THE CHOICE OF POST-CONFLICT INTERACTIONS IN WILD CHIMPANZEEs (PAN TROGLODYTEs)

by

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Summary

Some costs of conflicts remain after an aggressive interaction has been terminated. Post-conflict management in social living animals can reduce those costs by means of a variety of interactions implemented after aggression (e.g. reconciliation, consolation, redirected aggression). Each post-conflict interaction (PCI) provides different advantages and disadvantages, although the functions may sometimes overlap. Individuals can therefore choose a PCI to achieve the most favourable outcome within a given conflict situation. We examined 876 dyadic aggressive interactions among 18 wild chimpanzees (Pan troglodytes verus) of both sexes in the Taï National Park, Côte d’Ivoire. We investigated which conflict-condition led to which type of PCI and related the choice of PCI to its advantages and disadvantages. Taï chimpanzees used reconciliation to resolve conflicts among high value partners and when approaching the former opponent was unlikely to entail further aggression. Consolation seemed to substitute for reconciliation, when were opponents low value partners or approaching the former opponent was too risky, such as when further aggression was likely. Taï chimpanzees renewed aggression after undecided conflicts and when losers were unexpected. They used

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2) We thank the ‘Ministère de la Recherche Scientifique’, the ‘Ministère de l’Agriculture et des Ressource Animales’ of Côte d’Ivoire, the director of the Taï National Park and the ‘Projet Autonome pour la Conservation du Parc National de Taï’ for permission to conduct this study. We also thank the ‘Centre Suisse de la Recherche Scientifique’ in Abidjan, the staff of the ‘Station du Centre de Recherche en Ecologie’ and of the ‘Projet Chimpanzé Tai’, especially Kpazahi Honora Néné and Nohon Gregoire Kohon, for support in Côte d’Ivoire. We are grateful to Daniel Stahl and Gunter Weiss for their statistical advice, to Elainie Madsen, Martha Robbins and Linda Vigilant for constructive comments. Special thanks are due to Cathy Crockford for constant stimulating discussions and encouragement. This research was funded by the Swiss National Foundation and the Max Planck Society.
redirected aggression after long conflicts, possibly because friendly PCIs were likely to fail. However, Taï chimpanzees continued with business as usual when conflicts were very short, and they avoided further interactions when the accessibility of the resource was unlimited. Taï chimpanzees appeared to follow a clear-cut evaluation process as they seemed to weigh advantages against disadvantages for the appropriate choice of PCI.

Introduction

Aggression disturbs the relationship of conflict partners and induces social tension within social groups (Cords, 1992; Aureli et al., 1999; Matsumura & Okamoto, 2000). Such costs of conflicts remain present even after the aggression has ended. Post-conflict management is believed to reduce the costs of conflicts for social living animals. Post-conflict interactions (PCI), which in brief is the first interaction of a conflict partner subsequent to aggression, can either reduce those costs (e.g. stress reduction: Cords & Aureli, 2000; limit damage to a disturbed relationship: Aureli & Smucny, 2000) or can prevent further aggression (Aureli et al., 2002). Yet, while PCIs represent an advantageous mechanism for social living animals, serious disadvantages may also be accrued (Watts et al., 2000; Aureli et al., 2002). Conflict partners may become trapped in further aggression when, for example, approaching former opponents for reconciliation (Aureli & van Schaik, 1991b; Cords, 1992). Conflict partners can choose from a pool of PCIs that consist of several affiliative or aggressive PCIs, carried out with former opponents or third parties (Aureli & de Waal, 2000). Therefore selecting an optimal PCI requires an evaluation of both the advantages and disadvantages. Individuals choosing a PCI are viewed as going through a decision-making process. The terms decision and choice do not necessarily imply a conscious reasoning process, rather individuals can switch between different behavioural possibilities.

Within group aggression erupts when individuals compete over food, mating partners, social partners or privileges of access to resources (Huntingford & Turner, 1987; Mason & Mendoza, 1993). Subsequently to aggressive interactions, which we will refer to as conflicts, PCIs can be implemented. Conflict partners can choose from a pool of PCI including reconciliation, solicited consolation, renewed aggression and redirected aggression, while in addition conflict bystanders can offer consolation or attack conflict partners (Aureli & de Waal, 2000). Alternatively conflict participants may avoid any further interaction (‘no PCI’). Each of the seven options (six PCIs + ‘no