Testing the Zeigarnik effect in spontaneous memory recall during mind-wandering

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Abstract

Why do certain past events resurface more often in our thoughts? This study investigates the factors influencing retrospective mind wandering, particularly concerning incomplete or unresolved experiences. We used a custom-designed game in which in-game events were systematically varied, then assessed participants' spontaneous recall of those events one week later. Results revealed that offline participants and those familiar with the experimenter were likelier to experience game-related mind-wandering. The strongest predictor of recall was the time spent engaged with the game, highlighting the importance of memory encoding strength. While individual rumination tendencies did not predict whether participants would recall the game, they did predict the frequency of such episodes among those who did. Thoughts centered on the game's protagonist over peripheral details, suggesting narrative salience. Based on these insights, we propose an initiation maintenance model of retrospective mind wandering, which integrates bottom-up and top-down processes to generate and persist spontaneous thoughts.

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