Influences on Non-Human Primate Grooming Behavior

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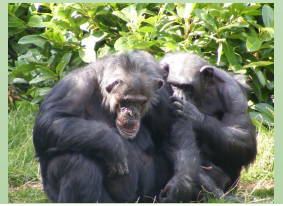
References

Introduction

Grooming has a variety of uses in the world of non-human primates: it can be used to reconcile after a fight (Jablonski, 2022), develop socially, prevent disease (Allanic et al., 2020), and reduce stress (Jablonski, 2022).

But what actually influences grooming behavior? Torfs (2023) and his colleagues hypothesized that variables like sex, age, rearing history, group size, and sex ratio could all impact various aspects of this behavior. Mishra (2020) and their colleagues guessed that dominance rank factored in. Girard-Buttoz (2020) and his colleagues hypothesized that these patterns may differ in groups based on how territorial their groups are. Allanic (2020) and their colleagues suggested that grooming might be influenced by the strength of social bonds and dominance ranks. This research poster will cover all of these hypotheses as in the aim to examine how does grooming behavior in non-human primates differ between groups and individuals?



Chimps grooming (Image credit Hamnett, 2007)

Methods and Materials

- Torfs et al. (2023) collected behavioral data of bonobos over the course of nearly 11 years in 8 different zoos. The sample size consists of 136 data points.
- Mishra et al. (2020) observed a group of Nicobar long-tailed macaques at Campbell Bay for a total of 1660 h. They divided behavior into frequency-based activities.
- Girard-Buttoz et al. (2020) observed two chimpanzee communities, and one bonobo community over the course of two years. The researchers focused their observations on the adults and subadults in the communities.
- Allanic et al. (2020) studied two groups of wild bonobos in the DRC. The PE group (main focus of study) consisted of 27 individuals at the time of the study.

Results

- Torfs et al. (2023):
  - Sex, age, and rank could predict individual grooming strategies. Rearing history only impacted the popularity of males as grooming partners (p 15).
- Mishra et al. (2020):
  - Female macaques groomed more, and this grooming was both reciprocal and balanced. Lower-ranking females also aimed their grooming at higher-ranking females, and overall groomed more than higher-ranking females.This behavior was not as evident in male macaques (p 448)
- Girard-Buttoz et al. (2020):
  - Chimpanzees significantly engaged in more grooming than bonobos (p 218). Chimpanzees tended to groom those closer in rank, while bonobos groomed those further in rank (p 219).
- Allanic et al. (2020):
  - There was no correlation between grooming site preferences and strength of social bonds. Found no correlation between age (which they associate with dominance) and body site preference (p 220). Mothers spent more time grooming inaccessible parts of their offspring compared to other individuals (p 221).

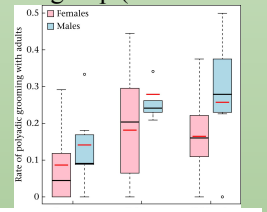


Figure 1 (Image credit Girard-Buttoz, 2020)

Discussion

In conclusion, the data from these various studies is evidence of a variety of factors influencing grooming in non-human primates. Factors such as sex, rank, and age are seen to affect the frequency of grooming, and how this grooming is directed. In terms of future research, it would be useful to extend the current findings by examining other populations of primates and other factors that might influence grooming.