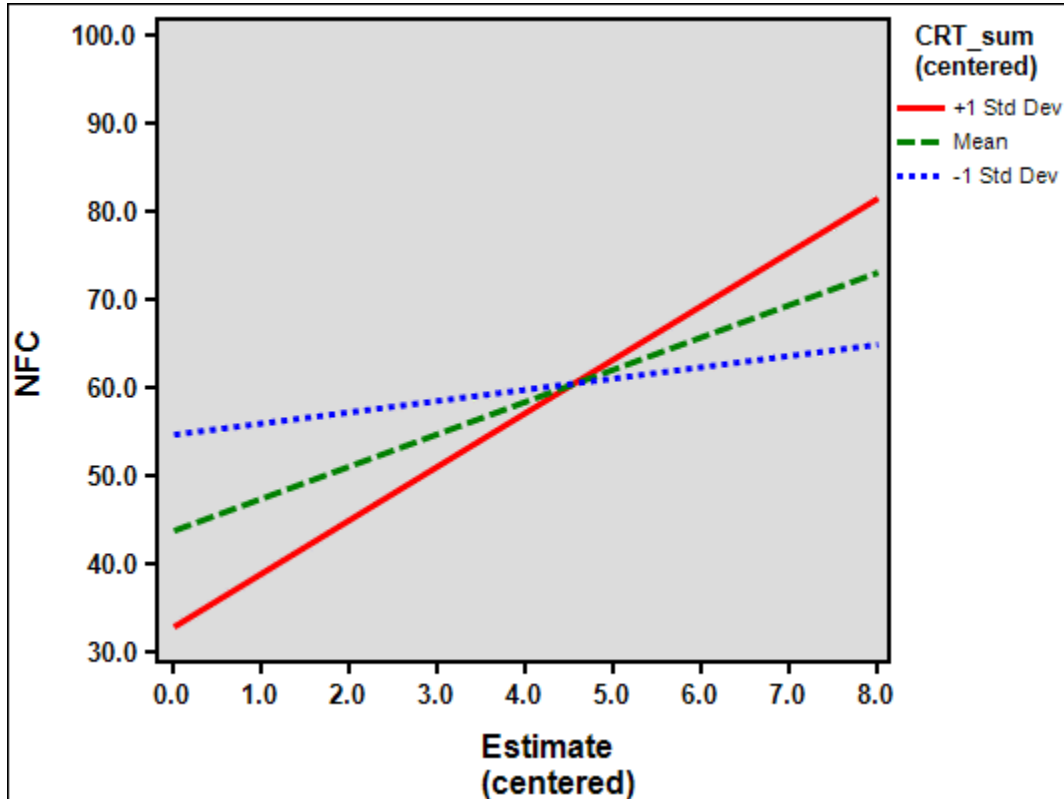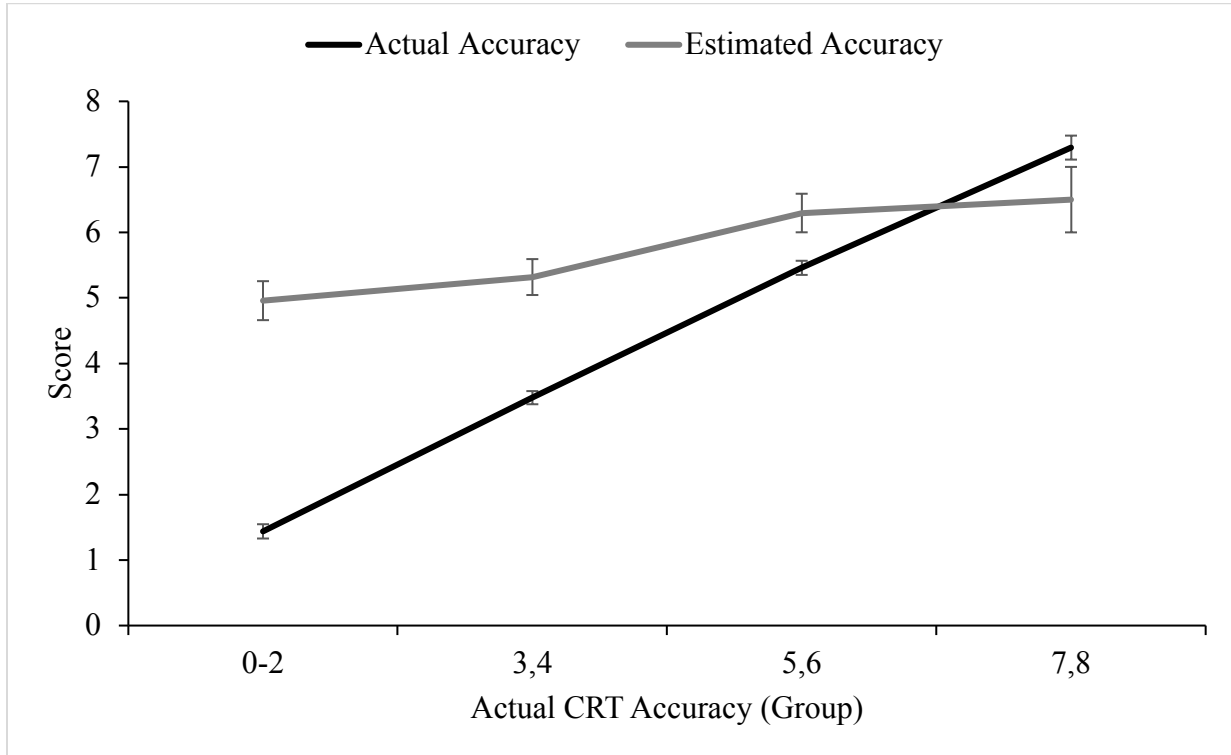**Figure S1.**

Study 1. Interaction between actual CRT accuracy ("CRT_sum") and estimated CRT accuracy ("Estimate") in the prediction of Need for Cognition (NFC). $N = 183$. Figure created using Interaction v1.7.211, http://www.danielsoper.com/Interaction/default.aspx.

Figure S2.

Miscalibration between actual CRT accuracy and estimated CRT accuracy as a function of CRT group (those who score 0-2, 3-4, 5-6, or 7-8 out of 8) in Study 2. Y-Axis represents the number of correct/estimated correct out of 8 CRT problems. Error bars represent 95% confidence intervals.

Figure S3.

Study 2. Interaction between actual CRT accuracy ("CRT_sum") and estimated CRT accuracy ("Estimate") in the prediction of Need for Cognition (NFC). *N* = 340. Figure created using Interaction v1.7.211, http://www.danielsoper.com/Interaction/default.aspx.
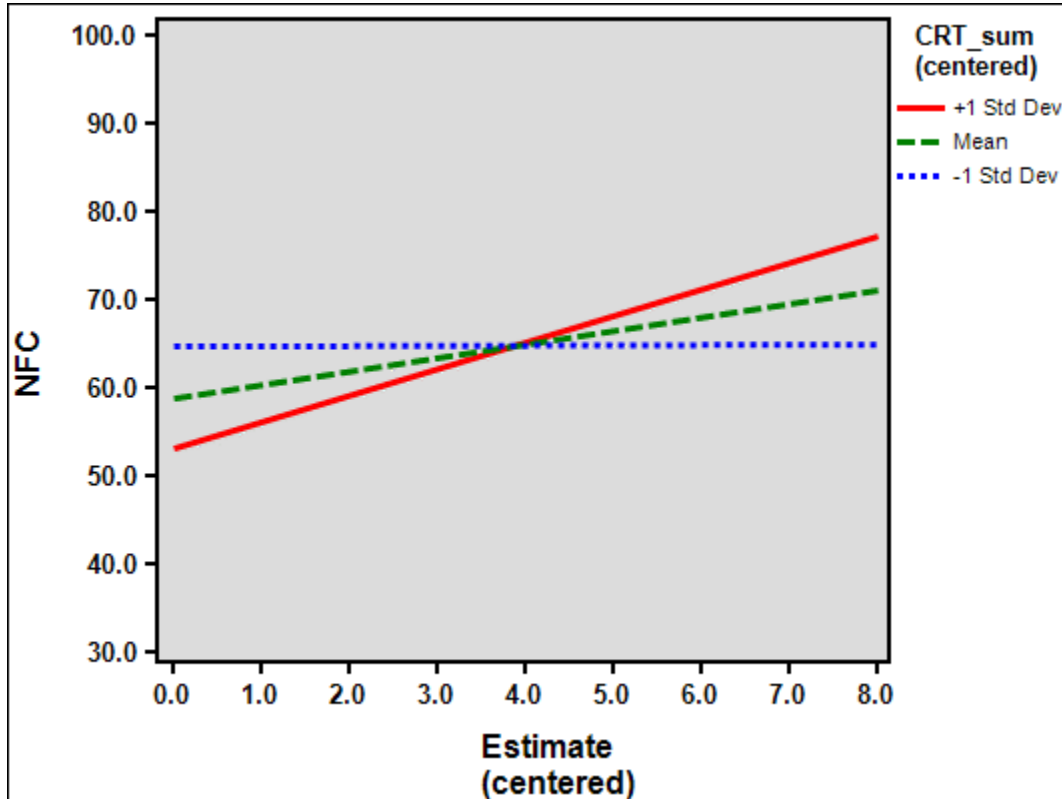
Supernatural belief

Participants were also given a paranormal belief scale (Pennycook, Cheyne, et al., 2012). The original goal was to demonstrate that it is possible that estimated and actual CRT performance do not always equally correlate with other types of self-report measures apart from Need for Cognition. Drawing on evidence that analytic thinkers are less likely to believe in religious and paranormal claims (Gervais & Norenzayan, 2012; Pennycook, Cheyne, Seli, Koehler, & Fugelsang, 2012; Pennycook, Ross, Koehler, & Fugelsang, 2016; Shenhav, Rand, & Greene, 2012), we addressed this issue by including a supernatural belief scale. The scale consisted of 26 items sampled from 7 categories of supernatural belief (example items in parentheses): Religious ("I believe in God"), Psi (''Mind reading is possible''), Witchcraft (''Witches do exist''), Omens of luck (''Black cats can bring bad luck''), Spiritualism (''It is possible to communicate with the dead''), Extraordinary life forms (''The Loch Ness monster of Scotland exists'') and Precognition (''Astrology is a way to accurately predict the future''). Items were presented in a randomized order and participants responded on a 7-point scale from strongly disagree to strongly agree. The scale was reliable, $\alpha = .97$.

Results

Supernatural (religious and paranormal) belief was more strongly correlated with actual CRT accuracy, $r(341) = -.278$, $p < .001$, than estimated CRT accuracy, $r(341) = -.093$, $p = .086$, $t(338) = 3.23$, $p = .001$ (see Table S1 for full correlation table). This provides an existence proof for the idea that actual CRT can be more predictive than estimated CRT accuracy. Regression indicates that actual CRT performance predicts supernatural belief after estimated CRT performance and their interaction (neither of which were significant) have been controlled (see Table S2).

Table S1. Correlations (Pearson r) among variables in Study 2. $N = 341$.

	1	2	3	4	5	6	7	8	9
1. CRT Accuracy	-								
2. Estimated CRT Accuracy	.400***	-							
3. Need for Cognition	.202***	.160**	-						
4. Heuristics & Biases	.411***	.326***	.218***	-					
5. Supernatural Belief	-.278***	-.093	-.227***	-.220***	-				
6. CRT_1 – Estimated Accuracy$_2$ (Calibration1)	.676***	-.404***	.074	.148**	-.203***	-			
7. CRT_1 – NC$_3$ (Calibration2)	.631***	.186**	-.632***	.153**	-.042	.480***	-		
8. H&B$_4$ – NC$_3$ (Calibration3)	.167**	.133*	-.625***	.626***	-.005	.060	.627***	-	
9. CRT_1 – H&B$_4$	.543***	.068	-.015	-.543***	-.054	.487***	.439***	-.424***	-

***indicates $p < .001$, **indicates $p < .01$, *indicates $p < .05$

Table S2.

Final step of separate hierarchical multiple regression analyses predicting Supernatural Belief with estimated CRT accuracy (CRT Est), actual CRT accuracy (CRT Acc), and their interaction (Acc x Est) as predictors.

	r	B	*t*	*p*	*Tolerance*	*VIF*
Intercept			18.36	< .001		
CRT Acc	-.278	-.289	4.99	< .001	.82	1.23
CRT Est	-.093	.025	.43	.671	.78	1.29
Acc x Est	-.011	.012	.22	.826	.92	1.08

DV = Supernatural Belief, $N = 341$

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