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The Wason selection task in the long-run: Evaluating the truthfulness of universal and probabilistic statements through evidence search

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Abstract

To investigate, in an ecological way, how people evaluate the truthfulness of universal and probabilistic statements we introduce a modified version of the Wason Selection Task. Participants see four decks of cards (instead of four cards), and are asked to turn as many cards as they deem necessary to judge if a given statement is true or false, both for the observed sample (deductive task) and for an imaginary reference population (inductive task). Participants encounter universal ("All P are Q") or probabilistic statements ("more/less than x% of P are Q"; between-subjects) with abstract, realistic neutral, and realistic polarizing statements (within-subjects). Half of the participants receive an endowment for each turn, correct (incorrect) deductive judgments are rewarded (penalized), and turning a card incurs a cost (other half: fixed participation fee). We report results from two online experiments, thereby also contrasting prescriptive models of evidence search with actual behaviors.