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Asymmetry of causal inference in reading

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Abstract: This study investigated how knowledge of causality representations affects the reading in Japanese. In Experiment 1, 24 participants read events presented in cause-to-effect or effect-to-cause order without causal conjunctions. The latter received longer reading times and more regressions than the former even when probability and predictability were balanced. Experiment 2 examined whether this reading order effect was derived from a default reasoning asymmetry (i.e., reasoning from cause to effect is favored over that from effect to cause). We utilized epistemic constructions to explicitly identify the reasoning direction. Self-paced reading results from 24 participants showed that readers were more efficient when reading cause-event as the evidence, effect-event as the conclusion vis-a-vis the counterpart, confirming the reasoning asymmetry. However, reading order effect remained robust, presumably reflecting that causal reasoning is temporally embodied.