"I see what you mean!" – The Influence of Common Perceptual Context and Perspective-Taking on the Evolution of Graphic Codes

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Successful ostensive communication, both verbal and non-verbal, must rely on a body of shared information that has been called "common ground" (Clark, 1996). By virtue of knowing similar things, communicators are better able to infer each other's intentions (Scott-Phillips, Kirby, & Ritchie, 2009). The importance of common ground for referential communication has been extensively studied (e.g. Healey, Swoboda, Umata, & King, 2007), but its impact on language evolution remains a moot issue. How important are shared information and perspective-taking in the genesis of new languages through communication?

We conducted a controlled laboratory experiment to answer the questions of whether 1) more common perceptual context between two interlocutors and 2) better perspective-taking abilities displayed by the subjects could help solving the task of designing entirely new graphic codes, and using them for communication. In the experiment, the amount of perceptual context that dyads had in common was manipulated by minimising or maximising the portion of the reference space seen by both participants.

Our results show that participants solved the task by inventing new codes, which vary widely between dyads. Having more perceptual context in common helps with this, and fosters the creation of richer codes. Better perspective-taking abilities were associated with worse outcomes in the experiment. Our results contribute to explaining why codes for graphic communication are harder to learn and develop than those for oral speech. The paradigm used in the experiment can easily be modified to address related research questions in the future.

References

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