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How planful is routine behavior? A selective-attention model of performance in the Tower of Hanoi.

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Summary: Routine human behavior has often been attributed to plans – mental representations of sequences goals and actions – but can also be attributed to more opportunistic interactions of mind and a structured environment. This study asks whether performance on a task traditionally analyzed in terms of plans can be better understood from a "situated" (or "embodied") perspective. A saccade-contingent display-updating paradigm is used to change the environment by adding, deleting, and moving task-relevant objects without participants' direct awareness. Response latencies, action patterns, and eye movements all indicate that performance is guided not by plans stored in memory but by a control routine bound to objects as needed by perception and selective attention. The results have implications for interpreting everyday task performance and particular neuropsychological deficits.

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