
CHAPTER TEN

The Inuit and the evolution of limited group conflict

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10.1 INTRODUCTION

From an examination of the archaeological and ethnographic record Bigelow (1969) and Eibl-Eibesfeldt (1979) draw the conclusion that the human behaviour we call war is and has been a universal human trait perhaps as old as *Homo sapiens*.^{*} Bigelow (1969), in his book *The Dawn Warriors*, goes so far as to suggest that many of man's so called advanced facultative skills evolved specifically to enhance man's warring skills, as war, Bigelow suggests, was adaptive. The advent of nuclear weapons may have irrevocably changed the cost to benefit ratio of warring behaviour. So long as there were some winners then war may have been adaptive but when there are only losers the behaviour of war ceases to have any adaptive advantages. How will this change in the cost to benefit ratio of warring behaviour be played out in evolutionary terms? Will man become extinct? Perhaps.

If it is the expressed desire of mankind not to become extinct, at least not in the near biological future, then how can this warring animal be modified without paying the costs of selection by nuclear conflict? If it is impossible to alter the genetic hubris of human nature by genetic engineering (we don't know how) or natural selection (we don't have time) the only course open to us, for the salvation of our genotype, may be through the cultural manipulation of human behaviour. This possibility for saving mankind, by rational and cultural intervention, at first appears to be an obvious solution that

^{*}For an additional review see Alexander (1979), for cross-cultural studies see Otterbein (1970) and Wheeler, V. (1974) and, for a study of hunter/gatherers, see Ember (1978) who regards the anthropological view that hunter/gatherers are peaceful and non-competitive as a 'myth'.

The Inuit and the evolution of limited group conflict

should be promptly embraced. Unfortunately when we take even the briefest look at human history we quickly discover that man has continually been pleading with his fellow man to be nicer than he is. Philosophers and kings have repeatedly tried various political solutions and rational appeals to project man into a state of peace, at least since the times of Ancient Greece, without success. If the cultural modification of human nature, to curb an innate propensity for group conflict, is impossible, then evolutionary logic would suggest that we should get the process of selection over and done with as soon as possible. Why wait? Press the button now.

This conclusion is built on the premise that human salvation, by cultural means, is as impractical as changing the genetic basis of human antisocial behaviour. This chapter is written to document the fact that the cultural restriction of group conflict is indeed possible, as at least one society, on at least one occasion by some process of sociocultural evolution, has done it. The Inuit* of the central Canadian Arctic did sometimes commit murder but the killing of a fellow tribesman and a member of another tribe cannot be distinguished in the Inuit culture. It will be argued that the behaviour we call war was not a part of their social repertoire. The very term 'war' cannot be translated into their language Inuktitut. This rare event, in the annals of human biocultural evolution, deserves our close attention.

10.2 INTERTRIBAL CONFLICT IN THE CENTRAL ARCTIC: MURDER, FEUD OR WAR?†

Before I can begin to make the case that the Inuit of the central Canadian Arctic, unlike many of the peoples that surrounded them, did not engage in the social behaviour war it will be necessary to briefly discuss what is being defined by the term war in this chapter. Gwynne Dyer, in his book *War* (1985), wishes to suggest that prehistoric hunter gatherers did not engage in warfare as they did not have a division of labour society that produced a warrior class or a chief that would lead them into battle. For Dyer war is a cultural invention that merely has to be uninvented if mankind is to be saved. However the prehistoric hunter gatherers Dyer discusses did possess clearly

*Although most of the original ethnography in this chapter relates to the Inuit tribe that are known as the Netsilingmiut much of what is said here would apply to the tribes that surround them and perhaps to most of the Inuit in general who are the Eskimo that occupy North America from east of the Mackenzie Delta to west and north of Labrador, exclusive of these regions.

† As this study required information on historical intertribal conflicts a methodology was employed in which community elders confirmed and elaborated previously collected ethnographies. This field work was undertaken in Arctic settlements on the west coast of Hudson Bay during 1976, 1980 and 1982. For more detail on methodology see Irwin (1985a).

Intertribal conflict in the Central Arctic: murder, feud or war?

defined territories,* peopled by clearly defined groups,[†] that, as Dyer admits, frequently engaged in organized intergroup killing.[‡] For the purposes of this chapter this behaviour will be defined as war. The socially and technically complex behaviour we associate with war today is, in this view, a cultural elaboration of a primitive behaviour. Bigelow (1969) and Eibl-Eibesfeldt (1979) would probably agree with this perspective. By the criteria defined here let us now take a look at the Inuit of the central Canadian Arctic, and the peoples that surrounded them, and decide if they engaged in war or existed, excepting murder, in a state of relative peace.

In Alaska the coastal Eskimo and their inland Indian neighbours were in an almost continual state of war that was frequently genocidal (Petroff, 1884). In Weyer's account of such a conflict it should be noted that the women and children were killed. 'The attacking Indians stuffed the door with brush wood and set fire to it. Entrapped, the Eskimo women were shot by the Indians from the smoke hole, and most of those not killed by arrows suffocated in the smoke.' These Indians were later killed 'to the last man' in a counter attack (Weyer, 1932). Nelson (1899) attributes a similar level of fighting to Eskimo groups although these encounters fell short of total genocide, 'they killed all they could of the males of the opposing side, even including infants, to prevent them from growing up as enemies. The dead were thrown in heaps and left. The females were commonly spared from death, but were taken as slaves.'

The Eskimo of the Bering Strait region of Alaska would appear to have been culturally adapted to the behaviour of war. The Unalit called the warrior who planned the attack *mu-gokh-ch-ta* and the enemy was termed *um-i-kis-tu-ga*, 'one who is angry with me' (Nelson, 1899). The young men of the region:

regularly trained for war, hardening themselves in all manner of athletic exercises, dieting themselves, and often obliged to fast in order to habituate themselves to great hardship, or making journeys on foot for many days in succession as a test of endurance. Not only were the different tribes constantly at feud among themselves: they did not hesitate to enter upon combats with Indians or white men when these ventured into their territory. Fighting was carried on as a rule with bow and arrow, but they

*Inuit tribes name themselves after geographic locations so that the Netsilingmiut, for example, are not, as is popularly believed, 'The People of the Seal', but are in fact 'The People of Seal Lake', as this tribe live close to a large tidal lake that contains seals.

[†] These groups or tribes can be defined in many different ways. One of the most useful perspectives that can be used here is that of tribes as dialect groups (Birdsell, 1972) that were substantially endogamous (Irwin, 1985a, 1987).

[‡] Burch and Correll (1971) define war as conflict between the members of a number of extended families from two or more regional groups and feuding as hostilities limited to the members of two extended families. These definitions may be used here.

The Inuit and the evolution of limited group conflict

had also special inventions of their own; among the most notable were breastplates of walrus tusk, proof against arrows, or great saw-toothed clubs designed to crush the skull of an enemy. (Rasmussen, 1927)

Warring behaviour does not seem to be so culturally well developed as we move east along the coast of the North Slope of Alaska and into the Mackenzie Delta region. Here, as on the Yukon, Eskimo/Indian conflict extended up the river system (Rasmussen, 1927). However it is worth pointing out that Weyer (1932) does not consider these encounters to be war campaigns as such (Stefansson, 1914) but rather murderous skirmishes (Rink, 1887). I will not attempt to adjudicate this point of definition here but this equivocation may be significant as it is probably symptomatic of a real reduction in the level of conflict when compared to South West, West and North West Alaska.

In comparison to the Eskimo of Alaska and the Mackenzie Delta the Inuit of the central Arctic had little contact with the Indian population to the south. However, what contact they did have may frequently have been merciless and one sided as typified by the encounter on the Coppermine river at what is now called Bloody Falls.

By the time the Indians had made themselves thus completely frightful, it was near one o'clock in the morning of the seventeenth; when finding all the Esquimaux quiet in their tents, they rushed forth from their ambuscade, and fell on the poor unsuspecting creatures, unperceived till close at the very eves of their tents, when they soon began the bloody massacre, while I stood neuter in the rear.

In a few seconds the horrible scene commenced; it was shocking beyond description; the poor unhappy victims were surprised in the midst of their sleep, and had neither time nor power to make any resistance: men, women, and children, in all upward of twenty, ran out of their tents stark naked, and endeavoured to make their escape: but the Indians having possession of the land-side, to no place could they fly for shelter. One alternative only remained, that of jumping into the river: but, as none of them attempted it, they all fell a sacrifice to Indian barbarity!

The shrieks and groans of the poor expiring wretches were truly dreadful; and my horror was much increased at seeing a young girl, seemingly about eighteen years of age, killed so near me, that when the first spear was stuck into her side she fell down at my feet, and twisted round my legs, so that it was with difficulty that I could disengage myself from her dying grasp. As two Indian men pursued this unfortunate victim, I solicited very hard for her life; but the murderers made no reply till they had stuck both their spears through her body, and transfixed her to the ground. They then looked me sternly in the face, and began to ridicule me,

Intertribal conflict in the Central Arctic: murder, feud or war?

by asking if I wanted an Esquimaux wife; and paid not the smallest regard to the shrieks and agony of the poor wretch, who was twining round their spears like an eel! Indeed, after receiving much abusive language from them on the occasion, I was at length obliged to desire that they would be more expeditious in dispatching their victim out of her misery, otherwise I should be obliged, out of pity, to assist in the friendly office of putting an end to the existence of a fellow creature who was so cruelly wounded. On this request being made, one of the Indians hastily drew his spear from the place where it was first lodged, and pierced it through her breast near the heart. The love of life, however, even in this most miserable state, was so predominant, that though this might justly be called the most merciful act that could be done for the poor creature, it seemed to be unwelcome, for though much exhausted by pain and loss of blood, she made several efforts to ward off the friendly blow. My situation and the terror of my mind at beholding this butchery, cannot easily be conceived, much less described; though I summed up all the fortitude I was master of on the occasion, it was with difficulty that I could refrain from tears; and I am confident that my features must have feelingly expressed how sincerely I was affected at the barbarous scene I then witnessed; even at this hour I cannot reflect on the transactions of that horrid day without shedding tears. (Hearne, 1795)

Encounters of this kind were so effective, from an Indian point of view, they may have been partly responsible for the creation of a mythology amongst the Inuit that living trees were dangerous and it was unsafe to camp in the Indians habitat, the forest (Rasmussen, 1927; Birket-Smith, 1929; Weyer, 1932).

Where contact between the Inuit and the Indians was more frequent conflict was probably less one sided. On the south west coast of Hudson Bay the Caribou Eskimo were probably always hostile toward the Indians, the Cree and Chipewyan (Rasmussen, 1927; Birket-Smith, 1929; Weyer, 1932). In northern Quebec and Labrador the Ungava District Hudson Bay post built a palisade around their houses in 1831 'to prevent the intrusion of the natives, Indians and Eskimos, who were lately at war with each other that the rancorous feeling had not subsided and might break out afresh at any moment without warning' (Turner, 1894; Weyer, 1932).

In the Central Arctic the blood feud probably replaces war as the most deadly form of social conflict* (Boas, 1888; Weyer, 1932). Boas tells us:

Real wars or fights between settlements, I believe, have never happened, but contests have always been confined to single families. The last instance

*One explorer, Klutschak (1881), suggests that the Netsilingmiut had conquered their neighbours the Ukussiksalingmiut. However I have not been able to find any recollection of such a war amongst the members of either of these tribes. Boas (1888) also finds no record of such a conflict and makes an effort to refute Klutschak.

The Inuit and the evolution of limited group conflict

of a feud which has come to my knowledge occurred about seventy years ago. At that time a great number of Eskimo lived at Niutang, in Kingnait Fjord, and many men of this settlement had been murdered by a Qinguamio of Anarnitung. For this reason the men of Niutang united in a sledge journey to Anarnitung to revenge the death of their companions. They hid themselves behind the ground ice and killed the returning hunter with their arrows. All hostilities have probably been of a similar character. (Boas, 1888)

It is worth noting that this conflict resulted in the final killing of only one person, the murderer, and not his relatives, or other members of his tribe. This kind of action could just as easily have taken place within a tribe as the execution of a murderer by the victim's closest male relative was the normal course of action for all Inuit (Saabye, 1818; Lyon, 1824; Hall, 1864; Gilder, 1881; Klutschak, 1881; Turner, 1887; 1894; Boas, 1888; Nelson, 1899; Hawkes, 1916; Stefansson, 1921; Jenness, 1922; Rasmussen, 1927; Birket-Smith, 1929; Cadzow, 1929; see Weyer, 1932 for a review), even within an extended family. This so called blood feud, by Inuit standards, was probably nothing more than an emicly correct dispensation of justice. If, as Boas suggests, this example is typical of intergroup conflict amongst the Inuit of the Central Arctic then it may not be possible to distinguish this kind of human killing from murder or execution in either semantic or practised behavioural terms. If this distinction cannot be made then it may be reasonable to conclude that the Inuit did not participate in the behaviour we call war. In an attempt to resolve this question it will firstly be necessary to complete a cognitive analysis of the Inuit in terms used to describe the taking of human life and secondly make some estimate of the incidence and extent of murder, both within and between tribes. Finally, if it is concluded that the Inuit did not practise war, then did this state of relative peace represent some lost state of nature or were cultural mechanisms instituted to limit the escalation of deadly conflict?

In Greenland, where there are no Indians, intertribal relations may have been for the most part peaceful (Nansen, 1893; Weyer, 1932). Perhaps it was limited to murder and feud (Saabye, 1818) much as it appears to have been in the Central Arctic. Nansen tell us that the Greenlanders find war 'incomprehensible and repulsive, a thing for which their language has no word'. As before, knowledge of numbers killed, what groups they belonged to and descriptions of cultural mechanisms instituted to limit intertribal hostility would be welcome. However this chapter is limited to an analysis of these questions with respect to the Inuit of the Central Arctic.

The question of whether the taking of human life in the Central Arctic should be classified as murder, feud or war can be answered from both the perspective of the Inuit culture (emic) and from the perspective of the

Intertribal conflict in the Central Arctic: murder, feud or war?

ethnographer (etic). As these terms exist in the English language it is clearly possible to distinguish between these forms of killing in our culture. If these semantic discriminations cannot be made in Inuktitut then some of these behaviours may not exist in an emic sense and are probably less likely to exist in a real behavioural, etic, sense. Inuit* terms for the taking of human life are given in Table 10.1.

Table 10.1
Inuit cognates for the taking of human life

<i>English</i>	<i>Eskimo (Inuktitut) and literal translation</i>	
Murder	Inuaktok Human – he or she took life	
Revenge killing or execution	Akeyauok Back – he or she – to him or her	
Two people fight	Unatuktook Fight – them (two)	
Many people fight	Unatuktoon Fight – them (many)	
War	None	
Many people fighting and killing each other or mass murder	Unatuktoon Fight – them (many)	Inuakgrotioon Human – they took life (many)
Baby abandonment	Nutaraarluk Baby	Iksingnaoktauyoq Leave it – he or she – doing it
Baby freezing	Nutaraarluk Baby	Qiqititauyoq Freeze it – he or she – doing it
Suicide	Inminik Self	Pitariok He or she took life

*This analysis uses Netsilingmiut terms. However, as the dialects of the Inuit tribes are very similar (Irwin, 1985a, 1987) this analysis is probably cognitively accurate for most Inuit in general. For more information on the methodology used for this semantic analysis see Irwin (1985a).

The Inuit and the evolution of limited group conflict

A number of observations can be made on this collection of terms. Inuktitut (the Eskimo language) contains a term for murder, *inuaktok*. This behaviour is considered to be wrong (blameworthy) by the Inuit, it is in most cultures. Like English there is also a term for execution, *akeyauok*. This behaviour is not considered blameworthy. Under some circumstances execution may even be praiseworthy in the Inuit culture if revenging a murder requires a brave act. However revenge killing or execution, *akeyauok*, can only be used with respect to specific acts of murder and the associated murderer(s). In discussions about war the Inuit use the term *unatuktoon*, 'many people fighting'. However this term does not necessarily imply the taking of human life unless a form of the term for murder is added, *unatuktoon inuakgrotioon*. Given this semantic construction it is not possible for the Inuit to associate praiseworthy behaviour with human killing on a large scale as the closest they can get to a term for war in their language is *unatuktoon inuakgrotioon*, 'mass murder'. To make this point clearer it is worth noting that some forms of human killing, that are blameworthy in the English language and culture, are not blameworthy in the Inuit culture. Infanticide, generally female infanticide, is not described by a term that would be the equivalent of 'baby murder'. The Inuit use the terms baby abandonment, *nuaraarluk iksingnaoktauyoyq*, and baby freezing, *nuaraarluk qiqititauyoyq*, and these behaviours are not considered blameworthy by the Inuit* (Irwin, 1985). We may conclude, therefore, that like the Eskimo of Greenland (Nansen, 1893) the Inuit of the Central Arctic appear to have no word in their language that is the cognitive equivalent of war, with its associated licence to take human life. It should be pointed out that the Inuit word for murder is based on the Inuit word for human, *inuk*. Nearly all Eskimo are some form of Inuit. Indians, however, are not, they are Iqeelik, lice people. It follows, therefore, that killing an Indian may not have been murder in a strict cognitive sense although killing another Inuk, whatever their tribe, excepting execution, always was murder.

To decide whether or not war took place in some etic sense it would be helpful to know, first, if murder between members of different tribes was significantly more frequent than murder between members of the same tribe. Secondly, it would be helpful to know how many individuals were killed in the most bloody intertribal conflicts: 50, 20, 10, 5 or less?

Murder may not have been an infrequent event amongst the Inuit. Of 36 myths collected from my mother and father-in-law, approximately half deal with the wrongness of murder and the inevitable justice of execution at the

*It should be pointed out that these babies were not considered human, in a metaphysical sense, as these babies would not have been given a name/soul and could be cognitively discriminated as, *nutaraarluk atikungitok*: baby – name – he or she – without.

Intertribal conflict in the Central Arctic: murder, feud or war?

hands of the closest male relative. Rasmussen's (1931) collection of myths shows a similar balance. The myth 'Quqtaq' is typical (Irwin, field notes):

When Quqtaq was little more than a baby his father was killed by a man and that man took Quqtaq's mother for a wife. Quqtaq grew up with the man who had killed his father and this stepfather looked after Quqtaq well even though Quqtaq was not his own son.

Every morning, while Quqtaq was still growing up, he would leap out of bed and then jump through the door. He would jump through the snow door even when the igloo was closed up. Sometimes he would jump through the snow blocks, even when they were not the door!

The man who had killed Quqtaq's father and who had married Quqtaq's mother, was getting worried. He would stare at Quqtaq when he leapt out of bed and jumped through the igloo wall or jumped through the closed door. This made the man suspicious and one time he even said, 'Quqtaq, I think you want to kill me'.

But Quqtaq replied, 'No, I do not wish to kill you because you have looked after me, I am growing up and I eat well because of you. Why would I want to kill you?'

One morning Quqtaq jumped out of his bed, leapt through the door, and when he jumped back in he grabbed hold of a knife, so fast, no one saw him. Then he stabbed the man who had married his mother and he pulled the knife out of the body, covered in blood.

When Quqtaq killed his mother's second husband, she exclaimed, 'Quqtaq, do you have a mind? Quqtaq, do you have a heart? Why did you kill this man?'

Quqtaq answered, 'I do have a mind and I do have a heart. But I remember, when I was so very little, trying to stop myself from crying, when this man killed my father. I will never forget the time when this man killed my real father. As I have told you, I remember the time when I struggled to hold back the tears. So I have killed this man who has been my stepfather'.

Kako, 1980

In contrast to this collection of murderous tales, that frequently involved the killing of close relatives (for example jealous brothers), it is very difficult to find any mythology that can be said to describe intertribal conflicts that may bear some resemblance to war. Boas (1888), Rasmussen (1931) and my informants all refer to a mythical people, the Tunrit, who were very large and strong, half Inuit and half white, that could move enormous rocks and lived in stone houses (the Inuit of the Central Arctic only use tents and snow houses, igloos). The remains of these dwellings can still be found. Boas (1888) and Rasmussen (1931) tell us that the Tunrit ran away and left their land after one of them had accidentally killed an Inuk boy or one of their dogs. Samik

The Inuit and the evolution of limited group conflict

told Rasmussen (1931) that the 'Tunrit were strong, were easily frightened, were easily put to flight, their lust to kill, we hear nothing of'. Boas (1888) also describes what he considers to be the only tradition of a real fight between tribes. It also involves a conflict between newcomers and people who lived in stone houses who rolled boulders down on their enemy. In the accounts I have heard there was loss of life in the conflict that led to the Tunrit deserting their land (field notes). Perhaps these different tales are all variations of the same story.

If we review the first and second hand accounts of murder we find evidence that suggests the ratio of tribal to intertribal killing may have been biased toward the taking of human life within the tribe. Boas does not provide many detailed accounts of murder. Rasmussen (1931) gives a detailed account of his meeting with the 'outlaw', Ingivalitaq, who had murdered his hunting companion and points out that of the 60 families of the Netsilingmiut tribe included in his census the male heads of the four families living at the remote camp on Belliot Strait were murderers 'or at any rate men who had kidnapped their wives'. Balikci (1970) gives several historical accounts of murder amongst the Netsilingmiut and their neighbours (see below), but Steenhoven (1959) provides what may be the most authoritative descriptions of seven murders that he is able to attribute to members of this tribe in recent times; Sumisertok in about 1900, Sivatkakluk also in about 1900, Krabviojark in 1910, Atuwir in 1913, Amaroalik in 1921, Arnasluk in 1935 and Angotaojajok in 1940. However all of these murders involved fellow camp members that were related and therefore probably of the same tribe.

Some additional sense of the level of human conflict in the Central Arctic may be gained from an assessment of how many people were killed in the most deadly of these human exchanges. In Boas's single account of an intertribal conflict only the avenged murderer was killed. However Balikci (1970) provides a detailed account of what may have been the most bloody exchange involving Netsilingmiut. Balikci's informant, Irkrowaktoq, places the incident before the arrival of Sir John Ross's ship in 1829 and describes how Kujaqsaq and some of his relatives from around Netsilik travelled to Arvilikjuak to avenge the murder of his father, Ugak. In this account many Arvilik men are killed but we are not told how many. In three accounts, which Balikci tells us are fragments of the same incident, Rasmussen's (1931) informants Samik, Manelaq and Tiekasq name three persons killed by Kujaqsaq who is described as being 'eager to kill people' and having arrows that were directed by magic words. Itimangnerk, the brother of Balikci's informant, told Steenhoven (1959) that this kind of incident would be resolved when one side 'suffered, say, four casualties or wounded'. My informants were generally not sure how many people were killed in such conflicts. The most specific answer I was given to this question was 'four, or three, or two. Four was the most. The losers would be those with three or four dead'.

Coefficients of relatedness

Both Inuit mythology, and the accounts of killing that can be recalled, do not suggest that the rates of intertribal killing exceeded the rates of killing within the tribe. It may therefore be reasonable to conclude that intertribal conflict amongst the Inuit of the Central Arctic, was limited to murder, and revenge killing, or execution, as is suggested by their semantics. These conflicts generally involved individuals but on at least one occasion before 1829 a revenge conflict produced as many as 'four casualties or wounded' (Itimangnerk to Steenhoven, 1959) which isn't very many when compared to the 'upward of 20' Inuit killed by the Indians at Bloody Falls (Hearne, 1795). Let us now explore what may have been the evolutionary causes for this state of limited intertribal hostility.

10.3 ALTERNATE THEORIES FOR THE EVOLUTION OF LIMITED GROUP CONFLICT: ULTIMATE CAUSE

Many social scientists fall into the trap of characterizing prehistoric, hunter gatherer man in either Rousseauian 'noble savage' terms or Hobbesian 'brutish' terms so that they can develop a thesis of civilization that is a fall from the Garden of Eden (for example, Dyer, 1985 above) or a struggle to create an Eden where there never was one. Neither picture of human nature is quite correct as sociobiology suggests that humans have a capacity for altruism, egoism and reciprocity depending on the coefficient of relatedness of the parties involved and/or the cost to benefit ratio of the social behaviour being engaged in (Hamilton, 1964; Trivers, 1971). As far as our hunter gatherer ancestors are concerned the limits of reciprocity and the beginnings of group conflict would seem to be the tribe or dialect group that was substantially endogamous (Irwin, 1985, 1986). If the humans in these population structures stopped making war then sociobiological theory suggests that something happened to the coefficient of relatedness, or cost benefit ratio, or both. Let us briefly consider these alternatives that are tabulated in Table 10.2.

10.4 COEFFICIENTS OF RELATEDNESS

Hamilton first suggested that the theory of kin selection (Hamilton, 1964) could explain human group behaviour in genetically structured tribal populations in his 1975 paper 'Innate Social Aptitudes of Man: An Approach From Evolutionary Biology'. Although this paper is perhaps the first to explain human intertribal relations in population genetic terms, Hamilton fails to realize that relative differences in coefficients of relatedness can frequently be better predictors of social behaviour than simple similarities in coefficients of relatedness (West Eberhard, 1975). Because of this oversight

The Inuit and the evolution of limited group conflict

Table 10.2
Summary of biological costs and benefits (ultimate cause) for Inuit/Inuit and Indian/Inuit war

<i>Benefits of Inuit/Inuit war</i>	<i>Costs of Inuit/Inuit war</i>
More Wives	Very few hunters could reliably feed more than one wife and her children
More Land	Hunters cannot exploit new territory as efficiently as old territory
	Hunters as warriors were a valuable and limited resource
<i>Benefits of Indian/Inuit war</i>	<i>Costs of Indian/Inuit war</i>
More Wives	Indian and Inuit genotypes would be degraded
More Land	Indians did not possess a technology to exploit the Inuit territory

Hamilton is brought to the false conclusion that in some demicly structured human populations:

... hardly any extra hostility is expected to members of neighboring demes. . . . a sea-shore phase of hominid evolution, if it occurred, should have been particularly harmonious. (Hamilton, 1975)

In my paper, 'A Study in the Evolution of Ethnocentrism' (Irwin, 1987, also see Irwin, 1985a), this error in theory is corrected with a mathematical model that predicts that social behaviour can be polarized at all population boundaries where there is some variation in the coefficient of relationship between the adjacent demes. In other words rivalry between closely related human populations is as predictable a phenomenon as sibling rivalry. Brothers have been known to kill each other and closely related tribes sometimes do go to war. So the fact that the Inuit tribes of the central Canadian Arctic are closely related to each other, because they are arranged in a linear stepping stone population structure (Irwin, 1985a, 1986) cannot, in and of itself, explain their state of relative peace.*

*It should be noted, however, that inertia in the evolutionary process could produce a situation in which the proximate mechanism of group identification and behaviour could produce population structures with unusually low levels of intergroup conflict. For a discussion of this issue see 'Badging' in section 10.7.4.

Costs and benefits of war to the Inuit

It is worth noting that the intensity of hostility between adjacent Eskimo tribes in Alaska is much less bloody than Indian/Eskimo conflict in the same region. This fact can probably be explained in terms of the relative differences in the coefficients of relatedness of these different groups. However, if the Alaskan Eskimo were not at war with the Indians of the region then these Eskimo might have been expected to increase the intensity of their own intertribal conflicts. Why hasn't this happened in the Central Arctic? Why didn't the Inuit tribes, who had very little contact with the Indian population to their south, fight it out for possession of the land?

10.5 COSTS AND BENEFITS OF WAR TO THE INUIT

Weyer provides the following suggestion as to why the Inuit tribes of the Central Arctic did not engage in warfare:

A further hindrance may lie in the fact that both factions are so poverty-stricken and harassed by the common hardships of their antagonistic and ungenerous habitat that intertribal fighting but poorly repays even the victor for the time and energy it consumes. (Weyer, 1932)

This thesis may very well be correct but it begs the question as to what the potential benefits of war for the Inuit might have been and what costs made the prosecution of war an unprofitable venture for them. From a biological perspective the benefits of war can be understood in terms of securing additional resources for the purposes of reproduction and survival. I shall organize my analysis along these lines.

10.5.1 Reproductive resources, costs and benefits

With respect to reproduction, females that are approaching or who have reached the age of reproductive maturity could be considered a valuable resource. This may be particularly true for the Inuit of the Central Arctic who practised high rates of female infanticide (Rasmussen, 1931; Weyer, 1932; Balikci, 1967; Freeman, 1971; Irwin, 1985a). However male foragers, who provided most of the meat for their wives and children, may have been a more critical limiting resource than reproductively mature females (Irwin, 1985a, 1989). It should be pointed out here that most marriages amongst the Inuit were monogamous (Rasmussen, 1931; Irwin, 1985a) as the adult population was balanced by high rates of male mortality (due to hunting accidents) equal to the rates of female infanticide; so, although one of the more frequent motives for murder amongst the Inuit was to steal a wife from another man this was never done on a mass scale, involving war, as only a few exceptional hunters were ever able to support more than one wife and their

The Inuit and the evolution of limited group conflict

children (Irwin, 1985a, 1989). By way of contrast it is worth noting that in the kinder climate of Western and Southern Alaska, where rates of female infanticide are much lower (Weyer, 1932; Irwin, 1985a), the capture of females was a common cause of intertribal war (Petroff, 1884, Nelson, 1899; Weyer, 1932). Therefore, it may be reasonable to speculate that the frequency of polygamous relationships would have been much higher amongst these Alaskan Eskimo when compared to the Inuit of the Central Arctic.

10.5.2 Survival resources, costs and benefits

With respect to survival, a valuable resource would have been productive hunting grounds. The distribution of the large mammals that are the principle food source for the Inuit, is quite uneven across the Arctic (patchy). For example, concentrations of marine mammals are often found at prominent head lands or narrow straits that generate strong currents and open water (for example, Point Barrow, Belliot Strait, Igloodik) and fish are caught in abundance at the mouths of the largest rivers (for example, Backs River and Coppermine River). A monopolistic occupation of these sites could provide an Inuit tribe with a valuable and stable food source that might well be worth going to war over. However, the earlier review of the ethnographic record suggests that the Inuit did not fight wars over these 'oases of protein' that are scattered across their habitat. If this is indeed the case then biological theory suggests that the costs of perpetrating such wars must have outweighed the rich benefits that might have come to the victors. I will now attempt to review what some of these costs could have been.

Territorial specialization

A territory that is very distant or separated from the 'home' territory by a geographic barrier, such as a mountain range, glacier field or wide expanse of open water will clearly be of less value than an easily accessible territory. However, if an Inuit tribe develop a subsistence technology that is specialized to exploit the ecological characteristics of their own habitat then even an accessible adjacent territory may be of only marginal value if its ecological profile is different. The coarse grain environmental change that occurs between the lands occupied by the Indians and Eskimo could be such a case in point. If the Indians had been able to survive the Arctic winters north of the tree line, then wars between these two megapopulations may have been more bloody and decisive than they were. The Indians did not possess the Inuit technologies that use animal fats and oils for heat, snow houses for mobile insulated dwellings and all the tools required for the implementation of these

Costs and benefits of war to the Inuit

technologies, such as specialized clothing, spears, snow knives, sleds etc. Without the benefit of these inventions Indian expeditions beyond the tree line were limited to the brief Arctic summer.

In a similar way, highly specialized forms of hunting, focused on specific animals, at specific times and places, may have helped reduce conflict between the Inuit tribes of the Central Arctic. This thesis was addressed in my field work by asking elderly hunters which tribes were best at different hunting techniques. In spite of a certain degree of ethnocentrism in some of the responses, in that they may have tended to exaggerate the hunting abilities of their own tribe, most of the respondents agreed that the Netsilingmiut were the best at hunting seals through winter ice (some of their dogs are trained to detect breathing holes buried beneath the snow). This would be expected as the Netsilingmiut live in the middle of the Northwest Passage where, in some years, the sea ice does not break up even in the summer months. By way of contrast the Igloomingiut, who live by a turbulent strait in Northern Hudson Bay, were considered to be most proficient at hunting sea mammals in open water (their kayaks are large for extended use at sea) and the inland Inuit, of the Barren Grounds, were considered most expert in the various techniques of hunting caribou (their sleds were long and slender which sacrificed manoeuvrability for speed). It seems possible, therefore, that the Inuit tribes that occupied the Central Arctic possessed technologies that were, to a considerable degree, adapted to their particular environmental niche. If they moved to their neighbours' territory they may have increased the risk of starvation as many of their skills and much of their local knowledge may not have been applicable to the new habitat.

Although hunting specialization may have made warring over land less profitable for the Inuit, it should be noted that the introduction of the rifle, around the beginning of this century, turned hunting specialists into hunting generalists. This revolution in Inuit hunting methods may have played a significant role in the migration of a large number of Netsilingmiut families south to the west coast of Hudson Bay in the early 1920s (Rasmussen, 1931; Irwin, 1985a). It may be speculated that if the introduction of the rifle and this migration had not been accompanied by the introduction of intertribal law, in the form of the Royal Canadian Mounted Police, then the migration of the Netsilingmiut to Hudson Bay may not have been so swift and unopposed.

Population control

From the perspective of sociobiology, with its emphasis on inclusive fitness, population control is an unlikely evolutionary imperative, as it probably requires selection at a group level (for a discussion of this argument with respect to humans see Bates and Lees, 1979). Current orthodoxy in sociobiology considers group selection to be an improbable biological event

The Inuit and the evolution of limited group conflict

(Williams, 1966; Wilson, 1975a). I have argued elsewhere (Irwin, 1985a) that Eskimo female infanticide was an adaptive manipulation of the sex ratio that increased reproductive success. Therefore, to suggest that female infanticide and high male mortality replaced war as a means of population control amongst the Inuit (for example see Weyer, 1932) would appear to be making a biologically flawed and outdated argument. This line of explanation will not be used here.

Male hunters as a limiting resource

Active male hunters, that were able to consistently harvest protein resources, were a valuable and possibly limiting resource for the Inuit of the Central Arctic. As already mentioned, this may have been one of the causes of Eskimo female infanticide (Irwin, 1985a). Anecdotal data is also available that suggests that the scarcity of good hunters may have been an important element in the limitation of Inuit intertribal conflict. For example, revenge execution was sometimes discouraged in order to bring an end to a potential string of reciprocal, feuding murders (Steenhoven, 1959; Balikci, 1970). However if an execution could not be avoided, because the murderous crime had been particularly onerous or because the murderer was a continued threat, then:

. . . relatives could take revenge. But if there were young men involved in the revenge, good hunters who bring in food, then others accompanied him because they like to see him alive rather than killed. When someone says that he wants to take revenge, then all will accompany that man. And if that man is a good hunter, the others accompany him for his protection. (Itimangnerk, in Steenhoven, 1959)

Rates of female infanticide and male mortality are temperature dependent phenomena, across the Arctic, from Alaska to Greenland (Irwin, 1985a). Extensive intertribal hostility in the warmer parts of Alaska and a relative absence of warfare amongst the Inuit of the Central Arctic at first suggests that Eskimo intergroup violence may also be a temperature dependent phenomenon. However, the ethnographic record suggests that warfare did not rise to Alaskan levels of conflict in the kinder climate of Greenland. If these data are correct then this observation presents a puzzle for the thesis being developed here and I should make an effort to speculate on a possible explanation. It should be noted that the Eskimo of Greenland reached their habitat by migrating to it from the harsher environment of Arctic Canada (Crawford and Enciso, 1982). If they had already evolved a cultural capacity to limit group conflict before they reached Greenland then perhaps they simply have not lost this adaptation by virtue of some process of cultural inertia. It could also be speculated that the natives of Greenland genuinely

Costs and benefits of war to the Indians

found the reintroduction of warfare abhorrent and rationally chose to maintain their evolved cultural capacity for limiting group conflict. This suggestion, however, probably takes an overly optimistic view of human nature and so this thesis should not be seriously considered until all other possible explanations have been exhausted. Unfortunately this interesting question is beyond the scope of this chapter.

10.6 COSTS AND BENEFITS OF WAR TO THE INDIANS

With respect to reproductively mature females, as a resource to be gained from warring behaviour, it should be noted that the Indians and Inuit of the region did not regard each other as human. Another quote from Hearne's account of the massacre at Bloody Falls may be instructive on this point:

The brutish manner in which these savages used the bodies they had so cruelly bereaved of life was so shocking, that it would be indecent to describe it; particularly their curiosity in examining, and the remarks they made, on the formation of the women: which, they pretended to say, differed materially from that of their own. For my own part I must acknowledge, that however favourable the opportunity for determining that point might have been, yet my thoughts at the time were too much agitated to admit of any such remarks; and I firmly believe, that had there actually been as much difference between them as there is said to be between the Hottentots and those of Europe, it would not have been in my power to have marked the distinction. I have reason to think, however, that there is no ground for the assertion; and really believe that the declaration of the Indians on this occasion, was utterly void of truth, and proceeded only from the implacable hatred they bore the whole tribe of people of whom I am speaking. (Hearne, 1795)

Although there was some trafficking in females, between the Indians and Eskimo in South West Alaska (Petroff, 1884; Weyer, 1932) and perhaps occasionally in the Mackenzie Delta (Rasmussen, 1927; Weyer, 1932), this behaviour was the exception rather than the rule. It may be important to note that this genetic migration only took place where Inuit extended their territory into the relatively warmer Indian habitat, below the tree line. The Inuit of the Central Arctic are genetically adapted to their harsh environment with short limbs, improved circulation, improved metabolism and small hands and feet, to reduce heat loss and thus prevent frost bite (Folk, 1966; Hanna, 1968; Moran, 1979). Inter-marriage could have destroyed these genetic adaptations and proved detrimental to both the Indian and Inuit populations with a resultant loss of fitness due to outbreeding depression (Shields, 1982a, 1982b).

The Inuit and the evolution of limited group conflict

With respect to land as a resource I have already discussed the reasons why the Indians did not make war with the Inuit to take their territory away from them. The Indians simply did not possess the technology to inhabit the Arctic environment north of the tree line on a permanent basis. However the Inuit might have been able to adapt some of their technologies to live in the Indian habitat, particularly along the coast line, where their fishing and sea mammal hunting skills could have been put to productive use. In the context of these observations Indian/Eskimo conflict may be interpreted as an Indian behaviour directed principally at preventing the Inuit from migrating south of the tree line and not as a means to acquire new hunting and fishing grounds. The Inuit believed they were taking a life threatening risk if they camped amongst the trees for any lengthy period of time (Rasmussen, 1927; Birket-Smith, 1929; Weyer, 1932). This fact suggests that the Indian practice of making war against the Inuit of the Central Arctic, whenever the opportunity allowed, was most successful in keeping the Inuit out of Indian territory.

10.7 CULTURAL ADAPTATIONS FOR THE EVOLUTION OF LIMITED GROUP CONFLICT: PROXIMATE CAUSE

If humans have evolved an innate capacity for group conflict then the Inuit described here may have had to develop cultural mechanisms to overcome phylogenetic inertia in order to restrain tribalistic hostility. As with questions of ultimate cause these cultural proximate mechanisms (summarized in Table 10.3) would have to deal with the evolutionary problems of limited resources and differences in coefficients of relationship. I will begin with the cultural management of limited resources.

10.7.1 Sexual and marriage relationships

Of 58 Netsilingmiut families surveyed by Rasmussen (1931) in the Central Arctic in 1923, 54 were monogamous, 1 was polyandrous and 3 were polygamous. The Inuit did not have any cultural prohibitions on adult males or females from having more than one partner. Marriage relationships were often very pragmatic. In Inuit society it was possible for a young man to be married to an older widow if she needed a man to hunt and provide for her and her children, in return he needed a woman to make his Arctic clothing. Such a marriage may appear to have more to do with survival than reproduction. However, in this kind of economic relationship the young man's sexual needs may have been satisfied by a relationship with the wife of one of his hunting companions. As all the parties to such an economic/sexual relationship would probably be close relatives then it may not be necessary to look beyond some form of cultural kinship selection as an evolutionary explanation for these behaviours. Given this kind of cultural flexibility in

Cultural adaptations for the evolution of limited group conflict

Table 10.3

Summary of cultural adaptations (cultural proximate mechanisms) for limiting Inuit conflict

<i>Limited resource</i>		<i>Cultural adaptation</i>	<i>Effect</i>
1.	Reproductively mature females	Monogamy favoured but polyandry and wife exchange permitted	Reduces risk of not having access to a female
	Productive hunters	Monogamy favoured but polygamy and wife exchange permitted	Reduces risk of not having access to a provider
2.	Land and game	Hunting territory held in common	Reduces risk of not having a hunting territory
<i>Limiting conflict</i>		<i>Cultural adaptation</i>	<i>Effect</i>
3a.	Language	No cognates available to conceptualize and discuss war	Planning war is difficult
3b.	Political organization	No institutions for social organization above the extended family	Organizing war is difficult
3c.	Socialization of nonaggression	Child rearing practices manipulate infants, rewards, affection, and punishment, aggression	Develops self control of aggression
3d.	Magic	Murder by magical means is ineffective	Murder rate reduced
3e.	Threat of retribution	Execution of murderer is socially encouraged	Costs of murder increased
		Mythology teaches the high costs of murder	Apparent costs of murder increased
3f.	Formal conflict	Ritualization of conflict limits combatants	Death rate reduced
4a.	Kinship	Intermarriage increased ties between tribal subpopulations	Coefficient of relationship increased

The Inuit and the evolution of limited group conflict

Table 10.3 continued

<i>Limiting conflict</i>	<i>Cultural adaptation</i>	<i>Effect</i>
4b. Pseudokinship	Itlureet (ritual cousins) increased ties between potentially antagonistic tribes	Apparent coefficient of relationship increased
4c. Badging	Increased cultural similarity reduced innate capacity for intertribal hostility	Apparent coefficient of relationship increased

marriage and sexual relationships the need to kill in order to obtain a husband or wife, or simply to have sexual intercourse, was greatly reduced. Needless to say, given the imperatives of reproductive success, this cultural flexibility and tolerance for different sexual arrangements frequently failed, individuals sometimes became jealous and, occasionally, murdered so they were able to monopolize the favours of a partner. Although it may be impossible to prove, it may well be the case that sexual tolerance and flexible marriage relationships increased the reproductive success of Inuit kingroups and possibly reduced rates of murder.

10.7.2 Property rights

I have probably just suggested, in so many words, that competition for reproductively mature females and productive male hunters may have been reduced by partially treating them as a common resource within the kingroup. This conclusion may be given additional support from an analysis of the way in which the Inuit regard property rights in general. Within the tribe the Netsilik, and the tribes adjacent to them, shared most of their material resources (Irwin, field notes) for the practical reason that:

A greedy person is not smart because a greedy person will end up with nothing some day and then he will end up with no help.

Kako, 1980

Land, animals that had not been killed and even fish traps were held in common; the Inuit considered it wrong to 'possess' such property (Weyer, 1932; Birket-Smith, 1959). Indeed the denial of free access to these resources has, on at least one occasion, been a cause for murder (Balicki, 1970). With only one exception all my informants felt fish traps would not be a cause for intertribal conflict. According to Hawkes (1916) the Eskimo of Labrador:

Cultural adaptations for the evolution of limited group conflict

... may occupy a fishing station in summer year after year undisputed, but it does not give them any special right to it. Anyone else is free to come and enjoy its benefits and, according to Eskimo ethics, they would move away before they would start a dispute about it. (Hawkes, 1916)

However, as Weyer points out, quite a different situation is found amongst the warring Eskimo of Alaska:

... certain duties accompanying the accumulation of much property by a single person are peculiar to the Eskimos of the Bering Sea. Furthermore, personal rights are more specifically defined here. Among the Unalit, thus, the most productive places for setting seal and salmon nets are sometimes regarded as being privately owned. (Weyer, 1932)

Within the tribe the Inuit of the Central Arctic further promoted sharing with the institutionalization of different kinds of partnerships. For example, seal meat sharing (Van de Velde, 1956; Balikci, 1970; Trivers, 1971), name sharing gift exchange (Guemple, 1966; Irwin, 1981), wife sharing (Guemple, 1961) and various forms of pseudo kinship or kin extension (Irwin, 1985a and Burch, 1975 for Alaska); for a review see *Alliance In Eskimo Society* (Guemple, 1971). Although these partnerships rarely extended beyond the tribe it might be reasonable to suggest that the extensive sharing of resources within these groups that went some way to creating a just, egalitarian society, may have taken pressure off individuals and small groups to look beyond the tribe for the necessities of survival and reproduction.

10.7.3 Limiting conflicts

Given the conflicts of interest implicit in the nature of human sociality it is to be expected that institutionalized communalism was far from being a flawless mechanism for social conflict control. When the cultural mechanisms just described failed then other cultural mechanisms were deployed to contain and limit the destructive effects of human conflict. Some of the cultural proximate mechanisms for limiting antisocial behaviour may be described as outlined below.

Language

It is difficult to know to what extent language may be an epiphenomenon that simply provides a cognitive map for evolved human behaviours and to what extent language may be an instigator of behaviour. Either way it has been noted that there is no cognitive equivalent for war in Inuktitut. As no praiseworthy value can be semantically attached to mass murder in their language the Inuit must find conceptualizing and discussing warfare difficult.

The Inuit and the evolution of limited group conflict

This semantic obstacle to thoughts of war must necessarily impede efforts to coordinate the social behaviour of war. No such impediment exists in Alaska amongst the Unalit (Nelson, 1899).*

Political organization

In the Central Arctic the political system is the kin system which mirrors, fairly closely, the biological social order (Irwin, 1985a). Amongst the Inuit the matriarchs and patriarchs of the extended families had authority over the younger members of the extended families (Steenhoven, 1959). As there was no institutionalized political authority beyond these respected elders command and control at the tribal level of behaviour would have been difficult to organize. As has already been pointed out the Unalit of the Bering Strait region of Alaska, called the warrior who planned an attack *mu-gokh-ch-ta* (Nelson, 1899) and Weyer tells us that:

Among the Alaskan Eskimos the office of chieftain is possibly developed to a higher degree than in any other group. This is not strange among the Eskimos of Bering Strait and the adjacent coast of Alaska, where the natives are outstanding for their war-like tendencies.

Elsewhere among the Eskimo, even in other parts of Alaska, there is less centralization of authority. (Weyer, 1932)

Socialization of non-aggression

In her paper, 'The Origins of Nonviolence; Inuit Management of Aggression', Briggs (1978) theorizes that a combination of affection, playful aggression, teasing and ridicule socialize Inuit children into adults with an unusually well developed capacity for controlling their own potentially aggressive behaviour. Although this kind of psychological thesis is difficult to prove empirically, and although I find myself in disagreement with much of the detail of her thesis (perhaps, in part, because I lived and worked amongst different Inuit tribes), the conclusion may be substantially correct. If Briggs' thesis is sound then specific patterns of reward (affection) and punishment (playful aggression, teasing and ridicule), administered during a child's development may be partly responsible for adult Inuit self control. However, as Briggs points out, this socialization is only one interdependent element in an array of complex processes involved in the management of Inuit aggression. From the theoretical perspective developed here it should be understood as a cultural

*It should also be noted that Briggs (1978) considers the existence of certain Inuit semantic concepts such as *ihuma* (mind), *naklik* (love), and *ilira* (fear) to be important elements in the development of Inuit non-aggression.

Cultural adaptations for the evolution of limited group conflict

proximate mechanism not an evolutionary ultimate cause or 'Origins of Nonviolence'.

Magical conflict

Another element in the culture type that reduces the frequency of murder (both ingroup and outgroup) may involve the 'black arts' of Shamanism. Frequently Inuit, in traditional times, would attempt to kill other Inuit by employing magic of some kind (Irwin, field notes):

The shamans could curse people in different ways. If a shaman hated or disliked a man or a woman and one of their relatives had just died, he would take some hair from the dead relative and keep it to curse other people. When the shaman hated somebody or was jealous of them because they were a better hunter than himself, or if he wanted to marry someone's wife, then he would put the hair of the dead relative on the ground where that person who he wanted to kill would walk. Or he would put it near or in front of the person he hated and when that person got that hair stuck onto his cloths then that person was cursed. Then all kinds of hair would grow from his face, from his hands, from his legs, from his feet or his back. Hair would grow and every time that person found it he would pull it out. If he kept pulling them all out he would win but if he couldn't catch up with the hair growing on him, then he would die. That is how they used to curse other people if they hated them or disliked them or were jealous of them.

Aupudluck, 1980

My living with the Inuit for many years has not left me with the impression that they are a stupid people. On the contrary their empirical knowledge of their environment with regard to hunting, tools, materials and navigation (Irwin, 1985b) is indispensable to their survival. Why then is magic of this kind believed in and practised? Clearly magic is not so nearly as effective a killer as a knife and perhaps this is precisely the point. A group of individuals involved in murder by magic will be fitter than a group of individuals involved in real acts of physical murder. In other words, by some process of cultural kingroup or group selection, magic may have evolved to allow for the relatively harmless outlet of pent-up hatred or jealousy that might otherwise have precipitated a string of real deaths.

Threat of retribution

As has already been mentioned it was the right and duty of a male relative to avenge the murder of a family member. However, in practice, very few murders were executed in this way (Steenhoven, 1959; Balikci, 1970). It is interesting to note that all the myths concerning murder do end in the

The Inuit and the evolution of limited group conflict

execution of the murderer. Why should this discrepancy exist between myth and fact? Perhaps, as with magic, holding a false belief, in this case the belief that a murder would always be revenged, reduced the rate of deadly conflict. From a biological perspective execution can be understood as a genuine cost to the behaviour of murder. This real cost may not be very high. However the apparent cost created by the cultural mythology is high and may act as a false but effective deterrent.

Formal conflict

We are used to institutionalized mechanisms for limiting and controlling conflict within all societies. For example amongst the Inuit two individuals who had a grievance, that could not be settled by a common elder relative, might engage in a 'song duel' in which the disputants would try to ridicule their opponent until they withdrew their complaint out of embarrassment before their peers (Balicki, 1970). If this stratagem failed the disputants might take it in turns to hit each other on the shoulder or temple, with closed fist, until one of them gave up (Balicki, 1970; Irwin, field notes). Of particular interest to the thesis being developed here is the possibility that these efforts to restrict violence may have extended to the worst of intertribal hostility as pointed out by Itimangnerk to Steenhoven in his discussion of the revenge conflict described earlier by Balicki (1970) and Rasmussen (1931).

All would travel to the enemy's place and, at a short distance from it, they would pitch camp: for the others, probably being unaware of their arrival, should be able to prepare themselves. Then, the revenging party would send forward an old man or old woman to find out whether the others were prepared. For those old ones, according to our customs, were never attacked. Thus the old woman asks them if they are ready to come outside. If so, the other party would advance and, while they were approaching each other, each would choose an opponent whom he considered his match in strength. They would shoot with bow and arrow; and if they were not many, they might fight with snow knives also. Harpoons for bear and muskox hunting were also used. Now, if one party had suffered, say four casualties or wounded, they would concede the victory and the winners would let the defeated go home. (Itimangnerk, in Steenhoven, 1959)

Additionally, in an effort to reduce the possibility of a conflict from ever starting between members of different tribes a formal greeting procedure would be followed when strangers met for the first time (Klutschak, 1881; Boas, 1888; Stefansson, 1914; Jenness, 1922; Mathiassen, 1928; Birket-Smith, 1929; Rasmussen, 1929, 1931; Burwash, 1931; Weyer, 1932), for example a woman might be sent out as a herald of peace:

... as she came nearer and nearer to our group the slower and shorter

Cultural adaptations for the evolution of limited group conflict

became her steps, and her facial expression betrayed a certain uneasiness. She had a small knife with her as a weapon, and however strange is this custom of sending a woman against the strangers, it is employed constantly by the tribe (Netsilingmiut). (Klutschak, 1881)

Such a greeting might be followed by other ceremonies that would establish formal ties between the strangers. This will be discussed below.

10.7.4 Establishing intergroup ties

From a sociobiological perspective most of the foregoing cultural adaptations can be understood as mechanisms that reduce conflict by manipulating the cost to benefit ratio of social behaviour (either real or apparent). By way of contrast the cultural adaptations to be described below reduce conflict by manipulating the coefficients of relationship (either real or apparent) of potential combatants.

Kinship

Intermarriage alliances can be understood biologically as increases in the coefficients of relationship (r) of the members of two extended families by virtue of their common inclusive fitness interests created when a marriage between their kin is consummated. Although intertribal marriage was rare between the major tribal groups in traditional times marriage between subtribes was common (Boas, 1888; Irwin, field notes). In more recent times rates of intertribal marriage have increased. For example, in the Netsilingmiut extended family, of which I am a member by marriage, the migration rate in my wife's generation is 55%, in her parents' generation 40%, in her grandparents' generation 30%, in her great-grandparents' generation 2% and in her great-great-grandparents' generation 0%. The sample size in the great-great-grandparent generation is too small to conclude that the migration rate is indeed as low as 0% and the sharp increase in the migration rate in the grandparents' generation was due to the general migration of this family to Hudson Bay in the 1920s. Thus although intermarriage may have improved contemporary intertribal relationships, this sample suggests, like the ethnographies, that intertribal marriage probably did not produce extensive networks of alliances between the larger tribal groups in the past.

Pseudokinship

In the absence of the establishment of genuine kinship between the members of the major tribes pseudokinship can be culturally instituted to give the appearance of increasing coefficients of relationship (apparent r) between extended families. Boas describes elaborate formal duels that took place between members of different tribes:

The Inuit and the evolution of limited group conflict

If a stranger unknown to the inhabitants of a settlement arrives on a visit he is welcomed by the celebration of a great feast. Among the southeastern tribes the natives arrange themselves in a row, one man standing in front of it. The stranger approaches slowly, his arms folded and his head inclined toward the right side. Then the native strikes him, with all his strength on the right cheek and in his turn inclines his head awaiting the stranger's blow. While this is going on the other men are playing at ball and singing. Thus they continue until one of the combatants is vanquished.

Boas, 1988

My informants have provided me with much more detail on these contests that culminated in the establishment of formal pseudokinship ties between the leading members of antagonistic tribal groups. These partnerships were called Itlureet, generally this term translates as cousins, however in this context it translates as ritual cousins. From a number of interviews the following composite description can be given (Irwin, field notes):

Itlureet were very happy partners but they used to compete with songs. If you and I were Itlureet I would sing about all the things I saw you do wrong and you could do the same to me. Itlureet were not normally from the same place or tribe, they were strangers. They would meet once in a while and then they would compete. In those years long ago the Itlureet were like the law, people had to be in order, get their guilt out. Itlureet did that.

Ipiak, 1982

My father had an Itluk. His name was Sougriq but later on people called him Marilayuk. After they Itoktutiyuk (became Itlureet by ritual contest) they became friends and gave each other meat or anything they needed. They had fighting contests. Every young man had to find an Itluk in the old days if they thought their strength, size and age matched.

Tavok, 1982

Itlureet were people who were not from the same place. When they saw each other they wanted to compete, they were happy, they wanted to be friends. I missed my only chance to see two such men. They were Kidlinermiut and Netsilingmiut. I was in an igloo and I didn't know they were having a contest. The Netsilingmiut lost that time, he had a bleeding nose. Maybe the Kidlinermiut was using his shamanism to have more power. The Kidlinermiut had heard the Netsilingmiut was strong so they became Itlureet. They were the strongest of each tribe.

Tungrilik, 1982

Badging

For behaviour to evolve at the tribal level of population structure proximate mechanisms are required to identify the members of such groups. This can be

Cultural adaptations for the evolution of limited group conflict

done with cultural badges such as dialect or accent although any variation in culture will do (Irwin, 1985a, 1987). Given the thesis presented earlier, that any difference in coefficients of relationship across a population boundary should produce a polarizing of ingroup/outgroup behaviour then it theoretically follows that any difference in cultural variation between groups (the proximate mechanism of group identity) should have the same effect. This, however, may not always be true in practice as proximate mechanisms are open to manipulation during the development of an organism (Bateson, P., 1979, 1982, 1983a). If human group behaviour evolved in a population structure that on average produced say X variation in culture for every Y variation in coefficient of relationship and if this population structure was, for the most part, marked by considerable variations in both X and Y then a certain variation in X (cultural badging) would evolve to be associated with a certain level of group polarization. If, now, by some process of cultural evolution, variation in cultural badging (X) was kept low then unusually low levels of intergroup hostility, not in keeping with real differences in intergroup coefficients of relationship (Y), could be phenotypically expressed. As with pseudokinship this cultural manipulation of social behaviour can be understood in terms of apparent r.

All Eskimo, from North Alaska to Greenland speak essentially the same language with the result that they can converse with their tribal neighbours. In contrast, this megapopulation is separated from the Indians by a solid linguistic wall. No Eskimo in traditional times could converse with their Indian neighbours who might be only 200 miles distant, while they could have conversed with other Eskimo 2000 miles distant. As has already been noted these two megapopulations did not consider the other human, migration rates were nearly zero and all conflicts between them were particularly bloody. Given the theoretical perspective developed thus far this latter situation is to be expected, however, most ethnographers find it unusual, if not unique, that essentially the same language is spoken by the Eskimo over a 3000 mile stretch of the Earth's surface (Heinbecker and Irvine-Jones, 1928; Weyer, 1932). If this observation is correct then it may be speculated that linguistic variation between Eskimo tribes has been culturally limited so as to reduce conflict between them. As would be expected the relatively peaceful tribes of the central Canadian Arctic have very similar dialects (Birket-Smith, 1928; Irwin, 1985a, 1987) and although I do not have any comparative data on this subject at present I would expect the warring Eskimo tribes of Alaska to show greater linguistic variation. It may be significant to note that Rasmussen had little difficulty understanding the various Eskimo dialects on his travels from Greenland to Alaska, until he reached the Yukon (Rasmussen, 1927), in Western Alaska.

10.8 A SYNTHESIS OF BIOLOGICAL AND CULTURAL MODELS

Mapping the causal chain of any complex human behaviour is probably destined to failure as the chain is in reality a shifting causal network. Nevertheless a model of some sort, within which to systematize the analysis made here, would be welcome in order to understand more clearly what has just been done and provide a framework within which to build similar analysis of other human behaviours.

Tracing the historical origins of phenomena can frequently help us focus on the most relevant causes of phenomena. Cosmology is dominated by inquiries into the history of the universe. Similarly tracing the history of ideology and documenting human sociocultural history provides us with important insights into contemporary cultures and social practices as they are manifest. In biology the historical approach to the analysis of adaptive function has been advocated by Pittendrigh (1958); Williams (1966); Mayr (1974) and Barash (1982). This analytic method may help in developing a better understanding of human behaviours in general (Tinbergen, 1953); Irwin, 1985a, 1987).

The theoretical approach used here is essentially a combination of sociobiology (Wilson, 1975a), neo-ethology (Bateson, P., 1966; Crook, 1970; Hinde, 1970; Tobach, 1978) and cultural evolution (Cavalli-Sforza and Feldman, 1973, 1981; Campbell, D., 1975, 1977, 1983; Alexander, 1979; Boyd and Richerson, 1980, 1983, 1985; Pulliam and Dunford, 1980; Lumsden and Wilson, 1981; Bateson, 1983a,b). A synthesis of these perspectives can be created by tracing the historical events that lead to a behaviour from its biogenetic evolution, through its sociocultural history and individual development, to the manifest expression of the behaviour.

In this case the behaviour under examination is limited intergroup aggression amongst the Inuit of the Central Arctic. Figure 10.1 takes the causes of this behaviour, identified in this chapter, and attempts to arrange them in order of their evolutionary emergence and recent natural history. By way of a thought experiment I will speculatively review this history in an effort to illustrate some of the potential benefits of the synthesis being attempted. First, and perhaps always, we must begin with the imperatives of life, fitness, most commonly understood in terms of reproductive success and survival.* Relevant to the behaviour being examined here the advent of sexual reproduction and associated mammalian demic population structures are important events. In humans this turn of evolution gave rise to the ingroup/

*Fecundity may be a useful index of fitness when hunter/gatherer societies, such as the Inuit, are being examined. However efficiency (MacArthur, 1962; Slobodkin, 1972), biomass (Carson, 1961), competitive ability (Claringbold and Baker, 1961), energy flux (Lotka, 1922) or trophic energy (Van Valen, 1976) may be more useful indexes of fitness for the comparative study of more complex human societies (Irwin, 1985a).

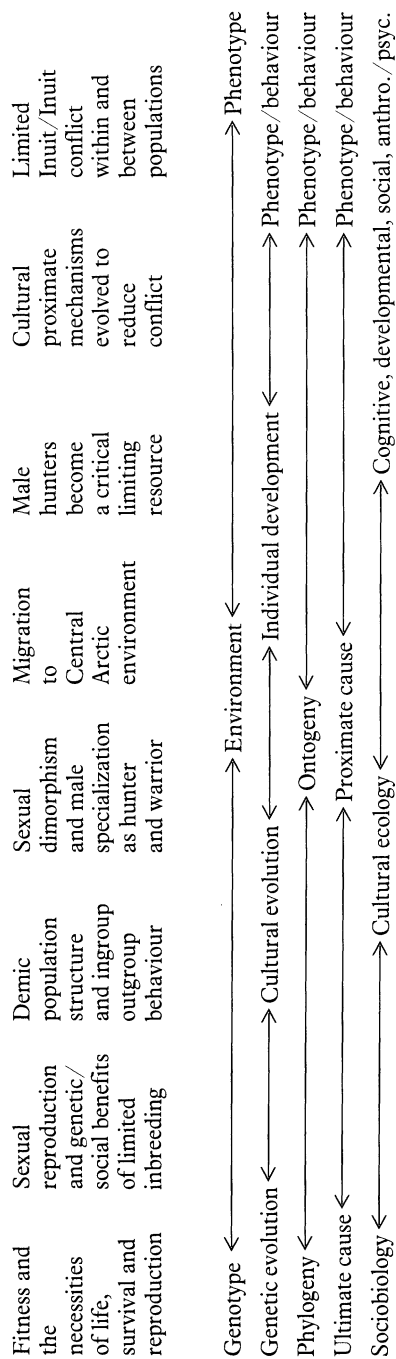


Figure 10.1 'Evolutionary Spectrum' for the behaviour of Inuit/Inuit limited conflict. The model is generated by tracing the natural history of the behaviour under examination back through its recent development then through its cultural evolution and finally through its genetic evolutionary history.

The Inuit and the evolution of limited group conflict

outgroup behaviour we have come to associate with tribalism. At perhaps the same time a number of factors (for example, male competition for females, differences in male and female parental investment, extended nursing) contributed to human sexual dimorphism, that emphasized hunting and the prosecution of war as predominantly male activities. Hunter gatherers extended their range into the Arctic some seven to fifteen thousand years ago. As these migrants moved into the increasingly less hospitable regions of the Central Arctic the techniques of hunting large Arctic mammals were developed and practised almost exclusively by males while females specialized in child care and the manufacture of protective clothing. The rate of male mortality rose and more male hunters were needed to feed the females and their infants. Males were now a critical limiting resource. Female infanticide was introduced to increase the male to female sex ratio but many young males, just approaching their hunting prime, were being lost to the costly behaviour of war. At some point this cost of war, the losing of male protein harvesters, came to exceed the benefits of war, more females and territory. Phylogenetic inertia prevented the genetic evolution of an adjustment to the human biogram that would be phenotypically expressed as an innate capacity for restrained male conflict. By a number of processes of cultural evolution, ranging from individual rational thought to the cultural group selection of traits, numerous cultural proximate mechanisms came into existence to curb male hostility. These traits were enculturated during the development of each Inuk, from birth through puberty, rendering them less prone to aggressive acts and less inclined to be involved in acts of war against their neighbours. When compared to their ancestors or other groups of humans in more hospitable habitats these Inuit might be judged to live in a state of relative peace.

This historical abstraction of the major arguments presented in this chapter, generates the model termed an 'evolutionary spectrum' depicted in Figure 10.1. This description moves from left to right, from genotype to environment to phenotype, from sociobiology through the various social sciences (for example, cultural ecology, sociocultural and cognitive anthropology, developmental and social psychology) to behaviour, from genetic evolution through cultural evolution and individual development to behaviour, from phylogeny through ontogeny to behaviour and from ultimate cause through proximate cause to behaviour. (Further discussion of this theory, and how it relates to other social science and biological theory, is presented in my paper, 'The Sociocultural Biology of Netsilingmiut Female Infanticide', Irwin (1989).)

It should be noted that the evolutionary spectrum only depicts what may be considered the pivotal events in the evolution of limited group conflict amongst the Inuit of the Central Arctic. The spectrum can be greatly expanded by focusing the inquiry on any of the more particular causes of this

Discussion

behaviour. For example the second to last cell on the right hand end of the spectrum, 'Cultural proximate mechanisms evolved to reduce conflict', contains the 12 mechanisms (and there are probably more) listed in Table 10.3. Any one of these mechanisms, if inserted at this point in the spectrum, will trace a slightly different evolutionary path from the general one given. For example, Figure 10.2a depicts some of the extra elements that should be inserted into the evolutionary spectrum for the cultural adaptation of pseudokinship (see section 10.7.4). this particular cultural proximate mechanism requires the evolution of symbolic language and the mapping of biological kin by symbolic language. Figure 10.2b depicts some of the extra elements required for the socialization of non-aggression (see section 10.7.3). This particular cultural manipulation requires the evolution of a parental ability to modify progeny behaviour through the manipulation of rewards and punishments.

10.9 DISCUSSION

The main purpose of this chapter is to uncover knowledge about the nature of Inuit group conflict resolution in the hope that it might be of some practical value to contemporary societies. Although the discussion that is to follow is very speculative I will attempt to review all the cultural proximate mechanisms listed in Table 10.3 with a view to noting what mechanisms we may have some equivalents of, what mechanisms we lack and finally what novel mechanisms could possibly be adapted to meet our own needs in the modern world. These speculations must be considered preliminary and are made to stimulate discussion, not to conclude it.

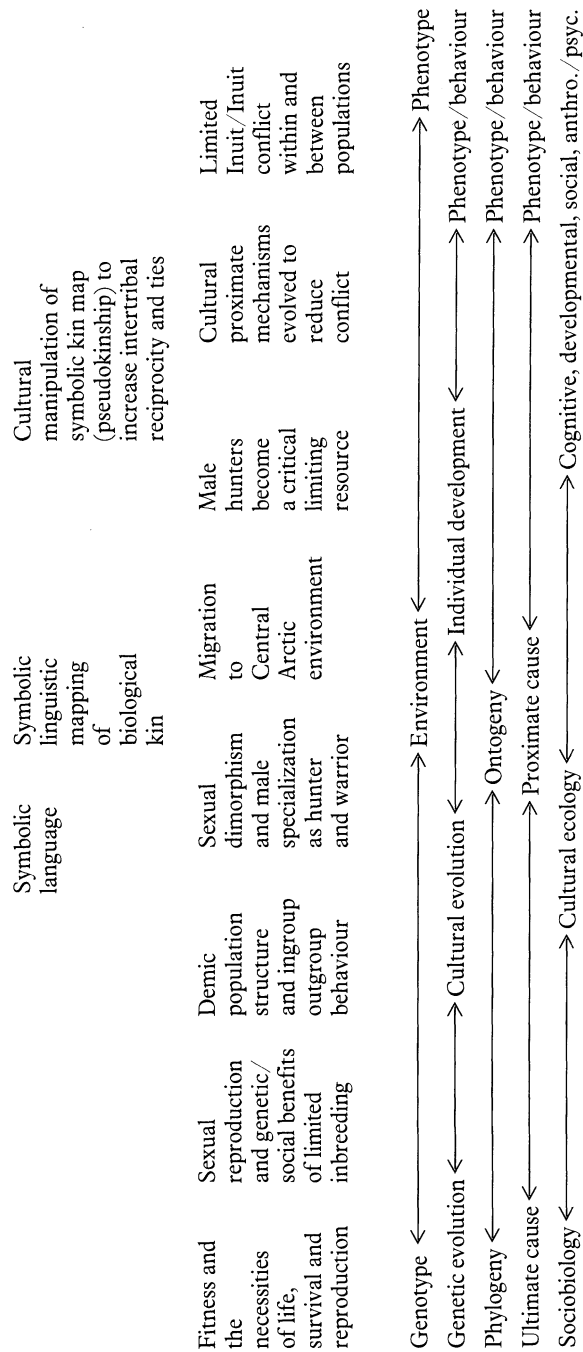
10.9.1 Sexual and marriage relationships

In most of the western world competition for females is reduced by the legal enforcement of monogamy. However the recent move toward increased polygamy in the form of serial monogamy may increase male competition for optimally reproductively mature females. Enforced monogamy may have both an internal and external prosocial, stabilizing effect. In contrast institutionalized polygamy may increase conflict and may have, for example, contributed to the expansion of the Islamic empire in the middle ages by allowing captured outgroup females to become additional ingroup wives (The Koran).

10.9.2 Property rights

Different political ideologies deal with the problem of the equitable distribution of the resources of a society in different ways. For example the Marxist

Figure 10.2(a) Pseudokinslhip elements to be included in the ‘Evolutionary Spectrum’ for the behaviour of limited Inuit/Inuit conflict.



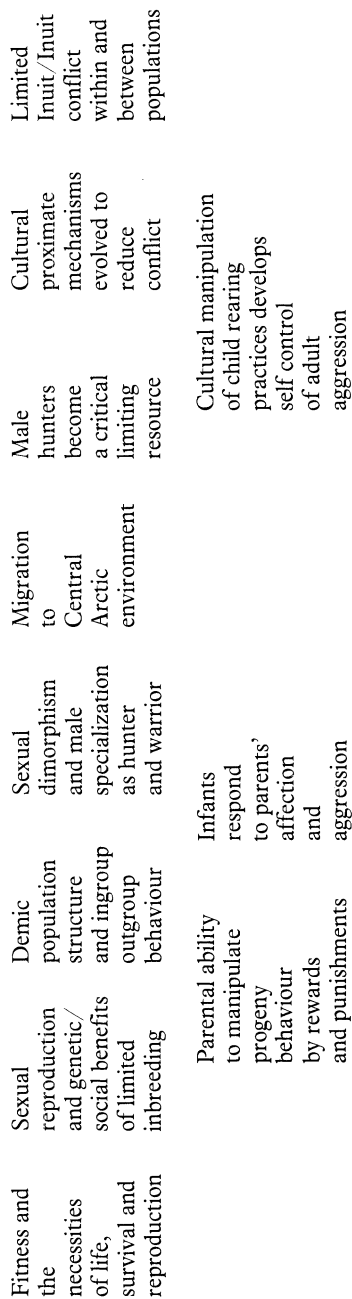


Figure 10.2(b) Socialization of non-aggression elements to be included in the ‘Evolutionary Spectrum’ for the behaviour of limited Inuit/Inuit conflict.

The Inuit and the evolution of limited group conflict

solution is Communism and the Capitalist solution is the judicial administration of a Meritocracy. Numerous political systems have been tried out in an effort to create 'the just society' with various degrees of success. To enter into a discussion of the merits of these different systems is beyond the scope of this chapter. However, it is perhaps all too clear that between societies there is little or no attempt to institutionalize equitable access to the resources of the world. So long as this inequality exists then intergroup conflict may be difficult to avoid.

Language

Unfortunately the English language, and so far as I know the languages of all societies that do battle, have cognates that define intergroup hostility in praiseworthy terms. Perhaps it would be more difficult for us to send our young men off to fight an enemy if our semantics only allowed us to tell them to march forth bravely, to confront their fellow man and then, with a warm heart, commit mass murder.

Political organization

The societies that most effectively engage in the behaviour of war possess culture traits that can efficiently organize their society for combat. As with language there may be no simple way to undo these elements in our cultural evolution except to suggest that knowing that these characteristics of our social fabric have come into existence, at least in part, to facilitate war, should put us on guard against the more deadly aspects of these institutions that frequently portray themselves as benign. It should be noted that many of my Inuit informants believed the Royal Canadian Mounted Police did much to reduce intertribal hostility, such as it was. Clearly the imposition of order by an alien force can effectively reduce intergroup conflict. Perhaps it is unfortunate for us that no paternal alien is about to impose order on our war wrecked international world.

Socialization of non-aggression

Even if the early socialization of Inuit children does reduce adult aggression the process is probably not well enough understood for mass export to other more aggressive societies. However, societies that blatantly enculturate their children to be aggressive probably could be socially 'treated' to produce a gentler population. Unfortunately, as with the preceding culture traits, this may not be easy as culture is a most effective behaviour modifier as it seems to attach itself, almost like a virus infection, to the most insidious characteris-

Discussion

tics of human nature. In many societies playing with death toys and killing games are simply a lot of fun.

Magic

Perhaps we would all be better off if, like the Inuit, we believed we could kill our enemies with magic. Instead of ministries of war with all their deadly weaponry we would have ministries of sorcery with their ineffective potions and spells. Unfortunately our instruments of death are all too effective. However magic, or rather metaphysics, does play an important role in some modern wars. Islamic warriors believe they will go directly to heaven if they die while fighting a holy war. This metaphysical belief may have been adaptive when fighting was done with swords. In medieval times young men would rush forward to fearlessly engage their foe. Today's young men rushed forward only to engage bullets and gas in the marsh lands that divide Iran and Iraq.

Threat of retribution

Just like Inuit mythology, story telling in our culture teaches the costs of murder. Fictitious murderers in books, on the radio and on television invariably do not get away with their crimes. In reality, as with Inuit society, they probably get away with their crimes more often. However, unlike Inuit society, international killing is frequently left unpunished as it is not classed as murder when a state of war exists, and sometimes when it does not exist. Perhaps effective retribution for international killing could reduce international conflict? Perhaps a tradition of story telling, that taught children that acts of international killing would always be revenged, would also discourage many of them from growing up to be soldiers or terrorists.

Formal conflict

Our world is awash with formal and ritual conflict: I am fighting for my hypothesis in this chapter which, no doubt, will come under attack from searching questions from the reader. In the international courts and in the international political forums of the world wars are fought with semantics and rhetoric. We fight economic war with our industrial institutions, we fought a 'Cold War', we fight arms races and our athletes fight on the sports fields of international arenas. Some of these forms of conflict, such as arms races, are more dangerous than others. We would do well to curtail them. Others, such as sports, semantic battles and rhetoric jousts, present little or no risks to the participants. These forms of ritual conflict should be encouraged.

The Inuit and the evolution of limited group conflict

Kinship

It is entirely possible that patterns of international migration would be a fair index of patterns of international alliance. The trick, with respect to kinship and peace making, is to increase rates of intermarriage between worst enemies. Unfortunately, rates of East–West migration are still very low. Opening up borders would help, as it has in Germany since 1989. If the leaders of the Super Power nations held their offices for life then perhaps marriages could be arranged between their sons and daughters. However, in the absence of such a turn of cultural events then, like the Inuit, we will have to make do with pseudokinship.

Pseudokinship

Up till now this discussion of cultural proximate mechanisms for reducing human conflict has contained few or no surprises. However the Inuit cultural invention of ritual cousins, *Itlureet*, may be unique so we should make a special effort to see if it can't be adapted to our needs. Ritual cousins, it should be remembered, were the leaders of their communities, they became best friends for life through tests of strength, tests of humour and by sharing their material possessions. As with intermarriage, pseudokinship is probably most effective at reducing intergroup conflict when it involves the most prominent members of societies. However, as there may be some resistance, on the part of our political leaders, to initiate ritual cousin ties with their sworn adversaries, it may be up to others to start the ball rolling. Perhaps, with the help of their professional or union organizations individuals could seek out an *Itluk* in the country of their supposed enemy. As role models, it might prove most effective if athletes, teachers and university professors took the lead in establishing *Itlureet* ties.

Badging

If cultural variation, 'badging', is a proximate mechanism for the establishment of ingroup/outgroup identity then it follows that cultural heterogeneity should correlate with human conflict. In *Deadly Quarrels* Wilkinson (1980) analyses 780 wars that took place between 1820 and 1952 in order to test numerous empirical generalizations concerning the nature of war. On the question of heterogeneity he concludes:

The propensity of any two groups to fight increases as the differences between them (in language, religion, race, and culture style) increase. A homogeneous world would probably be a more peaceful one. (Wilkinson, 1980)

Conclusion

The Eskimo, from Siberia through North America to Greenland, could converse with each other. Perhaps this commonality of cultural badging contributed to low levels of intertribal hostility. The nations that make up the East and West blocks appeared to be behaving more like two adjacent megapopulations, like the Indian and Inuit. These behaviours, the proximate mechanisms of deadly competition, can possibly be reversed with cultural exchange, student exchange, intermarriage, worker exchange and the learning and practise of each other's language and customs.

10.10 CONCLUSION

The reason for the evolution of limited conflict amongst the Central Arctic Inuit and limited conflict between modern nuclear Super Powers is probably the same in ultimate cause terms. Specifically the costs of war exceed the benefits. However the proximate causes of peace are very different. For us it is the threat of mutual assured destruction that keeps us at bay. Unfortunately this mechanism for maintaining peace is inherently unstable.

However, one of the cultural mechanisms maintaining Inuit peace was partnership ties between the leading antagonists of any potential conflict. In this case, if there were a shift in the balance of power, it would have been possible to create new partnerships to restore stability. This point can possibly be made clearer by comparing Alaskan partnerships with Central Arctic partnerships. The latter were made between enemies to diffuse conflict while Alaskan partnerships were made between enemies or friends and could be exploited to create peaceful or warring alliances (Burch and Correll, 1971). Central Arctic partnerships were never used for organized conflict. If there is a lesson to be learnt from this piece of ethnography it is that we must actively seek partnerships with our worst enemies. In time our enemies may change, at which point we must shift our institutionalized partnership making activities to our new principal adversary.

The possibility of manipulating the cultural proximate mechanisms associated with the regulation of human hostility, in order to reduce the frequency and intensity of conflict between human groups, may be welcome. However, the 'Evolutionary Spectrum' model of Inuit group conflict resolution suggests that the proximate mechanisms of limited intertribal hostility evolved as a consequence of evolutionary necessities which rendered the costs of warfare higher than the benefits of warfare in the marginal environment of the Central Arctic. If the evolutionary perspective used here can be applied to human group conflict in general, as I believe it substantially can, then we may be forewarned that although manipulating the cultural proximate mechanisms associated with the regulation of human hostility may lead to a reduction in group tensions it will not, in the long term, prevent group conflict, unless the underlying ultimate causes of group conflict are also dealt with. This sad

The Inuit and the evolution of limited group conflict

realization threatens to make much of the discussion and conclusions of the chapter redundant. However, in what may be an effort on my part to finish on an optimistic note, I wish to suggest that a reduction in tensions produced by manipulating the cultural proximate mechanisms associated with the regulation of human hostility may help generate a sociopolitical environment in which the more fundamental causes of intergroup hostility can be dealt with by, for example, making the access to the resources of the world, so necessary for survival and reproduction, more equitable.*

In the past it has always been possible to allow social evolution to follow its natural course in the knowledge that given sufficient time selection would edit out the unfit cultural mutations. However selection requires a node of selection (Campbell, 1974); a point about which the unfit adapt or die out; a point about which the fit survive and prosper. In human cultural evolution the units of selection have become less numerous and more deadly. From 10 million hunters and gatherers which would have made up some 20 thousand tribes we find the present world of nearly 5 billion polarized about two or three Super Powers. From prehistoric until recent times some form of group selection could take place without endangering humanity. One tribe or nation could extinguish another. Unfortunately the node of selection has now moved away from the arena of tribes and nations to the arena of worlds. Those worlds of sentient beings that come to terms with the problems of social behaviour will be selected for. Those worlds of sentient beings that fail to come to terms with the problems of social behaviour will be selected against. Human ideologies, at least in so far as they are followed in practice, would seem to have failed to save man from his worst enemy, himself. Indeed, ideology as badges frequently increases human hostility. It may be a slim hope, but perhaps a rigorous scientific understanding of human sociality can succeed where ideology has not. If this can be accomplished, then man and a science of human nature will have come of age by cheating natural selection with her own instruments. In this circumstance, human fitness is dependent on human enlightenment.

*To some extent equitable means different things to different peoples, Communism, Socialism or perhaps the institution of a just Meritocracy. I will not attempt to adjudicate between these ideologies here although efforts to use evolutionary theory for this purpose have been made (Peterson and Somit, 1978). For the foreseeable future equality within societies will probably have to remain a matter of taste, a value judgment. However, between societies, the signing of the Helsinki Agreement, the 'North-South Dialogue' and the 'Law of the Sea' debate hopefully demonstrate a possibility for reaching a degree of consensus on questions of equitability at the international level.