

Shifting meanings: The fluidity of signal-meaning mappings in a minimal communicative task

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Abstract: We used a non-linguistic experimental paradigm to explore the instantaneous creation of new communicative conventions. Participants played a computer game, in which they sent and interpreted minimal signals to obtain shared rewards within a virtual scene. Trials manipulated the space of possible signals that could be sent, and the meanings to be expressed (locations and quantities of rewards); as such, optimal success in the task required participants to jointly construct signal-meaning mappings that functioned as part of a system, rather than in isolation.

We observed different signalling strategies among participants, but with some individuals using ‘system-mapping’ conventions that globally reorganized in light of changing task constraints. Such behaviour reflects the principle of pre-emption in pragmatics, where the inferred meaning of an utterance depends on its relationship among a set of alternatives. Our initial findings provide a basis for future research, investigating contexts that are conducive to this phenomenon.