

The mental number line in Hebrew readers

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Abstract. Several studies, starting with Dehaene, Bossini, and Giraux (1993), have reported that, in parity-judgment tasks, the difference in response latencies generated by the right and left hand are negatively correlated with number magnitudes. This SNARC (spatial–numerical association of response codes) effect is in line with the notion that the “mental number line” extends from left to right. The SNARC effect has been found mainly in native speakers of Germanic/Romantic languages; it has been suggested that the SNARC effect may derive from the experience of reading from left to right. To date, there is no evidence that the SNARC (or reverse SNARC) effect exists in parity judgments in native speakers of Hebrew readers. Here we provide the first demonstration of a horizontal, left-to-right SNARC effect in native speakers of Hebrew performing the parity task. Although we found no SNARC effect using the standard parity task, a reliable SNARC effect was found when we succeeded in reducing the MARC (markedness association of response codes) effect. We succeeded in reducing the MARC effect by implementing the parity task in 2 sessions, on 2 different days, each time using a different mapping of the parity-to-response side.