

Intentional information sharing promotes cumulative culture relative to inadvertent behavioural cues: an experimental demonstration

Gemma Mackintosh

University of Stirling, Stirling, United Kingdom

Mark Atkinson

University of Stirling, Stirling, United Kingdom

Christine Caldwell

University of Stirling, Stirling, United Kingdom

Abstract

Using an experimental transmission design, we investigated the extent to which intentional information-sending creates an accumulation of beneficial information, relative to transmission via inadvertent information.

A small subset of an information providers search was transmitted to an information receiver, either selected by the information provider themselves (Intentional), or randomly sampled from their full search history (Inadvertent). A third condition where information receivers were shown all of the information providers search attempts was included as a control.

Intentional information-sending led to cumulative improvements that were comparable to receiving full information from a previous participants search, demonstrating that intentional information-sending had promoted cumulative cultural evolution. A follow-up study manipulated whether the sender also received feedback from the receiver which provided information about locations which had not been searched. No difference was found between these conditions, indicating that for this task, bidirectional communication did not further boost the effects of unidirectional intentional communication.