Causal agency and the perception of force

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Abstract: In the Michotte task, a ball X moves towards a resting ball Y. In the moment of contact, X stops und Y starts moving. Although, according to Newtonian mechanics, the force launching Y is equal to the force stopping X, previous research has shown that subjects tend to view X and not Y as the agent, and that X tends to be attributed more force than Y. Force dynamic theories interpret these findings as evidence for the view that agents are generally attributed more force than patients (i.e., Y). Our experiment contradicts this view. We manipulated the strength of agency intuitions by varying the type of movements of X and Y prior to the collision. Although this manipulation shifted agency intuitions about X and Y, the force attributions stayed invariant. This result confirms the view that theories of causal process representations and of causal agency assignment need to be separated.