



# Beyond the ballot: attention shapes and causally impacts voting decisions



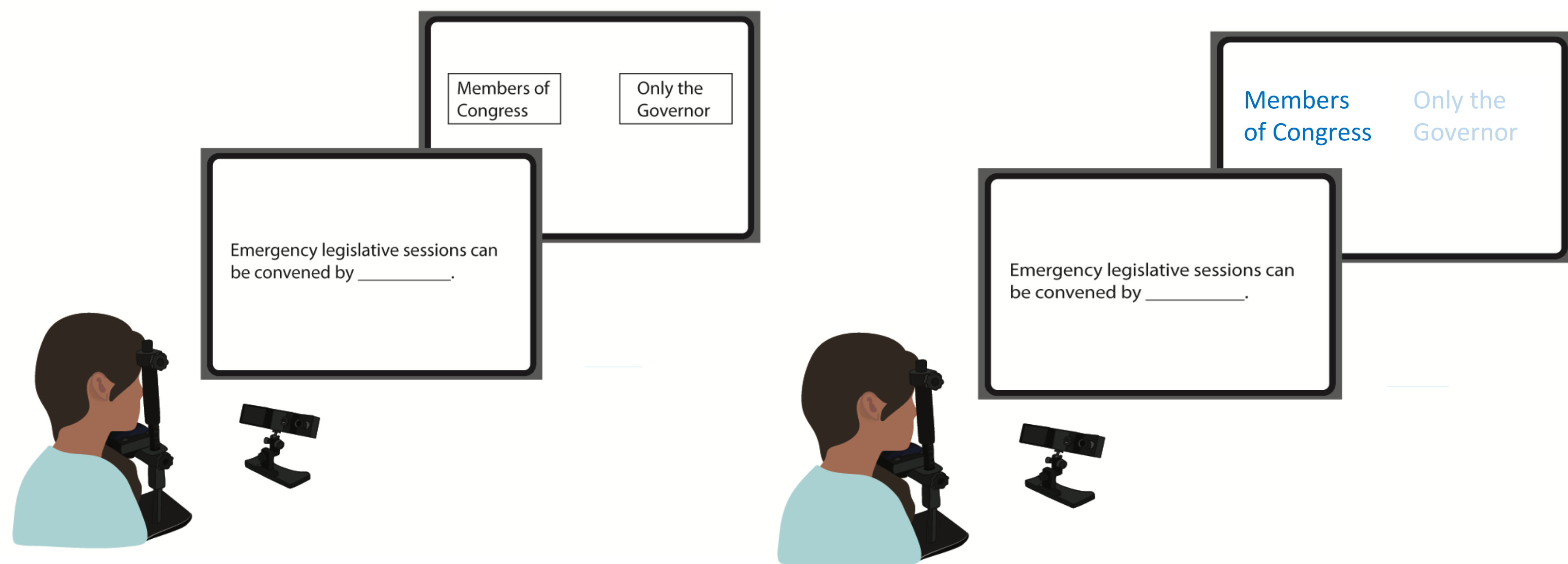
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## Questions

- Can visual attention influence voting decisions?
- Does the impact of attention on voting decisions depend on the context of voting decisions?
- Do people with different levels of partisan strength have different decision-making processes?

## Overview of the study

- Study 1 (observational, N = 66): the **correlation** between visual attention & choice in political decisions
- Study 2 (experimental, N = 119): the **causality** between visual attention & choice via the manipulation of gaze



- Independent norming study (N = 199): measure valuation of the options & issues

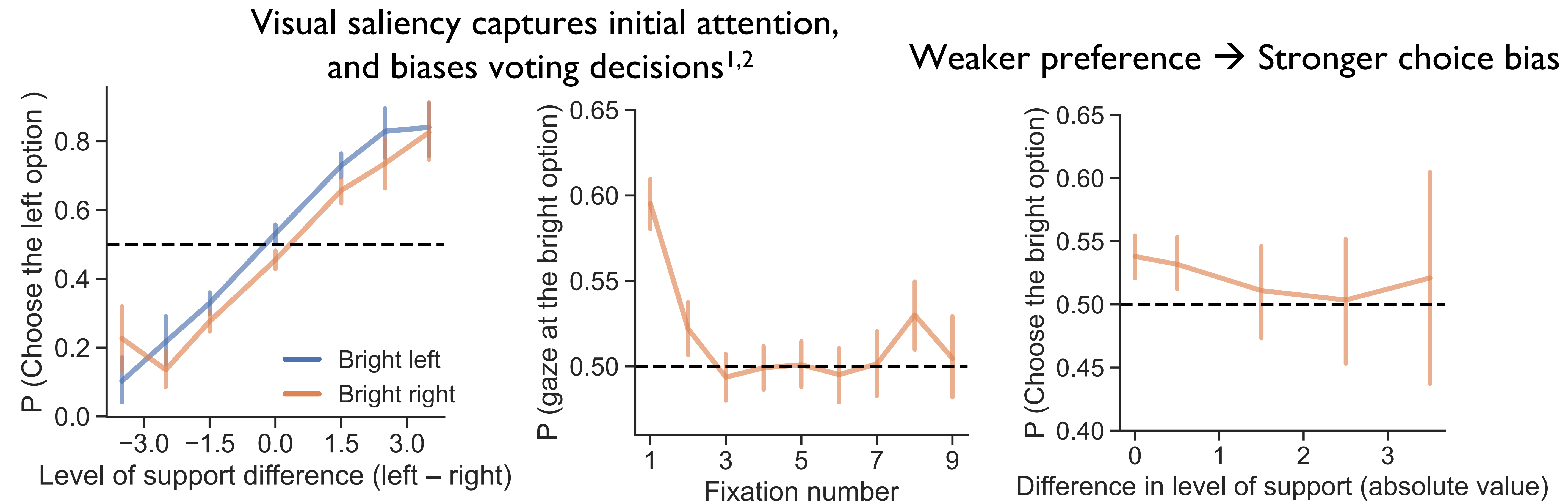
Emergency legislative sessions can be convened by Member of Congress (Only the governor)

Extremely against \_\_\_\_\_ Extremely support

How important is this issue to you personally?

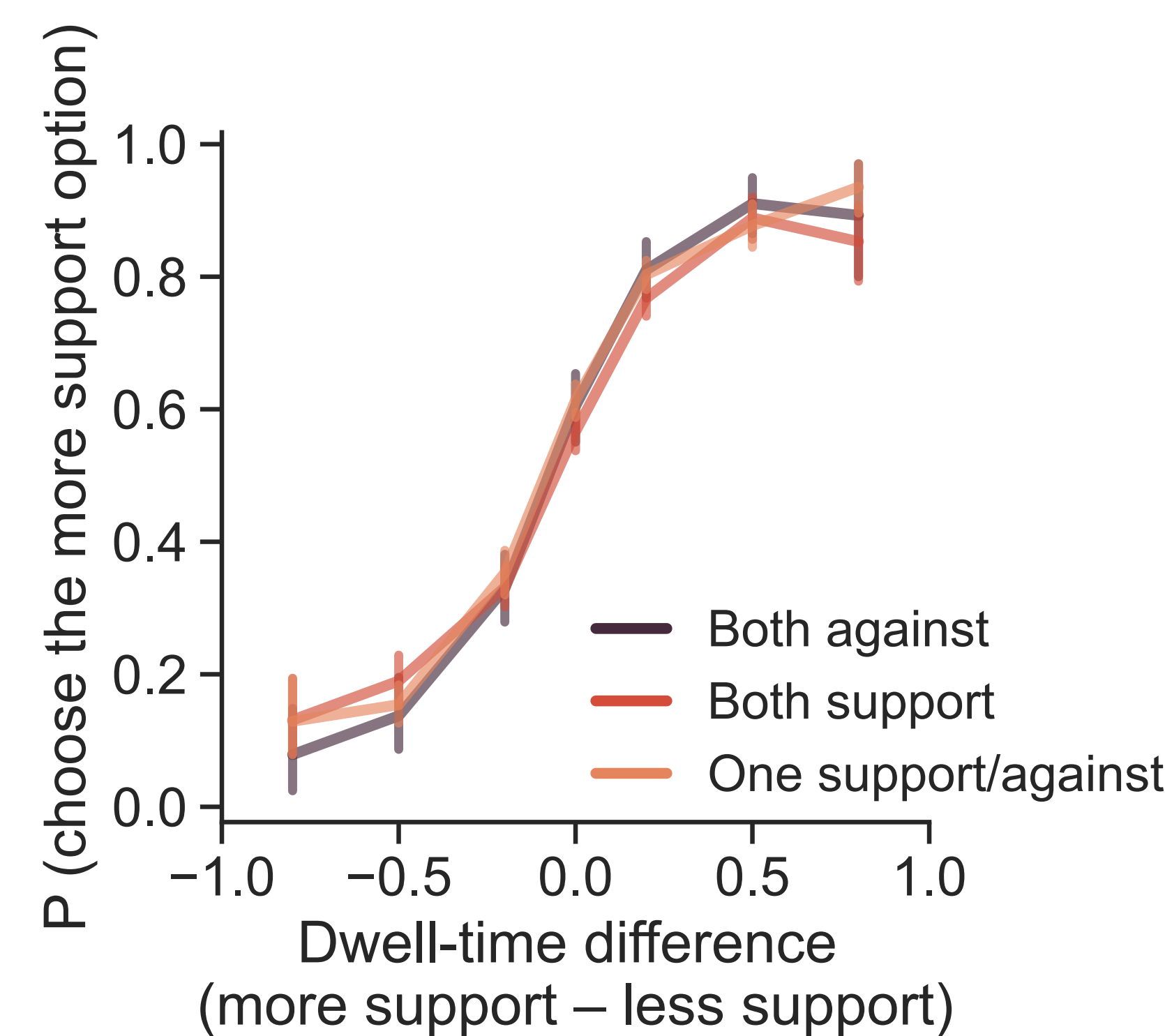
Not important at all \_\_\_\_\_ Very important

## Saliency manipulation influences voting decisions



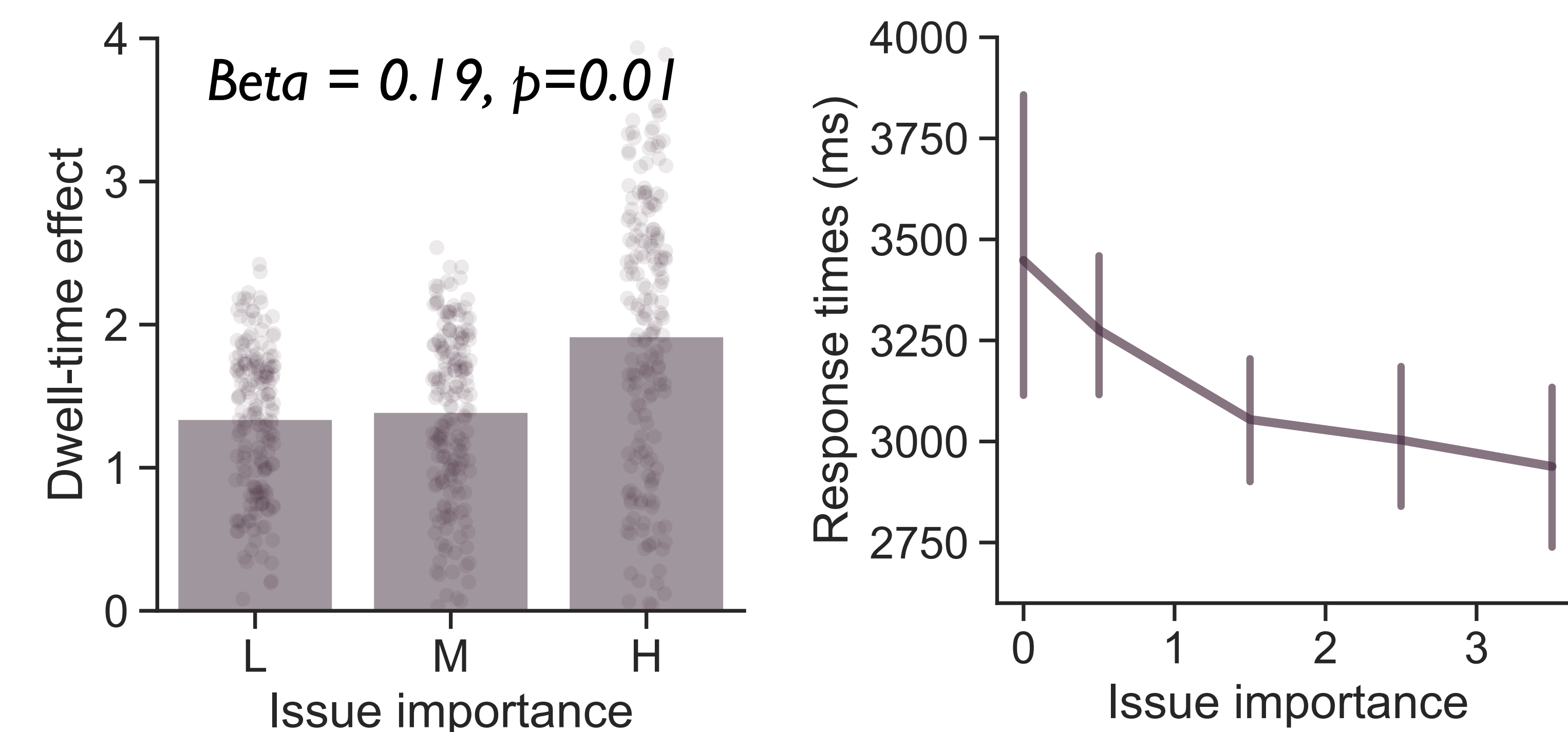
## Dwell-time effects are consistent across valance types

Attention has a positive impact on choice across valance types, indicating attention modulates goal-relevant evidence<sup>3</sup>



## Issue importance contributes to overall decision value

More important issues:  
→ larger dwell-time effects & faster responses  
→ consistent with attentional Drift Diffusion Model<sup>4</sup>

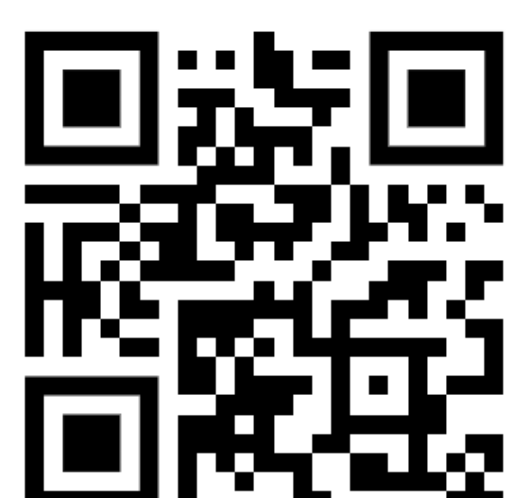


## Computational modeling: Attention bias and decision weight reflect partisan strength

Parameter	Study 1	Study 2	Relations with Partisan strength
Decision boundary ( $a$ )	3.50 (0.72)	3.33 (0.75)	No
Attention bias ( $\theta$ )	0.54 (0.34)	0.53 (0.27)	Yes $Cor = 0.17^*$
Decision weight ( $\omega$ )	0.24 (0.09)	0.23 (0.12)	Yes $Cor = 0.18^*$
Non decision time ( $ndt$ )	480 (214)	488 (237)	No
Drift scaling ( $d$ )	1.56 (0.54)	1.51 (0.50)	No

## References

1. Miller & Krosnick (1998). *Public Opinion Quarterly*
2. Shulman et al. (2022) *Political Communication*
3. Sepulveda et al. (2020). *Elife*
4. Smith & Krajbich (2019) *Psychological Science*



Let's connect!  
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