

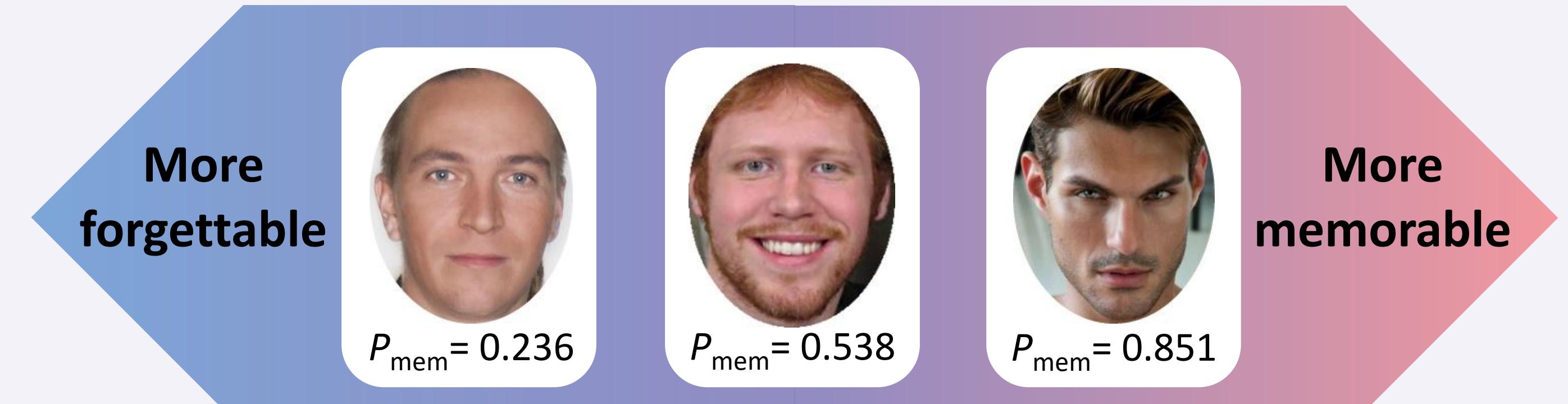
Tracing the Emergence of Stimulus Memorability

Jason Woo, Greer Gillies, & Keisuke Fukuda
Department of Psychology, University of Toronto Mississauga



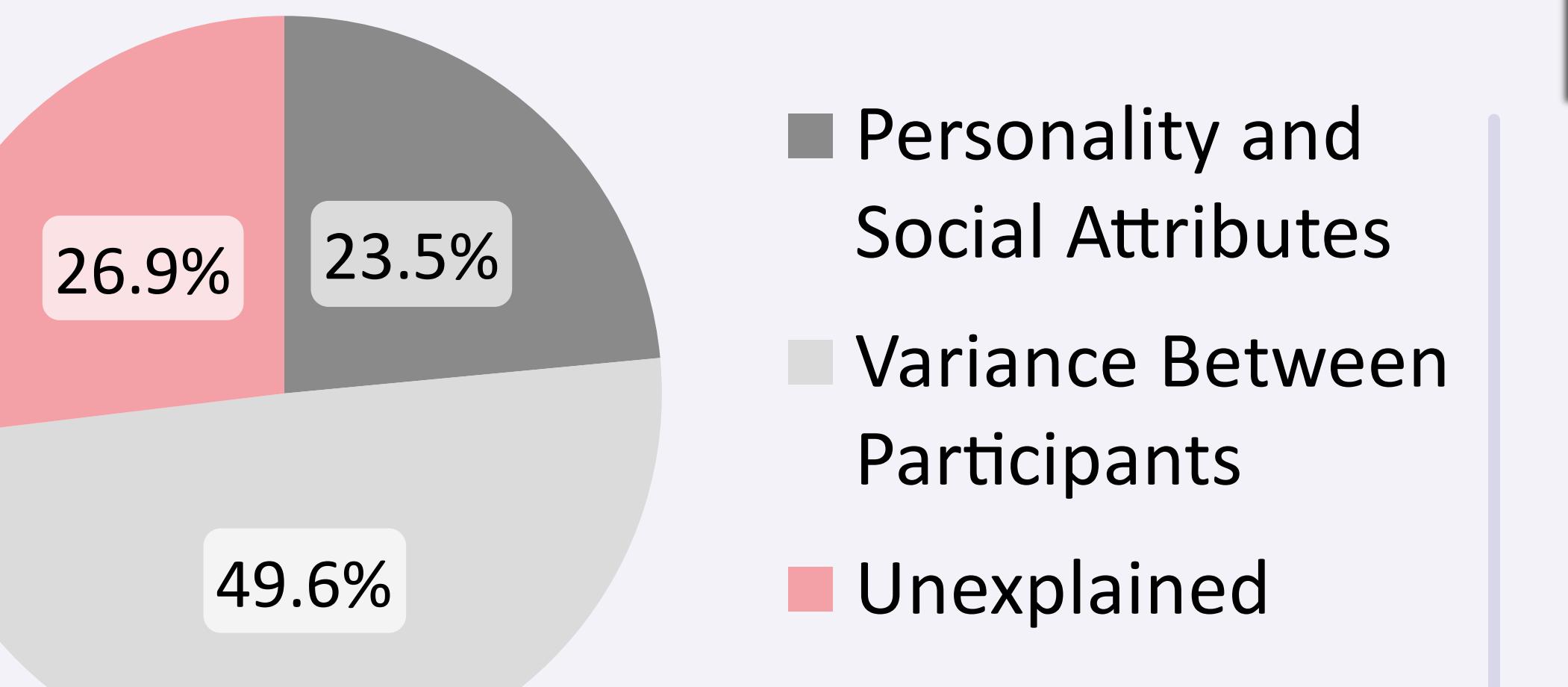
Background

Memorability: a predictive value of whether an image is likely to be remembered or forgotten



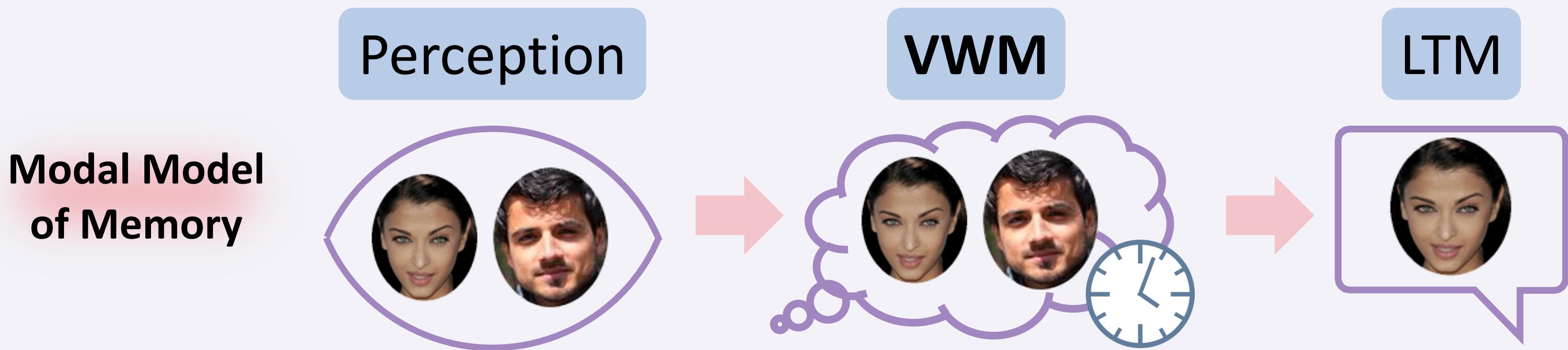
Bainbridge et al., 2013

Contributions to Memorability



Memorability is an intrinsic attribute of an image that is stable across different people

When? At which memory stage(s) does memorability emerge?



How? How might memorability emerge in VWM?

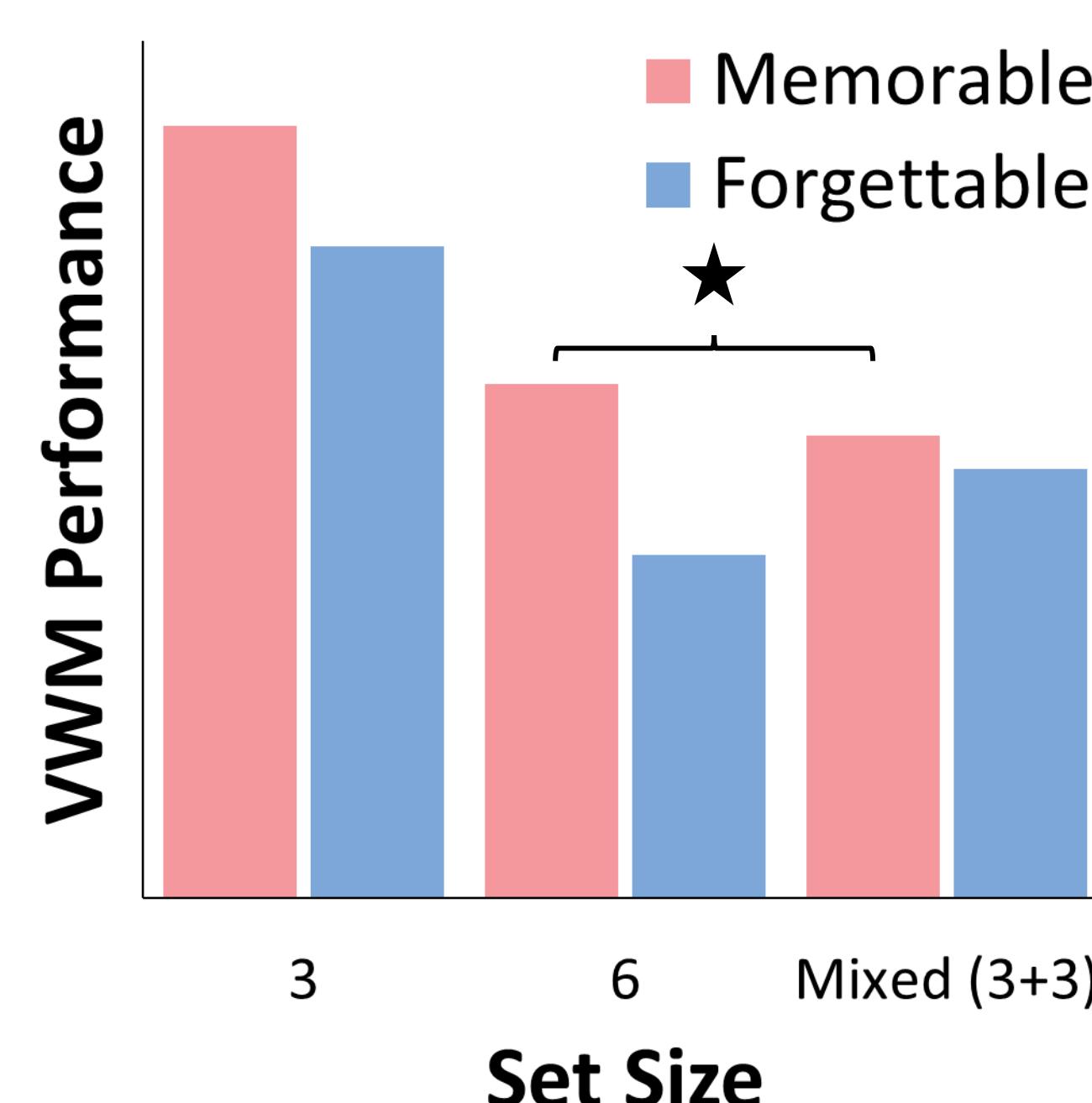
Atkinson & Shiffrin, 1968

Methods

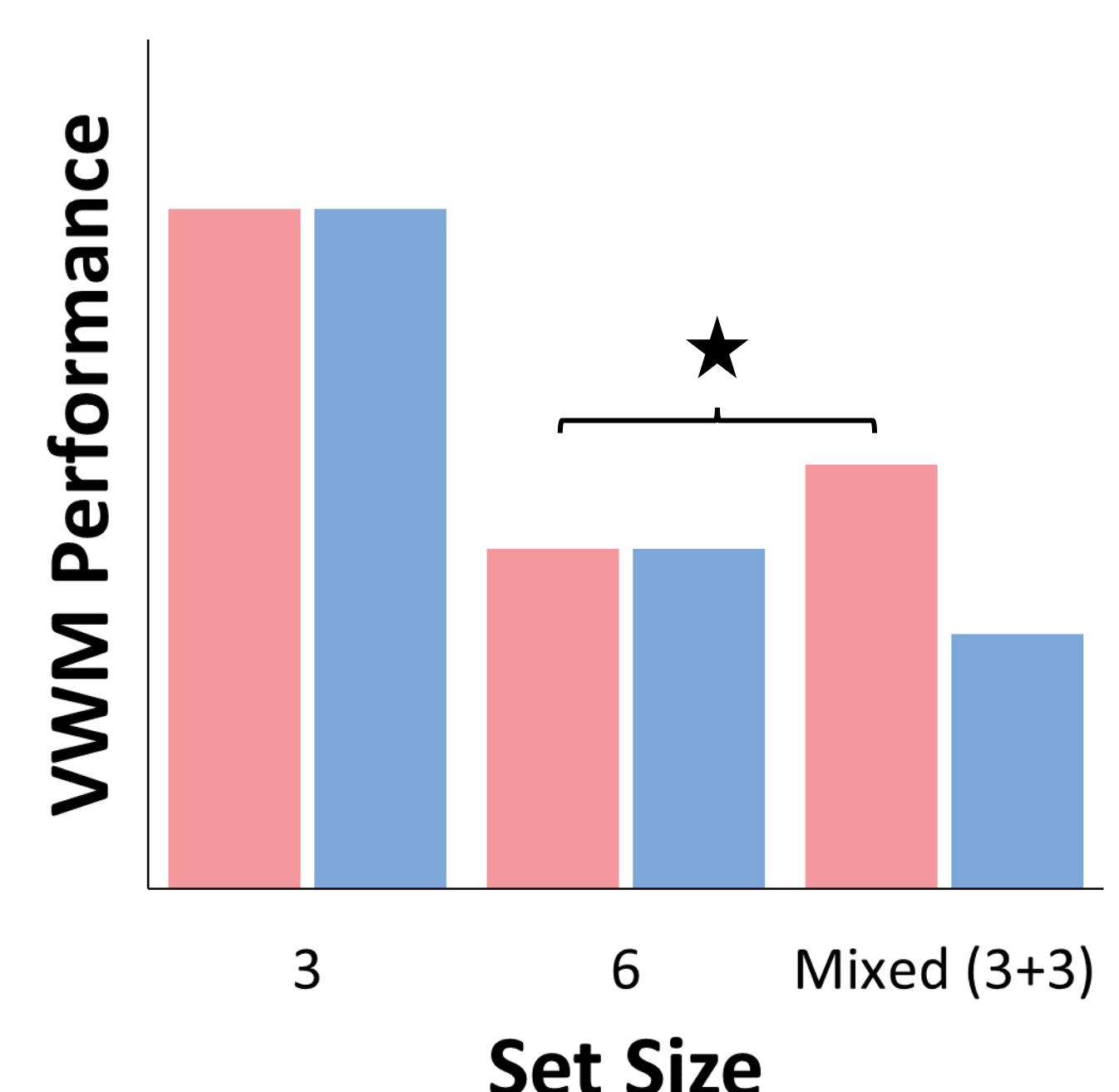


Predictions

1) Memorable faces require fewer resources



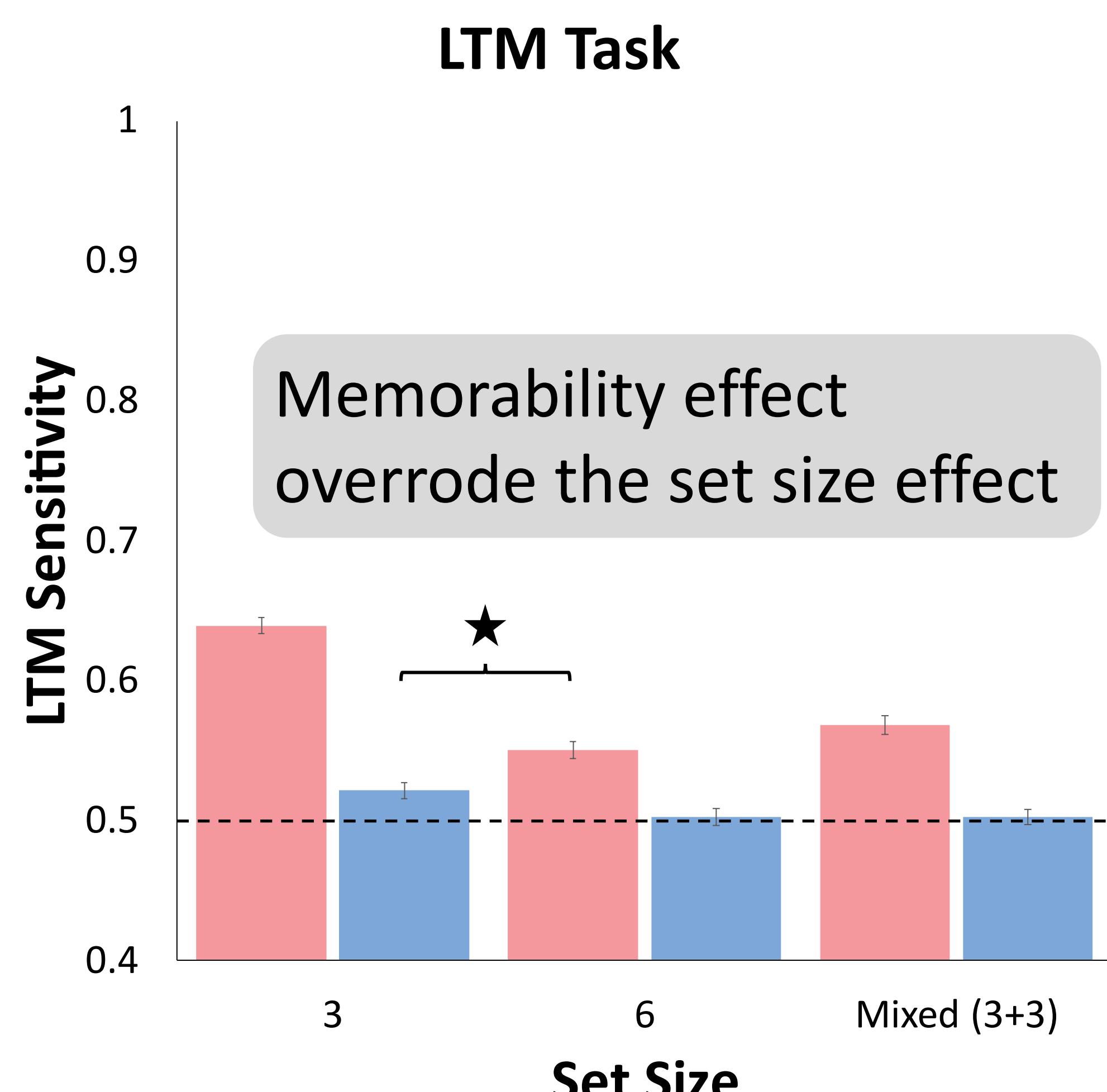
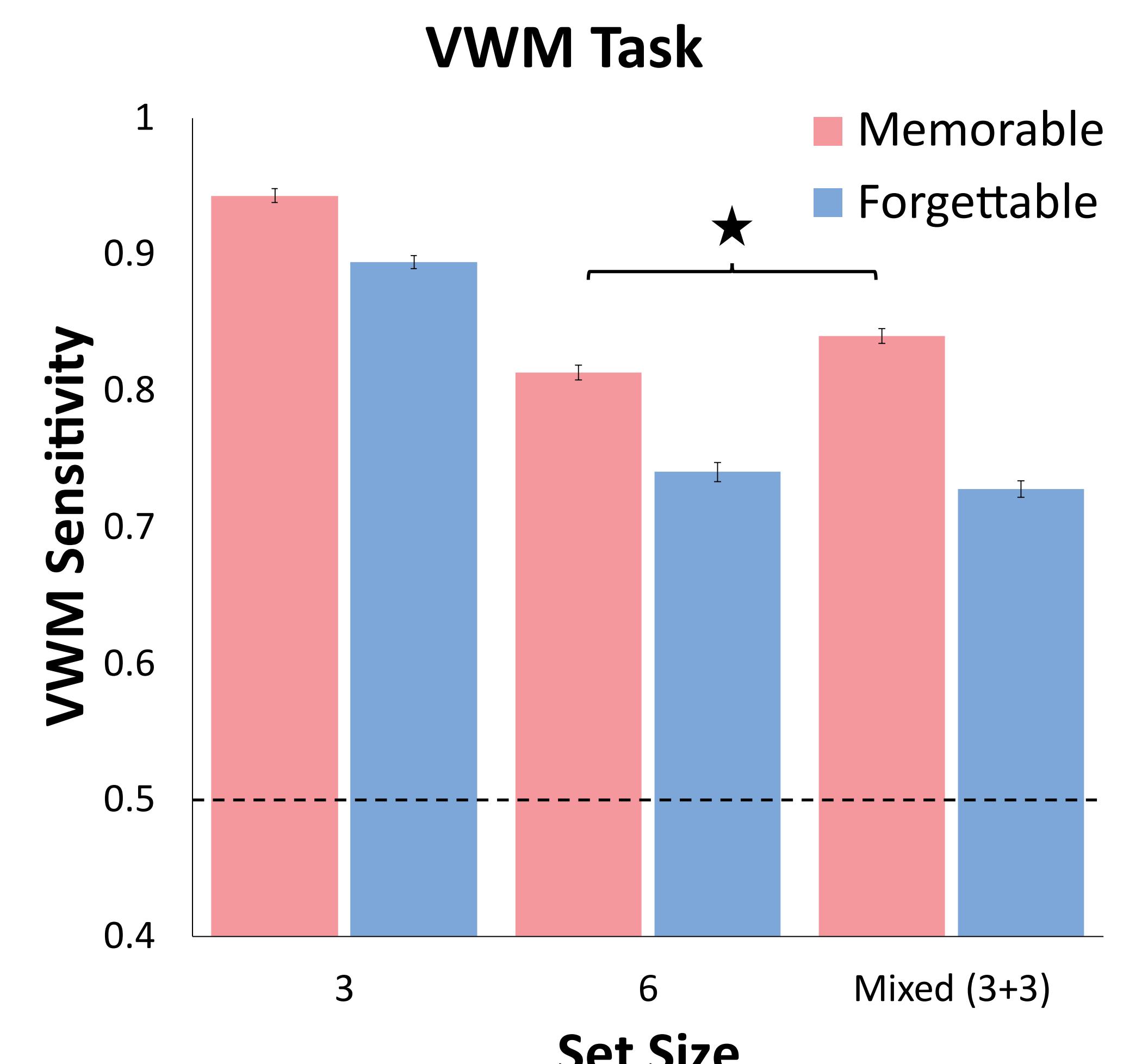
2) Memorable faces are more competitive



Results

Both predictions are correct!

1) Memorable face sensitivity > forgettable face sensitivity



2) Mixed memorable > set size 6 forgettable

Conclusions

1. Memorability emerges during VWM: Memorable items require fewer resources and are more competitive than forgettable items
2. Memorability continues to emerge post-VWM: Memorable items decay slower than forgettable items

Atkinson, R. C., & Shiffrin, R. M. (1968). Human memory: A proposed system and its control processes. In K. W. Spence & J. T. Spence (Eds.), *Psychology of Learning and Motivation* (Vol. 2, pp. 89-195). Academic Press. [https://doi.org/https://doi.org/10.1016/S0079-7421\(08\)60422-3](https://doi.org/https://doi.org/10.1016/S0079-7421(08)60422-3)

Bainbridge, W. A., Isola, P., & Oliva, A. (2013). The intrinsic memorability of face photographs. *Journal of Experimental Psychology: General*, 142(4), 1323-1334. <https://doi.org/10.1037/a0033872>