

Within-Group Behavioural Consequences of Between-Group Conflict: A Prospective Review

Andrew N. Radford, Bonaventura Majolo & Filippo Aureli

Supplementary Material

Supplementary Table 1. Definitions of key terms used in the paper.

| Term | Definition |
|--------------------------------|---|
| Affiliation | The exchange of ‘friendly’ behaviour, such as allo-grooming, allo-preening, gentle body or muzzle contact, embraces and vocalisations. Used post-conflict, these behaviours can reduce anxiety, re-establish/strengthen relationships, act as a reward, be used as a trading commodity or help console. |
| Aggression | Attacks with or without physical contact on other individuals (including herding behaviour). Can refer to initial conflict (within or between groups) and post-conflict behaviour. Post-conflict aggression may be a by-product of increased anxiety or be used to deflect attention, punish free-riders or reduce between-group emigration and mating. |
| Bystanders | Animals not involved in the conflict (i.e. non-combatants), who have witnessed the conflict. |
| Combatants | Individuals involved in a conflict. In the context of within-group conflicts, this includes both former opponents and third-party supporters; in the context of between-group conflict, this refers to all group members who interacted aggressively with conspecifics from outside the group. Combatants can subsequently be involved in post-conflict behavioural interactions with other combatants and/or non-combatants. |
| Conflict | An aggressive interaction between two or more animals. It can occur between two members of the same group (within-group conflict) or between two or more conspecific animals belonging to different groups (between-group conflict), and can be of variable intensity. |
| Conflict-management strategies | Behaviours that have evolved to minimise the likelihood of within-group or between-group disagreements escalating into conflicts, and behaviours that have evolved to mitigate conflicts in the aftermath. |

| | |
|-----------------------|--|
| Consolation | Post-conflict affiliation initiated by bystanders towards former combatants, which reduces the former combatant's post-conflict anxiety. |
| Former opponent(s) | In the aftermath of a conflict, the individual(s) who has recently exchanged aggression/submission (i.e. former aggressor and former victim); a subset of combatants. |
| Free-riders | Group members who gain benefits from the actions of others, without paying the costs of being involved themselves. |
| Herding | Aggressive action (usually by males) that prevents emigration or mating with animals from different groups (by females). |
| Intensity of conflict | Conflicts vary depending on the type of aggressive pattern displayed (ranging from long-distance threatening displays to physical attacks). |
| Non-combatants | Individuals not involved in the conflict. May have witnessed the conflict (bystanders) or may have been elsewhere (non-bystanders). They may be involved in post-conflict behavioural interactions with combatants and/or other non-combatants. |
| Outcome of conflict | A conflict can have a clear-cut result (i.e. one or more winners and one or more losers) or be undecided, depending on whether uni-directional aggressive and submissive behaviours are displayed. |
| Out-group threat | Threat posed to group members by one or more conspecific individuals from outside the group. |
| Post-conflict | The aftermath of a conflict where changes in the aggressive or affiliative behaviour can be observed. Traditionally, research on post-conflict behaviour has focused on the first 10–60 min after a conflict. |
| Redirected aggression | Post-conflict aggression from former victims towards non-combatants. A special case of redirection is kin-oriented redirection (sometimes called 'between-family revenge'), in which a victim is aggressive towards a relative of the former aggressor, to inflict indirect costs to the aggressor and deter them from further aggression. |