

## **The dynamics of reasoning: Chronometric analysis and dual-process theories**

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Dual-process accounts of reasoning often differ in subtle but important ways in their specification of the flow of control between heuristic, System 1 processes and analytic, System 2 processes. For example, some dual-process accounts of the indicative selection task emphasise a *staged* flow of control, whereby System 1 provides default responses that are simply rationalised by System 2 processes, only being overturned through more rigorous System 2 analysis in a minority of individuals. Other accounts of the indicative task describe parallel streams of System 1 and System 2 processing that *compete* for control of behaviour, with System 2 winning the competition for only a few people who possess the requisite analytic power to override responses primed by System 1. The former accounts invoke notions such as non-consequential reasoning and ‘deciding before you think’, whereas the latter accounts downplay the rationalising functions of System 2 and refer, instead, to System 2’s potential to produce normative task construals. We suggest that differentiating between stage and competition accounts is a major research challenge that is not well served by standard response data. Instead, we propose that chronometric analysis using response latencies and inspection times can provide more useful evidence to tease out the dynamics of reasoning. As an illustration we outline how inspection-time studies have clarified the involvement of dual systems in reasoning with indicative and deontic selection tasks. We also consider how the combined deployment of chronometric and process-tracing techniques may further illuminate the interplay between System 1 and System 2 processes.