

EFFECTS OF CAGE MESH ON POINTING HAND SHAPES IN CHIMPANZEES (PAN TROGLODYTES)

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It has been speculated that cage mesh exerts a shaping influence on reaching by captive apes, which is then misconstrued as pointing by human observers. Although this notion is clearly falsified by the pointing of language-trained apes—who point in the absence of intervening cage mesh—nevertheless, the degree to which cage mesh might influence pointing hand shapes by great apes in other housing environments remains relatively unexplored. We examined 259 apparent points displayed in archival footage from over 18 hours of observation by three non-language-trained chimpanzees housed at a biomedical research center. We coded points in relation to the how close to the boundaries of the diamond-shaped cage mesh their points were displayed. We coded whether the hand was protruding through the (a) nearest edge (0-1.27 cm., half-diamond), (b) one row in (0-2.54 cm., first row of full diamonds), (c) two rows in (1.27-3.81 cm., second row of full diamonds), and (d) anywhere else in the middle of the mesh, away from the boundaries. We found that points with the whole hand were significantly more likely to be displayed away from the mesh boundaries, relative to points with the index finger or other single-digit points. However, points of each hand shape were displayed at each location, demonstrating that these physical parameters do not fully account for the number of fingers extended while pointing by chimpanzees. Funded in part by National Institutes of Health Grants RR-00165, RR-01658, RR-03591, and NS-29574, and the School of Psychology at the University of Sussex.

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