

# *Primate Social Conflict: An Overview of Sources, Forms, and Consequences*

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Social order and social conflict always are continuing, simultaneous aspects of interaction among individuals and groupings in every society. There is no society without some conflict. Without some order, there is no society.

If one can adequately explain conflict, he will also have advanced our knowledge of order; if he can adequately explain social order, he will have helped us to understand conflict.

(Williams 1970)

Virtually all primates live in organized social groups, the forms of which vary widely across species and much less within species. Some species are characteristically found in groups containing a single adult male together with several females and their offspring. Other species live in groups that include multiple adult males and females and immature animals at all stages of development. A few species favor social

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systems in which a single pair does all the mating, while all other adults are excluded from the group or participate in caring for the young.

A central and continuing concern in the study of primate social behavior is to understand the sources of order in these groups. What processes produce the differences among species in social organization? How are groups formed? How do they maintain themselves as social entities? How capable are they of accommodating to demographic changes brought about by births, deaths, defections, or the perturbations caused by untoward environmental events? What manner of adaptive benefits are conferred by a given form of social organization, and how are they achieved?

Although such questions call for different approaches and make use of different explanatory models, they share the assumption that social organizations are the emergent products of dynamic social processes. The collective order is in some manner created and maintained by interactions among the individual constituents. Together, they form the society. Together, they determine who will be included or excluded as members of the group, and they establish the place which each individual will occupy in the dynamic web of social relationships. In this ongoing pattern of mutual influence, adjustment, and control, the individual is, at once, agent and object, acting while being acted upon.

#### SOURCES OF SOCIAL CONFLICT

Given this basic feature of primate social systems and the high degree of behavioral autonomy of the individual primate, the likelihood is great that conflict will occur. The potential sources of conflict are many. Conflict may occur whenever two individuals are seeking the same thing at the same time and both cannot be satisfied, or because one individual wants or anticipates something from another who is unwilling or unable to comply (Coombs 1987; Hand 1986). Social conflict may be the result of actions that are ambiguous, moods or intentions that are disregarded or misinterpreted, or motives that are ambivalent or fundamentally incompatible (see Mason in this volume). The potential for conflict is multiplied as group size increases,

not only because of the additional number of participants, but also because the possibilities for the formation of factions and coalitions increase (see Itoigawa in this volume; Noë, 1986; Silk in this volume).

Awareness of the prevalence of social conflict in the daily life of nonhuman primates has been sharpened by the growing body of information on the life-span development of known individuals within established social groups. For examples, see Altmann and Altmann 1970; Altmann et al. 1985; Goodall 1975; Itoigawa in this volume; Rawlins and Kessler 1986; Rhine 1986. These data have drawn attention to the number and types of social problems that an individual is likely to encounter at the level of daily intercourse throughout its life, and in more intense form as it negotiates passage through major social transitions from weaning and the birth of younger siblings, adolescence, mating and the care of young, and extending into late maturity and senescence. For examples, see Abbott in this volume; Andrews et al. in this volume; Anzenberger in this volume; Hinde 1983; de Waal in this volume; Mason et al. in this volume; Mendoza and Mason 1986; Menzel in this volume; Norton 1986; Rawlins and Kessler 1986).

Another development that has helped to make social conflict more salient is an improved understanding of the subtlety and complexity of social relationships and their powerful effects on the participants (Anderson and Mason 1974, 1978; Hinde 1983; Mendoza in this volume; Mendoza and Mason 1989; Mendoza et al. 1991; Sapolsky in this volume). The dynamic processes involved in the formation and maintenance of relationships can readily put individuals in a place where their interests do not coincide. Indeed, given sufficient time, the elements of rejection, resistance, or indifference are bound to emerge in some form in any active relationship—even those in which the level of mutual satisfaction is high (Anzenberger in this volume; Menzel in this volume). Moreover, primates rely extensively on their knowledge of other individuals in the regulation of their social lives (Anderson and Mason 1974, 1978; Cheney et al. 1986; de Waal in this volume). Such information, however it is acquired, is an imperfect and fallible guide to social conduct and can easily lead to conflict (Mason in this volume).

A critical element in our current understanding of the sources of social conflict has been provided by sociobiological theories. Sociobiol-

ogy is based on the assumption that natural selection has favored individuals who act so as to maximize their own fitness. From this perspective, social conflicts are anticipated whenever the genetic self-interests of interacting organisms diverge. As sociobiological arguments have emphasized, this condition is quite common. The potential for conflict exists, not only with respect to competition for access to mates and essential resources—which has always been recognized as conducive to conflict—but also in relationships in which conflict may seem intuitively unlikely, such as between breeding pairs, between siblings, and between parents and offspring (Maynard Smith 1974; Tiger in this volume; Trivers 1972, 1974). From a sociobiological perspective natural selection should also favor the evolution of strategies to avoid, mitigate, or resolve social conflicts. Such strategies are particularly likely to be manifest in relationships in which the participants have a stake in tempering or eliminating the conflict because, for example, they are close genetically, are mutually dependent, or risk being injured.

In spite of the seminal contribution of sociobiological theory, the utility of any evolutionary approach to empirical studies of primate social conflict is necessarily limited. A major source of this limitation is that evolutionary strategies are abstractions—generalized scenarios referring to the actuarial properties of populations—rather than the actual moment-to-moment behavior of individuals. Instances of social conflict are not generated by incompatible evolutionary strategies, but by interacting animals who operate in the here and now, who lack prescience, and who do not always act in their own best interests. An essential complement to sociobiological theory is information on the proximate sources of conflict and the factors that determine its frequency, intensity and form.

#### FORMS OF SOCIAL CONFLICT

In view of the ubiquity of social conflict, the richness and variety of its sources, and its powerful influence on social life, it is remarkable that it has so rarely been treated as a distinct and important topic in animal research. This is not to say that all forms of social conflict have been neglected. Aggression, in particular, has received a huge amount of

attention in both the scientific and popular literature. Indeed, in many quarters, aggression is treated as though it were synonymous with social conflict. It is not. Although aggression is a salient aspect of social conflict, it is only one part of a much broader range of phenomena, and not necessarily the most important part at that. One suspects that the preoccupation with aggression says more about our understandable concern with the extravagant human capacity for violence and mayhem than about the actual frequency of aggression or its significance in the social world of nonhuman primates.

Conflict, rather than aggression, is the generic concept. It is an inherent and protean accompaniment of life in organized social groups. Our common vocabulary for describing social interactions is replete with terms referring to different forms or degrees of social conflict. Individuals resist, coerce, and impose upon one another; they clash, compete, work at cross purposes, disagree, and have falling-outs; they may also negotiate, resolve, compromise, or reconcile their differences. Although such terms usually refer to human behavior, many are applicable to the behavior of nonhuman primates, as the chapters in this volume amply illustrate.

Conflict may also occur within an individual. This form of conflict is not specifically social. As the early ethologists pointed out, however, intraindividual conflict is frequently present in a social context (Tinbergen 1952). This is the case, for example, when an individual is simultaneously motivated by two incompatible drives such as flight and attack. Intraindividual conflict has also been investigated extensively in experimental animal behavior laboratories (Brown 1971; Miller 1944, 1982). Generally speaking, cognitive complexity is conducive to intraindividual conflict. The greater the diversity of stimuli that an organism is able to register, the larger its repertoire of responses for acting on such stimuli, and the more elaborate its cognitive processes, the more frequently it will encounter decision-making conflict (Berlyne 1960). Small wonder that conflicts are so common among group-living primates!

#### CONSEQUENCES OF SOCIAL CONFLICT

Responses to conflict are as diverse as one might expect, given the vari-

ety of its sources and forms, and they can have important biosocial consequences. We know from our own experience that being involved in social conflict often produces a state of acute discomfort or distress. Apparently, this is also the case with monkeys and apes. An animal may respond to the unpleasantness of conflicts by quitting the field, intensifying its original pursuit, accommodating to the resistance which it encounters, or aggressing against another. Its options are many. Whatever the immediate response to social conflict may be, however, it can have significant long-range consequences for all participants, both individually and in respect to their future relations with one another.

Social conflicts may be brief, one-time episodes, or they may be prolonged or repeated frequently. It is reasonable to assume that the effects of chronic or recurrent social conflict can be cumulative and potentially harmful to the individual, owing to persistent activation of the catabolic processes associated with the stress response (Weiss 1972). Experimental evidence demonstrating pervasive and damaging physiological effects of chronic social conflict is available for rodents and tree shrews (Henry and Stephens 1977; von Holst 1977, 1985). With respect to primates, the indications are clear that periods of social instability—during which conflict is probably frequent—are associated with persistent and potentially pathogenic changes in some individuals (Kaplan et al. 1983; Manuck et al. 1988; Sapolsky 1987, and in this volume).

The destructive potential of social conflict has presumably contributed to the evolution of ways to forestall or mitigate its deleterious consequences. Conspicuous among these are various species-typical ritualized behaviors shown by all primates. Such behaviors are particularly likely to be associated with conflict. In social situations they apparently convey intolerance, submission, friendly intent, reassurance, and so on. Ritualized behaviors tend to elicit appropriate complementary responses. This has given rise to the idea that certain social conventions or rules govern interactions during conflict and serve to establish or preserve potentially valuable relationships (de Waal in this volume; de Waal and Yoshihara 1983; Kummer 1975; Maxim 1976, 1982; Mendoza in this volume; Mendoza and Barchas 1983).

An intriguing possibility is that some social situations in which the potential for conflict is great may reduce this potential by the adap-

tive strategy of causing changes in physiological regulatory systems. For example, the physiological suppression of reproduction in young adult or subordinate members of social groups of talapoin or marmosets could effectively eliminate sexual competition between potential rivals (Abbott in this volume; Hansen et al. 1980). Likewise, physiological differentiation among males during initial formation of dominance relations may be an evolved strategy that reduces competition and conflict by altering metabolic processes and behavioral tendencies among otherwise similar animals (Mendoza in this volume and 1984; Mendoza and Mason 1989).

Conflict may also contribute to social order as a creative and positive force (Lyons in this volume). The possibility that conflicts can promote psychological development and strengthen social bonds has been recognized by a number of influential theorists. A common ingredient in this notion is the idea that conflict generates tension or energy that is an impetus to growth and innovation. John Dewey described conflict as "the gadfly of thought" (Dewey 1930, 200). Jean Piaget hypothesized that peer conflict caused cognitive conflict, which was a major impetus to cognitive development (Shantz 1987). Erik Erikson characterized human psychosocial development as a sequence of stages, each involving a nuclear conflict that "...adds a new ego quality, a new criterion of accruing human strength" (Erikson 1963, 270). The social theorist, Georg Simmel, viewed social conflict as a form of socialization and a necessary factor in maintaining group integrity (Cosser 1956). In contrast to these theorists, students of animal behavior have tended to emphasize the negative consequences of social conflict. There are some exceptions, however. M. R. A. Chance, certainly among the first to call attention to the unique importance of conflict in primate societies, suggested that social conflict played a significant role in the evolution of primate intelligence (Chance 1966; Chance and Mead 1953). Konrad Lorenz also recognized the positive role of conflict as a force in evolution and believed that "...the personal bond, love, arose in many cases from intraspecific aggression, by way of ritualization of a redirected attack or threatening" (Lorenz 1966, 217). At a more proximate level, primatologists have hypothesized that conflict makes a positive contribution to social order by

increasing interpersonal attraction, creating social bonds, and strengthening group cohesion (Chance 1955, 1963; de Waal 1986; de Waal and Yoshihara 1983; Kummer 1971; Mason 1964).

## CONCLUSIONS

Our view of conflict as an important factor in the social life of animals has been enlarged by primate research. Beyond the occasional dramatic clash between antagonists, the concept has been extended to include the commonplace. Conflict is seen as a normal and recurrent feature of social life, varied in its causes and manifestations, but nonetheless consequential for the participants.

As the chapters in this volume illustrate, the study of social conflict has much to offer toward understanding the sources of order in primate societies. Conflict differentiates roles within organized groups. It leads to changes in reproductive potential and physical well-being. It is a daily accompaniment of such mundane processes as selecting travel routes, choosing to lead or to follow, and deciding where or when to settle down for the night. Most likely, conflict contributes to the evolution of rituals and rules of social conduct, and gives rise to the phenomena of interpersonal attraction, charisma, and social bonds. It is difficult to imagine a stage in the life of the individual primate into which social conflict does not intrude.

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