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Are domestic pigs (*Sus scrofa domestica*) able to use complex human-given cues to find a hidden reward?

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Abstract

Understanding human-animal interactions in livestock production systems is crucial for improving animal welfare. It is therefore of general interest to investigate how livestock animals obtain information from humans. By using an object-choice paradigm, we investigated whether domestic pigs (*Sus scrofa*) ($n = 4$) were able to use a variety of human-given cues, such as different pointing gestures, to find a hidden food reward. In Experiment 1, an experimenter pointed towards a baited location in front of the pig while the extent of the protrusion of his hand from the upper body was varied. Pigs had problems using pointing gestures that did not protrude from the upper body of the experimenter, but were able to successfully use a long cross pointing administered with the contralateral hand of an experimenter to find a hidden reward. In Experiment 2, an experimenter indicated a baited location that was behind the pig using either a pointing gesture, his body or his head orientation. All four individuals used the pointing gesture and one pig was able to use the head orientation to find the hidden reward. The results provide additional evidence of pigs' ability to use novel human-given cues as well as on the limits of their abilities, and will contribute to a better understanding of pigs' perception of their stockpersons and handlers.

Keywords: animal welfare, domestic pigs, human-animal interaction, human-given cues, object choice paradigm, pointing gesture