

Intersubjectivity in Pigeon Courtship: Does it exist?

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Pigeons (*Columba livia*) and their mutual courtship display represent a good animal model of interactive communication. Here we ask the question – Is pigeon courtship behaviour based on anticipation of social reactions and controlled by social feedback? In other words, is it inter-subjective in nature? Using a closed-circuit TV setup that allows the manipulation of real-time interaction between two pigeons, we manipulated social contingency and inter-individual timing, to test for the perception of social influence and social synchrony respectively. To test social synchrony perception we delayed the interaction by 0, 1, 3, or 9 sec. To test social contingency perception subjects courted another pigeon either in real-time (contingent interaction) or on pre-recorded video (non-contingent). We then repeated this experiment, extending the duration of each condition from 2 to 6 minutes. In all cases, our dependent measure was courtship intensity. Our results show that pigeons adjust their display intensity depending on the presence of social contingencies during mutual visual display, an effect observed only when conditions last 6 minutes. Pigeons, representing a highly social species, appear to possess true inter-subjectivity, a capacity that is known to be omnipresent in humans.