

TITLE: Examining Responses to Inequity in Gorillas

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Introduction: Humans from a variety of cultures respond negatively to inequity, leading researchers to question if these responses are innate. Given the close evolutionary relationship between humans and non-human primate species, studies involving other primates provide insight into situations which could have selected for negative responses to inequity. There have been previous studies on whether other primates refuse to participate when exposed to inequity, but little is known about more affective reactions, such as attention-getting behavior and aggression. Additionally, refusals have been explored in a variety of primates, including three of the four great apes, but the reaction of gorillas is unknown. Previous findings have demonstrated differing responses to inequity across primate species. Thus, the purpose of this study is to examine both refusals and affective responses to situations of inequity in gorillas.

Method: The gorillas learned to exchange a token in return for a food reward that was ranked as high, medium, or low value, depending on the preference of the gorillas. The independent variable was the value of reward given after completing the exchange task. Gorillas were paired with social partners and alternated turns completing the exchange task. A total of 40 trials were conducted in each session. Affective responses such as aggression and attention-getting behavior as well as refusals to complete the exchange or accept the reward were coded using an ethogram tested for inter-rater reliability. By gathering both affective response and refusal data, we can tell if the gorillas unhappily complied with the exchange, versus refusing to participate. Unhappy compliance suggests that the unequal reward is worth completing the task, although the gorillas noted the inequity.

Results: These data are completely collected; however, coding of the video tapes is still in progress, so overall results are not available.

Conclusion: Research has demonstrated that humans, chimpanzees, and bonobos respond to situations of inequity, while orangutans do not. If gorillas show similar responses, this could suggest similar patterns of cognitive development and provide evidence for a natural inclination to fairness among African apes, including humans. If gorillas do not respond to inequity, this would support the hypothesis that responsiveness to inequity evolved in species that routinely cooperate with non-kin. Data concerning gorilla responses to inequity contribute to the efforts of researchers to track the evolution of this behavior in primates.