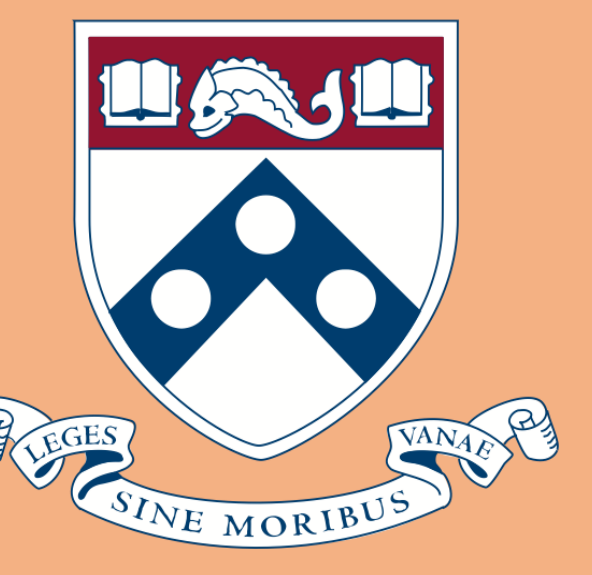


Choose Your Adventure: A Novel Paradigm for Measuring Perseverative Thought

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INTRODUCTION

- Perseverative thought (PT), including repetitive negative thinking such as worry and rumination, is strongly associated with anxiety and depression.¹
- While many trait questionnaires assess PT,²⁻⁴ these measures fail to track PT as it changes in response to momentary stressors.
- Previous attempts to elicit and assess state PT^{5,6} have been limited by:
 - static stimuli (e.g., single sentences) that do not mirror how events unfold in real life
 - passive exposure to stimuli that do not require the participant to take action
 - specialized equipment that is inaccessible to many clinicians
- To address these limitations, we created a story task modeled after the “Choose Your Own Adventure” books. We examined predictors of state PT, assessed by frequent thought ratings as events unfolded throughout the story.

THE STORY TASK

- In an online task, participants engaged with the hypothetical scenario of travelling to a job interview (see Figure 1).
- The story featured sixteen choice points. Although all choices inevitably led to the same end result, participants believed that the choices they made would influence how the task ultimately unfolded.
- On each of the task's 184 screens, participants rated their thought valence on a scale from -10 to +10.

METHOD

- Participants were 92 undergraduate students (67% female, 45% White).
- Participants completed the story task, followed by a post-task questionnaire in which they rated the story on several characteristics using a 1 (*not at all*) to 7 (*very much*) Likert-type scale (see Figure 2).
- Participants also completed 3 trait questionnaires⁷⁻⁹ whose scores were standardized and averaged into a composite variable for trait PT (Cronbach's $\alpha = .86$).

We developed a novel experimental paradigm that effectively evoked perseverative thought in real time.

Figure 1: Five-screen excerpt from the story task.

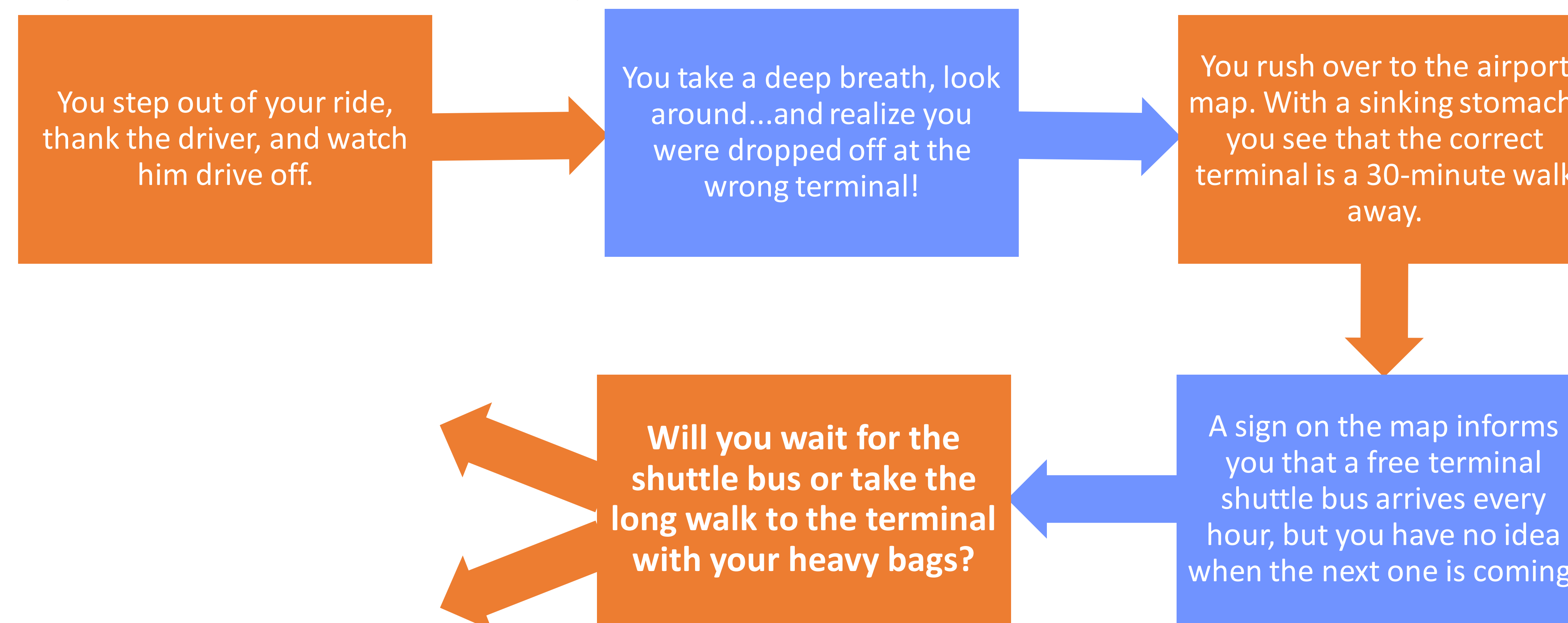
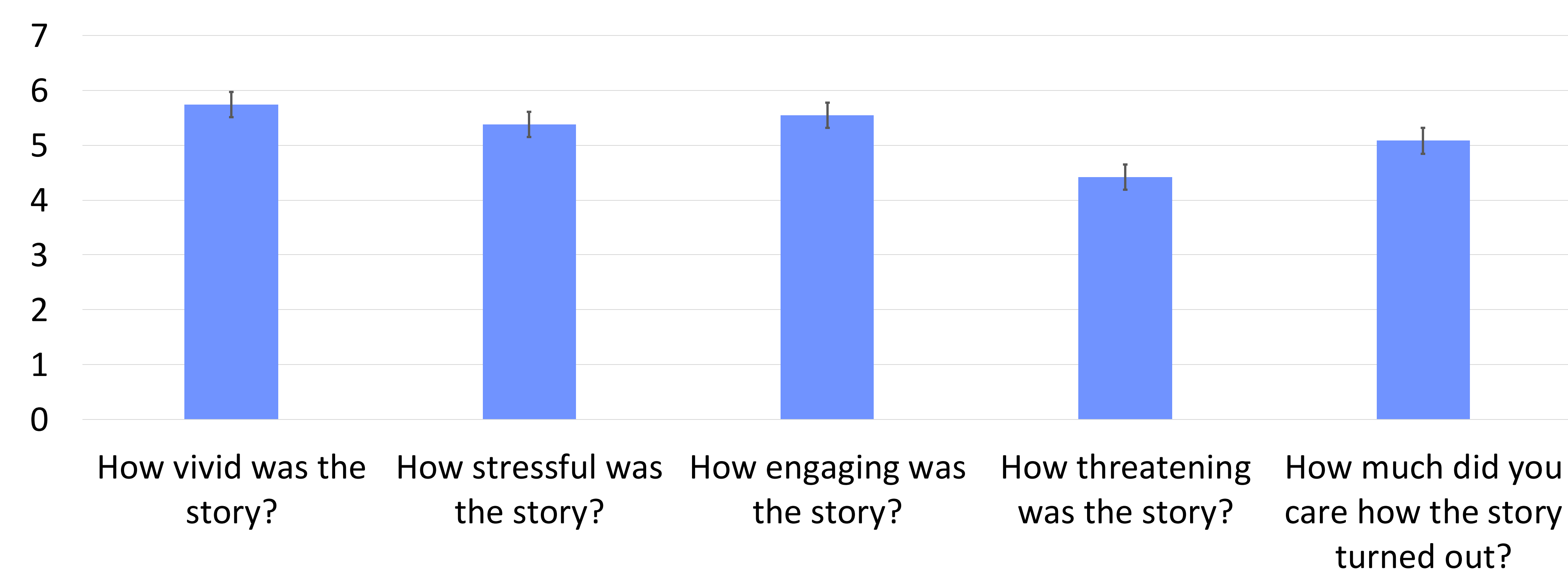


Table 1: Pearson correlations for mean thought ratings and event valence.

	Mean All Screens	Mean Pos. Screens	Mean Neut. Screens	Mean Neg. Screens
<i>r</i>	-.35	-.21	-.18	-.42
<i>p</i>	<.001	.049	.096	<.001
	SD All Screens	SD Pos. Screens	SD Neut. Screens	SD Neg. Screens
<i>r</i>	.28	.45	.24	.11
<i>p</i>	.006	<.001	.020	.311

Figure 2: Participant responses to the post-task questionnaire.



RESULTS

- The story task evoked thought ratings varying widely in valence and intensity (range = -10 to 10, $M = 1.72$, $SD = 1.88$).
- Thought ratings corresponded closely to the valence of events on the screen (*negative screens*: $M = -2.80$, $SD = 2.57$; *positive screens*: $M = 5.00$, $SD = 2.11$; *neutral screens*: $M = 3.70$, $SD = 2.35$).
- Higher trait perseverators reported more negative thoughts across the task ($r = -.35$), especially on screens depicting negative events ($r = -.42$; see Table 1).
- Trait PT also predicted greater variability in thought ratings across the task ($r = .28$), especially on positive screens ($r = .45$).

DISCUSSION

- Our results provide promising initial support for the story paradigm in eliciting and measuring state PT. Participants found the story highly vivid, engaging, and stressful, and thought ratings varied widely and tracked closely with the events on the screen.
- Trait PT was moderately associated with both the mean and variability of thought ratings across the task
- The study was limited by its use of an undergraduate sample, which limits the generalizability of the data garnered. A further limitation was the difficulty of separating thoughts from feelings, which lowered the internal validity of our 'thought valence' measure.
- Future research might use this paradigm with a clinical population to determine if there is a significant difference in their thought valence compared to a control group. This population should include those with depression and/or anxiety, as PT is commonly observed within these mental illnesses.

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