

FATHER-OFFSPRING RELATIONSHIPS AMONG THE GOMBE CHIMPANZEES (*PAN TROGLODYTES SCHWEINFURTHII*)

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While the importance of maternal relationships is well-known in chimpanzees, paternal relationships have been largely unexplored. Chimpanzees' promiscuous mating system has both been presumed to obscure paternity for males and made identifying relationships difficult without genetic analysis. However, selection should favor helping and avoiding harming both maternal and paternal kin. Because males are philopatric, fathers have the opportunity to help their sons throughout their lives. In addition, females risk inbreeding with both maternal and paternal relatives because they often mate within their natal community before emigrating, and at Gombe, approximately 50% of females do not disperse. We genetically determined paternity and examined dyadic association and interactions to test whether fathers invest in their juvenile and adolescent sons (N = 9 pairs, 11 years), and whether fathers and daughters avoid mating (N = 8 pairs, 27 years). In this preliminary study, we found that juvenile and adolescent males have more positive interactions with maternal brothers than unrelated males ($P < 0.001$), but they have no significant difference in association or interactions with fathers. We also found that females have significantly lower successful copulation rates with maternal brothers than with unrelated males ($P = 0.007$), while there was a non-significant trend for fathers and daughters to have lower rates than unrelated dyads ($P = 0.098$). The data suggest that daughters recognize their fathers and avoid inbreeding, but that fathers do not bias behavior towards their older offspring.

Keywords: paternal kin, kin recognition, parental investment, inbreeding