Controlling a Wandering Mind: Tasks dictate differences in estimates of mind wandering

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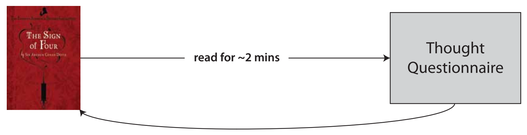
Although mind wandering (MW) has been investigated using various paradigms throughout the years, there has yet to be a comprehensive study examining how the different measures relate to one another.

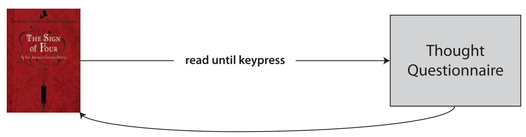
In a within-subjects design, we obtained estimates of mind wandering for nineteen participants using four commonly-used procedures:

Experimenter Caught Reading Task



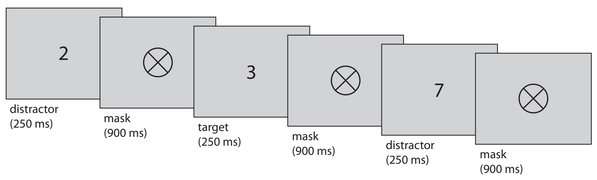
$$\text{Proportion of MW} = \frac{\text{\# of mind wandering instances}}{\text{total \# of probes}}$$

Self Caught Reading Task



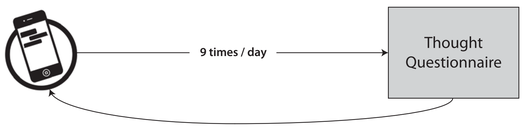
$$\text{Proportion of MW} = \frac{\text{\# of mind wandering instances}}{\text{total time}}$$

Sustained Attention to Response Task (SART)



$$\text{Proportion of MW} = \frac{\text{\# of incorrect target responses}}{\text{total \# of targets}}$$

Real World Sampling



$$\text{Proportion of MW} = \frac{\text{\# of mind wandering instances}}{\text{total \# of probes}}$$

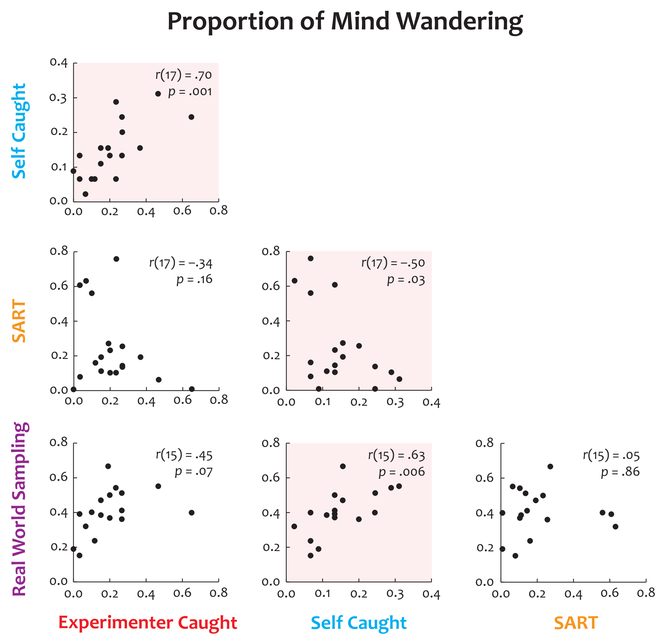
Thought Questionnaire

1. Just prior to the prompt, was your mind wandering to something other than your current task?
2. Were you surprised that your mind had wandered?
3. Did you allow your thoughts to wander on purpose?
4. Were you thinking about something related to your task?
5. Just prior to the prompt, what were you doing?

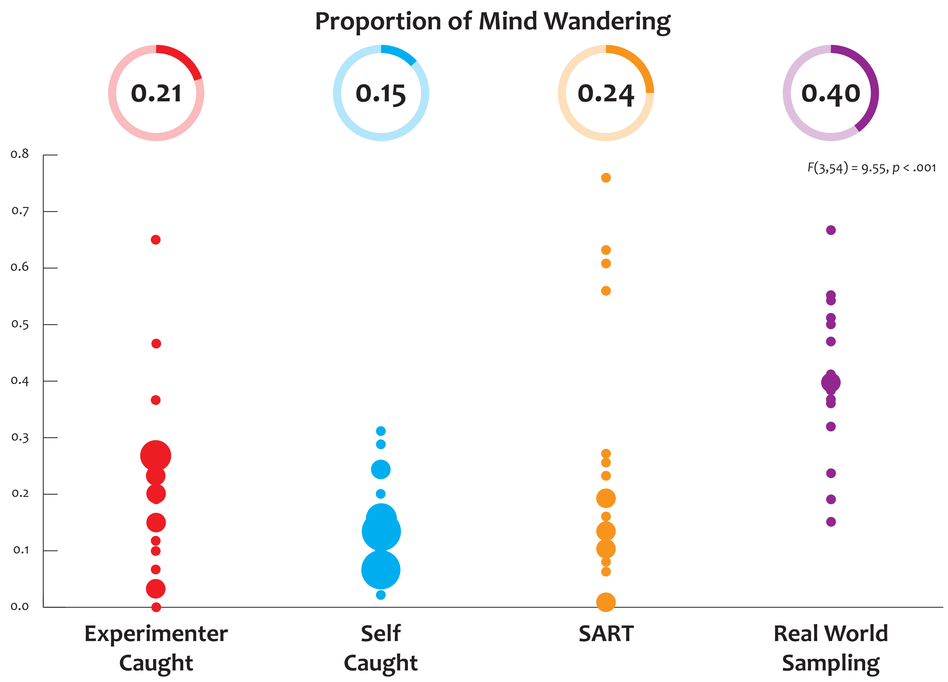
Adult Temperament Questionnaire

A 177-item self-report questionnaire assessing individual temperament traits, including attentional control.

How do the different measures of mind wandering relate to one another?

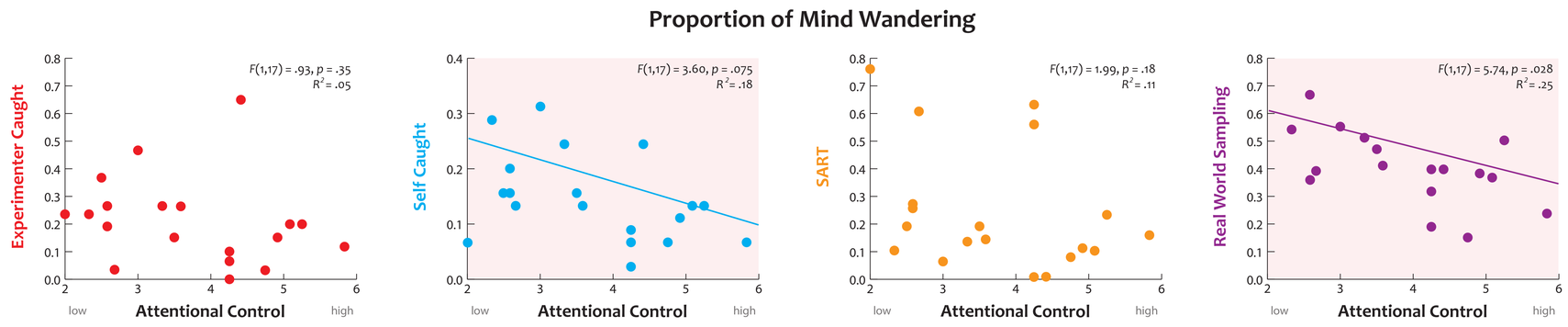


Mind wandering estimates assessed with experimenter caught, self caught, and real world sampling were positively related, while the SART correlated negatively with the self caught task.



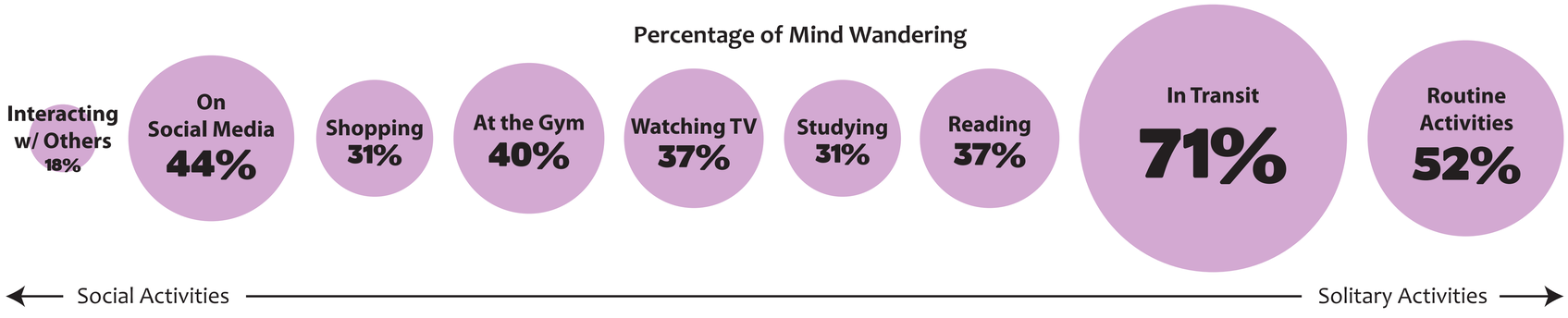
Real world sampling yielded the highest estimate of mind wandering.

How well does attentional control predict the different measures of mind wandering?



Individuals with greater attentional control had fewer instances of mind wandering as measured by self caught and real world sampling, suggesting that mind wandering estimates may vary with the degree of attentional control required by the task.

What activities have the highest degree of mind wandering?



Mind wandering is more frequent during solitary activities as compared to social activities.

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