The Relationship Between Prospective Memory and Cognitive Abilities

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Questions
1. Can we measure Prospective Memory (PM) ability quickly and accurately at the latent level?
2. Is Prospective Memory ability separable from other cognitive abilities?
3. What cognitive abilities are related to Prospective Memory performance?

Method
Subjects: 531 Georgia Tech students, IUPUC students, and Atlanta community members

Tasks:
Three Working Memory Capacity (WNC) measures: Operation Span, Symmetry Span, and Rotation Span.

Three Fluid Intelligence (Gf) measures: Raven’s, Letter Sets, and Number Series.

Three measures of Prospective Memory accuracy.

1. PM - Lexical Decision Task: Press “U” key when you see a word with a yellow border.

2. PM Symmetry: Press “U” key when there is a green square in the upper left hand corner of the screen.

3. PM Parity: Is the specific characteristic of the number one that you have been told to look for?

Results

Can we measure prospective memory ability quickly and accurately at the latent level? Yes.

Is Prospective Memory ability separate from other cognitive abilities? Yes.

What predicts Prospective Memory ability?

Conclusions
1. We can reliably measure Prospective Memory at the latent level with three 10-minute tasks.
2. Fluid Intelligence and Working Memory Capacity are both related to Prospective Memory Ability but Fluid Intelligence is the better predictor.

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