

## HOW DO DEFEATED ALPHA MALE CHIMPANZEES KEEP DOMINANCE RANK? FROM OBSERVATIONS IN THE MAHALE MOUNTAINS, TANZANIA

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Male chimpanzees compete for alpha status in order to gain high reproductive success. However, little attention has been given to defeated alpha males. Ex-alpha males must select one of these options: (1) staying out of the group and attempting re-conquest after gaining good health, (2) remaining a non-alpha high-ranking male, or (3) becoming a low-ranking male in the group. The option chosen would depend on the resources available to the ex-alpha male. It is hypothesized that useful resources, such as fighting ability and good health, would be highly influenced by the male's age. Thus, we predict that young adult males (16-23 years old) would take strategy (1), middle-aged males (24-31) strategy (2), and old males (31<) strategy (3). Seven cases of power takeover were observed at Mahale. Two males gained the alpha position twice. Two old males (KS, NT) chose strategy (1), and one middle-aged male (FN) chose strategy (1) and (3), one old male (DE, twice) and one middle-aged male chose strategy (2), and one old male (NT) chose strategy (3). Consequently, the observations did not closely fit the predictions. Although the sample size was small, the results suggest that gaining and maintaining high rank is more strongly influenced by social intelligence, i.e., whether the male can exploit the male social network, than physical age.

Keywords: Chimpanzee, Alpha male, Power takeover, Male network