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Guinea baboons strategically use punishment and partner choice to promote cooperation

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Abstract

Human cooperation extends beyond kin and its evolution can be explained in part by direct benefits from cooperative interactions. However, cooperation based on direct benefits is vulnerable to defection, making mechanisms that ensure reciprocity essential. One such mechanism is partner choice, whereby individuals preferentially interact with cooperative partners. Yet, constraints can limit available partners, encouraging reliance on partner control strategies, such as punishing defection. Here, we investigate whether Guinea baboons can use both partner choice and partner control, and whether they flexibly adjust these strategies depending on context. Using a touchscreen-based prosocial choice task, receivers could accept or refuse an actor's choice. Baboons selectively refused selfish choices more often than prosocial ones, indicating the use of partner control by punishment. They also actively changed partners following non-rewarding interactions, indicating reliance on partner choice. Crucially, baboons flexibly adjusted these strategies as a function of partner availability.