Warfare was a major characteristic of New Guinea-Papuan societies. Particularly in the Highlands, it has been spoken of as chronic, incessant, or endemic. Exactly what proportion of time was spent on it as against other activities—economic exchange, ritual, ceremony, domestic affairs, gardening, hunting, and so on—is impossible to say. Apart from a few regions where fighting is still continuing, this can only be inferred. But the literature on the Highlands contains some fairly detailed accounts of warfare, including a number recorded from first-hand observation, or close enough to give considerable confidence. In nearly all recorded cases, warfare was an accepted feature of ordinary social living; and the time spent in actual fighting and in direct preparation for it, alone, must have been considerable.

For the present purpose, warfare is defined as planned violence carried out by members of a political unit, in the name of that unit, against another (cf. Berndt 1962:232). Fighting and skirmishing within such units were subject to fairly consistent and concerted peace-making pressures, and moral imperatives often invoked to limit and discourage internal dissension. Conversely, fighting between units was widely regarded in principle as right and proper, and distinguished by special terms which can appropriately be translated as "warfare."

Another emphasis in New Guinea-Papuan life was economic. Apart from purely subsistence activities, accumulation and distribution of wealth provided scope and incentive for entrepreneurs and manipulators. Leadership could be achieved through both channels. Fighting prowess was much more significant than economic prestige, especially in situations unaffected by outside pressures, but the association between the two was close.

Highlands warfare has been commented on generally by Read (1954a:5) and by Barnes (1962:9). Barnes suggests that: "In New Guinea a greater emphasis appears to be placed on killing for its own sake rather than as a continuation of group policy aimed at material ends." Schwartz (1963), looking at the situation from the standpoint of Manus material, takes a contrary view. As a dominant orientation in the lives of most Highlands peoples, intergroup fighting, from all available evidence, certainly involved a casual attitude toward killing. But opponents were not there to be annihilated—although this did, on occasion, occur. They were there to be fought. For the eastern Highlands, I have characterized warfare as an antagonistic game (Berndt 1962:414). In abstract, the total situation could be seen as a huge checker board, on which moves and counter moves were made, with individual units dropped as their members became refugees, or reinstated as they regained their position. (Berndt 1962:232–68). But I agree with Schwartz (1963:85) that to conceptualize New Guinea warfare as an athletic match as Vicedom and Tischner
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(1943/48, Vol. 2:150), among others, have done, is to provide only part of the picture. It was a dangerous and often deadly “game,” with the defeated frequently suffering not only physical and emotional humiliation but also destruction, loss of movable property, and even loss of land, with all that this entailed. Generally speaking, warfare was bound up with the struggle for power and prestige. Material considerations were by no means absent, but they were far from being dominant.

Warfare was, however, “expected, recurrent and co-ordinated” activity between opposing groups (Read 1954a:41; Berndt 1962:232–33). In this sense it bore a noticeable resemblance to the large ceremonial economic exchanges of the moka kind (Brown and Brookfield 1959; Reay 1959a; R. Bulmer 1960; Ryan 1961; Meggitt 1958a; Elkin 1953)—except that these last were carried out in a relatively peaceful context. The official post-contact suppression of warfare provided opportunities for economic elaboration. This is well brought out in one instance by R. Bulmer (1960:10–11), and probably applies generally to the New Guinea-Papuan situation. Where hostilities are widespread and continuous the ramifications of economic exchange are curtailed, but as warfare is brought to a standstill the economic emphasis becomes correspondingly more prominent. The two kinds of activity are similar in respect of the pervasive themes of competition and conflict which they express, albeit in different ways. Not least, a system of economic exchange today may operate through the network of allies so vital to the pattern of traditional warfare. The relationship between them was one not simply of likeness but also of interdependence. In other words, stability in fighting alliances, and in the rules and expectations governing them, had implications for trade and exchange: the more stable the alliances, the more highly developed and formalized the system of economic exchange. However, this needs further investigation.

Political organization defined the war-making unit and, accordingly, the units of allegiance and alliance. Indeed, polity in New Guinea is thrown into stronger relief than in many other non-literate societies, mainly because of the prevalent warfare. As Brown (1963:3) points out, a central government is lacking for all areas in the Highlands; it does not follow, however, that absence of fixed authority is necessarily tantamount to “anarchy.” For all the apparent disorder and chaos which warfare entails, its rules and conventions are based on assumptions about social order and its maintenance. The limitation of authority is significant; but the fact that it is short-term and diffused, resting on achievement rather than inherited status, does not mean there is no authority.

Barnes’ discussion of unilineal descent in relation to multiple membership or affiliation (1962:7) is relevant to much of the Highlands, granted varying degrees of local emphasis and recognition. Even in societies with a strong unilineal bias (e.g. Gahuku-Gama, Kamano, Usurufa, and Jate), a man’s allegiance to his patri-group is complemented or cross-cut by interpersonal ties which extend beyond its boundaries. These may hinge directly or indirectly on affinal relationships; or they may be established through personal negotiation or through inheritance, for instance when a man passes on such a bond to his
son. Such interpersonal ties may serve as a basis in arranging alliances. Multiple ties and interests are crystallized in recognized affiliation, or provision specifically made for mobile or multi-local residence, and with it flexibility of group affiliation, as among the Mendi (Ryan 1961); or, as in the case of the Huli, multi-residential patterns prevail with loyalties varying in accordance with place of living (Glasse 1959a: 279, 281). Alliances of this formalized nature are perhaps less noticeable in some other Highlands societies. But the Gahuku-Gama (Read), with perhaps the most clear-cut system of alliances of all Highlands groups, lack multi-affiliation in the Mendi and Huli sense. For certain Highlands areas Barnes rightly emphasizes the "proliferation of ties at the individual rather than at the group level" (1962: 7). But for the Highlands in general, group membership and inter-group ties are undoubtedly no less important, even in regions where multi-affiliation is most obtrusive—as among the Mendi and Huli. Multiple allegiance, interest, or affiliation does not rest simply on individual initiative, important as this is.

It is not possible here to treat warfare in any detail, or to look at it in a fully comparative perspective. Instead I have attempted simply to summarize some of the main features contained in the available published material, necessarily omitting much that is both directly and indirectly relevant.

As an integral part of social life, warfare should be considered in context, and not as an isolated feature. Religious, initiatory, and economic activities were complementary to fighting, and settlement patterns and construction organized in relation to defence and attack. Socialization included not simply training boys in the techniques or arts of warfare, but also their persistent indoctrination in the appropriate beliefs and assumptions. War-magic, or sorcery, was a widespread feature of this complex. The material weapons involved in fighting—bows and arrows, shields and clubs—took much time and energy to prepare; in the Eastern Highlands, for instance, arrow types were individually named, and in fact arrows were far more decorative and more carefully made than the sacred flutes. Songs and myths relating to war are a topic in themselves. So are modes of fighting, usually varying with the relations between the social groups involved—for example, sudden ambushes, surprise raids, pitched battles, or ritualized encounters. Arrangements regarding the announcement of hostilities, often with ritual accompaniments, and ways of terminating them, have much in common throughout the Highlands. The role of women, too, shows broad similarities, despite differing views in regard to the conventional loyalty expected of wives and their role as supporters and instigators of the main combatants—although they were not, as a rule, expected to be combatants themselves. The question of leadership, including the relation between war leaders and others, would need fuller study than present space allows.

My focus will be on three aspects: (1) the political unit, as the war-making group; (2) allies and enemies; and (3) refugees. The regions touched upon are
**Table I. Regional Distribution: Rough Positioning of Regions Referred to in This Paper (see also general map in this issue)**

<table>
<thead>
<tr>
<th>Areas</th>
<th>References</th>
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<tr>
<td>Western</td>
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<td>Western</td>
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<td>Central</td>
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<td><strong>References</strong></td>
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<tr>
<td>A2</td>
<td>R. Fortune (1947a), (1947b).</td>
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<tr>
<td>D2</td>
<td>J. Nilles (1943/44), (1950/53).</td>
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<tr>
<td>D2</td>
<td>H. Aufenanger and G. Höltker (1940).</td>
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<tr>
<td>E1</td>
<td>M. Reay (1959a), (1959b).</td>
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<tr>
<td>F</td>
<td>R. Bulmer (1960).</td>
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<tr>
<td>H</td>
<td>R. M. Glasse (1959a), (1959b).</td>
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<td>J</td>
<td>A. P. Elkin (1953).</td>
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TABLE II. ROUGH EQUATION OF SOCIAL UNITS IN THE HIGHLANDS

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D1</th>
<th>D2</th>
<th>E1</th>
<th>F</th>
<th>G</th>
<th>H</th>
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<th>J</th>
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<tbody>
<tr>
<td>Kamano, Usurufa, Jate, Fore</td>
<td>Gahoku-Gama</td>
<td>Slane</td>
<td>Chimbu</td>
<td>Gende</td>
<td>Kuma</td>
<td>Mbowamb</td>
<td>Kyaka</td>
<td>Mendi</td>
<td>Huli</td>
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<td>(Grossippe)</td>
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<td>(lineage)</td>
<td>sub-clan</td>
<td>sub-clan</td>
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<td>group (lineage segment)</td>
<td>patrilineages</td>
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<td>polysegmentary</td>
<td>lineage</td>
<td>occasional subdivision into patrilineages</td>
<td>sub-sub-clan</td>
<td>'family'</td>
<td>sub-sub-clans (comparable to lineage)</td>
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Note: The table lists the rough equation of social units in the Highlands, with each column representing a different unit of social organization. The units range from the most inclusive (Kamano, Usurufa, Jate, Fore) to the most specific (sub-sub-clans or ambilineage groups).
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shown diagrammatically in Table I. They extend from east to west across the Highlands. References are noted for each. A rough equation of social units distinguished by various writers is set out in Table II. Two somewhat similar tables have been drawn up, by Reay (1959a:35) and by Brown (1960:32). In reviewing the relevant literature I have kept to the past tense for the sake of uniformity; in some cases the present tense would still be appropriate.

THE POLITICAL UNIT

In region A1 (Kamano, Usurufa, Jate, and northern Fore language areas) the political unit was, generally speaking, the “big name,” which I translate as “district” (see Berndt 1962; Berndt in Read, ed. n.d.). Each of these included a varying number of villages and hamlets, containing a nucleus of one or more patrilineages. However, the unit which I call a clan was co-resident and exogamous among the southern Kamano, Usurufa, and Jate, whereas among the northern Fore it comprised linked lineages of one name occupying different sites in the same district and marriage took place within as well as outside it. In other words, in the Fore case the unit of common descent (clan) cut across the unit of common residence (village or hamlet) and intermarriage reinforced the kin bonds between its members. This combination of lineages could be viewed as a sub-political unit. When a lineage split up, for example through internal dissension, the small breakaway group would move to a new site in the same district, or align itself with others to make up a clan.

The main settlements were on high ground, with palisades enclosing one or two men’s houses and a cluster of women’s houses; all but a few small gardens lay outside, with scattered pig-tenders’ huts and garden huts, not consistently occupied. Each was responsible for its own defence against sudden attack, but among the Fore there was greater expectation of help from other settlements, in this case from other lineages of the same name; an attack on one was conventionally viewed as an offence against all. These two slightly different forms of organization represent two kinds of attempt to achieve security in the face of intermittent warfare and the assumption that warfare was inevitable. Among the Kamano, Usurufa, and Jate, district affiliation was more obviously important. Men fought in the name of the district, not of their respective villages or hamlets or lineages. In full-scale hostilities each settlement within a district would be attacked in turn, and only when all were laid waste would people leave the district as refugees.

In both cases, apart from warfare, members of the several clans constituting a district came together for age-grading and other sacred rituals. The district was the largest unit of relative solidarity. Conventionally and normatively, it was the political unit. In wider-than-personal relations with other districts its members were said to act as one, and structurally all such units were conceptualized as being equivalent. Nevertheless, in a crisis a person could rely with certainty only on members of his own clan, and ultimately only on those of his own lineage.

In area B (Gahuku-Gama), Read (1951:155–56; 1954a:33–8) uses the term sub-tribe for the district group known by a “big name,” the members
of which acknowledged ties of friendship and common origin and combined in warfare. It was made up of fortified villages or clans, as in area A, each known by a “little name,” but some exogamous and others not; these in turn were composed of patrilineages (sub-clans) and/or polysegmentary lineages. But the village was the core of community life (Read 1954a:13). The district or sub-tribe was not, as in area A, the political unit; but a number of such district groups, in combination, formed a “tribe,” known by a composite name. This was the political unit, the widest group within which warfare—as distinct from ordinary fighting—was forbidden, and its common enemies were other “inclusive combinations of district groups” (Read 1951:157). The links uniting sub-tribes in this way were relatively permanent, and could be called formal alliances or political ties (Read 1954a:40).

In area C (Siane), village organization centered on the patrilineal virilocal clan, the executive unit in fighting (Salisbury 1962a:12, 15, 25, 26). This was exogamous, and the “largest effective unit,” with much more autonomy than in area A. Linked clans comprised what Salisbury calls a phratry (comparable to “district” in A). The largest unit was a tribe (Salisbury 1962a:13, 14), including up to nine clans. A small tribe (of two to three clans) was exogamous, and equivalent to a phratry, but a large tribe included several phratries. Since the phratry did not unite for offence and defence, but its component clans remained neutral when one of their number was involved, it was the “negative” political unit, the clan the positive political unit. In this scheme the politically active unit was kept to a minimum, neutrals counteracting the spread of hostilities, with economic considerations serving as a further element of control.

Area D (Chimbu, specifically the Naregu) differed from these in spatial positioning as well as in social alignments. Residential and cooperative groups were based on proximity and convenience, not necessarily on common descent (Brown and Brookfield 1959:5). Men congregated in communal houses, while women and children’s houses were scattered and hidden for their protection. Such an arrangement would have been less practical in the eastern Highlands, where so much warfare consisted of raiding in contrast to the more formalized Chimbu variety. Aufenanger and Hölter (1940:16), for the Gende (D, which appears to be essentially of Chimbu type), speak of “enclosed or fenced scattered hamlets,” sometimes including small gardens. The hamlet enclosure included a men’s house, occasionally a mixed “family house,” and sometimes one or more women’s houses, partly inside but divided by the fence; but most women’s houses lay outside, either near the fence or up to ten minutes’ walking distance away. Nilles (1950:25–7), also for area D, speaks of patrilineal clans (equivalent to A and B “district”). The largest of these were divided into exogamous sub-clans (“village” clusters or scattered settlements), made up of several local groups each with its own name (i.e., hamlets occupied by extended or joint-family groups). The local group was the most effective unit, the executive unit, focusing on the men’s house. Among the Gende (D) the pattern was much the same. But Nilles (1950:40) suggests that the clan was the political unit; fighting between local groups was mild, and settlement
could be effected through payment of compensation. According to Brown (1960:24), the named sub-clan (equivalent to Nilles' local group) was associated with a stretch of territory made up of a number of garden blocks. The clan was a distinct exogamous unit (equivalent to Nilles' sub-clan), several of which (two to eight) made up a phratry linked by common tradition and descent. A tribe was "an alliance of neighbouring clans" (Brown 1960:24, 30; 1961:77), to be distinguished from a phratry—although some tribes were localized phratries. Clan and tribal solidarity were important for defence of common land (Brown 1963:4), and these units acted together in economic exchanges; but the tribe might break up through internal fighting. Efforts were made to "resolve differences within the clan, rather less within the tribe, and none between tribes."

Since continuing hostility was discouraged within the sub-clan and clan (Brown 1960:27, 28), although there was fighting between clans, the clan would seem to have been in fact the effective political and war-making unit. But "interdigitation of land prevented warfare in the phratry:" threat of defeat and destruction for any of its component clans led to the combination of all members of that phratry as a military body. Brown and Brookfield (1959:41) note that fighting was more common between sub-clans and clans belonging to different tribes; and according to Aufenanger and Höltker (1940: 118), for D², one settlement would make war against other like units, or one sub-group against others.

The Kuma (area E') of the middle Wahgi, living on high terraces and on the steep slopes of the narrower valleys, were dispersed in distinct local settlements (as in area D¹ and D²). Each of these last represented a parish, which was "clan-based," with an exogamous residential core of adult males acknowledging common unilinear descent (Reay 1959a: 25, 26, 37, 51-3). This parish-clan was the widest political unit. Clans were linked to form phratries, and each phratry-constellation (Reay 1959a:26) included three kinds of relationship: (a) between enemy clans where no form of cooperation was possible or desirable; (b) between "brother" clans; and (c) between potentially friendly and potentially hostile clans. War was not waged to annex land, as in area D¹ and D². Those in (a) were traditional enemies between whom no intermarriage took place; those in (c) were available for intermarriage, but not during hostilities (1959a:26-7): compensatory payments and peace-making were necessary before intermarrying was resumed. Within the phratry, then, this three-cornered situation provided for all relations of conflict and cooperation, restricting and limiting warfare spatially; there is no evidence to suggest that warfare occurred outside the phratry. Nevertheless, there was considerable spatial mobility. The parish-clan was subdivided into sub-clans, and often this smaller group was the executive body "of the wider integrative unit" (1959a:53). Luzbetak (1958:58, 74-5) makes the same point for E² (at Banz).

Among the Mbowamb of Mt. Hagen (area F), as reported by Vicedom and Tischner (1943/48, Vol. 2:1-145), the limited-diffused settlement or "house-
place" (an expression used also in area A') had a core of one or more sibs; many of these combined to form named Grossippe, or "great" clans (1943/48:24–5). The dwellings were "family houses" in monogamous unions, or a cluster of women's houses about the husband's house in polygynous unions, far enough apart to allow for privacy but close enough to ensure a measure of "togetherness." A number of such named settlements (maximum 27, minimum 6) made up a settlement-complex, equivalent in one sense to a Stamm (or tribe), with a "general name." Although members of a settlement shared various common activities, the sib was the most solidary group and not the inhabitants of a settlement as such—especially since these included, at times, wives' relatives as well as other "outsiders." Individual persons were adopted, from the same or different Stämme also, weak sibs or small breakaway groups could be adopted by others, as their "protectors" (1943/48:5). Each sib had, among other common features, its localized dance-place, but as a result of segmentation its members might be scattered among two or more settlements/villages. (Apoklum settlement, weakened through warfare and forced to accept former enemies as close neighbors, was one example: 1943/48:4.) Wars between different Stämme were deliberately aimed at destroying ("annihilating and debilitating") opponents. Fighting within a Stamm, between its component sibs, was not marked by the same ferocity, did not involve that aim (1943/48:144), and was called by a slightly different term—in short, was not warfare as defined here (1943/48:151). It would seem, therefore, that the widest political unit was the Stamm, and the executive unit the sib, which cut across settlement allegiance.

The Kyaka of area G, on the slopes of Mt. Hagen Range between the Baiyer, Lai, and Ku Rivers (R. Bulmer 1960:2–4), lived in dispersed homesteads and homestead clusters. Such small localized units were apparently equivalent to the named sub-clan. The single contiguous territory forming a larger settlement was occupied by the exogamous clan, the independent warring unit. Fighting within it was discouraged, and it was the coordinating group for moka economic exchanges as well as for ritual purposes. Beyond a certain point, it segmented to form a number of settlement groups; larger clans divided not only into sub-clans but also into sub-sub-clans, comparable to lineages. Several clans linked by common patrilineal descent formed a "great clan," generally exogamous in respect of members by birth, which could be regarded as the widest political unit. Within this, ideally, no warfare should take place; however, in practice it did occur. The main executive unit thus appears to have been the clan, which had the power to wage war.

Among the Mendi of area H (Ryan 1961), the largest named social group was the exogamous clan, made up of a number of sub-clans claiming direct patrilineal descent plus immigrant non-agnatic sub-clans. New sub-clans were formed by fission and by accretion of refugee groups. The sub-clan was the economic unit, and children born to non-agnatic migrants had a free choice in their future allegiance. Two or more clans which shared or occupied contiguous territories, were genealogically related, and engaged in consistent
interaction, as well as intermarrying, formed a clan-cluster or “inter-clan alliance.” Affiliation and residence were extremely flexible. The clan-cluster, however, was the largest politically active group. Fighting sometimes occurred within it, but the narrower the social range between the disputants the greater the likelihood of settling it. Fighting outside the cluster range was hard to resolve.

The Huli of Tari (area I) lived in isolated homesteads, each in its own gardens (Glasse 1959a:277), and each containing two or more household groups. The core of these was the ambilineage—a corporate body, centered on a parish territory, within which conflict was settled without recourse to warfare (Glasse 1959b:183). The unit associated with this territory was the local descent group (1959a:278), which might be termed the political unit. Lineages which together made up clans were widely scattered, and phratries, accordingly, were spatially diffused. Lineage segments, however, occupied a specific stretch of territory. There was no consistent coactivity between clan members (Glasse 1959b:180). The parish was fringed by defensive trenches, forming a network of pathways across the whole area, and it could be barricaded off in times of war (1959a:278). A major local feature was multi-residence within a limited kin circle. A man cultivated gardens in a number of parishes and had rights also in those of his wife or wives. According to Glasse (1959a:279, 281–3), one man had descent connections in 26 parishes, while another regarded 8 parishes as “home”; these cases were not exceptional. With a high rate of individual mobility, the composition of local descent groups was constantly changing. A man's major loyalty at any given time was to the group within which he was living; he would support it in hostilities against all others except, as Glasse puts it, two or three local descent groups to which he felt closely related. Where loyalties fluctuated with residence, it is not easy to speak of a political unit, particularly since warfare necessarily involved allies. Two local descent groups might feud, with limited fighting; but as soon as either received aid from others, this was warfare (1959a:285).

In area J (Enga), the basic land-holding and war-making group, the political unit, was the exogamous patri-clan (Meggitt 1957c:133–35). It comprised two to seven sub-clans (or patrilineages), which in turn were subdivided into coresident groups. A cluster of contiguous clans (three to nine), known as "brother clans," formed a phratry. In the past, apparently, there were large-scale "sporting fights" in which two or three phratries would confront one another as units. Two clans, finding themselves in conflict with each other, would invoke the aid of their respective phratries. There were also duels between important men, concluded after ten or so casualties with an exchange of goods. Normally, warfare did not involve phratries as units (1957c:136), although co-phratry clans would occasionally assist "brothers." Generally, phratry affiliation was subordinated to personal considerations—helping an exchange partner, or a relative. Inter-clan fighting was the more usual: a neighboring clan might be attacked without warning in an attempt to seize its land, destroy houses and occupants along with gardens, and force the
defeated to flee. Sometimes a large sub-clan attacked a smaller clan, but if the victim were faced with defeat its parallel sub-clans would come to its aid. Generally sub-clans of the same clan were expected not to fight; they occasionally did so, but this was not warfare (Meggitt 1958a:271, 273).

ALLIES, ENEMIES, AND REFUGEES

In distinguishing the political and war-making unit, attention must be paid to allies as well as to enemies.

In area A1, political alliances between districts were tenuous and designed to achieve limited short-range ends. Direct requests for such aid took the form of payments or bribes (Berndt 1962:254-58), or appeal to common fear of a stronger and threatening neighbor. All “other” districts were a source of potential hostility as well as friendship. A constellation of contiguous districts represented the zone of maximum interaction. Within it, from the perspective of any given district, interaction was most intensive at the center, least so at the peripheries; and on this basis three spheres can be broadly delineated. Take one Usurufa example, centering on a district which I shall call ‘Z,’ and covering in memory depth a period of approximately 50 years. The small inner sphere surrounding Z involved only four other districts, but to it were attributed the fatal shootings of 66% of the Z men and 61% of the Z women (lineal members) killed by arrows, 62% of all Z sorcery cases, and 41% of all Z marriages. Three further districts made up a second, intermediate, sphere; to this were attributed 28% of all Z men’s marriages, but only 1% of all Z deaths. The residue of Z deaths and outside marriages was spread spatially throughout a third, peripheral, sphere which included about 21 other districts. The two main spheres, in a fairly confined region, marked the area of greatest strain but also of the greatest cooperation. Most fighting took place between members of these particular districts, but they were also the main source of marital partners as well as of guests at certain festivals and ceremonies. The further apart any two districts were, both spatially and in kin and quasi-kin terms, the less the likelihood of warfare. Members of different districts were linked by both consanguineal and affinal ties, and neutrality in respect of certain relationships was fully accepted as a principle. There was no demand for total participation. On the other hand, the presence of certain relatives, and affines, could exacerbate a situation. Individual persons were frequently faced with a conflict of loyalties. The two major spheres of interaction were criss-crossed with lines of distrust and conflict, potential hostility, and outbreaks of physical aggression, but counterbalancing these were ties of loyalty, affection, trust and cooperation.

Following defeat and dispersal, segments of a district might be scattered over a fairly wide area. No traditional pattern of land conquest prevented them from reassembling on their hereditary ground, although practical difficulties might delay their return. But some refugees, especially after a long series of defeats and deaths, in time became affiliated to their host district and lost their separate political identity. Women captured in fighting might
be taken as wives, and children absorbed, or partially so, into the lineage and
district of their captors. Adoption on this basis, like adoption between close
kin in different districts, complicated the issue of district membership and
district allegiance in time of war.

In area J, in contrast, apart from the formalized triangular battles (Megg-
gitt 1958a:268), inter-clan fighting took place with the express aim of land
conquest. That certain relatives should remain neutral in fighting was impor-
tant. In any particular sequence, participants might have close relatives,
especially matrikin, on the opposing side. They were careful to avoid them,
for fear of destroying a valuable exchange partnership. Moreover, a way had
to be left open in case of possible defeat. Refugees, when their numbers had
been built up, drew upon matrikin and affines in an endeavor to recover
their lost land (Meggitt 1957c:135–36) but had only a slender chance of doing
so. There was thus ample scope for the permanent resettlement of refugees
with matri-kin and affines, so that they became absorbed into their hosts’
clans, as sub-clans. Such immigrants made up 5 to 35% of any one clan-parish
population (Meggitt 1957c:134–36). Between clans, fighting was bitter. When
casualties became heavy—10 to 15 men, for instance—older men would
intervene, drawing attention to the loss of “actual or potential exchange
partners”—a persuasive argument. They would take the lead, then, in peace
negotiations, during which clan boundaries were reaffirmed and compensation
was paid in respect of deaths.

Economic exchange, or the role of economics as a moderating influence in
warfare, was relevant to other areas, too (e.g., H). In area G, R. Bulmer (1960:
10–11) emphasizes the economic aspect in considering the influence of the
moka in disputes. Every man was joined by close ties to members of at least
one other clan: these were the moka partnerships, which war disrupted. Wars
involved compensation, and the expenditure of commodities which could
otherwise be used in moka. This could not take place between groups until
outstanding payments had been settled. In area J, in the intervals between
fighting, clans maintained exchanges along these lines (Meggitt 1957c:136).
Relatively small spheres of intensive interaction (cf. area A1) involved several
contiguous Enga clans. In Meggitt’s example (1958a:270), one clan had had
disputes with at least 41 different clans, often several times; and as a result,
over a period of about 20 years at least 36 deaths had occurred. Of these, 70%
involved clans immediately contiguous to it, 22% others slightly more distant
spatially, and 8% others more distant still. In the same period of time, mem-
bers of that particular clan had contracted 182 marriages with these others.
As Meggitt notes (1958a:278–79), and as in area A1, there was a definite positive
and fairly high “correlation between rate of killing and rate of marriage.”
“The main causal factor,” he says, was “propinquity.” The same feature is
noted by Elkin (1953:170).

The highly developed system of multi-affiliation and multi-residence among
the Huli (area I) could have a direct bearing on the refugee situation, although
Glasse is not specific on this point. In an adjacent area (H) the connection
seems clearer. Among the Huli, warfare hinged on alliances formed by the small local descent groups (1959a:285), but because dissension almost inevitably developed between them these alliances did not last long. Glasse adds, "Revenge defines enemies and allies, but when the fight is over, the principles of redress divide the allies who fought as one" (1959a:274), thus hindering the formation of large and powerful groups. Allies became such not only for kinship reasons but also because they found pleasure in fighting (1959a:286). However, after parishes had been laid waste and men, women, and children killed (the maximum number of deaths being about 18 on each side, plus injuries), peace was negotiated by neutrals or by men with relatives on both sides, an arrangement involving compensatory mortuary payments. Responsibility lay with the instigators and was framed in individual terms, the main brunt falling on the two descent groups, which were obliged to pay for the losses of their own allies. Enemy compensation, however, was paid only occasionally to prevent the continuation of war and feud (1959a: 286–87). Payments to allies could lead to conflict when claims were "undervalued, overlooked or completely rejected" (1959a: 287–88). Each death in a war thus involved the instigators in a heavier responsibility and forced them to seek peace, a major controlling force in all Huli fighting. Another control hinged on the fluctuation of loyalties expressed through the rule of multi-affiliation.

Among the Mendi (H), while the clan-cluster formed by interclan alliances made up a political unit, a further range of political alliances of a transitory nature was maintained by economic exchange, the clans involved being known as "brotherhood clans." Clan-clusters entered into political alliances with certain of their neighbors, and there were also distant allies, usually distant affines. Every clan had enemies, and fighting was nearly constant. Enemies, however, did not intermarry, since the elaborate and protracted exchanges involved in a betrothal—kept to a minimum in area A1—would be difficult if not impossible between warring groups. Affines were usually friends, their relationship cemented repeatedly by personal exchanges. Economic relationships could not persist between enemy groups, and this in fact differentiated allies from enemies. Ryan (1961) notes that economic alliances were actually political alliances. And alliances played a considerable part in everyday affairs. While not formalized to the extent found in area B, they were just as significant. Yet in area A1 these features of economic exchange, intermarriage, and warfare were part of the one socio-political system. Among the Mendi, fighting between affines would break up marriages and women would return to their patrikin; if they remained with their husbands, they severed all ties with their own kin. Affines did not shoot at one another, and if a man's clan was involved in an encounter with his wife's kin or mother's kin he just did not fight. Fighting classified as warfare involved three kinds of participants: (a) members of the two groups responsible for having started the fight, referred to as "fight-bases"; (b) regular allies of both; (c) relatives of either party who had come to enjoy the fight, and in so doing would "acknowledge kin affinity." Truce ceremonies lasted over several years, but these were separated from
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negotiations designed to compensate allies who had lost members in the fighting, in much the same way as in area I. However, in all warfare the main intention was to disperse the opposing fight-base, although its land was seldom occupied. The vanquished would become refugees. They might return to their land later after agreement with the victors, and after payments had been made; but more generally they would seek shelter among their matrikin, wives' patrikin, or sisters' affines. These "centers of refuge" were kept open only by maintaining economic exchanges. In fact, the basic reason for gift-giving and for exchanges of this kind was to provide "potential refuge-giving relationships" which were often separated from political alliances. Dispersal of groups of people as refugees seems to have taken place fairly frequently. But warfare also helped to limit population, and arable land was plentiful. Ryan (1959:268-74) suggests that the flexibility of residence-patterns was a direct consequence of Mendi warfare, offering a solution to refugee problems.

In area F, too, alliances were an inseparable part of warfare as locally defined (Vicedom and Tischner 1943/48, Vol. 2:154/55). Supposing, for instance, two Stämme were at odds, but one could not attack the other directly as it wished to do because they were too far apart or were separated by the territories of others—it might then try to get neighbors, as allies, to act on its behalf. Or a weak Stamm might offer voluntary help to a stronger: "When you fight so-and-so, we'll go with you." Not all men of one Stamm joined in fighting another; some remained neutral because of kin or affinal ties. But each side also included individual members of yet other Stämme, participating on personal grounds, such as helping their daughters' husbands or other affines. Alliances could thus be established through marriages between members of different Stämme (1943/48, Vol. 2:146). Jilting of a suitor might start a war, with widespread repercussions, but a major aim in arranging a marriage was to secure strong affinal kindred and thereby the friendship of powerful sibs from other Stämme. This "led to the greatest complications" (1943/48, Vol. 2:155). Men of the same sib might have wives from sibs in opposed Stämme and consequently fight as volunteers with the kindred of their respective wives. This gave rise to the ambiguous position of men of one sib fighting on different sides, although they were careful not to attack members of their own sib. Such voluntary helpers were treated like other allies, and, as in areas I and H, the Stamm for which they fought was held responsible for paying compensation in the event of their being killed, not the side which actually did the killing. Here also allies were, in general, very capricious (1943/48, Vol. 2:157), defining loyalty largely in economic terms. Except in the case of volunteers and of sibs belonging to the same Stamm (1943/48, Vol. 2:154-55), allies required pay for their services, and alliances were often transitory. Vicedom and Tischner speak of a "hired relationship" (1943/48, Vol. 2:156), and point out that allies dissatisfied with the compensation paid to them might "go over to the former enemy side" in order to "take vengeance on their former allies." The expectation of assistance between close affines may have had a restraining influence in warfare, by providing a range of cross-
cutting ties. But combined with the system of hiring allies it could have had a contrary effect, too, by encouraging the spread of disputes which might otherwise have been more narrowly contained. It could also have helped to detract from sib solidarity, and this is probably reflected in the settlement pattern. At the same time, this pattern, together with the positive use of affinal ties, seems to have provided greater security for refugees than in area A1. Clearly there was a refugee problem, associated with changes and blurring in land boundaries through time (1943/48, Vol. 2:1–2 et passim). Such persons usually found protection with their affines, resulting in some degree of multi-residence, although less obviously so than in areas H and I.

Among the Kuma (E1), with the exceptions already noted, no traditional alliances took place between parishes (Reay 1959a:53), while “brother clans” did not necessarily assist one another in fighting except against those they had previously fought (1959a:54). Enmities were enduring and every male had the responsibility of maintaining them. Women identified with their own patri-clan, and loyalty to their husbands’ group was seen as relative to their own. Their traditional enemies, for instance, were not necessarily the same. In the event of hostilities, a wife might be in a position to exploit the situation, and if her husband were in the defeated group she might allow herself to be captured (1959a:183). Relations between enemy clans were “strictly incompatible with intermarriage” (Reay 1959a:59), but wives of traditional enemies could be captured and taken as wives.

One aim in Kuma warfare was to drive the defeated from their land, and this apparently took place quite frequently in pre-European times. About half of the Kuma parishes had been driven from their home grounds, some returning later, others going to new territory (Reay 1959a:53). Refugees lived with relatives or affines until they became strong again, or until peace-making ceremonies permitted them to return; or they acquired land from their hosts “in exchange for one or more brides” (1959a:7). Large clans were particularly powerful, but also particularly vulnerable because “size leads to segmentation, and the frictions that come with size hasten the process.” (Reay 1959a:32, 192). Reay sees a direct correlation between segmentation and warfare (1959a:32–3). Parish-clans absorbed whole refugee segments of other clans; remnants of defeated clans disappeared in this way, their children becoming members of the host clan (1959a:32–3, 37).

In Chimbu (D2), there was no consistent pattern of enemies and allies. (See Brown and Brookfield 1959:42–3, re table indicating number of independent instances of opposition and alliance in battles.) Compensation was rarely paid outside the tribe. When allies suffered a loss, that was a different matter. However, “alliance tribes” were made up of two groups of nearly equal size, since only in this way could they defend themselves against neighboring tribes. Almost half of the marriages in Chimbu were contracted within the tribe (Brown 1960:33), so that intra-tribal affines were “more often collaborators rather than opponents.” It would seem, however, that, as in the case of area E1, intermarriage and warfare were regarded as incompatible.
Nilles (1950:35) suggests that a marriage helped to bind groups together, while a quarrel between them meant its dissolution.

Intertribal wars were sometimes responsible for migrations and changes in territorial patterning (Brown and Brookfield 1959:39–44, Brookfield and Brown 1963:79). Although most fighting was carried out by small groups, larger battles were usually brought to a close after a few killings when members of the losing side were routed. According to Nilles (1950:40), people might cease fighting “only when exhaustion and starvation force them to stop”; but he speaks also (1943:117) of seasonal fighting. Brown and Brookfield (1959:42) report that occupation of a defeated group’s land was fairly common. As far as sub-clans and clans were concerned, however, land conquest was not necessarily permanent, and the defeated group might be invited to return after payment of compensation. Friendly groups occasionally assisted refugees to regain their land, and this was one of “the few occasions of true military alliance” (Brown and Brookfield 1959:41). However, the fact that many refugees failed to return provided one “explanation of the present scattered distribution of some phratries, clans, and even subclans.” Taking refuge with kin and affines sometimes led to absorption in the host’s group (Brown 1960:28–9). Remnant groups (phratries) which had dwindled in numbers could strengthen themselves by accepting refugees, or by arranging for an alliance with a more powerful phratry. Multi-affiliation (as in areas I and H) was probably a feature of Chimbu organization, at least to some extent. Aufenanger and Hölhtker (1940:16–17) infer this for area D2 in stating that residence was open to personal choice, within a certain linguistic range, and that the composition of a settlement was always changing—“some leave, some come in.”

Among the Siane (area C), clans fought clans of other phratries (Salisbury 1962a:25 ff.). Relations between unrelated clans were normally hostile. Nevertheless, they supplied one another with wives. Salisbury says, “It may be expedient for the clan to be allied with some clans and to exchange sisters with them while actively fighting with other clans.” (1962a:25) But alliances changed quite rapidly, and people pointed out, as in area A1, “They are our affinal relatives; with them we fight.” In fact, apart from some minor differences, the similarity with area A1 in this respect is close. Refugees always had a friendly phratry clan to fall back on. When two clans were actively fighting, neutrals (other clan members, from each phratry concerned) would “sit on the side-lines watching,” and offering advice on how to settle it (Salisbury 1962a:26–7). Once the actual fighting was over they would arrange for peace payments to be made (in much the same way as in area I). There was also “ceremonial warfare on cleared battle-grounds”; “renowned fighters” of opposing sides would joust “until one . . . caught off balance” was left to be killed, after which the rest of his clan might flee to seek refuge.

In area B among the Gahuku-Gama, warfare took place between traditional enemies, who might be “separated by only a few miles” or “no more than thirty minutes’ walk apart” (Read 1954a:22). There was a preference
for in-group (tribal) marriage (1954b:865). Should a pair of linked tribes intermarry, they did not make war on each other. The Gahuku-Gama regarded women from enemy tribes as particularly dangerous, and therefore rarely captured but usually killed them (1954a:28). It would seem, then, that here too, in contrast to areas A1, C, and J, warfare was regarded as incompatible with marriage. Formal alliances between district groups (sub-tribes) were the only "real" and enduring ones; others were transitory (1954a:41). The whole Gahuku-Gama area could be mapped out so that "From whatever point . . . the continuum of social ties spreads outwards, uniting some groups in a common bond on the one hand and opposing them to a different combination of groups on the other" (Read 1954a:38, and diagram, 41, Fig. 5). This defined the range of permanent oppositions and permanent political ties. Warfare was thus a form of coordinated activity, just as it was in a different context in area A1. A dominant aim in warfare, as apparently in all examples noted in this paper, was to scatter the enemy, forcing its members to become refugees—and killing a number of them in the process, with the usual devastation of houses and gardens. Read (1951:157, 159) mentions many cases of people forced to leave their homes, finding refuge within the Gahuku-Gama constellation and even beyond. There they would try to muster enough strength to regain their own territory. The search for land was an important issue in these wars (Read 1952b:442), but not necessarily as a matter of conquest; it applied mainly to refugees. Broadly speaking, among the Gahuku-Gama (Read 1954a:43) there was an "extension of political boundaries" to achieve a larger and more powerful social unit. The "shifting pattern of temporary alliances" rested simply on expediency. In local perspective the "survival of each group depended," primarily, on retaining a more firmly defined balance between enemies and friends.

CONCLUSIONS

In a region which is seemingly so diverse, generalizations are not easy to make, and this is especially true of a topic such as warfare. In translating vernacular terms and local concepts, the research worker is confronted with the problem of presenting these "inside views" within a framework reasonably acceptable to readers and colleagues. Too inflexible an agreement on terminology can force an appearance of unity upon the empirical material. Lack of agreement, or too idiosyncratic an approach, for example in regard to labelling the social units involved, can accentuate the impression of diversity. A satisfactory balance is not easy to achieve, especially in the initial stages of research where concentration on specific societies or regions is a prime consideration. Systematic comparison is likely to be more successful once local data are available, although obviously it can be simplified by the use, from the start, of a check list or list of categories to make sure that all relevant points are adequately covered.

In the present case, there is already a formidable amount of material on the topic of Highlands warfare, much too detailed (for example, in the Mbo-
wamb material) to be summarized here. More is likely to be available in future, despite the fact that this is one of the first features of local life to disappear under administrative pressure. Even so, there are gaps and differences in approach which make comparisons difficult. What does emerge is the striking similarity in certain respects throughout the Highlands as against an equally striking divergence in others. To see in perspective the Highlands region considered here, one would need to consider it in relation to other parts of Papua-New Guinea, including the coastal areas with which there are so many resemblances—not least in regard to warfare. Head-hunting, however, appears to be one exception in this respect, while cannibalism has been reported for only certain parts of the Highlands, particularly in the east. Notions of equivalence varied, too, and not only in balancing goods against goods, or goods against the injury or killing of persons. In vengeance-killings, for instance, equivalence ranged from the general theme of "a person for a person" to more specific demands, "an adult man for an adult man, a woman for a woman," and so on.

In brief, much the same precipitating causes of warfare are listed for all these Highlands areas, most notably "blood-revenge," women, pigs, insults and sorcery accusations, and disputes about ownership of land or food resources (such as pandanus nuts and edible fungi). Land conquest, as an explicit or implied aim, occurred only in some areas; but the aim of dispossessing any enemy unit at least temporarily, driving its members from their territory, was widespread. And in all these areas fighting, combined as it was with personal adornment and the aesthetic appeal of song and ceremony, represented one of the most colorful aspects of living. Warfare posed certain similar problems for the whole Highlands region. Although most of these people are reputed to have "enjoyed" warfare, or at least to have taken it largely for granted, and although in one sense it resembled a sporting contest or game, from all accounts it remained pleasurable or satisfying only so long as one was undefeated. What is more, speaking of warfare as a game may obscure the fact that for adult males it was far more than a hobby or spare-time diversion. If not a full-time occupation, it was certainly not far removed from that; and it could be described as a major preoccupation. Strength generally, and fighting prowess in particular, were major cultural and personal emphases, and it was recognized that those in opposition, or potential opposition, had much the same views and could respond in the same terms.

There were attempts, then, deliberate and otherwise, to widen the executive political unit as a means of deriving additional security. The most highly formalized example was that in area B. A more usual way was to establish a broadly based political unit, within which clans, for example, had war-making rights. Thus any one clan, if faced with defeat, was able to fall back on the wider unit for its support. This was the case in A1 (the village-clan/district), D1 (clan/tribe), G (clan/great clan), and F (sib/Stamm). In E1 (clan/phratry), a refuge was always available in the parish land of a parallel clan member in
one's own phratry, even though the phratry included other clans which were classified as enemies. The use of neutrals (as, for example, in C) provided further security, and in most regions allies were available on a permanent or transitory basis. Another way of widening the social area of protection was to allow for multi-affiliation or multi-residence (as in areas H and I).

Throughout the Highlands, there was the persistent problem of refugees. A fairly high rate of mobility was a direct consequence of warfare. Irrespective of what particular measures were taken, whether or not "refuge centers" were maintained, the lot of refugees was a difficult one. Their position was little better in those societies where affines played a dominant part as hosts. In fact, it seems that where affines were regarded as enemies there was more chance of refugees recovering their own home territory. Where traditional enemies were not a source of wives, there appears to have been a greater emphasis on multi-affiliation and multi-residence. Movement of refugees, whatever their prospects of regaining their previous position, meant that land had to be available in sufficient quantity to cope with such residential changes. Ryan's suggestion (1961) that this was made possible at Mendi because the population was kept down through a fairly high mortality rate in warfare might be relevant also to other areas. Yet in most fighting, with occasional exceptions, the death-rate for individual battles or war-sequences was not particularly high. (There is not much information about its relation, proportionately, to death from other causes.) On the other hand, in three areas where population density was high (Chimbu, Mt. Hagen, and Wabag) war also involved land conquest (Brown and Brookfield 1959:42; Vicedom and Tischner 1943/48; Meggitt 1957c: 136). In nearly all cases (with some exceptions, as in areas A1, B and C), only a small proportion of refugees could reasonably expect to return to their "home ground." Although return was institutionally provided for by multi-residence and multi-affiliation (as in H and I, and possibly in F), absorption or assimilation of refugees into the clan (or similar unit) of their hosts was more usual, especially in densely populated areas.

From east to west, two broadly different settlement patterns with minor variations are distinguishable. Villages and hamlets of a fairly compact kind were common in the eastern Highlands, although there were scattered dwellings as well; but in the center and west, beyond the Gahuku-Gama-Siane, the predominant pattern was one of scattered hamlets and settlements. Throughout the whole region, certain sites were palisaded for protection against enemies. A correlation between these forms of settlement and the solidarity of the unilineal descent group seems plausible. Villages were usually occupied by a basic core making up a patrilineal virilocal clan (C), a patrilineal local clan (B), or parallel patri-lineages forming a clan (A1), plus wives and adherents. The population of the diffused settlements was much more varied. Such characterizations as these are not wholly satisfactory, however, if only because of the interplay between ideal and actual in any given case: considerable diversity in the actual situation might go hand in hand with an ideal of uni-
lineal descent and unilocal residence. In any case, the contrast is not of the same magnitude as if, say, a pattern of dispersed single-family dwellings were being compared with large villages inhabited by long-settled populations.

Dispersal accompanied by multi-affiliation represented one approach to the problem of security against attack, and had certain advantages from the standpoint of defence. A major disadvantage lay in the difficulty of mustering, at short notice, a fairly solidary body of fighting men. Settlements containing a more or less stable nucleus of male members explicit about their main allegiance in warfare were in a much better position on that score. But readiness to unite on a corporate basis, or the cohesiveness of what can be classified, variously, as the political unit, did not necessarily rest on co-residence in well-defined settlements. Nor does an ideal of unilineal descent represent the only kind of ideology appropriate for that purpose. Stability and continuity in political alliance as against transience and flexibility, with the further criterion of combining or differentiating between warring and inter-marrying relationships, represents another range of possibilities. “Permanent” alliances provided a base line of social identification and affiliation, perhaps just as effective for this purpose as the ideology of unilineal descent, giving some coherence to groupings which on the criterion of descent alone might appear to be fairly loose and ephemeral. In conjunction with an emphasis on unilineal descent, of course, it could have a doubly reinforcing effect. Most Highlands groups apparently tolerated without much difficulty changes in affiliation, in practice if not necessarily in principle, and were extremely tolerant of shallow time depth where social relations and especially group membership were concerned. But not enough information is available, in spread and in detail, to allow us to see all those variables in perspective on a Highlands-wide basis. Even at the level of simple description, leaving aside more difficult questions of correlation and explanation, it is clear that likenesses and differences on this one topic alone do not fall neatly into patterns. Even the most tentative efforts to make them do so would appear superficial or, however slickly done, little more than speculative.

Overall, however, defining allies and enemies in effect defined also the area of intensive interaction, forming a “community” which was recognized as holding common views about cooperative and antagonistic relations. Within such an area there were expected behavioral patterns and rules, some of which referred to fighting and warfare (for example, the range outside which killing and destruction of property were legitimate and “good”), and others to economic exchange, combined ceremonial endeavor, and those activities which bound friends and kinsfolk together in contrast to others. Quite often, too, people had as much to do with their enemies as with their friends: it is simply that the content of the relationships involved was different in each case. Warfare, as noted in regard to areas A 1 and B, was actually, in a sense, a cooperative undertaking, and its importance in this respect should not be underestimated.

Two features stand out. First, in some Highlands societies (A 1, C, J, espe-
cially, and possibly F under certain conditions) there was a definite connection between warfare and marriage: units fought other units from which they received, and expected to receive, wives. In nearly all the others (B, D1, E, H and I), in contrast, warfare was incompatible with marriage. The reasons for such a marked difference are not clear, but where affines were not enemies they represented either active allies or a reasonably safe refuge in defeat.

The second feature is that of economics. Deaths in warfare, peace-making, compensation of allies, and so on, involved opposing groups in heavy payments of gifts. Warfare also interrupted economic exchanges between groups as between persons, although clashes might in fact be precipitated by disputes arising from these. Such considerations had a restraining influence and in some cases a positive controlling influence on warfare. (This was particularly apparent in areas C, G, H, I, and J, and possibly D1.) Even as far as refugees were concerned, as in area H, "refuge centers" were kept available only by gift-giving. Economic exchanges and trade relations symbolized political alliances. In area A1, economics and warfare were two sides of the same coin: in nearly all other areas they have been more obviously separated out.

Finally, the evidence from all these areas underlines the importance of cognatic and affinal ties, cutting across local group and clan loyalties, but in the process not really damaging them or making them less significant. True, there was a conflict of loyalties, but not of an equally balanced kind: one centered on the group, the other on the person. Individual consideration of kin and of trading partners, if these were distinguished, meant that in almost all fighting between two opposed groups (even in area A1) there were some persons who would hold their hand in regard to some other persons. This in itself had a moderating effect on warfare. Warfare was never "total." Even apart from the issue of neutrality, participation of adult males was rarely complete. Non-participation was in some cases a conventional matter, as among the Mbowamb (Vicedom and Tischner 1943/48, Vol. 2:152). In others, as in Area A1, in any given encounter it was left very largely to individual choice. The apparent disregard for human rights in warfare outside a certain social range was, in fact, combined with a certain respect for such rights, and that respect was manifested in the provision for personal relationships even in the heat and excitement of actual combat. Flexibility, allowance for personal initiative within loosely defined limits, was apparent in this sphere of Highlands living no less than in others.
ONE

The Pacified Past

The Anthropology of War

War has long been a sensational topic. Warfare concentrates and intensifies some of our strongest emotions: courage and fear, resignation and panic, selfishness and self-sacrifice, greed and generosity, patriotism and xenophobia. The stimulus of war has incited human beings to prodigies of ingenuity, improvisation, cooperation, vandalism, and cruelty. It is the riskiest field on which to match wits and luck: no peaceful endeavor can equal its penalties for failure, and few can exceed its rewards for success. It remains the most theatrical of human activities, combining tragedy, high drama, melodrama, spectacle, action, farce, and even low comedy. War displays the human condition in extremes.

It is thus not surprising that the first recorded histories, the first written accounts of the exploits of mortals, are military histories. The earliest Egyptian hieroglyphs record the victories of Egypt's first pharaohs, the Scorpion King and Narmer. The first secular literature or history recorded in cuneiform recounts the adventures of the Sumerian warrior-
The earliest written parts of the Books of Moses, the "J-strand" (called so because in its passages the name given God is Yahweh or, corruptly, Jehovah), culminate in the brutal Hebrew conquest of Canaan. The earliest annals of the Chinese, Greeks, and Romans are concerned with wars and warrior kings. Most Mayan hieroglyphic texts are devoted to the genealogies, biographies, and military exploits of Mayan kings. The folklore and legends of preliterate cultures, the epic oral traditions that are the precursors to history, are equally bellicose. Indeed, until this century, historiography was dominated by accounts of wars and the political intrigues that led up to them. Because history, strictly speaking, consists of written accounts and because writing is confined to civilized societies, civilized warfare is the subject of a long-standing and voluminous literature. For example, more than 50,000 complete books have been devoted to the American Civil War alone, and scores more are published each year. What the literate world knows as warfare is therefore civilized warfare.

But recorded history represents less than half of 1 percent of the more than 2 million years that humans have existed. In fact, prehistory ended in some areas of the world a mere thirty years ago. At the dawn of the European expansion (A.D. 1500), only a third of the inhabited world was civilized; all of Australasia and Oceania, most of the Americas, and much of Africa and north Asia remained preliterate and tribal. These long chapters in humanity's story and all the recent "peoples without history" are the special focus of anthropology—of the archaeologists who study the former and of the ethnographers who have observed the latter.

What, then, has anthropology said about the warfare conducted by prehistoric and "primitive" societies? The simple answer is: very little. By recent count, only three complete books (and a handful of anthologies and ethnographies) devoted exclusively to primitive warfare have been published in this century, far fewer than are published on the American Civil War each year. Information on the topic is not lacking, but it is tucked away in technical journals or scattered as brief passages in ethnographic and archaeological reports. Compared with the tens of thousands of volumes and countless articles on civilized military history, however, this imbalance is striking, considering how much of humanity prehistoric and primitive peoples represent. The subject of war among ancient and modern tribal peoples remains prone to glib speculation, the caprices of intellectual fashion, and the deeper currents of secular mythology.

Even today, most views concerning prehistoric (and tribal) war and peace reflect two ancient and enduring myths: progress and the golden age. The myth of progress depicts the original state of mankind as ignorant, miserable, brutal, and violent. Any artificial complexities introduced by human invention or helpful gods have only served to increase human bliss, comfort, and peace, lifting humans out of their ugly and hurtful state of nature. The contradictory myths aver that civilized humans have fallen from grace—from a simple and primeval happiness, a peaceful golden age. All the accretions of progress merely multiply violence and suffering; civilization is the sorry condition that our sinfulness, greed, and technological hubris have earned us. In the modern period, these ancient mythic themes were elaborated by Hobbes and Rousseau into enduring philosophical attitudes toward primitive and prehistoric peoples.

HOBBS AND ROUSSEAU

The English philosopher Thomas Hobbes (1588–1679) reached his conclusions about warfare and society via a series of logical arguments. In his great work, Leviathan, he first established that, in practical terms, all men were equals because no one was so superior in strength or intelligence that he could not be overcome by stealth or the conspiracy of others. He found humans equally endowed with will (desires) and prudence (the capacity to learn from experience). But when two such equals desired what only one could enjoy, one eventually subdued or destroyed the other in pursuit of it. Once this happened, all hell broke loose. The similar desires of others tempted them to emulate the winner, and their intelligence required them to guard themselves against the fate of the loser. When no power existed to "overawe" these equals, prudent self-preservation forced every individual to attempt to preserve his liberty (the absence of impediments to his will) by trying to subdue others and by resisting their attempts to subdue him. Hobbes thus envisioned the original or natural condition of humanity as being "the war of every man against every man." In this primeval state of "warre," men lived in "continual fear and danger of violent death"; and, in Hobbes's most famous phrase, their lives were therefore "solitary, poor, nasty, brutish, and short." He claimed vaguely that "savage people in many places in America" still lived in this violent primitive condition but gave no particulars and never pursued the point further.

Humans escaped this state of war only by agreeing to covenants in which they surrendered much of their liberty and accepted rule by a central authority (which, for Hobbes, meant a king). And since "Covenants, without the sword, are but words," the king (or state) had to be granted a monopoly over the use of force to punish criminals and defend against external enemies. Without the state to overawe humans' intelligence by force, mediate their selfish passions, and deprive them of some of their natural liberty, anarchy reigned. Civilized countries returned to this condition when central authority was widely defied or deprived of its power, as during rebellions. All civilized "industry" and the humane enjoyment of its fruits depended on a peace maintained by central government; the "humanity" of humans was thus a product of civilization.
Hobbes acknowledged that nation-states between themselves remained in a “posture of war.” But because they thereby protected the industry of their subjects, “there does not follow from it that misery which accompanies the liberty of particular men.” In other words, a world of states necessarily tolerated some wars and much preparation for war, but these preserved havens of peace within each state. In the primitive condition, there was no peace anywhere.

Hobbes never claimed that humans were innately cruel or violent or biologically driven to dominate others. The condition of war was a purely social condition—the logical consequence of human equality in needs, desires, and intelligence. It could be eliminated by social innovations: a covenant and coercive institutions of enforcement. War would recur only if these covenants were broken or if the police powers of the central state waned. His argument was certainly intended as an apology for absolute monarchy; but later, yielding to circumstance, he admitted that it applied equally well to other forms of strong central government, even republics. Whatever his views on the ideal form of the state, the point of central relevance here is that Hobbes considered the inherent “natural” state of humanity to be war, not peace.

For the past two centuries, the most influential critic of Hobbes’s view of primitive society and “man in a state of nature” has been Jean-Jacques Rousseau (1712–1778). Rousseau disdained the logical rigor of the philosopher, the plodding empiricism of the historian and the scientist, and the unbridled invention of the romancer, but he combined a semblance of all three with an assertive style to become an intellectual sensation. Like Hobbes, he constructed an origin myth to explain the human condition, but his denied civilization its humanity while proclaiming the divinity of the primitive.

Rousseau, like Hobbes, asserted the natural equality of mankind but saw humans in their natural state as being (justly) ruled by their passions, not their intellects. He argued that these passions could be easily and peaceably satisfied in a world without the “unnatural” institutions of monogamy and private property. Any tendency toward violence in the natural condition would be suppressed by humans’ innate pity or compassion. This natural compassion was overwhelmed only when envy was created by the origins of marriage, property, education, social inequality, and “civil” society. He claimed that the savage, except when hungry, was the friend of all creation and the enemy of none. He directly attacked Hobbes for having “hastily concluded that man is naturally cruel” when in fact “nothing could be more gentle” than man in his natural state.3 Rousseau’s Noble Savage lived in that peaceful golden age “that mankind was formed ever to remain in.” War only became general and terrible when people organized themselves into separate societies with artificial rather than natural laws. Compassion, an emotion peculiar to individuals, gradually lost its influence over societies as they grew in size and proliferated. When artificial, passionate states fought, they committed more murders and “horrible disorders” in a single engagement than were ever perpetrated in all the ages that men had lived in a state of nature.

Unlike Hobbes, Rousseau seemed genuinely interested in whether his contentions were confirmed in the observations of real “savages” then being encountered by European explorers. His disciples accompanied French explorations and brought back mixed reports.4 The explorer Louis de Bougainville reported that “Tahitians exactly fulfilled Rousseau’s predictions, although to reach this conclusion Bougainville had to ignore their rigid class stratification, their arrogant chiefs, and some of the most horrible warfare on record (Chapters 4–7). But another explorer told Rousseau of a sudden unprovoked attack on French explorers by the very simple and previously uncontacted aboriginal Tasmanians, despite the most peaceful gestures by the completely naked French emissaries. Rousseau was shocked: “Is it possible that the good Children of Nature can really be so wicked?” Of course, Noble Savage apologists then and since have remarked that such fracases were only the result of the natives’ misunderstanding of the emissaries’ intentions or anxiety that the explorers meant to stay. Even so, what had happened to the savages’ natural compassion and lack of jealousy? Similar cases of tribesmen at first contact “shooting first and asking questions later” (which with hindsight seems prescient on their part) did not trouble Rousseau or his disciples to the point of reconsidering their assumptions. They were too thoroughly convinced that the natural state of human society was a peaceful combination of free love and primitive communism to see these violent first encounters as anything but rare aberrations.

Despite Rousseau’s influence, Hobbes’s view of primitive life held the upper hand during the nineteenth century, which not coincidentally was the heyday of European imperialism and colonization. One of the principal apologies for Western imperialism was the pacification of ever-warring savages by European conquest, missionary activity, and administration. The natives, living in Hobbesian turbulence, could enjoy the comforts of Christianity and the benefits of civilization only after they were pacified and controlled by Europeans. Europeans also awarded their own the highest ranking among the few civilizations they recognized (such as those of Asia and the Near East) because they reckoned that theirs had progressed further than any other from the violent and impoverished state of nature. Not surprisingly, the soldiers, missionaries, and colonial functionaries sent out to establish Western dominion brought back accounts that emphasized the Hobbesian features of societies they sought to conquer and transform. These portraits were the only information available to the first anthropologists as the discipline emerged during the 1860s. Only a handful of anti-imperialists, reformers, and self-consciously iconoclastic
artists—few of whom had ever directly observed real primitives—clung to Rousseau’s pacific view of uncivilized life.

THE CONCEPT OF PRIMITIVE WAR

In the early part of the twentieth century, the mass of unsystematic observations of prestate societies that had accumulated during European expansion was superseded by the new data of ethnography. Trained in the new technique of participant observation, anthropologists went out to live with the subjects of their studies for months and even years, learned their language, and made observations of their customs and behavior with their own eyes. The young science of anthropology had left its armchair.

All of this data, old and new, indicated that with only rare exceptions primitive life was not particularly peaceful. It was no longer possible to declare, as the eminent sociologist William Sumner did at the turn of the century, that primitive man “might be described as a peaceful animal” who “dreads” war. In 1941, the great ethnographer Bronislaw Malinowski could argue that “anthropology has done more harm than good in confusing the issue by . . . depicting human ancestry as living in the golden age of perpetual peace.” Yet it was also clear that, contrary to Hobbes, life in small-scale societies was not “solitary, poor, nasty, brutish and short.” Anthropologists who actually lived among such people, got to know them as individuals and as friends, and participated in their daily affairs found it very difficult to maintain a Hobbesian disdain for their way of life. Ethnography exposed primitive cultures as perfectly valid and satisfying ways of being human and found that they often possessed features that were preferable to comparable aspects of Western civilization.

Few of these ethnographers were explorers, however, and they usually lived with people who had already been pacified by Western administration. Thus they had to rely on their informants’ memories of precontact warfare and had little opportunity to observe it directly. But such accounts tended to idealize or bowdlerize behavior. While informants’ descriptions of many aspects of social life could be enhanced or corrected by the anthropologists’ direct observations, independent checks on their descriptions of warfare were usually impossible.

For example, an ethnographer studying the Sambia of New Guinea found that Sambia warriors “unconsciously repress the gory parts of war tales, transforming the once traumatic into drama” when recounting their war experiences. When such idealized native accounts were filtered, by the questions asked, through the intense interest of anthropologists in customary rules and rituals, the images of primitive combat that emerged had a very stylized, ritualistic allure.

In The Face of Battle, historian John Keegan notes an exactly corresponding tendency in military historians’ accounts of civilized battles. Some of these make bloody combat between groups of frightened, overexcited men seem no more hurtful than a barroom brawl or a proxy Romantic thunderstorm. In these accounts, individuals and groups are motivated by a hunger for glory or avenge for previous defeats, by a desire to maintain the reputation of the regiment, retain the good opinion of their comrades, or gain the notice of superiors. The soldiers are very rarely depicted as driven by hatred of the enemy and never as fighting for the base motives of material gain or fear of punishment. Were such accounts our only source of information, we could easily conclude that modern Western warfare has been highly ritualized, psychologically motivated, and not particularly deadly. Only actual casualty statistics and rare unedited eyewitness memoirs by front-line soldiers challenge such impressions. But anthropologists, with very few exceptions, have had information of only the historiographic type to guide them in generalizing about uncivilized warfare.

In some rare instances, ethnographers were able to observe actual primitive combat. But even these observations showed a marked bias toward pitched or formal battles. Because such battles are the primary goal and most dramatic events of modern warfare, the eyes of ethnographers were drawn to comparable clashes in the tribal societies they studied. They noticed that these primitive battles were often suspended after only a few deaths, and—even if they were renewed after a brief interval—the total number killed in a series of battles was usually small. The ethnographers seldom analyzed casualties in relation to the small numbers who fought and thus could not compare them on this basis to larger-scale civilized battles. The raids, ambushes, and surprise attacks on villages that constitute a major component of tribal warfare were seldom observed and paid little notice. The general impression drawn from rare glimpses of formal battles was that primitive warfare was not very risky.

By midcentury, it became possible to save the Rousseauian notion of the Noble Savage, not by making him peaceful (as this was clearly contrary to fact), but by arguing that tribesmen conducted a more stylized, less horrible form of warfare than their civilized counterparts waged. This view was systematized and elaborated into the theory that there existed a special type of primitive war very different from “real,” “true,” or “civilized” war.

The architects of this concept of primitive war, Quincy Wright and Harry Turney-High, were academics of vastly different character and experience. Despite the essential similarity of their views, neither of them ever acknowledged in print the existence of the other’s work.

Quincy Wright (1890–1970) was professor of international law at the University of Chicago. He directed that university’s long-term study of the causes of war, which began in 1926. This project eventually involved a large number of faculty members and graduate students from a variety of disciplines, including anthropology. The study of war by primitive societies was but a small part of this
great enterprise but had a considerable effect on much subsequent thinking by anthropologists. Wright's two-volume summary of this project, *A Study of War*, was published in 1942. An abridged edition of this work remains in print today. Not surprisingly, Wright took a rather lawyerly view of war and was especially concerned with identifying the laws and customs that might moderate or even eliminate it. Indeed, he defined war as a temporary legal condition permitting hostile groups "to carry on a conflict by armed force." His attitude toward war seems one of judicial disapproval for such a wasteful and brutal way of settling disputes.

Harry Holbert Turney-High (1899-1982) was, for most of his career, a professor of anthropology at the University of South Carolina. But unlike most academics, he maintained a lifelong involvement with the modern military, rising from a private in the cavalry to a colonel of military police in the U.S. Army Reserve. He served in Europe during World War II as a military police officer but apparently never saw actual combat. As an ethnographer, he collected "memory culture" data on the Flathead and Kutenai Indians of Montana and wrote the standard ethnography on these groups. The character of tribal warfare remembered by these fringe Plains tribes and his own admiration for the principles of warfare he learned in training as a cavalryman obviously strongly influenced his views of primitive warfare. His seminal book, *Primitive War* (1949), remains the only anthropological synthesis on warfare; it is still in print.

Rather than viewing war as a temporary legal condition, Turney-High saw it as a social institution that served a variety of functions. Not only could war be useful, especially in a civilized context, but it was also an exciting diversion. Turney-High reserved his disapproval for what he saw as substandard, half-hearted, or cowardly warfare, not war itself. Writing in a rollicking, opinionated style, he radiated contempt for anyone ignorant or heedless of the civilized soldier's craft and trade, whether the uninformed were social scientists, tribal warriors, or modern guerrillas. Indeed, one has the uneasy sense that Turney-High thought a little whiff of cordite smoke, some military discipline, and a touch of wholesome field punishment would do everyone a world of good.

Despite the difference in their basic definitions of war and their studied silence about each other's work, both Wright and Turney-High agreed that primitive warfare differed drastically from warfare conducted by civilized states. Militarily, Turney-High thought primitives "resemble more the ape and the ant" than they did civilized men. *Turney-High* drew a very sharp line, literally a "military horizon," above which real warfare was conducted by states and below which occurred only the submilitary combat of primitives. He spoke of primitive warfare as being "childish, reflecting the ways of human infancy." Both men agreed that this distinction between primitive and civilized warfare was rooted in a fundamental difference in aims and motivation.

In civilized or real warfare, the motives or goals were economic and political—for example, plunder, more territory, or hegemony. Turney-High characterized these as "rational and practical." By contrast, primitives were said to fight for personal, psychological, and social motives. Wright argued that the military goals of primitive societies primarily involved maintaining "the solidarity of the political group" and secondarily satisfying "certain psychic needs of human personality." Their lists of primitive motives included tension release for violent impulses that could be conveniently redirected toward outsiders; pursuit of personal prestige and status, including initiation to manhood; and revenge. Both Turney-High and Wright asserted the widely repeated claim that primitive people commonly went to war for adventure or sport—literally, to escape boredom. Given Turney-High's characterization of the motives of states, he clearly implied that the motives of primitive societies were irrational and impractical. Comparable purely psychological motives only occasionally appeared in civilized warfare in the motivations of individual soldiers or small units.

Wright and Turney-High dismissed the possibility that warfare might function to produce material advantages for primitive groups because the conscious pursuit of such advantages was characteristic only of states. They saw all features of primitive war making as flowing directly from impractical, personal goals, which could be achieved without "victory" and, indeed, could be served only if warriors had a very good chance of surviving combat.

Turney-High and Wright judged primitive warfare to be technically defective compared with civilized warfare. They independently listed the various deficiencies of primitive war:

1. Poor mobilization of manpower because of reliance on completely voluntary participation
2. Inadequate supply and logistics
3. Due to deficiencies 1 and 2, an inability to conduct protracted campaigns
4. No organized training of units
5. Poor command and control
6. Due to deficiencies 4 and 5, undisciplined units and lighty morale
7. Few weapons specialized for war and neglect of fortification
8. No professional warriors or military specializations (such as swordsmen, bowmen, and cavalrymen)
9. Ineffective tactics and neglect of certain principles of warfare

In short, they found primitive warfare desultory, ineffectve, "unprofessional," and unserious.

The highly voluntary nature of recruitment for war parties in tribal societies, Turney-High claimed, led to ineffective or defective mobilization. The ability of
warriors in some tribes to desert a war party because of ill omens or dreams was even more disastrous. He suggested that "a good stiff jolt of punishment" would have quickly remedied such malingering. Although he conceded that social pressure alone was sufficient to raise large war parties in some tribes, he also believed the system of physical compulsion used by the Zulu, Dahomean, Celtic, and modern states was superior. Typically, Wright, and especially Turney-High, gauged the military efficacy of a practice by how closely it resembled that of the modern military, rather than by its effects. In the case of mobilization, the key effect involved the proportion of a society's potential manpower that was actually mobilized for combat, an issue neither scholar ever addressed.

Turney-High noted that the inadequate supplies provided to warriors by their subsistence economies limited the possibilities for perpetuating campaigns or sieges beyond the first encounter. He linked the issues of adequate supplies and logistics to "a social organization capable of producing an economic surplus by a high agriculture" (presumably he means a state supported by short-fallow agriculture) and "a means of transporting such food." Thus the absence of extended military campaigns was the direct consequence of poor logistics that, in turn, reflected a primitive economy and social organization. By implication, the only way a gardening tribe or hunting band could conduct an extended campaign would be by first becoming an agricultural state.

Both scholars noted that primitive warriors were ill-disciplined and rather selective about obeying their leaders' commands. The military virtues of discipline and ready obedience were the product of training, practice, and exercise. Turney-High remarked that only states could afford such training and that only state leaders had the power to compel obedience. At the same time, he repeatedly implied that such discipline was essential for victory and that only states were capable of winning victories. He had nothing but disdain for the capriciousness and heedlessness of primitive warriors:

His is an undisciplined rabble which really does not stand and die when ordered by some alleged chief. A stand-up battle with quality troops against odds was no more his idea of fun than is of his cultural descendent, the guerrilla. The primitive warrior . . . loves a sure thing. Turning an apparently hopeless cause into a winning one by valor and skill is not his way.

Wright's characterization of primitive warriors as "flighty" was not so openly contemptuous, but it carried the same message.

One feature that permeated Turney-High's discussion of primitive war—and distinguishes it from Wright's—was his profound belief that the tactical principles or laws of war taught to modern officers in training represented timeless requirements for effective warfare. He compared them to scientific laws and claimed that they could be used to predict or guarantee military success and failure. For him, to the degree that primitive warriors ignored or violated these commandments, their warfare was necessarily frivolous and ineffective.

According to Turney-High, primitive warriors did adhere to some of these principles or "laws" but characteristically ignored or disobeyed several others. Indeed, their application of some might even be superior to that of civilized soldiers. He found that tribal warriors generally obeyed the principles that prescribed Offensive Action, Surprise, Intelligence, Utilization of Terrain, and Mobility. They were quite variable in their use of the rules for Fire and Movement, with many groups merely exchanging missiles at a distance and never closing with their foes. They were surprisingly poor at the law of Security, often being surprised or ambushed and neglecting the use of fortifications. They rarely adhered to the commandments of Concentration at the Critical Point and Exploitation of Victory in that they failed to focus on key objectives or enemy weaknesses and to pursue defeated foes. Of course, Cooperation of Specialized Forces—another rule—was impossible for groups lacking specialized units such as cavalry and artillery. He insisted that primitives did not use the Correct Formations, but he was vague on this point. Given that his other accusations implied a lack of sophistication or complexity, it is surprising that he also found primitive warriors failing to observe the principle of Simplicity of Plans, either by having none at all or by having plans that were too standardized.

These principles, for which Turney-High claimed the status of social science laws, are contradictory and rather vague, especially in practice. For example, achieving "security" usually requires locating forces at other than the "critical point" and often necessitates restraint in the "exploitation of victory." Many civilized units or armies have paid a high price by adhering to the injunction to exploit victories by racing headlong into piecemeal defeat by their rallied or reinforced foes. Fortifications exemplify "security" but are inimical to "mobility" and "offensive action." Actually, few of these principles can be taken at face value or unequivocally. With examples like the disastrous trench offensives of World War I and Napoleon's Russian campaign, it might be more honest to restate one principle as "offensive action except when inadvisable." Others of these laws suffer from a debilitating vagueness. How simple should plans be? How does one recognize the critical point except in hindsight? Because of their proverbial vagueness and contradictoriness, these tactical laws are much more readily employed, like proverbs, in rationalizing outcomes than as scientific prescriptions for generating victories. Ironically, Turney-High's "immutable laws of War" are no longer taught to aspiring war leaders at the great Western military academies.

For all of his disparagement of primitive warfare, Turney-High repeatedly recognized that the concentrated economic surplus, power of coercion, and
centralized decision making of states were the basic determinants of his "true war." The absence of these features in primitive societies explained most or all of their military "deficiencies." In other words, Turney-High's military horizon was not so much a tactical Rubicon as a political and economic one.

One tactical principle missing from Turney-High's list is the importance of superior numbers (usually codified as the principle of Mass). This important feature of warfare he airily dismisses with the assertion that "good small armies have time and again humiliated large masses." In fact, any number of good small armies have been ground into dust by less artful large masses. For example, the nimble Finns in 1939 and 1940 and the formidable Germans in 1941 and 1942 certainly humiliated the more massive Soviet Army initially, but they were soon overwhelmed as thoroughly as any armies in history. Like so many historians enamored of tactics, leadership, and discipline, Turney-High's focus was on victory in battle, not wars. As the Romans fighting Hannibal showed, one can lose every battle but the last one and still win the war. That crucial last battle has almost always gone to the side with the larger manpower reserves and stronger economy.

Both Wright and Turney-High agreed that because of its frivolous motivations and technical deficiencies, primitive warfare had few important effects, nor was it particularly dangerous. Wright concluded that casualties and destructiveness only increased with social evolution. Both scholars simply assumed that fighting for practical goals with civilized techniques automatically made war more terrible and, conversely, that irrational goals with simple techniques made war ineffective. Neither author supported these assumptions with any facts or figures. Although both war figures from a few tribal groups (presumably because they contradicted his conclusions) they appeared only in an appendix. He even experienced difficulty supporting his trend of increasing death and destruction with historical data from Europe. Turney-High never bothered with figures at all. He believed that since primitive warriors were always defeated by civilized soldiers, the point was self-evident. He did, however, concede that primitive societies "made some very credible stands against the white man, in spite of their small populations and simple weapons," implying that primitive warfare was not always entirely ineffective or safe. Essentially, Wright and Turney-High's conclusions concerning the efficacy of primitive war amounted to aesthetic judgments of form and style, rather than practical or scientific evaluations of effects.

Subsequent students of precivilized life seem to have paid little heed to Wright and Turney-High's technical points about the social contexts and techniques of primitive war. But no one seems to have forgotten their dismissal of primitive war as a relatively harmless sport, directed toward impractical goals and incapable of afflicting any essential aspects of social existence. From this filtration, the postwar concept of a relatively benign primitive war was born.

THE CONTROVERSY OVER CAUSES

As the concept of ineffective and unimportant primitive war became embedded in textbooks and teaching, anthropologists devoted little attention to warfare during the 1950s. The situation changed dramatically in the 1960s, however, for a host of anthropological and nonanthropological reasons. During the late 1950s and early 1960s, ethnographers were able to observe the final stages of tribal warfare in highland New Guinea and in Amazonia. Anthropologists were again directly confronted with the realities of warfare among small-scale societies. Explanations of these new observations became entangled in the theoretical and political debates of the times. These arguments also reopened the Hobbes versus Rousseau question and revived the mythologizing impulses that have invariably attached themselves to this debate.

The anthropological debates about war are part of a wider theoretical battle in anthropology between cultural ecology and cultural materialism on one side and a variety of opposing "-isms" on the other. Cultural materialism proposes that most cultural practices are explainable by reference to the material conditions of life—ecology, technology, demography, and basic economy. Various anthropological opponents to cultural materialism deny this proposition, preferring explanations that refer to the independent realms of social dynamics, differing ideologies, or other nonmaterial factors.

The materialist perspective focuses on the adaptive consequences of war. One early materialist view was that warfare redistributes or controls human populations, bringing them into a better balance with available scarce resources, especially productive land. There was also the implication that warfare should intensify with increasing population pressure on critical resources. The combatants may or may not be aware of these material causes, and they often use a fairly standard set of pretexts or justifications for fighting. Nevertheless, a common result of tribal warfare is that one side obtains from the other various means of production in the form of land, livestock, and additional labor. Some materialists argued that societies undertake warfare only when forced to do so by competition over food or other essential resources. Peace is the inertial or natural state to which societies revert when essential material needs can be cheaply supplied by nonviolent means.

This type of theory simply elaborates Rousseau's contention that primitive man is an enemy to others only when he is hungry. Yet the materialists were by no means completely Rousseauian; many of them (for instance, Andrew Vayda, Robert Carneiro, Marvin Harris, and William Divale) asserted that tribal war-
fare could be exceptionally vicious and inflict high casualty rates. Indeed, Robert Carneiro argued that warfare played a key role in social evolution, especially the development of states.

In the late 1960s, a substantial shock to the materialist interpretation of war was administered by Napoleon Chagnon’s influential and popular ethnography on the Yanomamo of Venezuela and Brazil. Chagnon described the Yanomamo as being embroiled in almost constant warfare. The men displayed a considerable propensity for violence against everyone. Yet Yanomamo villages were surrounded by abundant unoccupied territory; the fighting between them was apparently motivated only by desires to exact revenge and to capture women; and they experienced difficulty in obtaining sufficient food only as a result of warfare. Chagnon literally declared that the Yanomamo exemplified the Hobbesian state of “warre.”

Many antimatinalists have concentrated on the social features that escalate disputes between individuals into warfare between groups or make peace difficult to establish and maintain—in other words, on formal causes rather than material or final ones. This conception is neo-Hobbesian in that it derives primitive warfare especially from the absence of state-like institutions of external justice and mediation. The neo-Hobbesians denounce that one gains anything from war except a bleak social survival. For example, C. R. Hallpike claims that nonstate societies “engage in warfare because among other reasons they cannot stop, not because they derive any benefit from fighting. In the absence of any central authority they are condemned to fight forever . . . since for any one group to cease defending itself would be suicidal.”

Neo-Hobbesians argue that the booty obtained by warriors and the larger territories often acquired by victors are merely occasional effects and have no bearing on the causes of warfare. Indeed, the neo-Hobbesians seem quite unconcerned with the content or nature of the disputes that lead to fighting, apparently believing that a dispute over almost any matter can lead to war, if no powerful third-party authority exists to adjudicate or suppress it. To judge from the various social and ideological factors they repeatedly discuss, neo-Hobbesians see war as a permanent social condition in which the potential for combat is always present, even if it actually breaks out only intermittently. The actual episodes of fighting receive—and by these scholars’ principles require—no general explanation.

Neo-Hobbesians also view prestate warfare as being very frequent and consider a state of war a latent condition of prestate existence. Yet like Wright and Turney-High, they deny that it has any important practical causes or consequences except bare survival of the social group. By contrast, some materialists see primitive wars as having important demographic and economic causes and effects; but, like the proponents of benign primitive war, they do not see war as “normal” to (and therefore necessarily common among) prestate societies. In-

deed, materialists echo Wright and Turney-High in accepting that warfare becomes more frequent and terrible as the size, density, and complexity of economic and political organizations increase (that is, with social evolution). Thus recent anthropological theory has tended toward two extreme and opposed conceptions: primitive warfare is uncommon but rewarding, or it is very common but unrewarding. In either case, important aspects of Wright and Turney-High’s concept of primitive war survive.

The essential focus of almost all these arguments has been the perennial question: What causes war? The intense interest in this question, to the neglect of the actual conduct or immediate effects of warfare, is undoubtedly attributable to its assumed practical utility. Just as we cure or eradicate disease by eliminating its causes, so anthropologists frequently premise their examinations of warfare on the hope that it may be extinguished by rooting out its (single) cause. These arguments between the materialist and antimaternalist schools concerning warfare represent only a flank of a larger theoretical battle among anthropologists. Because of the pervasive polarization, both sides have claimed that their own favored theories suffice to explain warfare and assert that any resort to the other side’s hypotheses is logically unnecessary.

Though many partisans in these debates imply that the warfare of a particular region—or even all warfare—has a single cause, no complex phenomenon can have a single cause. There are efficient, formal, material, and final causes, as well as necessary and sufficient conditions. Even something as straightforward as catching an infectious disease usually entails more than just exposure to a viral or bacterial agent because the illness will not develop if the host possesses an inborn or acquired immunity. Since infectious diseases actually have multiple causes, they can be defeated by various means: eliminating exposure to the disease by quarantine or by destruction of animal vectors, killing the active agent with antiseptics or antibiotics, mitigating adverse symptoms with antitoxins, inducing immunity with vaccination, and so on. In this example, quarantine and antibiotics eliminate an efficient cause; vaccination removes a formal cause; and antitoxins ignore causes but palliate the effects. The complexity of the concept of cause means that seemingly contradictory views are often actually complementary because they focus on different categories. The anthropological debates about the causes of warfare may represent a classic case of unacknowledged complementarity.

**PREHISTORIC PEACE**

If social anthropologists of various persuasions have retained theoretical models derived from the concept of a stylized, ineffective, and insignificant primitive war, archaeologists during the past twenty-five years have been even
more accepting. Less by sustained argument than by studied silence or fashionable reinterpretation, prehistorians have increasingly pacified the human past. The most widely used archaeological textbooks contain no references to warfare until the subject of urban civilizations is taken up. The implication is clear: war was unknown or insignificant before the rise of civilization. In several recent collections of papers dealing with more specialized topics—such as prehistoric frontiers, migrations, trade, and “farmer-forager interactions”—the only mentions of warfare relate to historic civilized frontiers and civilized economies.

The possibility that warfare might have been involved with these matters before the rise of urban states is not dismissed; it is simply never mentioned.

A few specific examples from my area of expertise, European prehistory, should clarify the character of this interpretative “pacification.” The earliest farmers to appear in Britain during the period known as the Early Neolithic, beginning about 4000 B.C., constructed ditched and palisaded enclosures called causewayed camps by archaeologists. In Brian Fagan’s very popular textbook on prehistory, the function of these enclosures is discussed in entirely peaceful terms. Noting that several such camps were “littered with human bone,” Fagan concludes that “perhaps these camps were places where the dead were exposed for months before their bones were deposited in nearby communal burials.” In an excellent survey of the early farming cultures of prehistoric Europe, Alasdair Whittle suggests that the “interrupted ditches backed by solid barriers” (log palisades banked or daubed with earth from the ditches) typical of these camps merely expresses the “symbolism of exclusion.” According to these syntheses or summaries, either causewayed camps were the Neolithic equivalent of the famous Parsi Towers of Silence of India or their deep ditches and palisaded ramparts stood as elaborate symbols bearing the message Keep Out!

A far different impression is conveyed by the reports of the archaeologists who have conducted extensive excavations of some of these enclosures. At several camps, the distribution of thousands of flint arrowheads, concentrated along the palisade and especially at the gates (Figure 1.1), provides clear evidence that they “had quite obviously been defended against archery attack,” making it extremely probable that the enclosures were “built with this intention.” Moreover, the total destruction by fire of some of these camps seems to have been contemporaneous with the archery attacks. At one such site, intact skeletons of two young adult males were found at the bottom of the ditches, buried beneath the burned rubble of the collapsed palisade-rampart. In one poignant instance, the young man had been shot in the back by a flint-tipped arrow and was carrying an infant in his arms who had been “crushed beneath him when he fell.” Whatever ritual or symbolic functions of the enclosures might have had, they were obviously fortifications, some of which were attacked and stormed.

A Belgian archaeologist who has excavated many Iron Age burials was criticized by several colleagues at a recent conference for referring to burials from this period as “warrior” graves, even though they contained spears, swords, shields, a male corpse clothed in armor, and in some instances the remains of a chariot. The critics asserted that these weapons and armor were merely status symbols and had only a symbolic function rather than a practical military one. Similarly, copper and bronze axes from the Late Neolithic and Bronze Ages, formerly referred to as battle axes, are no longer classified as weapons but are considered a form of money. The 5,000-year-old Austrian glacier mummy recently reported in the news was found with one of these...
moneys mischievously hafted as an ax. He also had with him a dagger, a bow, and some arrows; presumably these were his small change.

Interpretive pacifications have been applied to archaeological finds from many other areas of the world. Such hypotheses about individual prehistoric artifacts and constructions are rarely implausible or manifestly wrong. Weapons and forts often do have symbolic significance. But these archaeological interpretations depend on rather tenuous arguments and assumptions and studiously ignore more violent interpretations directly supported by evidence. In short, they ignore the bellicosely obvious for the peaceably arcane.

These deconstructionist archaeological interpretations would be analogous to declaring that in contemporary Western culture automobiles and trucks are only symbols of status, masculinity, and liberty and that freeways are merely impractical ritual arenas for the enactment of rituals of status, masculinity, and personal autonomy while never mentioning that these artifacts and structures are fundamentally a means of transportation. Such completely symbolic interpretations also neglect the extremely significant fact that among the primary rationales for building the German autobahns and the American interstate-freeway system were arguments that they would facilitate the movement of modern mechanized armies. If present-day archaeologists were faced with interpreting the physical remains of modern industrial societies, they might emphasize the derivative symbolism of cars and highways while quietly ignoring the dependence of such symbolism on practical economic or even military concerns.

Although archaeologists may have pacified the past almost unconsciously, a handful of social anthropologists have recently codified this vague prejudice into a theoretical stance that amounts to a Rousseauian declaration of universal prehistoric peace. In some recent papers and books, Brian Ferguson and a number of other scholars have argued that the instances of tribal warfare described by Westerners, including ethnographers, were the product of disequilibrium induced by Western contact and did not represent the primitive condition. Specifically, such warfare was a product of decimation by introduced diseases, native population movements induced by civilized colonization, social disruption associated with slave raiding, and hostilities engendered by conflicts over civilized trade goods. These Western derangements created a "tribal zone" of Hobbesian war of an unspecified radius around any civilized outpost or observer. Whenever civilized observers moved out to previously uncontacted groups, they would either still be within this zone of war or, if they moved beyond the disrupted region, merely transmit the virus of war themselves by bringing Western goods for trade and gifts or by introducing new diseases. Thus no civilized observer could ever view anything but the Hobbesian warfare created by European contact. Ferguson concludes that the "wild violence" noted by Hobbes was not an expression of "man in a state of nature" but a reflection of contact with Hobbes' Leviathan—the states of Western Europe. To take the carnage as revealing the fundamental nature of human existence is to pass through the looking glass. This argument is based on the well-documented observation that contact with Westerners altered a wide variety of native behaviors and attitudes, including those involved in warfare. Undoubtedly, native warfare changed with increasing external contact, but important questions remain with regard to the character and speed of the changes and (especially) the nature of the situation prior to contact.

Since these neo-Rousseauian scholars characterize any evidence of Hobbesian social or demographic features, tribal traditions, and mythologies among prestate societies as being consequences of contact, they appear to believe that the resulting transformations, which touched almost every facet of social life and culture, occurred almost instantaneously. Thus the proponents of prehistoric peace not only reject the validity of certain ethnographic observations ungenial to their view of the primitive condition, but also deny the legitimacy of ethnography altogether. That is the substance of arguing that ethnographic descriptions merely mirror civilized behavior and do not provide a window on the precivilized way of life. But if ethnographers' observations can tell us nothing useful about the conditions of life peculiar to prestate nonindustrial societies, why bother with ethnography or ethnographers at all? An undistorted image of civilization is much more immediately discernible in the work of economists, sociologists, and historians. One suspects that because the uncivilized villagers described by ethnography often appear to have lived in a Hobbesian state, certain scholars have metaphorically "destroyed the village in order to save it."

This hypothesis attributes an exceptional potency—indeed, a peculiar radioactivity—to civilized people and their products. Were there never epidemic diseases before Western contact? Were there never uncivilized items of trade that excited the practical appetites of primitive consumers and were worth fighting over? Did new weapons never diffuse to modify prehistoric warfare? Were there never population movements or expansions before civilization? If any of these conditions existed before civilized expansion, then, by these arguments, the causes of war should also have existed. As we shall see in the following chapters, there is evidence that such things happened before civilized observers settled the preliterate world. In this case, the tribal-zone hypothesis would be reduced to the claim that civilized contact merely brought some new weapons to fight with and new items to fight over to prestate regions, not the more general reasons for fighting or the institution of war itself.

Most neo-Rousseauians are vague about what they suppose the precontact situation to have been. Their assertions that "wild violence" and carnage were caused by civilized contact imply they imagine that precontact conditions approached Rousseau's primitive peace. This hypothesis of prehistoric peace is
analogous to my father’s facetious claim that the flesh of a watermelon is really white until the skin is broken and it turns instantly red. As with my father’s story, it is impossible to disprove by direct observation. It requires no great diligence to show that any primitive group, at the moment of its ethnographic description, has been subjected to an epidemic, possessed civilized trade goods, or sustained some form of disruption from the presence of a European observer in their midst. Ferguson does acknowledge that archaeology has the capacity to look inside the watermelon before it is cut, but neither he nor his colleagues ever mention any archaeological support for their declaration of prehistoric peace.

In the past few decades, the hypothesis of unserious, ritualized primitive war has thus been transformed—through the consistent de-emphasis of prehistoric violence by archaeologists and later through the explicit arguments of some social anthropologists—into an neo-Rousseauian concept of prehistoric peace.

RESONANCE OF THE PACIFIED PAST

The neo-Rousseauian tenor of these postwar anthropological views on war and civilization has penetrated and resonated with other aspects of Western intellectual and popular culture. Let me cite a few recent expressions of such concurrences ranging from academic discourses by nonanthropologists to expressions in popular culture.

Directly reflecting the idea of primitive war, two military historians discussing the Iron Age of early Western civilization see it as the germinal period of real war:

> In less than 2000 years, man went from a condition in which warfare was relatively rare and mostly ritualistic to one in which death and destruction were achieved on a modern scale. . . . The Iron Age also saw the practice of war firmly rooted in man’s societies and experience and, perhaps more importantly, in his psychology.

War, warriors and weapons were now a normal part of human existence.40

Thus, before civilization, war was rare, ritualized, abnormal, and foreign to human psychology.

Recently, in a letter to an academic newsletter, a professor of sociology contrasted “the emotional richness and cultural diversity of traditional African tribal life” to “the enhanced capacity for destructiveness that the emergence of all civilizational structures brought forth, such as organized mass warfare.”41 Rousseau’s view of civilization as emotionally impoverished, culturally confining, and destructively warlike compared with traditional tribal life could not be more baldly restated.

In William Manchester’s quasi-memoirs of his service in the marines during World War II, he asserts that although the natives of Papua–New Guinea lived in a Stone Age culture, “it is equally true that their simple humanity would prevent them from even contemplating a Pearl Harbor, an Auschwitz or a Hiroshima.”42 Surprise attacks, slaughters of noncombatants, and general massacres are therefore unknown in a world of New Guinea tribesmen. As we shall see in later chapters, Manchester could not have been more wrong.

Reflecting several of the ideas of prehistoric peace, the plot of Jamie Uys’s film comedy _The Gods Must Be Crazy_ centers on a Coke bottle that is tossed from a passing airplane and lands in an African San (Bushmen) encampment. The Bushmen’s encounter with this civilized artifact soon leads to conflict and fighting in the previously harmonious camp. The angry headman then undertakes a quest to return this evil item to the unhelpful gods who dropped it. Reaching a civilized outpost, he is eventually arrested and gets embroiled in a guerrilla war. The film is a broad farce, but the little San’s good sense and peacefulness are always favorably contrasted with the foolishness, cold hearts, and violence of the civilized people he meets. The underlying message is that the selfish strife and heartless wars characteristic of civilization emanate from even its most prosaic artifacts.

In intellectual and popular culture, war has come to be regarded by many as a peculiar psychosis of Western civilization. This atmosphere of Western self-reproach and neo-Rousseauian nostalgia is prevalent in the views espoused by many postwar anthropologists.

The pacification of the past now epidemic in anthropology is just the latest turn in the long struggle between the myths of progress and the golden age, between Hobbesian and Rousseauian conceptions of the nature of primitive societies and of the prehistoric past. Relying perhaps on the time-honored archaeological method of ethnographic analogy, anthropologists have increasingly ignored the phenomenon of prehistoric warfare (as much as it had been declared by ethnologists to be weightless and unimportant). They have written warfare out of prehistory by omitting any mention of evidence of prehistoric violence when they synthesize or summarize the raw data produced by excavation. Some social anthropologists have recently become more aggressively pacifist, dismissing all ethnographic descriptions of primitive warfare as being the product of civilized interference with more peaceful precontact (that is, truly prehistoric) primitive life. If these ideas are correct, anthropology has little to say about war.

But the proponents of primitive war and prehistoric peace have tended to neglect the very evidence that is crucial to their propositions. With regard to the intensity, dangerousness, and effectiveness of primitive war, it is vital to study the direct effects of precivilized conflict: the casualty rates, the destruction, and the gains or losses of territory and other vital possessions. If uncivilized societies were very peaceful before literate observers could record them, archaeology
should be able to provide the documentation. The evaluation of these ideas (and, of course, any ideas contrary to them) requires careful surveillance of both ethnographic and archaeological data, with special attention to questions of how recent tribal and ancient prehistoric warfare was actually conducted and what the direct results of such conflicts were. Since implicit in any discussion of primitive warfare is a contrast with the corresponding forms of civilized conflict, it is also vital to make direct comparisons between the two in equivalent terms. Only then is it possible to achieve a realistic view of all warfare and to determine whether anthropology has anything to offer us in our attempts to understand and eventually eliminate the awful scourge of war. The purpose of this book is to provide just such a survey and evaluation.

TWO

The Dogs of War

The Prevalence and Importance of War

As we have seen, many recent popular and academic views of precivilized warfare agree that it was a trivial and insubstantial activity. Proponents of primitive war and the pacified past claim or imply that peaceful societies were common, fighting was infrequent, and active participation in combat was limited among nonstate peoples until they either evolved into or made contact with states and civilizations.

If these views are correct, they should be supported by broad surveys of ethnographic and archaeological evidence. Ethnographic data should indicate that nonstate societies were commonly pacificistic, resorted to combat much less frequently than did ancient or modern states, and mobilized little of their potential manpower for the warfare they did conduct. In the more thoroughly studied regions, archaeology should recover very little evidence of violent conflicts before the development of indigenous states or the intrusion of foreign states. As we shall see, on the contrary, the available evidence shows that peaceful societies have been very
rare, that warfare was extremely frequent in nonstate societies, and that tribal societies often mobilized for combat very high percentages of their total manpower.

LEVELS OF SOCIAL COMPLEXITY

Before proceeding with any ethnographic survey, we must review some terms that are used by anthropologists in roughly classifying the size and complexity of societies. These terms include bands, tribes, chiefdoms, states, and civilized or urban states. They loosely describe the population size and the economic and political complexity of various societies.

Bands are small, politically autonomous groups of twenty to fifty people with an informal headman. They usually consist of a few related extended families who reside or move together. Typically, bands are hunter-gatherers or foragers. Several such micro-bands usually congregate for a few weeks each year into a macro-band of several hundred people for ceremonies, festivities, courting and marriage arrangements, and the exchange of goods. Such macro-bands usually speak a distinct dialect and are sometimes referred to as dialect tribes. The classic examples of societies with band organization are the Eskimos of the central Arctic, the Pauites of the American Great Basin, and the Aborigines of central Australia.

The term tribes covers a multitude of social and political organizations. Tribes generally incorporate a few thousand people into a single social organization via pan-tribal associations. These associations are usually kin groups that trace descent to a common hypothetical or mythological ancestor. But nonkin associations, such as age-grades (groups of young men who were initiated together) and solidarities (mutual nonkin associations such as dance societies, clubs, etc.), can also integrate a tribe. Tribes are collections of such associations or kin groups that unite for war. While tribal leaders may be called big men or chiefs, they are not formal full-time political officials, and they usually exercise influence rather than what we would call power. In most cases, there is no central political organization except informal councils of “elders” or local chiefs. Foraging, pastoral, and agricultural economies are all found among tribes. Tribes are so various in their features that it is difficult to list classic cases, but the Indian tribes of the Plains, the southwestern Pueblos, and the Masai of East Africa are familiar examples.

Chiefdoms are organizations that unite many thousands or tens of thousands of people under formal, full-time political leadership. The populace of a chiefdom is usually divided into hereditary ranks or incipient social classes, often consisting of no more than a small chiefly or noble class and a large body of commoners. Both the means of production and economic surpluses are concentrated under the control of the chief, who redistributes them. A central political structure integrates many local communities. This central body may consist of a council of chiefs, but in most cases a single head chief controls a hierarchy of lesser chiefs. Accession to chieftship is hereditary, permanent, and justified on religious or magical grounds. But a chief, unlike a king, does not have the power to coerce people into obedience physically; instead, he must rely on magical and economic powers to enforce his dictates. Some typical examples, ranging from weak to strong chiefdoms, include some Pacific Northwest Coast tribes, many Polynesian societies, early medieval Scottish clans, and some traditional petty kingdoms in central Africa.

States are also political organizations that incorporate many tens or hundreds of thousands of people from numerous communities into a single territorial unit. They have a central government empowered to collect taxes, draft labor for public works or war, decree laws, and physically enforce those laws. Essentially, states are class-stratified political units that maintain a “monopoly of deadly force”—a monopoly institutionalized as permanent police and military forces. Civilized states are simply those with cities and some form of record keeping (usually writing). Since few people in the world today are not citizens of some state, examples are unnecessary.

The term primitive, when used in its usual sense in anthropology, merely refers to a technological condition—that of using preindustrial or preliterate technology. In social terms, primitive refers to societies that are not urban or literate. Precisely such societies are the traditional subject matter of anthropology. But because the word has negative connotations in everyday speech, primitive has fallen out of favor. It has been etymologically replaced by a number of inelegant neologisms such as preliterate or nonliterate, prestate or nonstate, preindustrial and small-scale. The term tribal societies usually encompasses bands, tribes, and weak chiefdoms but excludes strong chiefdoms and states. In the broadest sense, all these terms refer to societies that are simpler in technology and some aspects of social organization—and usually smaller in size—than societies that have produced historical records. Primarily for stylistic variety, all these terms are used interchangeably here.

IS WARFARE UNIVERSAL?

According to the most extreme views, war is an inherent feature of human existence, a constant curse of all social life, or (in the guise of real war) a perversion of human sociability created by the centralized political structures of states and civilizations. In fact, cross-cultural research on warfare has estab-
lished that although some societies that did not engage in war or did so extremely rarely, the overwhelming majority of known societies (90 to 95 percent) have been involved in this activity.

Three independent cross-cultural surveys of representative samples of recent tribal and state societies from around the world have tabulated data on armed conflict, all giving very consistent results. In one sample of fifty societies, only five were found to have engaged "infrequently or never" in any type of offensive or defensive warfare. Four of these groups had recently been driven by warfare into isolated refuges, and this isolation protected them from further conflict. Such groups might more accurately be classified as defeated refugees than as pacificists. One California Indian tribe, the Monachi of the Sierra Nevada, apparently did occasionally go to war, but only very rarely. The results of this particular survey indicate that 90 percent of the cultures in the sample unequivocally engaged in warfare and that the remaining 10 percent were not total strangers to violent conflict.

In another larger cross-cultural study of politics and conflict, twelve of a sample of ninety societies (13 percent) were found to engage in warfare "rarely or never." Six of these twelve were tribal or ethnic minorities that had long been subject to the peaceful administration of modern nation-states—for example, the Gonds of India and the Lapps of Scandinavia. Three were agricultural tribes living in geographically isolated circumstances, such as the Tikopia islanders of Polynesia (who were defeated refugees) and the Cayapa tribe of Ecuador. The final three were nomadic hunter-gatherers of the equatorial jungles and arctic tundra: the Mbuti Pygmies of Zaire, the Semang of Malaysia, and the Copper Eskimo of arctic Canada. Most of these peaceful societies were recently defeated refugees living in isolation, lived under a "king's peace" enforced by a modern state, or both. The real exceptions, representing only 5 percent of the sample, were some small bands of nomadic hunter-gatherers and a few isolated horticultural tribes.

In a study of western North American Indian tribes and bands, again only 13 percent of the 157 groups surveyed were recorded as "never or rarely" raiding or having been raided—meaning, in this case, more than once a year. Of these 21 relatively peaceful groups, 14 gave other evidence of having conducted or resisted occasional raids, presumably only once every few years. This leaves only 7 truly peaceful societies (4.5 percent of the sample) that apparently did not participate in any type of warfare or raiding. All these were very small nomadic bands residing in the driest, most isolated regions of the Columbia Plateau and the Great Basin. Again, we find the most peaceful groups living in areas with extremely low population densities, isolated by distance and hard country from other groups.

Even highly nomadic, geographically isolated hunter-gatherers with low population densities are not universally peaceable. For example, many Australian Aboriginal foragers, including those living in deserts, were inveterate raiders. The seeming peacefulness of such small hunter-gatherer groups may therefore be more a consequence of the tiny size of their social units and the large scale implied by our normal definition of warfare than of any real pacifism on their part. Under circumstances where the sovereign social and political unit is a nuclear or slightly extended family band of from four to twenty-five people, even with a sex ratio unbalanced in favor of males, no more than a handful of adult males (the only potential "warriors") are available. When such a small group of men commits violence against another band or family, even if it faced in open combat by all the men of the other group, this activity is not called war but is usually referred to as feuding, vendetta, or just murder.

Thus many small-band societies that are regarded by ethnologists as not engaging in warfare instead evidence very high homicide rates. For example, the Kung San (or Bushmen) of the Kalahari Desert are viewed as a very peaceful society; indeed, one popular ethnography on them was titled The Harmless People. However, their homicide rate from 1920 to 1955 was four times that of the United States and twenty to eighty times that of major industrial nations during the 1950s and 1960s. Before local establishment of the Bechuanaland/Botswana police, the Kung also conducted small-scale raids and prolonged feuds between bands and against Tsawana herdsmen intruding from the east. The Copper Eskimo, who appear as a peaceful society in the cross-cultural surveys just discussed, also experienced a high level of feuding and homicide before the Royal Canadian Mounted Police suppressed it. Moreover, in one Copper Eskimo camp of fifteen families first contacted early in this century, every adult male had been involved in a homicide. Other Eskimo of the high arctic who were organized into small bands also fit this pattern. Based on figures from different sources, the murder rate for the Netsilik Eskimo, even after the Mounties had suppressed interband feuding, exceeds that of the United States by four times and that of modern European states by some fifteen to forty times. At the other end of the New World, the isolated Yaghan "canoe nomads" of Tierra del Fuego, whose only sovereign political unit was the "biological family," had a murder rate in the late nineteenth century "10 times as high as that of the United States." Thus armed conflict between social units does not necessarily disappear at the lowest levels of social integration; often it is just terminologically disguised as feuding or homicide.

Both Richard Lee and Marvin Harris, defending the pacificist nature of Kung and other simple societies compared with our own, decry the "semantic deception" that disguises the "true" homicide rates of modern states by ignoring the murders inflicted during wars. Let us undertake such a comparison for one simple society, the Gebusi of New Guinea. Calculations show that the
United States military would have had to kill nearly the whole population of South Vietnam during its nine-year involvement there, in addition to its internal homicide rate, to equal the homicide rate of the Gebusi.\textsuperscript{10} As their ethnographer Bruce Knut notes, “Only the most extreme instances of modern mass slaughter would equal or surpass the Gebusi homicide rate over a period of several decades.”\textsuperscript{11} There is, then, an equal semantic deception involved in manufacturing peaceful societies out of violent ones by refusing to characterize as war their only possible form of intergroup violence, merely because of the small size of the contending social units.

If many of the “peaceful” hunter-gather bands did in reality engage in armed conflict, were any of them genuine pacifists? Perhaps the most striking case of peaceful hunters involves the Polar Eskimo of northwestern Greenland.\textsuperscript{12} In the early nineteenth century, they consisted of a small band of some 200 people whose circumstances seemed ideally suited to a postapocalyptic science-fiction plot or perhaps a heartless social science experiment. Their icy isolation had been so complete for so long that they were unaware that any other people existed in the world until they were contacted in 1819 by a European explorer. This tiny society, whose members eked a precarious livelihood from a frozen desert, not surprisingly avoided all feuds and armed conflicts, although murder was not unknown.\textsuperscript{13} When other Eskimo from Canada and southwestern Greenland reached them after hearing of their existence from Europeans, relations with these strangers and with the Europeans they encountered were always quite amicable. The Polar Eskimo thus provide a countereexample to the recent theory that contact with Western civilization and its material goods inevitably turns peaceful tribesmen into Hobbesian berserkers.

There are a few other examples of peaceful hunter-gatherers.\textsuperscript{14} The Mbuti Pygmies and Settang of the tropical forests of central Africa and Malaysia seem to have completely eschewed any form of violent conflict and can legitimately be regarded as pacifistic. However, the Pygmy foragers were in fact politically subordinate to and economically dependent on the farmers who surrounded them (Chapter 9). Although they frequently engaged in nonlethal violence involving weapons, the last small “wild” band of Aborignes in the western Australian desert, the Mardudjara, never (at least while ethnographers were present) permitted such fighting to escalate into killing. Although they possessed shields and specialized fighting weapons, the Mardudjara had no words in their language for feuds or warfare. The Great Basin Shoshone and Paitie bands mentioned earlier apparently never attacked others and were themselves attacked only very rarely; most just fled rather than trying to defend themselves. But these few peaceful groups are exceptional. The cross-cultural samples indicate that the vast majority of other hunter-gather groups did engage in warfare and that there is nothing inherently peaceful about hunting-gathering or band society.\textsuperscript{15}

Pacifistic societies also occur (if uncommonly) at every level of social and economic complexity. Truly peaceful agriculturalists appear to be somewhat less common than pacifistic hunter-gatherers. In the cross-cultural samples discussed earlier, almost all the peaceful agricultural groups could be characterized as defeated refugees, ethnic minorities long administered by states, or tribes previously pacified by the police or by paramilitary organs of colonial or national states.\textsuperscript{16} Low-density, nomadic hunter-gatherers, with their few (and portable) possessions, large territories, and few fixed resources or constructed facilities, had the option of fleeing conflict and raiding parties. At best, the only thing they would lose by such flight was their composure. But with their small territories, relatively numerous possessions, immobile and labor-intensive houses, food stores, and fields; sedentary farmers or hunter-gatherers who attempted to flee trouble could lose everything and themselves in the process of flight.

Fanners and sedentary hunter-gatherers had little alternative but to meet force with force or, after injury, to discourage further depredations by taking revenge. Groups that depended on very localized, essential resources—such as desert springs, patches of fertile soil, good pastures, or fishing stations—had to defend these or face severe privation. Even nomadic pastoralists in extensive grasslands had to defend their herds, wherever they might be. For obvious reasons, then, agriculturalists, pastoralists, and less nomadic foragers have seldom been entirely peaceful. But such pacifistic farmers have occasionally appeared.

The best-known peaceful agriculturalists are the Semai of Malaysia, who strictly tabooed any form of violence (although their homicide rate was numerically significant).\textsuperscript{17} Their reaction to any use of force involved “passivity or flight.” Interestingly, they were recruited as counterguerrilla scout troops by the British during the Communist insurgency in Malaysia in the 1950s. The Semai recruits were profoundly shocked to discover that as soldiers they were expected to kill other men. But after the guerrillas killed some of their kinmen, they became very enthusiastic warriors. One Semai veteran recalled, “We killed, killed, killed. The Malays would stop and go through people’s pockets and take their watches and money. We did not think of watches or money. We thought only of killing. Wah, truly we were drunk with blood.” However, when the Semai scouts were demobilized and returned to their villages, they quietly resumed their nonviolent life-style. The low density of population, shifting settlement, and abundances of unused land probably allowed the Semai, unlike many other farmers, the option of flight from violent threats.\textsuperscript{18} But their strong moral distaste for violence was undoubtedly important in maintaining their peacefulness.
Peaceful societies even exist among industrial states. For example, neither Sweden nor Switzerland has engaged in warfare for nearly two centuries; their homicide rates are among the lowest in the world. Like many peaceful tribal societies, Switzerland is to some degree geographically isolated behind its mountains. Sweden was once home to the legendary belligerent Vikings and remained one of the most warlike societies in Europe until the eighteenth century. Nevertheless, Sweden has fought no wars since 1815. Both nations traditionally maintain modern military forces; indeed, every Swiss male between the ages of twenty and fifty is a military reservist, while Sweden is one of the world’s leading arms exporters. But they and a few other nations in Asia and South America offer testimony that there is nothing inherently warlike about states.

Thus pacificist societies seem to have existed at every level of social organization, but they are extremely rare and seem to require special circumstances. The examples of Sweden and the Semai demonstrate that societies can change from pacific to warlike, or vice versa, within a few generations or, (as with the Semai) within the lifetime of an individual. As these examples and the case of the Polar Eskimo establish, the idea that violent conflicts between groups is an inevitable consequence of being human or of social life itself is simply wrong. Still, the overwhelming majority of known societies have made war. Therefore, while it is not inevitable, war is universally common and usual.

**THE FREQUENCY OF WARFARE IN STATE AND NONSTATE SOCIETIES**

How frequent are primitive wars, and do nonstate societies engage in warfare less frequently than states or civilized societies? These questions are related to the question of how intense primitive warfare is. Again turning to cross-cultural research, we find that many of the myths about primitive war are untrue.

The three cross-cultural surveys mentioned earlier also include data on the frequency of warfare. All these studies show that warfare has been extremely frequent among primitive societies. In the sample of fifty societies, 66 percent of the nonstates were continuously (meaning every year) at war, whereas only 40 percent of the states were at war this frequently. In this survey, warfare was therefore found to be less frequent in state societies. The larger sample of ninety societies, however, indicated that the frequency of war increased somewhat with greater political complexity; 77 percent of the states were at war once a year, whereas 62 percent of tribes and chiefdoms were this war prone. Nevertheless, 70 to 90 percent of bands, tribes, and chiefdoms went to war at least once every five years, as did 86 percent of the states. All these figures support yet another survey, which found that about 75 percent of all prestate societies went to war “at least once every two years before they were pacified or incorporated by more dominant societies” and that warfare was no more frequent “in complex societies than in simple band or tribal societies.” In the sample of U.S. western Indian tribes, which consisted wholly of nonstate societies, 86 percent were raiding or resisting raids undertaken more than once each year. And such high frequencies of fighting were not peculiar to North America. For example, during a five-and-a-half-month period, the Dugum Dani tribesmen of New Guinea were observed to participate in seven full battles and nine raids. One Yanomamo village in South America was raided twenty-five times over a fifteen-month period. These independent surveys show that the great majority of nonstate societies were at war at least once every few years and many times each generation. Obviously, frequent, even continuous, warfare is as characteristic of tribal societies as of states.

The high frequencies of prestate warfare contrast with those of even the most aggressive ancient and modern civilized states. The early Roman Republic (510–121 B.C.) initiated a war or was attacked only about once every twenty years. During the late Republic and early Empire (118 B.C. – A.D. 211), wars started about once every six or seven years, most being civil wars and provincial revolts. Only a few of these later Roman wars involved any general mobilization of resources, and all were fought by the state’s small (relative to the size of the population), long-service, professional forces supported by normal taxation, localized food levies, and plunder. In other words, most inhabitants of the Roman Empire were rarely directly involved in warfare and most experienced the Pax Romana unmolested over many generations.

Historic data on the period from 1800 to 1945 suggest that the average modern nation-state goes to war approximately once in a generation. Taking into account the duration of these wars, the average modern nation-state was at war only about one year in five every during the nineteenth and early twentieth centuries. Even the most bellicose, such as Great Britain, Spain, and Russia, were never at war every year or continuously (although nineteenth-century Britain comes close). Compare these with the figures from the ethnographic samples of nonstate societies discussed earlier: 65 percent at war continuously; 77 percent at war once every five years and 55 percent at war every year; 87 percent fighting more than once a year; 75 percent at war once every two years. The primitive world was certainly not more peaceful than the modern one. The only reasonable conclusion is that wars are actually more frequent in nonstate societies than they are in state societies—especially modern nations.

**MOBILIZATION**

The informal and voluntary mobilization for war supposedly characteristic of tribal societies is often cited as evidence of the lack of importance and effective-
ness of primitive versus civilized war. The idea is that if war really represented an important activity, instead of just a sport or dangerous pastime, these primitive societies would muster all of their strength.

Figure 2.1 shows some selected information on the size of war parties or armies in relation to the male populations of the social units from which they were drawn. While in most nonstate societies every male over the age of thirteen or fourteen is a potential warrior, not all of them participate in any particular war, battle, or raid. In general, tribal military formations are "all-volunteer" and usually muster proportions of their potential manpower similar to those achieved in the volunteer armed forces of states. Although modern conscript armies during active warfare generally represent a high percentage of the male population, on many occasions nonstate societies mobilize a higher proportion of their manpower. In World War II, neither the Soviet Union nor the United States, despite the tremendous power of coercion enjoyed by modern states, managed during the whole war to mobilize any greater proportion of its manpower than have some tribes and chiefdoms.

The reasons why mobilization cannot be complete are essentially the same for any society. Many males are too young, too old, too ill, or temperamentally unsuited to endure the stresses of combat. Because the sexual division of labor in most societies trains men and women to be proficient in different tasks, a society's economy may not be sustained if it is denuded of men to hunt, tend stock, clear gardens, or do whatever other essential work lies on the male side of the division. Although women may be able to take over some of these tasks, training and developing skill at them take time. It may be very unwise to focus all of a group's manpower at one point on a border or beyond it, leaving women, children, and property vulnerable to attack from another quarter.

Women have very rarely engaged in combat, but have often played auxiliary roles in mobilization and logistics. Before hostilities commenced, they might shame cowards, taunt the hesitant, and participate in dances of incitement. Among some groups, women have accompanied war parties to carry weapons and food. During combat, they might serve as a cheering section, supply first aid, or collect spent enemy missiles to resupply their own warriors. In some cases, either by choice or by necessity (such as when the enemy breached their fortifications), some women might actually fight. For example, female warriors were apparently not unusual in northern South America. In general, though, women's role has been to maintain the home front, tend gardens and stock, and nurse the wounded. While war may be everyone's business, it has usually been men's work.

In civilized war, ancient and modern, tremendous manpower (and womanpower) is required just to equip and supply military formations. The higher "warrior" proportions of modern wartime states in Figure 2.1 disguise the fact that only a fraction of the men mobilized actually engaged in combat. In Napoleon's armies, at any given time, only about 58 to 77 percent of his soldiers were "effectives." The rest were convalescing, in training, garrison troops, or members of support units. During World War II, only about 40 percent of American servicemen served in combat units. The others were involved in administration, logistical support, and training; and an even smaller percentage carried a rifle, sailed on a warship, or flew in a warplane. The "tooth to tail" ratio between combat and support troops was 1:14 for the U.S. Army in Vietnam and is now about 1:11. This diminution in the proportion of actual combatants in armies means that no modern state army can or does engage all of its mobilized manpower. These proportions reflect the huge geographic scale of modern military operations and the heavy, complex technology involved. Of course, every person mobilized is lost to the home economy and peaceful pursuits, but the fact remains that very few of them actually engage in combat. By contrast, in ancient armies and primitive war parties, almost every participant was an effective. If mobilization figures are modified to reflect the higher proportion of noncombatants in modern armed forces, the mobilization for combat of tribal societies would compare even more favorably with those of modern states. This finding also implies that males in nonstate societies are far more likely to face combat than is the average male citizen of a modern nation. By the measure

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Figure 2.1 Percentages of male populations mobilized for combat by various tribes, ancient states, and modern nations (see Appendix, Table 2.1).
of manpower mobilization, then, war is no less important to tribes than to na-
tions.

PREHISTORIC WARFARE

With regard to prehistory, nothing comparable to the surveys of historical and
ethnographic societies cited earlier exists as yet. Any attempts to survey 2 million
years of human prehistory for evidence of violence and armed conflict face
several daunting difficulties. The first is that most regions of the world are
poorly known archaeologically—the rare exceptions being Europe (especially
the west), the Near East, and parts of the United States. The most unequivocal
evidence of armed conflict consists of human skeletons with weapon traumas
(especially, embedded bone or stone projectile points) and fortifications. How-
ever, humans have buried their dead for only the past 150,000 years or so;
before this, the human remains that have been found were often disturbed and
fragmented by scavengers and natural forces. Even during the past 150,000
years, many prehistoric peoples disposed of their dead in ways—for example,
cremation and exposure—that left no remains for anthropologists to study. Only
among some peoples—those for whom the use of stone- and bone-tipped
weapons (which can survive embedded in or closely associated with human
skeletons) was commonplace—is it easy to distinguish accidental traumas from
those inflicted by humans. The use of these weapons occurred only during the
past 40,000 years, and in many regions perishable wooden and bamboo spears
and projectiles continued to be used until modern times. Until humans began
living in permanent villages, fortifications would have not repaid the labor re-
quired to construct them (Chapter 3). But humans seem to have become suffi-
ciently sedentary only during the past 14,000 years, and permanent villages are
common in most regions only after the adoption of farming (8000 B.C. at the
earliest). Thus it is possible to document prehistoric warfare reliably only within
the past 20,000 to 30,000 years and in a only a few areas of the world. Granting
these limitations, what does the archaeological evidence say about the peaceful-
ness of prehistoric peoples?

Some authors have claimed that the evidence of homicide is as old as humanite—or at least as old as the genus Homo (that is, over 1 million years). But many of the traumas found on early hominid skeletons have been proved by subsequent investigation to have had nonhomicidal causes or cannot be distin-
guished from accidental traumas of a similar character. For instance, the
paired "spear wounds" found on some South African Australopithecine skulls
are now recognized as punctures created by leopard canines as the predator
carried these luckless ancestors of ours, gripping their heads in its teeth. As
another example, Neanderthals seem to have been especially accident prone,
compared with the modern humans who followed them. Neanderthals’ bones
evidence many injuries and breakages (one study determined that 40 percent of
them had suffered head injuries). Which, if any, of these injuries were caused by
human violence cannot be determined. Since the heavy musculature and robust
bones of Neanderthals imply that their way of life was much more strenuous and
physically demanding than that of more recent humans, it seems probable that
most of the traumas in question were accidental. Why they so often "forgot to
duck" remains a mystery, however.

Whenever modern humans appear on the scene, definitive evidence of homicidal violence becomes more common, given a sufficient sample of burials. Several of the rare burials of earliest modern humans in central and western Europe, dating from 34,000 to 24,000 years ago, show evidence of violent death. At Grimaldi in Italy, a projectile point was embedded in the spinal column of a child’s skeleton dating to the Aurignacian (the culture of the earliest mod-
ern humans in Europe, ca. 36,000 to 27,000 years ago). One Aurignacian
skull from southern France may have been scalped; it has cut-marks on its
frontal (forehead). Evidence from the celebrated Upper Palaeolithic ceme-
teries of Czechoslovakia, dating between 35,000 and 24,000 years ago, im-
plies—either by direct evidence of weapons traumas, especially cranial frac-
tures on adult males, or by the improbability of alternative explanations for
mass burials of men, women, and children—that violent conflicts and deaths
were common. In the Nile Valley of Egypt, the earliest evidence of death by
homicide is a male burial, dated to about 28,000 years ago, with stone pro-
jectile points in the skeleton’s abdominal region and another point embed-
ded in its upper arm (a wound that had partially healed before his death).
The one earlier human skeleton found in Egypt bears no evidence of violence,
but the next more recent human remains there are rife with evidence of homici-
dle.

The human skeletons found in a Late Palaeolithic cemetery at Gebel Sahaba
in Egyptian Nubia, dating about 12,000 to 14,000 years ago, show that warfare
there was very common and particularly brutal. Over 40 percent of the fifty-nine
men, women, and children buried in this cemetery had stone projectile
points intimatly associated with or embedded in their skeletons. Several adults
had multiple wounds (as many as twenty), and the wounds found on children
were all in the head or neck—that is, execution shots. The excavator, Fred
Wendorf, estimates that more than half the people buried there died vio-
ently. He also notes that homicidal violence at Gebel Sahaba was not a once-in-
a-lifetime event; since many of the adults showed healed party fractures of their
forearm bones—a common trauma on victims of violence—and because the
cemetery had obviously been used over several generations. The Gebel Sahaba
burials offer graphic testimony that prehistoric hunter-gatherers could be as
ruthlessly violent as any of their more recent counterparts and that prehistoric warfare continued for long periods of time.

In western Europe (and more poorly known North Africa), ample evidence of violent death has been found among the remains of the final hunter-gatherers of the Mesolithic period (ca. 10,000 to 5,000 years ago). One of the most gruesome instances is provided by Ochre Cave in Germany, where two caches of "trophy" skulls were found, arranged "like eggs in a basket," comprising the disembodied heads of thirty-four men, women, and children, most with multiple holes knocked through their skulls by stone axes. Indeed, some archaeologists, impressed by the abundant evidence of homicide in the European Mesolithic, date the beginnings of "real" war to this period.

Indications of conflict, as reflected by violent death and the earliest fortifications, became especially pervasive in western Europe during the ensuing Neolithic period (the era of the first farmers, ca. 7,000 to 4,000 years ago, depending on the region). Some archaeologists have argued that real warfare begins only when hunters become farmers. This mistaken point of view does have some especially grim support in the remains of Neolithic mass killings at Talheim in Germany (ca. 5000 B.C.) and Roaix in southeastern France (ca. 2000 B.C.). At Talheim, the bodies of eighteen adults and sixteen children had been thrown into a large pit; the intact skulls show that the victims had been killed by blows from at least six different axes. More than 100 persons of all ages and both sexes, often with arrowpoints embedded in their bones, received a hasty and simultaneous burial at Roaix. The villages of the first farmers in many regions of western Europe were fortified with ditches and palisades. Several of these early enclosures in Britain, after being extensively excavated, yielded clear evidence of having been attacked, stormed, and burned by bow-wielding enemies. The early agricultural tribes and petty chieftains of Neolithic Europe were anything but peaceful.

Interestingly, the historically blood-soaked Near East has yielded little evidence of violent conflict during the Early Neolithic. Although extensive and elaborate fortifications were erected during this period at Jericho, they became common in the Near East only in the later Neolithic and in the Bronze Age.

When we turn to the United States—specifically to those areas that have been subject to intensive archaeological scrutiny and where large samples of human burials have been excavated, such as the Southwest, California, the Pacific Northwest Coast, and the Mississippi drainage—violent deaths are at least in evidence and, in some periods, were extremely common. Fortifications were constructed at various times and in various regions by prehistoric farmers in the Mississippi drainage and in the Southwest, as well as by the prehistoric sedentary hunter-gatherers of the Northwest Coast. As with the best-studied re-

gions of the prehistoric Old World, the prehistoric New World was also a place where the dogs of war were seldom on a leash.

In each of these regions, the indications are that warfare was relatively rare during some periods; nothing suggests, however, that prehistoric nonstate societies were significantly and universally more peaceful than those described ethnographically. The archaeological evidence indicates instead that homicide has been practiced since the appearance of modern humankind and that warfare is documented in the archaeological record of the past 16,000 years in every well-studied region. In the chapters that follow, it will become clear that archaeological evidence strongly supports ethnographic accounts concerning the conduct, consequences, and causes of prestate warfare.

There is simply no proof that warfare in small-scale societies was a rarer or less serious undertaking than among civilized societies. In general, warfare in prestate societies was both frequent and important. If anything, peace was a scarcer commodity for members of bands, tribes, and chiefdoms than for the average citizen of a civilized state.
Feasting on My Enemy: Images of Violence and Change in the New Guinea Highlands

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Abstract. This article considers changing images and practices of violence seen through the lens of two categories of the imaginary: assault sorcery and cannibalistic witchcraft. The ethnographic and historical locus for this discussion is the Highlands of Papua New Guinea, within which we further concentrate on three ethnographic cases where we have conducted fieldwork: in Hagen, in Pangia, and among the Duna speakers of Lake Kopiago (Figure 1). The time period examined is from the mid-1960s to 1998, coinciding with colonial and postcolonial changes in this region. With colonial pacification and postcolonial transformations in the political economy, many alterations have occurred in indigenous perceptions with regard to violent conflict and to the political values attached to social space. These changes have been reflected in changing notions about sorcery and witchcraft, two sorts of "mystical violence" that have tended to flourish in contexts where open warfare between groups or open interpersonal violence are suppressed or restrained.

We direct our attention to both sorcery and witchcraft because we see these as two overlapping conceptualizations of hidden violence that transgress boundaries of the human body and the body politic, as argued by Mary Douglas and others (Douglas 1966; Lock and Scheper-Hughes 1987; Stewart and Strathern 1997, see also Strathern 1996). Such forms of violence can clearly be seen as alternatives to warfare, or as forms of supernatural warfare themselves. But sorcery and witchcraft accusations and ideas can also be precipitates of patterns of disease and the sickness and death caused by disease. Images connected with sorcery and witchcraft therefore tend to co-vary with changing historical patterns of disease in epidemiological terms. In colonial circumstances these patterns further correlate with the spatial movements of people between communities as well as with the
spread of infectious diseases. Epidemiological patterns are therefore a part of the evidence brought forth in this article on why sorcery and witchcraft ideas change over time.

The New Guinea Highlands is an opportune area in which to examine these themes because the history of colonial contact and postcolonial change is relatively recent. Ethnohistorical accounts by the people are an important part of the narrative as a whole. Furthermore, this is a region in which warfare and acts of violence flourished in precolonial times and have subsequently reemerged as a part of alternating patterns of hostility, revenge, and peacemaking between groups. Exchanges of wealth goods are made to make alliances and to pay for killings, but these also are counterbalanced against perceived continuing, if covert, acts of hostility by sorcery and witchcraft. The imagery of cannibalism is used by some groups (in Hagen and among the Duna) to express aspects of aggressive hostility and the transcendence of these aspects by "proper" forms of consumption and exchange. Assault sorcery depends on magical notions of bodily invasion and destruction, which parallel those of witchcraft but without cannibalistic images. The common theme linking these two phenomena is that of bodily invasion, resulting either in destruction of or in consumption of body parts themselves. In both cases such assaults on the body reflect the fact that the victim is regarded as an enemy to be destroyed, hence our theme of "feasting on my enemy." Legitimate exchange is then seen as substituting the consumption of wealth for the consumption or destruction of bodies, thus resulting in "feasting with my enemy."

Alterations in perceptions of space over time in these societies can also be related to changes in the political economy. The integration of previously autonomous local polities into administrative areas in colonial time had complex results, causing forms of interdependency accompanied by latent intergroup hostilities. Changes in patterns of production, consumption, and exchange resulting from cash cropping in certain areas (e.g., in Hagen) have also led to new patterns of fears of witchcraft; while alterations in the conditions of communication between local and ethnic groups have led to increased fears of assault sorcery (e.g., in Pangia and among the Duna). Gender relations have also been affected by both economic and political changes, leading in some instances to intensified or renewed fears of female witchcraft (among the Duna).

Our framework involves the idea of political space, or the fields of power that are created and altered in colonial and postcolonial conditions. The power of the state, seen most broadly, has altered political space in the societies we consider, not simply by pacification—the removal of warfare and the creation of peace between groups—but rather by setting up
new forms and categories of space within which political power was both
denied and exercised. The removal of warfare did not mean the removal
of animosities, or the preemption of future hostilities; rather, it provided
a basis for their elaboration, with permutations of scale, setting up new
conditions for fears of sorcery and witchcraft to operate within.

We begin with a brief review of the theories of hostile sorcery and
witchcraft in the contexts of Africa and Melanesia, partly because we be-
lieve that our Melanesia-based arguments probably also apply to the ma-
terials on change in patterns of witchcraft and sorcery ideas in colonial and
postcolonial Africa.

Sorcery, Witchcraft, and Conflict

Images of bodily invasion clearly go with perceptions of conflict between
persons, the penetration and permeability of boundaries of the body, per-
sonhood, and groups, as stressed in the work of Douglas (1966, 1970, 1991,
1996) and others (e.g., Lewis 1970, 1989; Purkiss 1996: 120). In the earlier
literature on sorcery and witchcraft, arising to a fair extent from African-
ist ethnography, stress tended to be laid on the basis of such practices in
conflict, tension, and strain between persons in positions of competition,
jealousy, or incompatibility (e.g., Max G. Marwick’s [1952, 1970] theory of
sorcery as a social “strain-gauge” and the notion that sorcery provided an
avenue of redress for perceived wrongdoings). It is clear that such a theme
has empirical applicability to the contexts this article discusses, where the
images of conflict are expressed by the human body and by analogy, the
bounded community as the chief site for their symbolic work.

We are primarily interested in contexts of historical change rather than
in synchronic typologies of systems. We are interested in comparing pro-
cesses (social and historical) rather than in setting up definitional typolo-
gies. Therefore, in discussing assault sorcery and cannibalistic witchcraft,
we do not stress the distinction between the terms sorcery and witchcraft
as such; rather, we use these terms for convenience to refer to symbolic
syndromes of mystical violence1 that are partly distinct and partly over-
lap. In reviewing the question of definitional distinctions between sorcery
and witchcraft, several authors have concluded that hard and fast distinc-
tions can be made in hypothetical terms but then fail to fit the complexi-
ties of ethnographic fact. Bruce M. Knauff (1985: 346), for example, com-
ments that “opposed definitional terms such as ‘sorcery’ or ‘witchcraft’
leave problematic how intermediate cases are to be labeled and discussed.”
He goes on to say that the analysis of how sickness-sending beliefs can
articulate with political and symbolic actions is worthwhile, but “pinning
these processes to a binary typology may unwittingly obscure some of the richer inter-relationships” (ibid.).

The dimensions in terms of which definitional distinctions have been attempted include the innate versus the learned, involuntary versus voluntary action, and illegitimate versus legitimate power (see, e.g., Ellen 1993: 6). The first two distinctions derive in part from the classic work of E. E. Evans-Pritchard (1976 [1937]: on 11) the Azande, although it is clear from this work that the Zande witch was thought of as sending out “the soul of witchcraft” from his body and therefore as performing an intentional act, even though an accused witch might also claim “that he is unconscious of injuring anyone” (ibid.: 42). Zande witchcraft substance (mbisimo mangu) was thought of as inherited in the body and therefore as involuntarily obtained and innate in the person, yet its exercise was clearly seen as intentional, even if the witch was driven by his emotions of jealousy or dislike. A witch’s actions might thus be seen as a complex intermeshing of the voluntary with the involuntary. It is worthwhile noting here that Evans-Pritchard himself was not interested in ideal type definitions; he merely wished to explain what the Azande meant by the terms mangu (which he glosses as “witchcraft”), soroka (oracles), ngua (magic, characterized by ritual action and a spell, whereas mangu involved no use of spells), and sorcery (bad magic [gbegbere ngua]). His definitions are thus glosses of convenience, used to tie in with Zande expression, rather than being intended as universal classifications. The legitimate versus the illegitimate distinction, as proposed by Michele Stephen (1987: 264), runs into the difficulty, remarked on also by Knauft (1985: 346), that “many Melanesian societies accord some degree of deference to alleged sickness-senders,” while they also “actively disparage or castigate these person.” Stephen herself wished to contrast the powerful sorcerer to whom deaths may be attributed with the despised witch who is accused and punished; this distinction applies in some cases, though not always. The upshot is that we, like Evans-Pritchard, are using terms of convenience, but our aim is to situate the discussion in terms of historical changes, as Malcolm D. McCleod does in his 1972 analysis of the history of witchcraft among the Azande.

In Africanist studies of the historical contexts involved in changing patterns of witchcraft accusations, one point that is made very clear is that the societies concerned had been subjected on the whole to severe political and economic dislocations—through wage labor, missionization, and the growing dissolution of social bonds resulting from the movements of people and the challenges to moral codes and patterns of local authority. Douglas (1991: 727) notes that in Malawi, Zaire, Zambia, and Zimbabwe, where many ethnographic studies were done, “the old political systems
were not functioning” and witchcraft accusations between rivals for village power therefore arose in contexts where other ways of obtaining re-dress against an unpopular leader or of contesting succession to an office of leadership were no longer available. Although in an earlier work Douglas (1970: xx) points out that propositions about “social breakdown” and “increase in frequency of accusation” are usually empirically untestable, we are on safer ground in pointing out the demographic, spatial, and structural changes themselves. In situations of increased movements of people, it is thus likely that arenas of ambiguity and distrust in social relations—cited as those in which witchcraft accusations are made—will also increase (referred to in ibid.: xvii). The developmental cycle of competition for local power in a village will also be exacerbated by wider processes of social instability and so give rise to witchcraft accusation, such as John Middleton (1987: 137, 153) notes for the Lugbara of the Sudan. The same holds for sorcery and witchcraft in other parts of the world (on South-East Asia, see Ellen 1993: 16). It is not simply a matter of arguing for an increased frequency of types of action; rather, it is a matter of studying the changing loci of accusations and ways of handling these over time and of relating these changes to wider processes. In this regard the conclusions from African studies certainly apply, mutatis mutandis, to some of the Melanesian cases this article considers (e.g., the Duna). In a section on social change in her survey on sorcery and witchcraft in Melanesia, Stephen (1987: 277-88) argues similarly, pointing out that her legitimate versus illegitimate distinction is intended to apply to structures before colonial changes. The difficulty here lies in supposing that the structures in place before colonialism were necessarily stable rather than fluid and changing. But where changes are recent and documented, we can make some headway in delineating structural transformations: for example, when sorcery, like wealth, is no longer restricted to an elite but is attributed to the populace at large.2

In one of her surveys of different patterns of boundary-maintaining-redefining behavior, Douglas (1970: xxvi–xxvii) points out that a witch may be seen either as an outsider or as an internal enemy (a member of a rival faction or having outside liaisons, or as a dangerous deviant). These patterns may change over time, but in one of our categories, the assault sorcerer, the predominant assertion is that the perpetrator is an outsider, a classic version of a terrifying enemy.

Assault Sorcery and Images of Violence

Assault sorcery is generally correlated with distance and hostility.3 The sorcerer is seen as an outsider who penetrates a community area or iso-
lates a victim on the periphery of such an area, in a garden or a secluded
pathway, and makes a physically aggressive attack by stunning the victim,
butchering the victim's internal organs and removing them, sewing the per-
son up again and sending him or her home to eventually die. Often, if not
usually, the image is that assault sorcerers operate in squads that are trained
by adepts. Assault sorcery is closely cognate with notions of warfare and
is therefore likely to flourish when community spaces defined by warfare
have lost their definition because of pacification and colonial restructuring,
when there is a struggle to define new spaces and exercise power within
them.

Furthermore, in assault sorcery the sorcerer directly confronts and
overcomes the victim by minatory force. In a classic examination of types
of sorcery and violence among the Fore of Eastern Highlands Province in
Papua New Guinea, Jate, Kamano, and Usurufa, R. M. Berndt (1962: 224)
explicitly notes that in performing this kind of sorcery "the sorcerers have
two main intentions in mind. They have received an injury which demands
retaliatory action . . . [and] they want to avoid open warfare." An assault
sorcerer who is caught will be shot and his corpse dishonored and abused
before being returned to its home village, in the same way as might happen
to a war casualty. Fears of such sorcery may rise after the forcible ending
of open warfare. In this way sorcery can be regarded as a form of feuding
between groups. Nevertheless, it is a special kind of feuding, thought to
depend on the exercise of magical powers, and therefore contributes to a
higher level of terror between groups, making "pacification" less "peace-
ful" than it might otherwise be.

In his wide-ranging survey of types of "payback" activities in Melanesia, G. W. Trompf (1994: 64) makes a similar point when he notes that an
attribution of deaths to sorcerers or witches "is actually a common post-
contact development in many areas of Papua and one consequent upon
the fact that indiscriminate payback killings or tribal wars have been de-
barred." Trompf goes on to discuss several cases in which sorcery accu-
sations have altered with social changes: for example, overcrowding and
population pressure in Kalauna (ibid.: 67, citing Young 1971), disease pat-
terns, intergroup mobility, and altered political configurations as among
the Mekeo, where circa 1880–1940 the colonial power congregated people
in large villages and kept chiefs under tight control so that sorcerers "now
being highly mobile and bent on freely negotiating with each other in cote-
rries . . . emerged as a fearful power bloc, accumulating real local political
power as steadily as chiefly authority was sucked under expatriate control"
(Trompf 1994: 77). Sorcerers had previously acted to inflict punishment
and retribution on people at the behest of chiefs. Now they began to act
for themselves. Sorcery thus became more than a way of pursuing feud or punishing wrongdoers: it became a mode of politics in itself.

To pursue our own exposition of these themes, we provide composite ethnographic accounts pertaining primarily to three areas of the Papua New Guinea Highlands: Pangia, Hagen, and the Duna areas, specifically Duna speakers who live near the Strickland River in the Aluni Valley (see Figure 1).

Pangia: Assault Sorcery and Change

The Pangia district in Southern Highlands Province of Papua New Guinea was first brought under administrative control by Australian patrol officers in the 1950s. It contains some twenty thousand speakers of Wiru, horticulturalists and pig-rearers, who were engaged in classic patterns of warfare and exchange between local groups until the time of pacification and missionization. In the 1960s in this area there were some twenty partly colonially created, named villages, containing various groups and group segments, whose members saw themselves in certain contexts as communities. At the southernmost part of the area, an eight-hours walk from the next village, lay Tangupane, a place with fewer than one hundred residents, a high proportion of unmarried men, a low altitude, and an immense reputation for being the home of feared assault sorcerers, called māua or uro (these names would be pronounced only furtively by informants). People were thought to be at great risk from these sorcerers if they traveled to Tangupane and especially if they slept there. Visits to the outside latrine at night could not be made alone. One person had to stand guard at the latrine’s entrance to watch for a sorcerer’s approach, while another watched from the house door. But the uro supposedly did not venture far beyond Tangupane and its environs.

By the 1980s residents of the Pangia district believed that the number of these sorcerers had greatly multiplied and that they now ranged over the entire Wiru area, even besetting people near the government station. Why this change in perception? We suggest that colonial power had drained the villages of some of their indigenous powers of setting boundaries and set up a space in which invisible, uncontrollable powers that previously were held into local spaces by structures of warfare and restrictions of movement were now seen as moving more swiftly and widely. The space seen as that of pacification and development by administrators was seen by the people as the space of these invisible powers let loose from their previous local contexts.

The colonially created villages were material concentrations of more
Figure 1. Locations of major groups in Papua New Guinea discussed in the text.
dispersed forms of sociality that had existed previously. The villages, which were themselves beset by internal factionalism, became bounded arenas of social relations outside of which space was seen as less positively social. Pigs were no longer allowed to be kept in village houses; they were fed and stalled in small huts in garden areas defined as in some way “wild.” The creation of these wild areas set the stage for fears of sorcerers threatening the boundaries of the village settlements, and internal conflicts in the villages made people nervous and apprehensive of hostility. The previous solutions of social spacing were for the time being no longer available.

This example shows that in restructuring community spaces the colonial power in Papua New Guinea set up new sorts of local units and in doing so produced problems of how to define community contexts. Forces of sorcery in Pangia, seen as threatening the integrity of local places, were also seen as forms of bodily invasions. The assault sorcerer lurking on the village edge expresses this dual imagery.

There was no known counteraction against māua, hence the great fear it inspired. Māua sorcerers presented an extra threat to women, since the sorcerers were said to rape women before killing them. The sorcerer’s presence was marked by heat that suffocated the victim. Upon sending the victim home, the sorcerer first asked, “Where does the sun rise/set?” If the victim reversed the proper answer, he was satisfied and sent the victim off, with his or her own kidney in the mouth. Upon arrival at home, the victim began to roast and eat his or her own kidney in an autocannibalistic act and was then recognized by kin as doomed to die. Here we see the victim in a state of disorientation, being no longer aware of what is inside or outside or how to relate himself or herself temporally or spatially to the surroundings. This is similar to the type of confusion experienced by persons who are placed in particularly terrifying situations; for example, a soldier who does not realize that an arm or a leg has been blown off during a battle until there is a lull in the fighting and the immediate terror has lessened so that he can take note of his own body.

Among the Daribi, neighbors of the Wiru to the southeast, assault sorcery was known as kebidibidi. Apparently, there were methods of divination to determine who had caused a death by it, as well as statements that counterraiding parties would be organized in revenge (Wagner 1967: 52). Roy Wagner (ibid.: 53) points out that a larger number of deaths was attributed to this kind of sorcery than could be feasible. Assault sorcery thus played a special part in the Daribi imaginary economy of death. It would be particularly interesting to know if this situation had recently emerged (i.e., since “pacification”), as Wagner notes that most of the adult deaths that took place during his first fieldwork period were attributed to assault
sorcery (ibid.). This was during 1963–65, ten years after the beginning of Australian colonial administration in the area. Possibly this represented a shift in consciousness of senses of agency resulting from “pacification,” as we have suggested for the Wiru. The sense of control of boundaries that collapsed inward during colonial times may have driven communities such as these to attempt to reestablish new ways of explaining what was occurring around them and differentiating themselves from the potentially hostile “others” surrounding them, and increasingly among them, whom they were not allowed to kill in warfare. The inability to express collective group agency through warfare may thus have increased rumors of assault sorcery attacks in both areas.

Witchcraft and Social Epidemiology among the Melpa

Melpa speakers of Mount Hagen in Western Highlands Province of Papua New Guinea number some eighty thousand people, divided into tribes and clans, intensively linked by exchanges and by intergroup hostilities belonging both to the past and to contemporary contexts. The Melpa, who have an elaborate array of ideas about the causation of sickness and death, do not appear to have the idea of assault sorcery in quite the way the Daribi and the Wiru do. They have notions about *kum*, however, a kind of witchcraft that is believed to operate in a terrifying way reminiscent of assault sorcery, since the *kum* may eat the inner parts of a person, causing its host to become a cannibal seeking out corpses to consume. The technology of death that eventuates from either assault sorcery or witchcraft is thus quite similar. It is pertinent, therefore, to compare the Melpa’s ideas of *kum* with assault sorcery in Pangia, since both destroy those inner parts that show the presence of life force and human feelings.

The core idea in notions of witchcraft among the Melpa is greed (Strathern 1982; Stewart and Strathern 1997; cf. Kahn 1986 on Wamiran ideas). In 1964–65 such notions were attached to the supposition that one or two women in each clan were cannibals who could turn themselves into dogs in order to rob newly made graves of their corpses and consume the flesh.³ The propensity was believed to pass from mother to daughter. Historically, there was a greater emphasis on such notions in the northern Melpa area close to the Jimi Valley, and in many ethnohistorical representations of witchcraft the Jimi is cited as its origin place. The Melpa who live in the Jimi Valley are bordered on the north by the Karam, among whom witchcraft ideas are common and are called by the term *koyb*, the same as the Melpa *koimb*. *Kum koimb* is Melpa for “cannibal witchcraft,” thus the concept may be a fusion of ideas of *kum*, shared with the Wahgi and Simbu
peoples to the east of the Melpa area, and koyb coming from the Jimi area to the north. This may help to explain why kum is sometimes spoken of as a category of spirits that live beside watercourses or in bush areas, separate from people and sometimes as the force of witchcraft inside people. The witches of the Jimi Valley are believed to be able to enter people’s bodies through their anuses and to eat their way through their intestines, exiting through their upper orifices and leaving their victims as good as dead. The image here is one of assault witchcraft. These ideas also represent the Melpa’s fears of their very different northern neighbors, the Karam.

Michael O’Hanlon describes kum witchcraft among the Wahgi as intangible malevolent powers that certain individuals of either gender have that allow them to cause illness and death in others. Descriptions of witch attacks may stress the intense gaze of the witch or the harboring of small familiars (e.g., a cat, marsupial rat, or a snake) that a witch unleashes against his or her victim. This familiar is often said to emerge through the anus of the witch and it devours its victim’s inner organs. Accusations of kum witchcraft among the Wahgi also tend to occur after an epidemic outbreak or illness, or deaths in an area (O’Hanlon 1989: 57–58). O’Hanlon has reported for the Waghi a heightened number of kum sorcery accusations at the time of funeral feasts, when dysentery epidemics may spread through the attendees. The Wahgis at these funeral feasts said that the people practicing kum should be sent back to the Jimi Valley, indicating that they share the same ethnohistorical traditions as the Melpa. There are traces here of a precolonial history, but they are hard to follow up. We turn therefore to more recent times.

Colonial changes in New Guinea have always been accompanied by epidemiological changes, the flow of sicknesses. In looking at what Dan Sperber (1985) has called “the epidemiology of representations” in terms of the notion of “political space,” we also pay attention to what may be called the “representation of epidemiologies,” that is, physiological events conceptualized in cultural terms seen as invasions that intrude upon and consume the people’s lives. We also look at “social epidemiology,” the representation of changing social patterns in terms of witchcraft and sorcery attacks (cf. Douglas 1991). The epidemiological history of Melpa ideas of witchcraft seems to have started before colonial and postcolonial change and to have represented the contours of relations with neighboring peoples seen as “others” whose practices invaded the Melpa. Ideas have continued to change and develop over time. We compare accounts from 1978 and 1995.

In 1978 a rumor spread throughout the northern and central Melpa areas that more people were becoming cannibal witches. Instead of just a few women in particular lineages, as previously held, now it was feared that
many people of both genders were turning into cannibals because the existing witches were secretly placing pieces of human flesh into the headwaters of streams from which people drew their drinking water. The “grease” or fat from the human meat was tasted and experienced as “sweet,” turning people into cannibals. People therefore were enjoined never to drink water outside of their own clan areas and even within these areas to be very circumspect (Strathern 1982). We see here a prime idea of the spread of danger, through the pollution of water and the need to control consumption in order to avert the new danger flowing through the clan areas. We suggest that this was an expression of the collapse of the “properly” bounded clan area as perceived in the postcolonial imagination. The connections with fears of greed and excessive consumption associated with the advent of cash through the growing and selling of coffee and the relative decline of the exchange ethos in Hagen also seems clear here. The solution suggested was that everyone should control consumption of the medium believed to carry danger—the water supply—a solution that mimics epidemiological hygiene. Water is seen in curative rituals as a healing, purifying substance, yet it was also believed to harbor kum stones. As an element flowing between two categories in a landscape, water could take on either healing or harming capacities. For example, a person, who greedily consumed pork at a feast, who slaked his or her thirst at a stream, gave an opportunity to these little kum stones in the water to jump into that person’s throats. In one image these stones are seen as namb and pilamb (“let me eat, let me experience”). They would scrape at their host’s throat and make him or her insatiable for pork to feed them.

We compare this with the epidemiological rumors of 1995 (Stewart and Strathern 1997). Before this, witches had been reported to eat only the dead: they patrolled around burial sites and fed on corpses. In 1995, however, the idea emerged that there were not enough corpses for the witches to feed on, so they needed an alternative source of food (i.e., living people). Ru Kundil, who gave this account, noted, “We’re afraid because we think the witches may eat all of us living people and finish us off. Kum koimb is the name for these witches” (quoted in ibid.). Ru also described the practices of a traditional healer, Toa, an expert in all kinds of magic spells, who had developed a new technique for removing witchcraft familiars from people.

There are three differences between the 1978 and the 1995 narratives. First, by 1995 the cannibal witches had become more aggressive. Second, Ru declared that these witches were said to be controlled by a queen who lived in the Simbu area east of Hagen, which was seen as the home of dangerous people belonging to a different province (another image of postcolonial political space). And third, the situation was so serious that it now
supported the entrepreneurial rituals of a witch-finder (who acted like a pest exterminator by trapping the witches’ animal familiars). Comparing the 1978 and 1995 rumors, we see that in both cases there was a fear of an outbreak of excessive desires for consumption. In 1978 this was controlled by hygienic taboos, but in 1995 these taboos were not adequate: the cannibals were turning into murderers and curative magic was invented to restore them to normality.

In 1997 a further development of ideas took place. We found the Melpa to be experiencing a wave of millenarian notions concerning the “world’s end,” in which witchcraft activity was seen to be on the rise because Satan had instilled kum into his followers. In turn, this was taken as a sign that the world would end shortly (Stewart and Strathern, eds. 1997; Stewart and Strathern 1998a). The domination within the world of greed and desire would consume everything and bring about retribution from God and Jesus, since curative rituals could no longer control the situation.

These descriptions of the spread of witchcraft are reminiscent of detailed accounts of how actual microbial diseases such as typhoid spread through a population. It is thus quite interesting to consider whether the spread of fears of this kind may be at least correlated with changes in disease patterns. The suggestion is theoretically plausible although impossible to demonstrate. Epidemics of dysentery entered the Hagen area in the 1940s but were not attributed to witchcraft or sorcery (the same is true in the 1950s among the Duna). An outbreak of madness in Pangia in about 1960 was said to have followed from a dysentery epidemic that killed up to 25 percent of some village populations, but it was not explained as either witchcraft or sorcery (Strathern 1977). Nevertheless, it is possible that the 1995 fears were at least partly generated out of an increase in deaths from typhoid fever that was in fact occurring at the time, and that the earlier ideas about the pollution of water were echoes of public health lectures about the need to avoid defecation in streams so as not to spread germs, including the typhoid-causing organism.

With the spread of malaria and the perceptions of witchcraft, we are on firmer ground if we retrace our steps and look again at connections between the northern Melpa and the Karam people as Inge Riebe (1987: 212; see also Riebe 1991) has described them. Riebe argues that Karam people were said to have died of koyb witchcraft from the end of the nineteenth century onward and that the technique was introduced into their area from the north, the Ramu flats. The koyb was thought of as a small snakelike creature kept in the abdomen of the witch, enabling its human host to kill others. Further details were added to this belief through contact with Ramu peoples; koyb witches had the ability to “change into animals, or other
humans, become invisible, move at incredible speeds, or be in two places at once, kill without contact, and to sew together and temporarily resuscitate people killed with conventional weapons. Witches were also said to have a greed for human flesh” (Riebe 1987: 214). Witches were thought of as stingy and greedy people and—in an important twist—“were thought only to kill when paid to do so by normal humans” (ibid.).

Koyb witchcraft was given as an initial explanation for sudden deaths. Riebe (1987) suggests that this correlates with the entry of deaths from dysentery and malaria. Settlers from ethnically different northern valleys were more likely to be thought of as witches. They are likely have brought new diseases from their lowland areas into the highlands. Riebe further points out that accusations of witchcraft following such deaths were at first most often made against matrilateral cross-cousins who possibly had competing claims on land resources. This led to avoidance between the parties involved. Witchcraft accusations subsequently became the basis for negotiated payments of compensation between groups and therefore for the careers of aspiring leaders or “big-men” (ibid.: 218). At the psychological level, Riebe points out that proper social behavior depended on an ethic of generous giving, but “the underside of this world was the world of the witch—the world of greed, destructiveness and extortions under threat of witchcraft” (ibid.: 221). She also adds that accusations of witchcraft took the place of revenge homicide, since “all deaths caused by human agency had to be revenged” and a large proportion of deaths of active adults were now attributed to witches. The witch phenomenon was therefore an epidemic resulting from closures and openings caused by the political space of colonialism and indigenous responses to it as well as to new trackways of disease (on the spread of suanggi ideas in Irian Jaya, see Haenen 1997 and Oosterhout n.d. on Inatwatan ideas).

Riebe’s analysis meshes well with the historical situation of the Melpa. The increased passage in colonial times of notions of koinb (koyb) from the Jimi Valley into central Melpa coincided with travel by Melpas on government patrols into the Jimi area in the 1950s and beyond. The later epidemics of witchcraft fear among the Melpa are also correlated with historical perceptions of growing tension over the inequalities between people, marked by capitalist-style consumerism, as we have suggested, further compounded in 1997 by millenarian motions.

Duna Witchcraft and Assault Sorcery

Witchcraft may begin as revenge and end in politics, as we have seen in the Karam. It can also be an idiom for gender politics, as materials from the
Duna speakers of Lake Kopiago in the Southern Highlands Province show. We conducted our fieldwork with some one thousand Duna speakers belonging to five distinct parishes in the Aluni Valley. Like the people of Pangia and Hagen, the Duna cultivate gardens and rear pigs, but they have little cash cropping. These people classify assault sorcery in the same category as female witchcraft. Both phenomena are described as tsuwake, assault sorcery being tsuwake tene and witchcraft tsuwake kono. Since “pacification” and missionization in the 1960s, most other forms of sorcery practiced by males as a part of interparish hostilities have been abandoned and are not an object of fear. In this political space cleared of other kinds of mystical violence, however, ideas about both types of tsuwake have flourished. During 1991 and 1994 assault sorcerers were considered to be crossing the Strickland River between the Duna and the Oksapmin areas and menacing the outskirts of Duna settlements in the Aluni Valley; and internal fears of female witches (often with Oksapmin origins in their genealogies) led to suspicions and occasionally accusations. These two kinds of attack by unseen “others,” internal-female and external-male, had again effloresced in people’s imaginations precisely because of postpacification conditions. Cultural bricolage was also at work: One informant who declared that he had trained squads of youths to be tsuwake tene said that instead of the traditional sago-spine dart employed to pierce a victim’s breast, he was able to use syringes from his trade as an aid post health orderly. In 1998 we were told that the assault sorcerers had mostly been shot with guns in retaliation for their raids, but that the remaining few were now improvising methods to lure victims into their power, by persuading women to act as sexual decoys and then closing in for the kill. The sorcerers were always described as being from the Oksapmin area (that is, as prime examples of “the other” to the Duna).

Gender politics were at work in two ways. First, “foreign” male assault sorcerers were thought to be threatening local women, making them nervous outside of their village areas and requiring men to stand guard over the women as the men formerly did during warfare, so as to take revenge for any attacks. Second, female witches were thought to be internally threatening villagers because of their desire for “meat.” This idea was used to discourage women from meeting to talk together or to complain about pork distribution, so as to reassert male control and surveillance. Both processes may therefore be seen as postpacification responses by males in an attempt to reinforce their authority over females. Another detail is significant. In precolonial times female witches were said to have been sent as agents by male leaders to kill and consume males in enemy areas. But with pacification, it was believed, female witches ceased to be used in this way
and instead acquired an independent volition, allegedly turning against vic-
tims in their own communities. This is a historical narrative that parallels
in muted form the narrative of Mekeo sorcerers given by Trompf (see the
previous discussion in this article).

The underlying issue, as with the Melpa, is the perception of appetitive
desire. Pork is highly prized and in precolonial times men excluded women
from consumption of the cuts of pork that the men themselves consumed
in the course of a roster of religious cult performances. With the demise
of these cults, the introduction of Christianity, and the loss of communal
men’s houses, however, men found it harder to deny pork to women. Cor-
respondingly, we suggest, men began to accuse women more vigorously of
witchcraft. In a further twist, by 1994 certain prominent men whose wives
were rumored to be witches would specialize in turning up at pig-kills and
expecting to be given meat to share with their wives. Their hosts, afraid
of the possible witchcraft of these women, would give especially generous
portions to the husbands. The gender conflict over consumption was thus
resolved by these men in terms of an alliance coalition consisting of big-
man and witch-spouse. In 1994, in the village of Hagu, men also rebuilt
their communal men’s house, and these itinerant pork-seekers would over-
night in this house to share at least a portion of their meat with its regular
male residents and establish ties of male sociality and solidarity.

By 1998 the situation had further developed in more complicated ways,
which must be understood in terms of the dynamics of historical change
since the time just before the first regular administration patrols in the
1950s and the 1960s. Epidemic outbreaks of disease that were spread
through the intrusion of European outsiders and their workers from other
parts of the country caused widespread dislocation and depletion of groups
among the Duna. In the low-lying areas immediately near the large Strick-
land River, which marks the boundary between the Duna and the Oksap-
min peoples, a number of small intermarrying groups fought among them-
seves, both before and during this time. Many of their members migrated
up-valley to the mountainside parishes where they had ties through cog-
natic kinship or marriage. The composition of these parishes thus became
more heterogeneous than before.

Furthermore, these immigrants came from areas that were identified
with the origins of witchcraft. Indeed, the conflicts between the Strick-
land groups were partly, according to the ethnohistorical accounts, about
the accusation of witchcraft. In 1991 and 1998 informants in the parishes
of Aluni and Hagu indicated that witchcraft had originated from the ac-
tions of a male earth-demon who had emerged from a rock in the Strick-
land area and had proceeded, according to the origin myth, to seize and
consume people. The male demon was persuaded by a woman of one of the local groups, the Makalan, to have sex with her instead of killing and eating her; she then became the host to his cannibalistic propensities that were passed down to her children and descendants (the emphasis here is placed on the transmission through females). The women carrying witchcraft powers married into local groups and their descendants carried these powers with them in the precolonial shift from the environs of the Strickland grasslands to the forested mountain parish areas. Among the Duna it is thus a male spirit who brings the knowledge of witchcraft to women; but it is a female spirit, the Payame Ima, who brings the knowledge to men of witch divination (Stewart and Strathern 1998b). The Payame Ima was not the spirit who brought witchcraft to humans. Rather, she is said to enter into and possess the men to whom she grants ritual power to divine for witches.

Duna parishes are local collocations of kin, affines, and associates, conceptually organized around a body of coresident males descended agnatically from a parish founder. This core is known as the anoagaro, the paternal line, distinguished primarily from those who are imagaro, belonging to the parish through maternal ties. The effect of parish incursions by immigrants was to put the anoagaro in the minority in their own parishes and therefore to make the exercise of their leadership more difficult. For example, they are supposed to control the disposition of land, and this task would be made harder with the absorption of newcomers, including those thought to be witches. At the same time a good proportion of these anoagaro leaders were polygynists, with at least one wife thought to be a witch.

In 1991 and 1994 fears of the actions of these witches appeared to be on the increase, but the local Christian churches forbade the use of traditional methods of divination to seek out and punish witches thought to have killed and eaten witches. In 1996 this prohibition was broken after the dramatic deaths by fire of two young men from the Aluni parish who had taken part in a hunting expedition to the Strickland. They had lit fires in the grasslands (to burn out wild pigs), which then consumed them. A diviner was hired and pinpointed four local women as the responsible witches, who were said to have confessed to their acts. The women were driven out of the community and their kin paid compensation to the relatives of the two dead men. In 1998 this kind of sequence was repeated in Hagu, with two twists. The deaths that triggered accusations were a result of an epidemic (of malaria, typhoid, and pneumonia) following an unusual period of drought and food shortages. The son of a female witch who had “confessed” to his mother’s actions killed his mother, causing the original accusers to pay compensation for the death. Those who had died were two small children of the
only anoagaro leader in Hagu, one of whom was his youngest child and only son, the sole successor to the anoagaro line. The witches were from a family with whom the leader had disputed over land use (see Stewart and Strathern 1988b for fuller ethnographic details).

These dramatic and troubling events thus brought to the fore the results of some fifty years of historical change: alterations in village composition and the dynamics of village leadership as well as the prior alterations in the gendered consumption of valued foods and the latest ecological stresses of famine and sickness. Furthermore, another dimension was revealed: accusations about witchcraft can be a part of arguments among anoagaro leaders about legitimate control within the parish. These leaders may accuse others of subverting their control on their line of reproductive descent. But the leaders in different parishes also harbor resentments against one another because of the idea that they have witches as wives. While a leader may use this attribution to coerce others into giving him pork, he is also vulnerable to accusations by rival leaders and others that his wife has killed and eaten someone within his parish or a different parish. Accusations of witchcraft, like those of sorcery, can thus become a mode of politics, entwining issues of gender as well as interparish and intraparish conflict.

Cannibalism, Consumption, and Change

We have seen in the Duna narrative that in the origins of witchcraft a male earth-demon (tama) emerges from a hole and seizes and eats people. This direct form of cannibalistic consumption is then mediated by the earth-demon’s sexual relations with a human woman, from which witches emerge, born from their union. The same myth explains that in those early times the people at the Strickland River ate people instead of pigs. When a pig died, it was placed on a burial platform and mourned; a human might be taken as a captive to be killed and eaten as a funeral sacrifice for the pig’s death. It is told that a wandering hero from a different area came upon a woman about to be sacrificed in this way, and he saved her by cooking the pig instead, offering its flesh with salt (which he had brought as a gift from his own area) sprinkled on it to the mourners; the mourners were thereby persuaded to abandon cannibalism and eat pork instead.

The image of cannibalism here is cognate with witchcraft, since it belongs to the same myth as the story of how witchcraft first developed. Both witchcraft and cannibalism therefore are forms of inappropriate consumption, and progress is marked by their abandonment. The problem for the Duna is that while straightforward cannibalism is seen as having been tran-
scended by the gift of salt in the myth, witchcraft is still thought to be passed on within the community (Stewart and Strathern 1998b).

Narratives of an implicit shift away from cannibalism and its ritual transcendence in other forms of behavior belong to a wider class of origin stories in which “civilization” is presented as a mode of evolution in sacrificial practices. Michael W. Young’s (1983) discussion of victimage in Kalauna fits in here. Victimage in Kalauna (on Goodenough Island, in Milne Bay Province, Papua New Guinea) is institutionalized in two principal modes: a projective system of vengeance, homicide, and sorcery, and an introjective system of self-castigation. “Although these types of victimage may sometimes appear in pure form as vicarious sacrifice and self-sacrifice respectively, they are often found in combination” (ibid.: 29). The legend of the cannibal warrior, Malaveyoyo, culminates in his sacrificial death, which serves as a marker of the beginning of the colonial period when abutu, competitive food exchange, altered the previous pattern of vengeance and violence, serving as a surrogate for killing and eating one’s enemies. Abutu retained the idiom of oral aggression but displaced the object of consumption from the flesh of one’s enemy to food such as pigs that one had reared (ibid.: 92–109).

Exactly the same logical structure is shown in the conventional Hagen statement by relatives of a victim to the killers: “You killed our man but you did not eat him or taste anything sweet, so we give you back pork as his ‘bone,’ and you can give us back pigs for this ‘head’ later.” The figurative phraseology here does not rely on a trope of past versus present but on a notional cannibalism juxtaposed against a real noncannibalism. The message, however, is the same as in Kalauna: The exchange of pork transmutes oral aggression into sociality; put otherwise, it is the conversion of “feasting on my enemy” into “feasting with my enemy.” Images of cannibalistic witchcraft show that very transition arrested or denied, or nowadays a “regression” to a wild state that threatens contemporary life with its return when the life of order through exchange no longer can control the disordered spatial forces of postcolonial turbulence.

Ideas of the spread of assault sorcery also reflect these alterations in spatial relations, since assault sorcerers, like witches among the Melpa, are thought in Pangia and the Duna area to be spreading more widely than before, reflecting the facts of greater movements of people and continuing distrust among them. The assault sorcerer destroys the community by marauding it from the outside, while the witch destroys it by eating victims within the community. Both images reflect the complex changes in the meanings of “the outside” and “the inside” in an altered world of spatial relations.
Conclusion

Our arguments in this article have been presented in our account of historical changes in three different areas of the Highlands of Papua New Guinea, the Pangia, Hagen (Melpa), and Duna areas. The materials from these areas differ somewhat in their historical scope and focus. Pangia does not appear to have notions corresponding exactly to those of cannibalistic witchcraft such as are found in Hagen and among the Duna; therefore, this article discusses only the case of assault sorcery. Hagen lacks the exact notion of assault sorcery, but kum koimb witchcraft partly includes images comparable to those found in Pangia. Among the Duna there is both assault sorcery and witchcraft ideas.

This disparity of ideas, combined with areas of overlap, does not affect our main argument. We show that the wider field of assault sorcery and witchcraft can be examined to reveal alterations in scale and intensity of the kind we explore. These alterations involve some shifts and innovations in cultural tropes or images—for example, the Hagen idea that witches hid pieces of human flesh in streams or that witches in 1995 were attacking living people, not just corpses; or the Duna idea of the substitution of syringes for sago-spines and the use of women as decoys to attract male victims. These alterations in images can themselves be traced to various changes in the people’s way of life. Our main focus, however, is on changes in the contexts of operation of these “mystical” ideas and the ways in which they go with larger patterns of change. Several factors combined to produce these alterations: the movements of people, the mixing of linguistically or socially different groups, the effects of disease, alterations in group composition and the condition of leadership, changes in patterns of inequality arising from patterns of cash cropping and the consumption of goods purchased with money, and shifts in the balances of power between the genders and between local leaders. In this mixture of factors we stress both the “epidemiology of representations” in terms of images of violence, and the “representation of epidemiologies” of sicknesses such as malaria and typhoid. Finally, we argue that colonial “pacification” and postcolonial instabilities combined to produce perceptions of political space in which notions of sorcery and witchcraft, far from disappearing, mutated and spread.

Notes

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1 Esther Goody (1970: 243), in her study of male and female witchcraft among the Gonja of Ghana, also uses the term mystical violence, derived from the work of E. E. Evans-Pritchard (1976 [1937]). She realizes the term is not entirely satisfactory, but she uses it to refer to a class of phenomena the Gonja call by the same term, kegbe, including, for example, transvection, the eating of souls, the throwing of weapons across long distances, and so on. We use the term in the same way in this article for the categories of sorcery and witchcraft.

2 Our overall framework here is quite consistent with Marty Zelenietz and Shirley Lindenbaum’s 1981 collection on sorcery and social change in Melanesia. The themes that emerged from that collection include (1) sorcery fears and accusations reflecting the growth of economic inequalities between individuals within communities and between communities or regions; (2) fears and accusations reflecting the entry and movement of strangers between groups and the importation of novel techniques of hostile magic from fringe or distant places; (3) the breakdown of forms of in-group authority leading to an increase in sorcery suspicions within groups; (4) the correlations between novel fears of sorcery and new disease patterns, most notably remarked on by Mervyn J. Meggitt (1981) in his study of Enga ideas about tomakae sorcery (Lindenbaum also pays attention to the spread of fears of tokabu assault sorcery in the Eastern Highlands, although her account of this among the Fore is made unusual because of the unique epidemiological significance of the fatal neurological condition, kuru (a form of spongiform encephalitis). Elsewhere in the Eastern Highlands, the fears may have resulted more simply from the movements of persons and the beginnings of “rascal” behavior patterns among dissident youths.); (5) finally, the phenomenon of an increase in sorcery fears and accusations in situations where open warfare has been banned is acknowledged as common.

3 Bruce M. Knauft (1985: 104) in his study of Gebusi sorcery makes clear the analogy between assault sorcery and warfare when he writes: “Ogowili is a variant of classic sangguma or tada assault sorcery. . . . An ogowili is a semi-invisible warrior form taken on by a real man. Often, the man is a Bedamini or from a border clan or settlement associated with the Bedamini (i.e., from outside the community).” The sorcerers send the victim home, and when they eat the butchered meat from the victim’s body, the victim dies. Ogowili attacks are always fatal. Raids are said to be mounted in counteraction, leading to intercommunity fighting. The identity of an ogowili is determined in séances.

4 The Daribi methods of counteracting assault sorcery included the use of a divination stick or pole, thought to be possessed by the ghost of the sorcery victim, who would lead his or her clanspeople to the house of the attacker(s). The divination pole is known in the Ialibu area as a means of discovering a thief, in Pangia for the same purpose (it is called yomo kopini), and among the Duna as a means of identifying a female witch. We see here an example of cultural bricolage. Elements of a complex of practices—for example, the use of divination sticks—become attached and detached differently in different areas. The effects of having
such a method, however, are clear. If there is a way to identify a sorcerer, it is worthwhile to attribute a death to such a cause.

5 The dog is supposed to be a loyal consociate of humans, yet it has a wild side to its noman, deriving from its desire for meat. The parallel with the witch, and the idea that the witch betrays her own sociality and becomes wild, is clear.

6 In addition, during the 1980s there were reports that people were succumbing to a new and very bad kind of fever, which some called “flu.” The only treatment, it was believed, was to immerse people in plastic containers or bags filled with very cold water so that they almost froze. This again may be a response to the beginnings of a wave of typhoid infections in the area, including the mountainous northern Melpa area.

7 In 1994 and 1998, deaths that in 1991 had been attributed to witchcraft were traced to pollution from the Strickland River, which had been running red from the discharge of oxides used in the gold-mining process at the Porgera mine in the Enga Province. Environmental pollution from “outside,” on the ethnic boundary, thus took the place of pollution from inside by the witches, slotting into cosmological and ecological space by simple eversion. But the two systems of ideas also continued to run parallel, allowing people in different contexts to attribute deaths to either witchcraft or pollution.

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Anthropology, archaeology, and the origin of warfare

I. J. N. Thorpe

Abstract

The main theories of the origin of warfare – from evolutionary psychology, materialism, and historical contingency – are examined. Their implications and their use of anthropological evidence, especially for the Yanomamo of the Amazon, are explored, then their relationship to the Palaeolithic and Mesolithic archaeological record. The early prehistoric evidence for conflict and warfare, mainly from Europe, is considered, from individual injuries, mostly from club wounds to the skull and death by arrowshot, to mass killings which could have destroyed a group. The enormous regional variation in this evidence is set against universal theories which imply uniformity and are thus found wanting.

Keywords

Warfare; Palaeolithic; Mesolithic; conflict; evolutionary psychology; materialism.

Introduction

Conflict is clearly a significant area of current study in both archaeology and anthropology, as the number of recent overviews and volumes of case studies attests (e.g. Keegan 1993; Redmond 1994; Reyna and Downs 1994; Keeley 1996; Martin and Frayer 1997; Carman and Harding 1999). Not only is it a subject of great importance in its own right, but it touches on several other major issues, such as the use by evolutionary psychology of archaeological evidence, the history and biases of archaeology as a discipline, and the nature of archaeological evidence. Origins are always attractive subjects, and the origin of war is no exception, having been considered recently from the viewpoint of biological anthropology (e.g. Wrangham 1999), social anthropology (e.g. Kelly 2000), military history (e.g. Keegan 1993), history (e.g. Dawson 2001), and archaeology (e.g. Keeley 1996). The greatest interest in early war has been shown by anthropologists, as it is central to that elusive quality, ‘human nature’. Archaeology has largely been an onlooker in this argument (with Ferguson (1997a) an exception).
Interest in ancient warfare has been stimulated by Keeley’s polemical War before Civilization: The Myth of the Peaceful Savage (1996). He seeks to demolish a ‘myth’ promoted by archaeologists and anthropologists who have attempted to pacify the past. Keeley’s broadside has been variously received, Kristiansen (1999: 188) describing it as ‘inspirational’, but others are highly critical (e.g. Ferguson 1997b; Otterbein 1997). From an American perspective, with the dramatic shift in interpretation of the Maya from peace-loving to war-like (Culbert 1988), Keeley’s critique works, but European archaeologists have always seen the Bronze Age as a time of warriors, rendering his case far less persuasive.

The prime difficulty with Keeley’s argument is that, although he rightly points to the high incidence of ethnographically recorded conflict and more formal inter-group warfare, and makes a good case that this is not ‘ritual’ but real war, with a high level of casualties, this does not in itself imply much about ancient warfare. For here we are in the realm of interpretation, unaided by participant accounts or direct outside observation.

Before considering the major schools of interpretation of the origins of conflict I should give a definition of warfare, as this has been a major debating point in the past – it is defined here as organized aggression between autonomous political units. I see no great value in too tight a definition (e.g. Kelly’s (2000) seven-point scheme), however, since feuds (actions taken by individuals against members of another group (Otterbein 2000)) frequently escalate into war. As Koch puts it, ‘linguistic distinctions between raids, feuds, and war tend to obscure rather than elucidate the problem of explaining why people resort to violent methods of confrontation in pursuit of their interests’ (1974: 52–3). The majority of conflicts occur between closely related groups, with the warring parties frequently acting as exchange or marriage partners before and after. It is certainly the case that some past societies have distinguished between the two. Thus Redmond focuses on long-distance raiding in her important study of South American warfare (1994), as the Jivaro make a distinction between local feuding and true warfare, even though the former includes the assassination of individuals (Harner 1972). Jivaro true warfare consists of headhunting raids carried out against distant groups – a far more prestigious activity, as it involves expeditions into lands ‘filled . . . with evil spirits’ (Cotlow 1953: 144). So we are perhaps dealing here with high (long-distance) and low (local) status warfare.

Definitions of the opposing theorists have also long been a source of debate, with lines of thought which can be traced back to Thomas Hobbes’ Leviathan (1651) and his ‘State of Warre’ and Jean-Jacques Rousseau’s The Social Contract (1762) and his vision of a golden age of peace before the state.

Theories of war

Much of the current interest in conflict and warfare stems from the dominance of neo-Darwinian thought in society at large. From the sociobiology of the 1960s to the evolutionary psychology of the 1990s there has been a steady growth in the acceptance of a significant role for biology in human culture. The strand of evolutionary psychology most relevant to the study of early warfare is that which sees humans as shaped by an ancestral environment long past, dubbed the environment of evolutionary adaptation
(EEA). The EEA equates to the Palaeolithic and Mesolithic (e.g. Cosmides et al. 1992; Pinker 1998: 42), with the development of agriculture marking a crucial break. Thus the three main competing theories for warfare situated within evolutionary psychology – territorial, reproductive, and status competition – should all be susceptible to archaeological analysis from the evidence of early prehistory.

The territorial model originates in modern times with E. O. Wilson, who argued from the sociobiological strand of evolutionary psychology that ethnocentricity was a product of natural selection.

Our brains do appear to be programmed to the following extent: we are inclined to partition other people into friends and aliens, in the same sense that birds are inclined to learn territorial songs and to navigate by the polar constellations. We tend to fear deeply the actions of strangers and to solve conflicts by aggression. These learning rules are most likely to have evolved during the past hundreds or thousands of years of human evolution.

(Wilson 1978: 119)

The difficulties with this ‘rule’ are two-fold. It would also be adaptive to create good relations with neighbouring groups, perhaps especially so when hominins were the hunted rather than the hunters. Second, Cashdan’s wide-ranging survey (2001) did not find a correlation between ethnocentrism and xenophobia, undermining Wilson’s claims for universality.

More specifically, Wrangham (1999) has argued for continuity of a territorial instinct from the common ancestor of chimpanzees and humans. He argues that a territorial instinct exists in modern chimpanzees, with young male chimpanzee patrols of territorial borders leading to conflicts of extermination with neighbouring groups, improving the victors’ access to resources. These are compared with the territorial nature of modern American gang culture, with the link provided by comparisons with the Yanomamö of the Amazon as an example of primitive culture. Wrangham’s treatment of the Yanomamö evidence is considered below. A more general difficulty with the argument, however, is presented by the alternative perspective of Harrison (1993: 14–21). He suggests that, in Melanesia at least, the notion that groups make war is the wrong way round, and that it is actually the process of war which enables groups to form.

The reproductive theory of warfare is based on analogies with primate behaviour in which male-centred competition, over access to females, takes violent form (e.g. Wrangham and Peterson 1996). However, some detailed studies of warring societies suggest that no such reproductive success occurs, for example, Moore (1990) on Cheyenne war chiefs and Knauf (1987) and Kelly (2000: 20–35) on the !Kung, Mbuti, Central Eskimo, Semai, Hadza, and Gebusi. The most famous claimed case is Chagnon on the Yanomamö (1988), considered further below.

A more sophisticated approach sees warfare as the outcome of violent competition by young males striving for status and prestige (Maschner and Reedy-Maschner 1998), even when there is no prospect of territorial gain. While prestige is clearly a significant factor in the creation of warriors (Clastres 1994: 169–200), as with the reproductive theory, however, dubbing violence the business of men (e.g. Gilbert 1994; Van der Dennen 1995) avoids the considerable ethnographic evidence, especially from Asia (Rolle 1989) and the
Americas, of female warriors and even female war chiefs (Koehler 1997; Hollimon 2001). To comment that ‘women’s participation in warfare is rare’ (Maschner and Reedy-Maschner 1998: 23) merely sidesteps the issue.

A more general problem for all three evolutionary anthropology theories is the apparent need to produce an altered mental state before taking part in warfare, with fasting, possession by spirits, dances, special costumes, vows, rehearsals, and drug taking all recorded ethnographically (Kennedy 1971; Ehrenreich 1997). The dangers of this altered mental state are noted by Harrison for the Avatip of New Guinea. Avatip men were headhunters, with headhunting being a form of status competition, but they did not believe that violence, although potentially valuable, was innate:

Headhunting raids required special magic, which placed the fighters in a trance-like state of dissociation and relieved them of accountability for their actions; it was supposed to make them capable of killing even their own wives and children. That is to say, the ability to kill had to be imparted by magic and ritual, and deliberately removed at the end of raids.

(Harrison 1993: 27)

Any biological urging to kill therefore had to be heavily reinforced by cultural methods. In the Americas, even the famously aggressive Yanomamó use drugs to work themselves up to fighting chest-pounding duels against members of neighbouring villages (Chagnon 1990). These duels sometimes result in fatalities, which then precipitate a cycle of village raiding.

The other fundamental problem for evolutionary anthropology comes from archaeology. As critics have noted (e.g. Knauff 1991; Foley 1996), few archaeologists believe in an unchanging environment of evolutionary adaptation until the advent of agriculture. Instead, the pattern of conflict and warfare may well vary through time and across space.

The other main camp within anthropology is the materialist. Materialists believe that warfare is utterly irrational, and therefore one would risk one’s life in combat only when there was a desperate need for land or, more immediately, food (e.g. Ferguson 1990). Ferguson argues that motivations as stated by participants hide their real motives. However, New Guinean warfare analyses suggest that there is no simple relationship between land shortage and warfare, with some of the most warlike societies having fairly low population densities (Knauff 1990). In the case of the Dani (Heider 1970), wars against neighbouring villages mostly produce minor injuries, while individual killings result from stalking the enemy. Killings by the Dani are not motivated by land shortage, but by the need to appease the spirits of the war dead, who must be avenged lest they haunt the living. The practice of Dani warfare thus accords better with their own cultural understanding than with materialist theory.

Finally, the standpoint of historical contingency rejects any unifying theory in favour of the examination of the particular circumstances of each conflict, and, indeed, of each episode of peace (e.g. Otterbein 1997; Robarchek and Robarchek 1998; Clark 2000; Guilaine and Zammit 2001). In other models, a lack of warfare is certainly difficult to explain. In a general sense, the greater the degree of variability observed, both within a single society and between different societies, the more difficult it is to fit all warfare into any overarching structure, an issue which clearly troubles Dawson (1999: 97–8).
There are, however, models which take an intermediate course, arguing for significant breaks in the history of warfare. Anthropologists have argued that *War in the Tribal Zone* (Ferguson and Whitehead 1999), witnessed by travellers and ethnographers, was generated by colonialism. Although described by critics (e.g. Keeley 1996) as the ‘myth of the peaceful savage’, observing that patterns of warfare were affected by Western contact does not imply that earlier times were peaceful, as Ferguson himself has stressed (1997a: 321): ‘If there are people out there who believe that violence and war did not exist until after the advent of Western colonialism, or of the state, or of agriculture, this volume [*Troubled Times*] proves them wrong.’

Another attempt sees conflict as a consequence of settled agrarian communities (e.g. Leakey and Lewin 1992). Thus commentators seize on the walls of Jericho (for an alternative interpretation as a flood defence, see Bar-Yosef (1986)), one of the earliest towns, the attack on the Early Neolithic causewayed enclosure of Hambledon Hill, England (Mercer 1999), or Schletz in Austria (Windl 1994), an enclosure with multiple burials of individuals who met a violent end in the ditch. The most dramatic case is that of Talheim in Germany (Wahl and König 1987), c. 5000 BC, where a mass grave contained men, women, and children, killed by axe and adze blows to the head. Whatever the level of Neolithic violence (Schulting and Wysocki 2002), we cannot simply assume this appeared from nothing, and the evidence for both serious injuries and violent death from Mesolithic skeletons in Europe is steadily growing (Vencl 1999; Grünberg 2000; Thorpe in press). Such over-generalized historical models mask significant variation in the archaeological record.

**Appropriate analogies?**

Many of the studies within the framework of sociobiology/evolutionary anthropology are in essence models derived from observations of chimpanzee behaviour, in which it is assumed that chimpanzee behaviour is best interpreted in human terms. Too little consideration has been given to the question of whether a close relationship between chimpanzee and human behaviour can reasonably be assumed. Alternatively, is choosing common chimpanzees over pygmy chimpanzees or bonobos (de Waal 1989) a result of pre-determining the appropriate comparison? Bonobos show little sign of violence, do not hunt much, and are not dominated by males. The difference may relate to ecological factors, with bonobos occupying large, undisturbed rainforests.

The theories outlined above have all been applied to the Yanomamö, with varying degrees of success. Notions of xenophobia do not apply to Yanomamö conflict, for, as Chagnon (1996a) notes, the vast majority of fighting occurs between people who know each other well. Wrangham’s (1999) comparison between common chimpanzee behaviour and the Yanomamö is particularly inappropriate. The Yanomamö do not patrol territory, most of the fighting is done by older men, and those they kill are often relatives in closely related villages with whom they have good relations at other times (Ferguson 2001).

Chagnon’s (1988) reproductive success theory for the Yanomamö is also problematic. His raw figures for the number of children born to those who have killed another person
do suggest that successful warriors father more children. However, much of the reproductive success of killers at the time of his survey is simply a result of older men being killers. The difference in numbers of children recorded for men of the same age may actually reflect headmen having more children – headmen who are, by virtue of their position, cajoled into participating in raids (Chagnon 1997: 198). Moreover, as a snapshot, these figures could never demonstrate greater reproductive success over the lifetime. Chagnon himself notes that Yanomamö revenge attackers ‘always hope to dispatch the original killer’ (1988: 985), while others record the deaths of a number of multiple killers while they were still fertile (Albert 1990).

Chagnon’s data also provide a poor fit with the contention of Maschner and Reedy-Maschner (1998: 22) that it demonstrates ‘young males [aged 15–30] striving for status and prestige’. As Ferguson notes (2001: 109), the vast majority of killers were over 40, and possibly none below 25.

For Ferguson (1995) the Yanomamö fight for material resources, specifically steel axes to clear land, while the intensity of Yanomamö conflict relates to their position within the tribal zone. However, ethnographers of the Yanomamö do not recognize this picture (e.g. Peters 1998: 216), while the notion of Yanomamö groups controlling trade routes seems particularly far-fetched (Chagnon 1996b). The theory of a massive shift to warfare with the arrival of Europeans in South America in 1498 has also been questioned by Fausto (2000), who argues that flourishing war rituals observed in the sixteenth century imply that warfare was an important social component before the conquistadores’ arrival.

Fausto (2000), along with Albert (1989, 1990) and Lizot (1994), proposes a more localized interpretation of Yanomamö conflict, which situates itself within Amazonian belief systems and the statements of the Yanomamö themselves.

Conflict in early prehistory

Turning to the Palaeolithic and Mesolithic (focusing on Europe for reasons of space and familiarity with the material), there are three main areas of possible evidence – the existence of weapons, depictions of warfare, and skeletal remains demonstrating conflict.

Weapons may seem the most straightforward category, but here we encounter immediately the issue of symbolism. What past generations have termed weapons, for example battleaxes and daggers, need not have been used that way. Equally, axes, normally seen as workaday tools of forest clearance, may well be weapons (following Chapman 1999) these might be termed tool-weapons), while many weapons, such as wooden clubs, will survive only by chance in the archaeological record. With regard to weapons we need to demonstrate the actual use of objects to cause harm.

Levantine Spanish rock art (Beltrán 1982) is often presented as the most substantial body of evidence for conflict in the Mesolithic (e.g. O’Connell 1995; Nash 2000); and is sometimes argued to be a record of conflicts between racial groups (Beltrán 1982). Still, there are many who question the straightforward approach to interpreting rock art. A more fundamental difficulty, however, in the context of this paper, is the argument that the commonly suggested date of the Mesolithic is mistaken and that Levantine art is actually Neolithic (Beltrán 1982; Escoriza Mateu 2002).
Skeletal evidence is more reliable, in at least avoiding the issue of symbolic violence; even here, however, we need to stress the importance of care in interpretation. Thus Brothwell (1999) suggests that there may have been Neanderthal conflict on the basis of the frequency of traumatic injury, and that such injury cannot simply be accidental. However, other analysts have concluded that Neanderthals suffered a higher level of trauma, comparable in intensity and location to modern rodeo riders, than other hominids because of their practice of short-range hunting with spears (Berger and Trinkaus 1995). This could also be the cause of the weapon-like injuries from Shanidar (Iraq) and Skhūl (Palestine) (Fig. 1) (Roper 1969; Guilaine and Zammit 2001: 72–3). The most recent claim of Neanderthal violence comes from re-analysis of the young adult, possibly male, from St. Césaire, France (Zollikofer et al. 2002). A healed skull fracture is argued to be the result of an attack. Similar evidence for an anatomically modern human from Klasies River, South Africa, dates to 90,000 years ago (Deacon and Deacon 1999: 103). The earliest possible skeletal evidence of violent attacks comes from Sima de los Huesos, Atapuerca, Spain, the enigmatic cave containing at least thirty-two human skeletons dating to c. 250,000 BC (Arsuaga et al. 1997). Several skulls have healed impact fractures, with Cranium 5 possessing thirteen. Whether this should be interpreted as evidence of conflict is not yet clear, as only preliminary information is available at present (Cervera et al. 1998:143).

Atapuerca also offers the earliest possible case of cannibalism: the Gran Dolina cave has produced the remains of six individuals (Fernández-Jalvo et al. 1999) identified as the victims of cannibalism on the basis of the use of analogous butchering techniques in

*Figure 1* Possible weapon injury in the pelvis of the Neanderthal from Skhūl (Palestine) (after Guilaine and Zammit 2001).
humans and animals, similar breakage patterns to extract the marrow, and identical patterns of discard for human and animal bone. However, like claimed Neanderthal examples, such as Moula-Guercy in France (Defleur et al. 1999), the Gran Dolina case is believed to represent ‘gastronomic cannibalism’, the consumption of members of the group after their death, rather than the result of murder or massacre. Certainly at Gran Dolina the vertical spread of human bones suggests occasional consumption over a long period rather than a massacre.

From the Upper Palaeolithic, four lines of evidence have been followed: the development of weaponry; possible depictions of violence in cave paintings; mass burials; and skeletal evidence. The earliest bows may have appeared in the Late Upper Palaeolithic, but definitive evidence in the form of arrows is missing. There are some seven depictions of anthropomorphs apparently pierced by projectiles from European cave art (Guilaine and Zammit 2001: 85–9): whether they depict actual killings, wished-for killings, or magical killings cannot be determined. A number of multiple burials have been located from this period, most notably that at Predmostí in Moravia, where twenty individuals (eight adults and twelve children) were interred. Keeley has concluded that, considering ‘the improbability of alternative explanations’ (1996: 37), these must have been the victims of a lethal conflict. However, as Kelly notes (2000: 157), high levels of death from disease and starvation are recorded for gatherer-hunter groups. Introduced diseases may seem to be a thing of the modern world, transferred to devastating effect from Europe to the Americas, but the Upper Palaeolithic sees the movement of raw materials over hundreds of kilometres (Gamble 1998), movements which may well have involved individuals making contact with new groups far distant from their own territory.

In terms of skeletal evidence, there are two final Upper Palaeolithic bodies with flint points lodged in the bones, both from Italy (Bachechi et al. 1997). One, from San Teodoro cave in Sicily, was a woman with a flint point in her pelvis. The other was a child with a flint point in its backbone, found in the Grotta dei Fanciulli (usually known as the Grotte des Enfants), Grimaldi, on the Italian mainland. Whether the points were spear-tips or arrowheads is unclear. The excavators in both cases thought they were arrows. In the less clear-cut case of Wadi Kubbaniya, Egypt (Wendorf and Schild 1986), two bladelets found between the ribs and backbone may have been the cause of death. The poorly dated cave site of Montfort Saint-Lizier, where a quartzite blade was embedded in a human vertebra (Bégouën et al. 1922), may also belong here, if it is not Early Mesolithic.

Without doubt, the most remarkable discovery of this period comes from Jebel Sahaba, in the Sudan (Wendorf 1968). A cemetery containing fifty-nine burials was located on a knoll overlooking the Nile some 12,000 years ago; of these, twenty-four had chert projectile points either embedded in the bones or found within the grave fill (Fig. 2). Altogether, 110 chert points were found during the excavations, ‘almost all in positions which indicate they had penetrated the body either as points or barbs on projectiles or spears’ (Wendorf 1968: 959). Slightly more males than females show traces of violence, and several children were also apparently killed by projectiles. There were a number of multiple burials, presumed to be contemporary interments, some with no traces of projectile injuries. The pattern of multiple wounds (up to a dozen in the case of an adult female) may indicate either close combat or revenge attacks by a group. Several of the adult males were interred alone, which may imply they were killed away from the settlement. Environmental pressure is suggested
by Wendorf (1968: 993) as the cause of the violence, but no analysis of the skeletons has been undertaken to attempt to confirm this. While some of the burials are clearly contemporaneous, the absence of radiocarbon dating makes the duration of use of the cemetery impossible to determine, and it is at least possible, given the absence of traumatic injuries at the only contemporary burial site in the vicinity (Wendorf 1968: 993), that this was a special-purpose burial place for those who had died untimely deaths – a common feature of the ethnographic record (Kamp 1998).

Turning to the Mesolithic, and beginning with the Mediterranean and the Near East, remarkably little trace of violence can be detected here in terms of skeletal trauma (Cordier 1990; Vencl 1991; Grünberg 2000). For the central and eastern Mediterranean the relatively small sample size (Grünberg 2000) may be a factor, with just a single example of violent death from Franchthi Cave, Greece (Cullen 1995). This is not so for the western Mediterranean, where some 400 burials have been found in Portuguese shell middens such as Moita do Sebastião (Lubell et al. 1989). A projectile wound in the foot at Moita do Sebastião and a skull wound at Cabeço da Arruda are the only clear traces of violence here. Parry fractures have been reported from Portuguese sites (Grünberg 2000: 190) – these are usually interpreted as resulting from an attempt to fend off a blow directed at the head or upper body. However, recent examinations of prehistoric American material show no link between the frequency of head injuries thought to result from attacks and parry fractures (Larsen 1997: 112). There are actually a large number of accidents which can result in parry fractures (Lovell 1997).

The absence of direct evidence is especially striking for the Natufian of Palestine.
(Roper 1975), where a large skeletal sample (over 400 inhumations, most from large cemeteries) exists, yet only a single suggested act of violence (a depressed fracture of the skull at Nahel Oren (Ferembach 1959)). Moreover, population pressure has often been suggested as a factor in the Natufian development of an agricultural economy, yet there is no trace in the archaeological record that this led to conflict.

Figure 3 Possible weapons used on Mesolithic sites on the banks of the Danube: top left, antler pick (Vlasac); right, bone projectile point (Schela Cladovei); bottom left, antler axe (Vlasac) (from Chapman 1999).
Moving away from the Mediterranean, projectile injuries apparently causing death are reported from Vlasac and Schela Cladovei on the Danube (Fig. 3) (Radovanovic 1996; Chapman 1999). At Schela Cladovei the level of violence appears to be very high among the fifty-six skeletons excavated, with six cases of projectile injuries (four male, one female, one unsexed, mostly from bone points) along with some half a dozen examples of cranial injuries (mostly not healed before death), so that about one third of all adults from the site had traumatic injuries. However, within the region’s Mesolithic cemeteries as a whole Schela Cladovei and Vlasac appear to be exceptional – the latest overall figures are eight projectile injuries out of 400 skeletons, and roughly ten individuals with fractures. They thus provide the vast bulk of cases from one-fifth of the total examined burial population, suggesting that significant cultural variability existed in the level of conflict within this relatively small area.

In northern Europe we have the oldest definite evidence for arrows and thus bows, at Stellmoor in Germany, c. 8500 BC, along with a significant level of well-recorded skeletal trauma in the form of projectile wounds (Cordier 1990; Vencl 1991). More than anything else, this justifies descriptions of the Mesolithic as the period when true warfare began in northern Europe, with examples from Atlantic France and Denmark to the Ukraine of individuals suffering fatal wounds from weapons (Chapman 1999; Dolukhanov 1999; Vencl 1999; Thorpe 2003).

From southern Scandinavia, at the Ertebolle period Skateholm I ‘cemetery’ in southern Sweden, an arrowhead was lodged in the pelvic bone of an adult male (Grave 13) (Larsson 1989), and a bone point was found with another male (Grave 34) (Vencl 1991). At the Ertebolle period Vedbæk ‘cemetery’ on Zealand, one of the individuals (an adult, probably male (Bennicke 1985:102)) in a grave containing three bodies had a bone point through the throat (Fig. 4) (Albrethsen and Brinch Petersen 1976). The apparently simultaneous burial of the man, woman, and child has led to the suggestion that all three died suddenly and violently (Albrethsen and Brinch Petersen 1976). Bone points may also have been found in the chests of burials at Bäckaskog (an adult female) and Stora Bjers (an adult male) in Sweden (Albrethsen and Brinch Petersen 1976), although the circumstances of discovery are less clear.

At Téviec in Brittany a male burial had two flint points embedded in his spine (Péquart and Péquart 1931). Further east, several projectile injuries apparently causing death (Cordier 1990; Alekšin 1994; Vencl 1991, 1999; Lillie 2001) are reported from Volos’ke and Vasylivka I in the Ukraine; also in the Ukraine the Vasylivka III cemetery produced four burials with arrow injuries and several with apparently crushed skulls.

More indirect evidence of injuries also exists where large-scale studies of skeletal material have been undertaken. Bennicke’s examination of cranial trauma in Denmark (1985: 98–101) shows that during the Mesolithic there were a high number of injuries in the form of fractures and impressions. The best-known example is the male burial (aged 30–50) from the Ertebolle period Korsør Nor harbour settlement site on the coast of Zealand (Norling-Christensen and Bröste 1945; Schilling 1997), possibly in a bark boat, who has a deep healed wound caused by a club. Six other burials were present at the site although these had all been disturbed by wave action. Two further skulls (an elderly male and an unidentified adult) also showed healed wounds (Bennicke 1997). Several more examples have appeared since Bennicke’s general survey was conducted, including the...
probable male with two healed wounds from the famous Ertebølle period underwater site of Tybrind Vig on Fyn (Andersen 1985) and the Ertebølle period young male (c. 25 years of age) boat burial from Møllegabet Site II on Ærø (Grøn and Skaarup 1991), with a healed axe-blow on the skull. That not all the victims of conflict were male is shown by the Ertebølle period female burial from Gøngehusvej, Vedbæk (Brinch Petersen et al. 1993). This 40-year-old woman, found in a double grave with a 5-year-old child, was buried with a decorated cap, attempting to conceal the impression of a blunt instrument in a healed fracture.
A similar pattern of cranial injuries has been detected by Lambert (1997) among prehistoric gatherer-hunter communities in California (where it mostly occurs among adult males, as do projectile injuries), and among the Yanomamö, where these generally non-lethal wounds result from fighting duels with heavy wooden clubs (Chagnon 1997). One might suggest, therefore, that two forms of conflict coexisted in Mesolithic southern Scandinavia – ritualistic fighting with clubs and actual warfare with projectiles.

Certainly in the Ertebølle case sedentism and territoriality are highly likely (Thorpe 1996: 63–93, 2003). The Eastern Woodlands of the United States of America provides a significant parallel in the burial of most individuals who had suffered violent deaths in shell mounds and midden heaps (Milner 1999). Given the contacts with Linearbandkeramik farmers in Germany one might also suggest status competition over imports, or indeed a materialistic interpretation of fighting to control trade with the outside world. However, these imports are few in number, and, with the possible exception of stone adzes and copper beads, do not seem to be clear status goods (e.g. they are not used as grave goods) and were certainly not essential to the material well-being of Ertebølle communities. Moreover, these conditions all apply equally to the Natufian and the Portuguese Mesolithic, yet with vastly lower levels of conflict.

Skeletal material also points to the existence of conflicts occurring on a much larger scale. At Ofnet cave in Bavaria two pits contained the skulls and vertebrae of thirty-eight individuals, all stained with red ochre, dating to around 6500 BC (Fig. 5) (Frayer 1997; Orschiedt 1998). Most were children; two-thirds of the adults were females. Peter-Röcher (2002) argues that the Ofnet burials were not a plausible demographic community for the Mesolithic and that this is therefore not a massacre, but a temporary absence of males may have been the precipitating cause of the attack. Finds of deer teeth and shells were associated only with adult females and children. Half the individuals were wounded before death by blunt mace-like weapons, with males and females and children (even infants) all injured, but males having the most wounds (Fig. 6) (Frayer 1997). Several skulls had cut marks, but these were not related to cannibalism or removal of the brain; there were also cut marks on the vertebrae of one in three of all individuals, relating to the removal of the head. The scale of the massacre suggests an attempt to wipe out a whole community, followed by the ceremonial burial of ‘trophy skulls’ (Keeley 1996: 102). Certainly, there are many accounts in the ethnographic record that demonstrate the very careful curation of skulls taken in warfare (e.g. Sterpin 1993). It should be noted, however, that Orschiedt (1998) has recorded lower injury counts than Frayer (although this probably relates to a smaller available sample), and he suggests that not all the skulls were deposited at the same time, although the skulls he does accept as definitely injured are found together. We should also note that none of the conditions of sedentism, territoriality, and status competition attributed to the Ertebølle have been claimed for the German Mesolithic (Jochim 1998).

A similar story may lie behind the discoveries at Dyrholmen in Jutland, where the bones of at least nine individuals were discovered (Degerbøhl 1942). There are traces of cut marks and fractures of long bones and mandibles apparently to reach the marrow, with cut marks on the skull of a 10-year-old child suggesting scalping (Anger and Dieck 1978: 166–7). At Møllegabet Site I on Årø bones were also broken open to reveal the marrow and a male jaw broken to remove the front teeth (Skaarup 1995).
If these are cases of cannibalism, then they could be linked to warfare through a common explanation given by historically recorded groups who practise cannibalism – that the vital energies or personal attributes of the enemy would be absorbed by the cannibals. Cannibalism is also sometimes used in South American societies as a way of disrespecting the enemy, eating their flesh ‘like animal meat’ (Conklin 1995). If head-hunting is involved, then this simultaneously deprives the enemy of the benefit of the strength provided by reincorporating the dead into the group and unleashes the anger of the dead on their community unless the death can be avenged (e.g. Boes and Sears 1996). In the case of the Mølleøabet jaw, the excavator argued that the teeth were being removed to ‘become part of an ornament with which the victor could adorn himself’ (Skaarup 1995: 399).

Peter-Röcher (2002) may be correct to argue that a statistical examination of Grünberg’s database (excluding Ofnet and the similar deposit of three injured skulls from the nearby site of Hohlenstein-Stadel) shows the relatively slight evidence for warfare.
However, two points need to be made. First, Grünberg's database is not complete, with less than half the Danish examples of Mesolithic violence represented, for example, which renders any statistical manipulation of such small datasets doubtful. More generally, I would argue that the variation between sites and areas is significant in assessing the value of general theories, and that a statistical approach masks crucial cultural variability.

It should be clear that the Palaeolithic and Mesolithic evidence cannot be fitted neatly into any one of the over-arching explanations. The biological theories imply a constant level of violence, not supported by the archaeological evidence, which demonstrates significant variations in evidence for conflict from virtually none to apparent massacres. The materialist theory would be far more convincing if there were a significant increase in conflict with the adoption of agriculture. We therefore need to turn to historical factors and considerations of the specific societies concerned. Mesolithic conflict need not have been over economic resources, as Haas (2001: 338) notes, but a strong degree of internal territoriality would certainly be consistent with other indications (Layton and Barton 2001).

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Figure 6 Pattern of trauma at Ofnet, composite drawing showing location of blows on skulls (after Frayer 1997; Orschiedt 1999).
However, many other causes of wars among gatherer-hunters have been noted. Warfare in early prehistory may well have arisen from matters of personal honour – such as slights, insults, marriages going wrong, or theft. In a small community, everyone is related. An attack on one group member is an attack on the whole family. A personal feud may quickly involve the whole community. From there it is a small step to war. For an example among recent gatherer-hunters, we may turn to Hart and Pilling’s (1960) record of the Tiwi of northern Australia. A series of personal grievances felt by various men among two Tiwi bands led them to recruit their relatives, arm themselves, physically with weapons and psychologically with the white paint of war, and set out for a confrontation with the band containing their enemies. The elders led the insults directed at the other side and urged a general attack. Fortunately, the younger men limited the spear throwing to the individuals involved in the feud, but a single misplaced spear could have resulted in war.

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