

## 1 **Explorative Analysis: reaction times**

2 An explorative analysis was performed to compare reaction times of stimuli which were  
3 categorized as "ironic". Since not every participant categorized at least one stimulus as  
4 "ironic" in every congruence condition, a total of 16 TD participants and 19 ASD participants  
5 were included in this analysis.

6 We conducted a 2 x 2 ANOVA with group as a between subject factor (ASD and TD group)  
7 and congruence condition as a within subject factor (congruent and incongruent) to evaluate  
8 reaction times for "ironic" responses.

9 We found a significant main effect for congruence condition ( $F(1, 33) = 5.8, p = 0.02, \eta^2 =$   
10  $0.15$ ), with faster reaction times for incongruent than congruent stimuli that were categorized  
11 as "ironic". We did not find a significant main effect for group ( $F(1,33) = 0.2, p = 0.64, \eta^2 =$   
12  $0.01$ ) nor a significant interaction ( $F(1, 33) = 0.3, p = 0.60, \eta^2 = 0.01$ ).

13 For incongruent stimuli, the mean reaction time for "ironic" was 3,144 ms (SD = 354 ms) in  
14 the ASD group and 2,988 ms (SD = 521 ms) in the TD group. Taking the degree of  
15 incongruence into account, the shortest reaction times for the "ironic" category were  
16 measured for the strongly incongruent stimuli (ASD:  $M = 3,083$  ms,  $SD = 79$  ms; TD:  $M =$   
17  $2,960$  ms,  $SD = 119$  ms), followed by the slightly incongruent stimuli (ASD:  $M = 3,191$  ms,  
18  $SD = 97$  ms; TD:  $M = 3,061$  ms,  $SD = 132$  ms). The longest reaction times were found for the  
19 congruent stimuli (ASD:  $M = 3,322$  ms,  $SD = 156$  ms; TD:  $M = 3,296$  ms,  $SD = 175$  ms).

20 **Table A. Summary of reaction times.**

Reaction time	TD		ASD	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<i>Total</i>				
Angry	2,666	480	2,664	310
Happy	2,346	431	2,332	321
Ironic	3,002	508	3,160	367
Ambivalent	3,168	539	3,169	331
<i>Congruent</i>				
Angry	2,570	423	2,592	265
Happy	2,195	451	2,222	331
Ironic	3,296	702	3,322	680
Ambivalent	3,215	595	3,301	383
<i>Incongruent (Total)</i>				
Angry	2,765	546	2,721	372
Happy	2,560	503	2,461	345
Ironic	2,988	521	3,144	354
Ambivalent	3,125	504	3,123	340
<i>Slightly incongruent</i>				
Angry	2,816	548	2,733	365
Happy	2,496	504	2,398	300
Ironic	3,061	588	3,191	433
Ambivalent	3,148	530	3,161	363
<i>Strongly incongruent</i>				

Angry	2,676	721	2,700	441
Happy	2,852	892	2,622	586
Ironic	2,960	532	3,083	355
Ambivalent	3,068	480	3,067	330

21 Times are given in milliseconds.