

ALPHA MALE CHIMPANZEES AT GOMBE: CONSEQUENCES OF DOMINANCE STYLE

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The degree of behavioral variation among individual chimpanzees is striking. However, little is known about the evolutionary consequences of such variation. Alpha male chimpanzees at Gombe National Park and elsewhere exhibit distinct dominance styles, ranging from 'despotic' (characterized by frequent aggression and low rates of grooming others) to 'cooperative' (less aggression, high rates of grooming others). First, I use long-term data on 10 alpha males in two communities at Gombe to test the hypothesis that an alpha male's dominance style affects his reproductive success. Preliminary analysis indicates that compared to cooperative alpha males, despotic alpha males achieved a higher proportion of copulations with sexually receptive females, resulting in greater reproductive skew. This conclusion is supported by genetic data from 31 offspring sired during the tenures of 5 alpha males. Second, I test the hypothesis that an alpha male's behavior affects the social relationships among other adult males in the community. I use grooming and association data to visualize the adult male social network during the tenure of each alpha male. Preliminary analysis of the density, path length and cliquishness of these networks indicates that cooperative alpha males foster a male cohort characterized by large, cohesive groups and generally strong social relationships. This study highlights the importance of inter-individual behavioral variation for understanding the pattern of interactions and relationships in a long-lived social primate species.

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