

Intuitive, Creative, or Transliminal?

Crossing the threshold from intuition to convergent thinking

Joshua R. Ortega¹, 
✉ joshua_ortega@ucsb.edu

Madeleine E. Gross¹,  Jonathan W. Schooler¹

¹ Department of Psychological and Brain Sciences, UC Santa Barbara

Introduction

Theoretical work indicates the personality trait **transliminality** is associated with lower activation thresholds for conscious processing. This implies individuals higher in transliminality require less activation before information processed unconsciously enters conscious awareness. Similarly, **intuitive thinking** often involves formulating hunches or hypotheses based largely on unconscious processing. Intuition may therefore reflect one’s ability to access information *below* the threshold of consciousness. Taken together, this suggests individuals higher in transliminality should exhibit better intuition, thus demonstrating greater access to unconscious or subliminal psychological material.

Methods

In a sample of 122 undergraduates, we measured transliminality, intuition, and convergent thinking. Transliminality was measured using the **Revised Transliminality Scale**, a 17-item true/false scale developed by [Lange et al. \(2000\)](#). Intuition and convergent thinking were assessed using an online version of the **Dyads of Triads (DOT) task** ([Bowers et al., 1990](#)) in which participants viewed pairs of word triads and were asked: 1) to identify which of the two word triads were *semantically coherent* (i.e., all three words could be linked by a fourth *solution* word), and 2) to solve the coherent triad by generating the solution word. Convergent thinking was calculated as the **proportion of solved trials**, i.e., trials where the participant correctly generated the solution word. Intuition was calculated as the proportion of unsolved trials in which participants **correctly identified the semantically coherent triad**. Several other personality variables (e.g., schizotypy and overinclusive thinking) were measured for exploratory purposes. This poster was made using the **posterdown** R package ([Thorne, 2019](#)).

Results

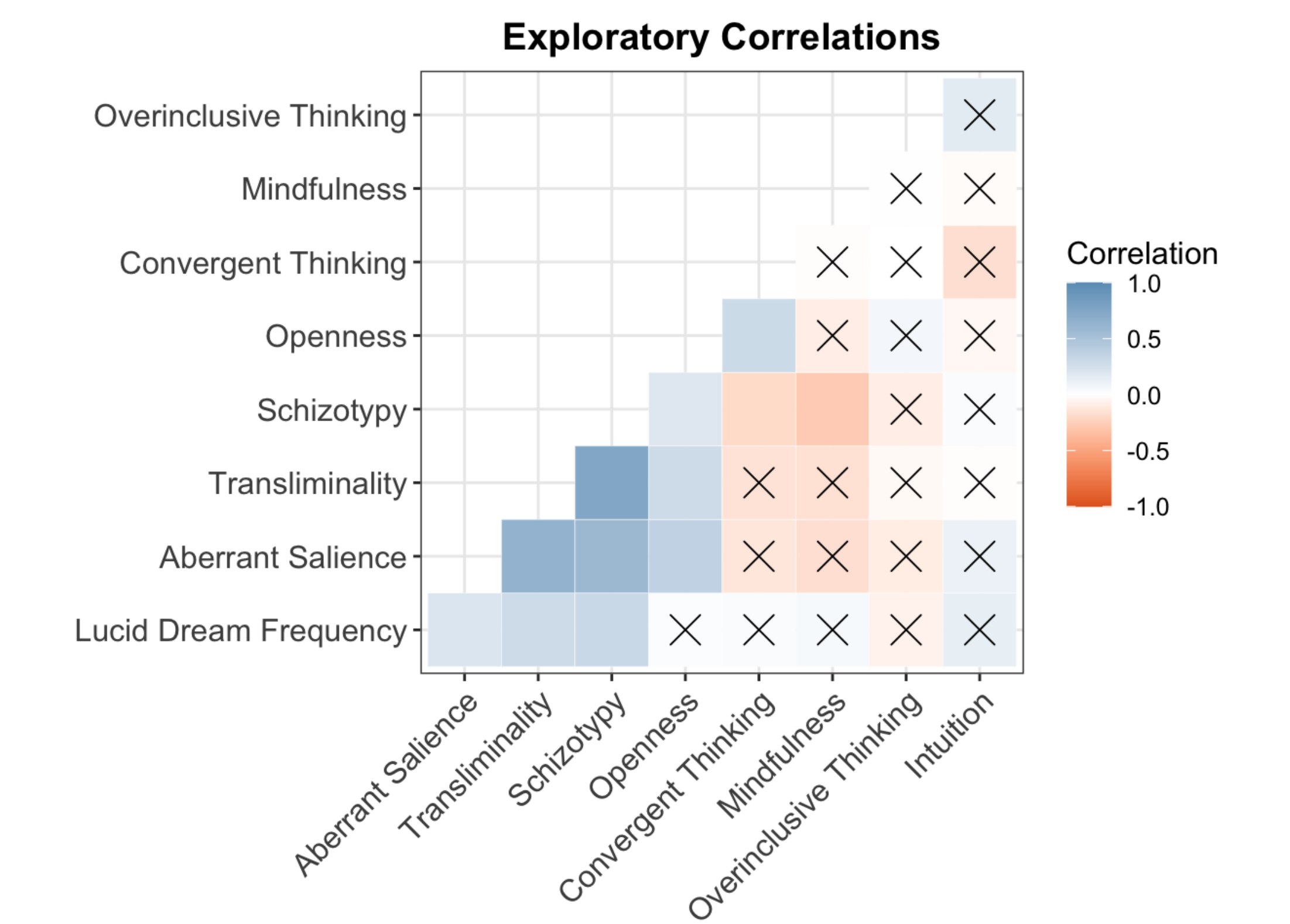
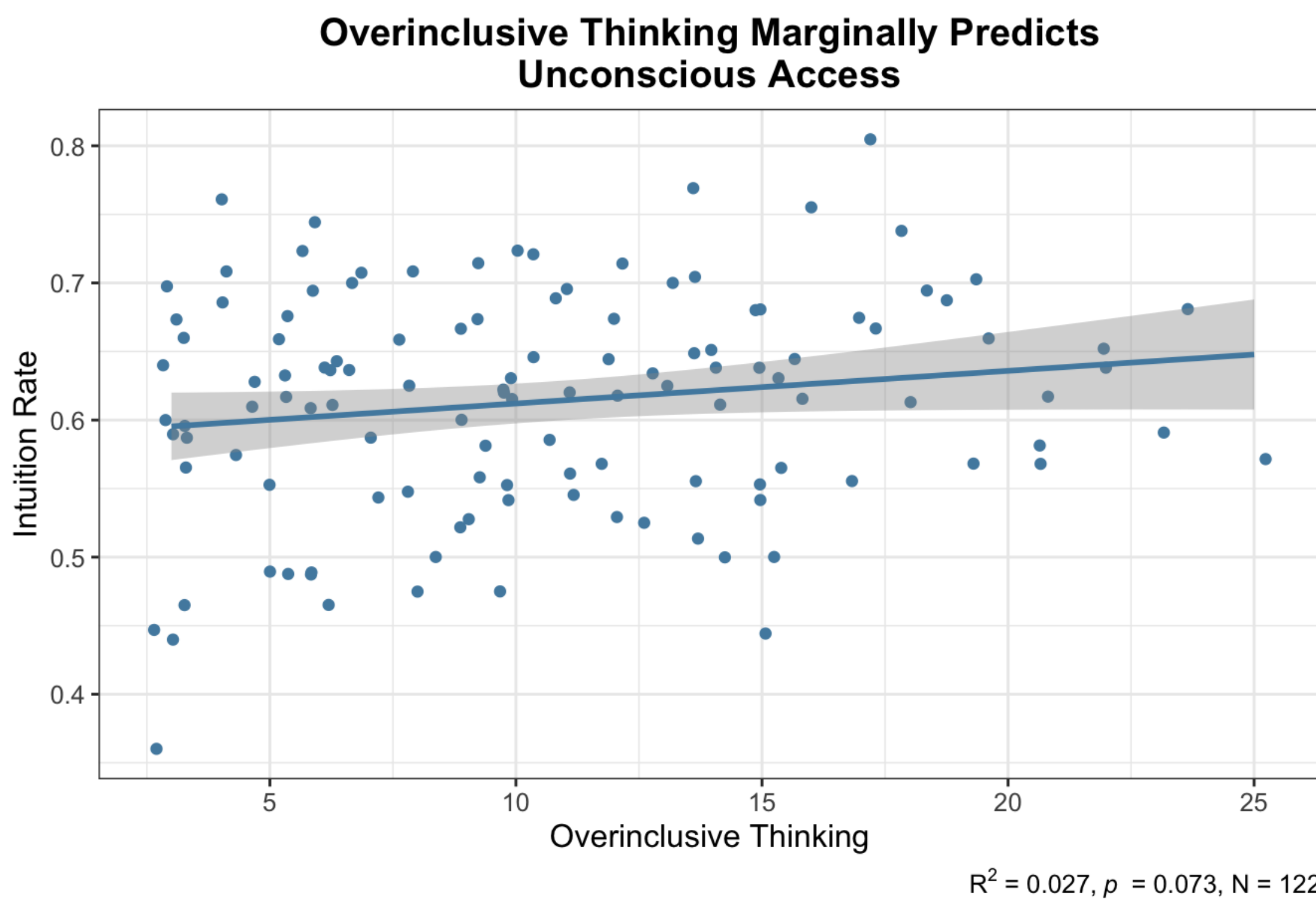
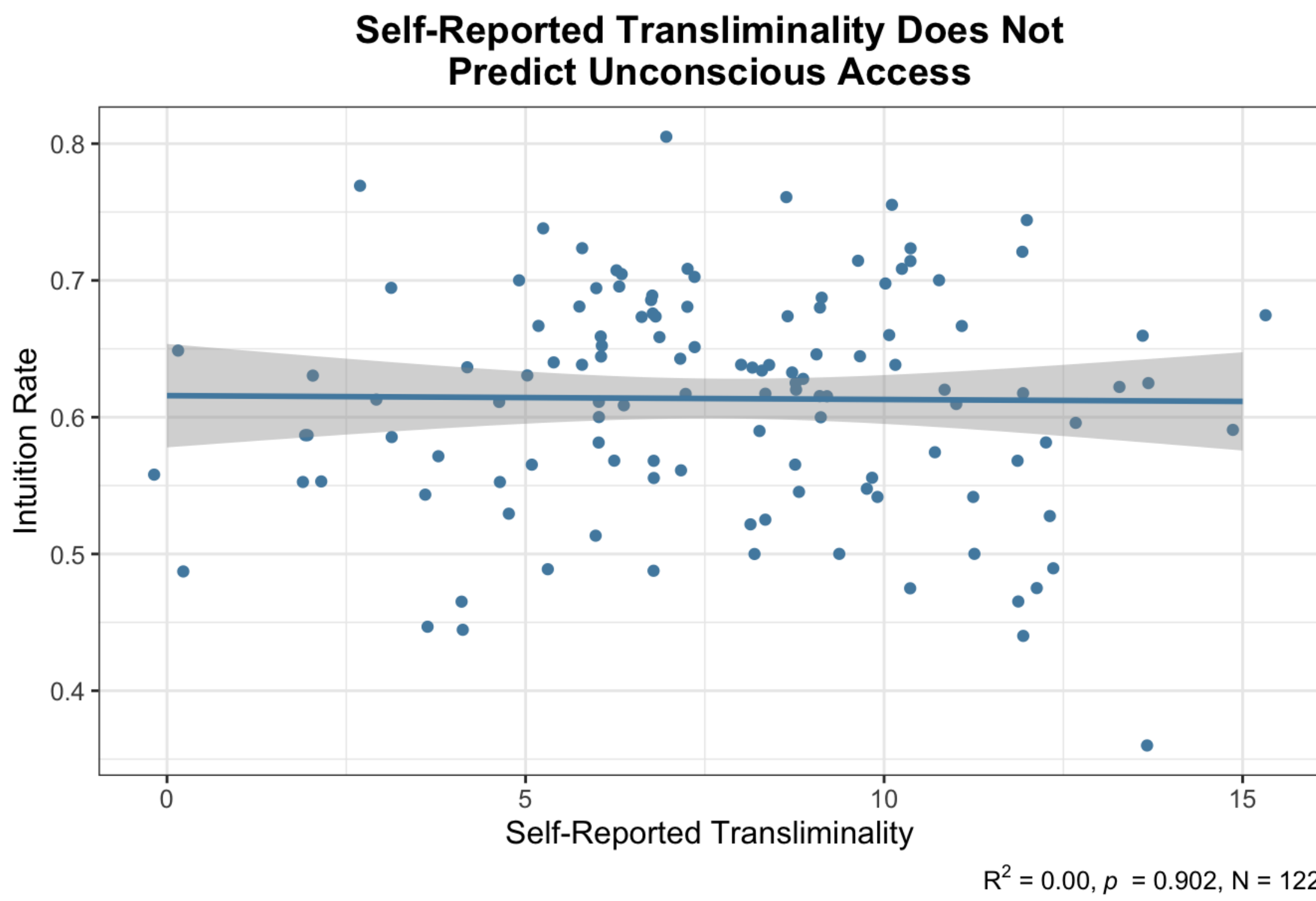
We predicted individuals higher in transliminality would display greater intuition and convergent thinking. To test this, we ran two simple linear regression models with transliminality as the predictor in both models, and either intuition or convergent thinking as the dependent variable. Contrary to our hypotheses, transliminality did not predict intuition ($\beta = 0$, $t(120) = -0.123$, $p = 0.902$) nor did it predict convergent thinking ($\beta = -0.004$, $t(120) = -1.63$, $p = 0.106$). We did however find a marginal correlation between intuition and overinclusive thinking ($r = 0.16$, $t(120) = 1.81$, $p = 0.073$). Interestingly, convergent thinking and intuition were marginally negatively correlated with one another ($r = -0.17$, $t(120) = -1.90$, $p = 0.059$), although we later determined this was likely an artifact of using the DOT to capture both constructs. Finally, a one sample t-test revealed the sample as a whole performed better than chance on the intuition measure ($t(121) = 15.47$, $p < 0.001$, $d = 1.40$), indicating it is possible to identify semantic coherence even when the reason for that coherence, i.e., the solution word, eludes conscious awareness.

Conclusion

Surprisingly, we found no relationship between intuition and transliminality, thus calling into question the notion that transliminality mediates greater access to unconscious material. However, this null result can be interpreted in several ways. First, it is possible the self-report measure of transliminality was inadequate for capturing variation in unconscious access. Alternatively, it is possible intuition is simply a poor objective indicator of transliminality. Nevertheless, this study opens the door for future researchers to explore other promising indicators of unconscious access, one of which may be overinclusive thinking.

Surprisingly, self-reported transliminality does not predict greater access to unconscious information.

But, overinclusive thinking might.



Sample Dyads of Triads Trial

A

Time

Union

Rust

B

Fur

Rack

Tail

Please type the solution to the coherent triad (if you know it):

Which triad do you think was coherent? Answer this question even if you provided a solution above.

Triad A

Triad B

References

Bowers, K. S., Regehr, G., Balthazard, C., & Parker, K. (1990). Intuition in the context of discovery. *Cognitive Psychology*, 22(1), 72–110. [https://doi.org/10.1016/0010-0285\(90\)90004-N](https://doi.org/10.1016/0010-0285(90)90004-N)

Lange, R., Thalbourne, M. A., Houran, J., & Storm, L. (2000). The revised transliminality scale: Reliability and validity data from a rasch top-down purification procedure. *Consciousness and Cognition*, 9(4), 591–617. <https://doi.org/10.1006/ccog.2000.0472>

Thorne, W. B. (2019). *Posterdown: An R Package Built to Generate Reproducible Conference Posters for the Academic and Professional World Where Powerpoint and Pages Just Won't Cut It*. <https://github.com/brentthorne/posterdown>

