

A study on playing cards to disentangle order and magnitude in the SNARC effect

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Abstract

The SNARC effect would reflect a left-to-right mental number line (MNL). The aim of this study was to disentangle the roles of numbers' magnitude and order in the SNARC effect by using playing cards as stimuli. While most people hold cards in ascending order (AO), consistent with the MNL, a subset of individuals stably hold cards in descending order (DO), opposite to the MNL, with low-value cards (e.g., 2) on the right and high-value cards (e.g., 6) on the left. In a magnitude classification task (Experiment 1) and in a parity judgement task (Experiment 2) involving both digits and playing cards as stimuli, AO participants showed regular SNARC effects for both digits and cards, whereas DO participants showed regular SNARC effects for digits but not for cards. These results suggest that the order of cards in DO participants prevents the SNARC effect from occurring, but does not reverse the effect.