A bullshit blind spot? Dunning-Kruger effects in bullshit detection

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*Google Meet Link for Q&A:
https://meet.google.com/jve-zsgm-pzd

Background

- People are often confident that they are not easily misled (i.e., they have good "bullshit detectors"). However, their BS detection confidence may not relate to their actual ability.
- Past work has shown that people who engage in bullshitting more frequently are metacognitively less able to distinguish bullshit from non-bullshit, suggesting that some people may be unaware of their susceptibility to misleading information.
- We examined the extent to which a person's confidence in their BS detection abilities is related to actual accuracy on a BS detection task as well as how they feel their detection ability compares to the ability of others.
- We also examined the associations of these variables with bullshitting frequency and intelligence.
- We followed up in Study 2 by investigating whether one's bullshit detection ability is perceived to be an intuitive or reflective process.
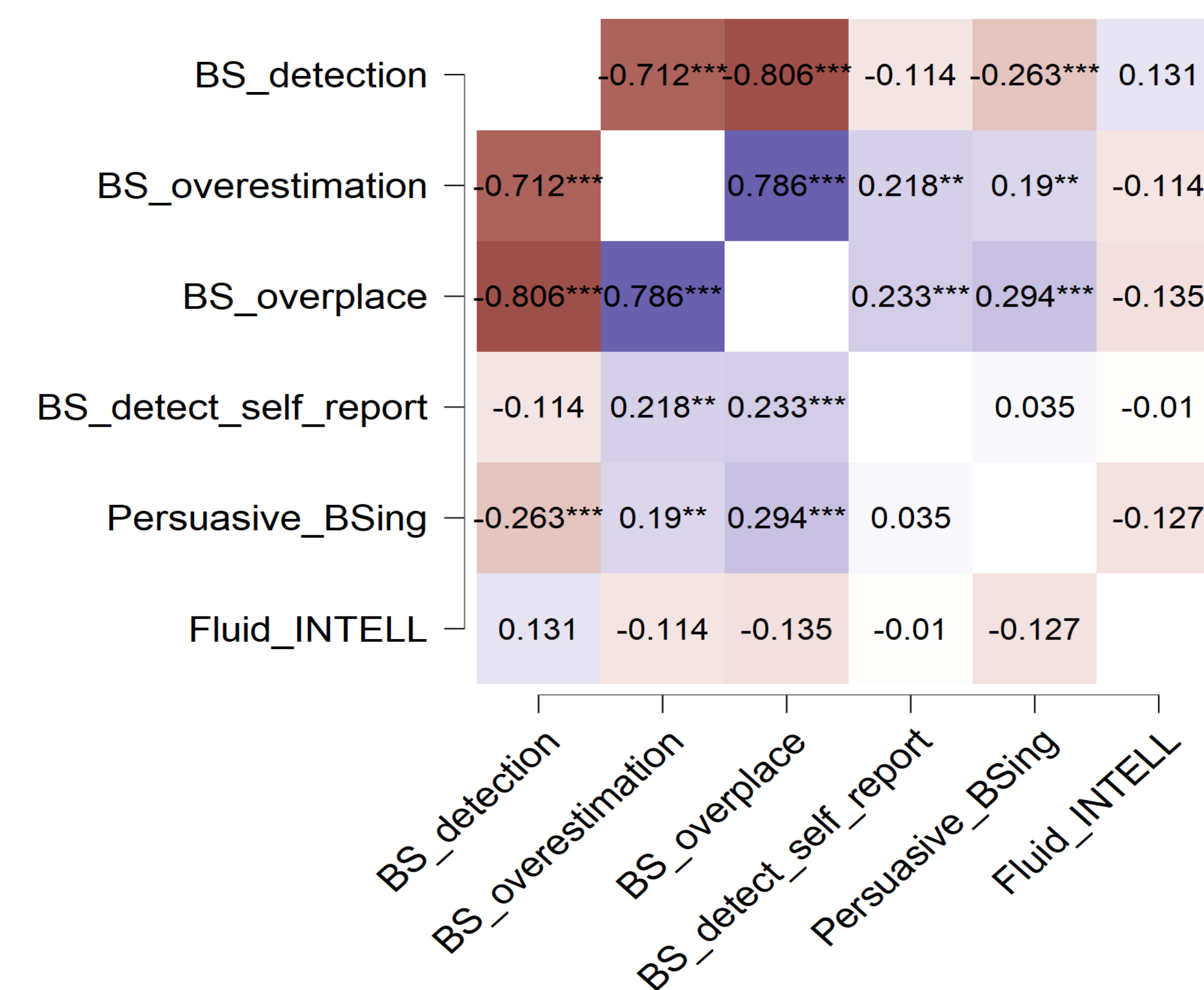
Method (Study 1: *N* = 211; Study 2: *N* = 201 ; MTurk samples)

1) *Bullshit detection* – Participants rated 10 BS and 10 non-BS statements as either "Profound" or "Not Profound." "Bullshit Detection" index was calculated using a *signal detection approach*, by subtracting P(False Alarms) from P(Hits). Participants also self-reported their general BS detection ability (compared to others) on a 0 to 100 sliding scale.

2) *Overconfidence (overestimation)* – measured by subtracting actual BS detection % accuracy from estimated % accuracy

3) *Overplacement* – measures how a person believes they performed compared to others

4) *Persuasive bullshitting frequency* – propensity to engage in bullshitting intended to impress or persuade others. Measured using the Bullshitting Frequency Scale (BSF; Littrell et al., 2020).

5) *Intelligence* – Study 1 = Fluid (10-item ICAR); Study 2 = Crystallized verbal (10-item Wordsum).

6) *Intuition vs reflection* – asked participants whether they rated profoundness of items intuitively ("I knew it immediately") or reflectively ("I had to think about it for a few seconds"). Time spent rating each item was also collected.
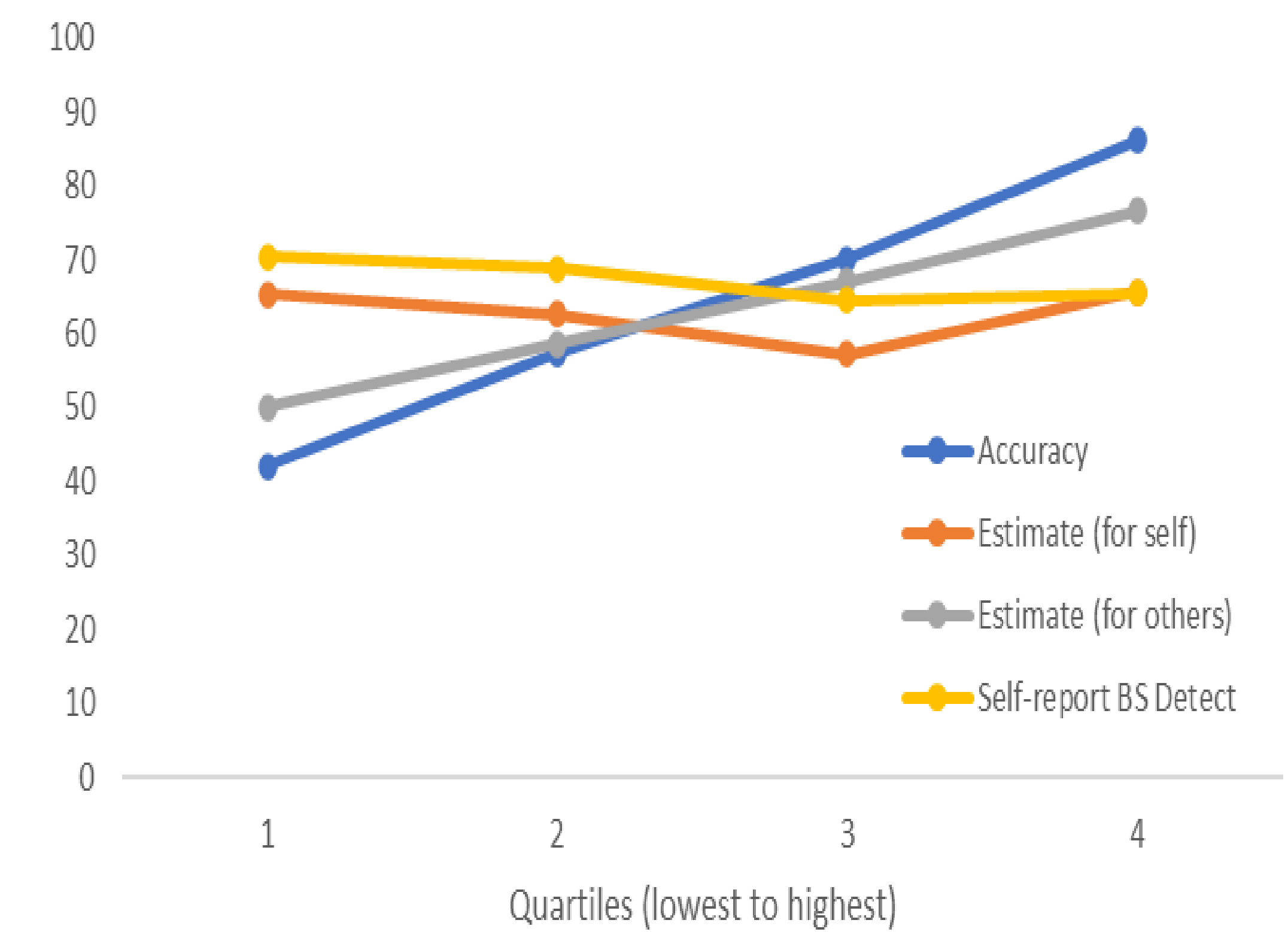
Discussion

- Study 1 showed strong evidence of Dunning-Kruger-like effects for bullshit detection. That is, people who are least able to detect bullshit and distinguish it from non-bullshit grossly overestimated their performance, while those most able to detect it were significantly underconfident in their performance. Overall self-reported BS detection ability followed this same pattern.
- People least able to detect bullshit believe they are significantly more skilled at detecting bullshit compared to everyone else, suggesting that highly bullshit receptive people may have a "bullshit blind spot."
- Study 2 confirmed main results from Study 1 while also finding that, in general, people tend to take slightly longer to evaluate bullshit statements but do not tend to use one processing strategy over the other. However, evaluating non-bullshit clearly relied more heavily on intuitive processes.

Results – Study 1

	BS_detection	BS_overestimation	BS_overplace	BS_detect_self_report	Persuasive_BSing	Fluid_INTELL
BS_detection		-0.712***	-0.806***	-0.114	-0.263***	0.131
BS_overestimation	-0.712***		0.786***	0.218**	0.19**	-0.114
BS_overplace	-0.806***	0.786***		0.233***	0.294***	-0.135
BS_detect_self_report	-0.114	0.218**	0.233***		0.035	-0.01
Persuasive_BSing	-0.263***	0.19**	0.294***	0.035		-0.127
Fluid_INTELL	0.131	-0.114	-0.135	-0.01	-0.127	

BS Detection Accuracy vs Confidence (Study 1)
- Accuracy
- Estimate (for self)
- Estimate (for others)
- Self-report BS Detect

Quartiles (lowest to highest)

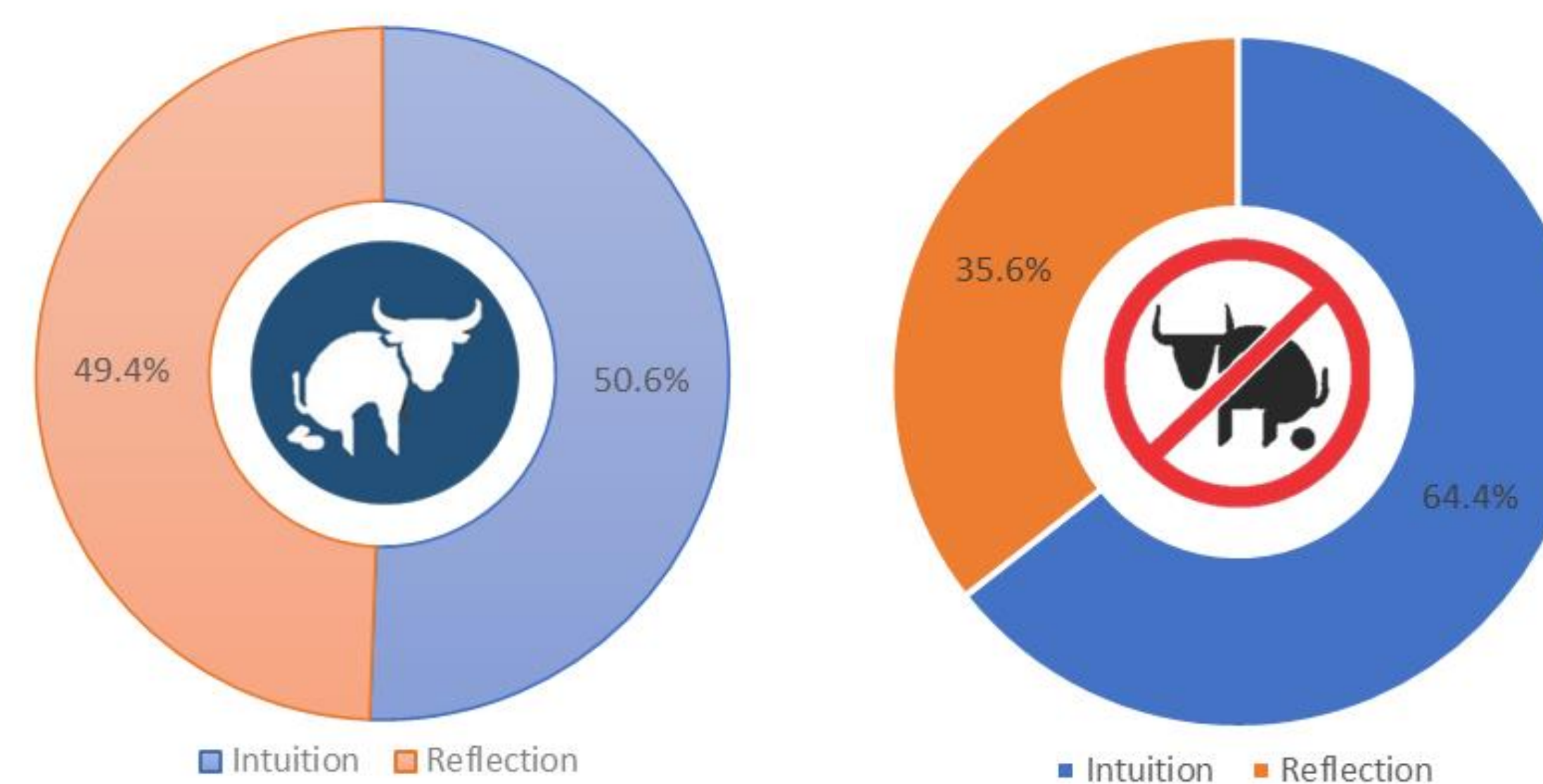## People more receptive to bullshit grossly overestimate their ability to detect it and believe they are better able to detect it than others (i.e., "bullshit blind spot").

Results – Study 2. Intuition vs reflection use in BS detection

Item	Process	Count	Proportion	χ^2	Sig.	Avg. time
1 This life is nothing short of an unfolding lightning bolt of enlightened growth. (BS)	Intuition	102	.51	0.04	.83	10.25 sec
	Reflection	99	.49			
2 A river cuts through a rock not because of its power but its persistence. (non-BS)	Intuition	155	.77	59.11	<.001	8.05 sec
	Reflection	46	.23			

Self-reported thinking process used for detection   **Average time to rate items**

49.4%   50.6%   ■ Intuition ■ Reflection

35.6%   64.4%   ■ Intuition ■ Reflection

11.13 seconds   **9.17 seconds**
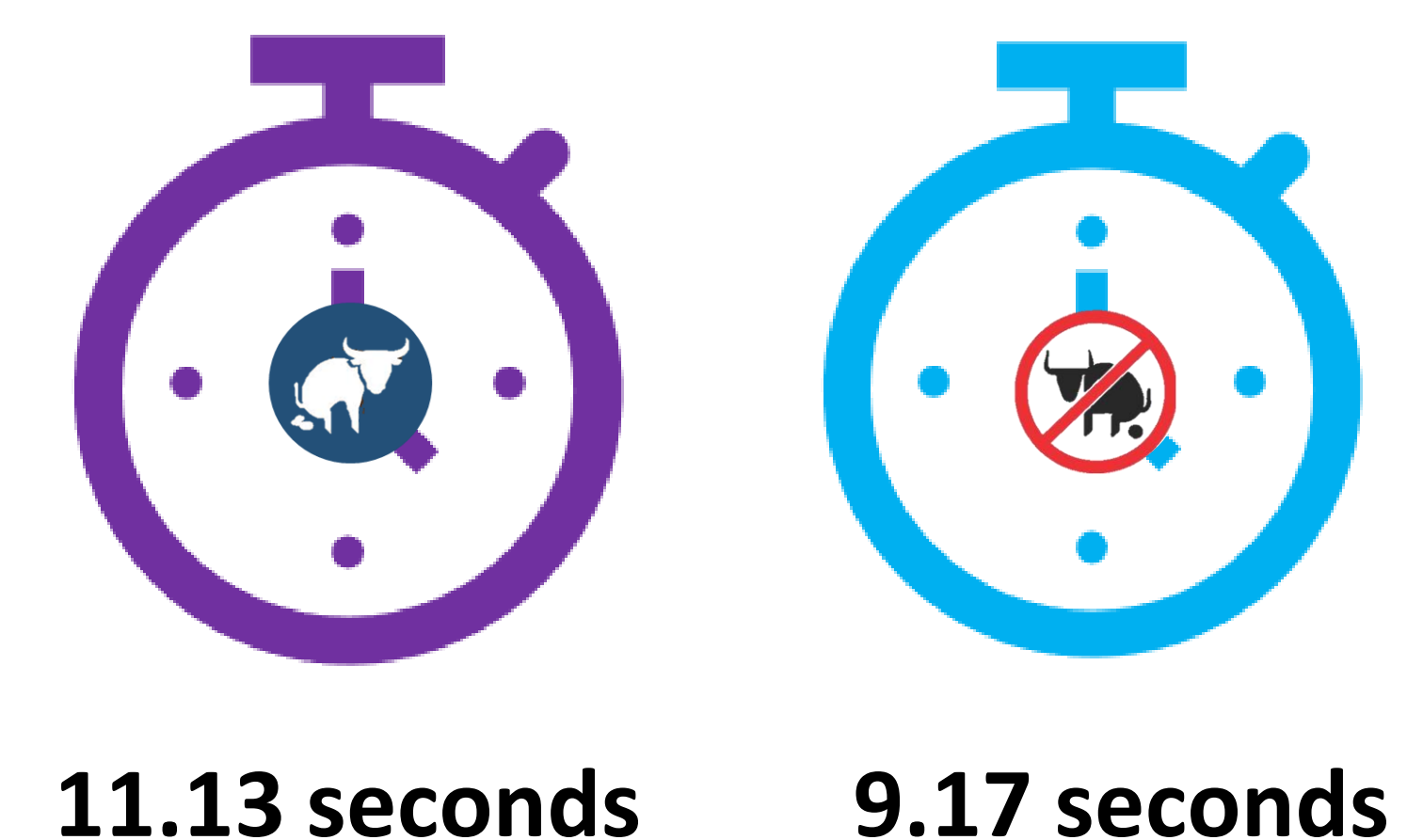
References

- Littrell, S., Risko, E.F., & Fugelsang, J.A. (2020). (2020, September 14). "You can't bullshit a bullshitter" (or can you?): Bullshitting frequency predicts receptivity to various types of misleading information. *PsyArxiv*, https://doi.org/10.31234/osf.io/az2cj
- Pennycook, G., Cheyne, J. A., Barr, N., Koehler, D. J., & Fugelsang, J. A. (2015). On the reception and detection of pseudo-profound bullshit. *Judgment and Decision Making,10*(6), 549–563. http://journal.sjdm.org/15/15923a/jdm15923a.pdf