

**EFFECTS OF OBSERVER PRESENCE ON GESTURE PRODUCTION BY CHIMPANZEES (PAN TROGLODYTES)**

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We assessed the influence of the arrival of a human experimenter on the gesture production of 84 chimpanzees at the Yerkes National Primate Research Center. Of these 84 chimpanzees, the time of arrival of an experimenter was indeterminable from the videotapes, so final analyses included 74 chimpanzees. Each animal received two trials in which a grape was placed centrally on a strip with three peanuts to symmetrically to both sides; thus food was present, but unreachable throughout each trial. The experimental manipulation was whether the grapes and peanuts were dispersed closely together (2 cm. apart) or relatively far apart (20 cm.). Order of conditions was counterbalanced. There were no apparent effects of order or of inter-item distance. However, in both trials, the chimpanzees were significantly more likely to gesture after the experimenter arrived ( $p$ 's < .001). Even in the few cases in which chimpanzees were conservatively coded as gesturing in the absence of an experimenter, the animals tended to gesture just as the experimenter was arriving. This study replicates six previous studies of observer effects on gestural production by great apes by Call and Tomasello (1994), Hostetter et al., (2001), Leavens et al. (1996, 2004[two experiments]), and Poss et al. (2006); no such study has ever failed to find facilitating effects of observer presence on great ape gestures. Thus, chimpanzee gestures are communicative, social acts, they are not frustrated acts of prehension, as some have suggested. Funding: NIH RR-00165 & NS-29574, and the University of Georgia.

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