RECONCILIATION AND REDIRECTED AFFECTION
IN RHESUS MONKEYS

by

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(With 3 Figures)

(Acc. 15.I.1983)

Introduction

The occurrence of reconciliations among chimpanzees, reported by DE WAAL & VAN ROOSMALEN (1979), has recently been regarded as one out of several indications that these great apes have entered a cognitive domain which sets them apart from almost all other animals. The suggestion is that reconciliations depend on introspection and self-awareness (GALLUP, 1982). While not denying that chimpanzees may possess these mental abilities and may use them in a great variety of social contexts, we wonder whether these abilities are necessary to explain the phenomenon of reconciliation. The minimum requirements seem rather simple: a) individual recognition, b) a good memory ("who was my opponent?") and c) conciliatory tendencies.

The first two capacities are definitely present in many animal species, not only primates. The third requisite may have more to do with a species' social temperament than with its cognitive powers. It may be absent in solitary animals, but one would expect that animals living in groups or pairs would benefit from mechanisms to restore peace in an active way, rather than depend on time to heal their "wounds".

The study of post-conflict behavior may assist our understanding of social cohesion, conflict resolution and tension reduction. DE WAAL (in press) discusses the theoretical ramifications of the subject, and tries to integrate them in a 'reconciled hierarchy model'. This model is partly

1) This study was supported by NIH grant RR-00167. We are grateful to Lesleigh LUTTRELL for assistance with data analysis, Mary SCHATZ and Jackie KINNEY for preparation of the manuscript, Catherine MARIN for the French summary, and Janet BALLWEG for drafting the illustrations. This article is publication number 22-021 of the Wisconsin Regional Primate Research Center. Address: 1223 Capitol Court, Madison, WI 53706, U.S.A.
based on some "old" ideas from the ethological literature (e.g., CHANCE, 1961; ALTSMANN, 1962; MASON, 1964; LORENZ, 1966; SCHENKEL, 1967). The central point is that social attraction forms an integrated part of dominance-subordinance relationships, i.e., that such relationships reflect a compromise between agonistic and socially positive tendencies. The model is presumed to be applicable to a wide range of animals. The present study investigates whether the rhesus monkey, *Macaca mulatta*, is also a possible candidate. The species is of interest as it has the reputation of being aggressive and intolerant. But maybe even this primate shows some "hedonic" tendencies.

We shall address the question: "Do rhesus monkeys reconcile?" That is, do former opponents seek friendly contact with each other after their conflict? The mere regular occurrence of post-conflict contacts between opponents is not sufficient, because in a species with a bad memory or lack of individual recognition one would also expect such contacts to happen. We must know how the probability that monkey A contacts B is affected by a preceding A-B conflict, and also whether their first post-conflict contact is behaviorally different from contacts in other contexts. In other words, do we have any reason to believe that there is a connection between conflicts and subsequent inter-opponent contacts?

Although there are some indications for the existence of this connection in other species, both primates (e.g., McKENNA, 1978; SEYFARTH, 1976) and non-primates (e.g., RASA, 1977; PFEFFER, 1967), the only systematic investigation of the specific problems outlined above was that by DE WAAL & VAN ROOSMALEN (1979). They found evidence that after an agonistic interaction chimpanzees preferentially made contact with former opponents rather than with third parties, and that the most characteristic behavior between former opponents was a mouth-mouth kiss. These contacts were labelled 'reconciliations'. The term refers to an objectively definable interaction type, but it admittedly has a strong human psychological connotation. Similar anthropomorphism is present in more familiar terms such as threat, submission and appeasement. We concur with ASQUITH (in press) when she concludes that ethologists have always used the human referent as an important heuristic aid to theory-formation.

The observation methods used in this rhesus study are essentially the same as those of DE WAAL & VAN ROOSMALEN (1979), but we have added a series of control observations. This allows for a more conclusive interpretation of the data, and also for an analysis of some general effects of aggression on subsequent social interactions in the group.