



Reconsidering Violence in Simple Human Societies: Homicide among the Gebusi of New Guinea [and Comments and Reply]

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Reconsidering Violence in Simple Human Societies

Homicide among the Gebusi of New Guinea¹

by Bruce M. Knauft

Homicide rates among the Gebusi of lowland New Guinea are among the highest yet reported. This paper characterizes and empirically tests Gebusi homicide data against the predictions of three theories commonly used to explain aspects of human violence: sociobiological theory, fraternal interest-group theory, and learning/socialization theory. The data strongly contravene the predictions of each of these theories. The seemingly exceptional nature of Gebusi homicide is in certain respects surprisingly similar to the dynamics of violence in highly decentralized and egalitarian societies such as the !Kung, the Central Eskimo, the Hadza, the Semai, and the Waorani. On the basis of a review of the evidence from these societies, violence in highly egalitarian human groups is characterized and a set of linked hypotheses forwarded to explain it.

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Anthropological theories of human violence have taken several forms. Some have attributed violence to innate propensities and have argued that a tendency toward aggression is biologically encoded (Lorenz 1966, Ardrey 1966, Hamburg and Trudeau 1981; cf. Konner 1982: chap. 9). Drawing upon this notion, sociobiologists have suggested that the patterning of violence in human societies is predictable on the basis of genetic relationship, i.e., that violence tends to be inversely related to genetic relatedness (e.g., Chagnon and Bugos 1979, Daly and Wilson 1982; cf. Blanchard and Blanchard 1984). Others have suggested that the propensity for violence is learned and have attempted to explain its presence or absence in different human societies (e.g., Montagu 1973, 1976, 1978). The causal role of political structure and military socialization—particularly the organizational basis of a collective male fighting force in fraternal interest-groups—has been stressed in a number of cross-cultural studies (Otterbein and Otterbein 1965; Otterbein 1980, 1985a, b; see also Thoden van Velzen and van Wetering 1960; cf. Paige and Paige 1981). Still others have stressed the importance of socialization, specifically the modeling of adult aggression via punitive child rearing and distant/authoritarian father-child relations (Segall 1983, Ross 1981, B. Whiting and J. Whiting 1975, J. Whiting and B. Whiting 1975, Bandura 1973, Montagu 1978). Recently, Ross (1985a, b, 1986a) has suggested through cross-cultural research that harsh socialization is a more robust causative predictor of the overall incidence of violence in a society than are social structural factors.

Violence among the Gebusi of lowland New Guinea, whose homicide rate is among the highest yet reported, defies explanation by any of these theories. Even with social interaction controlled for, homicide is inversely rather than directly related to biogenetic rankings. Fraternal interest-groups are absent, and socialization is affectionate rather than harsh. While even a strong and rigorous empirical disconfirmation of these theories in one or several societies does not, of course, invalidate them as cross-cultural explanations of violence, it does suggest that the universe to which they apply needs to be delimited. These theories assume or assert that what causes violence in sedentary, tribal, agricultural societies—those most intensively studied by ethnologists—also does so for simple foraging and nonintensive foraging/horticultural societies—the ones that have predominated for most of our species's history. I suggest that this common assumption is false and that an evolutionary model of human violence must be more responsive to the particular sociocultural conditions of extremely decentralized and strongly egalitarian societies.

Especially for very decentralized human societies, it is crucial to distinguish between a high incidence and/or valuation of aggressive, conflictual behavior and the rate at which people actually kill one another. Among fully sedentary, more propertied societies—in which male status competition is often quite pronounced—it can be convenient to assume a high correlation between the general degree of aggressive conflict, either within the

group or with outsiders, and the rate at which killing in these spheres actually occurs. The difficulty of ascertaining per capita homicide rates as opposed to obtaining general accounts or observations of instances of conflict increases the tendency to adopt this assumption. Thus, for instance, the theories of violence mentioned above tend to account for lethal violence as an aspect of a general pattern of aggression or conflict. While this may not be unwarranted for societies in which systematic collective conflict is frequent, it may be inappropriate for the simplest human societies. In these latter societies, male prestige competition and interpersonal aggressiveness are generally minimal, as is the propensity for large-scale social action (Leacock and Lee 1982), but the rate of killing may be quite high.

For instance, !Kung Bushmen have typically been described as extremely peaceful and gregarious, as reflected in the title of Thomas's (1959) monograph *The Harmless People*. More recently, Marshall (1976:53, 288) has characterized the !Kung as "non-aggressive people" who "are strongly set against fighting," "manage very well to avoid physical violence," and "conform strictly to certain specific useful customs that are instruments for avoiding discord" (see also Draper 1978). At the same time, however, a systematic survey by Lee (1979a:398) revealed a !Kung homicide rate equivalent to 29.3 per 100,000 per annum. If one restricts calculation to the period 1920–55, when violence was greater due to lack of colonial interference, the homicide rate jumps to 41.9.² Even the lower figure of 29.3 is almost three times the current U.S. homicide rate, which is itself one of the highest among Western societies. By contrast, the homicide rate in African tribal societies is much lower, the ethnic-group averages available ranging from 2.2 (BaLuyia tribes) to 4.0 (Basoga) and 5.5 (Uganda tribes) (see Bohannan 1960:158; Fallers and Fallers 1960:71; Southall 1960:228). The rate of homicide among the "peaceful" !Kung has thus been six to eight times greater than the average reported among "tribal" societies often considered to have relatively high degrees of social and interpersonal conflict, e.g., as "predicted" by the prevalence in them of patrilineal/patrilocal clan organization and authoritarian elder/junior relations.

A perhaps more striking case is that of the Central Eskimo. Central Eskimo groups are careful to avoid direct confrontation or expression of hostility in interpersonal relations, as is reflected in Briggs's (1970) detailed monograph *Never in Anger*. As Eckert and Newmark (1980:193–94) note: "In the ethnographic literature on the Central Eskimos there appears, again and again, a clearly enunciated native ideology of good-will, cooperation, and equality. . . . Patience, peacefulness, courage, generosity, modesty, honesty, and co-operation were valued above all and were inculcated very early in childhood." At the same time, several writers have noted that the Central Eskimo have a great propensity

for lethal violence (Eckert and Newmark 1980; Balikci 1970:chap. 9; Hoebel 1964:chap. 5; Steenhoven 1959). Rasmussen (1932:17) conducted a survey of the adult men of one community and found that 60% (9/15) had committed one or more murders of adults and an additional 13% (2/15) had attempted killings without success. He concludes, "There was not a single grown man who had not been involved in a killing in some way or another." Hence, the pervasive Eskimo adherence to and emphasis on interpersonal tranquility has belied an extremely high homicide rate.

Even in simple societies where a high rate of homicide is *not* reported, lethal violence may nonetheless be of statistical, demographic, and evolutionary significance. In highly egalitarian and noncompetitive societies, lethal violence is especially easy to overlook or misinterpret, since it tends to be feared, devalued, and deemphasized by the people themselves. Norms of communal sharing and cooperation are strongly stressed. Moreover, the overall rate of *aggression* is often low, leading the ethnographer to assume that homicide must be rare or nonexistent. At the same time, because the group studied is quite small, even a high overall homicide rate may not produce many or any incidents or accounts of killing during a fieldworker's stay. Given the predominant cultural ethos, any cases of killing that are uncovered can easily be dismissed as exceptional or aberrant.

For instance, the Semai, according to the subtitle of Dentan's (1979) monograph, are *A Nonviolent People of Malaya*, and the detailed descriptions by Dentan (1978, 1979) and Robarchek (1977) confirm the general lack of conflict and aggression in Semai social relations. Dentan (1978:98) mentions, however, that "at least two murders have been committed between 1955 and 1977, and there is gossip about a couple of others." The presumed occurrence of even two murders during this period would actually produce a substantial homicide rate, since Dentan's study population totaled only about 300 (1979:4). Even if we assume that two homicides constitute the total number of killings in this population over the period 1955 to 1977 (or, alternatively, four homicides in a population double this size), this is equivalent to a homicide rate of 30.3 per 100,000 population per annum. Interestingly, this figure is of the same order of magnitude as the homicide rate that Lee calculated for the !Kung.

Concerning the nomadic Hadza of northern Tanzania, Woodburn (1979:252) notes that despite an extremely egalitarian political structure "conflict among the Hadza can easily be lethal." Among a population of some 400 persons, Woodburn mentions in passing three homicides and strongly implies that a significant number of other cases have also occurred.

Even among the Mbuti Pygmies of Zaire, long considered the archetype of the peaceful egalitarian society, violence is not unheard of. Turnbull (1961, 1965a, b, 1968, 1978, 1983) has been criticized for minimizing the significance of conflict in Mbuti society (e.g., Beidelman 1985), and because he does not report cases of Mbuti

2. Draper (1978:48) notes that "homicide and assault in recent times are no doubt discouraged by the fact that a government-appointed headman now lives in !Kung territory. . . ."

violence that he did not personally witness his sample of evidence is correspondingly restricted. During his stay among a small band, however, Turnbull did see a serious fight in which an enraged Mbuti hurled a spear within a foot of his antagonist (1961:109–113), another dispute in which an antagonist threatened directly to kill his opponent (pp. 116–117), and a third conflict that he suspected might result in homicide though in fact it resulted only in the burning of a hut and the ritual “killing” of the suspect through temporary ostracism (pp. 121–24). While it would be improper to conclude that the Mbuti may have a significant per capita homicide rate, it would be equally presumptuous on the basis of the data available to claim that severe violence among them is negligible.

Distinguishing carefully between interpersonal conflict or aggression generally and the incidence of homicide per se reframes in more empirical terms the question whether simple human societies and the evolutionary trajectory of our species have been violent or peaceful (see Lorenz 1966, Ardrey 1966, Popp and DeVore 1979, Chagnon and Irons 1979, Bigelow 1975; contrast Montagu 1973, 1976, 1978; Fabbro 1980; Moore 1972; Eckhardt 1975). Viewed in the present perspective, it is quite possible that both points of view are partially correct. Especially in egalitarian societies, there may be a pattern of social life that is generally peaceful and tranquil but is punctuated by aggression which, when it does occur, is unrestrained and frequently homicidal. This

may result in a high ratio of lethal violence to aggression despite a low overall incidence of aggression.

The Gebusi are remarkably noncompetitive and politically decentralized for a New Guinea society; their interpersonal relations are self-effacing, nonhierarchical, and mutually deferential in the extreme (Knauff 1985*b*:chap. 3). At the same time, they exhibit an extremely high homicide rate. In several respects, Gebusi culture pushes to extremes the pattern just suggested. Testing theories of lethal violence against the Gebusi data is thus relevant to a general understanding of violence in simple human societies.

Ethnographic Background

The Gebusi are a society of some 450 persons living in the lowland rain forest of south-central New Guinea (Knauff 1985*a, b*, 1986, 1987*a, b*; see fig. 1). The average elevation is 170 m, and yearly rainfall averages 4,150 mm. Subsistence is based on opportunistic hunting and foraging, sago processing, nonintensive shifting horticulture (primarily unfenced banana gardens), and rudimentary husbandry of a few semidomesticated pigs. Population density is 2.6 persons per square kilometer. Disputes over territory or resources are extremely infrequent and tend to be easily resolved; there is no evidence of land shortage.

Gebusi reside nominally in longhouse settlements,

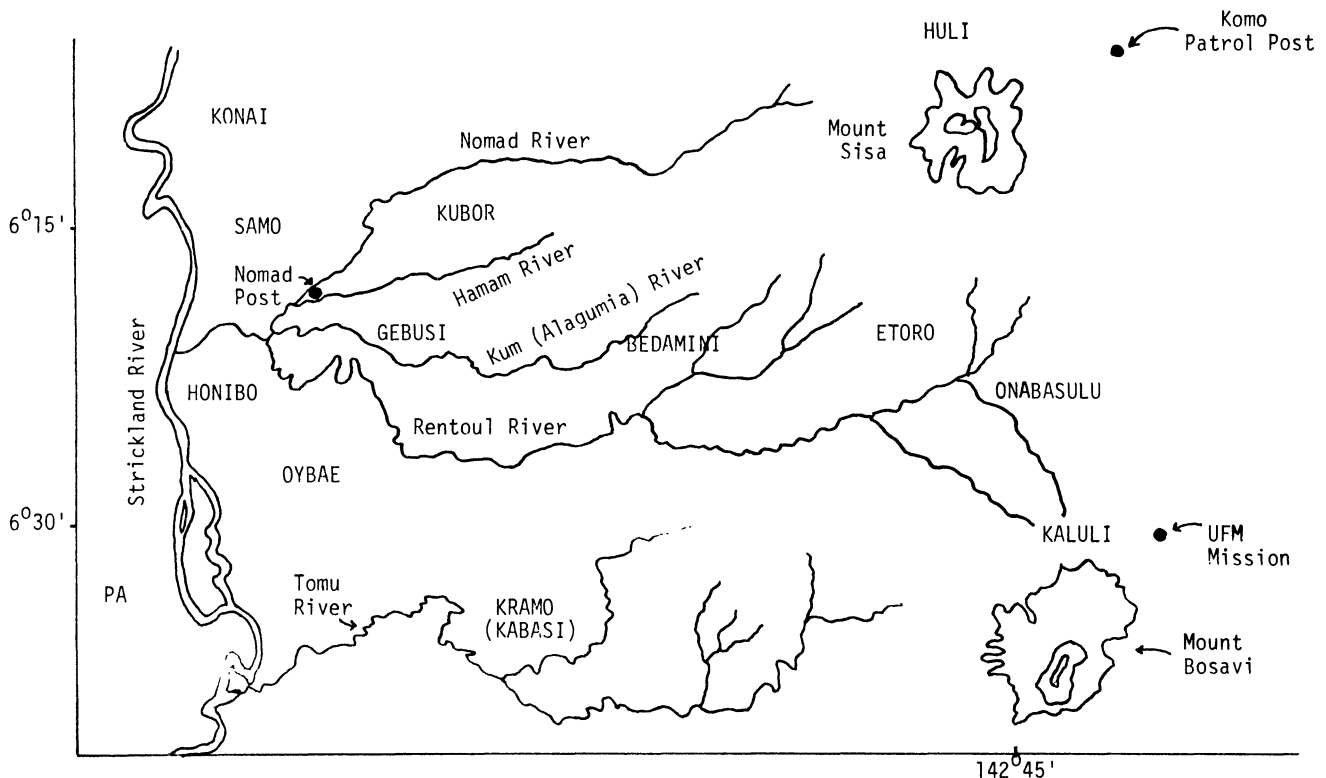


FIG. 1. The Strickland-Bosavi area, New Guinea. (Map information from U.S. Army Maps SB 54-11, SB 54-12.)

scattered roughly equidistant in the forest and comprising an average of 26.5 persons each. Residential movement is frequent between adjacent primary residence sites and between these sites and gardens; on the average night only 55.3% of a settlement's "permanent" population is in residence, with 29.7% residing in a garden or makeshift forest shelter, 12.5% visiting another longhouse within the general community, and 2.5% visiting a more distant settlement. Between two and six longhouse settlements form a largely endogamous residential community. Travel is very free and casual within the community but more restricted outside it. The community is a relatively dense zone of kinship affiliation and diffuse friendship, as well as the area of social and subsistence activity. Settlements within the community are autonomous and politically independent, though they may choose to ally for ceremonial functions, ritual antagonism, or, more rarely, actual armed conflict.

Settlement composition reflects the desire of adult men to live with as many close kin—affinal and matrilineal as well as agnatic—as possible. Settlement coresidence of primary affines and matrikin—e.g., WB/ZH, MB/ZS, and WF/DH—ranges from 68 to 82 to 88% respectively of that possible. Because of such coresidence, male members of the small patrilineal (which average 18.0 persons each) are residentially dispersed in different settlements rather than localized. At the same time, coresidence of the most closely related adult male agnates (FFBSS or closer) is 85% of that possible.

The political and economic life of the Gebusi is highly decentralized, particularly in comparison with that of many New Guinea highland societies. Gebusi lack big men or headmen, fight leaders, ritual eldership, and gerontocracy; they recognize no indigenous positions of secular male leadership. Men are highly self-effacing in social interaction and avoid taking a public stance which could be perceived as either ordering or pressuring other men in the community to conform to their point of view (e.g., Knauff 1985b:65–66). Matters of collective concern are settled by consensus; each man is ultimately free to participate or not as he wishes, though usually all join together. The familiars of a medium have de facto authority in supernatural matters when their host is entranced during a séance, but mediums have no special influence or position in everyday life.

Gebusi are distinctive for practicing no competitive exchanges and having no custom of material compensation to resolve disputes or to transact marriages. Food exchanges in daily life and at feasts are carried out in a spirit of generalized reciprocity, and nonrelatives as well as relatives receive portions. The same is true of wild pig or cassowary hunted; everyone in the settlement receives a portion. Larger food amounts are exchanged between affines and between matrikin than among nonkin, but there is no sense of competition or rivalry in exchange, and no tally of items received or given is kept. Gebusi numeration has no terms for numbers greater than three. Marriage is transacted as true or classificatory sister exchange or as unreciprocated romantic marriage accepted de facto by the woman's agnates. Coresi-

dence and domestic cooperation between male affines are prevalent whether the marriage that links them is reciprocated or not, despite the fact that there is no bridewealth or bride service.

Gebusi male social life is markedly devoid of male status rivalry. Instead, there is a pronounced aura of diffuse male friendship and camaraderie. The emotional tenor tends to be relaxed and unpretentious rather than aggressive or boastful.³ This sociality among men, both related and unrelated, is particularly strong in the longhouse and in many casual visitations within the community. Friendship between unrelated young men and/or adolescents commonly results in homosexual relationships (Knauff 1986, 1987b).

In certain respects, Gebusi have more social and political features in common with foraging societies than with "tribal" cultures of the New Guinea highlands. These features include extensive and nonintensive subsistence activities, fluid residential movement, lack of secular leadership positions, decision making through noncompetitive consensus, discouragement of adult male status seeking, and permissive and nonpunitive socialization (see Leacock and Lee 1982).

General patterns of Gebusi violence may also be viewed in this light. Hostility and aggressive demeanor are extremely infrequent in day-to-day behavior. Gebusi conceive anger to be an individualistic and antisocial state that runs directly counter to their basic values of communal sociality (Knauff 1985b:chap. 3). Correspondingly, expression of fear and withdrawal at the prospect of violence are actively encouraged. The violence that does occur erupts suddenly, is often devastatingly extreme, and subsides with parties tending to act as if little had happened. The general desire is to reestablish amity and peaceful coexistence as quickly as possible. The most legitimate and frequent context of lethal violence is the killing of a person as a sorcerer—for allegedly causing the sickness death of someone else in the community.⁴ Such killings tend to be accepted without responsive action even by the closest kin of the person killed. The general perception is that the real source of anger was the sorcery suspect and that violence was a regrettable but necessary way of expunging that person and reestablishing community good company. In sociological terms, this violence acts as a strong leveling mechanism which precludes the emergence of assertive leaders and reinforces commitment to norms of sociality and sharing.

Gebusi have remained outside the purview of effective mission and administrative influence. In 1980–82, their rituals, séances, sexual practices, and sorcery inquests were practiced avidly and in a surprisingly traditional

3. Gebusi are embarrassed and "scared" (*abwida*) by references to their individual proficiencies or accomplishments. They avoid use of personal proper names, including their own, and are often reluctant to look at individual photographs of themselves, preferring group shots. They shun privacy and appear most content in the ubiquitous casual socializing of the communal longhouse.

4. Less severe violence occurs in controlled ritual fighting and in occasional wife beating (see Knauff 1985b:32, 247–53; 1987a).

manner (Knauft 1985b:chap. 1; contrast Schieffelin 1981). A sorcery inquest leading to execution and cannibalization of the suspect had occurred in our community of residence some nine months prior to our arrival; the incident was effectively concealed from government officials. No Gebusi were bilingual, e.g., in neo-Melanesian or Motu. There were no trade stores in the area and no significant economic development in terms of cash cropping, wage labor, or out-migration.

Gebusi in the New Guinea Context

The Gebusi pattern of violence contrasts with that of many societies of the New Guinea highlands, among which warfare or reciprocal raiding was often endemic (e.g., Meggitt 1977; Koch 1974; Berndt 1962; Heider 1970, 1979; cf. Gordon and Meggitt 1985).⁵ Crucial here is the absence of reciprocating collective violence in Gebusi sorcery retribution. In economic terms, correspondingly, Gebusi lack the competitive reciprocity of balanced exchange, just as they lack competition for material property, land, and political status. In terms of Modjeska's (1982) outline of the evolution of politico-economic intensification in New Guinea, Gebusi are at the low-intensity extreme (cf. Rubel and Rosman 1978, Feil 1986).⁶

This low-intensity pattern is accentuated by features of human geography. Gebusi lack not only the high-altitude valleys and high population densities of the New Guinea highlands but also the abundance of swamp and riverine resources of many of New Guinea's major floodplain and coastal environments. At the same time, their inland but lowland environment lacks the faunal diversity of the hilly and mountainous "fringe" areas of interior New Guinea (Dwyer 1983, Morren 1986, Kelly n.d.; see Weiner n.d.). While Gebusi resources appear adequate for the daily subsistence needs of a dispersed population, their dietary staples of bananas and sago yield far less nutrition than the root crops, such as sweet potato, that are abundant at higher elevations to the northeast. Perhaps more surprisingly, hunting is not avidly pursued by Gebusi, does not constitute an important focus of regular subsistence activity, and is usually only opportunistic.⁷

5. In addition, highlanders contrast markedly with Gebusi in style and demeanor; public interactions in the highlands are often highly aggressive and self-aggrandizing.

6. However, in the light of documentation by Kelly (n.d.), I do not assume that this range of variation is grounded in differences in number of pigs owned per capita.

7. It is unknown to what extent lack of hunting is due to cultural preferences, low density of the wild pig and cassowary populations, or increased exposure to malarial and other health hazards during extended hunting expeditions (Knauft 1985b:16–21). Quite possibly a combination of these factors is involved. Most Gebusi men simply say that they prefer the communal life of the settlement. Unless undertaken as a communal effort, sustained hunting in the bush is considered arduous and unpleasant (see Knauft 1983: appendix B).

Gebusi nutrition and health are further reduced by the intensity of lowland disease vectors, e.g., for malaria, filariasis, and tuberculosis (as well as introduced influenza). Infectious diseases reduce the ability of the body to absorb nutrients, and there is at least qualitative evidence of malnutrition among Gebusi children (Knauft 1985b:20–21). Whatever the underlying causes, Gebusi form the northern perimeter of a large lowland area of extremely low population density—the most sparsely populated area of New Guinea. A significant portion of the area to the south of the Gebusi is entirely uninhabited.

In terms of this larger areal pattern, it is significant that several sociocultural features change incrementally as one moves northeastward and upward in elevation from the more highly dispersed lowland groups of the Strickland Plain (e.g., Oybae, Honibo, Gebusi) to the "fringe" New Guinea groups of the Great Papuan Plateau (e.g., Bedamini, Kaluli, Etoro, and Onabasulu)—a residential altitude range of 120 m to 1,050 m. Along this gradient there is a general increase in reliance on root crops and hunting and in population density, as well as a likely increase in general health (prior to introduced diseases).⁸ Significantly, material exchange, compensation payments, and leadership based on eldership and/or warfare success (while still little developed by highlands standards) are all noticeably more elaborated among the Great Papuan groups than among the Gebusi and their lowland neighbors.⁹ Surprise dawn raiding against long-house settlements as wholes was developed among the former groups but virtually absent among the latter. For the Great Papuan Plateau, Kelly (1977:19) documents the formation of well-organized raiding groups of up to 150 men or more. In contrast, the inability of Gebusi to defend themselves or retaliate against large surprise raids was one important reason for the intrusion of the neighboring Bedamini into the northern and eastern sections of their territory (Knauft 1985a; 1985b:chap. 1).

In short, the Strickland-Bosavi area has exhibited intraregional variation in which the eastern as opposed to the southwestern sector evidenced a relative increase in

8. Population density ranges from 0.4 per square kilometer among the Oybae in the southwest to 6.5 per square kilometer among the Etoro to the east (Knauft 1985b:415 n. 5; Kelly 1977:18). Etoro show "no evidence of protein deficiency" (Kelly 1977:42). Documentation of substantial Etoro hunting yields and prey variety has been supplied by Dwyer (1982, 1983, 1985) and Kelly (1977: chap. 2).

9. Sørum (1984:320) notes the existence of Bedamini community fight leaders, with leadership generally based on "fighting abilities, oratory and seniority" (1980:275). Kelly (n.d.) documents the presence of a named Etoro elder-leadership role with a number of ritual and secular duties and prerogatives. Schieffelin (1983) notes the importance and positive evaluation of personal assertiveness and intimidation in Kaluli adult male status. Ernst (1978) documents the importance of formalized exchange reciprocity and compensation among the Onabasulu. Compensation payment for sorcery and other delicts and some form of standardized bride-payment were apparently common throughout the Great Papuan Plateau (see Ernst 1978; Kelly 1976, 1977; Schieffelin 1976, 1980; Sørum 1980). All of these features are of minimal importance or absent among the Gebusi, Oybae, and Honibo.

altitude, health, population density, hunting, exchange elaboration, aggressive male leadership, and collective violence. While environmental factors likely influenced these broad sociocultural contrasts, the intensification of warfare and tribal expansion belies strict ecological determinism. The largest and most successful military power in the area was the Bedamini, intermediate both in altitude (600 m maximum) and in population density (5.4 per square kilometer) between the Gebusi and the Etoro (see Sørum 1980, 1982). Local cultural as opposed to ecological variations seem particularly important in explaining this distinctive pattern (Knauft 1985a). In all likelihood, cultural, socioeconomic, and ecological factors interacted in the development of Papuan Plateau societies and in the contrast between them and fully lowland groups such as the Gebusi. For the moment, it is the fact of such contrasts—particularly with respect to reciprocating collective violence—rather than their underlying causes that is at issue.¹⁰

Given their particular place among the small dispersed longhouse societies of the Strickland-Bosavi area, the Gebusi are one of the most decentralized New Guinea groups documented to date. The Gebusi mode of sorcery attribution reflects this fact. Gebusi sorcery occurs primarily within the local group. There is little collective opposition to sorcery attribution, no strong men or fight leaders to organize revenge killings, and no material compensation to forestall violence (contrast Steadman 1971, Schieffelin 1976, Kelly 1976). These features reflect a political system at the extreme end of a continuum of decentralized New Guinea societies in which sorcery or witchcraft suspects could be systematically executed (Knauft 1985b:339–44). The relationship between political decentralization and distinctive patterns of violence is particularly important.

Incidence of Gebusi Homicide

Given the lack of cultural emphasis on Gebusi violence, there was little immediate indication from patrol reports or from Gebusi themselves that homicide among them was frequent. Lethal violence was not an a priori interest of mine, but as genealogies were being collected informants often mentioned in passing that individuals under consideration had been homicide victims. Before systematic mortality inquiries were made, complete clan genealogies were completed to establish a large and relatively random population set. This sample included all deceased adults and their spouses who could be named from fifteen clans and from subclans of three additional clans—a total of 394 individuals, deceased between

about 1940 and 1982. This sample is much larger than the number of living Gebusi adults. For each deceased individual, the cause of death and supporting case-study information were obtained. Every account was cross-checked at least once with a different informant, and the more complex cases (e.g., those involving homicide) were reviewed on several occasions with informants related and unrelated to the deceased. While the contributions of a few informants were misleading at first, the exposure of errors through investigative cross-checking quickly resulted in a general accuracy of reporting that developed into an earnest desire of informants to provide correct and complete accounts. A special effort was made to obtain maximal enumeration and details of nonhomicide deaths so that these would not be under-represented. Particular facets of cases that were beyond recollection were recorded for tabulation purposes as “not known.” All interviews and discussions were conducted in the Gebusi vernacular.

The cases tabulated as homicides entail the killing of one individual by another individual through direct physical violence, i.e., homicide in the Western, dictionary sense of the term. While most Gebusi homicides are explained as retribution for lethal sorcery, any possible confusion between physical and alleged killing by spiritual means came quickly to light as the details of personal action and the final resolutions of each case were elicited and cross-checked (contrast Marano 1982). (For case studies and detailed descriptive accounts of many Gebusi homicides see Knauft 1985b.) The data were obtained from the clans resident in the central-western sector of Gebusi territory, which lies outside the region subject to regular raiding and subsequent intrusion by Bedamini to the north and east.

Of 394 adult deaths in the genealogical survey, nearly one-third (129 = 32.7%) were homicides (table 1). Homicides accounted for 29.3% of female deaths and 35.2% of male deaths.¹¹ Calculation of per annum homicide rates, often neglected in ethnographic studies, is particularly important for purposes of cross-cultural comparison (cf. Archer and Gartner 1981). The rate of Gebusi homicide over the period 1940–82 was conservatively calculated by (a) ascertaining the number of homicides per year in that period (3.07); (b) liberally estimating the 1940 population of the 18 clans in question on the basis of known demographic trends (Knauft 1985b:chaps. 4, 8, appendix D); and (c) conservatively assuming that the homicides tabulated are all of those that occurred in the 1940–82 population—even though the present sample of 394 persons is only 52% of the liberally estimated parent population (Knauft 1985b:376–77). The homicide rate thus calculated is equivalent to at least 568 per 100,000 per annum. Homicides occurring before and after effective Western contact (in 1962) were tabulated separately. The homicide rate was

10. While the interplay between sociocultural and ecological factors has recently been considered in contrasts between “fringe” and highland areas of New Guinea (Weiner n.d., Kelly n.d., Modjeska 1982, Morren 1984, Feil 1986), there has been very little concern with the contrast between “fringe” and adjacent lowland New Guinea societies (see Morren 1984). This is an important topic in need of future consideration.

11. The smaller number of female deaths in the total sample is likely due to a tendency for informants to forget the identity and circumstances of widows' deaths. Widows in Gebusi belief are of increasingly marginal importance as they get older.

TABLE I
Causes of Gebusi Adult Deaths

Sex	Sickness	Homicide	Accident	Suicide	Unknown	Total
Male	107 (46.5)	81 (35.2)	7 (3.0)	1 (0.4)	34 (14.8)	230 (99.9)
Female	95 (57.9)	48 (29.3)	1 (0.6)	1 (0.6)	19 (11.6)	164 (100.0)
Total	202 (51.3)	129 (32.7)	8 (2.0)	2 (0.5)	53 (13.5)	394 (100.0)

NOTE: All data categories are defined in Western terms, i.e., the medical or sociological rather than the Gebusi conceptualization of sickness, homicide, accident, and suicide. Numbers in parentheses are percentages of row totals.

at least 683 per 100,000 per annum during the precontact period (1940–62) and dropped to 419 thereafter (1963–82). Even between 1975 and 1982, 19.0% of all adult deaths in the sample were homicides.¹²

Comparison with rates from official and ethnographic sources (table 2) indicates that the Gebusi homicide rate is one of highest ever reported. Several words of methodological caution are necessary, however, concerning comparative homicide rates. For simple societies, cumulative totals of violent fatalities are often culled nonrandomly from an undefined sample population over an indeterminate period of time. Thus, many of the non-state-society figures listed in table 2 are based only on rough extrapolations from information that is widely dispersed in monograph reports concerning homicide number, population size, and the time period considered. For Western and other state societies, the population-size, sample, and time-period problems are mitigated, but rarely is any cumulative total given of lethal violence *from all sources*. Typically, killings are tabulated separately (and in different types of reports) depending on whether they took place in warfare, non-legitimate interpersonal aggression within the society, or legitimate violence (e.g., killing in self-defense, killings by officials in the line of duty, and legal executions). The quantitative relationship and developmental covariance between these forms of lethal violence relative to their *aggregate* rate is seldom calculated. This problem is compounded by the fact that societal definitions of “legitimacy” with respect to violence vary widely and may conceal various forms of internal violence from cross-cultural comparison. Killings from civil war, rebellion, and execution, for example, are difficult to define and compare apart from tumultuously changing political contexts, definitions, and ideologies of violence. (Likewise, Gebusi homicide defies simplistic categorization.) This makes more important, however,

at least the attempt to estimate the types and incidence of killing from all sources in a society. This aggregate measure would be an important prerequisite for later subcategorizing and analysis of cross-cultural variations in lethal human violence. Such an aggregate index would allow comparative assessments of homicide frequency in the simple dictionary sense of the term—the killing of one person by another through physical means. At present, we have little knowledge of the evolutionary trends in aggregate homicide rates even among nation-states in the 20th century.

For example, it is of interest to compare the Gebusi rate of killing with that of modern Western states. The homicide rates in table 2 for state societies do not include homicide in the course of “legitimate” collective conflicts such as battles or wars or publicly legitimated internal killing. It seems safe to say, however, that the Gebusi rate of killing during 1940–82 is 40 times the current U.S. rate of lethal violence from all such sources combined. In a longer time frame, however, such assessments may prove biased, since warfare in modern countries can claim a disproportionate number of victims during short but infrequent periods. If one assumes two wars of three years each over a period of five decades, the U.S. population killed in each year of war would have to be 720,000 (in addition to the existing internal homicide rate) to produce an overall killing rate of 500 per 100,000. In short, it would appear that only the more extreme instances of modern mass slaughter would equal or surpass the Gebusi homicide rate over a period of several decades.

Sociological Characteristics of Gebusi Homicide

Gebusi homicide takes place primarily within the residential community, especially as a concomitant of sorcery attribution (with the suspect as the target), and against both women and men in significant numbers. Of the 129 homicides in the sample, nearly four-fifths (79.1%) took place within the small Gebusi population

12. No homicides occurred in our community of residence or in adjacent settlements during our 22-month stay. Our presence may have prevented homicide from occurring on two volatile occasions (see Knauff 1985b:chap. 2).

TABLE 2
Homicide Rates (per 100,000 Population) of Selected Societies

Society	Period	Homicide Rate	Source
Britain	1959	0.5	Demographic Yearbook
Japan	1951–56	2.2	Wood (1961:57)
Basoga (Uganda)	1952–54	4.0	Fallers and Fallers (1960:71)
United States	1953	4.8	FBI Crime Reports
Sri Lanka	1957	5.9	Wood (1961:57)
Middlesex, England	1580–1603	6.3	Hair (1972:43)
Samoa (Western and American)	1977	9.9	Freeman (1983:163)
United States	1980	10.7	FBI Crime Reports
Miami	1948–52	15.1	Wolfgang (1958:25)
Kent, England	13th century	15.1	Given (1977:39, erratum)
Colombia	1960	34.0	Wolfgang (1967:285)
!Kung	1920–55	41.9	Lee (1979a:382, 397)
Detroit	1985	58.2	FBI Crime Reports
Tepoztlán, Mexico	1920–55	ca. 59.0	Lewis (1951:26–28, 227)
Cleveland black males	1969–74	142.1	Rose (1979:14)
Yanomamo	1970–74	165.9	Melancon (1982:33, 42)
Mexican <i>mestizo</i> village	1961–65	251.2	Nash (1967)
Casiguran Agta ^a	1977–84	326.0	Headland (1986:537–43)
Murngin (Australia)	1906–26	ca. 330.0	Warner (1969:146–47)
Goilala (New Guinea)	1896–1946	533.0	Hallpike (1977:120)
Gebusi (New Guinea)	1963–82	419.0	Knauff (1985b:376–77)
	1940–62	683.0	Knauff (1985b:376–77)
Hewa (New Guinea)	1959–68	778.0	Steadman (1971:215)

^aWhile the Agta figure was obtained during a period of intense socio-demographic stress and alcohol use, the author's supporting information (pp. 388–97, 537–43) suggests that a high rate of homicide, perhaps a third to half of that reported at present, also occurred traditionally.

itself, and it is these cases that are the focus of the present discussion (table 3).¹³ Over half (53.5%) of the homicides were perpetrated within the victim's community, and one-third (33.3%) involved persons coresident in the same longhouse settlement. Of the intra-Gebusi homicides, over four-fifths (82/102 = 80.4%) were the killing of a Gebusi individual as a sorcerer, i.e., for having allegedly caused the sickness death of another Gebusi. Two more homicides entailed the killing of a family member of the alleged sorcerer as well as the execution of the primary suspect. Of these 84 sorcery homicides, only 4 (4.8%) resulted in a revenge homicide—a return killing by the kin of the person slain in retaliation for his or her death. This is indicative of the degree to which action against alleged sorcerers is culturally legitimated. It also reflects the tendency for peaceful coexistence to be reestablished quickly in the community following lethal violence.

Gebusi killings of alleged sorcerers contrast revealingly, both in incidence and in dynamics, with

Gebusi battle killings. Battle accounts for just 2.9% (2/69) of intracommunity and 9.8% (10/102) of all intra-Gebusi homicides. Battle killings take place between groups of persons from settlements (or groups of settlements) in collective bow-and-arrow encounters, either in facing lines in settlement clearings or as skirmishes in the bush. Eight of the ten battles that resulted in homicide took place between Gebusi from different communities. As is consistent with Gebusi sociopolitical life generally, there is no material compensation for battle killings; the group sustaining the loss attempts to exact blood revenge. However, upon failure in one major effort of collective fighting, the attempt is given up. Several battle deaths in the sample are known to have been precipitated in this limited blood-feud fashion, and in 8 of the 10 killings either a previous battle homicide or some other outstanding grievance was known to have been the cause of the fight.¹⁴ In contrast to such homicides, killings of alleged sorcerers are both especially frequent within the community and quite unlikely to precipitate even an attempt at revenge killing. It is perhaps consistent with this that intracommunity killings of alleged sorcerers seldom correspond to any

13. Extrasocietal homicides in the sample were due primarily to two long-distance raids on Gebusi longhouses by Bedamini. These raids were never reciprocated by Gebusi. Indeed, they had been invited and abetted by Gebusi wishing the foreigners to kill a suspected Gebusi sorcerer; the Bedamini, however, had extended the raid to the suspect's entire settlement (Knauff 1985a; 1985b:chaps. 1, 5, 8).

14. Battle killings could be classed in Otterbein's (1980) terms as internal war, since the groups involved are autonomous political entities within the same cultural group.

TABLE 3
Residential Distribution of Homicide against Adult Gebusi Victims

Killer's and Victim's Residence	Male Victims	Female Victims	All Adult Victims
Intrasettlement	23	20	43 (33.3)
Extrasettlement/ Intracommunity	22	4	26 (20.2)
Total	45	24	69 (53.5)
Extracommunity/ Intrasocietal	26	7	33 (25.6)
Intra-Gebusi total	71	31	102 (79.1)
Extrasocietal	9	18	27 (20.9)
Total	80 (62.0)	49 (38.0)	129 (100.0)

NOTE: Numbers in parentheses are percentages of the grand total.

outstanding social grievance recognized between the kin of the killer and the homicide victim, in only 9 of the 69 intracommunity sorcerer-killings (13%) was any preceding social cause attributed. The cause of the sorcerer's purported anger is simply that "he (or she) is just a bad person; he sent sickness and death just because" (see Knauf 1985b:142-49).

The sorcerer is believed to keep his animosities hidden and to be motivated by an irrationally malicious and generally misanthropic spite. It is consistent with this perception that there is little if any discussion—either public or private—as to who the sorcerer might be or why he or she might have committed the act. Even opinions given by the person who is dying from sickness as to the identity of the sorcerer or his/her motive are given little credence. The identity of the sorcerer can only be discerned through spiritual inquest.¹⁵

This inquest begins with all-night séances during which omniscient spirits reveal aspects of the sickness death unseen by humans. Séances are conducted by mediums (whose bodies the spirits temporarily inhabit) and culminate in a spiritual indictment and naming of a sorcery suspect. The proceedings are scrupulously observed by the kin of the suspect and by the community at large to ensure that they are neutral and unbiased. Indeed, the primary accusers (typically close agnates of the sickness victim) go to some lengths to exhibit goodwill toward the resulting suspect and to demonstrate that they are interested only in a fair divinatory verdict. The medium

is expected to be unbiased and, in particular, not a relative of the primary kin of the sickness victim. For this reason, it is not uncommon for mediums from other settlements or even other communities to be solicited to conduct death inquest séances. Mediums are not paid or otherwise remunerated for their services; conducting inquest séances is considered a civic duty.

While indictment by the medium's spirits initiates the process of divination, this spiritual evidence must be validated through public divinations undertaken by the suspect him- or herself. The medium plays no role in these divinations. The primary divinatory task is the cooking of a large divination packet with meat or fish inside, and the failure of the suspect to do this properly is taken as a sign of his or her guilt. Gebusi have a strong belief in the objective validity of these divinations. This faith is attested to by the lack of resistance by the closest kin of the suspect when they are confronted by a consensus that their kinsman is, upon the observed evidence, guilty of sorcery.

Following an unfavorable divinatory outcome, the suspect may be killed on the spot, with his or her kin's acquiescence. Suspects have occasionally been tied up and publicly tortured. When a suspect is indicted for having caused the sickness death of a member of his or her own patriline, close kinsmen perpetrate the killing. In many instances, however, the closest kin of the alleged sorcerer are ambivalent about the suspect's guilt. Especially if the outcome of the public divination is not definitive, the potential of armed support for the suspect by these people precludes an immediate killing. In these cases, the accusers typically wait until the initial tension of the situation wanes—perhaps for several weeks or months—and then organize a consensual plan in the community to ambush the suspect when he or she is in the forest, unsuspecting, with few supporters. In the face of such an ambush, the closest kin of the targeted individual almost invariably flee. It is generally known that such ambushes are surgical strikes directed only at the indicted individual; other family members and supporters are not targets and are not at risk unless they deliberately put themselves in the line of fire. The kin of the alleged sorcerer, while often not completely convinced that the suspect is guilty, rarely risk their lives to resist or avenge a killing that has the consensual approval of the many different clans in the community at large. In the great majority of cases, then, the killing of the suspect is accepted and goes unavenged. Indeed, there is a general feeling of relief in the community that a lethal sickness sender in the group has been expunged. The kin of the homicide victim tend overwhelmingly to remain within the community and are sometimes even reincorporated into the settlement of the killers after a few years.

Certain social structural features are statistically correlated with Gebusi homicide. Preeminent among these are lack of marital reciprocity in sister exchange—the imbalance favoring either the suspect or the accusers—and clan size (Knauf 1985b:chaps. 7, 8). In this sense sorcery homicide is ultimately about male control of

15. Information about sorcery inquests was obtained from numerous observed cases and from fully transcribed tape recordings of spontaneous Gebusi inquest discussions, as well as from informant descriptions of previous cases.

marriageable women. However, these statistically significant factors are neither publicly nor privately recognized by Gebusi as a cause of homicide against sorcery suspects, even by the closest kin of those killed.¹⁶ This tendency is frequently furthered by a hiatus of many years between the onset of nonreciprocal marriage and a sorcery attribution between the patriline in question. Indeed, norms of amity and cooperation between affines—including those linked by nonreciprocal marriage—are eulogized, and any potential disgruntlement is deemphasized or denied. Killings are carried out as a communitywide duty to expunge a demonstrated sorcerer rather than as the redress of a personal grievance. Perhaps more important, there is no empirical tendency for sorcerer killings to be reciprocated in conscious or unconscious “revenge” between patriline or clans. The “cause” of violence is thus in one very real sense the belief system which posits (a) that some other person is responsible for each and every sickness death, (b) that no retribution is possible except the slaying of the offender, and (c) that violence in this context is self-legitimizing. In fact over 26.5% of all Gebusi sickness deaths in the sample individually precipitated the murder of another person for allegedly practicing sorcery.¹⁷ At least 64.7% (11/17) of the middle-aged men in two communities had committed homicide, including some who were among the least assertive and aggressive even by Gebusi standards.

Despite the strength of their belief in sorcery, there is no objective evidence from any of the many sorcery inquests observed in the field that Gebusi sorcery packets were ever made or used. Gebusi do claim that such packets are made, and indeed, sorcery inquests place a high priority on the finding of such “evidence.” However, this “evidence” is invariably one or more natural objects interpreted post hoc as having been part of a now-decayed sorcery packet. Given the severity of Gebusi sorcery attributions and the fervent belief in the accuracy of divination measures, it would appear that few Gebusi attempt to practice sorcery. One gets the impression that this is one of the last things most Gebusi would attempt to do. Given the cultural belief that sickness deaths are a heinous crime of human agency, however, lethal action against sorcery suspects is nonetheless extremely frequent. The spiritually divined “evidence” is the only indication of guilt necessary; ascertaining an alleged social-causal motive for sorcery is unimportant.

In several respects, Gebusi sorcery killings entail the attribution of deviance: a psychological projection of malice against unsuspecting persons who then become scapegoat targets for intracommunity violence (see

Foucault 1976; Erikson 1962, 1966; Becker 1963:chap. 1; contrast Girard 1977). While the cultural dynamics of deviance attribution among Gebusi are intriguing, the present concern is the sociopolitical relevance of Gebusi homicide for general theories of lethal violence. In political terms, violence in the form of normatively legitimated deviance attribution reinforces Gebusi norms of sociality and precludes male status hierarchy. Men and women who are by temperament more aggressive, outspoken, or assertive appear from my observations to be much more likely targets for sorcery accusations, particularly as they get older. Conversely, persons who are good-humored and accommodating tend to be immune to such accusations.

The Universe of Potential Victims

Among the dimensions of homicide considered particularly salient by criminologists are the location of the crime, the sociological characteristics of perpetrator and victim (sex, age, ethnic affiliation, socioeconomic status), and the social or kinship relationship between them (e.g., Wolfgang 1958, Bourdouris 1974, Archer and Gartner 1976). Tabulating and analyzing such factors is particularly important in assessing the risk of homicide that potential sets of victims face (e.g., Byrne and Sampson 1986). Establishing which types of persons and settings are most subject to the risk of homicide is a major goal of the Violence Epidemiology Branch of the U.S. Centers for Disease Control (Centers for Disease Control 1983, 1985; Meredith 1984). An important practical and methodological aspect of such risk assessment should be determination whether homicide is nonrandom relative to the universe of persons and situations normally encountered. For instance, if a high percentage of homicide in a population is found to occur between friends, in bars, or between persons with high blood-alcohol levels, it should be ascertained whether this high incidence is *caused* by the situations in question or stems from the fact that these situations are frequent in the lives of the subject population. In other words, a universe of persons and situations needs to be established as a baseline against which the occurrence of homicide is measured. Such information has rarely been supplied in studies of homicide, either sociological or anthropological. However, anthropological techniques are particularly apposite to the acquisition of such information; participant observation can ascertain what types of persons and situations are most commonly confronted by members of a subject population in their daily lives. These assessments can then be compared with the incidence of lethal violence.

In the case of the Gebusi, the two preeminent dimensions of social setting and interpersonal relationship are residence and kin relationship. These form axes of the Gebusi social universe against which the occurrence of homicide can be assessed. Coresidence at the settlement level entails evening socializing in the longhouse as well as extensive food sharing and subsistence cooperation on

16. The psychodynamic etiology of Gebusi violence and conflict avoidance are preliminarily discussed in Knauff (1987b).

17. In addition to the 202 sickness deaths in table 2, the ratio of 86/211 included 9 deaths that were perceived as sickness deaths and resulted in subsequent sorcery attributions: 2 suicides, 3 deaths by accident, and 4 homicides. The last are cases in which a battle wound led directly to infection and death but the death was nevertheless attributed to sorcery by someone other than the true killer.

a daily basis (Knauft 1985b:61–64). Residence in different settlements within the same community entails frequent casual visitation (again, in the longhouse) and general cooperative activity in large-scale ceremonial activities. Kinship relations can be classified and enumerated in terms of the Gebusi's own classificatory system or in terms of biogenetic relationship. The former technique more clearly echoes sociocultural reality as the Gebusi perceive it and has been used elsewhere to establish the nonrandom occurrence of sorcery attribution relative to the Gebusi residential/kinship universe (Knauft 1985b:chap. 5). In the present context, however, kinship relations have been retabulated and rank-ordered in terms of biogenetic relatedness in order to test Gebusi data against a sociobiological hypothesis.

Testing a Sociobiological Hypothesis of Violence

Sociobiological theory predicts, other things being equal, that the incidence of interpersonal violence, particularly homicide, will vary inversely with the degree of biogenetic relatedness between offender and victim (Daly and Wilson 1982, Chagnon and Irons 1979; see, more generally, Hamilton 1964, Lumsden and Wilson 1981). Specifically, since reproductive fitness of the victim decreases to zero upon homicide, a given ego should *minimize* the loss to the gene pool of persons who share a high percentage of his or her own genes, i.e., of close biogenetic kin. Conversely, he or she should maximize the genetic loss to future generations from persons who are unrelated to him or her. These predictions should be especially likely to be confirmed when there is some way to control for the degree of normal social contact between persons in various relationship categories, i.e., to control for the universe-of-victims problem noted above. Failure to control for such social contact is an important part of sociobiological explanations for the relatively high level of violence among coresiding relatives (Daly and Wilson 1982).

Given the shallowness of Gebusi genealogies, it is not possible, as would be optimal, to compute a numerical coefficient of genealogical relatedness (F_g) for a kinship universe and between homicide perpetrators and victims. However, a rank-ordered assessment of degrees of relatedness may be calculated in both these respects on the basis of known genealogies. Statistical data on Gebusi marriage and co-marriage patterns make possible a rank-ordered assessment of the combined maternal and paternal genetic inheritance in each category relative to the others, irrespective of Gebusi assessments of degrees of relatedness. The categories that can be reliably ascertained, in order of descending biogenetic relatedness, are as follows: (1) intrapatriline relations; (2) cross-patriline relations within the subclan; (3) affinal (marital) relations between subclans of the same clan; (4) affinal relations between different clans; (5) matrilineal (ascending-generation marital) relations between different clans; (6) cross-subclan relations; (7) distant affinal

relations; (8) relations between currently "unrelated" persons; and (9) fictive but maritally prohibitive "brother-clan" relations.

Descriptions of these categories and of their biogenetic rank-ordering are given in appendix A (for a fuller account of Gebusi social organization, see Knauft 1983; 1985b:chap. 6). The general lines of differentiation in these categories are between close agnates within the clan (Categories 1 and 2), close relatives through marriage (3–5), distant relatives (6, 7), and virtually unrelated persons (8, 9). Of these, the basic category clusters (and the most comparatively significant in terms of homicide) are very high interrelatedness between close agnates, intermediate relatedness between persons who intermarry, and low relatedness between persons who tend not to intermarry and do not share agnatic ancestry.

The above nine categories can be used in conjunction with Gebusi genealogies and census data to ascertain the composition and distribution of a Gebusi individual's social universe. To establish the general composition and distribution of Gebusi relatedness categories, the full set of interpersonal relationships in one typical community was tabulated. Ever-married men were used as the reference point to allow for subsequent comparison with the homicide data, since adult men take exclusive initiative and responsibility in carrying out lethal violence. The relationship of each of the ever-married men in the community to each and every other adult member of his settlement and community was calculated. Genealogical relationships of male egos to other men were assessed separately from their genealogical relationships to women. In total, 1,890 relationships, viz., the relationship of each of the 30 men in the community to each of his male cohorts (30×29) and to each of the 34 women in the community (30×34) were ascertained and categorized (table 4).

The bulk (52.9%) of the average man's community coresidents, whether male or female, are persons categorically unrelated to him. This same relative pattern is also evident in coresidence of unrelated persons at the level of individual longhouse settlements (40.5%). The generally high percentage of unrelated persons of both sexes is consistent with the fact that although each adult man wishes in principle to live with as many kinspersons—agnates, affines, or matrikin—as possible, the relatives and spouses of these coresidents are often not also his relatives. Following upon nonrelatives, members of one's fictive "brother" clans form the next highest percentage of the adult Gebusi man's social universe, both at the community and at the settlement level (14.6% and 14.0% respectively). Affinal, matrilineal, Sand intraclan relatives follow in descending order.

The kinship universes of Gebusi men can be compared with an analogous tabulation of residential and kinship relationships between homicide victims and perpetrators (table 5).¹⁸ The same tabulation techniques were

18. In cases of ambush, the accuser and organizer of the ambush—typically a patriline agnate (or husband) of the person who died from sickness—is not necessarily the individual who shoots the

TABLE 4
Relationship Universe of Ever-married Gebusi Men

Kin Relationship	Settlement Total			Community Total		
	Males	Females	All Adults	Males	Females	All Adults
Intrapatriline	20 (11.4)	16 (6.3)	36 (8.4)	28 (3.2)	25 (2.5)	53 (2.8)
Cross-patriline	18 (10.2)	14 (5.5)	32 (7.4)	34 (3.9)	32 (3.1)	66 (3.5)
Subclan affine	5 (2.8)	0 (0.0)	5 (1.2)	12 (1.4)	0 (0.0)	12 (0.6)
Primary affine	20 (11.4)	32 (12.6)	52 (12.1)	64 (7.3)	62 (6.1)	126 (6.7)
Primary matrikin	22 (12.5)	21 (8.3)	43 (10.0)	112 (12.9)	106 (10.4)	218 (11.5)
Cross-subclan	16 (9.1)	4 (1.6)	20 (4.7)	37 (4.3)	36 (3.5)	73 (3.9)
Distant affine	6 (3.4)	2 (0.8)	8 (1.9)	44 (5.1)	24 (2.4)	68 (3.6)
“Unrelated”	53 (30.1)	121 (47.6)	174 (40.5)	434 (49.9)	565 (55.4)	999 (52.9)
“Brother” clan	16 (9.1)	44 (17.3)	60 (14.0)	105 (12.1)	170 (16.7)	275 (14.6)
Total	176 (100.0)	254 (100.0)	430 (100.2)	870 (100.1)	1,020 (100.1)	1,890 (100.1)

NOTE: Numbers in parentheses are percentages of column totals.

TABLE 5
Relationship between Homicide Perpetrators and Victims

Kin Relationship	Settlement Coresidents			Community Coresidents		
	Male Victims	Female Victims	All Victims	Male Victims	Female Victims	All Victims
Intrapatriline	4 (19.0)	4 (26.7)	8 (22.2)	4 (10.5)	4 (21.1)	8 (14.0)
Cross-patriline	4 (19.0)	0 (0.0)	4 (11.4)	5 (13.2)	1 (5.3)	6 (10.5)
Subclan affine	0 (0.0)	0 (0.0)	0 (0.0)	3 (7.9)	0 (0.0)	3 (5.3)
Primary affine	5 (23.8)	4 (26.7)	9 (25.0)	9 (23.7)	5 (26.3)	14 (24.6)
Matrikin	0 (0.0)	0 (0.0)	0 (0.0)	2 (5.3)	0 (0.0)	2 (3.5)
Cross-subclan	0 (0.0)	0 (0.0)	0 (0.0)	2 (5.3)	0 (0.0)	2 (3.5)
Distant affine	0 (0.0)	2 (13.3)	2 (5.6)	2 (5.3)	3 (15.8)	5 (8.8)
“Unrelated”	5 (23.8)	3 (20.0)	8 (22.2)	6 (15.8)	4 (21.1)	10 (17.5)
“Brother” clan	2 (9.5)	0 (0.0)	2 (5.6)	3 (7.9)	0 (0.0)	3 (5.3)
Not known	1 (4.8)	2 (13.3)	3 (8.3)	2 (5.3)	2 (10.5)	4 (7.0)
Total	21 (99.9)	15 (100.0)	36 (100.0)	38 (100.2)	19 (100.0)	57 (100.0)

NOTE: Numbers in parentheses are percentages of column totals.

used in both cases, and the tables are fully comparable except that the homicide figures are slightly diluted by a small category of "not known" kinship relationships.¹⁹ The 57 intracommunity homicide cases are those from the complete mortality survey of 15 Gebusi clans (and three subclans) in which the victim lived in one of the two communities of residential census. Throughout the table, the largest absolute number and percentage of homicides are between primary affines, with homicides within/between patriline and between unrelated persons being next most frequent. Given the strong probability of a scattered and uneven dispersal of the 57 cases in the extensive 6 × 10 table, this distribution of cases is strikingly consistent for both men and women and both the settlement and the community level. Such internal consistency lends added support to the genuineness and validity of the homicide pattern documented.

Observed homicide relationships in each kinship/residence category were compared with the frequency expected on the basis of actual coresidence and kinship patterns by computing the ratio between the percentage figures in tables 4 and 5. For example, if 20% of a man's male coresidents at the settlement level are of a particular relationship type (X), then a null hypothesis would predict that 20% of male homicide victims within the settlement would also be of relationship type X. In that case the ratio of actual to expected homicide in that kinship/residence category would be unity (1.00). Correspondingly, a ratio of 2.00 indicates that homicide in that cell is twice as frequent as kinship/residence patterns predict, while a ratio of 0.50 indicates that it is half as frequent as expected. Table 6 enumerates these ratios.

According to the sociobiological hypothesis, the *lowest* homicide/kinship ratios (consistently less than 1.00) should occur in the *top* rows of table 6, i.e., in those categories for which genealogical relatedness is greatest. Conversely, the highest ratios should be found in the bottom rows, i.e., between those persons most distantly related. That the incidence of coresident kinsmen of various types is controlled for at both the settlement and the community level makes these expectations particularly strong. In fact, however, table 6 shows almost exactly the reverse trend; the sociobiological hypothesis is strongly disconfirmed. Consistently high (> 1.00) ratios occur in the closest relatedness categories. Indeed, the four highest aggregate ratios (last column) occur in the four first rows, i.e., in the four categories of *greatest* genealogical relatedness. For these relationships, the incidence of homicide was between three and almost nine times more frequent than that expected on the basis of the representation of these persons in the community. Conversely, the bottom two rows, entailing the least

genealogical relatedness, consistently show an incidence of homicide lower than would be expected by the representation of these persons in the kin universe. Such distantly related persons are only about a third as likely to be homicide victims as even a neutral (null) hypothesis would predict.

The totals (last column) reveal a statistically significant correlation between homicide and genealogical relatedness but one which is direct rather than inverse.²⁰ The overall trend of these findings is shown by the standardized residual for known homicides (table 7). The above-expected incidence of homicide in the four categories of greatest relatedness constitutes the predominant contribution to the overall pattern of statistical significance.

The consistency with which the sociobiological hypothesis is disconfirmed in tables 6 and 7 is somewhat surprising. On the one hand, it was anticipated on the basis of a previous study that an inverse relationship between homicide and relatedness might characterize *intermediate* vis-à-vis more *distantly* related kin. (This previous study considered the Gebusi kinship universe socioculturally rather than genealogically [Knauff 1985b:chap. 7].) On the other hand, a high incidence of homicide was *not* anticipated among closest kin—intrapatriline and cross-patriline relatives.

Three inferences may be drawn from this test. The first concerns biogenetic versus sociocultural categories of analysis. Analyzed in sociocultural rather than in biogenetic terms, Gebusi patriline include in-married women as part of the patriline, while out-married women are excluded. So defined, Gebusi patriline are relatively immune to homicide. In genealogical terms, however, the reverse is true; women in the community are homicide victims of their own patriline almost eight and a half times as frequently as their presence would predict (see table 6, first row, next-to-last column). In more general terms, when complete primary (e.g., quantifiable) data are unavailable for reanalysis, information precategorized in sociocultural terms may not reflect the true dynamics of genealogical relatedness. This poses a major constraint to large-scale sociobiological applications based on loose inferences and generalizations from ethnographic accounts (e.g., Essock-Vitale and McGuire 1980, Betzig 1986). Indeed, the account of a primary ethnographer is often if not typically designed expressly to capture and reflect the sociocultural perspectives of the people studied.

This does not mean that sociocultural accounts are useless for testing sociobiological propositions. Indeed, they can be extremely valuable *when used in conjunction with independent numerical data*. A detailed understanding of sociocultural norms can help explain *why* sociobiological principles are contravened in a given case. For instance, because Gebusi women are con-

death-dealing arrow (though he does take this role if at all possible). He is nonetheless the perpetrator of the killing in the sense of orchestrating the homicide and is described by Gebusi in principle as the one who "does the killing" (*e fap*).

19. The exclusion of "not known" percentages from table 5 would have strengthened the significance of the ultimate findings; their inclusion is methodologically conservative.

20. Specifically, in the last column of table 6, the number of ratios in Rows 1–4 that are greater than expected (>1.00) is significantly greater than the incidence of such ratios in the last five rows (Fisher's exact $p < .05$).

TABLE 6
Ratio of Homicide Percentages to Kin Universe Percentages

Kin Relationship	Settlement Total			Community Total		
	Males	Females	All Adults	Males	Females	All Adults
Intrapatriline	1.67	4.24	2.64	3.28	8.44	5.00
Cross-patriline	1.86	0.00	1.50	3.38	1.71	3.00
Subclan affine	0.00	0.00	0.00	5.64	0.00	8.83
Primary affine	2.09	2.12	2.07	3.25	4.31	3.67
Primary matrikin	0.00	0.00	0.00	0.41	0.00	0.30
Cross-subclan	0.00	0.00	0.00	1.23	0.00	0.90
Distant affine	0.00	16.63	2.95	1.04	6.58	2.44
"Unrelated"	0.79	0.42	0.55	0.32	0.38	0.33
"Brother" clan	1.04	0.00	0.40	0.65	0.00	0.36

sidered structurally homologous with members of their husbands' patriline, they can be subject to sorcery attributions and homicide by their own genealogical brothers—e.g., as a way of taking vengeance upon their brothers-in-law. This helps account for the extremely high homicide rate against intrapatriline females within the community. (An analogous cultural system—i.e., one that facilitates the killing of sisters by men of their natal family—is also found in many circum-Mediterranean and Islamic societies [Kressel 1981].)

A second, related point regards a potential objection to the present analysis: that it is based on rank-order categories rather than metric, interval ones, e.g., as would be possible with actual coefficients of genealogical relatedness. Because biogenetic relatedness decreases geometrically with genealogical distance, it could be argued that the mathematically practical universe of data variation occurs *within* the intrapatriline category rather than over the entire range of kinship categories.

TABLE 7
Standardized Residual for Chi-square of Observed versus Expected Homicides

Kin Relationship	Settlement Total	Community Total
Intrapatriline	+ 3.14	+ 5.36
Cross-patriline	+ 1.00	+ 3.04
Subclan affine	- 0.63	+ 4.74
Primary affine	+ 2.51	+ 5.55
Primary matrikin	- 1.82	- 1.66
Cross-subclan	- 1.24	- 0.05
Distant affine	+ 1.73	+ 2.24
"Unrelated"	- 1.47	- 3.41
"Brother" clan	- 1.22	- 1.70

$\chi^2 = 29.04,$
d.f. = 8,
 $p < .001$

$\chi^2 = 113.41,$
d.f. = 8,
 $p < .001$

While this criticism is not resolvable in terms of the present data, even its assumed validity reveals an important underlying point. If the range of social behavior explainable by sociobiological principles is no wider than that of the immediate family, then such principles are largely irrelevant to the explanation of larger-scale social processes and behaviors. That sociobiological principles cannot explain the distribution of such a strong selective force as homicide in such a small kin universe as a Gebusi settlement throws into doubt their purported explanation of phenomena less directly related to reproductive fitness in much larger human groups, particularly in the absence of compelling statistical evidence.

Third, qualitative assessments by sociobiologists of seeming "costs" to fitness such as aggression may not reflect the specific forms of aggression that influence fitness most drastically. For instance, my previous study considered kinship relations vis-à-vis Gebusi attributions of sorcery generally—attributions which encompassed but were not limited to those with homicidal outcomes (Knauff 1985b:chap. 7). Using sorcery attribution as a general marker of aggressive behavior would have shown members of the same patriline to be relatively immune to aggression. However, the present analysis of homicide per se shows emphatically that the reverse is the case; violence is more rather than less common within patriline than expected. This is an empirical confirmation of the potential, discussed above, for lethal violence to vary independently of more general measures of aggression.

It is incumbent upon sociobiologists to specify the degree to which ostensibly costly or beneficial behaviors influence differences in reproductive fitness, as opposed to having only a hypothetical or vaguely attested relationship to well-being or social success. The assumption is often made in sociobiological studies that energy expenditure, economic cost, or being a target of systematic low-level aggression is tantamount to reproductive detriment in human societies. Conversely, there is often an assumed causal relationship between "reciprocity" and

inclusive fitness, on the one hand, and between economic gain or out-directed aggression and relative reproductive success, on the other. That a very strong and obvious selective pressure such as homicide can be largely decoupled from everyday patterns of friendship, cooperation, and low-level aggression seriously questions the validity of these assumptions for human societies. That common assumptions and basic tenets of sociobiology are so strongly disconfirmed in one of a class of simple societies that may be characteristic of our species's history raises important questions about the presumed large-scale or global application of sociobiological principles to human behavior.

While there would appear to be a wealth of behavior in human societies that contradicts sociobiological postulates, few social scientists have yet responded to the ever-growing literature of sociobiological reasoning by compiling rigorously documented empirical refutations (see Boyd and Richerson 1985:202–6). Substantive negative conclusions have, however, emerged from tests of at least two of the major demographic trends in human history. These are the inverse relationship between fertility and affluent industrialism, i.e., the modern demographic transition (Vining 1986; Barkow and Burley 1980; Boyd and Richerson 1985:199–202), and, in pre-industrial societies, the historical growth of large but unhealthy and sometimes internally nonviable urban populations based on constant in-migration from reproductively prolific rural areas (Knauff 1987c; McNeill 1976, 1979; see Finlay 1981; Storey 1985; Wright 1986).²¹ While patterns of genetic propagation are certainly not irrelevant to such developments, genetic costs appear in these cases to be overridden by the appeal of particular beliefs, customs, and behaviors. Explaining such processes requires an empirical understanding of how ideas and cultural motivations may be transmitted and perpetuated contrary to the transmission and propagation of genes (Knauff 1987c; Richerson and Boyd n.d.; cf. Rindos 1986).

Testing a Fraternal Interest-Group Theory of Violence

According to fraternal interest-group theory (see Otterbein 1980, 1985a, b; Otterbein and Otterbein 1965; Thoden van Velzen and van Wetering 1960; cf. Boehm 1984; Paige and Paige 1981), localized groups of related males, having common interests, form the organizational basis

21. A clear example of culturally successful but genetically costly behavior in an acephalous society can be found among the Marind-Anim of South New Guinea (van Baal 1966, 1984; Ernst 1979). The Marind-Anim practiced sexual customs that rendered a large percentage of their women sterile, resulting in a declining population (for demographic data, see South Pacific Commission 1955). Yet the Marind were able to be a viable and even rapidly expanding *cultural* system through the capture and adoption of children from neighboring tribes in the course of headhunting raids. Likely one-sixth or more of Marind children were biogenetically foreigners, raised through acculturation to be full Marind adults.

for a high incidence of violent conflict such as feuding and warfare in pre-state societies. The theory is elegantly simple in principle. Fraternal interest-groups are simply localized groups of related males. The presence of such groups is operationally indicated by the existence of patrilocal residence, which aggregates related men. In decentralized societies, the presence of fraternal interest-groups is said to predict a high rate of feuding, internal and external warfare, and conflict and violence in general. The absence of fraternal interest-groups is suggested to correlate with low levels of conflict and violence. Pre-state fraternal interest-groups are said to form the organizational and evolutionary basis for larger and more sophisticated military organizations in larger and more complex societies (Otterbein 1985b:80–82) and to have themselves evolved from tendencies among primates for localized groups of related males to form a collective force that pursues group interests and generates violent conflict (Otterbein 1985a:xxi; see Bigelow 1975). The presence of such groups is thus hypothesized to have been a major part of our hominid ancestry and, implicitly, a major cause of violence throughout most of human evolution.

As Carneiro (1970) recognized in prefacing the first edition of Otterbein's *The Evolution of War*, fraternal interest-group theory is linked to notions of Darwinian selection on a social and societal level—specifically, a selective advantage for male groups that are effectively organized and successful in violent conflict. That these groups of men are by definition *related* as well as localized implies that the competitive advantage of fraternal interest-groups has biogenetic results and concomitants, if not biogenetic causes. That Otterbein stresses the relevance of fraternal interest-group theory to hominid evolution heightens this sociobiological implication. Sociobiological selection principles are particularly influential—perhaps indeed the dominant paradigm—in current studies of nonhuman primate behavior (for an exhaustive annotated bibliography see Gray 1984). The fraternal interest-group theory of lethal violence is thus linked to sociobiology in terms of the evolution of aggression.²²

As we have seen, the sociobiological prediction concerning lethal violence is disconfirmed by the Gebusi data. Even between intrapatriline *males*, homicide is over three times as frequent as the neutral (null) hypothesis would predict. Conversely, male-male violence against relatively unrelated persons is quite low, both at the settlement and at the community level. The high level of intrakin-group violence among Gebusi men calls into question the existence of fraternal interest-groups among Gebusi. Given that the rate of homicide is greater within close kin aggregations than outside them, how can male aggregations be called “groups” with strong collective “interests”? Gebusi seem to lack fraternal in-

22. This is not to say that Otterbein himself has stated a predilection for sociobiology. Indeed, his theory as originally formulated argues strenuously for social structural as opposed, for instance, to ecological determinants of violence.

terest-groups and yet have an extremely high rate of internal violence. At the same time, the types of Gebusi violence are in several respects analogous to the internal war and blood revenge that fraternal interest-group theory specifically predicts. Not only do Gebusi patterns and techniques of battle correspond to internal war but the collective ambush of suspected sorcerers has strong cultural elements of blood revenge—the killing of the sorcery suspect as the revenge of the group for the perceived prior killing of the sickness victim.

The presence of fraternal interest-groups among the Gebusi is particularly questionable in terms of the criterion Otterbein uses to identify them: patrilocality. Men of the same patriline constitute only one-third (33.5%) of the Gebusi man's male cohorts in the longhouse settlement (table 4). This percentage is exceeded by the percentage of men in the two most *unrelated* relationship categories in the settlement, which total 39.2%. Hence, coresidence of distantly related men exceeds in absolute terms coresidence of closely related men. In addition, the rate of coresidence of primary affinal and matrilineal relatives is extremely high, 68–88% of that possible (Knauff 1985b:27–31). Marriage takes place predominantly between rather than within settlements, and many Gebusi men move to the settlements of their in-laws. Gebusi thus fit one of the operational definitions given for nonpatrilocal societies: residence is “not consistently with the kin of either spouse, but . . . determined by personal circumstances” (Otterbein and Otterbein 1965:1471).²³

At the same time, a significant number of crosscutting ties link Gebusi from different settlements, and according to several social structural theories of conflict such alliances mitigate the fighting solidarity and proneness-to-violence of core groups of related males by promoting multiple loyalties outside them (Ross 1985b, 1986a; LeVine and Campbell 1972:48–53; see, more generally, Fortes and Evans-Pritchard 1940, Gluckman 1956). This reasoning is the logical complement to fraternal interest-group theory. Ross (1983, 1985b) has suggested on the basis of cross-cultural research that internal conflict has a strong inverse relationship to crosscutting ties. Crosscutting ties among Gebusi include initiation cohort and sponsorship relations and politically significant kinship ties through marriage that extend beyond the settlement and sometimes beyond the community (Knauff 1985b:63–64). In addition to these ties are relations of homosexual friendship, often between non-coresidents. Gebusi men feel strong personal obligation to their initiate-relations and friends wherever they live, as well as to their affines and matrikin. Often these ties between men of different settlements provide the basis for subsequent coresidence, which shifts fluidly over

23. The absence of patrilocality among groups with high rates of violent conflict may be noted generally in the Strickland-Bosavi area of New Guinea (see Kelly 1977, Schieffelin 1976) and among the Huli of the Southern Highlands (Glasse 1968). Huli kinship and residence are strongly cognatic, yet almost one-fifth (80/409 = 19.6%) of male deaths resulted from homicide, primarily in warfare (Glasse 1968:98).

time. Crosscutting ties provide diffuse overlapping networks of personal support and hospitality throughout the society, unmitigated by even community boundaries. According to the theory, such links should minimize the incidence of internal conflict, but among Gebusi the incidence of lethal violence within the society is high.²⁴

A more elaborate approach to the question of fraternal interest-groups in pre-state societies has been proposed by Paige and Paige (1981). They code interest-group strength on a four-point scale, aggregating indices of the political size of the group, its descent ideology (patrilineality), and its ability to contract explicit bargains (measured by presence of bridewealth [pp. 74–75]). Gebusi lack bridewealth and have small political units (fewer than 100 persons) and weak patrilineality; they would score at most only one on the four-point scale of fraternal interest-group strength. In addition, Gebusi exhibit what Paige and Paige define as a “low-value resource base,” which is strongly correlated with an *absence* of strong fraternal interest-groups.

To argue that the Gebusi data are consistent with fraternal interest-group theory—that fraternal interest-groups exist among them, that crosscutting ties are absent, or that Gebusi violence does not fall within the purview of these theories—would require restriction of its application to the point that it becomes true almost by definition.

A single disconfirmatory case certainly does not invalidate cross-cultural tests of fraternal interest-group theory. However, the poignancy of this exception is striking and bears further scrutiny. This exception is particularly relevant to Otterbein's use of fraternal interest-groups to explain the occurrence of violence in the most politically decentralized human societies. It suggests that fraternal interest-group theory must, at the very least, give way to a more precise and less monolithic assessment of how phenomena such as “relatedness,” “male localization,” and “patrilocality” interact under specific conditions in simpler human (and primate) societies. It is particularly important to confront the wide potential difference between sociocultural and sociobiological definitions of “relatedness”; these are implicitly collapsed by Otterbein (1985a:xxii) and need to be carefully distinguished and examined for covariation (cf. Boyd and Richerson 1985, Knauff 1987c).

A related problem presents itself in the categorization of residence. Otterbein (1985a:xxii) implicitly adopts the early position of Steward (1936, 1955) and then Service

24. Crosscutting ties of various types are extremely prominent in if not characteristic of many highly egalitarian societies. These may take the form of namesake or totemic relations, trade or exchange partnerships, formalized friendship, joking, wife-sharing relationships, or true or classificatory affinity (e.g., Guemple 1972, Balicki 1970:chap. 6; Wiessner 1982; Lee 1979b: chap. 5; Turnbull 1965a, b; 1968). Among exclusive foragers, such ties often provide the groundwork for residential flexibility, unrestricted territorial access, and/or subsistence cooperation between members of different bands. Yet, as we have seen, the incidence of lethal violence in these societies is often relatively high.

(1962, 1979) that band societies are predominantly patrilineal and patrilocal. While this formulation was important in stimulating research, it has proved inaccurate; in a review of current hunter-gatherer studies, Barnard (1983:196) describes the patrilocal model as “empirically groundless.” He goes on to ask why “the myth of the patrilocal band” persists (see, e.g., Service 1979; cf. Ember 1978), when in the 1960s and 1970s a “generation of scholars gave the *coup de grace* to the patrilocal model.” As is implied by Barnard (p. 197), one reason is the reluctance of cross-cultural researchers to revise the coding of these societies in the Human Relations Area Files on the basis of new, more detailed ethnographic information. Barnard notes that many of the band societies coded as patrilocal in the *Ethnographic Atlas* have since been shown to be extremely fluid in their residential organization. This nonpatrilineal fluidity is especially characteristic of the egalitarian groups of comparative concern here: the !Kung (Lee 1979b:chap. 5), the Hadza (Woodburn 1972), the Mbuti (Turnbull 1965b:97–109; 1968), the Eskimo (Guemple 1972; Balikci 1970:chaps. 3–6), and the Semai (Dentan 1979: 76–80).

Yet another problem is the presumed demographic basis for fraternal interest-groups in simple societies with low population densities. As noted by B. Whiting and J. Whiting (1975a) and Konner (1981:22), the residential community in such societies is seldom large enough to permit the development of age-cohort groups of related adolescent males. In other words, the organizational form that provides the core of fraternal interest-group structure in many sedentary “tribal” societies tends to be absent among many hunter-gatherers.

Human societies differ from nonhuman ones precisely in that moral imperatives and culturally constituted values take on an influence and a life of their own (see, in the specific context of lethal violence, Boehm 1984). Many of the key features of band societies—residential fluidity, emphasis on sharing, lack of male dominance hierarchies, extensive crosscutting ties, and gregariousness—run counter to the imperatives of rigid fraternal interest. As the Gebusi case indicates, this is in no way to adopt the Rousseauian assumption that violence tends to be absent in simple societies. It is rather to suggest that the internal dynamic of violence in extremely decentralized human societies is often different from that in societies that are more politically and economically differentiated, more sedentary, and more concerned with property and status hierarchy.

Testing a Socialization Theory of Violence

A number of cross-cultural studies propose that highly aggressive adult male behavior is linked to harsh socialization, an emphasis upon punishment and obedience in child rearing, and distant or authoritarian father-child ties (e.g., B. Whiting 1963, B. Whiting and J. Whiting 1975, J. Whiting and B. Whiting 1975, West and Konner 1976, Russell 1972, Segall 1983, Rohner 1980, Lambert

1971). Conversely, affectionate socialization practices and strong/warm father-child ties are asserted to engender a relative lack of adult male aggression (Alcorta 1982, Montagu 1978; cf. Munroe, Munroe, and Whiting 1981).²⁵ Ross (1985a, b, 1986a) has conceptually reviewed and cross-culturally reanalyzed the linkage between harsh socialization and adult male aggression. He concludes that severe child rearing is a better predictor of overall levels of violent conflict in a society than are social structural factors such as fraternal interest-groups.

This assessment may not be as applicable to the simplest human societies as it is to more complex ones where male status differentials and competition are more pronounced and culturally elaborated. Leacock and Lee (1982) note that indulgent and highly affectionate socialization practices are generally characteristic of band societies, and this assessment is consistent with systematic cross-cultural assessments (Konner 1981:22; West and Konner 1976). Ethnographic reports of socialization among the !Kung, the Eskimo, and the Semai are consistent with those for band societies generally: child rearing is indulgent, seldom authoritarian, and entails close father-child ties (see, for the !Kung, Draper 1975, 1978; Shostak 1981:45–50; for the Semai, Dentan 1978, 1979; Robarchek 1977; for the Central Eskimo, Briggs 1970, 1978, 1982). Yet, as we have seen, the rates of homicide in these societies are high. A further case is that of the Waorani, an Amazonian society in eastern Ecuador that has been described as “one of the most egalitarian societies in the world” (Yost, quoted in Collins 1983:12) and as a “tribe where harmony rules.” Yost notes, “There is an all-pervasive attitude of ‘leave it be.’ Nobody gets mad. Eighteen people might be living in the same house, in continual social contact, yet there is no fighting or hurting. They are psychologically very open with one another, and the caring they show for one another is quite extraordinary.” Yet “more than 45 percent of [Waorani] deaths were caused by spearing in fighting within the tribe” (Collins 1983:12).

While detailed socialization data are not equally available for all of these societies, the information we have suggests a pattern among them that is contrary to the socialization theory of lethal violence. The particularly high level of violence among Gebusi makes documentation of their child-rearing techniques especially relevant. For this purpose, I shall use the cross-cultural criteria set up by Ross (1985b:576): Harsh socialization is indicated by pain infliction, frequent scolding and corporal punishment, lack of childhood indulgence, presence of non-maternal caretakers, emphasis on fortitude, and value placed on aggressiveness. Affectionate socialization is indicated by childhood trust, importance of honesty, closeness of the father, high valuation of generosity, expression of affection toward children, and a high value placed on children by the society.

25. While arising from different concerns and sometimes different theoretical premises, all these studies are in agreement that aggressive adult behavior is related to aggressive socialization, e.g., as predicted by learning theory (Bandura 1973).

Among Gebusi, physical punishment of children at any age is extremely rare. Beatings, spankings, or beratings do not occur. Children of all ages are greatly indulged by both mothers and fathers. They are taught by observation of parental example and, negatively, by the results of their own actions, e.g., the pain of cutting oneself when playing carelessly with a knife. There are almost no objects taboo to childhood exploration. The most common contexts for social control are in teaching food sharing and the occasional need for children to accompany their parents to forest or garden locations against their wishes, e.g., when they would rather stay and play with others in the main settlement. In such instances, children's objections are simply ignored or are treated with bemused understanding.

The lack of physical punishment or pain infliction is highly evident in Gebusi initiation rites. Unlike male cults in many New Guinea societies (see Herdt 1982, Allen 1967), Gebusi initiation entails neither excruciating ordeals (such as penis or nose bleeding) nor the taking of young boys from their mothers into the exclusive company of men. Gebusi initiation ceremonies take place in late adolescence or early adulthood—between about age 17 and 24—as a public celebration of the attainment of manhood.²⁶ Those undergoing initiation are not beaten or hit. The only painful “trial” is the wearing of a heavy bark wig by the initiate for a few hours on the morning following one of the public feasts. Significantly, the wig may be removed by the novice at his own discretion after the short ceremony is over. No stigma (or prestige) is signified by the length of time it is worn.

The movement of a Gebusi boy from the women's to the men's section of the communal longhouse takes place at about age four to six. This transition occurs gradually and is instituted by the increasing desire of the boy himself to be in the company of his father and other men.²⁷ Boys in transition between male and female sleeping quarters are free to shift their sleeping places on a day-to-day basis or even during the course of a single night. Fathers (and other coresidents) are physically quite affectionate with young children (especially boys) and take indulgent pride in the latter's budding interest in male activities. Indeed, when their fathers go off hunting for feast food or visiting other settlements, boys in early childhood often throw temper tantrums at being left behind, “because they will miss their fathers.” These tantrums are sympathetically accommodated by mothers and remaining men; typically they do not last long. Men as a rule do not like to leave their sons behind; they take them along unless a long trip or special activities would make their sons an undue hindrance. Fathers are notably nonauthoritarian and undemanding of their sons, and in two years I only once saw a father so much as shove his son in irritation.

26. In some respects it could be questioned whether these Gebusi ceremonies are indeed “initiation rites” (Allen 1967). For the nearby Kaluli, Schieffelin (1982) has suggested that the ceremonies do not constitute initiation.

27. Gebusi psychosexual development is discussed in Knauff (1987b).

In contrast to many New Guinea peoples, the Gebusi have little if any restricted knowledge or cult secrets that must be kept from boys: male life is strikingly communal across age and kinship categories (see Knauff 1985b:chap. 3). Even prior to the gradual shift of sleeping arrangements in the longhouse, a boy is apt to have close contact with his father. Foraging and gardening activities are commonly carried out by communal male and female groups. Socializing and sleeping in smaller shelters during these occasions is a collective affair, as is socializing at meal times and in public spaces in the longhouse settlement. Fathers have frequent contact with their children after the first few months of life (during which time the child is generally confined to the mother's net carrying-bag) and enjoy holding and playing with their progeny. At the same time, the father's care of infants is minimal relative to that of the mother, who generally carries the child until it can walk substantial distances on its own. The preeminence of maternal care appears to be a universal tendency in human populations, including those band societies in which paternal contact is highest (see Konner 1981:32–34). The affection and indulgence of Gebusi fathers for their older children and adolescents is also quite explicit, in contrast with the situation in many New Guinea highlands societies. There are no authoritarian labor requirements or other demands on adolescents, and the transition to full participation in male communal life is gradual, unreluctant, and untraumatic.

The main trauma for a Gebusi boy is the distancing of his mother, which begins when he reaches three and a half to four years of age. At this time, a younger sibling is often anticipated or has been born. With weaning and the subsequent reduction of maternal attention, the child may have tantrums or whine frequently for food (e.g., as an implicit replacement for breast milk). Mothers typically ignore or act bemused by these antics; on occasion they may taunt the boy for his lack of forbearance. The boy for his part gains independence and quickly learns that loss of maternal affection can be countered by the strong positive reception he gets from his father and from the male community.

Children have a strong trust in the care and affection of their parents. The greatest threat to childhood trust is the existential reality that many parents die when their children are young, either from natural causes or from homicide. Weaned children are adopted by close kin and generally remain with the same extended household group they resided with before.

The primary cultural value instilled in young children is “good company” (*kog-wa-yay*). This term is also used by Gebusi to describe their customs and way of life as a whole. The component concepts of this term—togetherness, casual talk, and exuberant humor—are the most immediate and striking dimensions of Gebusi social life. The opposite, negatively valued trait is *gof*, which connotes anger, hardness, and violence. Violence and anger are considered antisocial and unbecoming, and individuals suspected of being upset usually go to great lengths to deny it. Collective fighting is rare and occurs

primarily as carefully staged displays of ritual antagonism between different longhouse settlements prior to a communal feast (Knauft 1985*b*:chap. 9; 1987*a*). Neutral parties quickly interpose themselves between the opposing sides, and all persons proceed to snap fingers in peace (like shaking hands) and enter the longhouse for a night of feasting and socializing. In the few cases in which individual antagonism publicly erupts (three in 22 months), the settlement at large intervenes physically between the two antagonists until their tempers cool. The closest kin (e.g., brothers) of the antagonists do little to support their kinsmen's cases and nothing to escalate hostility to a collective level. Likewise, angry children are not allowed to hurt one another (rarely do they try). Early childhood anger tends to manifest itself in an occasional tantrum of crying and flailing, designed (unsuccessfully) to draw attention rather than to hurt another person. Any sign of adult anger or potential violence tends to inspire an emotional state (*abwida*) ranging from uneasiness, anxiety, and embarrassment to extreme fright. Gebusi openly encourage the use and display of *abwida* behavior to advertise vulnerability and encourage a return to good company (Knauft 1985*b*:chap. 3).

It is evident from this description that Gebusi child-rearing practices are highly affectionate rather than harsh, the elevated rate of Gebusi homicide notwithstanding. It may be noted in this regard that the killing of sorcery suspects by adults is thought to be a communal duty—an act to expunge human malice that cannot be eliminated by any other means. The adult violence that does occur in Gebusi society tends to be quickly over, extreme, and subsequently played down or ignored. Conversely, good company is reasserted and reemphasized. On a day-to-day and week-to-week basis, anger and aggressiveness are strikingly absent; aggression is rare, even though it is extremely violent when it does occur. Homicide tends to occur in a highly delimited and socially sanctioned context: the attribution of sorcery following the sickness death of someone in the community. This context is strikingly and effectively dissociated in Gebusi psychology from normal, everyday life. That factors such as unreciprocated marriage which underlie many homicides go unrecognized by Gebusi is particularly striking in this regard.

Psychological Compartmentalization

The pattern of dissociated, compartmentalized violence found among the Gebusi is in several ways analogous to patterns found among the !Kung, the Central Eskimo, and the Semai. In all these societies a pronounced aversion to confrontation in social life is combined with an ultimate tendency toward extreme violence—a tendency exacerbated by the scarcity of sociopolitical means of responding to it. Correspondingly, the existence of violence is often downplayed and unredressed. Rasmussen (1932:18), for instance, follows his case accounts of Copper Eskimo murders with these remarks:

“Among them a mere trifling incident often gives rise to a fight, which is nearly always to the death. But it is not remembered; they do not bear malice, and therefore people who have had a serious quarrel may very well be the best of friends.” Briggs (1982:115) remarks that Inuit Eskimo “manifest a horror not only of killing but also of much milder forms of aggression, such as striking a person or even shouting. Fear makes them exaggerate incidents of aggression and expect it when it does not occur. Compartmentalization, then, is an important way of coping with aggressive feelings and behavior in Inuit society.” Briggs goes on to note that this compartmentalization of aggressive feelings is ambivalent and incomplete; ultimately there is a strong tension between denial of hostility and the possibility that aggressive impulses may be acted out. When such feelings are acted out they not infrequently result in total contravention of social norms, viz., murder.

Among the !Kung as well as the Eskimo, there is extreme fear of and aversion to violence (Marshall 1976:281, 288). At the same time, a seemingly trivial dispute may end in homicide (Lee 1979*a*:chap. 13). Violence when it does erupt is particularly frenzied and indiscriminate: “a [!Kung] bystander or a third party is as likely to be killed as a principal in a fight” (p. 397). When violence is focused on a particular individual, the killing can be quite brutal, as in one case in which the !Kung victim was described by informants as “shot so full of arrows that he looked like a porcupine” (p. 395).

Interesting in this regard is Dentan's (1979:58–59) description of the Semai when they were incorporated into government counterinsurgency forces and directed to fight Communist troops:

they seem to have been swept up in a sort of insanity which they call “blood drunkenness.” A typical veteran's story runs like this. “We killed, killed, killed. The Malays would stop and go through people's pockets. . . . We did not think of watches or money. We thought only of killing. Wah, truly we were drunk with blood.” One man even told how he had drunk the blood of a man he had killed. Talking about these experiences, the Semai seem bemused, not displeased that they were such good soldiers, but unable to account for their behavior. It is almost as if they had shut the experience off in a separate compartment, away from the even routine of their lives.

In highly decentralized egalitarian societies, where the norms of communal sharing and cooperation are extremely strong, compartmentalization of violent action and emotion may also be particularly strong.

It is consistent with such compartmentalization that lethal violence in simple societies may be consensually directed against persons perceived to be separate from the rest of humanity for having egregiously violated basic tenets of cooperative and egalitarian social living. Among Gebusi, persons so compartmentalized legitimately merit treatment otherwise unthinkable against humans, including even torture and cannibalism. Draper (1978:40) notes that a significant number of !Kung

homicides were “assassinations of people who had proven to be incorrigible.” For !Kung as for Gebusi, “deviants, outcasts, and fugitives had nowhere to go and still make a living. They had to be retained within the society and tolerated or eventually assassinated” (p. 49). Among Eskimo, collective killing was often directed at recidivist murderers, chronic liars, or those frequently suspected of sorcery (Hoebel 1964:88–92).

In all these cases, public compliance or acceptance of the killing precludes escalating rounds of collective violence—regardless of the objective reality of the victim’s ostensible “crime.” Violence promotes a return and even a renewed commitment to norms of sharing and cooperation. In this sense, violence in noncompetitive egalitarian societies can be the ultimate means by which egalitarianism and lack of status rivalry are ensured. Killing in these societies is the ultimate leveling mechanism.

Discussion

The Gebusi and the other societies discussed have high rates of homicide and yet do not conform to the predictions of either fraternal interest-group theory or socialization theory. The Gebusi data additionally refute in strong terms a sociobiological explanation of violence. (A lack of sufficiently detailed information for the other societies mentioned makes it difficult to test them against sociobiological predictions.) Why should these societies be exceptions?

First, the type of violence common in these simple societies often differs from the type of violence which predominates in pastoral or sedentary tribal societies; it is different both in psychology and in sociology from reciprocated combat or systematic blood feuding between male groups. Whereas the three theories just considered are intended to apply to pre-state societies in general—i.e., to simple, highly decentralized societies as well as to those with larger and more complex forms of political organization—the present study suggests that they do not.

Second, the simple societies considered all place extreme emphasis on social harmony and have an abiding distaste for anger and aggressive behavior. The general adherence to these norms may obscure a high rate of violence demanding explanation. As mentioned above, for example, the !Kung have been depicted as “harmless people” (Thomas 1959), the Semai as “a non-violent people” (Dentan 1979), the Waorani as a “tribe where harmony rules” (Collins 1983), and Eskimo relations portrayed as “never in anger” (Briggs 1970). Taken to extremes (see, e.g., Turnbull 1978; cf. 1961), this tendency can erroneously convey a practical immunity to violence. This is not to say that a social emphasis on harmony and communal sociality may not in fact be general, pervasive, and genuine in these societies. Indeed, the prevalence of egalitarian harmony can in some cases be dialectically tied to the ultimate and total contravention of these norms (Knauff 1985*b*). In other words, the compartmentalization of violence can be

linked to its radical occurrence in certain delimited but statistically relevant contexts.

Third, it is easy to overlook the incidence of violence in many very simple societies because they are so small in scale. On demographic grounds alone, the occurrence of homicide in a very small group during a year or two of fieldwork is much less likely than it is in a larger society. Thus, even if the rate of homicide is the same in both groups, the sample size needed to uncover homicides in the smaller group may be impractically large. This tendency is magnified by the fact that while the raids and wars of tribal societies are long-remembered events that are both difficult to conceal from outsiders and culturally prominent, the individual killings of simpler societies are not.

A Paradigm of Violence in Extremely Egalitarian Human Societies

Given that at least some simple human societies exhibit a distinctive form of violence and nonviolence, it may be asked what social and political features underlie this pattern. To address this question, I shall venture a Weberian “ideal-type” description of violence in the societies under consideration, a description that, though selective and incomplete, serves as a point of departure for conceptualization of the problem, hypothesis formulation, and refinement.

At one level, the pattern of violence in the societies under consideration—!Kung, Eskimo, Semai, Gebusi, probably Hadza, and possibly Mbuti and Waorani—follows from the dynamics of noncompetitive egalitarianism. Politically, there is a strong drive to preclude male status inequalities and a general absence of male status hierarchy. Because egalitarianism and communal cooperation are genuine and deeply valued, there are long periods of interpersonal harmony and communal good company. Social life is enlivened and tension dispelled by a constant stream of casual talk, humor, and good-natured teasing (Marshall 1961; Turnbull 1961; Briggs 1970:337–43; 1982; Rasmussen 1932:14; Knauff 1985*b*:chap. 3; see Leacock and Lee 1982). These mechanisms are so pervasive and effective that explicit interpersonal aggression is rare. The conflicts that do arise are often settled by one of the antagonists simply by moving to a different group until tempers cool and the issue is largely forgotten (Turnbull 1968; Woodburn 1979:252).

On occasion, however, bald contention arises unexpectedly, suddenly, and/or over some delimited issue, often out of proportion to the social event that triggered it (Rasmussen 1932:16–17; Turnbull 1961:121–23; Lee 1979*a*:chap. 13; Knauff 1985*b*). If the dispute is not too serious, intermediaries may physically interpose themselves between the disputants. Once this level of control is breached, however, the engagement threatens lethal violence. This threat is exacerbated by the absence of political leaders or authority figures who might exercise control and of institutional or formalized redress. In some instances, passions erupt in a fury and go blindly

out of control. In a different permutation, anger may be unleashed communally against a convenient scapegoat, such as a social outcast, recidivist, or sorcery suspect. In either case, lethal violence is unlikely to be between groups as collective entities.

While violence is sudden, spasmodic, and extreme, it is apt to subside almost as quickly as it arises. The disputants or their survivors may move away from each other temporarily, but little else is done. Moreover, there is little outrage over violence or killing; it is either considered legitimate or simply accepted as a *fait accompli*. This may be the case even when the killing does not have consensual approval. As Woodburn (1979:252) says for the Hadza, "When a murder does occur, no accepted procedure exists for punishing the murderer. The kin of the victim can expect no compensation and are themselves unlikely to retaliate against the murderer. Usually no action will be taken against the murderer, particularly if he moves away for a while from the associates of the victim." Where revenge killing does occasionally occur (e.g., !Kung, Eskimo), it is sometimes years later. Often, as noted above, the second homicide is a consensual killing to expunge a recidivist murderer. When it is an individual action, revenge for a previous murder is sometimes only vaguely predisposing of it. The original killer and his antagonist may have resumed normal social interaction with each other and may even be coresident. In this context, a dispute over some new issue, such as a recent sexual impropriety, is more easily fueled to lethal proportions by animosity over the previous killing.

Regardless of the ultimate resolution of a killing, values of communal friendship emerge, if anything, all the more forcefully following an act of violence, as if to deny its importance or reality. The propensity for anger and violence is negatively evaluated. At the same time, there is often a deep-seated fear that violence may again erupt. This fear may seem unjustified, though it is in an ultimate sense realistic (see Knauft 1985*b*:chap. 3; Briggs 1982; Marshall 1976:281, 288; cf. Robarchek 1977).

While this pattern of violence has a distinctive psychological and political dynamic, it is in some respects informed by a deeper causal mechanism: male disputes over women. Lethal disputes in these societies are seldom over material property, food, land, political title, prestige, or political control. Rather, as Collier and Rosaldo (1981) have argued for a somewhat broader range of simple societies, the basis of egalitarian male status is the fact of marriage—in particular, the right of adult men to legitimate heterosexual access. Lethal violence in all the societies under consideration is initiated almost exclusively by males. While aggressive acts and fighting may include women as well as men—as among both Eskimo and !Kung—it is men who commit homicide (Lee 1979*a*:chap. 13; Hoebel 1964:83–89; Knauft 1985*b*; Woodburn 1979:252).

This violence is not uncommonly related to disputes over female sexuality. Among Eskimo and !Kung, issues of sexual impropriety—especially adultery or wife steal-

ing—are the most frequent causes of dispute and homicide (Hoebel 1964:88–93; Rasmussen 1932:17–18, 61–65; Balikci 1970:153–62; Lee 1979*a*:chap. 13; 1979*b*:chaps. 6–7; Marshall 1976:280; Shostak 1981). Among the Mbuti, sexual improprieties figure prominently in the two most serious cases of aggression discussed by Turnbull (1961:109–13, 121–24), and in a survey of disputes (1965*b*:216) he finds sexuality the issue that most commonly precipitates concrete action. Among the Semai, violence and sexual misbehavior appear to entail one another by cultural definition (Dentan 1979:61–62). The single specific case of homicide mentioned by Dentan (1979:133) is one in which the victim had seduced the killer's wife. Concerning the Hadza, Woodburn (1979:264) writes, "A great deal of Hadza custom focuses on the aggressive sexuality of Hadza men. In the absence of important rights over either fixed or movable property, much attention is focused on competition between men for sexual rights over women."

In some cases, male violence over women may be an underlying cause of disputes that appear unrelated or only tangentially related to this motive. The Gebusi are striking in this regard: while lethal violence stems from sorcery attributions and any link between sorcery killing and lack of marital reciprocity is played down or denied, there remains a striking correlation in Gebusi society between homicidal sorcery attribution and lack of reciprocity in sister exchange marriage (Knauft 1985*b*:chaps. 5–7). In one sense, then, Gebusi sorcery attribution is about unresolved and even unacknowledged improprieties in the balance of marital exchange.

An analogous displacement of affinal or sexual tensions may also underlie some of the passionate and seemingly irrational violence over "trivial" issues that occurs in many highly egalitarian societies. It is noteworthy in this regard that joking relationships, often ribald, are pronounced in most of the societies considered (see Dentan 1979:75; Knauft 1986; Lee 1979*b*:chap. 5; Marshall 1976:204–8; cf. Eckert and Newmark 1980; Briggs 1970:337–43). As Radcliffe-Brown (1940) noted long ago, such joking relations enjoin amity in relations that have an inherent potential for conflict. It is consistent with this that serious disputes sometimes arise in these societies when sexual jibes are suddenly taken as taunts rather than jokes (see Lee 1979*a*:chap. 13; Eckert and Newmark 1980:195–96).

In practice, the threat of illicit sexuality is magnified by the fact that marriage in highly egalitarian societies is quite informal. The onset of marriage is typically indicated by the simple establishment of a common-law sexual union rather than a ritual transfer of rights and obligations (see Dentan 1979:73; Lee 1979*b*:chap. 6; Shostak 1981; Balikci 1970:153–62; cf. Knauft 1985*b*:172). Divorce tends to be defined in a correspondingly fluid manner. Woodburn (1972:205) writes of the Hadza, "A man is married only so long as he lives regularly with his wife. Once he leaves her for longer than a few weeks 'his house has died' . . . and he has no further rights over her or his children by her. She may marry again as soon as she likes." The current state of sexual cohabitation thus

easily becomes a sliding index as well as an abstract symbol of being married or unmarried. Adult male status can be put in correspondingly great jeopardy by the prospect of wifely infidelity. At the same time, premarital sexuality and even extramarital heterosexuality—if carried out discreetly or as wife exchange—have been accepted if not tolerated and celebrated in many of these same societies (Shostak 1981; Marshall 1976:279; Balikci 1970:160–61; Knauff 1986; Turnbull 1961).

At this point it may be asked: Why is male violence and aggression over women not *more* common, overt, and culturally salient in these societies? Why is conflict so often dissociated from the ongoing social tensions that may engender it, and why is violence so commonly displaced from primary potential antagonists onto others? These questions are of particular interest in the light of the fact that many other apparently decentralized societies have much more direct, chronic, and collectively escalating forms of male conflict, including conflict over women. These societies often exhibit more systematic and extreme forms of male-female subordination as well. Aggressive male gender identity in general and its concomitants in chronic feuding, raiding, and warfare have all been quite pronounced in seemingly decentralized societies such as the Yanomamo (Chagnon 1977), the Ilongot (M. Rosaldo 1980, R. Rosaldo 1980), fringe societies of the New Guinea highlands (e.g., Rappaport 1984, Hallpike 1977, Godelier 1986, Herdt 1986, Berndt 1962), and many Native American Plains cultures (especially following the introduction of the horse). Chronic domestic disputes and institutionalized or collective violence also appear to have been relatively common in many Australian Aboriginal societies (Warner 1969:chap. 6; Berndt 1965; Meggitt 1962; cf. McKnight 1986).

Egalitarianism that is both unranked and noncompetitive contrasts sharply with the situation in this group of societies. Among the !Kung, Mbuti, Eskimo, Gebusi, and Hadza, values of generalized sharing and cooperation are typically most emphatic and intense in the very relations that are, in terms of women, most problematic: relations between affines and between nonrelatives who are potential affines. These societies are constituted in very concrete domestic and subsistence terms on harmony and diffuse reciprocity in these nonkin relations. Natal kin or descent groups in these societies are small and shallow; they cannot be politically or economically autonomous. Male affines and/or nonrelatives coreside and cooperate in subsistence activity, and this aggregation is one of mutual support rather than that of a leader building a power base. Particularly among !Kung and Eskimo, recourse to affines, namesakes, and various nonkin partnerships is a crucial avenue of physical survival in times of food shortage and ecological stress (Wiessner 1982; Lee 1979a, b; Balikci 1970:chap. 6; Guemple 1972). At the same time, marital and affinal relationships, like descent groupings, are not highly structured; they are not engendered a priori on the basis of social structure and do not in this sense have prescrip-

tive rights and duties. Instead—whether because of ecological exigencies, endogenous cultural motivations, social structure, or some combination of these—an extreme premium is placed on relatively unstructured sharing and cooperation with affines and coresident nonrelatives.

In the context of this emphasis, male tensions, particularly over women, tend to be glossed over or denied: overt, chronic confrontation runs counter to the ideals of diffuse social harmony that are so central in these most egalitarian societies. Chronic, escalating disputes—especially between factions—would threaten not only the viability of the domestic group but important later ties between groups or individuals after fission or outmigration. Significantly, relationships of sexual joking are particularly pronounced in these societies, and sexual tensions are often effectively defused in a spirit of camaraderie (Knauff 1985b:chap. 9; Marshall 1961; Lee 1979b:chap. 5; Briggs 1970; cf. Eckert and Newmark 1980). What tensions cannot be effectively dispelled, however, tend to be suppressed or ignored; there is little social recognition, control, or redress apart from informal social pressure. Among Gebusi, for instance, the norms of good company hold sway equally and even most emphatically among affines related by an unreciprocated marriage. Tensions over women remain real but are deemphasized or unacknowledged because of cultural norms of noncompetition between affines and nonrelatives.

When sexual and/or other tensions ultimately are galvanized, they may result in unrestrained violence that makes up in intensity for what it lacks in frequency. This violence may, in light of dominant cultural norms, be psychologically displaced or culturally unexplained. Often it is perceived either as outside the realm of cultural control altogether or else as functioning to support communality and egalitarianism. Hence, violence in these societies leaves intact or even intensifies the assertion of cooperation and friendship among nonrelatives and affines. This is consistent with the reasoning of both Freud and the early Lévi-Strauss (1969): the roots of human culture are found in the sociocultural and psychological control of sexuality and in the repression, displacement, and/or transformation of sexual anger through symbolic and cultural mechanisms.

Toward a Theoretical Reconsideration of Violence in Simple Societies

It is always dangerous to generalize on the basis of one case or even a few related ones; my suggestions are intended as exploratory hypotheses. Before a preliminary hypothesis can be formulated, however, the definition of “simple” or “egalitarian” societies must be considered. The venerable typology of band versus tribe is no longer serviceable (Fried 1967; cf. Steward 1955). For simple societies in particular, subsistence modes such as “foraging” or “hunting-gathering” cannot be the sole means of classification (see Ellen 1982, Barnard 1983). Some “for-

agers" have had rich and intensively utilized resource bases that permit sedentism, large villages, substantial material surplus, and even rank hierarchy. Conversely, mixed foraging/horticultural strategies can be highly mobile, economically simple, and sociopolitically decentralized.

Beyond the diversity of subsistence varieties within the categories of "foragers" versus "horticulturalists" lies the fact that even harsh ecological environments do not rigorously determine human social organization and values. The diversity of social organizational forms that may be engendered by similar ecological niches has been empirically documented from several different vantage points for hunter-gatherers (Layton 1986; Woodburn 1980, 1982; Godelier 1975; Turnbull 1965*b*, 1968) as well as for horticulturalists (e.g., Kelly 1968; cf. Leach 1954) and pastoralists (Kelly 1985). It seems generally that while social organization may be strongly influenced by ecological constraints, these constraints operate in tandem with sociocultural constraints and biases. Given divergent axioms of cultural orientation at the outset, ecological constraints may engender highly divergent outcomes of social organization. While ecology may limit the *range* of social options, some easier to accommodate than others, it does not determine which alternatives will be taken in any given case.²⁸

One of the key independent variables in decentralized human societies is the degree to which status distinctions exist among adult men. These status differentials most obviously take the form of routinized residential, economic, or military leadership—recognized positions of strong man, headman, big man, or war leader. Not uncommonly, such status distinctions are also indicated by inequalities of wealth, polygyny, or the ability to command exchange and may be reflected in ritual preeminence or personal adornment. Male status differentials also include such largely nonmaterial distinctions as age-grades, gerontocracy, or ritual eldership, sometimes involving prerogatives of polygyny or secular authority. These differentials may correspond only roughly to the complexity of subsistence technology and material-economic development. For instance, some Australian Aboriginal societies exhibited marked status differentials through age-graded ritual hierarchies and control of secret knowledge despite a low level of material, technological, and economic development (see Woodburn 1980, 1982).

Societies that conspicuously lack culturally recognized adult male status distinctions are particularly egalitarian and can be considered on this basis to form a distinctive class of societies. In these extremely decentralized societies, adult male status differentials tend to be actively and assiduously eschewed, and adult male status is neither differentially ascribed nor achieved

through competition. Instead one finds strong, pervasive values mandating generalized sharing and cooperation among coresident men, irrespective of physical prowess, age, or knowledge. These norms act as a pronounced political leveling mechanism. Even those differences that arise on the basis of personal ability—such as differential success in hunting or in curing sickness—are minimized; they do not lead to acknowledged differences in status and are not reflected in recognizable differences in social treatment or deference in daily social interactions.

This distinction concerning male status is intermediate between the broad categorization of simple/egalitarian human societies proposed by Collier and Rosaldo (1981) and the more restrictive dichotomy forwarded by Woodburn (1980, 1982) (see appendix B). In the present formulation, routinized status differentials among men may exist in technologically simple societies on the basis of nonmaterial property or rights over people. At the same time, adult male status differentials are not necessarily engendered by labor investment in property (which occurs automatically with horticultural production). In short, adult male status differentials may be present in simple foraging societies or absent in mixed foraging/horticultural ones. A general absence of adult male status differentials appears extremely unlikely, however, as subsistence comes to rely more exclusively on plant and animal domesticates.

In societies that lack adult male status distinctions and effective leadership roles, in contrast to more complex sociopolitical systems, violence tends to be (a) more internal to the residential group; (b) more spontaneous and sudden—arising unpredictably out of a pervasive denial of anger and/or the politics of nonconfrontation in small cooperative domestic groups; (c) more dissociated from the normal ethos of daily life and from underlying social causes of violence; (d) less presaged by punitive or authoritarian child socialization; (e) less engendered by territorial rights, property, or ritual status concerns; (f) based more on consensually approved status leveling than on individual status elevation; (g) less publicly eulogized; (h) less collectively opposed and less socially controlled; (i) less apt to result in escalating revenge, retaliation, or redress (e.g., by fraternal interest-groups); and (j) though limited in aggressive incidents, relatively high in homicide. In all these respects, I suggest, the dynamics of human violence alter with increasing emphasis on adult male status distinctions, e.g., with increasing control and competition over socioeconomic exchange and property.

These hypotheses are intended as a point of departure for more detailed consideration of violence in simpler human societies. The ways in which violence develops as simple societies evolve are certainly complex and uneven (see appendix B). Variations are apt to be influenced by interactions between ecological and culture-historical factors as well as by sociopolitical and psychological dynamics. A unicausal theory of violence patterns based on the presence or absence of adult male status distinctions is unlikely to explain all these processes. However,

28. As noted by Dwyer (1985), this problem poses a particular difficulty for optimal foraging theory. While it is easy to show *ex post facto* that a given subsistence strategy is "adaptive," it is difficult to show that modifications of it would not be equally or even more effective.

assessing the role of male status distinctions in relation to the above predictions should refine our understanding of politicoeconomic, gender, and ecological factors in the evolution of human violence.

Appendix A

Categories of Gebusi Relatedness

1. Intrapatriline relations. Gebusi patriline units are very small agnatic units (e.g., 2–5 adults) which trace genealogical connection to a common male ancestor no more distant than the third ascending generation and typically only one or two generations distant from the current adult generation. Each and every patriline member (male and female) is related in this way. Patriline units are the nuclei of Gebusi domestic and political life. Intrapatriline relatedness is increased by the fact that 56.3% of all widow remarriages take place within the patriline, e.g., with a B or FBS of the deceased husband. Hence relatedness is enhanced by some common maternal as well as paternal genetic contribution.

2. Cross-patriline relations (within the subclan). Beyond three generations, patriline units lose some degree of social solidarity but remain members of a single subclan. Persons of the same subclan (but of different patriline units) tend to be related to a common male ancestor genealogically distant by more than two or three but no more than six generations. That a substantial fraction (34.4%) of all widow-transfer marriages take place between different patriline units of the same subclan also increases the degree of genealogical relatedness between their members. Cross-patriline members also tend to have the same clans as regular marriage partners and hence an increment of relatedness due to the genealogical relationship of their mothers.

Gebusi do not change clan affiliation or identity with demographic fluctuation or residential movement. (There is no evidence among Gebusi for the “cumulative patrilineation” of New Guinea highlands societies, whereby nonagnates are gradually absorbed into a clan [cf. Barnes 1967].) Clan identity is retained as a clan grows and subdivides across community and even across tribal boundaries or dwindles to a single remaining individual who is effectively dependent on members of other clans. It is consistent with this pattern that when marriage occurs between subclans of the same clan, neither their subclan identity nor their affinity is denied; they are described as related simultaneously by marriage and by agnation (see Point 4 below). This same relative accuracy of registering biogenetic relatedness pertains to illegitimate births, which are limited primarily to widows; Gebusi describe the child as still being a “brother” to the patriline of its recognized genitor even though it may have strong rights and obligations in the clan of its mother’s deceased husband.

3. Affinal (marital) relations between subclans of the same clan. (Subclans include an average of 2.9 adult

males each.) While clans effectively taboo marital relations within subclans, sometimes clan-mates of different subclans do marry. These people are both agnates and affines to one another. The progeny of these unions are more closely related in genetic terms than either persons related by marriage between different clans or members of different subclans of the same clan who have not intermarried (see Points 4 and 6 below). Once affinal ties between subclans of the same clan are initiated, they are not uncommonly recapitulated in alternate generations (e.g., as in Point 4 below).¹

4. Affinal relations between members of different clans. Affinal relations among Gebusi clans and subclans are often repeated in alternate generations: about half of all marriages (47.4%) reduplicate the marriage of a FF, FFB, or FFZ. Gebusi tend to contract marriages in a fairly consistent fashion with several clans which form their primary marriage partners. Moreover, about half (52.2%) of all Gebusi first marriages are sister exchanges, and a widow tends to marry a close agnate of her deceased husband. Since marital relations between different clans are reestablished at the patriline level in alternate generations almost half of the time, persons in such recapitulating marital relations tend to be more closely related in biogenetic terms than are clansmen from opposite subclans, who tend to be six or more generations distant and seldom intermarry (see Point 6 below). Hence affines exhibit a degree of genealogical relationship which is intermediate between that of (a) close agnates and (b) distant agnates and persons who seldom intermarry. For purposes of comparison with killer-victim relations, it may be noted that alternate-generation marriage patterns are undiminished by homicide between affines; indeed, homicide between affines is a common part of the cycle whereby affinal distance is established in adjacent generations and then overcome with remarriage in alternate ones (Knauff 1985b:chap. 7).

5. Matrilateral (ascending-generation marital) relations between different clans. Matrilateral relations entail the same basic genealogical relationships as mentioned in Point 4 for affines, but in the ascending generation. Because it is sometimes progeny of elders who take homicidal action against the sorcerer believed responsible for their deaths, a matrilateral relationship between the sickness victim and the sorcery suspect can put the person who commits the homicide in a more distant genealogical relationship to the person killed than would a parental affinal relationship. Hence matrilateral relations are classed as more rather than less genealogically distant than affinal ones.

1. This and other categories have been created to reflect the most important and frequent dimensions of multiple and overlapping genealogical relations. Cases of multiple kin relationship not specifically taken into account by category definitions were classed in the category of closest relatedness. The number of cases in which such multiple kin ties might have been great enough to contravene rank-order assessment was negligible in practical terms.

6. Cross-subclan relations within the clan. Many clans contain subclans the members of which are typically more than six generations distant from one another and cannot trace specific agnatic links between them. In addition, they have not intermarried. At the same time, the lack of any evidence for clan identity changes suggests that clan "brothers" in different subclans do have common if distant agnatic ties. In addition, such persons, being of the same clan, also tend to have the same clans as marriage partners and hence not uncommonly marry women and men from the same subclans and patriline, i.e., persons who themselves have a relatively high degree of biogenetic relatedness. Finally, widow-transfer marriage occasionally occurs between subclans of the same clan (9.4% of all widow transfers). In these cases, the progeny of the woman from her first and second marriages (i.e., men of different subclans) are half-siblings. Over time, this linkage maintains a closer biogenetic relation between members of different subclans than would otherwise be the case.

7. Distant affinal relations. Person X whose clan "sister" or clan "brother" (Y) from a different subclan marries person Z (of a different clan) may be said to be related to Z as a distant affine. X's own patriline may have practiced some degree of intermarriage with the patriline or subclan of Z, but the lack of a close affinal tie suggests that such marriages have not been particularly frequent and regularly reciprocated in recent generations. Persons such as X and Z share no agnatic descent and are only distantly related through previous marriages.

8. Relations between "nonrelatives." Persons classed by Gebusi as nonrelatives are not related by patrilineal descent or by marriage in the present or ascending generation. The absence of such ties from the entire subclan cohort of two individuals from different clans tends to indicate a paucity of marriage between them generally, and this is sometimes recognized terminologically by Gebusi themselves by the term "outsider/unmarriageable" (*sofun*). Some degree of intermarriage between the ancestors of the "unrelated" individuals is possible and in some cases likely to have occurred in more distant ascending generations.

9. Brother-clan relations. A given Gebusi clan classes the members of between two and eight other Gebusi clans as its "brothers" and "sisters." This shared agnatic terminology is fictive only, used to create an ideology of kinship among some unrelated clans. At the same time, as ostensible "siblings," men and women of brother clans are prohibited from marrying one another, which prevents brother-clan members from increasing their genealogical relatedness to each other through intermarriage. The only genealogical relationship that members of brother clans tend to have arises from the fact that they may take spouses from the same clans, i.e., marry persons who are themselves to some degree related at the clan level. This small degree of relationship may then be passed down to each of the respective brother clans.

Appendix B

Conceptual Distinctions in the Study of Simple Human Societies

The contrast between societies with and without routinized male status distinctions can be clarified conceptually by comparing it with insightful distinctions proposed by Collier and Rosaldo (1981) and by Woodburn (1980, 1982) within the class of simple/egalitarian societies. Collier and Rosaldo (1981) are concerned with the politics of gender and marriage in simple societies. They distinguish "bridewealth" from "bride-service" societies. Bridewealth societies transact marriage through substantive property payments, bride-service societies (being simpler) primarily through rights to male labor, e.g., the obligation of the bridegroom to work for and give meat to his parents-in-law. While in many ways valid for the authors' particular aims, this distinction collapses within the large "bride-service" category societies such as Yanomamo, Ilongot, and Australian Aborigines, which are either status-competitive or age-stratified among men, and societies such as !Kung, Mbuti, and Eskimo, which lack systematic status differentials on this basis.¹

A distinction in terms of presence or absence of male status distinctions is more ethnographically delimited than that between bridewealth and bride-service societies. At the same time, it is conceptually broader than the distinction between immediate-return and delayed-return systems forwarded by Woodburn (1980, 1982). Woodburn distinguishes economic systems with long-term rights over people or property (delayed-return systems) from those that lack them (immediate-return systems). Delayed-return systems are diverse; they include foraging strategies that allow significant subsistence surplus or labor-intensive property and those, like Australian Aborigines, that provide systematic rights over adults, particularly women and younger men. Societies that practice any form of horticulture have, by definition, delayed-return economic systems.

Woodburn's scheme is designed primarily to distinguish some foraging systems from others, and it is particularly insightful in specifying how economic form in these societies can be determined by sociocultural factors over and above ecological determinants (see also Layton 1986). However, the determination of violence per se in egalitarian societies appears to be weighted less by economic constraints and more by broader variations

1. Societies such as Gebusi, which lack both bridewealth and bride service, appear somewhat anomalous in this scheme. Bride service has also been arguably absent among Mbuti and Eskimo, though these groups are clearly decentralized and would appear to be included within the gender and political framework Collier and Rosaldo portray for simple "bride-service" societies. While their discussion of sexual politics in simple societies is insightful, their core distinction between bridewealth and bride service may be less inclusive than they seem to intend.

in political differentiation than his scheme provides. Hence groups such as the Semai and the Gebusi, which practice mixed horticulture/foraging, have a pattern of violence more similar to those such as the !Kung and Eskimo as opposed to both Australian Aborigines and New Guinea highlanders.

A final note of present relevance in Woodburn's scheme is his brief evolutionary consideration of sociocultural development. Woodburn (1980) notes that immediate-return systems and delayed-return systems have likely coexisted for at least the last 10,000 years. In addition, he notes that while immediate-return systems form the primordial economic model of human ancestry, there has likely been shifting from immediate-return to delayed-return systems *and vice versa* during at least the last few millennia. Analogous statements could be proposed with respect to the distinction being made here between presence and absence of routinized status distinctions among adult males. For instance, societies such as the Semai and the Gebusi may in some sense be remnant groups that have been isolated, devolved, or perhaps undergone cycles of complementary cultural schismogenesis with those neighboring societies in which aggressive male status distinctions—and predatory collective violence—are much more highly developed. As is the case in Woodburn's (1980) initial distinction, however, these societies are no less "genuine" in their characteristics on this account.

Comments

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Knauff's paper contains some good things. We especially like its well-documented refutation of the myth of the nonviolent tribesman (although Knauff's tough-minded, critical stance is somewhat undermined when, in describing the Gebusi, he asserts ingenuous null hypotheses such as "there is no sense of competition or rivalry in exchange, and no tally of items received or given is kept"). Knauff's paper seems weak, however, in the context in which he cites us, and we feel obliged to criticize rather sharply his claim to have "disconfirmed" what he calls "the sociobiological hypothesis." This claim is predicated upon a mixture of ignorance and dubious methodology.

The former problem is manifested in Knauff's opening paragraph, in which he equates the contemporary evolutionary approach to the study of social behavior ("sociobiology") with the sort of nonadaptational instinct theories that it supplanted and that most biologists consider its antithesis. Then, when we get to his "disconfirmation," we discover that Knauff's "sociobiology" consists entirely of the single idea of "kin selection" or evolved

nepotism. It is hard to know how to respond to such a limited view of a field in which the central ideas include not just nepotism but mating strategies, sexual selection, parental investment, sex allocation, life-history strategies, reciprocity in nonkin relationships, ecological impacts upon adaptive strategies, and much more; there are implications for the study of homicide in recent evolutionary theorizing about every one of these topics (Daly and Wilson 1987). It is ironic that Knauff should dismiss our approach to the study of homicide only to arrive at the conclusion that the Gebusi homicides with which he is concerned are "ultimately about male control of marriageable women." We could hardly quarrel with this (thoroughly "sociobiological") conclusion, which echoes our own emphasis upon male competition over female reproductive capacity as a uniquely potent stimulus to homicide (see especially Daly, Wilson, and Weghorst 1982, Wilson and Daly 1985, Daly and Wilson 1987).

Well and good, one may protest, but evolved nepotism is a central idea in sociobiology, and Knauff has demonstrated its inapplicability to the case of Gebusi homicide, has he not? Not really, for several reasons. The first is that he does not clearly and convincingly explain (either here or in his 1985 book) by what criteria the perpetrator of a homicide was identified. No killings took place during his 22-month stay. All data are based on retrospective accounts of a process involving séances, further divination, and noisy public interactions. There are several indications that killings were collective acts (e.g., "the killing of sorcery suspects by adults is thought to be a communal duty"), and yet, for purposes of analysis, a single perpetrator (the primary "accuser," and "not necessarily the individual who shoots the death-dealing arrow," according to n. 18) is somehow identified. One cannot but suspect that Knauff's data on victim-killer relationships have been influenced by his informants' (consensual? self-interested?) reconstructions of what actually took place in the wild *melées* of past sorcery accusations.

That is one problem with the conclusion that Gebusi homicide is not the product of nepotistic motives. There are others. Who are the victims, and to whom are their deaths costly? The cantankerous and the elderly are often of no great utility to their relatives and may even be liabilities by virtue of consuming familial resources and provoking resentments that spill over onto their kinsmen. Such persons are likely targets of sorcery accusations, as several anthropologists have noted (see, e.g., Kluckhohn 1944, Middleton and Winter 1963), presumably because such accusations are unlikely to provoke vengeance by powerful kinsmen who value the accused sorcerer's life; Knauff suggests that accused Gebusi sorcerers are disproportionately often just such persons, implying that their deaths may often cost their kinsmen nothing and may even benefit them.

Finally, the analysis by which Knauff claims to show preferential accusation of close relatives could easily be improved. He divides the universe of potential victims

into a number of categories of declining average relatedness to a potential killer, but the categories overlap to an undetermined degree, and the "closest" category—in which Knauft claims homicide is disproportionately and anomalously concentrated—contains almost the entire range of relatednesses. He anticipates that readers will protest that interesting variation in relatedness is obscured within his "intrapatriline" category and asserts that "this criticism is not resolvable in terms of the present data." Why not? The genealogies are surely not so shallow as to preclude distinguishing brothers from cousins, for example. We are forced to conclude that Knauft avoids such distinctions because they do not support his agenda.

The attributes of people and other animals have been shaped by a history of selection so as to promote fitness in the environments of evolutionary adaptation. There is no serious controversy about this proposition; the only alternatives to Darwinian explanations of the adaptive properties of organisms are religiously motivated created myths. Efforts to "disconfirm" sociobiology are therefore futile: they are about as likely to succeed as efforts to disconfirm anthropology. It is clear that homicides, among the Gebusi as among other peoples, arise out of conflicts of interests; Darwinism provides a conception of the distal basis of our perceptions of our interests and is therefore an invaluable guide for generating hypotheses about conflicts thereof (Daly and Wilson 1987).

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This paper makes very useful contributions in a number of areas. Its attempt to assess competing explanations for violence with detailed data from a single well-documented case is particularly noteworthy. Because of space limitations, I will confine my comments to one issue. Knauft argues that in "extremely egalitarian" human societies the incidence and character of violence require an explanation different from those developed for pre-state societies in general. In part, he is interested in the "evolution of human violence" and argues that the Gebusi are representative of the simplest, most extremely egalitarian human societies known. This can be taken to imply that the known societies of this type represent an early stage in the evolution of human violence (and presumably of human society and culture more generally). I am not suggesting that Knauft intends this, but in spite of his interest in evolutionary problems, his analysis is almost wholly internal and synchronic. He pays little attention to the way in which extremely egalitarian societies became as they are described ethnographically. In fairness, one cannot expect him to do much with this problem, since our knowledge of the historical development of any of the extremely egalitarian societies is deficient. It is quite probable, however, that internal violence in these societies may be

connected to the history of their external relationships. Knauft's brief comments make it sound as if the Gebusi are in some sense in an environmental backwater, and this is certainly the case for a number of the other extremely egalitarian societies that he cites. For example, Thomas's "harmless people," the !Kung, perhaps the classic case of an egalitarian decentralized society and, as Knauft shows, rather similar to the Gebusi in type and level of incidence of violence, could just as appropriately have been called "the helpless people." They and the other San-speakers have been under pressure from more powerful neighbors throughout the historic period. In very recent times their resistance to this pressure has been minimal, but earlier some of their San-speaking confreres, located in much more desirable environments, did actively resist outside pressure (see Vinnicombe 1976, Wright 1971). There is the very real possibility that much of !Kung "harmlessness" is the result of !Kung "helplessness," i.e., one of the outcomes of defeat. It is quite possible that current !Kung social behavior (and that of many—all?—other extreme egalitarians) is the product of devolution rather than evolution.

This is not to argue that Knauft's emphasis on male status distinctions is wrong or even misplaced (indeed, I think it an improvement over the explanations he criticizes). But an analysis of external relations over time and their impact on internal violence and such variables as male status distinctions seems to me essential if we are to break out of the synchronic, tautological functional style of explanation espoused by the "ecologists" and many other would-be anthropological theorists. By ignoring history and external relations in history Knauft comes uncomfortably close to the same trap.

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Knauft's paper is intended as a critique and empirical falsification of sociobiological generalizations regarding the relationship between biogenetic distance and homicide. While it achieves this objective well, it offers the reader much more. Knauft has the best quantitative data on intragroup homicide in a New Guinea society that I know of. They were rigorously collected in the vernacular and analyzed in terms of explicit and sensible rules. In addition, he presents a valuable and thoroughgoing debunking of many stereotypes imposed on low-intensity hunter-gatherer and hunter-horticulturalist societies, such as their supposed nonviolence and patri/fraternal organization. The paper (along with Knauft's other reports) is also an important contribution to the ethnography and human ecology of lowland-fringe societies in New Guinea, since it completes a picture of intraregional variability for the Strickland-Bosavi sphere.

In this regard, he does appear to overlook striking par-

allels from other regions of New Guinea. One result of citing Inuit and !Kung cases rather than New Guinea ones is that he draws the distinction between “simple societies” and “sedentary tribal societies” too starkly. Further, his concern with refuting sociobiology leads to an uncritical cultural determinism.

My own reference point is the Mountain Ok sphere (Hyndman and Morren n.d.), which, centered on Telefolmin, straddles the central mountain range extending into the northern and southern lowlands. My research has been with the Miyanmin, who range from the mid-altitude zone to the lowlands on the north slope. I found Knauff’s ethnographic sketch of the Gebusi startling because they clearly resemble the Miyanmin in many ways. Moreover, the Miyanmin display a pattern of intraregional variation paralleling that which Knauff attributes to the Strickland-Bosavi area as a whole (see Morren 1986:159–62, 194, 237–39, 281; see also Gardner 1981, Hyndman and Morren n.d.).

The Miyanmin themselves recognize variation in distinguishing between *am-nakai* (house people) groups of mid-altitude zones and *sa-nakai* (forest people) of the lowlands. *Am-nakai* Miyanmin are (only relatively) more sedentary, centralized, densely populated, and involved with collective reciprocal violence. They also have identifiable leaders, although these are quite egalitarian, with very narrow competences. *Sa-nakai* Miyanmin are more mobile, dispersed, and low in population density and display a high level of intragroup violence. Indeed, *am-nakai* informants disparagingly liken their quarrelsome *sa-nakai* cousins to cockatoos. In short, the Gebusi resemble *sa-nakai* Miyanmin.

This variation cannot be explained culturally, historically, the two “kinds” of Miyanmin are one people. Some *sa-nakai* groups are segments of *am-nakai* groups, while others contain migrants and refugees from such groups. More important, I would argue that such aggregate characteristics as hierarchy and segmentation, centralization and dispersal, intragroup and collective violence, and so on, vary continuously in time within groups as well as in social space between groups. And while it is convenient to look at aggregate phenomena, the ultimate unit of analysis is not culture or society or even population but individual behavior and its consequences in some kind of context. In this connection, the case of the *sa-nakai* Miyanmin is interesting precisely because the historic and recent separation of some groups and individuals from *am-nakai* groups was the result of individual violence, adultery, sorcery disputes, and the like. Thus, arguably, some “violent” individuals are attracted to the margin. It is also true that some individuals I know have emigrated to *sa-nakai* groups because of the attractiveness of the “scrambling,” anarchistic frontier life-style, which in turn seems to be related to the relative absence of interpersonal competition for resources and high mobility.

In summary, we should not replace the sociobiological stereotype with one that is equally lacking in naturalism.

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Gebusi homicide is capital punishment. The executions of sorcerers correspond to a definition of capital punishment that I have been using: the “appropriate killing of a person who has committed a crime within a political community” (Otterbein 1986:9). There are three elements to the definition, each of which is present in Gebusi homicides (Knauff 1985b:101): Gebusi settlements are political communities, most Gebusi killings are viewed as legitimate and seldom lead to retaliation, and before an execution takes place it is ascertained that the suspect is guilty of sorcery. Perusal of Knauff’s ethnography on the Gebusi reveals no usage of the terms *capital punishment* or *death penalty*, although the term *execution* is employed (1985b:101–2). Classifying Gebusi killings as capital punishment allows them to be distinguished from homicide in general; non-capital-punishment homicides are not considered appropriate, and the person killed has not committed a crime. For these reasons most Gebusi homicides differ from most of the homicides of the Eskimo, Hadza, !Kung, Mbuti Pygmies, Semai, and Waorani. For research purposes Gebusi executions should be compared with Eskimo, !Kung, and Mbuti capital punishment (see below). The sudden violence of the Gebusi that sometimes leads to homicide should be compared with similar homicidal violence in these and other societies.

In a cross-cultural study of capital punishment, I divided egalitarian societies into bands and tribes (Otterbein 1986) and subdivided the tribal societies into three types depending upon whether councils and/or feuding were present. Bands were societies that had neither councils nor feuding. The Gebusi would have been classified as a band. All the bands, and indeed all of the societies in the 51-society sample, had capital punishment. The bands were the Aranda, Klamath, Lapps, Ojibwa, Ona, and Pygmies; additional, nonsample bands discussed included the Cheyenne, Central Eskimo, and !Kung. What theorizing had been done suggested that executions at this level of sociopolitical complexity were carried out for the sake of “group survival” (Otterbein 1986:57):

Group survival theory, as formulated by Durkheim, White, Leach, Turnbull, Llewellyn, Hoebel, and Lee, pertains to societies at the band level of sociopolitical complexity. The theory posits a small, culturally homogeneous political community, in which everyone knows everyone else (i.e., a primary group). If any member threatens the survival of the band by acts that disrupt the social or religious order (Durkheim considered these the same), or that endanger the band’s ability to obtain food, or deprive members of their lives, that member will be disposed of. The possibility also exists that a stranger (i.e., a person who is not a member of the community) living with the

band may be executed if he threatens the survival of the group. Since the offense is a community concern, the decision to execute is made by the community as a whole, or certainly by all of the elders. An ambush with weapons, sometimes in the hands of members of another political community, completes the legal process.

Although the data were sometimes scant, the theory was supported (Otterbein 1986:108):

Findings that support predictions from the theory include: Those offenses that endanger the welfare of the group—incest, sacrilegious acts (such as sorcery, witchcraft, and violations of taboos), and homicide—are capital offenses. The community decides upon the execution. The execution occurs in secret, with weapons.

Five of the six bands in the sample executed for witchcraft (Otterbein 1986:90). The Gebusi are another example which meet the predictions derived from the theory.

Knauft's account is probably the best description of capital punishment in the ethnographic literature because of the quantifiable data collected. Two executions a year (82 executions in 42 years) for a small population is phenomenally high. If Knauft's ethnography (1985*b*) had been available while I was writing the chapter on bands, the Gebusi would certainly have been included in the cross-cultural study. Other high-quality field studies that describe the execution of sorcerers/witches are beginning to appear: Ireland (1986) on Waura witchcraft executions and Gregor (1986) on the killing of witches in Upper Xingú villages. Both these South American groups have high frequencies of capital punishment. Gregor estimates from his data, which go back to the 1930s, that a witch is killed at a rate of approximately one every 18 months. Eventual comparison of the Gebusi with the Waura and the Upper Xingú should lead us well beyond Knauft's "exploratory hypotheses."

In extremely egalitarian human societies, two kinds of violence need to be accounted for; Knauft does not distinguish them. One kind is planned and carried out by the community (legitimate), the other is sudden and stems from the actions of individuals (illegitimate). Both forms of violence arise from "suppressed" tensions which are "displaced from primary potential antagonists onto others" (Knauft's phrase). Elsewhere Knauft disavows the Freudian hydraulic model of aggression (1985*b*:79–80, 404). These tensions derive from three conditions: egalitarian values, lack of male status distinctions, and male disputes over women. The males who feel wronged suppress their anger. In Gebusi society this suppressed anger frequently leads to sorcery attribution and infrequently to sudden homicidal violence. Knauft's version of frustration-aggression theory, however, takes the argument only to this point. His theory does not explain why some egalitarian societies have primarily sudden homicidal violence and others primar-

ily executions of sorcerers. Furthermore, the frequencies of each form of violence vary from society to society. For example, from my reading of ethnographic materials, I find that the Gebusi are high-execution and medium-homicide, the Eskimo and !Kung medium-execution and medium-homicide, and the Mbuti and Semai low-execution and low-homicide (I interpret the !Kung and Semai as having different homicide rates—Knauft claims that they are similar).

I do not know why the two kinds of violence occur, and with varying frequency. Indeed, my cross-cultural study of capital punishment suggests that while homicidal violence varies in band societies, capital punishment is low, but the recent studies cited above show that capital punishment is sometimes high in these societies. The following is an attempt to develop an explanatory model composed of three variables: (1) the elaborateness of the sorcery/witchcraft belief system throughout the region in which the society is located, (2) the magnitude of felt wrongs and the frequency of disputes, and (3) the ability of authorities to prevent violence. (The third variable permits the model to be applied to a large number of societies; e.g., the Andros Islanders once strongly held beliefs in sorcery and witchcraft [Otterbein and Otterbein 1973:1672–73] and also had a double standard of sexual behavior that made males rivals [Otterbein 1966:67], but because of the control of the British government over the island homicides were rare and if they occurred the killer was executed.) These variables may be related in the following ways: If sorcery/witchcraft beliefs are elaborate, frustrations and disputes are frequent, and authorities cannot prevent violence, then sorcery accusations and executions will be common. (Knauft's hypotheses and the Gebusi fit here.) If sorcery/witchcraft beliefs are not elaborate, frustrations and disputes are frequent, and authorities cannot prevent violence, then sudden homicidal violence will occur more frequently than sorcery accusations and executions. Whether or not sorcery/witchcraft beliefs are elaborate, if frustrations and disputes are infrequent, executions and homicides will be infrequent, even if authorities cannot prevent violence. If authorities can prevent violence, the frequency of homicides will be low whether or not sorcery/witchcraft beliefs are elaborate and regardless of the extent of frustrations and disputes. If the frequency of homicides is low, authorities are likely to employ execution infrequently (Otterbein 1986:73–82, 111–12).

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Knauft provides a number of ideas that are of real importance to a comparative understanding of political conflict and violence. He is to be commended for the ways in which he has utilized the difference between the expressed norms of the Gebusi and his genealogical data to

identify a significant problem that needed explanation. His placement of the Gebusi material within a larger comparative framework communicates important points about the theoretical relevance of the case. The use of commonly held theoretical orientations as starting points for his explanation of Gebusi homicide is both an important challenge to these theories and part of his articulation of a theory of political violence. My questions about some of the points he makes are raised within his own admirable framework. His approach offers us both a coherent theoretical argument and exploratory hypotheses that will benefit from further discussion and refinement.

One of the most important findings of this study, at the same time an unresolved issue in the subsequent theorizing, is the uncertain relationship between homicide and other forms of political conflict and violence. On the one hand, Knauff pushes us to consider a group of societies characterized by an overall low level of overt aggressivity in daily life but extremely high levels of homicide. Striking as these results are, they are consistent with those of studies of political violence in modern nations, which find a number of independent dimensions of conflict rather than a single underlying one (Gurr 1980, Rummel 1963). Such differentiation suggests a diversity of sources of violence and cautions against hasty assumptions concerning its homogeneity.

Yet if, as Knauff says, homicide, at least in a certain group of societies, is independent of other dimensions of violence, then it seems inappropriate to criticize theories of political violence for not being able to account for the high homicide rates and patterns he finds among the Gebusi when these theories do not directly address homicide. Fraternal interest-group theory, particularly in the sophisticated form in which it is articulated by Paige and Paige (1981), leads us to expect *collective* action, often involving organized violence, on the part of coresident related males. Neither the social preconditions nor the form of political violence that Paige and Paige's theory predicts are present among the Gebusi, and therefore Knauff's data are, to me, more a confirmation than a falsification of that theory. Even if Gebusi homicide can be viewed as the kind of violence that fraternal interest-group theory predicts, I am uncomfortable with his suggestion that the Gebusi data are inconsistent with the theory on the grounds that the Gebusi lack the social and economic conditions fraternal interest-group theory predicts in high-violence societies. Fraternal interest-group theory does not claim to be a general theory of violence; it certainly does not deny the existence of forms of violence other than those caused by organized, related, coresident males.

In thinking about the relationship between homicide and other forms of violence, it is perhaps important to ask how the Gebusi and other people conceptualize such behaviors. To what extent do they see conflict behaviors on a single dimension? Similarly, how do they seek to reconcile the objectively high rate of homicide with social norms of "good company?" Knauff gives us some notion of what an interesting answer to these questions

might be in his discussion of psychological compartmentalization, where he offers some ideas relevant to conflict theory more generally. It seems plausible that the Gebusi and others consider homicide an action to end a state of tension or potential conflict rather than a cause of further violence. As a psychological mechanism, then, homicide is understood as a *defensive* behavior designed to protect the community and its harmony, not a threat to that harmony. If this is correct, Gebusi homicide may have many elements in common with the sanctioned violence found in the legal systems of states and nations and in the justifications for military actions in the contemporary world. State-sanctioned killing is described and viewed by members of society as very different from violence that is not legitimate. Often the victims are blamed for making the society undertake the actions it does against them, and antiseptic euphemisms, which receive their highest refinement in current military jargon, replace clear descriptions of the violence.

The proposal that we need to develop different theories of violence for different types of societies raises the question whether we might consider different explanations for violence that is legitimate within the social order and violence that is not. A further question is to what extent the differences between small-scale societies and others to which Knauff draws our attention are to be understood, at least partially, as differences in the ratio of collective to interpersonal violence.

In my own work on conflict and violence (Ross 1985, 1986a, b) I have grappled with the methodological problems of developing different theories for different kinds of societies. Rather than simply turning to a priori categories of the independent variable such as uncentralized vs. centralized or foragers vs. agriculturalists, I think it may be more useful to make theoretically informed distinctions with respect to particular forms of violence and conflict. For example, in looking at internal and external conflict, my data show that some societies are differentiators in that one or the other form of violence is prominent, while others are generalizers in that the levels of the two forms of violence are approximately equal. Differentiator societies are more likely than generalizers to have strong crosscutting ties, marital endogamy, matrilocality, weak fraternal interest-groups, and political power that is relatively concentrated (Ross 1985).

The utility of Knauff's concluding hypotheses is related to the intriguing suggestion that homicide is a leveling device in societies in which formal social control mechanisms are weak or nonexistent. Does it possibly follow, then, that in more hierarchical systems ratios of interpersonal to collective violence are much lower than among egalitarian ones because individual uncertainty about one's position in the social order is not as great? If this is the case, I want to know more about the underlying psychological mechanisms at work. Similarly, Knauff could say more about how male disputes over women underlie many of the killings among the Gebusi. Can he tell us more about the choice of the

target for a sorcery accusation? If lack of reciprocity among groups is a background condition associated with homicide, I still want to know more about the more proximate triggers for sorcery accusations and murder as well.

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Knauft's study of homicide among the Gebusi of New Guinea is the first serious assault on fraternal interest-group theory that we know of. It is also critical of other current theories of human aggression, and for good reason. We will not deal with these other theories but concentrate instead on fraternal interest-group theory, sharing as we do with Robert Murphy responsibility for an early formulation. Before looking in more detail at Knauft's account of the shortcomings of fraternal interest-group theory, it seems useful to restate its main assumptions. This is all the more important because Knauft associates it with sociobiology and encumbers it, unnecessarily, with the assumptions of conflicting-loyalties theory.

Three decades ago Murphy (1957:1033) suggested that matrilineal societies would repress open aggression. As the crucial variable responsible for peacefulness he indicated the dispersal of consanguineous males. A few years later we tested this hypothesis by selecting a sample of 50 matrilineal and patrilineal societies from Murdock's (1957) World Ethnographic Sample (Thoden van Velzen and van Wetering 1960). The relationship between matrilineality and peacefulness proved to be statistically significant (1960:191). Since then a number of other anthropologists (Divale 1974, Kang 1979, Otterbein 1968, Otterbein and Otterbein 1965, Paige and Paige 1981) have retested this hypothesis and arrived, directly or indirectly, at approximately the same conclusion: matrilineal societies are more peaceful than patrilineal ones. Very few hypotheses in anthropology have ever achieved such consensus. How was peacefulness in matrilineal societies to be explained?

Murphy (1957:1033) offered an explanation in terms of crosscutting ties: "As among the Mundurucú, if the lines of allegiance in a conflict situation are drawn to kinship in any matrilineal society, bonds of local contiguity will be sundered; if primary loyalty is given to bonds of residence the ties of kinship will be broken. In short, when the residence and kin groups of the male do not coincide, he acquires multiple commitments that may come into conflict."

Murphy's suggestion did not persuade us. Certainly, conflicting loyalties could be held responsible for the presence of mediators in the enemy camp and might therefore contribute to quicker and smoother settlement. But members of both patrilineal and matrilineal societies experience conflicts of loyalty. Although one

could perhaps argue that individuals in matrilineal societies suffer more conflicts of loyalty, little is to be gained by relying on such a numerical preponderance. One bond is simply not equal to the other; one tie outweighs the other. It seemed to us that loyalties resulting from shared interests by far outweigh other loyalties. When a conflict arises, the individuals involved will choose sides by severing the less significant ties. This may be painful and costly, but such actions are undertaken daily in all societies, and in many of those crosscutting ties fail to prevent the eruption of bloody conflict.

A reexamination of Hoebel and Llewellyn's (1941) precise description of conflicts in matrilineal Cheyenne society led us to the conclusion that violence in Cheyenne society was perpetrated by individuals acting on their own, without much social backing, and that it seldom gave rise to group conflicts. Of the 14 murder cases that occurred among the Cheyenne between 1835 and 1879, none was jointly committed by two or more persons. Where murder did occur, it was nearly always committed in rage or drunkenness. We came across no evidence of blood feuds. Individual violence did not seem to lead to group conflicts; individual acts of aggression did not elicit struggles for power at the group level.

This material suggested to us that the high levels of aggression usually found in patrilineal societies are due to violence at the group level. Patrilineal societies, or societies with residence rules clustering consanguineous males, offer the ideal condition for such forms of group conflict. When related males reside together, they will have common interests to defend of a material or immaterial (prestige positions, claims on supernatural agencies) kind. For any number of related males residing together we coined the term "fraternal interest group." Essential to the fraternal interest group is a fund of possessions controlled by one or more members of the group. Male relatives must have a reason for concerted action, a reason powerful enough to risk the displeasure of the community if need be. If they share vital interests they will attempt, forcefully if necessary, to defend or promote these interests. A second point to be stressed about fraternal interest groups is that they are bound to weaken the levelling forces of the wider community. Violence can be more effectively suppressed if the individual concerned is not part of a power group that will support him through thick and thin. Bystanders who separate and restrain combatants can curb a great deal of potential aggression in societies without such solidary groups. The individual concerned will lack the psychological assurance of having a reliable stronghold behind him. These were the two most important sociological points to be mentioned about fraternal interest groups, conflicting loyalties forming no part of these.

The Gebusi do not aggregate related males in clusters that can be meaningfully distinguished from other such units. There is no evidence of Gebusi agnates' controlling a fund of resources. In brief, Gebusi have no fraternal interest groups. Unfortunately for us, partisans of the theory under scrutiny, Gebusi are without any reasonable doubt extremely violent. On the basis of excel-

lent genealogical material, Knauft concludes that no less than one-third of all adult male deaths are homicides. Where does that leave us?

Perhaps some aspects of fraternal interest-group theory can be salvaged by following Knauft's suggestions to delimit the universe and distinguish, for example, between sedentary tribal and agricultural communities, on the one hand, and hunting and non-intensive foraging communities, on the other. A number of societies in both categories have no localized aggregates of related males and will, according to fraternal interest-group theory, display non-competitive, non-hierarchical, self-effacing relationships among males. This would be true for the Gebusi. Knauft asserts, for example, that they are mutually deferential in the extreme, exactly what one would expect in a society that disperses related males. But then, of course, we are here confronted with a high homicide rate. How to explain this discrepancy? Knauft, taking his cue from Briggs's (1970) work on the Inuit Eskimo, points at the compartmentalised character of aggression: painful avoidance of aggression and brief bursts of lethal violence go together.

In our paper (Thoden van Velzen and van Wetering 1960:171) we explicitly mentioned at least one form of such compartmentalisation: "*We must emphasize that when speaking of peacefulness, we mean peacefulness within the society, for in many cases internal peacefulness is combined with implacable bellicosity towards external enemies.*" An adherent of the conflicting-loyalties school (Flap 1985:65) mentions this same phenomenon (internal peacefulness, external warfare) but stops after suggesting that further research is needed. Conflicting-loyalties theory has no solution to offer for problems of this kind.

What this seems to suggest is that we need to recognise the significance of psychological explanations. Obviously, to sustain high degrees of restraint in ordinary social intercourse is too much for the human being: pent-up feelings will express themselves against an external enemy or against the "not-to-be-borne-any-longer-individual," as Hoebel and Llewellyn (1941:141) call the scapegoat. That such individuals would be no exceptions but account for one-third of all adult deaths in at least one society (the Gebusi) comes as a surprise to us. Just as disconcerting from our point of view is the material collected by Knauft on a number of other societies that resemble Gebusi in some crucial structural aspects. The Eskimo, for example, greatly cherish social harmony and demonstrate great restraint in daily life but have a high homicide rate.

Again this saddles the adherents of fraternal interest-group theory with a problem in regard to non-intensive foraging and hunting societies. The question remains whether it is so much better a predictor for Knauft's first category, the sedentary tribal and agricultural societies. We are beginning to have doubts about the theory in its present form. When doing fieldwork among the Malila of southwestern Tanzania, an agricultural and sedentary people (Knauft's first category) with predominantly pat-

rilocal and virilocal forms of residence, we regularly noticed brawls, fights, and public sorcery accusations. We even came to know about a few cases of people who had been beaten to death—all of this in accordance with the predictions of fraternal interest-group theory. Much stranger, and harder to explain, was that much of the aggression took place *within* the fraternal interest group: brothers beating brothers, sons mistreating fathers. This was certainly not what we expected of these groups; in our thinking they were solidary bastions, hoarding strength for the unavoidable encounters with other such units. The presence of groups of agnates residing together is perhaps a good predictor of the level of open aggression in society but says next to nothing about the persons or groups at whom it is directed.

Knauft is not fully clear on how to explain the high incidence of Gebusi homicide. He asserts that male rivalry over marriageable females is one of the chief causes of violence. He refers to the early Lévi-Strauss and to Freud and adds: "the roots of human culture are found in the sociocultural and psychological control of sexuality and in the repression, displacement, and/or transformation of sexual anger through symbolic and cultural mechanisms." There is indeed no need to be afraid of Sigmund Freud or the early Lévi-Strauss, but insights such as the one just quoted do not happen to discriminate between societies. We would suggest, in an effort to salvage as much as possible of fraternal interest-group theory, that societies that disperse related males will create conditions for what the sociologist Norbert Elias (1978, 1982, 1983), on the basis of examples from European history, calls *civilisation*. Civilisation to Elias is the cultural form brought about by the strict control of emotions. Males in these cultures behave with moderation and diplomatic circumvention. Such societies glorify self-effacement and mutually deferential behaviour. It is the absence of fraternal interest groups that might explain such civilisation in less complex societies than the ones that served as cases for Elias's study.¹ The individual in such an egalitarian society is deprived of a group to fall back on in times of danger, and levelling forces have maximum scope when individuals are not too narrowly tied to group obligations. Such a revision of fraternal interest-group theory would not only explain the phenomenon of civilisation in less complex societies but perhaps also offer insights into the consequences of a systematic suppressing of aggressive feelings. Civilisation exacts its toll: relations of restraint, good-naturedness, pleasant social manners, all of these imply repression of aggressive impulses. Either external warfare or sudden bursts of lethal violence against "not-to-be-borne-any-longer-individuals" reveal the magnitude of the forces repressed for the ideals of "good company."

1. For an attempt to use Elias's ideas on civilisation for the explanation of peacefulness, see Thoden van Velzen (1984).

Reply

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I thank all the commentators and appreciate their remarks concerning the importance of the data presented and their suggestions for further analysis.

Simple societies and Melanesia. I concur with Morren that my paper emphasizes similarities between Gebusi and other simple societies at the expense of intra-New Guinea comparisons. While Gebusi are in several respects at one extreme of the range of Melanesian societal variation, they are by no means a Melanesian anomaly. I have elsewhere analyzed the regional societal and cultural context in which Gebusi are situated (Knauf 1985a). My purpose in stressing similarities between Gebusi and groups from other world areas was threefold. First, the surprising similarity between Gebusi and societies such as Eskimo, !Kung, and Semai with respect to male status, aggression, and violence focuses attention on dimensions of violence that have often been neglected. Second, the similarities between these societies are especially apt, as Morren notes, for a critical reevaluation of several stereotypes commonly imposed on low-intensity hunter-gatherer and hunter-horticultural societies. Finally, models in New Guinea ethnology have too often been defined in terms of the socioeconomic paradigms of highland New Guinea, and partly because of this low-intensity Melanesian sociocultural systems, particularly those from low-altitude areas of New Guinea, have been understudied both ethnographically and theoretically. The drawing of direct connections between such a society and simple societies elsewhere was intended to highlight the range of societal variation within Melanesia. More work needs to be done on the distinctive features of different Melanesian culture areas and on comparison of groups of Melanesian societies both socioculturally and ecologically with societies from lowland South America, equatorial Africa, aboriginal Australia, Southeast Asia, and Polynesia.

While I am in sympathy with many of Morren's remarks, he misconstrues me on one central issue: cultural determinism. My analysis does not propose, as Morren seems to suggest of it, that culture operates in a vacuum. This is clear from my conceptualization of male egalitarianism in simple societies. This dynamic is unquestionably impacted by socio-ecological factors such as population density, subsistence strategy, resource concentration, settlement pattern, and the ecological costs and benefits of intragroup and intergroup cooperation. My qualification, however, is that such influences on social action must be considered in tandem with the cultural values that shape and mediate them in any particular society or set of societies. What needs to be pursued further for simple societies is the dynamic *interrelationship* of cultural, sociological, and

ecological constraints, not the reduction of one of these to another.

Simple societies in historical context. Donald suggests that my approach is insightful as far it goes—given the data available—but that more attention must be given in the future to the evolution and historical development of simple societies; they must not be considered a synchronic "type." I actively endorse this position and hope to consider it more fully in future work. The full diversity of foraging and simple foraging-horticultural societies is just beginning to be effectively documented ethnographically and archeologically (e.g., Leacock and Lee 1982; Schrire 1984; Lee 1979a, b; Hoffman 1986; Rai 1987; Ellen 1982; Price and Brown 1985; Zvelebil 1986; Bailey 1983; Gamble 1986; Winterhalder and Smith 1981; cf. Harding and Teleki 1981). One would not, for example, necessarily expect similar patterns of political structure and violence among (a) Neanderthals versus anatomically modern humans using blade and microlithic tools, (b) foragers dependent on highly concentrated coastal or big-game resources versus those dependent on widely scattered plant and animal resources, or (c) foragers or forager-horticulturalists operating in environments highly contested versus relatively uncontested by other human groups. Rather than prematurely categorizing such rich diversity, my present hypothesis focuses on the relationship between high rates of homicide and relatively low rates of overall aggression in societies in which overt status distinction and competition among adult men are effectively discouraged. The preclusion versus elaboration of adult male status distinctions is itself a further complex question that should arguably consider factors such as resource strategy, residential pattern, social organization, and interethnic contacts, along with cultural values, ethnopsychology, and local history. The hypothesis does not exclude any such developmental analysis, e.g., as is proposed by Morren for the Miyanmin; instead, it predicts the outcome in terms of violence of certain sociopolitical forms regardless of how these themselves arose. During the preliminary stages of research, one advantage to such an approach is that it is widely applicable and, indeed, does not depend on the assumption of homogeneity between societies in terms of their resource base or culture history.

A caveat here is Donald's important suggestion that patterns of internal violence and male status may be affected in parallel by relationships with outside groups. Both before and after writing my paper, I was uneasy about the possible independent effect of imposed interethnic relations (see the conclusion to appendix B). Though not mentioned by Donald, this potential can be found among the Gebusi themselves, who were systematically preyed upon by the neighboring Bedamini (Knauf 1985b:chap. 1; 1985a), and among the Semai, who may be in a similar relationship with Malays. Analogously, long-term relations of opposition and/or symbiosis between true foragers and adjacent sedentary populations might engender in the subordinated culture both male deference and societally internalized vio-

lence. Such a pattern has reached extremes among some Agta foragers, whose internal disruption (and alcohol use) has produced a homicide rate equivalent to 326 per 100,000 per annum (Headland 1986:537–43). One must be wary, however, of explaining a complex internal phenomenon on the basis of simple external causes. The information from the traditional Eskimo, Lee's data set on !Kung homicide (especially 1920–55), and the available material from the Waorani cannot be easily explained on the basis of external cultural domination. It is also worth emphasizing that the Gebusi data presented were obtained from a sector of Gebusi territory that was beyond the purview of all but the most long-distance Bedamini raids.

While external pressure can influence the internal social dynamics of simple societies, the specific nature of these reactions is determined by the indigenous cultural system already in place (see Knauff 1985b:240–44). Even if the large assumption is made that undifferentiated and noncompetitive adult male status is a function of political helplessness, the empirical relationship between this condition and certain forms of internal violence still appears to hold. I thank Donald, however, for emphasizing that violence in simple societies needs to be understood within a larger developmental context. Simple societies as I have described them were probably quite common prior to the advent of plant and animal domestication (see below), but similar sociocultural dynamics can be secondarily reinforced or perhaps even reengendered through subordination and complementarity of decentralized societies to adjacent groups that are more technologically and/or organizationally developed.

It is important to separate two factors that Donald discusses in tandem: political imposition and human ecology in relatively low-yielding environments. Donald's implication that these two factors are in a correspondent if not causal relationship—hunter-gatherers have been pushed into marginal areas—should not lead us to think that “pristine” foragers generally experienced ecological bounty. Because low nutritional yield per unit of land is a function of appropriation techniques and organization as well as of the environment per se, nonintensive human ecology needs to be viewed in evolutionary (as well as in “devolutionary”) terms; many environments that are now high-yielding were quite low-yielding in our evolutionary past, when technology was simpler and competition with other species greater. Further, the human trajectory from perhaps the time of *Homo erectus* until quite recently has been one of expansion into environments that were at the outset marginal. Finally, as Sahlins (1972) has suggested, the prevailing economic tendency in simple societies is conservative—to minimize both labor and food surplus and to keep yields well below possible limits. Thus, the low-intensity human ecology that is associated with some of the simple societies under consideration is probably quite common in evolutionary terms. It may further be emphasized that simple societies can include mixed-forager-horticulturalists as well as exclusive foragers; sociopolitical complexity is not totally determined by resource base or popu-

lation density. Simple societies encompass a range of developmental variation concerning the degree to which noncompetitive sociocultural dynamics are articulated with ecological, cultural, and external political exigencies.

Fraternal interest-group theory. Thoden van Velzen and van Wetering's admission of their theory's weaknesses is a striking example of candor and dedication to Popperian science. The distinctiveness of the disconfirmatory evidence from simple societies is attested to by their assessment that this is the first serious assault on fraternal interest-group theory to date. It is likely that the theory remains in some respects applicable to more complex and fully agricultural pre-state societies. The additional question Thoden van Velzen and van Wetering raise concerning violence *within* fraternal interest-groups can be approached through Ross's (1985b) combined assessments of in-group versus out-group violence. I am convinced by their argument that fraternal interest-group theory and conflicting-loyalties theory should not be conflated. In practice, these theories have often been (perhaps incorrectly) considered empirical complements. At the same time, the Gebusi material and that from other simple societies appear to disconfirm each theory independently on empirical grounds; a logical association between the theories is not crucial to my argument.

In disagreement with Thoden van Velzen and van Wetering, I suggest that the insights of Lévi-Strauss and Freud *do* have particular relevance to the etiology of violence in simple societies—relevance based on propensities that in their extremity distinguish modern and presumably archaic simple human societies from groups of nonhuman primates: prolonged childhood, very high parental investment, low sexual dimorphism, sexual pair-bonding, high sexual division of labor, elaborate exogamy, extensive food sharing, relative absence of male dominance hierarchies, intergroup alliance, and cognition centered on symbolic referentiality, linguistic displacement, and highly deferred gratification. As a linked set, these factors predispose simple societies toward the cultural control of sexual desires and marital tensions and corresponding patterns of assiduous social cooperation punctuated by occasional severe violence. In contrast, the extensive *state*-level ideological or religious privation that Thoden van Velzen and van Wetering mention is related less to sexual and marital tensions than—as is collective violence in these societies—to competitive status and prestige concerns in politico-economic and religious hierarchies. The *state*-level relationship between personal privation and the drive for status and prestige is one I have tentatively considered with respect to preindustrial cities (Knauff 1987c).

As these commentators suggest, the present analysis is in important respects theoretically unfinished. Explaining the relationship between psychocultural and sociological dimensions of violence in simple and not-so-simple societies is an important and neglected topic. My paper is primarily a critique of some existing theories and a descriptive prolegomena for extensive work that remains to be done.

Ross concurs that fraternal interest-group theory cannot easily explain the patterns of violence that occur in simple societies; greater theoretical and conceptual refinement is needed. At the same time, he suggests that the material I present lies technically outside the intended scope of fraternal interest-group theory. This is debatable; most researchers who have conducted cross-cultural tests of aggression and fraternal interest-groups have taken lethal violence to be an important dimension of what they were trying to explain and treated in a fairly undifferentiated manner data on internal violence from simple societies such as the !Kung and Eskimo. Along these same lines, it would be difficult to justify excluding Gebusi violence, which, *pace* Ross, is typically collective. It seems to me that most cross-cultural researchers have incorrectly assumed—either tacitly or actively—that the bulk of the information on violence in simple societies fit fraternal interest-group theory. The more important point of clarification—upon which I think Ross and I would agree—is that many of these data are in fact not explained by the theory.

Ross's defense of fraternal interest-group theory "in the sophisticated form" articulated by Paige and Paige (1981) seems to me effective in some ways and misplaced in others. Paige and Paige do specify with some precision the nature of the dependent variables they are trying to explain—various dimensions of reproductive ritual. They also have a multivalent scale of fraternal interest-group strength as the independent variable. They do not, however, focus systematically on collective political violence; their specific predictions concerning reproductive ritual are, unless I have missed something, largely irrelevant to this issue. Further, their passing references (1981:53–55) to political conflict suggest that they concur quite heartily with all the major earlier studies of fraternal interest-group theory and collective violence. It is in terms of methodology, then, that cross-cultural research could most productively follow their lead, i.e., in *specifying more rigorously the independent and dependent variables being considered*. This would focus greater attention on the ethnographic specifics of each case—introducing a rigor that is not engendered by redefining post hoc the applicability of existing variables to existing data sets.

While, as Ross suggests, this problem may to some degree be solvable by adducing additional variables for study, such an approach must maintain close scrutiny of its conceptual suppositions (see Knauft 1978:219–20). Adding new variables can easily leave intact the problems of definition and data coding inherent in the old ones, incorporating them into the new analysis. While the new analysis claims explanatory completeness, it can compound the initial errors and improperly fragment the topic of study. With respect to violence in simple societies, the ways and extent to which existing theories are disconfirmed suggest to me not that we have missed a few variables but that the types of distinction being used—stemming primarily from more complex societies—fail to capture the dynamics of human violence that have been operative for most of our species's

history. Further research from competing vantage points should allow better evaluation of this assertion in the years ahead.

Information pertinent to many of the specific ethnographic inquiries made by Ross and others concerning the Gebusi can be found in my monograph (1985b).

In contrast to Ross and to Thoden van Velzen and van Wetering, Otterbein does not address the problem posed for fraternal interest-group theory by the data from simple societies, but his recent book—published since my paper was completed—contains a striking assessment: that band societies *lack* fraternal interest-groups (1986:70). (Indeed, Otterbein makes this true of band societies by definition.) This assertion directly contradicts his suggestion one year earlier (1985a:xxii) that fraternal interest-groups are the primary organizational basis of human violence in hominid and early human social evolution. His present abandonment of this evolutionary position underscores the need for an alternative explanatory perspective such as the one I have tried, preliminarily, to explore.

In his present comments he attempts to redefine the issue by classifying Gebusi killings as "capital punishment" and depicting Gebusi killing as a "group survival" strategy, e.g., a way of controlling criminal threat. Such an assessment of killing—and of sorcery and witchcraft—has the classic functionalist bias of assuming that aggression serves the wider social good (Coser 1956, Gluckman 1956, Marwick 1956; contrast Sykes 1974, Foucault 1977, Douglas 1963, Turner 1964). In the Gebusi case, the inadequacy of this assumption is laid bare: the Gebusi are dying out at an exceedingly rapid rate and indeed have a half-life of only 29.8 years (Knauft 1985b:376). Their extremely high internal killing rate has been and continues to be an obvious and important cause of this decline. Given these conditions, Gebusi killing can hardly be termed a strategy of "group survival." Otterbein's functional reasoning on the basis of a priori definitional concepts has skewed ethnographic reality.

The problematic concepts here are "crime" and "appropriateness"; Otterbein (1986:9) defines capital punishment as "appropriate killing of a person who has committed a crime within a political community"—in contrast to inappropriate killing for no legitimate reason, termed "homicide." In the real world, however, killing is not so easily dichotomized. What is considered "capital punishment" by one group or at one level in the political hierarchy may be considered "homicide" by others in the structure. Attempting to resolve the problem by invoking the definitional boundary of a homogeneous "political community" begs the question, since the definition of this community may itself be a core issue of contention. This is true of many state societies as well as of acephalous ones. (Consider, for example, the complex current relationship between violence and politics in the Middle East or Central America.) Even in our own society, as Black (1983) has pointed out, many "crimes" are perceived by associates as well as by the perpetrators to be legitimate self-help. The larger point is that "crime" and "appropriateness" are subject to

complex and often discordant sociocultural negotiation, not simply “present” or “absent” (contrast Otterbein 1986:11).

While in nonliterate, acephalous societies some killings do appear egregious and others consensual, many and perhaps most are in a hazy, indeterminate relationship to the notion of “political legitimacy.” This is true of Otterbein’s (1986:52–57) own case examples of serially reciprocated, murders/executions in band societies; a retributive killing may itself be avenged because of disagreement as to whether it was appropriate or not. In societies such as the Eskimo, Hadza, and !Kung, the line between appropriate and inappropriate killing can become vanishingly thin; a killing may be considered simply amoral—outside normal comprehension and simply extraordinary or “awefull,” leaving survivors confused rather than morally satisfied or righteously indignant. Killing in simple societies does not seem so neatly divisible between “capital punishment” and “homicide” as it might in societies with more formalized legal and political systems.

In the case of the Gebusi, I am perhaps myself at fault for overemphasizing the normative and consensual aspect of sorcery killings in my synoptic description; the case studies reveal more complex crosscutting actions and attitudes (Knauff 1985*b*). While in some cases the killing is willingly accepted by the community at large, in others it is actively opposed or tolerated only out of cowardice or fear by neutral parties and the victim’s supporters. After an intrasettlement killing, the closest supporters of the deceased often move out and set up their own settlement in protest, belying its consensual “legitimacy.” The alleged Gebusi sorcerer has in objective terms committed no sorcery; the accusation may be simple scapegoating—the *attribution* of deviance. This is why I suggested that “Gebusi homicide defies simplistic categorization” and, more generally, that existing subdivisions of lethal violence may distort our awareness of cross-cultural and evolutionary trends. Otterbein (1986:19) makes the striking admission that intercoder reliability in HRAF tabulations is “high when data are scant” and “low when data are profuse.” The latter characterization appears applicable to the Gebusi and underscores the tenuousness of definitional assessment in HRAF codings.

Sociobiology. Daly and Wilson’s remarks are misleading in several respects, and their substantive claims are empirically refuted by the data available. The general supposition of their argument—which I consider in conclusion—is particularly disquieting. (1) I do not suggest that sociobiology is equivalent to instinct theories; I merely point out that sociobiologists have drawn upon the notion that aggression is subject to genetic influence. (2) The proliferating diversity of sociobiological reasonings does not negate the fact that, as Daly and Wilson admit, inclusive-fitness theory underlies many if not most sociobiological explanations of behavior that penalizes or benefits others. Argument on the basis of group selection and even reciprocal altruism is coming

under increasing criticism (Williams 1966, Boyd and Lorberbaum n.d., Boyd and Richerson 1985; cf. Harpending, Rogers, and Draper n.d.). (3) It is impossible for me to respond to Daly and Wilson’s strident implication that I take their 1987 book into account, since this work is not due to be published for another six months. (4) To say that violence in simple societies revolves around sex and marriage is not to suggest that it can ipso facto be explained on the basis of Darwinian principles. The point here is that culture shapes, displaces, sublimates, and organizes sexual energies and tensions in complex ways that may defy sociobiological prediction. (5) *Pace* Daly and Wilson, those wishing information about Gebusi homicide perpetrators are referred to the numerous case studies and accompanying kinship diagrams in Knauff (1985*b*:chap. 7), to description of data-gathering techniques (pp. 113–16), and to accounts of sorcery inquests and acts of retribution (chaps. 2 and 4). Of particular relevance are numerical data documenting close kinship between persons who die from sickness and those who perpetrate homicidal retribution on their behalf (p. 129). While Daly and Wilson describe the killings of alleged Gebusi sorcerers as “wild melées,” they in fact tend to be carefully planned attacks. (6) The most potentially significant criticism Daly and Wilson make is that Gebusi sorcery attributions tend to be made against older individuals, i.e., those whose reproductive value to their kinsmen is minimal. This is true of persons *accused* of sorcery but not of those *killed* as sorcerers, particularly in the past (Knauff 1985*b*:140–42). A breakdown of homicide by general age-sex category (Knauff 1985*b*:117) reveals that young men were killed more frequently than older men (52.8% of all deaths for the former versus 32.0% for the latter) and that married women were killed more frequently than either widows or young women (30.2% versus 29.6% and 25.0% respectively). These figures do not support Daly and Wilson’s contention. (7) The question of overlap between categories of relationship was addressed as a note to appendix A. (8) Subdivision of homicide cases within the patriline, contra Daly and Wilson, does not disconfirm my argument. The reason that I did not subdivide homicide within patriline was that the number of intrapatriline homicides was small. Of the eight such homicides, one was of a Z, two were of a FB, one was of a FBS, one was of a FFBSS, and three were of a FFBSD. This distribution roughly parallels the distribution of persons of various degrees of interrelatedness within the average patriline. Indeed, the coefficient of relatedness in these homicide relationships is almost identical with (slightly above) the average of coefficients of relatedness in the model patriline as a whole. Daly and Wilson’s counterhypothesis concerning intrapatriline homicide is not confirmed. My larger point also remains: homicide *outside* the patriline is in a strong *inverse* relationship to biogenetic relationship.

Despite Daly and Wilson’s dismissal of my Gebusi homicide data, other scholars (including several of the present commentators) have judged them to be among

the most complete and rigorous yet available on killing in a non-state society. The standards for testing kin-inclusiveness theory that I adopted on the basis of these data are far more explicit, empirical, and systematic than the loose qualitative assessments that continue to pass as "proof" of large-scale sociobiological assertions (e.g., Betzig 1986, Reynolds, Falger, and Vine 1987). There is a growing awareness among even those sympathetic to sociobiology that more rigorous empirical standards are needed (Borgerhoff-Mulder 1987, Foley 1986, Harpending et al. n.d.).

In light of this trend, Daly and Wilson's methodological and theoretical remarks are particularly unproductive. No explanatory approach in the natural or social sciences should be immune from critical testing and refutation, particularly one that purports to conduct scientific tests on the basis of "predictive hypotheses." Daly and Wilson's assertion that sociobiology is as irrefutable as anthropology is disingenuous and incorrect. Anthropological explanatory paradigms have been and should continue to be subject to refutation on the basis of empirical and theoretical inadequacy. Over the years, paradigms such as culture and personality, ethnoscience, structural-functionalism, structural Marxism, neofunctionalism, and the "new" (now old) ecology have all been so scrutinized. Sociobiology should be similarly subject to empirical scrutiny. To do otherwise is to adopt sociobiology as a religious faith of the kind Daly and Wilson ridicule. How else can its empirical application be known? How are its "predictive" limits to be drawn? Sociobiology may have a legitimate place in the study of human behavior, and like the other approaches mentioned it is likely to be more limited in application than its zealous adherents claim. As with other approaches, it is by hard-nosed refutations and confrontation with real-world complexities that these empirical and theoretical limits should be established (e.g., Vining 1986, Knauft 1987c). Dismissing on a priori grounds any attempt at disconfirmation effectively allows proponents of sociobiology to gerrymander their data sets at will and creates a double standard of evaluation governed by bias. If Daly and Wilson are serious about making sociobiology the scientific study it purports to be, they must give up the cloak of sociobiological sanctity.

My conclusions concerning sociobiology are if anything underscored by Daly and Wilson's remarks and, paradoxically, by the genuine strengths of some of their own empirical work. First, sociobiological reasoning needs to be accompanied by solid empirical evidence; second, this evidence should not rely selectively and uncritically upon qualitative ethnographic accounts; third, predictions based on inclusive fitness are likely to have little value beyond a small range of very close biogenetic relationships; fourth, generalizations and metaphoric extensions of kin selection should not be made on the basis of hazy assessments of reproductive "costs" and "benefits"; and, finally, exceptions to sociobiological predictions should be seriously considered and not summarily dismissed.

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Institutions

■ The Latin American Committee on Indigenous Peoples' Films, an outgrowth of the first Latin American Indigenous Peoples' Film Festival, organized by the Instituto Indigenista Interamericano in 1985, has the following objectives: (1) to develop a catalog of Latin American films that touch in one way or another upon the problem of indigenous peoples; (2) to foster the exchange of audiovisual materials among the various countries of the continent and among indigenous peoples; (3) to promote the production and distribution of films on indigenous peoples, especially those originating in the indigenous communities themselves; (4) to assume responsibility for oversight of the ethical use of the audiovisual media in relation to indigenous communities, recognizing the concerns expressed by those communities; (5) to hold further film festivals (one of which has just taken place in Brazil); and (6) to create an audiovisual archive on indigenous peoples. The committee has recently become affiliated with the Commission on Visual Anthropology of the International Union of Anthropological and Ethnological Sciences. For further information, write: Alejandro Camino, Independencia 461, Miraflores, Lima 18, Peru.

■ The Instituto Indigenista Interamericano, in collaboration with the Mexican national Secretaría de Educación Pública, has assembled a selection of films that depict the values and the contemporary situation of various indigenous peoples of the region in a television series called "América Indígena." The films of the series are as follows: *Los Hieleros del Chimborazo* (Ecuador; Gustavo Guayasamín), focusing on several families from indigenous communities in Chimborazo Province who make their living by cutting blocks of ice from the 5,000-m slopes of the volcano of the same name and selling them in the fairs of Riobamba and Guaranda; *Puente de Ichu* (Peru; Jorge Vignati/Panorama Producción Perú), showing the cooperation

of three Andean communities separated by the Río Apurimac in the biennial renovation of Peru's oldest suspension bridge, constructed of a vegetable fiber known as *ichu*; *Cuetzalan* (Mexico; Instituto Nacional Indigenista), on the traditional ritual surrounding the dance "Los Voladores"; *Mayo Ya 84* (Nicaragua; Sistema Sandinista de TV), on the annual fiesta of Palo de Mayo of the Atlantic-coastal Miskitos and creoles; *Don Emilio y Sus Pequeños Doctores* (Finland/Peru; Luis E. Luna), on the life, work and thought of a curer of the Peruvian Amazon; *Santiago Tlatepuzco* (Mexico; Instituto Nacional Indigenista), on the work, family life, and festivities of the Chinantec of Usila in northeastern Oaxaca; *Yo Hablo a Caracas* (Venezuela; Carlos Azpúrua), on the threat to the cultural patrimony of the Yekuana-Maquiritare of the Federal Territory of Amazonas posed by religious missions; *Musica Andina del Perú* (U.S.A.; John Cohen); *Tsachila, Hombre Colorado* (Ecuador; José Corral Tagle), on the traditions of the Tsachila, called *colorados* by the Spanish colonists for the color they dyed their hair; *Martín Choque, Un Telar en San Isidro* (Argentina; Tristán Bauer and Silvia Chanvillard), depicting the daily life of descendants of the ancient Quechua of northwestern Argentina and tracing the process of production of a poncho; *Lamas, Tradición y Cambio* (Peru; Jorge Suárez R./Calicanto Producciones Cinematográficas), on a group in the high forest of Peru that coexists and commingles with a local creole culture; and *Pastores de los Andes* (Peru; Nilo Pereira/Centro de Teleducación de la Universidad Católica de Perú), on the alpaca herders of the high Andes. Produced by Sergio Muños, the series was coordinated by Alejandro Camino and Marina Villalobos, coordinated for television by Susana Ibáñez, and realized by Olga Cáceres; the theme music is by Antonio Zepeda. For further information, write: Instituto Indigenista Interamericano, Insurgentes Sur 1690, Col. Florida, México, D.F. 01030, Mexico.