

THE SOCIAL USE OF COPULATION CALLS IN BONOBOS, *PAN PANISCUS*

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During mating events, females of many primate species produce loud and distinct vocalisations known as 'copulation calls'. Traditionally, the adaptive significance of these calls is considered to be for promoting reproductive success. Here, we investigated copulation calling in bonobos (*Pan paniscus*), a species that produces copulation calls in both heterosexual and homosexual contexts. The social significance of bonobo copulation calls challenges theories explaining these calls as purely reproductive strategies. We examined how bonobos use vocalisations as tools to pursue certain social and reproductive goals. We recorded copulation calls of females (N = 12) living in naturalistic enclosures at Lola Ya Bonobo Sanctuary, DR Congo, for 6 months in 2008-09. In an additional stage, we manipulated group composition to examine audience effects. Results indicated acoustic similarity between homo- and heterosexual copulation calls. Whilst females called more during heterosexual copulations, we observed a relationship in both contexts between calling and the dominance relationship of the caller and partner. We found low-rank females called more when invited to mate with higher-ranked partners. Analyses revealed audience effects relating to high-ranked female presence. Our results suggest that bonobos use copulation calls as strategic signals to express social status and to advertise bonding relationships. The way these calls have become detached from their biological function represents a relevant contribution to debates on the evolution of primate vocal communication.

Key words: chimpanzee, copulation, vocal, communication