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Proceedings of the Annual Meeting of the Cognitive Science Society

Title

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Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 46(0)

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Publication Date

2024

Copyright Information

Peer reviewed

The Dynamic Nature of Procrastination

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Abstract

Procrastination is often characterized as minimal progress initially, with a significant increase in progress shortly before the deadlines. Yet, the cognitive mechanisms underlying this intriguing dynamic feature of procrastination—the time course of progress—remain poorly understood. We investigated this through an experiment where participants worked on a self-paced, week-long online reading task consisting of numerous work units (N = 611). We proposed two models that fit each individual's time course of progress. Both models consider the time course of progress as the output of sequential decision-making: whether to work now (and, if so, how much) or later. The first, a normative model, calculates the value of making progress using the Bellman equation; the second, a roll-out model, estimates this value by simulating future work progress. We found that the rollout model fit the data much better, suggesting some evidence against people behaving rationally and some evidence for people simulating future work progress.