The metacognition of attention: Using self-scheduled breaks to improve performance

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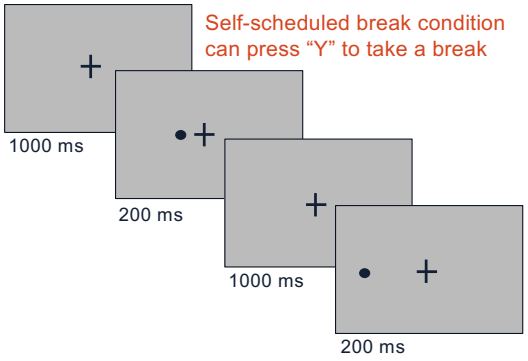
Classic Sustained Attention Task



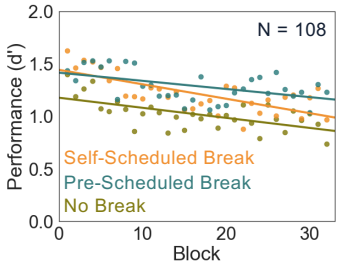
- Respond to far ovals (target events)
- 32 Blocks (22 trials per block)
- 18% target rate (Experiment 1 and 2)

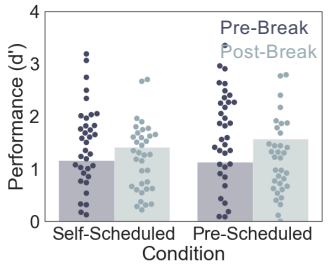
Experiment 1

Unrestricted break placement

Self-scheduled break: Take a 15 sec break

Pre-scheduled break: Given a 15 sec break yoked to self-schedule break condition



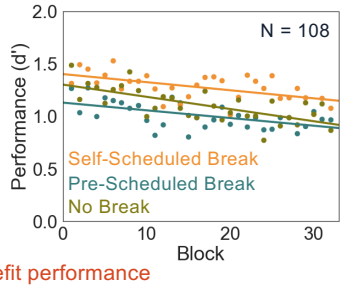


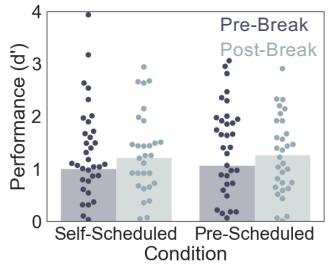
Experiment 2

Unrestricted break length and placement

Self-scheduled break: Take a X sec break

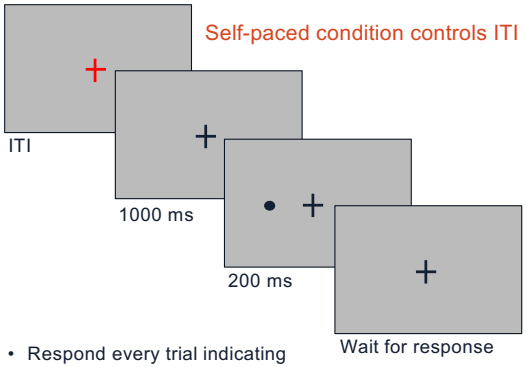
Pre-scheduled break: Given a X sec break yoked to self-schedule break condition





Conclusion: Self-determined breaks do not benefit performance

Modified Sustained Attention Task

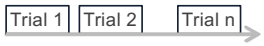


- Respond every trial indicating near and far ovals
- 9 Blocks (40 trials per block)
- 50% target rate (Experiment 3)
- 30% target rate (Experiment 4)

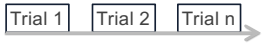
Experiment 3

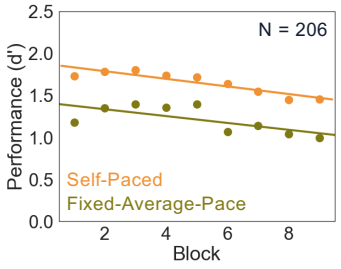
Self-pace trial rate

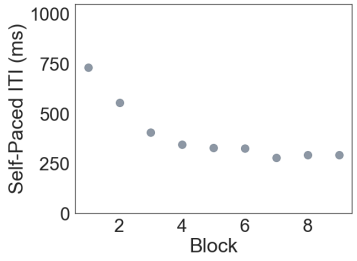
Self-Paced: Control timing between trials



Fixed-Average-Pace: ITI yoked to the average of self-paced condition





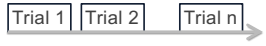


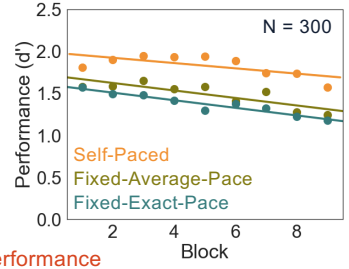
Experiment 4

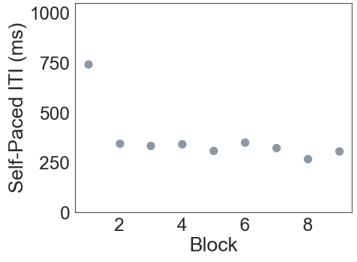
Replicates Experiment 3

Includes an exact yoked condition

Fixed-Exact-Pace: ITI yoked exactly to the self-paced condition







Conclusion: Self-pacing trial onset improves performance