

Collateral benefits to others induce the representation of social interactions

Jun Yin

Ningbo University, Ningbo, China

Qingqing Ye

Ningbo University, Ningbo, China

Denis Tatone

Central European University, Vienna, Austria

Abstract

People readily identify interactions based on resource transfer, such as giving. In the present study, we examine whether adults bind two agents in an interactive unit even if one caused the other to gain a resource indirectly — i.e., as a side effect of pursuing another outcome. Across five behavioral and EEG experiments, we found convergent signatures of social binding (change sensitivity and alpha-band suppression) when adults were presented with an action resulting in the collateral gain of a resource for a passive agent. No binding was observed when the action caused the collateral loss of the agent's pre-existing possession, revealing an asymmetry in how gains and losses are perceived to affect agents. Together, these findings suggest that adults interpret actions resulting in the provision of material gains as interactive, even when these are indirectly brought about.