**Self-organization and individual attributes influence the formation of dominance hierarchies in a group-living bird**

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Dominance relationships are an important type of social relationship that can influence group dynamics and individual fitness. To date, most studies on dominance have been restricted to investigating the orderliness of dominance hierarchies, and how individual traits influence dominance rank. Here, we use a social network approach to investigate the patterns and quality of dominance interactions in the pukeko, a cooperatively breeding bird that lives in stable, mixed-sex social groups. By using a combination of modern statistical techniques, including the first application of exponential random graph models in behavioural ecology, we demonstrate that pukeko dominance networks emerge from both the attributes of individuals, as well as from endogenous, self-organization of dominance relationships (i.e. structural dependence). Pukeko dominance networks are influenced by sexual differences in dominance interactions, sexual homophily, complex effects of social rank and a tendency to form transitive triad motifs. These factors have differential effects on submissive and aggressive behaviours, but ultimately lead to the formation of orderly and highly asymmetrical dominance hierarchies that are temporally stable. This study demonstrates the utility of multivariate statistical tools for network analysis of animal societies, and provides a rich understanding of the factors that influence dominance interactions in this interesting species.

\*\*formatting of bird species name?