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RITUALIZED 'PRIMITIVE' WARFARE AND RITUALS IN WAR: PHENOCOPY, HOMOLOGY, OR...?

by Johan M.G. van der Dennen

PART 1: RITUAL IN ANIMALS AND MAN

Ritualization in Animals

Any evolutionary change that adds to the communicative function of signaling behavior has been called 'semanticization' by Wickler (1967). The majority of known cases of semantic alteration involves *ritualization*, the evolutionary process by which a behavior pattern changes to become increasingly effective as a signal (E.O. Wilson, 1975; Eibl-Eibesfeldt, 1979).

Commonly and perhaps invariably, the process begins when some movement, anatomical feature, or physiological trait that is functional in quite another context acquires a secondary value as a signal. For example, members of a species can begin by recognizing an open mouth as a threat or by interpreting the turning away of an opponent's body in the midst of conflict as an intention to flee.

During ritualization, such movements are altered in a way that makes their communicative function still more effective. Typically, they acquire morphological support in the form of additional anatomical structures that enhance the conspicuousness of the movement. They also tend to become simplified, stereotyped (e.g., by repetition), and exaggerated in form (cf. the theory of animal communication as manipulation and signals as advertisement: Dawkins & Krebs, 1978).

Ritualized biological traits are referred to as *displays*. A special form of display recognized by zoologists is the *ceremony*, a highly evolved set of behaviors used to conciliate and to establish and maintain social bonds (e.g., the triumph ceremony of the greylag goose as described by Lorenz [1966]; *vide infra*).

During the process of ritualization behavior patterns may *change in their function*. For example, food enticing in the various *Phasianids* becomes a signal, the movements of swimming toward the female and toward the nest in the stickleback become a courtship dance. Furthermore, a *change of motivation* can be observed; in baboons, for example, the female sexual presenting posture is incorporated in the male repertoire of behavior and used as a greeting ritual. In addition, movements experience a number of changes directly related to the signalling function (E.O. Wilson, 1975; Eibl-Eibesfeldt, 1979).

Social signals must be conspicuous and most are extremely exaggerated in form and are accompanied by specially evolved releasers which enhance the effect of the movement. If they are to be maximally effective, social signals must be clear-cut and unambiguous. For this reason many of them do not vary the form of the pattern to various strengths of stimulus: typical intensity (Morris, 1957). See e.g., Hinde (1966) and Manning (1972) for examples.

Signals have to be conspicuous and unambiguous and at the same time simple and precise so as not to be misunderstood. This is achieved by the following changes (as summarized by Eibl-Eibesfeldt, 1979):

1. The movements become *exaggerated* in frequency and amplitude.
2. They become *stereotyped* and *simplified* by the dropping of some of the original components and the exaggeration of others.
3. *Variable movement sequences* of often antithetic motivations *become fused* into a

- stereotyped single movement pattern (e.g., the invitation dance of the cleaner fish or the zigzag dance of the male stickleback).
4. *Rhythmic repetition* enhances the visual effectiveness of the pattern. A ritual sequence when performed 'in full' tends to be very repetitive; whatever the message may be that is supposed to be conveyed, the redundancy factor is very high. Here it is worth reflecting on a general point of communication theory. If a sender seeks to transmit a message to a distant receiver against a background of noise, ambiguity is reduced if the same message is repeated over and over again by different channels and in different forms@ (Leach, 1966).
 5. Components of *orientation* are sometimes changed (e.g., inciting in ducks).
 6. Sometimes movement patterns are performed with a constant *typical intensity* (Morris, 1957). In this manner the behavior patterns become less ambiguous. Some courtship movements of ducks illustrate this principle. Animal signals can be partitioned roughly into two structural categories: discrete and graded (or digital and analog). Discrete signals (on-off, yes-no) are most perfectly represented in the act of simple recognition, particularly during courtship (E.O. Wilson, 1975). Discrete signals become discrete through the evolution of 'typical intensity' (Morris, 1957). That is, the intensity and duration of a behavior becomes less variable, so that no matter how weak or strong the stimulus evoking it, the behavior always stays about the same.
 7. Movements may '*freeze*' into postures: attacking movements, for example, often have developed into threat postures. Greylag geese greet each other with a special triumph ceremony which is basically a threat posture. The necks outstretched as if in threat do not however point toward each other, but in a course past each other, as if both were displaying at a third imagined enemy. The anthropomorphic translation of this would be that they are united in threat against a joint enemy.
 8. The *threshold values* for the stimuli releasing the patterns often *change* in such a way that the more ritualized the behavior, the more easily it is released (Daanje, 1950; Oehlert, 1958).
 9. Along with the above, behavioral changes frequently cause the development of additional bodily structures which emphasize the display, for examples plumes, manes, brightly colored skin patches or fins which unfold to sails.
 10. Expressive patterns with opposing intentionality in emphasis of contrast get ritualized in clear antithesis. A marine iguana will raise itself on all its feet and make itself as large as possible in aggressive display, but will drop flat on its belly in submission. This principle of antithesis was discovered by Darwin (1873), who was the first to describe metacommunicative play signaling in dogs. Such signals appear to be ritualized aggression intention movements.
 11. Several expressive patterns can be combined, each in varying stages of intensity, thus giving rise to a great variety of expressions, which nonetheless can be reduced to a few variables. Simultaneous combination results in superposition. In cases of alternative combination the organism may oscillate between the antithetic patterns.

The concept of ritualization was originated by Julian Huxley in his 1914 study of then great crested grebe *Podiceps cristatus*, and developed still more explicitly in a later monograph on the red-throated diver *Gavia stellata*. And later reinterpreted according to the concepts of modern ethological theory by Huxley (1966).

The ritualization of vertebrate behavior often begins in circumstances of conflict, particularly when an animal is undecided whether to complete an act (e.g., intention movements: flight intention movements [take-off leap] have been ritualized to serve as a courtship display in the male European cormorant *Phalacrocorax carbo* [Kortlandt,

1940; Hinde, 1970]; intention movements of biting or striking are a common source of the components of threat displays).

Signals also may evolve from the ambivalence created by the conflict between two or more behavioral tendencies (Tinbergen, 1952) (e.g., approach-avoidance, fight-flight), giving rise to redirection of aggression or displacement activity (a seemingly irrelevant act; such displays are called 'derived activities' by Tinbergen to signify their origin from other types of behavior). This is known as the conflict theory of the origin of displays. But it is now recognized that ritualization is a highly opportunistic process that can be launched from almost any convenient behavior pattern, anatomical structure, or physiological change. E.O. Wilson (1975) gives the following examples: ritualized predation; ritualized food exchange (billing, licking, kissing); lip smacking; smiling and laughing (derived from primate silent bared-teeth display and relaxed open-mouth display [van Hooff, 1972]); displays derived from autonomic responses such as ritualized respiration, ritualized excretion and secretion (e.g., pheromones, sex attractants, changes in skin coloration due to changes in the surface vessels [Hinde, 1966]); and automimicry (Wickler, 1969, 1970).

Other types of changes in the relations between the movement and its causal factors also occur during ritualization. Sometimes, for instance, homologous displays in related species depend on different strength of the associated tendencies. Baerends & Blokzijl (1963), comparing the agonistic and sexual displays of two closely related cichlid fish (genus *Tilapia*), found that each display was associated with a particular range of values of the fight/flight ratio ([tendency to attack]/[tendency to flee]). The value of this quotient appeared to be higher in *Tilapia nilotica* than that for the homologous display in *Tilapia mossambica*. They thus suggest that the primary difference between the two species lies in a lower threshold for aggressive responses in *T. nilotica*. Similarly, differences in the displays between male and female of the same species can be understood in terms of threshold differences (Hinde, 1966).

Another important concept in relation to ritualization is *emanicipation* of ritualized patterns. The courtship of ducks, for example includes patterns which are clearly derived from displacement preening and displacement drinking. It is possible that these patterns originally occurred by disinhibition as a direct result of a conflict between sexual and attack or escape tendencies when males courted females. One supposes that in ancestral males the appearance of preening or drinking depended on the conflict sufficiently balanced. Those males which performed these displacement activities most regularly were most successful in mating. In some way the appearance of these patterns served to arrest the female's attention and perhaps stimulate her sexually. However, in their descendants conflict may no longer be a prerequisite for the performance of preening and drinking patterns in the sexual situation. They are now almost invariable parts of courtship and highly modified in form. Tinbergen (1952) suggests that these patterns have become 'emancipated' from their original controlling mechanisms and are now controlled by the sexual mechanisms alone (Manning, 1972).

Rituals serve the function of communication. They release responses which in turn are answered; this leads to an orderly sequence of patterns of expression (Eibl-Eibesfeldt, 1979). Events which follow the stimulus-response principle may also be observed in the rituals of man. A smile is usually responded to by a smile, a nod by a nod and a handwave in a distance greeting with a similar handwave. In addition, however, acts are fused into longer sequences.

According to these responses, rituals can, following Eibl-Eibesfeldt (1979), be classified as follows:

1. Bonding

Individualized bonds evolved independently in birds and mammals from the mother-child relationship. Behavior patterns that serve bonding in the adult are derived from mother-child signals. Kissing, derived from kissfeeding, is an example of a parental behavior used to express affection and thus strengthen the bond between adults of opposite sex. Infantile appeals are used to attract friendly attention.

Rituals of bonding may be classified in various ways, according to the agents involved or the method by which the bonding is achieved.

Courtship rituals refer to the establishment of pair-bonds. *Greeting rituals* and *feasts* refer to bond formation and reinforcement outside the context of pair formation, feasts particularly on the level of groups.

If classification is by method, a particular type of bonding ritual might be categorized under the heading *rituals of synchronization* (e.g., dances).

Bonding, furthermore, can be achieved by rituals which express a *shared concern* (mourning rituals) or which unite the group ritualized by acts of *joint aggression* against a common enemy. Rituals of *gift exchange* are another category of bonding patterns.

2. Spacing and competing

Spacing is achieved by fighting and display. In intragroup aggression special inhibitions, released by appeals to submission (crying, pouting with cut-off and lowering of the head), prevent escalation into destruction (at least regarding members of the 'ingroup'). The appeals are the same universally. In addition, fighting by display occurs, one universal form being the threat stare duel. Another example may be the Kwakiutl potlatch: 'fighting with gifts'. The concept *Ventilsitten* refers to a category of rituals which apparently serve the function of neutralizing aggression by allowing it to have an outlet in contests which 'let off steam'.

In intergroup violence conventions are sometimes established to restrict killing to the combatants, to spare the civilians, to allow a warrior to surrender and to ban particularly destructive weapons. This is not just an invention of the 'civilized'. The Tsembaga of the Highlands of New Guinea fight wars with their neighbors, but try to avoid escalation into bloodshed if possible. According to Rappaport (1968) there are several stages of the war. At the beginning both parties rely mainly on display. After having cleared the traditional battle ground, they face each other, shouting insults and shooting at each other with arrows which lack the feathers and therefore easily miss the target. Since the parties are communicating verbally a release of tension may occur and reconciliation may result, particularly since a neutral third party is commenting on the event. Standing on a hill nearby, its members shout to the fighting parties how bad it is for brothers to fight, and that the dispute should be settled by an arrangement. Only if this fails does an escalation take place.

3. Appeasing

Appeasing is directly related functionally to aggression. Without the ability to appease, community life for potentially aggressive individuals would scarcely be possible. The simplest way to appease is by deflecting aggression-releasing signals. In man, signals which act as unconditioned aggression inhibitors are the signals which constitute the baby schema (*Kindchenschema*) and appeals through children have been mentioned as part of the rituals of friendly encounter. Behaving like a child may serve as an appeal as well...

Among the patterns of expressive behavior which inhibit aggression may be included smiling, pouting, ritualized cut-off and crying. Behavior patterns derived from parental and child behavior have an appeasing value, as is the case with all patterns of bonding,

including verbalized appeals.

4. Rituals to keep 'discipline'

In the military circles of our culture rituals of obedience can be observed (for example, raising and saluting the flag in the morning and evening).

5. The conquest of fear

Most other human rituals may be understood as serving the conquest of fear. Man as a rational being seeks for causal explanations of events. Events which he cannot explain cause fear. In an attempt to conquer fear man invents explanations for events caused by factors which are not accessible to his direct observation. He structures his world view according to these assumptions, providing security as well as a logical framework within which to act. The trance dance of the Bushmen may serve as an example.

Ritualized fighting

Probably the most spectacular examples of ritualization involve ritualized aggression; as E.O. Wilson (1975) formulated the key question: "Why do animals prefer pacifism and bluff to escalated fighting?". The answer is that agonistic behavior is potentially advantageous but also carries very high costs (in terms of the individual's inclusive fitness): possible injury and even death, 'aggressive neglect', etc. (see especially Cronin [1991] and Van der Dennen [1995] for detailed analysis).

For each species, Wilson observes, there exists some optimal level of aggressiveness above which individual fitness is lowered.

In a situation of conflict an individual can either challenge its rival, or retreat. The advantage of challenging lies in the chance of winning the resource, which will be referred to as the payoff. The cost of challenging can be assessed in terms of the energy utilized in the conflict and the risk of serious injury. For the stronger opponent, challenging is the best strategy; for the weaker, retreat alone will provide the maximum benefit. In unequal (asymmetrical) contests it is clearly beneficial to have some method of assessing relative strengths which will allow the weaker individual to withdraw without physical injury. Such an assessment will benefit both individuals if physical conflict can be avoided, and commonly occurs where a clear discrepancy in fighting potential or resource-holding power (RHP) exists between two individuals. Thus, the (obviously) stronger individual (generally) displays and the (obviously) weaker individual (generally) withdraws (Poole, 1985).

Non-injurious contests of this type (resolved without resort to physical violence but simply by display) have been termed ritualized fighting and, until the early 1970s, many ethologists (notably Lorenz, 1964, 1966) believed that ritualized fighting had evolved because it benefited both partners and hence ultimately the species. However Maynard Smith, Price and Parker carried out a theoretical analysis of aggression using game theory which cast serious doubts on such an interpretation (Maynard Smith, 1974; Maynard Smith & Price, 1973; Maynard Smith & Parker, 1976; Cf. Dawkins & Krebs, 1978; Caryl, 1981; Poole, 1985; Cronin, 1991; Van der Dennen, 1995).

In essence their argument (as summarized by Poole, 1985) is as follows: if all individuals in a population (henceforth referred to as 'doves') settled disputes by ritualized fighting and an individual appeared who employed escalated injurious fighting (a 'hawk'), the 'hawk' would win every time. Thus the strategy 'dove' is not an evolutionarily stable strategy (or ESS) for it can always be defeated by a 'hawk' (an ESS is defined as a strategy which, if adopted by most members of a population, confers

greater reproductive fitness than any alternative strategy).

As a 'hawk' would always succeed in conflict with a 'dove', the genes for 'hawk' would spread throughout the population. The time would come, however, when the probability of a hawk meeting another hawk in a conflict would increase to such a point that serious injury among hawks would be common; doves would then come to be at an advantage. Thus 'hawk' is not an ESS either and in this example, assuming that the cost of injury was greater than the benefit of winning, the final ESS would be an equilibrium point with a particular proportion of doves and hawks. The exact percentages of hawk and dove can be calculated by game theory for various values of costs and payoffs for the two strategies.

Maynard Smith (1976) appreciated that this scenario is simplified and that, for example, an individual might display conventionally against a dove but escalate when confronted with a hawk. He termed this strategy 'retaliator' and showed that it can be an ESS in situations where the cost of injury exceeds the benefit of winning.

The examples so far considered have made the assumption that the two individuals are evenly matched in the sense that each rival has a 50:50 chance of winning. In nature, however, conflicts are often asymmetrical; this may be because one individual is stronger (has greater resource-holding potential, or RHP), or one has greater need of the disputed resource, or because one individual is already holding the resource while its rival is a challenger attempting to take over.

In such asymmetrical contests, information regarding the resource-holding potential of the combatants may be available. Geist (1966) found that, in mountain sheep (*Ovis dalli*), a strange ram's position in the dominance hierarchy is partially determined by relative size, especially horn-size, and he observed only fights between rams of approximately equal size. Thus, it must be assumed that a ram is capable of assessing, on the basis of body and horn-size, the RHP of its rival in comparison to its own.

Where individuals are unable to detect differences in RHP, they might be expected to behave as if they were evenly matched. This would lead either to an impasse or to damaging fighting. Maynard Smith & Parker (1976), however, have shown that an arbitrary rule could be used to settle such disputes amicably. For example, the rule "resource-holder wins" is common to most territorial mammals but may also occur in competition for females, e.g., in hamadryas baboons (Kummer, 1968).

Whether or not escalated fighting occurs is also dependent upon the scarcity of the resource, conflict being more likely if a resource is highly restricted, when the payoff will be high. Escalated fighting is also more likely to occur in species in which the risk of serious injury is low.

One of the few mammalian species for which a detailed analysis of ritualized aggression under field conditions is available is the red deer (*Cervus elaphus*) which has been extensively studied by Clutton-Brock et al. (1979, 1982). In the rut, each stag attempts to acquire access to a group of hinds (a harem) which he then defends against rivals. In situations in which a stag is likely to be challenged he shows threatening behavior in the form of roaring and walking parallel to his opponent.

Clutton-Brock et al. found that stags roar most in conditions in which they are likely to be challenged and that the pitch of roaring is related to the size of the animal, larger stags having lower-pitched roars. Generally stags roar alternately, each facing its opponent.

Roaring appears to function for the two stags as a means of assessment. If the protagonist remains after the roaring contest, the contestants generally commence parallel walking. This occurs most commonly when opponents are well matched. The fact that there is a strong correlation between the duration of parallel walking (a test of

stamina) and that of subsequent fighting again indicates a trial of strength. Should the other male continue to challenge, however, the antlers are used and a fight develops. Fighting stags lower the head and ram the opponent with their antlers. As the rival faces his attacker, their antlers lock together and a pushing match ensues. Each stag attempts to get uphill from his opponent and to push him backwards. The loser finally withdraws and takes to flight. Pursuit is rare because attacking involves lowering the head which reduces the male's speed. If, however, the loser slips or falls, the winner will take the opportunity to jab the flank of its fallen rival, often wounding it severely. Fighting success is positively correlated with reproductive success and, in turn, with antler size. Success in fighting can therefore lead to a considerable gain in a male's fitness, but it also involves risks, as there is a 1:17 chance of its being seriously wounded. As a seriously-wounded stag has little chance of survival, it is apparent that the optimum strategy is avoid contests with superior rivals or those in which there is a high risk of injury.

Clutton-Brock et al. were able to show that roaring, parallel walking, and antler-pushing are three separate ritualized stages of escalation in a process of mutual assessment of fighting potential. This method of assessment (of size discrepancy, vigor of display, stamina and strength) is probably relatively immune to cheating.

These data support the view that roaring and parallel walks provide a means whereby rival stags can assess one another's fighting potential. Stags seldom challenge older, larger individuals, so that roaring contests rarely occur if there is an obvious visible discrepancy in size; very powerful stags of approximately equal strength, however, generally do not fight after long parallel walks, thus avoiding serious injury.

By advertising its fighting potential, the individual conveys information to its rival and at the same time may receive information about its opponent's strength.

In situations in which there is a difference in resource-holding potential (RHP) between two individuals, the weaker may display to indicate his non-combatant status. The two main types of display concerned are termed *submissive* or *defensive*.

Submission indicates that the individual will not retaliate, even if attacked, and a common form of this behavior is rolling over on to the back or crouching. For example, submissive canids lie on the back and expose the inguinal region, sometimes also showing a submissive grin. Submissive displays are commonly shown by the young towards older group members, by females towards males and by low-ranking adults towards high-ranking dominants.

Defensive displays, often referred to as 'defensive threat' signify that the animal will not spontaneously attack its opponent but may retaliate if attacked. It is commonly used where two closely-ranking individuals are in proximity, or where a lower-ranking individual is holding a disputed resource. In many species defensive threat involves displaying the teeth as, for example, in carnivores and primates (Poole, 1985).

Human (Cultural) Rituals

According to Eibl-Eibesfeldt (1979) there are similarities between phylogenetically and culturally evolved patterns of expression, which is, he contends, not particularly surprising. The selection pressures in both cases operate along similar lines. In general these patterns have to fulfill the criteria of being conspicuous, redundant, unmistakable and at the same time fairly simple as signals. Mimic exaggeration by emphasis of movement amplitude, simplification, rhythmic repetition, fusion of elements into new patterns and emphasis by additional structures of adornment are also principles in the cultural evolution of ritualistic behavior. No wonder human rituals appear to be highly *stylized*.

Typology of Human Rituals

In anthropology and related disciplines the terms 'ritual' and 'rite' are intimately associated with concepts such as myth, religion and the sacred (the transcendent realm), totemic cults, animal or human sacrifice, theater and dramatic expression, concerted ceremonies and collective synchronized activity (e.g., war dances, mourning procession, memorial parade).

Several features distinguish rituals from other kinds of behavior (e.g., Rappaport, 1979; Kottak, 1991). Rituals are formal C stylized, repetitive, and stereotyped. People perform rituals in special (sacred) places and at set times. Rituals include *liturgical orders* C set sequences of words and actions invented prior to the current performance of the ritual in which they occur.

A conventional typology of rituals distinguishes:

- imitative rituals (rituals imitate or repeat the myths; myths are the librettos for rituals);
- positive/negative (consecration and taboo) rituals;
- sacrificial rituals (destruction of a victim or scapegoat);
- and life crisis rituals (*rites de passage*; the transition of one mode of life to another, e.g., puberty, marriage, and death rituals; rituals of initiation, often involving symbolic death followed by symbolic rebirth; war/peace rituals) (Encycl. Britannica).

Passage rites are often collective. All *rites de passage* have three phases: separation, margin, and aggregation (Van Gennep, 1909; Gluckman, 1962; Turner, 1974; Fried & Fried, 1980; Kottak, 1991). In the first phase, individuals withdraw from the group and begin moving from one place or status to another. In the third phase, they reenter society, having completed the rite. The margin phase is the most interesting. It is the period C suspended C between states, the limbo during which people have left one place or state but have not yet entered or joined the next. This is called the liminal phase of the passage rite. *Liminality* always has certain characteristics. Liminal people occupy ambiguous social positions. They exist apart from ordinary distinctions and expectations, living in a time out of time. They are cut off from normal social contacts. A variety of contrasts may ritually demarcate liminality from regular social life. Turner (1974) and Kottak (1991) summarize a number of contrasts or oppositions between liminality and normal life. Liminality may even be demarcated ritually and symbolically by *reversals* of ordinary behavior. For example, sexual taboos may be intensified or, conversely, sexual excess may be encouraged.

Most notable is a social aspect of collective liminality called *communitas*, an intense community spirit, a feeling of great social solidarity, equality, and togetherness. People experiencing liminality together form a community of equals, and develop a strong *esprit de corps*.

Rituals are *social acts par excellence*. Inevitably, some participants are more committed than others are to the beliefs that lie behind the rites. However, just by taking part in a joint public act, the performers signal that they accept a common social and moral order, one that transcends their status as individuals (Kottak, 1991). Gluckman (1967), following analyses by Fortes & Evans-Pritchard and other social anthropologists, emphasizes that tribal ritual arises from situations where there is a conflict between the general moral order and the interests which leads individuals and groups to compete with one another: "Ritual cloaks the fundamental disharmonies of social structure by affirming major loyalties to be beyond question".

Differences between Evolutionary Ritualization and 'Cultural' Rituals:

1. Evolutionary ritualization involves the behavior of individuals; 'cultural' rituals and ceremonies mostly imply aggregates or groups (such as clans, tribes, [isosexual] age-classes) of individuals.
 2. Evolutionarily, individual displays evolved to manipulate or otherwise influence the behavior of other individuals by means of conspicuous and stereotyped advertisement (e.g., inducement to copulate in courtship displays, intimidation and deterrence in threat displays, cementing a pair bond in the triumph ceremony); 'cultural' rituals are generally difficult to understand as manipulations of, or attempts to influence, other 'cultural' units (with the possible exception of ritual warfare).
 3. Rituals designed by evolution are conspicuous, unambiguous, stereotyped, often repetitive, motor patterns coordinated in the brain. In 'cultural' rituals the conspicuousness, stereotypy and repetitiveness are mostly the result of (mass)organization, staging and choreography.
- As most human rituals involve either some procession-like program or concerted and synchronized rhythmic activities (e.g., collective dances), it seems appropriate to refer to their succession of steps or behavioral syntax as 'choreography', though no conscious dramaturge or conductor (other than 'tradition') may be involved.

Similarities:

On the other hand, the triumph ceremony of the greylag goose, performed by the two pair-bonded actors, male and female, is indistinguishable from, say, a dancing human couple in its concertedness and synchronicity.

The Neural Substratum of Rituals

Psychiatrists have often pointed out that rituals (psychological counterparts of somatic stereotypes) play a paramount role in all kinds of psychopathology. Ritual is, for example, a central feature in obsessive-compulsive disorder. Turbott (1997) considers the common feature of all rituals (psychopathological or not) to be stereotyped physical activity which conveys information. Some clinical, developmental, evolutionary and religious/historical evidence suggests, according to him, that stereotyped motor behavior may be the primary phenomenon.

Indeed, humans and other animals C at least the reptilian and mammalian species C seem almost 'predestined' to develop rituals of all kinds because of their neural (cerebral) architecture: the possession of a reptilian and paleomammalian brain underneath the (in humans hypertrophied and cauliflower-like) neomammalian cortex (MacLean, 1970 et seq.; Bailey, 1987). This is called the triune brain, and it supposedly gives rise to three mentalities. Bailey explains the role of the reptilian brain (or R-complex) as follows:

At the behavioral level, the reptilian brain is a 'slave to precedent' (MacLean, 1970), calling, as it does, upon rigid, stereotyped, and preprogrammed responses steeped in ancestral learning and memory... Within the R-complex is housed the basic behavioral hardware of the animal, the evolved repository of instincts and species-typical motivational and behavioral patterns subserving individual and, ultimately, species adaptation and survival. MacLean (1976) lists a pentad of reptilian traits including perseveration, re-enactment, tropisms (both positive and

negative), deception, and isopraxic behavior. Thus, reptiles, and humans when they 'regress' to reptilian levels of behavior, exhibit repetitive obeisance to daily routines and subroutines, ceremonial re-enactments and compulsive ritualism, mechanical reactions to minimal stimuli and partial representations (tropisms), nonconscious misrepresentation of motivation or intention (deception), and slavish conformance to species standards of behavior. The last fundamental parameter, isopraxis, is particularly interesting, for it is through imitation and mimicry of species-appropriate behaviors that species members act in accordance with species standards and achieve a sense of 'identity' of sorts. As MacLean (1978b) says: 'It cannot be overemphasized that isopraxis is basic for maintaining the identity of a species or social group' (p. 320)... note that reptilian behavior falls into a number of general categories including imitation and species conformity, establishment and defense of territorial areas, home-site selection, foraging and feeding, courtship, mating and reproductive behavior, ritualistic display, group formation, and competition, dominance, and aggression (MacLean 1962)... (Bailey, 1987 p. 62-63).

Konner (1982) remarks that MacLean's contribution has been to show that the reptilian brain is not concerned with mere control of movement, but with the storage and control of 'instinctive' behavior: the fixed action patterns and innate releasing mechanisms of the ethologists. This helps explain why reptiles and birds, in which the *corpus striatum* is the most highly developed part of the brain, seem (much more than mammals) to have behavioral repertoires consisting of stereotyped behaviors and responses: a lizard turning sideways and displaying its dewlap as a threat, for instance, or a bird repeating over and over again the same territorial song. It isn't that mammals have no such behaviors, but rather that birds and reptiles have so little else@ (Konner, 1982, p. 148).

The Ritual Cycle in Serial Killings

Joel Norris (1988), a psychologist and consultant on criminal cases in Georgia and Florida, has recently produced a psychobiological model of the serial killer's mind, his method and his madness, which at least puts the problem into some sort of order. According to Norris (as reproduced in Watson, 1995), the compulsion to kill represents the serial performance of a 'morality play' in which the same story is repeated, again and again, with different victims. In telling the obsessive tale, the killer establishes elaborate rituals, setting up a 'behavioral skeleton', which he wears on the outside like an insect, using this architecture to support his fantasies. And, Norris argues, because such killers seldom act rationally, but respond automatically to specific stimuli, it is possible to codify and predict their behavior. Norris identifies seven key steps in a typical serial killing:

1. The 'aura' phase C in which the killer withdraws from reality and builds a fantasy that demands to be satisfied.
2. The 'trolling' phase C involving an active search for suitable prey on carefully chosen hunting grounds. A time when the killer becomes very alert and focused, stalking victims like an accomplished predator.
3. The 'wooing' phase C during which victims are charmed, disarmed or tricked into putting themselves at risk.
4. The 'capture' C a moment that is savoured on the killing ground.
5. The 'murder' itself C which is usually heavily symbolic, staged to recreate a

moment in the killer's own childhood, bringing an emotional high and sexual release.

6. Followed by a 'totem' phase C in which the killer tries to prolong the intensity by taking photographs, dismembering, eating or preserving parts of the victim or their possessions.
7. And finally, a 'depression' phase C as illusions fade and the killer realizes nothing has been changed.

During this reprise, the killers may be lucid enough to turn themselves in and confess. Though, even when they do, they are seldom believed and frequently turned loose to start all over again. But, more often, the feelings of guilt pass and the relentless cycle begins all over again, going on and on until they are eventually caught red-handed (Watson, 1995).

A Communication-theoretical Analysis of Ritual

Rituals, like all human interactions, can be analyzed in terms of the communication theory developed by Scheflen (1968), among others.

People behave in coded, patterned ways and others perceive and comprehend these patterns. Logically speaking, were it not that interactions were patterned, behavior would be unpredictable and unreliable, and it would be impossible to sustain, mediate, and form human relationships, complete coordinated tasks, and transmit a common culture. Communication depends on a common behavioral morphology of shared meaning. Redundancy in behavioral programs reduces ambiguity.

Scheflen distinguishes 3 orders of behavioral integration in communication:

1. First-order communication: simple coordination of activities. People who know, whether consciously or not, the programs of action can perform their joint parts of the program without words or special signals. They simply do what is expected, conjointly and in synchrony. Consciousness is not necessary to the integration.

2. Second-order communication: use of integrational signals. But it is often the case that contingencies or ambiguities arise. Performers do not know precisely what to do or when to do it. Hence, special signals are introduced to modify or integrate the activities. Common examples are the use of a conductor to synchronize parts in a concert or the use of commands, bugles, whistles and other signals to coordinate a battle. The integrational signals can be classified as follows:

- A. *Pacing signals* to regulate the speed of performance; for example, in conversations, head nods and facial expressions provide feedback of the comprehension of those listening.
- B. *Identification signals* from the participants that indicate their roles and capacities in the performance.
- C. *Social integration signals* that monitor deviance and facilitate coordination of performance.
- D. *References to contexts* that indicate external events that require modification in the program.

3. Third-order communication: metacommunication. There are occasions when an interaction may be represented symbolically for someone who is not present, or a participant may learn his part better if the program can be explicated and discussed with him. There has evolved communication about communication C or

metacommunication. As a consequence we can talk about activities not then in progress or speak about them while we are enacting them.

An action that is metacommunicational in function can be as simple as a gesture or a smile. For example, men may smile to indicate that their pummeling of each other is to be regarded as friendly play. Or metacommunication may be as complicated as language.

Metacommunication can be elaborated about any part of a program, any relationship, any outcome.

In the enactment of a program, the communicational and metacommunicational aspects can at least have the following relations:

1. There may be no apparent relationship. The interactants may be performing a task and talking about entirely different matters. For example, a mother may feed her baby while talking to a neighbor about a television show.
2. A metacommunication commentary may be conducted about the program in progress. For example, participants may verbalize what they are doing and evaluate it by some criteria or evaluate and make explicit what others are doing. This is likely to occur when novitiates are being trained or deviants corrected as in psychotherapy.
3. Metacommunication may distort, rationalize, disguise, or draw attention from the rest of the activity of the program, either in conscious guile, unconscious delusion, or because in that culture the actual nature of the task has never been known or visualized appropriately. For example, certain Africans designate their morning and nightly drumming as bringing up and putting down the sun.

The following observation is of special importance regarding human rituals, the meaning and 'choreography' or 'syntagmatic sequencing' of which are mostly fixed by traditions: AWhen one is learning a program, the commentary may be learned with it and henceforth repeated with the formats without knowing why. In this way, linguistic accompaniments that do not represent understanding or insight into the activities may be transmitted from generation to generation. It can be asserted that, in some cases at least, people not only learn how to perform in first order formats, but learn how they are to refer to, think of, feel about programs. This last point has a number of implications for psychological theory. We have traditionally assumed that feelings and thoughts precede and cause behavior; this view opens the possibility that behavior may precede feelings and thoughts, or all may occur simultaneously@ (Schefflen, 1968).

This also means that one cannot rely on asking subjects what they are doing. They cannot adequately tell what they are doing. What they report are feelings about behavior or idiosyncratic or cultural myths about behavior.

PART 2: RITUAL IN 'PRIMITIVE' WAR

The Function of Human War Ritual

Ritual in humans seems to have a primarily apotropaic (anxiolytic) function: it reduces fear and anxiety. It has the effect of coordinating preparations for action among several individuals. It also functions as a means of organizing the perception of reality, i.e., chaos is replaced by order (Kennedy, 1971).

Rituals seem to play an important and even indispensable role in social intercourse. According to Durkheim, societies must periodically "recharge their social and moral sentiments of solidarity" (quoted in P. Smith, 1991). Furthermore, rituals "receive their special character from underlying and overarching semiotic structures that arrange

concepts in patterns of binary oppositions” (P. Smith, 1991). The ritualistic confirmation of an ethnocentric cosmos apparently played a major role throughout the history of war (Meyer, 1993).

Ritual reduces anxiety and fear and institutes confidence, while at the same time giving assurance of ultimate meaning. It reinforces the solidarity of the group by dramatizing its status structure. It strengthens group boundaries, justifies its hostile or defensive activities, and expiates its guilt. It especially supports the warrior values and the warfare process by ceremonially transforming the guilt of killing into self-righteous virtue and strength (Kennedy, 1971).

The fear-reducing function of human rituals may be illustrated by the example of the peaceful Semai. The Semai of the Malay Peninsula live in small bands and consider everything and everyone outside the band as malevolent and mortally dangerous. Robarchek & Robarchek (1998) state: “The forest that surrounds Semai communities is filled with malevolent ‘spirits’, beings and forces that wait only the opportunity to attack and kill human beings. People seldom venture alone into the primary forest, and staying alone in the forest at night is so foolhardy as to be symptomatic of madness. Nearly every activity is hedged with rituals and taboos in an attempt to stave off the omnipresent dangers that menace just outside”. This is contrasted with the Amazonian Waorani (or Auca), whose world view holds few dangers beyond the human threats of witchcraft or a spearing raid. “With no tutelary spirits, few animistic beliefs, and little magic, there are no communal religious rituals or responsibilities to link people together”.

Kennedy (1971) has presented an inventory of preparatory (pre-battle) and post-battle rituals, on which the following account is based.

Preparatory Ritual

Almost all societies perform a series of rituals before they join the enemy in battle which sometimes go on for days or even weeks in advance. We may call these preparatory rituals. The most obvious of these have the overt purpose of protecting the warrior from harm and death. Somehow he must be reassured that he has a reasonable chance of avoiding the fate of ‘all those others’.

- (1) Prayers and offerings are among the most common ritualistic attempts to instill such confidence.
- (2) Giving and wearing of magic amulets (making the warrior invulnerable against the projectiles of the enemy) is another.
- (3) Divination: forecasting the outcome of the fighting (which may include interpretation of omens, dreams and/or visions).
- (4) Warrior ascetism: ritualized sexual abstinence before a battle (lest the fierce warrior be contaminated by feminine substances).
- (5) Sacrifice is another particularly common form of preparatory ritual.
- (6) The vow is a ritual closely related to sacrifice. The vow of revenge, the vow not to return without killing or victory, the vow not to retreat (as in the ‘dog societies’ of the Plains Indians), are common examples.
- (7) Decorations of the body by painting, use of feathers, wearing a uniform etc.
- (8) The ritual rehearsal, where the battle is enacted and won symbolically before the war party sets out.

Warrior ecstasy is an opposite type of ritually induced preparatory behavior. Historically famous warrior ecstasies are the Berserkers of the Vikings, the dreaded *furor teutonicus*, and the Biblical Sampson who, filled with blood lust, in frenzied, trance-like states performed what seemed to be superhuman feats of mass killing. More

common and less spectacular examples of warrior ecstasy are the war dances. The war dance, sometimes intensified by drug taking, serves the overt purpose of final emotional preparation to face the spiritual and physical dangers of the enemy.

Often these emotion-arousing rituals have the effect of irrevocably committing the individual to bravery and self-sacrifice, for who could show his face if he exhibited cowardice in battle after such extravagantly fierce claims, the vows to kill, and the taunting of the less aggressive? Also, what right would he have to share the spoils in the event of victory? The great ritual effort to induce commitment may be seen as culturally developed means for overcoming the subconscious repugnance to killing as well as for reduction of fear (see also Potegal, 1979; van der Dennen, 1980, 1985).

The warrior value system apparently needs a great deal of social buttressing, from early training in fierceness through divine validation and many shaming devices to arousal and fear reducing rituals (Kennedy, 1971; Cf. Andreski, 1964; Chagnon, 1968a; Van der Dennen, 1995; Keeley, 1996).

Post-Battle Ritual

It is after the battle that ritual again reaches a crescendo in primitive societies. We frequently find orgiastic victory dances, in which gloating, bragging and frenzied joyful abandon predominate. Captives are tortured, killed and sometimes eaten. Sexual energies, previously dammed up by ascetic taboos, are released, and food and alcohol are consumed in great quantities. Much of this behavior is of course a kind of ritualized release of tension and fear. "Victory has ever been strong medicine" as Turney-High (1949) puts it.

He further points out that the victory dance restores the upset social equilibrium caused by the war, while at the same time acting as a *rite de passage*, i.e., a return to the normality of daily life roles which were disturbed by the war. A great deal of the ritual following battle is defensive against spirits. Victory is heady, but conversely there are one's own dead to mourn, and retaliatory anger is unleashed on the captives as symbolic equivalents of the killers of relatives and friends. Much of such ritual activity seems clearly to indicate the expiation of guilt, even more than it does relief in the freedom from danger, or the ego-inflating claims of triumph.

Disculpation Ritual

Various kinds of ritual penance after killing were widespread in primitive, as well as in ancient, societies. Fasting, sexual abstinence, and separation were common, as were ritual responsibilities such as sacrifices for vows given. Often the returning warrior was considered sacredly polluted and had to undergo additional purification rituals.

The Pimas, for example, regarded the killing of an enemy to be such a dangerous act that according to some observers a Pima warrior withdrew from battle the moment he killed his opponent to begin his rites of purification, or lustration (Kroeber & Fontana, 1987).

In his *The Golden Bough*, Frazer (1890 et seq.) was the first to acknowledge and summarize the available evidence of the existence of disculpation ritual, taboos and purification ceremonies (or lustration) in the war behavior of 'primitive' peoples. The purpose of the seclusion and the expiatory rites which the warriors who have taken the life of a foe have to perform is, he points out, no other than to shake off, frighten, or appease the angry spirit of the slain man@.

In his *Totem und Tabu*, Freud (1913) was so impressed by these examples of disculpation ritual among primitive peoples that he devoted a chapter to it, and

concluded: “We conclude from all these regulations that in the behavior toward the enemy other than purely hostile sentiments are expressed. We see in them manifestations of repentance, or regard of the enemy, and of bad conscience for having killed him. It seems that the commandment, thou shalt not slay, which could not be violated without punishment, existed also among savages long before any legislation was received from the hands of a God”.

Does Culture Phenocopy Nature?

Davie (1929) considered the sparing of women and children in war to be the beginning of a common law of war and peace. Efforts to confine armed conflict to the fighting male population has also been observed by Eibl-Eibesfeldt (1986) to be part of the institutionalization of rules of warfare that help to avoid unnecessary bloodshed. Cultural evolution, he submits, here phenocopies ritualizations that in the animal kingdom repeatedly led from damaging fights to tournament-like contests (“Wir beobachten ferner die Ausbildung von Regeln der Kriegsführung, die unnötiges Blutvergießen vermeiden helfen, und insbesondere auch das Bemühen, die bewaffnete Auseinandersetzung auf die kämpfende männliche Bevölkerung zu beschränken. Hier phänokopiert die kulturelle Evolution in ganz auffälliger Weise jene Ritualisierungen die im Tierreich wiederholt von Beschädigungskämpfen zu Turnierkämpfen führten. Beim Menschen findet eine analoge Entwicklung zweimal statt C bei den Zweikämpfen mit Waffen und dann beim Kriegführen zwischen Gruppen. Hier sind vermutlich ähnliche Selektionsdrucke wirksam. Bei dieser kulturellen Entschärfung des Krieges dürfte die uns angeborene Aggressionshemmung eine wichtige Rolle spielen” [Eibl-Eibesfeldt, 1986]).

Warfare as Callisthenics and Catharsis: Game-like Wars

Howell (1975) has argued that there are at least three kinds of ‘war’: (1) conflictive, marked especially by balance of forces and tendency toward resolution; (2) without conflict, due to lack of balance of forces or “no effective resistance”; and (3) nonconflictive, the “kind in which neither side is particularly interested in a more or less permanent disengagement”. It is the latter “which is so widely distributed in the anthropological literature, and the type which may be described as a kind of game with moderately high stakes”. His approach is reminiscent of Rapoport’s (1960) distinction between ‘fight like’ and ‘game like’ wars (cf. Speier’s [1941] distinction between ritual, instrumental and genocidal wars; and Van der Dennen’s [1995] distinction between wars of callisthenics, wars of coercion, and wars of carnage).

Rappaport (1968) provides a detailed exploration of intergroup relations among the Maring-speaking Tsembaga and their neighbors in New Guinea. These societies have a fairly complex system of interrelationships, with groups which are close and groups which are traditional enemies. And in the latter case, if for any reason a group is spoiling for a fight, even a minor incident can precipitate one.

The Tsembaga Maring distinguish between minor and serious fights (as do numerous other peoples: many societies all over the world distinguished between some kind of conflictive, issue-related ‘real’ war and something akin to the game-like ‘minor fight’ which was regarded as primarily recreative). In minor fights the offended party issues a challenge, after which allies are recruited and a battleground is selected and cleared. The clearing operation involves both sides but these avoid any encounters in advance of the appointed hour for the fight. At that time the sides line up to fire arrows and

sometimes spears at each other (some informants claimed that hand-to-hand weapons were not even brought to the scene of the fight). Large shields form a barricade from behind which the men pop out to shoot, then leap back to safety. But some men deliberately exposed themselves to enemy fire to show their bravery; casualties were not numerous and deaths were infrequent, “for the unfledged arrows of the Maring seldom kill”. Rappaport suggests that such minor fights may serve to end a quarrel before it gets out of hand. They permit time for “tempers to cool while satisfying the bellicose imperatives of manhood”.

Turney-High (1949) was appalled by the evident lack of military sophistication of North American Indians and other warriors who nearly always yielded to “the temptation to accomplish useless little victories, the slaughter of one man or the crushing of one small party... so that more often than not no real advantage is acquired by the victor nor permanent injury done to the defeated”. Kroeber (1925) reported that the California Indians “delivered mass fire, but the extreme range made it notably bloodless. They even went so far as to take poorer arrows to war than they used in economic hunting”. With the Californians and Columbians war was really a form of amusement; it consisted merely of duels, and the two ‘armies’ danced and sang at the battle. It was good fun and they enjoyed it (Kroeber, 1925; Hoebel, 1949). Such reports inspired Turney-High to charge that most Californians “were too cowardly to make fighting men”.

But in such examples there is no evident interest in seeking a resolution by either victory or a peace pact, because the purpose of the war games is to demonstrate bravado, if not courage (Howell, 1975).

War for adventure or sport is commonly reported among preliterate societies. Certain Australian tribes occasionally sent out expeditions, ostensibly to procure medicinal plants and minerals such as red ocher hundreds of miles away. They usually had to fight their way through tribes on whose territory they trespassed and returned with thrilling tales of adventure rather than with valuable commodities.

Malinowski (1920) writes of the Trobriand Islanders: “The mere fact of fighting as a sport, and the glory derived from a display of daring and skill, were an important incitement to warfare”.

“Among peoples who esteem the military life, expeditions are sometimes launched for the sheer fun of it. Young Plains warriors were actually disappointed when older chieftains called off prospective fights through peace parleys. War can be loved by those who play it as a game and are willing to pay the croupier, Death” (Hoebel, 1949). The Californian Yuman tribes apparently needed no immediate provocation because they fought for the pleasure and excitement fighting produced (McCorkle, 1978).

These milder forms of war have also been interpreted as providing an opportunity for working off aggressive impulses without danger to the social solidarity or economic welfare of either of the contending parties (e.g., Howitt, 1904; Hoijer, 1929; Wedgwood, 1930).

It has been observed time and again that war may provide an escape from debilitating tedium and *ennui*, from the monotony of the routine of everyday-life, frustration, and existential insignificance. “War is one of the most effective devices ever invented for this cathartic purpose” (Turney-High, 1949).

As Andreski (1964) remarked: “For a vigorous man, war may appear very attractive as an alternative to exhausting monotonous work and grinding poverty. The ‘heroic’ narrative poetry from the *Iliad* and the *Nibelungenlied* to the *Mahabharatta* is full of glowing pictures of the life of warriors, amusing themselves with gambling, wine, women and song, and basking in glory, which stands in strong contrast to the abject fate of toilers”.

“Men like war” Davie (1929), and more recently Van Creveld (1991), stated rather

apodictically and generalizingly. “They often fight for the love of excitement or the mere lust of fighting. While it is true, as someone has said, that anyone will fight when he is mad enough, it is also a fact that men will fight when they are not aroused, but just for the fun of it. War offers diversion and relief from *ennui*. It provides a mode of escape from the monotony of a dull existence. Primitive life seems to afford scanty amusements and means of recreation; the savage is so engrossed in a severe struggle for existence that his life leaves little room for diversion. Hence men like to fight. The most exciting things they know are hunting, herding, and warfare. These are the occupations they enjoy, and their pursuit affords a considerable measure of satisfaction and pleasure” (Davie, 1929).

Kwakiutl warfare was seasonal, and while the tactics involved surprise, ambush, and trickery, the warfare generally “was ceremonialized... and the object of a whole expedition could be gained by one killing and the taking of a single head. What actual violence occurred was dramatized superbly and outrageously” (Codere, 1950). Gearing (1962) noted the seasonal nature of warfare in the Great Smokey Mountains. Howell (1975) observed: “As there was no obvious strategic or tactical reason for the 18th-century Cherokee to fight during the fall or winter, it seems likely that more urgent matters, such as planting, harvesting, and communal repair activities took precedence the rest of the year. Many activities are necessarily curtailed during the winter, but the social calendar was still open. Winter was used for the used for the GAME of war, with prestige the principal reward for the player-warriors. This interpretation gains support from Gearing’s observation that ‘Occasionally, without regard to season, it was necessary to revenge a murder or to exert pressures to prevent a wrongful marriage’. That is, real grievance or real conflicts were dealt with promptly, as we might expect. And during the war season the opponents were selected at council meetings. The decision to fight was understood: what remained was to fix the target. The aggression was teleological rather than instrumental (i.e., rather than part of an attempt to solve a problem outstanding between the home team and the group to be attacked). The situation changed after about 1730, when the presence of colonial powers had the effect of linking much warfare with actual conflict situations” (Howell, 1975).

Evidence for the ritual character of war may also be found in statements that the society involved warred or feuded, *and* traded, *and* intermarried with their ‘enemies’. For example, Silver (1978) states of the Californian Konomihu (living near the Shasta): “Although the Konomihu feuded with the Scott Valley Shasta... they traded leggings and robes to them and intermarried with them”. Such observations are not scarce in the ethnographical literature (a number of them have been collected by Keeley, 1996; and Van der Dennen, f.c.).

Turney-High (1949) emphasized the psychological attractiveness of the sheer fun of recreational warfare especially if it is combined with the cathartic function of tension-releasing warfare: “War is the most exciting exercise in the world. The real struggle of fighting is more thrilling than the mock opposition of games; the real man-hunt is incomparably more stimulating than the slaughter of animals. War is the great trigger-release of pent-up emotions, and it is apparent that more than one tribe has realized this. The Winnebago, for example, recognized that war affords an excellent release when the load of sorrow becomes too great to be borne (Fletcher & LaFlesche, 1906)”. Among the headhunting peoples of the Philippines, such as the Ilongot, a death in the household, and the subsequent period of mourning, was among the chief conditions that would make a man wish to “relieve his heart” (Rosaldo, 1970; LeBar, 1975) by raiding for a head.

“Many tribes, indeed, were more realistic in conceiving of war as a flight-from-grief device than we are” (Turney-High, 1949).

War stories are still the most entertaining stories, and in order to spin yarns there must be wars. Wissler’s (1906) discussion of the Blackfoot makes this clear. With them the military yarn was the most important form of entertainment, and the Blackfoot insisted that it be a true one. Plains life was probably very monotonous, and therefore the successful warrior had not only provided pleasure for himself in manhunting but was a public benefactor in relieving the *ennui* of his fellow-tribesmen.

Much primitive war was more of an athletic than a military exercise. Of course, one sought to kill a human and risked being killed himself, but dangerous games have always been the most fun, especially those which look more dangerous than they are. When a Plains warrior got more honorable *coups* for slapping a living enemy in the face, for being first to whip a corpse, for taking a bow or blanket from a living man than for slaughtering a hundred troublesome enemies in ordinary battle, he was indulging in an athletic event, not war.

California informants admitted as much to Kroeber (1925). They knew that war looked more dangerous than it was. These tribes knew how to make stone arrow points, for they used them in hunting. Yet, they carried headless arrows to war. Warriors would return from an engagement bristling like pin-cushions. Their wives would pull out the simple wood arrows, and they would live to ‘fight’ another day.

Landtman (1927) points out that the inter-clan and intra-village hostilities in Papua were exercised with much self-restraint. They were generally held at night by the light of torches held by women. The observer might think that the battle was frightful from the noise and expenditure of rage, but deadly missiles were aimed at the legs and deaths were rare (Turney-High, 1949).

Unless viewed from the standpoint of a game, Turney-High (1949) comments, the whole thing seemed impossibly futile. Harris (1978) and Ferguson (1984) have (not very convincingly) criticized the ‘war as play’ explanation of primitive war.

Multiphase War Processes as Assessment and Escalation

Primitive War as a Harmless Pastime?...

There are many misunderstandings about ‘primitive’ war. On the one hand, Dyer (1985) and many others such as Montagu (1976), consider primitive war to be a relatively harmless pastime because it was ritualized to a large extent:

“[A]most all of them [hunting-and-gathering cultures] have the same attitude toward ‘war’: *it is an important ritual*, an exciting and dangerous game, and perhaps even an opportunity for self-expression, but it is not about power in any recognizable modern sense of the word, and it most certainly is not about slaughter” (Dyer, 1985; p. 6; italics added).

“They were almost all continuously involved in low-level warfare against their neighbors in their spare time, but nobody thought ‘winning’ was sufficiently important to put much thought into organizing warfare efficiently; rather, it provided justification for the fact that the warriors ran everything, and gave meaning to their lives.

This sort of tribal warfare is almost always very limited and bound by ritual. ‘Battles’ are often prearranged, but once they begin, they are not much more than the sum of the individual actions of many warriors acting on their own without direction or coordination. The fighting often stops for the day after one side has exacted a death, with the losers mourning their loss and the other side celebrating its victory within sight of each other. There are often deliberate steps taken to ensure that the killing does not get too efficient” (p. 9; italics added).
“Though *precivilized warfare served various ritual and magical purposes* and may have had broader social functions, it was predominantly a rough male sport for underemployed hunters, with the kind of damage-limiting rules that all competitive sports have” (p. 10; italics added).

Dyer (1985) explains why among hunter-gatherers, living in societies essentially confined to a single band, warfare would not be expected to be a bloody affair. These peoples were, he submits, rarely capable of imagining a degree of coordination that would make it possible to conquer another band and hold its territory, nor indeed would there have been much point. Other bands had few material possessions worth seizing, slaves were practically valueless in that sort of subsistence economy (where they could do little more than feed themselves), and additional territory was generally of only marginal use to migratory hunters.

Similar views have also been expressed by numerous cultural anthropologists and others, though they are, in fact, erroneous. These views do not take into account (1) the lethality of ‘raiding’ as the mode of warfare much more prevalent than pitched battle and conventional combat. Both Van der Dennen (1995) and Keeley (1996) provide numerical and circumstantial evidence of the astonishing number of casualties and the devastating destruction of primitive raiding; (2) the fact that even a pitched battle might turn into a massacre at the moment one party realizes its numerical or technological superiority; conventional combat may more appropriately be regarded as a low-cost means of assessing the (numerical) strength and determination of the adversary. Vayda provided empirical evidence for the idea that ritualized warfare (pitched battle) may rapidly change into lethal warfare if the odds change (*vide infra*).

Or ‘Primitive’ War as guerre à l’outrance?...

On the other hand, Keeley (1996) argued the exact opposite position: ‘primitive’ warfare was even more lethal and destructive than its contemporary counterpart because it was not ritualized at all:

As we have seen, the very deadly raids, ambushes and surprise attacks on settlements were the forms of combat preferred by tribal warriors to the less deadly but much more complicated battles so important in civilized warfare. In fact, primitive warfare was much more deadly than that conducted between civilized states because of the greater frequency of combat and the more merciless way it was conducted. Primitive war was very efficient at inflicting damage through the destruction of property, especially means of production and shelter, and inducing terror by frequently visiting sudden death and mutilating its victims. The plunder of valuable commodities was common, and primitive warfare was very effective in acquiring additional territory, even if this was a seldom professed goal.

Primitive war was not a puerile or deficient form of warfare, but war reduced to

its essentials: killing enemies with a minimum of risk, denying them the means of life via vandalism and theft (even the means of reproduction by the kidnapping of their women and children), terrorizing them into either yielding territory or desisting from their encroachments and aggressions. At the tactical level, primitive warfare and its cousin, guerrilla warfare, have also been superior to the civilized variety. It is civilized warfare that is stylized, ritualized, and relatively less dangerous. When soldiers clash with warriors (or guerrillas), it is precisely these 'decorative' civilized tactics and paraphernalia that must be abandoned by the former if they are to defeat the latter. Even such a change may be insufficient, and co-opted native warriors must be substituted for the inadequate soldiers before victory belongs to the latter...

Primitive warfare is simply total war conducted with very limited means...

Primitive war is 'war to the knife', *guerre à l'outrance*. (Keeley, 1996)

These two extreme positions may be reconciled somewhat by taking into account the following observations.

In a number of recent anthropological studies of warfare, different grades of violence have been distinguished, separate causes have been sought for fighting at each grade, and, in some cases, escalations from grade to grade have been noted (e.g., Warner, 1930; Otterbein, 1968; Chagnon, 1967 et seq.). Vayda (1971; 1974) describes a multiphase war process operating among the Maring of eastern New Guinea. The significant features of this process include the following: (1) The later phases of the process, that involves heavy mortality and sometimes leads to territorial conquests, cannot occur unless preceded by periods of weeks or months marked by rather ritualized hostilities in which mortality is low; (2) Escalations from phase to phase in the war process are not inevitable; (3) The causes of entry into war are not the same as the causes of escalation from one phase to another of the war process.

Evidence from case studies (Vayda, 1970; 1971) raises serious questions about the validity of cross-cultural or cross-societal studies that depend on the fixed assignment of the warfare of various societies to one or another of a limited number of such categories as 'revenge warfare'. The case studies point to the possibility that the ethnographic reports on which the assignments to the categories are based may be describing the causes of only the first phases of war processes; fighting for blood revenge, magical trophies, or sacrificial victims can become something else if there is escalation to the later phases.

This insight, that relatively ritualized agonistic war may escalate into instrumental or even genocidal war, is Vayda's most valuable contribution to the study of preindustrial warfare. A war of callisthenics may escalate into a war of coercion or a war of carnage, in a process of constant assessment and testing of disparities between the belligerents.

Durham (1976) suggested a selectionist explanation of the multiphase war process. Selection (i.e., natural plus cultural selection) may favor the use of low-cost 'assessment' tactics in the early phases of war. This strategy would allow the participants to assess the capability and motivation of their opponents without an immediate risk of large losses. Escalation would be expected only where earlier, less costly tactics seem insufficient to ensure net gain or where increased belligerence is necessary to prevent large losses to an escalating opponent. Finally, belligerents may actually be able to redefine the situation and the war aims, and expand their potential resource benefits in the course of conflict.

Notice that this explanation parallels in considerable detail Clutton-Brock et al.'s analysis of the ritualized stages of escalation in the agonistic behavior of red deer as a process of mutual assessment of fighting potential.

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