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DO CHIMPANZEES RELY ON PERSONAL OR SOCIAL INFORMATION WHEN FACED WITH AN EXTRACTIVE FORAGING TASK?

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When faced with a novel task, animals may preferentially copy another based on perceived attributes unrelated to success, exhibiting 'indirect bias'. We present the first empirical investigation of such theory. Captive chimpanzees ($N = 50$) were individually shown video demonstrations, by either adult/juvenile male/female 'expert' conspecifics, using a novel task, from which two rods protruded, to determine whether the expert's age or sex affected the observer's likelihood of copying the expert's rod use. In the experimental 'personal and opposing-social information' condition (POS), chimpanzees by individual, trial-and-error, learning could learn that pushing only one of the two rods released a reward. They were then shown a video of an expert pushing the opposite rod to that which they had learnt released rewards. A control group, given no opportunity for individual learning, were shown the video of an expert using one of the two rods (social-only information, SO). After receiving social information (the video of the expert), chimpanzees were allowed to use the task again to determine which rod they then used. The first responses of chimpanzees in the SO condition tended to follow the demonstration, while chimpanzees in the POS condition tended to stick to their personally-learned method. This represents the first evidence, in apes, for a strategy of 'copy when uncertain' (Laland 2004). When considering all responses made, surprisingly, only in the POS condition did any chimpanzee use the rod demonstrated with 100% fidelity (all after watching a juvenile female), representing the first tentative evidence for indirect bias in apes.

Keywords: chimpanzees, social learning, social learning strategies, indirect bias