

Supplementary Materials for “Face matching in developmental prosopagnosia”

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Raw scores for diagnostic tests

Sex/ Age	MFFT		CFMT		CFPT		CCMT	
	Percent Correct	Z-score	No. Correct	Z-score	No. Errors	Z-score	No. Correct	Z-score
F43	35.3	-2.51	37	-2.16	68	-2.95	41	-1.64
F49	6.3	-4.00	39	-1.81	52	-1.41	45	-0.72
F33	23.1	-3.47	38	-2.09	66	-2.86	63	-0.23
M59	15.0	-3.14	28	-2.83	70	-1.93	35	1.94
F34	40.0	-2.46	39	-1.98	40	-0.64	59	0.13
M59	30.8	-2.14	35	-1.93	38	0.69	67	2.01

Table S1. Percent correct on diagnostic memory tests for DP participants. Raw scores for the CFMT and CCMT are out of a possible 72. CFPT scores are expressed as errors with a chance-level upper bound of 93.

Face and name familiarity (LHT)

	Name Familiarity		Face Familiarity	
	Familiar	Unfamiliar	Familiar	Unfamiliar
UK	38.0 (1.2)	37.0 (2.3)	32.7 (7.1)	37.2 (2.3)
AU	35.4 (3.7)	36.3 (3.8)	36.3 (3.8)	30.2(12.9)
DP	30.2 (8.7)	36.4 (7.7)	23.9(11.2)	35.6 (5.9)

Table S2: Summary familiarity data for unfamiliar and familiar portions of the Local Hero Test (standard deviation in parenthesis).

Response time analysis (GFMT and LHT)

Mean response times for items in the Glasgow Face Matching Test (GFMT; see Table 1) revealed a non-significant main effect of Group ($F < 1$). The main effect of Trial Type was significant [$F(1,27) = 2.72$; $p < 0.05$, $\eta_p^2 = .081$], reflective of slower response times in mismatch ($M = 7.88$ seconds; $SD = 4.63$) compared to match trials ($M = 6.23$ seconds;

SD = 3.32). The interaction between factors was non-significant ($F < 1$). Thus, DP participants spent an equivalent amount of time performing the GFMT as controls.

Mean response time data for the Local Heroes Test are shown in Figure S1. These data were analysed to test whether DP performance in the LHT was supported by lengthier processing of face stimuli, using a three-way ANOVA with a between subjects factor of Group (DP, AU control, UK control) and within subjects factors of Familiarity (familiar, unfamiliar) and Trial Type (match, mismatch). The main effect of Group was non-significant [$F(1, 27) = 3.24$; $p > 0.05$; $\eta_p^2 = .107$]. Non-significant main effects of Familiarity [$F(1, 27) = 3.24$; $p > 0.05$; $\eta_p^2 = .107$] and Trial Type ($F < 1$) were also observed.

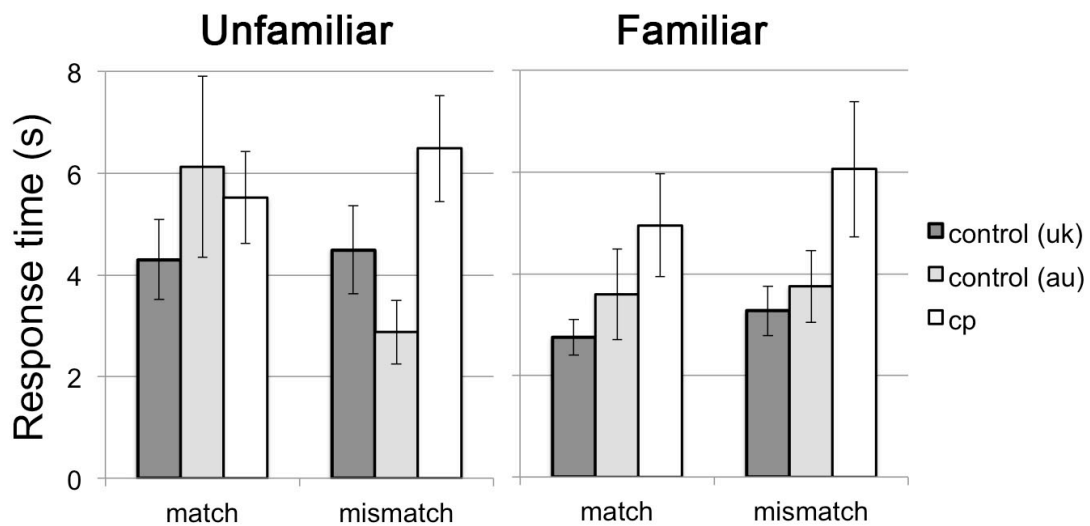


Figure S1. Mean response times on familiar and unfamiliar portions of the LHT, separately for match and mismatch trials. Error bars denote standard error.

Main effects were qualified by a significant interaction between Group and Trial Type [$F(1, 27) = 4.61$; $p < 0.05$; $\eta_p^2 = .146$]. Analysis of Simple Main Effects revealed that this interaction was driven by slower response times by DP participants in mismatch trials ($M = 6.93$; $SE = 1.08$) compared to control participants ($M = 5.78$; $SE = 1.41$) [$F(1, 27) = 7.68$; $p < 0.05$], but no difference between response times for match trials (DP: $M = 3.58$; $SE = 0.55$; Control: $M = 4.22$; $SD = .072$; $F < 1$).

As with accuracy data, the interaction between group and familiarity was non-significant [$F(2, 27) = 1.33$; $p > 0.05$; $\eta_p^2 = .047$]. The three-way interaction between factors was also non-significant [$F(2, 27) = 1.34$; $p > 0.05$; $\eta_p^2 = .047$].

Signal detection analysis (GFMT and LHT)

In both GFMT and Local Heroes tests, DPs were impaired on match, but not mismatch, trials. This result is consistent with a difference in response bias in DP participants. Therefore we analysed sensitivity (d') and criterion (C) for both the GFMT and the LHT. Summary data for the signal detection analysis are shown in Table S3. Analysis of sensitivity data (d' -prime) for the GFMT revealed significantly higher sensitivity in control participants ($M = 2.50$; $SD = 0.80$) compared to DP participants [$t(31) = 2.47$, $p < 0.05$, Cohen's $d = 1.30$]. The difference between Criterion (C) scores for DP and control groups ($M = -0.15$; $SD = 0.45$) was non-significant [$t(31) = 0.35$, $p < 0.05$, Cohen's $d = 0.16$]

	Sensitivity (d' -prime)			Response bias (C)		
	GFMT	LHT (familiar)	LHT (unfamiliar)	GFMT	LHT (familiar)	LHT (unfamiliar)
UK	2.76 (0.78)	2.86 (0.68)	2.33 (0.59)	-.20 (.42)	-.21 (.45)	.20 (.46)
AU	2.27 (0.77)	3.41 (0.68)	2.23 (0.74)	-.10 (.50)	-.16 (.37)	-.37 (.48)
DP	1.69 (0.37)	1.89 (0.53)	1.28 (0.38)	-.08 (.44)	.30 (.40)	.18 (.31)

Table S3. Signal detection measures for DP and Control participants in the face matching tests (standard deviations in parenthesis).

For sensitivity data on the LHT, main effects of group [$F(1, 27) = 19.2$; $p < 0.05$, $\eta_p^2 = .416$], and familiarity [$F(1, 29) = 33.9$; $p < 0.05$, $\eta_p^2 = .556$] were significant. interaction between factors was non-significant [$F(2, 29) = 1.43$; $p > 0.05$, $\eta_p^2 = .050$]. For criterion data, the main effect of Group was significant [$F(1, 27) = 6.63$; $p < 0.05$, $\eta_p^2 = .197$], reflective of a more conservative response bias in the DP group (i.e. less likely to respond 'same'). The main effect of Familiarity ($F < 1$) and the interaction [$F(1, 27) = 1.29$; $p < 0.05$, $\eta_p^2 = .046$] were non-significant .