua New Guinea can be removed by repealing or amending certain specific provisions in the existing Criminal Code.[48] But because of the costs involved in operating even an altered Supreme Court original jurisdiction, it would seem that far more sweeping changes are necessary. O'Regan himself acknowledges that:

> the imprisonment of the individual offender does little or nothing to reduce the likelihood of pay-

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47 *Nyali v. A-G* (1956) 1 QB 16 at 17.

48 R.S. O'Regan, "Pruning the English Oak", (1972) 3.

> back by the victim or his relatives. Their grievance is directed against all members of the offender's clan, not merely against the individual whom European law considers criminally responsible. Until the offence has been avenged or compensated the sense of grievance is likely to continue. This is of course a regrettable state of affairs but judicial homilies and exhortations "not to take the law into your own hands" will not change it. In my view the court (and the legislature) must recognize the problem and come to grips with it.[49]

O'Regan's suggestion that Local Court Magistrates be directed to arrange compensation is valuable, but almost impossible to implement under the existing restricted jurisdiction of the Local Courts. It has been tried before at Wabag where, following recent acquittals for murder the Judge urged compensation procedures to be put into motion.[50] But with its jurisdiction in this field limited to $200 (i.e., one large pig) the Local Court was unable to interest the aggrieved clan in accepting such a small amount of compensation. Native customary claims for compensation could have been pursued in the District Court under the provisions of the *Native Customs Recognition Act*, and in that court an amount of $1000 could have been awarded under S.29 of the *District Courts Act* by any of the Magistrates currently resident at Wabag. By importing a Stipendiary Magistrate from Goroka or Lae, the value of the claim could have been increased to $2000. But this is still only ten big pigs, or more probably twenty smaller pigs of various ages and sizes, about half the current acceptable amount for compensation for death caused by tribal fighting. Even this lesser amount of compensation might nevertheless reduce the likelihood of payback were it not for the fact that a court order is unenforceable against a clan. Moreover a Summons is only valid against a natural person, a registered company, or "any other corporation" which has a secretary or other kind of office bearer.[51]

Assuming that the District Court could be persuaded under the provisions of the *Native Customs Recognition Act* to recognize

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49 *Ibid.*, 18.

50 *R.v. Nere* (1973).

51 *District Courts Act 1963*, s.55.

the Enga custom of incorporating various rights and duties in the custom based corporation of the Enga clan, a court order would still be unenforceable against such a corporation which exists largely only in the minds of men and has no tangible assets. Ceremonial gatherings, *tee* exchanges, clan fights, and residual interests in bride price, land etc., are too nebulous to satisfy a court order, however real they may be to the Enga, and their one tangible asset, land, is immune by law from seizure. Of course, it would still be possible to sue each member of a clan individually, although the time and administrative energy so consumed would make this exercise, under the circumstances, worthless.

Given therefore that the present laws are inadequate, what changes should be made? How costly would the changes be?

The criminal jurisdiction of the Local Courts is derived from section 13(1) of the *Local Courts Act* which states:

> Subject to this Act, a Local Court has jurisdiction over-(a) all offences against a law in force in the Territory or part of the Territory *which may be dealt with summarily.*

Supposing that the last six words were omitted by an amending Act, this would give the Local Courts jurisdiction over *every offence*. That is, the concurrent jurisdiction which the Local Courts already have with the District Courts (except in certain circumstances) would be extended so that the Local Courts would then have concurrent jurisdiction with the Supreme Court.

There is no reason why the Local Courts should be allowed to handle such delicate cases as treason, piracy or assisting prisoners of war to escape, but then these sorts of cases are unlikely to occur within the next few years, particularly in the Enga District. On the other hand, there is every reason why the Local Courts should be permitted to handle the kinds of cases which are now so backlogged that the Supreme Court can never hope to hear them all for the reasons earlier stated. In relation to these cases, the question is, if the Supreme Court cannot handle them, why not let a court which can do so?

And if the same suggested amending Act also increased the civil jurisdiction of the Local Courts to something like $10,000, the Local Courts would then be in a position to deal with every Enga-type situation which now occurs. The vast

Supreme Court case backload could thereupon be fitted into the lists of cases now pending before the Local Courts, and, without much delay, be heard and determined in the usual Local Court manner. In spite of the increase in the case load of the Local Courts the additional case loading here would cost the Administration nothing since no more magistrates would be required. In fact, the cost to the Administration would be less than what it now pays for the expensive trappings and procedures of the Supreme Court.

By using the simplified procedures of the lower courts, each magistrate now stationed in the Enga District would be able to handle a far greater case load than what he does now. Even though magistrates are presently overworked there are two reasons why they could assume the case loading of the Supreme Court as well:

(1) A good deal of the District Court Magistrate's time is now taken up with preliminary hearings of indictable offences. These hearings would no longer be required if the amending Act permitted summary trial of all indictable offences. The time now taken up with preliminary hearings would then be available for the summary hearings of the same offences. There would be a considerable time saving here because of the difference in the respective procedures. For example, the procedure as laid down in section 72 of the *District Courts Act* requires a verbatim record of what a witness says during a preliminary hearing. This record must then be read over, and witnesses sometimes spend hours in the witness box, while every word they said is checked and sometimes rechecked on cross examination.

(2) The procedure is on the other hand comparatively simple in summary hearings. A Local Court is required only to take *minutes* of the evidence,[52] and in its summary hearings, a District Court is not even required to do that. On the contrary, a District Court is ordered to *hear and determine the Information with all*

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52 *Local Courts Act 1963*, s. 48(3).

> *due speed*[53] and is not required to record any evidence. In practice, all District Court Magistrates make *some* record of the evidence, either notes, minutes, or even verbatim depositions in a case likely to lead to an appeal, so that if the case is reviewed there will be some indication that the magistrate at the time was alert to what was being said in his court. Even so, the records of most District Court cases do not exceed two pages and the hearing does not generally last more than two hours.

Because of the differences in procedure therefore, a case at preliminary hearing takes four or five times longer to process in the court room than the same would at summary hearing, and a witness speaking the exact same words in both situations can be processed far more quickly in the summary hearing. Furthermore, the burdensome "after court" duties of copy typing, proof reading and despatching the copies of the court records to Konedobu following preliminary hearings, are absent after summary hearings. The summary hearing is therefore less exacting on all concerned.

But the mediation processes of the Local Courts are the least exacting. In fact, although a settlement reached at mediation forms part of the Local Court record, whatever is said before settlement is *inadmissable* under s.33 of the Act. That means, that the entire record of a Local Court hearing using this procedure need consist only of the basic details of the parties, the cause and the decision. It can mostly fit onto one sheet of paper.

This procedure is so simple that it enables a Local Court magistrate to preside over a number of separate courts simultaneously and concurrently in the manner described by Marilyn Strathern:

> A councillor approaches the Local Court magistrate and requests a summons to make an accused person appear at the court house. In effect this may operate as a summons to pre-court mediations held in the court house precincts. The Local Court magistrate also listens to reports brought to him by councillors of mediations which have followed

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53 *District Courts Act 1963*, ss. 68,134,135.

an initial hearing by himself.[54]

This has been happening also at Wabag where each pair of parties at mediation is assigned a tree to sit under, near the court house, and surrounding each tree so assigned, a crowd gathers and the mediation proceeds in the manner also described by Marilyn Strathern:

> People cluster casually, usually in some kind of circle, with each speaker in turn becoming the focus of attention. Knots of men may break away, presenting their backs to the speakers to whom they are still listening, to light fires or to engage in other minor activities. There is no rule about where councillors or komiti should sit, or where the disputants should be in relation to them. The audience is free to come and go.... Komiti usually begin by taking a chairman's role, inviting the different parties to speak in turn and keeping order while they do so. Then they cross examine as seems appropriate, call witnesses, and begin in their speeches to move towards suggestions of how the matter can be solved.[55]

When a solution has been agreed on, the magistrate is informed, and this settlement is then embodied in the court record of that case. In the meantime, the magistrate has gone about his other duties and in the course of a single day, it is possible for him to hear and determine three or four trials and about ten or twelve non-contested cases *inside* the court house and to pay periodic visits to, and keep a distant eye on at least ten concurrent disputes under mediation *outside* the court house.

When it has been used, the mediation system has worked perfectly at Wabag. The point is that it has never yet worked to capacity for the simple reason that the present jurisdictional limits preclude the sorts of cases most troublesome to the Enga from coming before the Local Court at all. I refer here to bride price disputes which exceed $200 claimed, death and other compensation payments in excess of this figure and *tee* disputes. Land disputes can also be

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54 M. Strathern, "Legalitity and Legitimacy - Hageners' Perception of the Judicial System" (1971) 1 Mel LJ 1 at 15.

55 M. Strathern (1972), *op. cit.*, 193.

brought before the Local Court under s.15A of the *Land Titles Commission Act*, but never are. This leaves the mediation service of the Local Courts at Wabag to settle only minor problems. Thus, while the most pressing problems now facing the Enga remain unsolved, the most potentially valuable problem solving mechanism we have is for the most part lying idle.

If the suggested amendment were enacted, most of the Indictable Offences would then have to be settled by compensation because the penalty limit of the Local Court is so low. But the Local Court would then be at liberty to overcome the most perplexing difference between traditional and modern law ---- the division between civil and criminal offences. For, with the increased civil jurisdiction, the Local Court could then make use of the now little-used conversion provisions under s.19 which now reads:

> Subject to this Act, a Local Court in criminal cases, may order - (a) the imposition of a fine not exceeding $100; or
> (b) the infliction of a term of imprisonment not exceeding six months,
> and may make such additional order (including an order for compensation to an amount not exceeding $200 as the justice of the case requires ..... etc.

Under the increased jurisdiction, the Local Court having summarily convicted a person of arson could order him to pay compensation in the sum of the value of the house burned down to the former owner thereof, and to remain in prison until such time as the compensation is paid.

This new emphasis on compensation would equate better with the Enga concept of justice which is that

> the basic *eye for an eye* legal code appears to hold true at all levels of the Enga legal system. From the destruction of a garden by a pig to the murder of an individual, compensation is sought. Enga law appears to be based on the principle of compensation. For every kind of injury, insult or damage, payment must be made.[56]

It has proved a simple enough process to amalgamate the

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56 Westerman, *op. cit.*, 115.

successful procedures of the "informal" courts with the authority of the Local Courts to create a lawful, workable dispute settling mechanism at Wabag. There is no reason why the judicial system as perceived by the Enga should not be regularised with the help of the proposed Village Courts and the *Local Courts Act* amendments suggested here. By retaining the appellate jurisdiction of the Supreme Court and the transfer jurisdiction of the District Courts, the necessary checks and balances of the wider society will be present as they are now, to preclude any gross miscarriage of justice, when most offences are passed through the Local Courts.

Although the channelling of most court cases through the Local Courts would eliminate the present case backlog and would lead to the more rapid settlement of future disputes it would not be a complete answer to the Enga problems. On-the-spot court hearings, rapid compensation payments and no fault liability judgements as advocated by Standish are definitely necessary after clashes of violence if the Government is really interested in stopping one outburst of violence from snowballing into the next.[57] Such quick settlement action would prevent a build up of tensions and may reduce the degree of strained relationships which exists between former enemies. Rapid settlement mechanisms could thus enable traditional antagonists to return to square one after each conflict between them and before the next conflict between them occurs. This would amount to the first "de-escalation" of feelings in years.

But quick settlement following one outburst of violence may not stop the next outburst of violence, particularly if they are unconnected with each other and occur at different places in the Enga District. Nevertheless there are ways in which a considerable amount of potential tension can be dissipated long before it ever reaches critical mass and erupts into violence.

Let us look first at the typical "street offences" situation. Appendix B shows the categories of all offences heard in the lower courts at Wabag in 1973. As a mirror of the world outside the courts, these figures should be treated with extreme caution since the amount of crime which comes to official notice is only a small fraction of the total

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57 Standish, *op. cit.*, 22.

volume. No person who has seen the public bar of the hotel at Wabag on pay weekends, for example, would concede that there were on the average only 2.5 disordely drunks in Wabag each fortnight. Yet this is the number processed through the courts.

Clearly what is happening is that the police are not doing their job. In both the difficult arrest cases mentioned earlier, no officer was present. There never is at Wabag, not even on pay nights. Young, inexperienced, junior constables, as indicated in the cases mentioned, are expected to handle these situations alone, without bothering their superiors. Yet there are seven *kiaps* stationed within the town of Wabag and one Regular Police Officer.

While the NCO's and constables on duty during the most volatile hours of pay weekends are battling to control often difficult situations police officers and *kiaps* are relaxing at the Wabag Country Club or are engaging in other off-duty activities.

One reason for this is the very deep tensions between District Administration Officers and Police Officers which lead to phases of non-cooperation. The Police Department does not have the officer strength to police the town properly and will not call on the *kiaps* who have. The *kiaps*, having abdicated their town police role to the police, look on indifferently while the police lose control.

There are no laws which forbid police and *kiaps* from working together to pool their manpower resources during difficult times. There is no law which prevents the rostering of *kiaps* for police duty during weekends so that there would always be at least one on active town patrol at all times. The Commissioner of Police, however, has decreed that there is to be no co-operation between police and *kiaps* for town patrolling in Papua New Guinea and this is one reason why the law and order situation in the country's towns is what it is today. A bit more common sense and better deployment of officer resources would prevent most of the violence in Wabag at no further cost to the Administration. The question of overtime does not arise since the *kiaps* don't get paid any in any case, and any overtime likely to be incurred by the maximum deployment of police during troublesome pay weekends can be offset during the intervening fortnight when the policemen are least likely to be needed by progressively rostering them off duty.

Outside Wabag, but still along the thin ribbon of Highway and its hinterland, the same principle could be applied to reduce the larger scale of violence found in tribal fighting. Strangely enough, the *kiaps* who show no interest in policing the towns where they and their families live, are extraordinarily active in trying to quell large scale fighting outside the towns, and often at great risk to their own safety. Yet with all this zeal, they often arrive too late.

A quick glance at the Critical Path Plan of the Tchak Valley riots in Appendix A shows that a simple incident on 8th February (a decision to build a house on certain land) sparked off a series of confrontations between the principal participants which culminated in two days of fighting and destruction. Yet the police and *kiaps* did not intervene until event No.(23), after one man had been killed and much property had been destroyed, four days after the initiating event.

Investigations after the riots revealed that if the police at Wapenamanda had knowledge of the brewing problems, say, knowledge of events (6), (9) or (13), they did not pass this information on to the *kiaps* and the *kiaps* apparently had no knowledge at all of these events until the attack was reported to them at event (22).

Since none of these events was invisible to passers-by at the time they occurred, this lack of basic intelligence coverage is clear evidence of the alleged "remoteness" of Government officers from the world around them:

> many kiaps do not have the experience, maturity, temperament and local knowledge to perform sensitive mediating roles. Few expatriates are even close to the people and many simply find themselves ignored when disputes arise.[58]

But some kiaps *do* have the required attributes, and a more intelligent deployment of these *kiaps* into sensitive areas such as the Tchak Valley might have averted this outburst of violence there.

The other problem is the slowness and ineffectiveness of the present land dispute settlement machinery. Any

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58 *Ibid.*, 15.

application to solve the dispute which initiated the sequence of events in the Tchak Valley would indeed have gone through a slow and complex process if begun in the Land Titles Commission. A decision from the Commission on such a matter would have been unlikely within two years, and it is doubtful if either clan would have waited patiently for so long. Even when land disputes are finally brought before the Commission for hearing, the Commissioner often sends the matter back to the village for settlement with the result that it never is settled, otherwise it would never have been brought before the Commission in the first instance.

Yet there is a more simple solution to these sorts of disputes which is rarely used in the Enga District. Section 15A of the *Land Titles Commission Act* states that a Local Court having jurisdiction over an area in which is situated any land which is the subject of a dispute as to ownership by native custom, may make an order authorizing the "use of occupation" of the land by one of the parties to the dispute and restraining the other from interfering.

Although intended as an interim order only, the real effect of a Local Court order under this section is to allow disputants to arrive at a permanent settlement by way of mediation without the necessity of a ponderous hearing before the Commission. The simple procedures of the Local Court as mentioned earlier can be used in a land dispute as in any other dispute, and the court record, as mentioned earlier, need consist of not more than one sheet of paper. This then becomes a registered enforceable order. Attendance can be compelled until a solution is reached and the matter becomes permanent for this reason: at its present case clearance rate, it would be years before the Land Titles Commission ever listed the matter for hearing, and by that time the law in relation to land matters in all probability will have been amended, and the Commission, at least in its present form, will have been abolished. In the meantime, the Local Court Order is binding.

The Local Court interim order procedure has been used successfully elsewhere in Papua New Guinea and there is no reason why it cannot be used more frequently in the Enga District. But because this procedure is not widely used in the Enga District, most Enga with land dispute problems have no alternative but to fight, since for all practical purposes, the legal mechanisms of land dispute settlement are denied them.

Strangely enough, the government spares no expense to ensure that all police cases are brought before the lower

courts for hearing after a fight over land, even if this means airlifting several riot squads to Wabag to help the prosecution of the many cases, and by importing several magistrates to hear them. Yet the same Government is not so constrained to supply additional magistrates or *kiaps* to investigate land disputes or other matters before fighting erupts, knowing that there is a multitude of potentially turbulent matters pending.

Had there been a policy of intervention *before* fighting, it is at least probable that in relation to all incidents like those mentioned in Appendix B, the disputes could have been settled without bloodshed, violence or property damage. But in the absence of this policy, and therefore in the absence of any other form of settlement by trial by court, the only redress by Enga land disputants is trial by combat.

In relation to the Appendix A riots, it is probable that a Local Court hearing on the spot, any time before fighting erupted three days after the initiating incident, could have settled the matter peacefully, at least for the time being. Even up until event No.(41) (the gathering of the allies for the counterattack) there was time to intervene, since in all probability such a gathering would have shown differences of opinion, conflicts of kinship interest, arguments over tactics, and uncertainties about the loyalties of fellow allies. Interference by the police at this point could probably have terminated the conflict between the major participants by dissipating built-up tensions into squabbles between allies of the same side. In all probability, large-scale fighting could have been prevented if police and *kiaps* had interfered with the flow of events much earlier along the Critical Path.

The all-too-familiar events were repeated in a later outbreak of violence in the Wapenamanda area[60] which was more destructive than that of the Tchak Valley. On 4th June 1973, members of one clan crossed their recognized boundary and began to construct a garden on land claimed by the adjoining clan. Unarmed confrontation continued between the two clans all that day and all the next until in the afternoon of 5th June when members of the affronted clan broke the fence around the offending garden. The next morning, the clan which had built the garden attacked, and events snowballed

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60 *Papua New Guinea Post-Courier* 7 June 1973.

along a similar Critical Path until three men were killed and fifty houses were destroyed. One week later in the same area, a similar conflict occurred except that this time there were no houses left to burn and only one man was killed.

What all this points to is that there is no such thing as unpredictable violence, on such a large scale as this, since a good deal of preliminary planning is necessary to mobilize so many people towards a common goal of this kind. The basic tactical planning unit of the Enga is the *kambuingi* described by Sackschewsky as:

> a decision-making process which functions within an exclusive group of men who meet to openly express themselves, to stimulate others with questions, to listen attentively, to criticize freely and to synthesize all acquired information into a new position, and to repeat the process until all members arrive at a consensus.[61]

The key participants in the *kambuingi* are mature men aged between 25 and 40. Anyone can attend if the meeting is about general topics but "security clearances are most strict when the issue concerns either a fight, a killing, or a land encroachment scheme."[62] In these cases, affines, attached clan members, clients of "Big Men", women and children, visitors, and anyone else whose loyalty is suspect are excluded. It takes some time to assemble members of a clan and then to talk out the issue. Word has first to be sent to all eligible members and then they come in dribs and drabs until those who are assembled at the appointed time and place are satisfied that there is a quorum.

If the issue is an attack or a defence, then those members who are in the expected combat zone are warned to evacuate their moveable possessions. When estimating the time of attack, allowances have to be made for these evacuations otherwise bitter quarrels will result with those whose assets are destroyed through faulty planning.

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61 M. Sackshewsky, "The Clan Meeting in Enga Society" in Paul W. Brennan (ed.) *Exploring Enga Culture* (1970) 73.

62 *Ibid.*, 58.

Of course, prior evacuation is also a warning to the enemy if the enemy sees it happening, so sometimes the attack must come first in order not to give the game away. In Appendix A for example, the surprise attack at event No.(13) occurred before event No.(17) when the attackers began to evacuate. This calls for detailed planning so that those members of the *kambuîngî* whose property is in the expected line of fire evacuate first and fight afterwards, and those whose property is considered safe lead the attack.

Each clan has its own *kambuîngî* and no clan can decide an issue for another clan. On the evening of 12th February therefore (see Appendix A) between 5pm and 8pm there were eight separate *kambuîngî*, all debating simultaneously the pros and cons of continuing the fight the next day (for the principal combatants) and whether or not to join in (for the allies). When agreement was reached, it took another hour for the allies to assemble in the men's houses of their principal partners where everyone spent the night planning for the dawn attack the following morning.

While the evacuation of moveable valuables continues, and while multiple *kambuîngî* are in session, no one needs to be clairvoyant to understand what is happening. Any half-qualified observer can see the storm clouds gather, and given the set of the now all-too-familiar sequence of events which leads up to these frequent outbursts of violence, it is not too difficult to predict within reasonable limits of probability that violence will erupt.

What then should the Administration do about it all?

In Western society, police have developed new techniques to meet situations of collective violence such as the equivalent, or whatever the nearest equivalent is, of an Enga tribal clash. These techniques are collectively termed "Least Force Confrontation" and are designed, not to meet a riot head on, but to prevent it from happening, by disrupting it or diverting its participants before any harm can be done. Some of the techniques used are:

Subversion: in which police act in an overly friendly manner towards one riot leader, causing the others to suspect him of collaboration with the police. This is intended to generate accusations and squabbles among the leaders and diverts their full attention from prosecuting the riot which can fail from the lack of a unified leadership.

Disruption: in which half truths are leaked to the riot

leaders, giving them inaccurate times and places of events they plan to attack. Police deliberately aggravate the confusion by deploying uniformed men and setting up impressive road blocks in the wrong places. This is intended to create confusion so that people gather at the wrong time and place and the riot becomes a non-event.

Attrition: in which the riot leaders are subjected to lawful but minor harassment *before* they embark upon an act of civil disobedience, or before they can gather a crowd. Vehicles are inspected and licences are checked etc, and this has the effect of delaying the leaders, sometimes to the extent that the followers lose interest.

Diversion: in which, if all else fails, police deliberately create an incident. For example, one or two unarmed policemen attempt to arrest a riot leader in the face of the crowd. Inflamed oratory from the leaders turns the crowd onto the police who retreat via a prearranged exit, with a hue and cry following. This process is repeated by pairs of police acting against the other leaders in turn. Nobody gets arrested, but the crowd becomes so scattered that the effectiveness of the riot is lost.

Although there may be some merit in using these techniques in the ethnically heterogeneous towns elsewhere in Papua New Guinea, the police, also an ethnically heterogenous organization, may be at a considerable disadvantage when dealing with an ethnically agglutinate Enga population. For irrespective of the numerical strength of the riot squads, in every confrontation with the Enga, each policeman knows that he is ethnically outnumbered, perhaps by a thousand to one, and this, to anyone born into the *wantok* system, must be a harrowing experience.

There is the further problem that the police just do not have the moral fibre to carry out such intricate manoeuvres under stress and that these or any similar excursions into the Machiavellian simply would not succeed.[63] But even if the police were capable of carrying out these manoeuvres the contempt with which the Administration would then be held by the Enga for resorting to such tricks would worsen the already deteriorating law and order situation, because whatever little respect the Enga now have for the police would vanish into accusations of police skulduggery and

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63 Freund, *op. cit.*, Standish, *op. cit.*, 19.

administrative dishonesty. Lang (personal communication) argues that although the Enga employ all sorts of tricks and subterfuges against each other and even in national politics, they have always supposed what is now the Department of Development Administration to be beyond such tactics, and to retain whatever control it now has the Department should maintain the status of the one party which can be trusted.

But there is no reason why we should not employ our own system of *Least Force Confrontation* based on tactics and procedures which are acceptable to the Enga. In order to achieve this, I would suggest that the role of the police be redefined in terms of the functions they used to fulfill earlier. Twenty years ago, there were no riot squads in the Highlands, no tear gas, and no airborne reinforcements. Admittedly, the land pressures were not the same, communications were slower, and occasions for violence were less, but when tribal fights did occur, the police, in spite of their inferior weaponry and numbers, were then better equipped to handle these fights than they are now.

One of the reasons for this, I would suggest, is that the police then were part of the Enga community. In those days, police delivered mail, repaired houses, pegged out drainage ditches, and acted as foremen, overseers and advisors when the present Highlands road network was being laid out. In the course of dealing with large road gangs during this construction period, police in their "off duty" hours were approached to settle *tee*, land and marriage disputes. Because of their supposed impartiality in such matters, police were soon accorded the status of traditional "Big Men". Their role in the community became an extension of the *kiap* system. *Kiaps* in fact were their senior officers and in times of relative peace, police found themselves doing what might now be described as "welfare" work, or work of a "District Development" nature.

Although there must have been instances of local despotism and favouritism by the police, the image of the police then was generally one of assistant, advisor, consultant and guide, and when trouble did erupt, a far different atmosphere prevailed when the police arrived than in the same circumstances when the police arrive now. For the appearance of the police in a village to arrest law breakers then was in the distinct minority, compared to their appearance for purposes of carrying out one or more of their other multifarious duties, and the police could then rely on their otherwise good reputations to get their less pleasant tasks done efficiently. In those days there was no need for

tear gas, batons, and deployed riot squads, for the police then used their own form of *Least Force Confrontation* -- their reputation. But in the intervening years, as the functions of the police became more specialised, so also, naturally, did their image.

This specialization of police functions is without logical development. It would seem that the multifarious functions of the Royal Papua New Guinea Constabulary of twenty years ago were far more in keeping with the original concept of police duties than are the present functions of the Constabulary. J.E. Whitehouse observes that 1200 years ago, Arab police helped to conduct the postal service, inspected weights and measures, supervised commercial transations to prevent fraud and exorbitant prices of goods.[64] He also notes that the duties of an English police constable in the 1840's included the control of sanitation, relief of destitution, fire fighting, and mail delivery, and that American police during the depression years considered themselves to be an employment agency for the large numbers of people then out of work. The author concludes:

> Some present day policemen speak longingly of the two fisted policeman who ruled his beat with an iron hand and performed no "sissified" social worker functions. This mythical character probably never existed.....It would appear that police traditionalists have not read their police history closely enough.[65]

We cannot put the clock back, but we can put the police back, into the same sort of duties and functions which they performed twenty years ago. We can, without any changes in the existing law and at no further cost, make them part of the Enga community again.

5. *Conclusion*

Any solution to the problem of violence among the Enga should be aimed at a reduction in the existing level of tension

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64 J.E. Whitehouse, "Historical Perspectives on the Police Community Service Function" (1973) 1 *Journal of Police Science and Administration* 92.

65 *Loc. cit.*

between groups which have been at loggerheads for years, with attendant provisions for subsequently keeping the level of tension low. This can be done by using what resources are now available to the Administration in the Enga District at no extra cost by:

(a) clearing the backlog of unsettled disputes

(b) showing the Enga what they can do with their own resources, and

(c) making Government Departments and agencies more efficient.

The Enga believe they are short of land. Yet, while the Enga bemoan the shortage of terrace land, they still use 66% of the yield thereof to feed pigs whose return to them in actual food value is relatively low.

Waddell (personal communication) argues that with the present population density and the present land use system, the Enga would clearly be better off without pigs. But pigs are so much a part of the existing Enga culture that any policy aimed at eliminating the pig from the Enga District must be considered unsound.

In connection with the recent devastating frosts which particularly affected the sweet potato crop it has been suggested that the Enga plant more frost-resistant crops such as high-altitude grain crops. However, Freund points out that:

> Soil tests among the Enga terraces indicate that while phosphates are at fairly critical levels, nitrogen and potash is generally good. As a result, it would be impossible, given the present availability of natural fertilisers, to raise grain crops which in other parts of the world support high population densities. On the other hand, there is an inherent balance between the soil requirements of sweet potato and the present fertilisation of the soil. Therefore, sweet potato is the most intensive crop which the people can grow now.[66]

In other words, there is no point in trying to introduce high altitude grain crops without at the same time

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66 *Op. Cit.*

introducting artificial fertilisers which in all probability the Enga could not afford to buy. Future policy must therefore cater for the continued herding of large numbers of pigs and the continued use of sweet potato as a staple crop.

How then can the Enga Syndrome be broken?

The basic defect in the present land use system among the Enga appears to be that both pigs and people are competing for the same food supply, the sweet potato, which grows on terraces comprising only about 15% of the total land mass.

Better use of the slopes would ease the strain on the terraces and spread land settlement over a wider area so that if a land-hungry clan knew what it could do on its own slopes there would be less incentive for it to covet the terraces of its neighbours.

At present, pigs roam the slope at will, and mixed gardens are found here and there, but the Enga generally use the slopes in a manner which is the direct opposite to that in which they use the terraces. That is, while the terraces are farmed *intensively*, the slopes are used *extensively*.

But having been long accustomed to the intensive use of the terraces, it would appear that the Enga would willingly use the slopes intensively also, if they only knew how. The soil on the slopes is of insufficient depth and quality for the type of sweet potato cultivation the Enga use, but there is no reason why the slopes could not be used for other purposes. For example, the Lai River is fed by thousands of tiny tributaries, many of which pass through the land of each clan. Each tiny tributary is capable of supplying in turn a succession of fish ponds built down slope and down stream from tributary source to Lai River junction. Carp abound in the lakes at Sirunki and Kandep, and from this stock an intensive pond culture could be introduced throughout the presently unused slopes of the Enga District, if the Enga were shown how.

Now man cannot live on carp alone, but carp could be used as the basis of a waste recycling scheme in which carp and algae are fed to pigs, and pig excreta is used to feed the carp and algae ponds, the harvest of which is then fed to the pigs. Such recycling produces both fish and pigs efficiently, without fish or pigs having to compete with people for food from the terraces. Even in this simple form,

recycling would release for human consumption the 66% of the sweet potato crop now fed to pigs, or, alternatively, would release the surplus mounds on the terraces for cash cropping. A more sophisticated recycling scheme of the kind described by Chan in which carp, pigs, chickens, geese and gardens feed each other without competing for the same food, could produce food for human consumption and sale in quantities never imagined by the Enga, from tiny intensively worked plots of land now lying idle on the slopes.[67]

With or without such recycling schemes, the slopes could still be used more profitably than they are now. Where plots are too steep or too small for cattle, they could still be used for the production of other types of animal food, for example, sheep, goats, geese or even guinea pigs. Guinea pigs are easy to keep and breed and could do much to improve the diet and food supply of the Enga.

All the basic requirements for producing high yield food supplies from the slopes are already available in the Enga District, waiting to be mobilised at little or no cost to the Government. All that is really needed is simply for Government officers to show the Enga what can be done with the resources now available. Better use of the resources now lying idle in most Enga clan land would do much to ease the strain on the terraces and reduce inter-group tensions.

Similarly, the Government itself could do a lot more with its own resources to help reduce the level of tension between traditional enemies and set the pace for a less turbulent future. A few simple amendments to the *Local Courts Act* could speed up settlement of disputes originating from the vast backlog of indictable offences which are at present destined never to be heard by the Supreme Court, and a shake-up in the police roster system with *kiaps* standing week-end police duty would increase the Administration's ability to handle trouble quickly when it does occur.

Finally, and at no extra cost, the Government could make the police force part of the community it serves, by expanding the present role of the police to include those duties of a welfare or a civic nature which the police carried out willingly and efficiently, twenty years ago.

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67 G.L. Chan, "Waste Utilisation in Rural Industrialisation" (1972) *6th Waigani Seminar*.

There is, all over the Enga District, a wealth of material, land, personnel, and other resources waiting to be used in such a way and at no extra cost to the Government that much of the violence among the Enga on the scale and intensity that we now know might never occur again.

APPENDIX A

CRITICAL PATH ANALYSIS OF THE TCHAK VALLEY RIOTS

February, 1973.

A. *Summary*

The network analysis and the network diagram of these riots together show the sequence of events which occurred in the Tchak Valley of Wapenamanda from 8th to the 13th February, 1973. The term critical path analysis is not used here to refer to the sophisticated statistical tool used by social scientists undertaking an analysis of causation based on a statistical weighting of many inter-linked variables. The analysis here is one of a major sequence of events which are linked together and regarded as critically linked to eventual outcomes.

The Critical Path marked on the diagram is critical in the sociological sense that it links together human activities and subsequent events which were essential to the continuation of the confrontation between the major contestants, the YANUN and the PINDAGIN Clans. As an example, activity (34)---(40) is not critical since the Yanuns would have attacked the Pindagins anyway, whether the Penales agreed to support the Pindagins or not. On the other hand, activity (25)---(41) is critical in that there would have been no continuation of the fighting on the 13th without it.

Events involving conflict or potential conflict occur along the Critical Path where more than one arrow meets. Event (6) for example was the first confrontation between the participants over the right to erect a dwelling house on a particular site. Event (9) was the first sign of violence, a scuffle at the house site. From then on, the conflict snowballs along the Critical Path.

Events (41) and (42) were not violent in the physical sense, but in all probability would have shown differences of opinion, conflicts of kinship interest, arguments over tactics and uncertainties about the loyalties of allies. Interference by the police at these points could probably have terminated the conflict between the major participants by dissipating built-up tensions into squabbles between allies of the same side.

In all probability, large scale fighting could have been prevented if the Police or *Kiaps* had interfered with the flow of events much earlier along the Critical Path.

Critical Path Analysis of the Tchak Valley riots
February, 1973

B. *Network Analysis*

Preceeding: Event No.	Succeeding: Event No.	ACTIVITY
1	2	Pindagin Clansmen decide to erect a new house on the boundary between Pindagin Clan land and Yanun Clan land.
2	3	Pindagins collect building materials and deliver them to the proposed house site.
2	4	Yanuns watch deliveries and discuss Pindagin intentions.
4	5	Yanuns discuss what action to take if construction starts.
3	6	Pindagins prepare house site.
5	6	Yanuns go to the house site and register a protest with the Pindagins, asking that construction be stopped.
6	7	Yanuns go home and discuss what action to take if Pindagins continue work on house site. They decide on a limited show of force and a threat to take court action.
6	8	Pindagins discuss Yanun protest and decide that the Yanuns are not likely to take any action other than a more forceful complaint which could be ignored or resisted.
8	9	Pindagins erect frame of house and install roof.
7	10	Yanuns watch the frame go up and plan a confrontation with the Pindagins demanding that the frame be removed.
10	9	Yanuns return to the house site and register a stronger protest with the Pindagins, during which scuffle occurs and house is slightly damaged when the Yanuns try to dismantle the frame.

Preceeding: Event No.	Succeeding: Event No.	ACTIVITY
		Yanuns say that they will take the matter to Court.
9	12	Yanuns discuss the day's events, still intending to take the matter to court and are unaware of Pindagin hostile intentions.
9	11	Others discuss the day's events and decide to attack.
12	13	Yanuns go to Pindagin house and call on Pindagins to assemble at the Councillor's house for court.
11	14	Pindagins secretly assemble warriors and discuss immediate tactics.
14	13	Pindagins attack Yanuns at 7.30am taking Yanuns by surprise.
13	18	Yanuns call for allies among the close by Yambarans.
14	17	Pindagin women and children evacuate.
14	15	Pindagins call for allies among the near by Warups.
13	16	Yanun women and children evacuate.
13	19	Pindagins and some Yanuns in action against each other.
15	21	Pindagin nearby allies gather quickly.
18	20	Disorganised Yanuns regroup, while Pindagins take advantage of their initial surprise attack, and advance burning Yanun houses.
20	19	Regrouped Yanuns and nearby allies join the fight.
16	22	Yanun allies alert Police at Wapenamanda.
21	19	Pindagin nearby allies join the fight.
19	23	Yanuns, now out numbered, retreat. Pindagins advance, burning houses and destroying gardens.
22	23	Police and Kiaps arrive from Wapenamanda.
23	24	Police disperse fighters.
23	25	Yanuns retire to Toporop mountain.
23	26	Pindagins retire to their singsing ground.

Preceeding: Event No.	Succeeding: Event No.	ACTIVITY
24	25	ADO Edwards visits Yanuns on Toporop and receives damage and casualty reports. He urges no payback.
24	26	Kiaps and police retire with Pindagins and quiet them.
25	27	) Kiaps and police make arrangements for overnight
26	27	) surveillance. The plan is for police and junior
24	27	) kiap to camp overnight while ADC and ADO return to Wapenamanda for the night.
27	28	ADC and ADO and others return to Wapenamanda.
25	29	Yanuns call on help from Pauagar for tomorrow.
25	30	Yanuns call on help from Yambaran for tomorrow.
25	31	Yanuns call on help from Tasikin for tomorrow.
26	32	Pindagins call on help from Yakaemanda for tomorrow.
26	33	Pindagins call on help from Warup for tomorrow.
26	34	Pindagins call on help from Penale for tomorrow.
29	35	Pauaga kambuingi agrees to support Yanuns tomorrow.
30	36	Yambaran kambuingi agrees to support Yanuns tomorrow.
31	37	Tasikin kambuingi agrees to support Yanuns tomorrow.
32	38	Yakaemanda kambuingi agrees to support Pindagins.
33	39	Warup kambuingi agrees to support Pindagins tomorrow.
34	40	Penale kambuingi agrees to support Pindagins tomorrow.
25	41	Yanun kambuingi agrees to attack Pindagins tomorrow.

Preceeding: Event No.	Succeeding: Event No.	ACTIVITY
26	42	Pindagin kambuingi decides that an attack from the Yanuns and allies is likely tomorrow and decides to prepare a defence.
35	41	Pauagar allies) mobilize at Yanun men's houses in preparation
36	41	Yambaran allies) for dawn attack on
37	41	Tasikin allies) Pindagins.
38	42	Yakaemanda allies) mobilize at Pindagin
39	42	Warup allies) men's houses in
40	42	Penale allies) preparation for expected attack by Yanuns at dawn.
16	41	Yanun combat zone cleared for action.
17	42	Pindagin combat zone cleared for action.
41	43	Yanuns and allies manoeuvre for attack.
42	44	Pindagins and allies manoeuvre for defence.
43	44	YANUNS ATTACK
44	45	Yanuns and their allies engaged in combat against Pindagins and their allies.
28	46	ADC and Wapenamanda kiaps at Wapenamanda.
46	47	Wapenamanda kiaps call for reinforcements from Wabag
46	45	Wapenamanda kiaps and police return to fight zone
45	48	Wapenamanda kiaps and police attempt to stop fighting.
47	48	Kiap and police reinforcements arrive from Wabag.
48	49	Yanuns and their allies rout Pindagins and their allies. Police and kiaps move in and protect property and finally disperse fighters.
	49	Fighting ends at 3 pm.

CONCLUSION

The critical path passes through events (1)(2)(3)(6)(8)(9)(11)(14)(13)(19)(23)(24)(25)(41)(43)(44)(45)(48) and (49)