

Post-conflict affiliation in rooks (*Corvus frugilegus*)

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Conflict features in the lives of many animal species, and induces social stress mediated by glucocorticoid hormones [1]. Post-conflict affiliation, between former opponents (reconciliation), or between former opponents and a bystander (third-party affiliation) has been suggested as a behavioural mechanism for reducing such stress [2], but has been studied almost exclusively in primates. As with many primates, several bird species live in social groups and form affiliative relationships [3]. Do these distantly related animals also use affiliative behaviour to offset the costs of conflict? We studied post-conflict affiliation in a captive group of rooks. Unlike polygamous primates, monogamous rooks did not reconcile with former opponents. However, we found clear evidence of third-party affiliation following conflicts. Both initiators and targets of aggression engaged in third-party affiliation with a social partner and employed a specific behaviour, bill-twining, during the post-conflict period. Despite the long history of evolutionary divergence, the pattern of third-party affiliation in rooks is strikingly similar to that observed in tolerant primate species. Furthermore, the absence of reconciliation in rooks makes sense in the light of species differences in social system.

1. von Holst, D. (1998). The concept of stress and its relevance for animal behaviour. *Adv Study Behav* **27**, 1-131.
2. de Waal, F.B., and van Roosmalen, A. (1979). Reconciliation and consolation among chimpanzees. *Behav Ecol and Sociobiol* **5**, 55-66.
3. Emery NJ, Seed AM, von Bayern AM, Clayton NS (2007) "Cognitive adaptations of social bonding in birds" *Phil Trans Roy Soc B* **362** (1480): 489–505.