Knowledge transfer for tool use in the Goffin's cockatoo

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Abstract

Are Goffin's cockatoos capable of transferring a tool-use skill acquired in a certain situation to a new contextual setting on which they have no previous experience? In our study, performance of thirteen adult subjects (divided into two groups: experimental or control) was compared in a two-stage experiment where the learning component about the tool was manipulated by providing a more diverse training for the experimental group in stage one. We hypothesized that this broader learning of the tool's affordances would enable to transfer its use to solve a novel task. Our results show that the experimental group outperformed the control group in stage two (higher success rate and faster learning speed), which we interpret as a product of behavioural flexibility being enhanced during stage one: by operating the tool in more diverse contexts, these individuals might have acquired an advantageous experience, transferrable to tackle an untrained problem more efficiently.