

The effects of games on the dog-owner relationship

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Introduction It is often claimed that certain dominance-related problems in dogs can be triggered by the games played by dog and owner. In particular it is thought that allowing a dog to win uncontrolled games such as Tug-of-War will increase the likelihood of it attempting to become dominant over its owner. However questionnaires (Goodloe & Borchelt, 1998) and experimental studies of Labrador and Golden Retrievers (Rooney & Bradshaw, 2002) have found no evidence for these postulated effects. In this paper we further investigate possible links between the types of games played in the domestic environment and both dominance and attachment dimensions of the dog-owner relationship.

Methods Fifty dog-owner partnerships were recruited. The dogs were aged between 20 months and 14 years (mean = 7 years); there were 29 males and 21 females representing 17 different breeds. When classified according to Kennel Club categories there were 17 gundogs, 16 working dogs, 10 terriers, 3 hounds, 2 toy and 2 utility dogs. Each dog and owner was filmed during a three-minute play session in which the owner chose the games played. All partnerships then undertook a one-hour test designed to measure dominance- and attachment-related behaviour of the dog. This test included sixteen components during which the owner performed a variety of actions towards the dog including removing its food bowl, grooming it and leaving it alone for three minutes. The test was video recorded throughout and from the tapes, the dog's behaviour recorded in 88 variables, which were reduced by Principal Components Analysis to two dominance-related factors (Amenability and Confident Interactivity) and four factors describing aspects of attachment (Non-Specific Attention-Seeking, Preference for Owner, Preference for Unfamiliar Person, and Separation-Related Behaviour). The effects of the types and style of games played on these six factors were tested using nonparametric statistical tests (Spearman Rank Correlation, Kruskal-Wallis, Mann Whitney U, and Fisher's Exact tests).

Results Dogs which played Rough-and-Tumble scored higher for Amenability ($U=207$, $p<0.05$), and lower on Separation-Related Behaviour ($U=210$, $p=0.05$), than dogs which played other types of games. Dogs which played Tug-of-War ($U=197$, $p<0.05$) and also those which played Fetch ($U=192$, $p<0.05$), scored high on Confident Interactivity, but whether they tended to win or lose these games had no consistent effect on any of their test scores. If the dog rather than the owner started the majority of the games, the dog was significantly less Amenable ($U=162$, $p=0.005$) and more likely to exhibit aggression (Fisher's exact test: $p<0.01$).

Conclusions The test procedure proved to be an effective way of quantifying both attachment and dominance dimensions of a dog-owner relationship. The results of this study provide no evidence that the outcome of games have a significant effect upon dominance dimensions of dog-human relationships, but suggest that attachment dimensions may be affected by playing games which involve considerable body contact. We conclude that the way in which dogs play reflects general attributes of their temperament and their relationship with their owner, but for the majority of dogs the outcome of games are not deterministic. However, we suggest that if play signals are absent or misinterpreted then games may have more serious consequences (Rooney *et al.* 2001), and for a minority of "potentially dominant" dogs, games may have greater significance. An important aspect of play seemed to be not which player wins the game, but which player initiates it. Dogs which were reported to initiate play frequently scored lower for Amenability and were more likely to exhibit aggression. This is evidence for the popular claim that dogs which are frequently allowed to initiate social interactions also behave with increased dominance towards their owner.

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References

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