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### **Authors**

Royka, Amanda L  
Heuser, Gwyneth  
Schouwstra, Marieke  
[et al.](#)

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# Emblems and Improvised Gestures are Structured to Guide their Own Detection

**Amanda Royka**

Yale University, New Haven, Connecticut, United States

**Gwyneth Heuser**

Allendale Columbia School, Rochester, New York, United States

**Marieke Schouwstra**

University of Amsterdam, Amsterdam, Netherlands

**Simon Kirby**

The University of Edinburgh, Edinburgh, United Kingdom

**Julian Jara-Ettinger**

Yale University, New Haven, Connecticut, United States

## Abstract

Emblems (also called conventional gestures) are a powerful, yet often overlooked part of humans' communicative toolkit. These gestures rapidly express encapsulated messages, such as waving a hand to greet someone and shoulder shrugging to reveal a lack of knowledge. We hypothesized that emblems are shaped by a universal pressure to reveal their communicative purpose, and they should therefore be unconfounded with movement typically produced to accomplish non-communicative goals. We present evidence for this hypothesis using a novel dataset of over 250 emblems from around the world: Over 95% of these gestures have forms that support observers' inferences, suggesting that emblems are shaped to ease observers' inferential burden. Finally, in a gesture-creation experiment, we show that these inference-guiding features emerge spontaneously without the need for observer feedback or cultural transmission. Taken together, these complementary approaches provide insight into how goal inferential processes may explain the shape of communicative actions across cultures.