Pigeon courtship is sensitive to social contiguity but not social contingency.

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Joint action is behaviour that requires coordination between animals to achieve a desired goal. We investigated the perception of social feedback in mutual courtship of the pigeon, Columba livia, in a double closed-loop teleconferencing setup. Pigeons could interact in real time with the life-sized video image of the other bird. We manipulated social feedback in two ways; 1) by altering temporal contiguity by three delays of 1s, 3s and 10 s and 2) by altering social contingency, by playing back a video of the subject’s partner from a previous interaction. Courtship intensity decreased in all three temporal delay conditions. Courtship intensity did not differ between a zero-delay condition and the non-contingent playback condition. We conclude that pigeon courtship is sensitive to temporal contiguity in social feedback, implying visual coordination in joint action. Pigeons did not show social contingency perception, and may lack a representation of social causality.