

## ONLINE APPENDIX

# Does the Name–Race Implicit Association Test Measure Racial Prejudice?

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### Supplementary Analyses

In this section we describe the analyses that were carried out on a subset of the stimuli used in the main study in van Ravenzwaaij, van der Maas, and Wagenmakers (2010). We removed all 44 Moroccan names with a familiarity rating higher than 2, and all 49 Finnish names with a familiarity rating lower than 1.25. This resulted in a mean familiarity of 1.49 ( $SD = 0.50$ ) for the Moroccan names and 1.43 ( $SD = 0.51$ ) for the Finnish names.

The left panel of Figure 1 shows the mean IAT-effects on mean RT for the three different IATs. The top panel shows IAT-effects for the names and the attributes combined, both for the complete stimulus set (solid line) and the restricted stimulus set (dotted line). The bottom panel shows: IAT-effects for names in the complete stimulus set (solid line), IAT-effects for attributes in the complete stimulus set (dashed line), IAT-effects for names in the restricted stimulus set (dotted line), and IAT-effects for attributes in the restricted stimulus set (dot-dashed line). Note that the error bars, representing 95% confidence intervals, are relatively small as a result of our large amount of trials (i.e., 320) and high reliabilities. The results from the complete set are qualitatively and quantitatively similar to those from the subset. The figure shows IAT-effects for the Dut–Fin and the Dut–Mor versions of the IAT, but not for the Fin–Mor versions of the IAT. The detailed statistical analyses can be found in the top three rows of Table 1 (see van Ravenzwaaij et al., 2010, for the statistical tests for the complete stimulus set). We present statistical results for names and attributes combined, as similar results are obtained for names and attributes separately. As Table 1 shows, there is a non-zero IAT-effect for the Dut–Fin and the Dut–Mor versions

of the IAT, but not for the Fin–Mor versions of the IAT. Also, both the IAT–effects for the Dut–Fin and the Dut–Mor IAT differ significantly from the Fin–Mor IAT, but not from each other.

Table 1: *Top three rows: test statistics for the IAT-effects on mean RT. Middle three rows: test statistics for the IAT-effects on D-score. Bottom three rows: test statistics for the IAT-effects on error rate. First three columns: 19 degrees of freedom, last three columns: 38 degrees of freedom.*

		Fin–Mor	Dut–Fin	Dut–Mor	F–M vs D–F	F–M vs D–M	D–F vs D–M
Mean RT	t	1.19	7.62	5.80	2.70	2.52	.05
	$p$	.25	< .05	< .05	< .05	< .05	.96
	$p_{H_0}^{Bayes}$	.75	.00	.00	.18	.24	.81
Error Rate	t	1.72	2.70	2.42	.39	.24	.17
	$p$	.10	< .05	< .05	.70	.82	.87
	$p_{H_0}^{Bayes}$	.61	.23	.33	.80	.81	.81
D–score	t	1.47	7.93	8.61	3.09	3.56	.41
	$p$	.16	< .05	< .05	< .05	< .05	.64
	$p_{H_0}^{Bayes}$	.69	.00	.00	.09	.03	.78

The middle panel of Figure 1 shows the mean IAT–effects on error rate for the three different IATs. The IAT–effects for error rate are less clear than they were for mean RT. Inspection of the middle three rows of Table 1 shows that there is a non–zero IAT–effect for the Dut–Fin and the Dut–Mor versions of the IAT, but not for the Fin–Mor versions of the IAT. However, none of the three IAT–effects significantly differ from each other. Also, the Bayesian posterior probabilities show that the effects are ambiguous.

The right panel of Figure 1 shows the mean IAT–effects on D–score. The results are qualitatively identical to the mean RT results. The detailed statistical analyses can be found in the bottom three rows of Table 1.

### Delta Plots

In this section we present delta plots that were based on the data and the diffusion model parameter estimates presented in van Ravenzwaaij et al. (2010). A delta plot represents the effect of an experimental manipulation across the entire RT distribution (De Jong, Liang, & Lauber, 1994; Ridderinkhof, van den Wildenberg, Wijnen, & Burle, 2004; Speckman, Rouder, Morey, & Pratte, 2008). For our IAT data, the mean IAT–effect is computed for five different RT quantiles (i.e., the .1, .3, .5, .7, and .9 quantiles), and plotted against the quantile mean RT (averaged over the compatible and incompatible block). Figure 2 shows delta plots for the Fin–Mor, the Dut–Fin and the Dut–Mor IATs. The delta plots also display the diffusion model predictions.

Consistent with effects in drift rate or boundary separation, Figure 2 shows that the effects for the Dut–Fin and Dut–Mor IATs increase with average RT. Also, consistent with effects in non–decision time, effects for the Dut–Fin and Dut–Mor IATs are present even for

the very fast responses (i.e., the .1 quantile). Finally, a comparison between the data and the diffusion model predictions shows that the model fit is satisfactory.

### Diffusion Model Estimates

This section displays the diffusion model estimates.

ppn	v1	v2	v3	v4	a1	a2	ter1	ter2	ter3	ter4	eta	sz	st	p
1	1.86	2.88	1.57	2.82	1.05	0.99	0.5	0.47	0.56	0.51	0.36	0.32	0.19	0.56
2	1.43	1.8	1.94	1.55	1.6	1.55	0.55	0.54	0.56	0.56	0.44	0.49	0.1	0.39
3	1.25	1.7	1.36	1.97	1.07	1.14	0.55	0.56	0.56	0.61	0.28	0.41	0.18	0.47
4	0.44	1.97	0.32	1.53	1.12	1.07	0.5	0.47	0.34	0.44	0.27	0.35	0.25	0.94
5	2.3	2.33	1.07	1.86	0.8	0.8	0.41	0.42	0.42	0.44	0.42	0.26	0.17	0.46
6	1.32	1.22	1.54	1.31	1.78	1.66	0.36	0.53	0.4	0.5	0.32	0.58	0.35	0.07
7	2.39	2.32	1.69	2.04	1.4	1.4	0.47	0.46	0.44	0.45	0.36	0.33	0.13	0.35
8	2.4	2.44	2.18	2.04	1.34	1.34	0.52	0.5	0.46	0.44	0.33	0.43	0.1	0.94
9	1.9	2.17	2.07	2	1.39	1.33	0.42	0.45	0.51	0.46	0.34	0.55	0.18	0.77
10	1.03	2	1.24	0.74	1.23	1.35	0.48	0.45	0.57	0.64	0.09	0.34	0.26	0.49
11	2.34	2.2	2.1	2.15	1.31	1.37	0.51	0.53	0.47	0.52	0.12	0.46	0.2	0.86
12	1.21	2.4	0.87	1.6	1.1	0.96	0.47	0.46	0.52	0.54	0.38	0.36	0.17	0.5
13	1.47	2.99	1.24	2.33	1.31	1.3	0.59	0.56	0.6	0.58	0.77	0.32	0.18	0.41
14	1.97	2.35	2.12	2.13	1.12	1.12	0.51	0.51	0.52	0.48	0.35	0.3	0.14	0.66
15	1.28	1.47	1.67	3.08	1.29	1.23	0.62	0.62	0.49	0.51	0.39	0.36	0.24	0.33
16	2.66	2.6	2.23	2.35	0.97	0.92	0.4	0.41	0.41	0.42	0.34	0.28	0.13	0.89
17	1.46	2.01	0.87	1.81	1.11	1.11	0.49	0.56	0.46	0.56	0.15	0.56	0.34	0.61
18	2.03	2.14	1.66	2.88	1.17	1.05	0.47	0.46	0.48	0.47	0.3	0.37	0.18	0.95
19	1.28	1.99	1.16	1.44	1.06	0.9	0.52	0.46	0.46	0.42	0.19	0.32	0.23	0.8
20	0.92	1.11	0.84	1.23	1.27	1.25	0.49	0.53	0.48	0.5	0.14	0.48	0.27	0.37
21	3.37	2.39	1.35	1.23	1.08	1.2	0.44	0.46	0.5	0.53	0.27	0.33	0.19	0.28
22	3.05	2.42	2.87	2.15	0.87	0.87	0.42	0.43	0.44	0.44	0.21	0.28	0.18	0.8
23	2.17	1.57	1.32	1.19	1.11	1.29	0.42	0.43	0.42	0.46	0.39	0.34	0.21	0.52
24	2.4	1.55	1.65	1.72	1.29	1.35	0.4	0.47	0.41	0.45	0.22	0.36	0.16	0.22
25	3.95	2.78	2.07	2.05	0.9	0.9	0.39	0.38	0.39	0.41	0.24	0.28	0.14	0.47
26	2.89	1.84	2.42	1.87	1.04	1.1	0.44	0.48	0.46	0.49	0.38	0.33	0.19	0.76
27	3.72	2.39	1.6	1.64	0.89	0.89	0.43	0.44	0.41	0.46	0.22	0.3	0.15	0.64
28	2.97	1.66	2.49	1.61	0.95	0.95	0.44	0.48	0.45	0.48	0.26	0.21	0.26	0.71
29	2.33	1.8	1.83	1.66	1.08	1.08	0.46	0.46	0.5	0.55	0.3	0.25	0.24	0.78
30	5	3.48	3.12	1.67	0.97	1.09	0.42	0.44	0.42	0.52	0.11	0.4	0.21	0.58
31	2.35	2.04	2.85	2.87	1.41	1.18	0.46	0.54	0.42	0.48	0.41	0.33	0.18	0.59
32	2.22	1.62	2.17	2.19	1.5	1.56	0.49	0.5	0.39	0.46	0.34	0.55	0.13	0.67
33	2.24	1.55	2.55	2.44	2.08	2.2	0.51	0.54	0.41	0.42	0.87	0.14	0	0.4
34	3	2.16	3.58	2.32	1.95	1.83	0.48	0.51	0.45	0.48	0.9	0.2	0.01	0.78
35	2.66	1.97	2.52	2.4	1.17	1.05	0.41	0.44	0.41	0.44	0.3	0.39	0.19	0.82
36	1.84	1.35	1.81	1.45	1.51	1.51	0.48	0.53	0.44	0.46	0.48	0.38	0.19	0.92
37	1.33	1.59	1.84	1.68	1.17	1.17	0.38	0.4	0.35	0.41	0.19	0.35	0.13	0.48
38	1.54	1.52	2.1	1.73	1.46	1.4	0.43	0.52	0.4	0.45	0.36	0.38	0.17	0.87
39	3.01	2.73	3.75	3.64	1.82	1.82	0.62	0.62	0.52	0.56	1.06	0.37	0.11	0.92
40	2.92	1.94	1.9	2.26	2.06	1.59	0.34	0.38	0.35	0.44	0.4	0.63	0.1	0.63
41	3.21	2	1.86	1.63	1.07	1.13	0.47	0.49	0.43	0.5	0.37	0.29	0.22	0.68
42	3.97	3.58	2.78	3.5	0.89	0.89	0.41	0.42	0.46	0.5	0.36	0.21	0.12	0.95
43	4.75	3.04	3.51	1.87	1.44	1.38	0.48	0.5	0.51	0.59	0.55	0.32	0.12	0.36

44	3.4	1.59	2.07	1.35	1.34	1.45	0.46	0.47	0.46	0.55	0.26	0.42	0.14	0.84
45	2.74	1.44	0.94	1.4	1.35	1.47	0.4	0.43	0.42	0.6	0.24	0.23	0.17	0.11
46	3.88	2.86	2.51	1.31	1.48	1.43	0.41	0.43	0.42	0.51	0.52	0.33	0.1	0.5
47	1.82	1.57	0.82	0.84	1.33	1.33	0.36	0.35	0.49	0.46	0.2	0.37	0.17	0.65
48	3.98	2.38	3.12	2.54	1.01	1.13	0.49	0.52	0.54	0.58	0.54	0.4	0.16	0.85
49	2.7	2.53	2.02	1.92	0.97	1.03	0.42	0.46	0.42	0.54	0.31	0.26	0.19	0.56
50	3.25	2.29	2.28	2.23	1.18	1.18	0.42	0.48	0.42	0.47	0.26	0.22	0.25	0.64
51	1.94	1.99	1.65	1.65	0.92	0.86	0.38	0.44	0.38	0.46	0.39	0.19	0.19	0.14
52	2.26	1.6	1.73	1.73	1.41	1.29	0.46	0.52	0.41	0.46	0.36	0.31	0.15	0.24
53	3.78	2.5	2.67	2.63	1.06	1	0.45	0.49	0.44	0.47	0.74	0.4	0.2	0.96
54	2.44	1.8	1.64	1.82	1.31	1.26	0.43	0.5	0.45	0.47	0.38	0.51	0.13	0.67
55	2.82	1.32	2.34	1.87	1.55	1.25	0.34	0.53	0.36	0.45	0.02	0.37	0.14	0.19
56	3.76	2.09	5.38	2.82	0.84	0.84	0.46	0.49	0.43	0.44	0.24	0.22	0.1	0.74
57	2.74	1.26	2.72	1.97	0.85	0.79	0.45	0.52	0.42	0.48	0.34	0.22	0.18	0.88
58	3.65	1.79	2.88	3.03	1.26	1.18	0.47	0.48	0.42	0.48	0.59	0.44	0.12	0.7
59	3.24	2.88	3.38	2.94	0.93	0.81	0.42	0.46	0.41	0.42	0	0.24	0.19	0.82
60	2	1.81	2.71	2.3	0.88	0.87	0.38	0.46	0.37	0.38	0.25	0.23	0.22	0.28

## Study 2

In this section we describe the additional study carried out in order to replicate the null-effect found for the Finnish–Moroccan IAT. We also attempted to explicitly manipulate name familiarity in this study.

A total of 104 Dutch undergraduate students took part in this study. We used the same stimuli as in the Finnish–Moroccan IAT presented in the main study (van Ravenzwaaij et al., 2010). In six different conditions, we manipulated the familiarity of the names presented in this IAT. In the Finnish positive condition, participants studied sentences with positive content about each of the Finnish names subsequently presented in the IAT (e.g., “Loviisa pets a dog”). In the Finnish negative condition, participants studied sentences with negative content about each of the Finnish names (e.g., “Loviisa carries a knife”). In the Finnish neutral condition, participants studied sentences with neutral content about each of the Finnish names (e.g., “Loviisa is wearing a sweater”). In total, one sentence per name was studied, resulting in a total of 80 sentences. The remaining three conditions were the Moroccan positive, the Moroccan negative, and the Moroccan neutral condition. For these conditions, sentence construction was identical, except that the Finnish names (e.g., Loviisa) were replaced by the Moroccan names presented in the IAT (e.g., Abdallah). Participants were instructed to study the sentences for 5 minutes for a later memory test. Then, they performed the compatible-first version of the Finnish–Moroccan IAT.

Upon completion of the IAT, participants were administered a questionnaire, that assessed the participants’ general feeling and more specific attitudes about Fins and Moroccans. The general feeling towards Fins and Moroccans was assessed by having participants draw a mark on a 10 cm line going from cold/unfavorable to warm/favorable. We subtracted the number of millimeters towards warm/favorable for the Moroccan group from the number of millimeters towards warm/favorable for the Finnish group to obtain a difference score of feeling towards Fins versus Moroccans. More specific attitudes were assessed by having participants rank both groups on a seven point scale on the following five properties: ugly/pretty, bad/good, unpleasant/pleasant, dishonest/honest, and unkind/kind. The resulting scores were averaged for each group and the average score for Moroccans was sub-

tracted from the average score for Fins to arrive at a difference score of attitude towards Fins versus Moroccans.

The results were a complete replication of the null-effect found in the main study: no IAT-effect was found for any of the six conditions with the Fin-Mor IAT. This was true for response latencies, error rates, the D-score, and the diffusion model parameters drift rate, boundary separation, and non-decision time. Since the manipulation of familiarity due to priming was non-effective (all  $p$ 's  $> .05$ ), we have pooled the data from all six conditions. The results for the pooled data are plotted in Figure 3. The figure shows that there is no IAT-effect for any of the following measures: mean RT, D-score, error rate, drift rate, boundary separation, and non-decision time.

The questionnaire data confirmed that participants indicated feeling more warmly towards Fins than towards Moroccans (mean difference = 8.98;  $t(103) = 4.78$ ,  $p = 5.7 \times 10^{-6}$ ,  $p_{H_0}^{Bayes} = 4.6 \times 10^{-4}$ ). Participants also indicated that they had more positive attitudes towards Fins than towards Moroccans (mean difference = 2.87;  $t(103) = 6.40$ ,  $p = 4.6 \times 10^{-9}$ ,  $p_{H_0}^{Bayes} = 4.9 \times 10^{-7}$ ).

Thus, the presence of these explicit differences in feeling towards Fins versus Moroccans along with the absence of an IAT-effect for Fins versus Moroccans for all six conditions is another strong indication against racial prejudice as an explanation of the name-race IAT-effect.

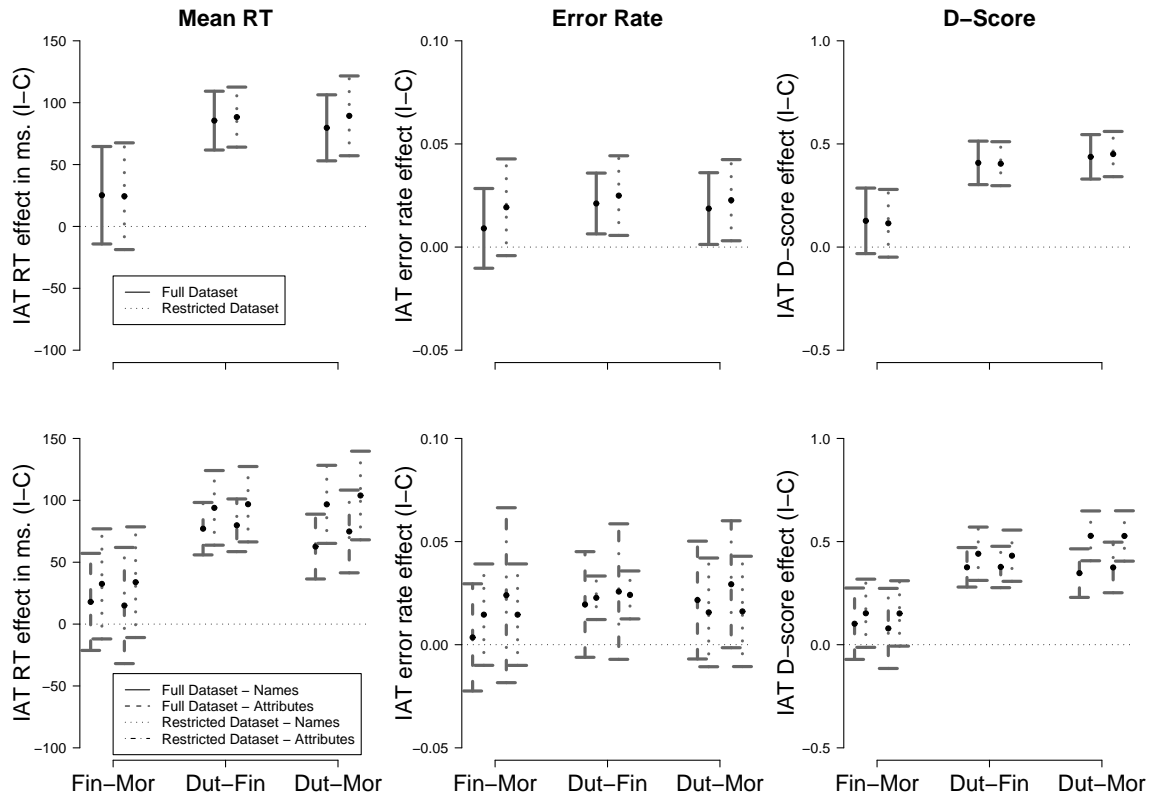


Figure 1. Left panel: The mean IAT-effects over participants on mean RT, for each of the three different IATs. Middle panel: The mean IAT-effects over participants on error rate, for each of the three different IATs. Right panel: The mean IAT-effects over participants on D-score, for each of the three different IATs. The top panel shows IAT-effects for the names and the attributes combined, both for the complete stimulus set (solid line) and the restricted stimulus set (dotted line). The bottom panel shows: IAT-effects for names in the complete stimulus set (solid line), IAT-effects for attributes in the complete stimulus set (dashed line), IAT-effects for names in the restricted stimulus set (dotted line), and IAT-effects for attributes in the restricted stimulus set (dot-dashed line). Error bars represent 95% confidence intervals of the mean.

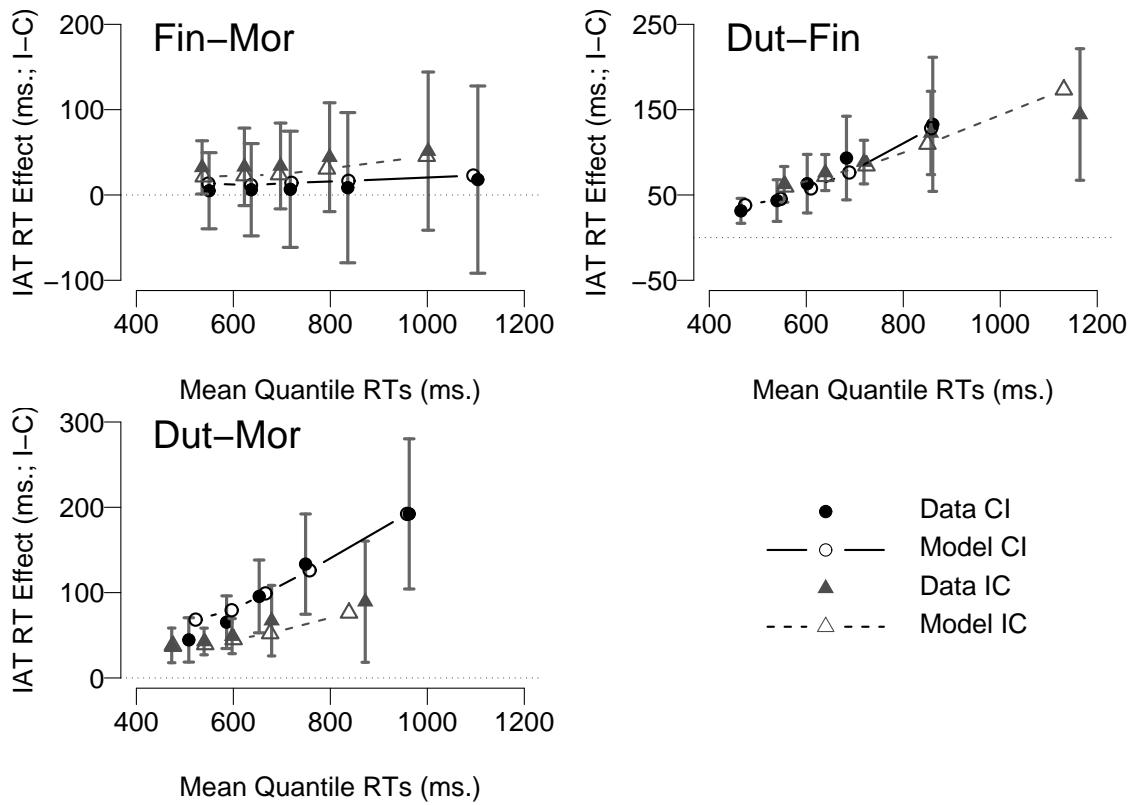


Figure 2. Delta plots for the Fin-Mor (top-left), Dut-Fin (top-right) and Dut-Mor (bottom-left) IATs. The solid symbols represent observed quantile means, with error bars representing 95% confidence intervals. The open symbols represent quantile means generated by the diffusion model parameter estimates, with lines added for continuity. The dots correspond to IATs in which the compatible block was presented first, and the triangles correspond to IATs in which the incompatible block was presented first.

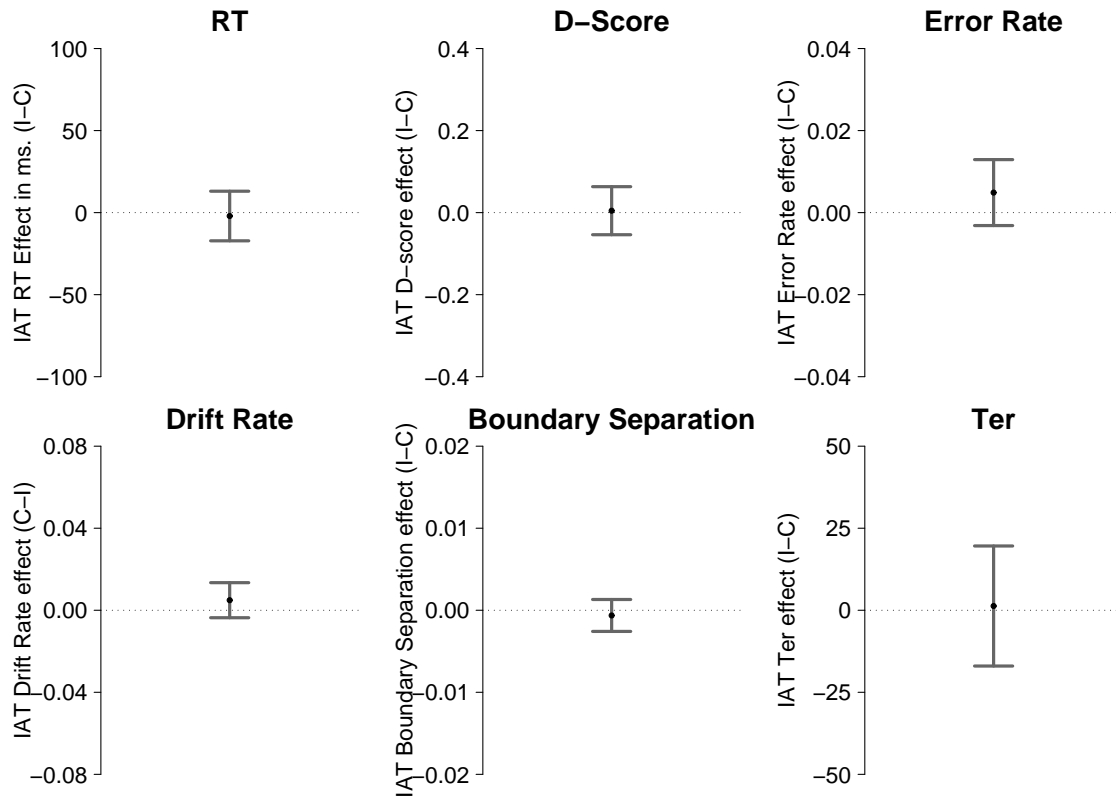


Figure 3. The mean IAT-effects over participants, pooled over all six conditions. The results are qualitatively similar to the results for each condition separately. The top panels show IAT-effects for mean RT, D-score, and error rate. The bottom panels show IAT-effects for the diffusion model parameters drift rate, boundary separation, and non-decision time. Error bars represent 95% confidence intervals of the mean.



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