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How do chimpanzees explore their environment prior to a risky decision?

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Abstract

Seeking for information is a ubiquitous requirement of life. Here, we studied how chimpanzees—one of humans closest living relatives—explore initially unknown payoff distributions before making a final exploitative draw (see Hertwig et al., 2004). More specifically, across two conditions (stable and changing), chimpanzees (N=15) could explore a risky (outcome variance) and a safe (no variance) assortment, prior to making a decision. In the stable condition, the safe and risky assortment remained on the same side and the food in the same location across trials. In the changing condition, the side of the assortments, as well as the location of the food within the assortments changed. We investigated (1) whether chimpanzees explore changing more than stable environments and (2) which strategies they use to explore their environments. We will discuss our findings in light of the evolutionary roots of human exploration and decision making strategies.