

1 Conference overview

CLARK McCAULEY

In reviewing the conference discussion, I will compare this conference with the symposium on war at the 1967 American Anthropological Association Meetings. The symposium was held in the context of concerns about U.S. involvement in the Vietnam War, and attempted to bring together what anthropology could offer toward understanding and reducing war. Twenty years later, what has been learned? Or, more particularly, comparing the content of that symposium (as published in *War: The Anthropology of Armed Conflict and Aggression* [Fried, et al. 1968]) with the content of the present conference, how have the issues and the evidence advanced?

DEFINITION OF WAR

The foundation for meaningful comparison with 1967 is the definition of war, which, happily, has not changed. Carneiro was perhaps most explicit in the present conference in defining war as a subset of human aggression involving the use of organized force between politically independent groups. This is substantially the same as Livingstone's (1968) "intergroup aggression," Wallace's (1968) "sanctioned use of lethal weapons by members of one society against members of another

CLARK MCCAULEY

society,” and Mead’s (1968) “groups . . . in purposeful, organized and socially sanctioned combat involving killing.” Carneiro goes beyond the older definitions in emphasizing political independence, but assessment of political autonomy can be difficult and can admit of differences of degree such as to make this portion of his definition problematic. Wallace and Mead go beyond Carneiro in emphasizing ingroup sanctions for killing, and Mead organized her whole paper around the origins and implications of the boundary between ingroup and outgroup. In thus emphasizing the perception of group boundaries and norms, Wallace and Mead appear to have been pointing the way to an analysis that could bridge cultural and individual explanations of war. In the present conference, the ethnographies provided by Gibson, Gregor, Robarchek, and Chagnon can be seen as moving toward and relevant to this kind of analysis.

BIOLOGICAL SELECTION AND WAR

The conference reflected a major change in biologically based explanations of war. Twenty years ago, Lorenz and Ardrey had popularized the idea of an aggressive or killer instinct for aggression in warrior societies, but which was present to some degree in all humankind. The implication of this view was that war might best be avoided by providing harmless outlets for aggression, and sports and the space race were both rated as above-average entertainments for this purpose. Anthropologists then and now find the hypothesis of a killer instinct not so much wrong as irrelevant to the kind of facts they want to explain. The Vikings of some hundreds of years ago are the notably peaceful Danes of today. The horse and gun made some people of the Shoshonean Basin – the Utes and Snakes – into warriors, and other people of the same Basin – the poor Diggers – into fearful refugees (Service, 1968). The gun and a market for slaves made both the Miskito kingdom and its Sumo victims “out of identical aboriginal material” (Service, 1968). Whitehead, at the conference, offered a similar history of transition from limited to unlimited war and slaving after the Carib came in contact with Europeans. In these examples, the rate of change in behavior – in culture – is too great to be a function of genetic differences (see Livingstone, 1968). Thus it hardly matters whether genetic selection for psychological characteristics may yet be going on in some human groups, since cultural change toward or away from war will remain to be

Conference overview

explained. This kind of argument was prominent in 1967, but appears to have been so successful as to need only briefest rehearsal in 1986.

Perhaps it is no accident that aggression as instinct has faded as an issue while sociobiology, another biologically based account of behavior, has risen to prominence. The possibility of explaining war in terms of behavior selected to maximize inclusive fitness was given considerable attention at the conference, at least as much as the killer instinct was given twenty years ago. A theory that promises to deal with cooperative as well as agonistic behavior is a priori attractive. And a theory able to comprehend altruism as self interest, as inclusive fitness can account for self-sacrifice if enough relatives with enough copies of the altruist's genes are thereby saved, generates real intellectual excitement. There was some feeling at the conference that a theory with this kind of excitement, one still under construction or at least in progress of explication, ought to be given the benefit of the doubt. More concretely, there were the vivid examples with which Chagnon illustrated his contention that the Yanomamö behave as if they sought reproductive opportunities. Still, the discussion did raise some doubts, one of which is already obvious: If war increases somatic and, ultimately, reproductive success of individuals who fight, why is war not continuous and ubiquitous like the incest taboo? That is, it is not clear how instincts leading to inclusive fitness can do better than instinct for aggression in accounting for the facts of cultural variation.

Another problem for the sociobiological approach was to specify how instincts leading to inclusive fitness could be represented in the motivations of the individual. It is clear that individual human beings are not motivated to maximize the number of offspring they and their kin contribute to the next generation. Infanticide is common in prestate societies, and abortion and contraception are common in modern societies. Likewise, celibacy is not nearly so rare as a biological motive for children ought to make it. The response was offered that individual human actors do not need to understand inclusive fitness, they need only be equipped with motives and behaviors which in the past have been associated with inclusive fitness. So, for instance, genetically based motives for dominance and for preferring similar others might be associated with success in getting genomes into the next generation. Even this example ran into some problems. The basis of similarity in humans appears to be susceptible to cultural interpretation that is independent of or even contrary to kinship relations. Chagnon reports

CLARK MCCAULEY

that Yanomamö brothers from nearby villages will attack one another, and some brothers did literally fight brothers in the American Civil War. Indeed the fissioning of Yanomamö villages means that nearby and feuding villages are likely to share more ancestors than more distant villages.

CULTURAL SELECTION AND WAR

At the conference, Chagnon and Dyson-Hudson argued for the importance of both biological and cultural selection in understanding warfare, while Carneiro and Ferguson remained largely unconvinced of the necessity of going beyond cultural selection. Although ideas about cultural selection were represented in the 1967 symposium, notably by Chagnon and Service, it seems fair to say that this perspective was considerably more elaborated in 1986 – perhaps by contrast with the advancing interest in biological selection. Most simply, cultural selection is group selection for norms and practices involving behaviors all humans are competent to perform (Skinner, 1981). That is, both cultural and biological selection explain behavior in terms of its consequences, but biological selection defines success in terms of relative contribution of genes to the next generation whereas cultural selection defines success in terms of relative contribution of norms and practices to the next generation.

The distinction between cultural and biological selection can be blurred by including mating opportunities as one kind of material resource, but the pure version of cultural selection espoused by Ferguson maintains that war, at least prestate war, is carried out for material resources such as land, water, food, and trade goods. Even war that appears to be for status can be understood as improving terms of trade for the group winning higher status. It is not necessary that individuals recognize the material goals that support their behavior; just as biological selection can operate via proximal motives associated with inclusive fitness, so can cultural selection operate on proximal goals of ritual, value, or religion that are associated with material success. Thus cultural selection can operate on variations in culture in the same way that biological selection can operate on variations in behavior anchored in genetic differences.

Cultural selection and biological selection can co-exist, but the pure version of cultural selection holds that biological selection of humans, if

Conference overview

it continues at all, is negligibly slow by comparison with cultural selection. Millennia ago, biological selection shaped human morphology, human motives, and human ability to satisfy these motives by analysis of means-end relationships. Now the morphology, basic motives, and intelligence of humans may be taken as essentially given, and the variation of culture understood in terms of cultural selection. Of course it need not be the case that all the motives biologically selected for in paleolithic times are as benign as the motives for food, water, and sex. It could be that motives for dominance and against difference that were selected for in the paleolithic are maladaptive today. If so, cultural variation must compete in satisfying these motives and the path of cultural selection is the more constrained.

An example of the opposition of cultural and biological selection cropped up in relation to identifying predictors of prestate war. Ferguson made a strong case for the importance of conflict over material resources such as land, food, and trade goods. Chagnon agreed to the importance of these but wanted to add mating opportunities and kin welfare as relevant to inclusive fitness and part of the material predictors of conflict. Ferguson resisted this idea as not necessary to explain examples of prestate war, but ended agreeing that resources related to inclusive fitness might well be important predictors of individual conflict even if not important as predictors of war. Chagnon agreed at least to the extent that it was fair to say that the Yanomamö fight over women but not fair to say that they go to war to obtain women.

One issue raised concerning cultural selection was the level at which it operates, whether only at the level of the group or at the individual level as well. That is, do individuals fare better or worse as a function of variation in belief, value, and behavior, or is individual variation within a culture negligible in the competition of group cultures? The beginning of data relevant to this question may be available in Gregor's description of a Xinguano man who denies the existence of witches and denounces killings for suspected witchcraft. If this individual lives and prospers, will others accept his beliefs? It is interesting to note that the question of level was raised as well for biological selection, but conferees agreed to consider biological selection only at the level of the individual. Biological selection at the level of genes, groups, or species remains controversial (see Barash, 1977), though perhaps not impossible (Gould, 1986).

The contest between biological and cultural interpretations of human

CLARK MCCAULEY

evolution continued throughout the conference. To borrow a metaphor from David Lykken, this is an issue of hardware versus software. Imagine the human brain evolving like the recent evolution of personal computers, that is toward both better hardware in terms of speed and memory and better software in terms of the programs and problems run on the machines. Biological selection is identified with evolution of hardware and cultural selection with evolution of software. Paleolithic selection can be thought of as selection of both hardware and software, with particular software to some degree limited to particular hardware. If biological selection is complete for humans, it can be thought of as having produced a very successful hardware that drove all other hardware from the marketplace so that further evolution is concentrated in the competition of software for the dominant hardware. The computer metaphor leads naturally to the question of whether the hardware is really so good that it places no limits on software development. There was general agreement at the conference that the greater speed of cultural selection recommends it for understanding cultural variation as studied by anthropologists, but the potential importance of understanding the products of biological selection was not denied.

SELECTION VERSUS HISTORY

At the conference, biological and cultural selection were seen as agreeing that material resources, including reproductive opportunities, are the currency in which different kinds of behavior are evaluated. That is, both kinds of selection explain group conflict in terms of competition for material resources, though both deny that human actors need be aware of the relations between their behaviors and these resources. Proponents of both biological and cultural selection (Chagnon, Dyson-Hudson, Carneiro, Ferguson, and Haas) found themselves in contention with more historically minded conferees (notably Gibson, Robarchek and Whitehead) for whom selectionist explanations were inadequate. The inadequacy cited was the blind and materialist quality of such explanations, and, in particular, the failure to connect distal contingencies in terms of material resources to the more proximal causes of conflict in the norms, thoughts, and goals of individual human beings. (At this point, I must confess that motives for dominance and against difference, offered above as possible proximal predictors of conflict, are more my own heuristics than hypotheses advanced in

Conference overview

discussion. Chagnon and Dyson-Hudson were especially consistent in limiting themselves to supposing indefinite proximal motives such that actors behave “as if” to maximize inclusive fitness.)

Discussion at the conference made clear that some participants were more concerned than others with connecting distal to proximal predictors of conflict, though there was eventual agreement that there was at least some value in identifying distal predictors. Still, the cultural historians were confident that the speed and direction of cultural change in relation to changed ecology could only be understood in terms of changes consciously directed by the perceptions of human actors. That is, cultural selection via random variation in culture seemed like biological selection via random variation of genes in that both are too slow to explain the speed of cultural adaptation.

The alternative offered was a view of culture as preadaptation, which was understood to refer to variation that may or may not have been affected by selection. In principle, this alternative can complement rather than oppose biological and cultural selection, but, in discussion, arguments on the basis of selection of either kind tended to be opposed to arguments on the basis of preadaptation. The idea of preadaptation is essentially historical; it is that ecological change or stress leads to cultural adaptation mediated by human choices based on pre-existing culture. The importance of this idea is that it emphasizes that ecological and especially material factors cannot be more than crude predictors of cultural change, since the same objective conditions can be interpreted very differently by different groups, depending on the culture through which they understand these conditions. With regard to war, preadaptation means that social or material challenge or stress may or may not lead to war, depending on the history of the group. Preadaptation especially means that war or peace, and particular directions of warlike or peaceful reactions, will be made more or less likely by the infrastructure of culture that is the product of group history.

For instance, Gibson was confident that the peacefulness of the Buid could not be explained by reference to physical or social ecology, since there were six other tribes he could point to with similar physical and social ecology, none of which is peaceful. His view was that the Buid culture could only be understood as a unique interaction of previous culture and present ecology, that is, that some important difference in previous history or culture led the Buid to react differently to their present ecology than did the other six tribes. He acknowledged that he

CLARK MCCAULEY

did not know and might never know what the important preadaptation had been, though historical investigation should clarify preadaptations for at least some kinds of cultural change. In a similar vein, Whitehead held that war and slaving by the Carib were reactions to contact with Europeans that could not be understood without reference to pre-European Carib culture. He suggested that the Carib kinship system was one important preadaptation for successful slaving. To a lesser degree, Robarchek and Gregor also resonated to the idea of preadaptation, and Robarchek's description of Semai reactions to the beginning of a cash market for durian fruit can be considered an extended example of the operation of preadaptation.

Relevant to the idea of preadaptation was considerable agreement at the conference that the origins of conflict must be distinguished from the factors maintaining conflict once begun. This distinction proceeds from both logical and experiential considerations. Logically, the effect of an adaptation cannot be its cause. Both biological and cultural selection can explain how a pattern of behavior can succeed and become more common because of its effects, but neither can explain how the pattern of behavior came to be there for selection to work on. In other words, selection works on the variation already available, and the origins of the variations need additional explanation. The kinship system of the Carib, for instance, existed prior to contact with Europeans and need not have originated in association with conflict, even though it was advantageous for slaving after Europeans made slaving profitable.

Gould (1986) makes a similar point by quoting Darwin with regard to the unfused skull bones essential to parturition of large-brained mammals. These cannot be explained as adaptations selected for their role in parturition, since similar sutures are found in birds and reptiles that need only break out of a shell. Indeed, Gould (1986: 54) summarizes the concerns of the historically minded at the conference:

Cardboard Darwinism . . . is a theory of pure functionalism that denies history and views organic structure as neutral before a molding environment. It is a reductionist, one-way theory about the grafting of information from environment upon organism through natural selection of good designs. We need a richer theory, a structural biology, that views evolution as an interaction of outside and inside, of environment and the structural rules for genetic and developmental architecture – rules set by the contingencies of history and physicochemical laws of the stuff itself.

Gould (1986) also makes a point about the asymmetry of selection

Conference overview

that is worth noting in the search for explanations of war. That is, structures that are harmful are likely to be eliminated by selection, but helpful structures can arise in many ways and need not be built by selection. Similarly in terms of behavior, motives and patterns of behavior that are harmful in either biological or cultural terms are likely to be eliminated, but helpful cultural practices can arise in many ways, not least from the accidents of unique group history.

In addition to these logical considerations, there are experiential considerations supporting a distinction between the origins and the maintenance of warfare. The conference discussed three kinds of force for continuation of conflict, once begun. The first is revenge: the injury or death of members of one's group, especially kin, is likely to lead to motivation and emotion for revenge. Feuding is likely to go on long after the original difference between two groups has become lost in myth or at least submerged in more recent injury.

The second force for continuation of conflict is related to the first but more rational: the strategy of physical conflict is dominant over more peaceful strategies in the sense that groups unable to respond to force with force are likely to be eliminated. That is, when choosing between cooperative and competitive behavior in a prolonged series of interactions with another, the strategy of responding to cooperation with cooperation and responding to competition with competition appears to be a very successful strategy (Axelrod, 1984). To the extent that individuals and groups appreciate the value of the tit-for-tat strategy, conflict once begun is likely to lead to additional conflict. The two forces for conflict continuation just described apply as well to individuals as to groups.

The third force applies to groups rather than to individuals and so may be said to be a force for continuation of war specifically, rather than for continuation of individual conflict. This third force is the class or common interest of those members of a group whose special business it is to fight or prepare to fight a war. This force, which may be identified with the interests of the military-industrial complex in modern states, exists as well in lower stages of political centralization. That is, a warrior class in chiefdom or village is likely to press for continuing conflict to the extent that their material interests and self definition depend on war and the threat of war.

Since these three forces for continuation and even escalation of conflict only come into play after conflict has begun, they act in

CLARK MCCAULEY

addition to whatever forces bring about the initiation of conflict. Thus predicting or explaining the initiation of conflict may be a different piece of theoretical business than predicting or explaining the continuation of conflict once begun. For instance, it is one thing to explain how the values and rituals of the Yanomamö, or the structure of their rewards and costs, operate to maintain and encourage conflict both within and between villages. It is quite another to explain how the system, the whole culture came into existence. The latter is an historical question, in which some previous culture presumably interacted with a change in ecology to shape the culture now observed. As an historical question, it is difficult to analyze scientifically since historical explanation is necessarily a highly contingent account of the interaction of unique circumstances.

The conference produced some lively discussion concerning the possibility and desirability of pursuing historical questions about why culture changes, as opposed to concentrating on predictors of war that can be useful across different cultures with the cultures considered as given. By the end of the conference, both kinds of approach seemed useful to most of the participants and examples of both kinds of understanding were cited in particulars of ethnographies presented by participants.

WAR AND THE DEVELOPING STATE

The end of the conference saw the beginnings of a promising model of the relation of warfare to the development of the state. This model will doubtless be further developed in the future by those involved with it at the conference (notably Carneiro, Chagnon, Ferguson, and Haas), but some of its directions can be briefly indicated here.

The foundation of this model was Carneiro's account of the development of the state via circumscription and resource competition. The states, from the least to the most hierarchical social organization, are the band, the autonomous village, the tribe or confederacy, the chiefdom, and the state. The stages are not meant to imply inexorable progress, since higher states can regress to lower ones (Carneiro suggested "pulsile tribalization" in reaction to external threat), but the stages are assumed to represent a necessary sequence such that, for instance, a tribe cannot become a state without passing through the stage of chiefdom. Parallel to these stages are several dimensions of hypothesized differences with