Motor Fluency Effects on Causal Judgment: The Role of Grip-Strength Asymmetries and Spatial-Numeric Associations

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Abstract: Human understanding of causation may be grounded in our experience of physical forces in the world. We investigated whether right-handers, who exert greater force with their right than left hands, judge candidate causes on the right side as more causal. In two experiments, subjects simultaneously learned about a moderately effective and an ineffective cause on a trial-by-trial basis. Subjects rated the moderately effective cause as more causal when it appeared on the right side of space. This effect was also present in subjects' trial-by-trial predictions, but the effect reversed with a left-right reversal in the spatial-numeric mapping of the causal judgment scale. The results are not consistent with the notion that our understanding of causation is grounded in our ability to exert force. However, they are consistent with influences of motor fluency and polarity correspondence on judgment.