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Appendix A: Data**I: Group details**

Gender: male=1, female=2

Groups: Asperger syndrome=AS, Mild Intellectual

Disability=MID, NT=Neuro-typical

token=scores from Token test (out of 44)

Subject	gender	age	group	token
16.00	2.00	20.00	AS	44.00
17.00	1.00	22.00	AS	44.00
18.00	1.00	20.00	AS	44.00
12.00	1.00	13.00	AS	41.00
13.00	1.00	16.00	AS	42.00
22.00	2.00	25.00	AS	44.00
23.00	1.00	18.00	AS	42.00
24.00	1.00	16.00	AS	43.00
25.00	1.00	18.00	AS	43.00
31.00	1.00	24.00	AS	44.00
32.00	1.00	17.00	AS	42.00
34.00	1.00	48.00	AS	44.00
35.00	1.00	13.00	AS	42.00
38.00	1.00	19.00	AS	.
39.00	1.00	21.00	AS	.
54.00	1.00	17.00	MID	40.00
55.00	1.00	21.00	MID	42.00
56.00	1.00	18.00	MID	43.00
59.00	2.00	17.00	MID	39.00
60.00	1.00	16.00	MID	39.00
61.00	2.00	16.00	MID	42.00
62.00	2.00	16.00	MID	38.00
63.00	1.00	16.00	MID	43.00
64.00	1.00	15.00	MID	38.00
65.00	1.00	18.00	MID	42.00
66.00	1.00	18.00	MID	42.00
67.00	2.00	19.00	MID	42.00
68.00	1.00	23.00	MID	42.00
69.00	1.00	20.00	MID	41.00
70.00	2.00	14.00	NT	.
71.00	2.00	15.00	NT	.
72.00	2.00	15.00	NT	.
73.00	1.00	17.00	NT	.

74.00	1.00	17.00	NT	.
75.00	1.00	19.00	NT	.
76.00	1.00	17.00	NT	.
77.00	1.00	17.00	NT	.
78.00	1.00	16.00	NT	.
79.00	1.00	16.00	NT	.
80.00	1.00	19.00	NT	.
81.00	1.00	18.00	NT	.
82.00	1.00	16.00	NT	.
84.00	2.00	18.00	NT	.
85.00	2.00	15.00	NT	.
83.00	2.00	19.00	NT	.
86.00	1.00	18.00	NT	.
87.00	1.00	18.00	NT	.
88.00	2.00	16.00	NT	.
14.00	2.00	17.00	AUTISM	42.00
19.00	1.00	19.00	AUTISM	44.00
11.00	1.00	17.00	AUTISM	44.00
21.00	1.00	18.00	AUTISM	43.00
26.00	1.00	27.00	AUTISM	43.00
27.00	1.00	18.00	AUTISM	41.00
28.00	2.00	54.00	AUTISM	44.00
29.00	2.00	14.00	AUTISM	44.00
30.00	1.00	22.00	AUTISM	44.00
36.00	1.00	16.00	AUTISM	41.00
37.00	1.00	15.00	AUTISM	44.00
89.00	1.00	17.00	NT	.
90.00	2.00	17.00	NT	.
91.00	2.00	17.00	NT	.
92.00	2.00	19.00	NT	.
93.00	1.00	17.00	NT	.
95.00	2.00	16.00	NT	.
98.00	1.00	19.00	NT	.
40.00	1.00	17.00	AS	.

II: The Illusions Experiment

Error scores for each display in mm.

pog=Poggendorff, ml=Muller-Lyer, brent=Brentano

A c in front indicates the control display for the given illusion.

subject	group	pog	cpog	ml	cml	brent	cbrent
16.00	AS	7.60	1.66	3.94	.52	1.35	1.35
17.00	AS	5.95	1.86	.75	.26	1.36	.17
18.00	AS	10.00	3.99	1.41	1.06		
12.00	AS	4.28	1.92	1.66	.27	.98	.20
13.00	AS	4.38	2.02	.50	.24	2.45	.32
22.00	AS	7.58	.82	2.16	1.10	1.92	2.54
23.00	AS	3.78	2.26	3.07	.29	3.21	.42
24.00	AS	5.81	2.75	.81	.18	.48	.14
25.00	AS	7.94	1.43	.94	.26	2.69	.27
31.00	AS	5.81	2.69	.77	.23	2.11	.11
32.00	AS	5.35	1.22	2.29	.91	2.32	.49
34.00	AS	4.80	.70	.60	.20	.50	.20
35.00	AS	7.90	2.10	1.00	.40	1.40	.60
38.00	AS	9.60	4.50	3.00	.60	2.10	.20
39.00	AS	6.10	2.00	1.80	.40	.30	.30
54.00	MI	5.04	1.09	1.56	.56	1.97	.41
55.00	MI	5.73	1.91	1.48	.36	1.06	.19
56.00	MI	5.09	.54	.81	.39	1.69	.36
59.00	MI	7.14	3.07	2.11	.64	2.19	1.54
60.00	MI	8.54	1.26	2.26	.43	6.24	1.32
61.00	MI	3.81	1.44	.83	.32	1.00	.55
62.00	MI	5.04	1.12	1.97	.20	1.85	.20
63.00	MI	9.26	2.86	1.20	.51	.69	.64
64.00	MI	8.07	1.29	1.82	.39	.91	.24
65.00	MI	9.53	3.41	2.93	.77	1.44	2.20
66.00	MI	4.64	.60	1.33	.29	.84	.14
67.00	MI	9.54	1.38	1.86	.37	6.27	.39
68.00	MI	6.20	1.10	2.00	.10	.80	.10
69.00	MI	4.50	2.80	.80	.40	1.10	.40
70.00	NT	6.72	1.25	1.29	.43	2.22	.26
71.00	NT	6.28	.94	1.18	.09	.59	.30
72.00	NT	6.91	2.78	.97	.49	1.81	.30
73.00	NT	8.25	4.07	1.43	.34	1.69	.24
74.00	NT	4.51	-.47	.49	.49	1.61	.23
75.00	NT	4.49	.73	1.00	.30	2.31	.23
76.00	NT	2.51	-.39	.79	.36	.58	.14
77.00	NT	4.83	.24	.68	.36	2.51	.17
78.00	NT	4.71	.65	3.41	.53	1.94	.59
79.00	NT	5.39	1.07	2.16	.24	.62	.36

80.00	NT	6.23	2.47	2.73	.30	1.44	.33
81.00	NT	4.38	.21	1.45	.24	.90	.39
82.00	NT	6.00	2.80	.50	.40	.90	.20
84.00	NT	4.40	1.70	1.10	.10	.60	.30
85.00	NT	7.60	3.60	.90	.20	.80	.20
83.00	NT	4.70	.10	1.10	.30	.80	.20
86.00	NT	6.30	1.90	1.20	.40	1.30	.10
87.00	NT	6.20	-.60	.90	.30	1.50	.30
88.00	NT	5.00	1.30	.60	.20	1.20	.20
14.00	AU	3.48	1.13	2.63	.36	1.57	.43
19.00	AU	1.74	.44	.81	.20	.94	.18
11.00	AU	-1.24	-.06	.47	.20	.87	.17
21.00	AU	1.87	-.94	.75	.24	2.79	.14
26.00	AU	1.41	.42	.76	.26	.94	.78
27.00	AU	2.96	1.33	.44	.24	1.64	.17
28.00	AU	4.44	1.27	.52	.11	.43	.14
29.00	AU	5.56	1.16	1.33	.20	1.23	.14
30.00	AU	4.02	-.54	2.17	.19	1.34	.29
36.00	AU	1.50	-1.30	1.00	.20	2.70	.10
37.00	AU	6.50	1.90	1.60	.50	.90	.20
89.00	NT	6.10	.50	1.30	.30	1.50	.20
90.00	NT	8.60	2.80	3.00	.80	1.60	.50
91.00	NT	4.80	.10	1.40	.10	.60	.40
92.00	NT	3.40	.80	.70	.30	1.00	.40
93.00	NT	3.30	.40	.60	.10	1.10	.10
95.00	NT	3.30	-.60	.70	.20	.70	.20
98.00	NT	3.30	.60	1.70	.20	1.00	.10
40.00	AS	9.40	3.40	2.60	.40	1.50	.20

III: Pause thresholds for launching

Scores are in ms.

10cm/s condition

laun10up=ascending, laun10do=descending, launch 10=average over both trials.

Subject	group	laun10up	laun10do	launch10
16.00	AS	190.00	110.00	150.00
17.00	AS	140.00	130.00	135.00
18.00	AS	170.00	130.00	150.00
12.00	AS	180.00	140.00	160.00
13.00	AS	180.00	100.00	140.00
22.00	AS	190.00	160.00	175.00
23.00	AS	300.00	20.00	160.00
24.00	AS	160.00	145.00	145.00
25.00	AS	240.00	230.00	235.00
31.00	AS	200.00	140.00	170.00
32.00	AS	140.00	140.00	140.00
34.00	AS	100.00	170.00	135.00
35.00	AS	130.00	110.00	120.00
38.00	AS	260.00	190.00	225.00
39.00	AS	140.00	140.00	140.00
54.00	MI	90.00	220.00	155.00
55.00	MI	100.00	150.00	125.00
56.00	MI	160.00	160.00	160.00
59.00	MI	370.00	120.00	245.00
60.00	MI	130.00	70.00	100.00
61.00	MI	100.00	70.00	85.00
62.00	MI	190.00	140.00	165.00
63.00	MI	150.00	80.00	115.00
64.00	MI	150.00	220.00	185.00
65.00	MI	100.00	70.00	85.00
66.00	MI	140.00	140.00	140.00
67.00	MI	160.00	100.00	130.00
68.00	MI	340.00	210.00	275.00
69.00	MI	100.00	90.00	95.00
70.00	NT	80.00	100.00	90.00
71.00	NT	130.00	120.00	125.00
72.00	NT	140.00	150.00	145.00
73.00	NT	90.00	80.00	85.00
74.00	NT	170.00	180.00	175.00
75.00	NT	100.00	110.00	105.00
76.00	NT	200.00	220.00	210.00
77.00	NT	110.00	100.00	105.00
78.00	NT	140.00	120.00	130.00
79.00	NT	110.00	150.00	130.00

80.00	NT	170.00	150.00	160.00
81.00	NT	110.00	120.00	115.00
82.00	NT	130.00	130.00	130.00
84.00	NT	160.00	100.00	130.00
85.00	NT	140.00	150.00	145.00
83.00	NT	170.00	220.00	195.00
86.00	NT	120.00	150.00	135.00
87.00	NT	90.00	140.00	115.00
88.00	NT	120.00	110.00	115.00
14.00	AU	70.00	50.00	60.00
19.00	AU	140.00	120.00	130.00
11.00	AU	110.00	150.00	130.00
21.00	AU	100.00	150.00	125.00
26.00	AU	100.00	10.00	55.00
27.00	AU	140.00	90.00	115.00
28.00	AU	110.00	130.00	120.00
29.00	AU	150.00	130.00	140.00
30.00	AU	80.00	90.00	85.00
36.00	AU	130.00	110.00	120.00
37.00	AU	60.00	80.00	70.00
89.00	NT	70.00	100.00	85.00
90.00	NT	140.00	120.00	130.00
91.00	NT	120.00	170.00	145.00
92.00	NT	120.00	170.00	145.00
93.00	NT	60.00	90.00	75.00
95.00	NT	110.00	150.00	130.00
98.00	NT	120.00	100.00	110.00
40.00	AS	200.00	110.00	155.00

40cm/s condition

laun40up=ascending, laun40do=descending, launch40=average over both trials.

subject	group	laun40up	laun40do	launch40
16.00	AS	170.00	120.00	145.00
17.00	AS	270.00	150.00	210.00
18.00	AS	120.00	130.00	125.00
12.00	AS	150.00	110.00	130.00
13.00	AS	130.00	160.00	145.00
22.00	AS	250.00	140.00	195.00
23.00	AS	250.00	140.00	120.00
24.00	AS	90.00	140.00	115.00
25.00	AS	230.00	250.00	240.00
31.00	AS	130.00	140.00	135.00
32.00	AS	90.00	150.00	120.00
34.00	AS	140.00	160.00	150.00
35.00	AS	150.00	130.00	140.00

38.00	AS	230.00	140.00	185.00
39.00	AS	240.00	230.00	235.00
54.00	MI	60.00	160.00	110.00
55.00	MI	80.00	110.00	95.00
56.00	MI	140.00	180.00	160.00
59.00	MI	240.00	.00	120.00
60.00	MI	100.00	180.00	140.00
61.00	MI	110.00	100.00	105.00
62.00	MI	130.00	110.00	120.00
63.00	MI	120.00	170.00	145.00
64.00	MI	190.00	220.00	205.00
65.00	MI	200.00	30.00	115.00
66.00	MI	170.00	30.00	100.00
67.00	MI	170.00	180.00	175.00
68.00	MI	190.00	70.00	130.00
69.00	MI	140.00	70.00	115.00
70.00	NT	90.00	70.00	80.00
71.00	NT	60.00	80.00	70.00
72.00	NT	90.00	90.00	90.00
73.00	NT	80.00	40.00	60.00
74.00	NT	140.00	190.00	165.00
75.00	NT	80.00	90.00	85.00
76.00	NT	130.00	160.00	145.00
77.00	NT	90.00	110.00	100.00
78.00	NT	80.00	100.00	90.00
79.00	NT	140.00	150.00	145.00
80.00	NT	90.00	110.00	100.00
81.00	NT	80.00	90.00	85.00
82.00	NT	80.00	150.00	115.00
84.00	NT	190.00	160.00	175.00
85.00	NT	140.00	160.00	150.00
83.00	NT	210.00	180.00	195.00
86.00	NT	80.00	160.00	120.00
87.00	NT	70.00	130.00	100.00
88.00	NT	210.00	190.00	200.00
14.00	AU	50.00	60.00	55.00
19.00	AU	40.00	80.00	60.00
11.00	AU	70.00	140.00	105.00
21.00	AU	110.00	130.00	120.00
26.00	AU	90.00	60.00	75.00
27.00	AU	120.00	70.00	95.00
28.00	AU	60.00	140.00	100.00
29.00	AU	110.00	10.00	60.00
30.00	AU	70.00	60.00	65.00
36.00	AU	90.00	110.00	100.00
37.00	AU	70.00	90.00	80.00
89.00	NT	60.00	110.00	85.00
90.00	NT	100.00	100.00	100.00
91.00	NT	110.00	160.00	135.00
92.00	NT	110.00	110.00	110.00

93.00	NT	70.00	80.00	75.00
95.00	NT	80.00	170.00	125.00
98.00	NT	80.00	100.00	90.00
40.00	AS	80.00	70.00	75.00

IV: Pause thresholds for continuity

Scores are in ms.

contup=ascending trial, contdo=descending trial, continuity=average

subject	group	contup	contdo	continuity
16.00	AS	160.00	150.00	155.00
12.00	AS	210.00	120.00	165.00
22.00	AS	120.00	230.00	175.00
23.00	AS	140.00	150.00	145.00
25.00	AS	210.00	210.00	210.00
35.00	AS	160.00	110.00	135.00
72.00	NT	150.00	170.00	160.00
80.00	NT	200.00	220.00	210.00
81.00	NT	210.00	170.00	190.00
84.00	NT	120.00	210.00	165.00
85.00	NT	180.00	200.00	190.00
87.00	NT	80.00	180.00	130.00
88.00	NT	70.00	110.00	90.00
14.00	AU	80.00	190.00	135.00
19.00	AU	.00	150.00	75.00
11.00	AU	150.00	200.00	175.00
21.00	AU	60.00	60.00	60.00
27.00	AU	140.00	160.00	150.00
28.00	AU	70.00	90.00	80.00
29.00	AU	130.00	160.00	145.00
36.00	AU	.00	150.00	75.00
37.00	AU	140.00	50.00	85.00
89.00	NT	150.00	200.00	175.00
90.00	NT	120.00	130.00	125.00
91.00	NT	200.00	250.00	225.00
92.00	NT	210.00	220.00	215.00
93.00	NT	130.00	100.00	115.00
95.00	NT	120.00	110.00	115.00
98.00	NT	130.00	130.00	130.00
40.00	AS	230.00	100.00	165.00

V: Spatial thresholds for the tool effect

Scores are in cm

toolup=ascending trial, tooldo=descending trial, tool=average

subject	group	toolup	tooldo	tool
16.00	AS	14.00	14.80	14.40
12.00	AS	14.30	15.10	14.70
22.00	AS	14.30	14.80	14.55
23.00	AS	14.00	15.70	14.85
25.00	AS	12.50	13.00	12.75
35.00	AS	13.10	13.30	13.20
72.00	NT	12.20	12.40	12.30
80.00	NT	12.20	15.10	13.65
81.00	NT	11.70	11.20	11.45
84.00	NT	10.40	13.30	11.85
85.00	NT	9.50	15.10	12.30
87.00	NT	10.10	9.70	9.90
88.00	NT	11.90	10.60	11.25
14.00	AU	10.70	10.70	
19.00	AU	11.00	11.50	11.25
11.00	AU	9.50	9.50	
21.00	AU	10.70	11.80	11.25
27.00	AU	12.20	13.60	12.90
28.00	AU	8.00	8.00	8.00
29.00	AU	10.70	9.70	10.20
36.00	AU	11.90	11.80	11.85
37.00	AU	10.70	13.90	12.30
89.00	NT	9.20	10.60	9.90
90.00	NT	10.70	10.00	10.35
91.00	NT	11.40	13.00	12.20
92.00	NT	12.20	11.20	11.70
93.00	NT	11.90	11.20	11.55
95.00	NT	11.60	12.00	11.80
98.00	NT	10.70	11.20	10.95
40.00	AS	12.20	10.90	11.55

VI: Temporal Integration

Scores are in ms.

temp int=scores for temporal integration, averaged over four runs.

Sub	group	temp int
22.00	AS	65.00
72.00	NT	32.50
81.00	NT	40.00
82.00	NT	42.50
84.00	NT	30.00
85.00	NT	37.50
83.00	NT	55.00
86.00	NT	50.00
87.00	NT	45.00
88.00	NT	32.50
14.00	AU	42.50
19.00	AU	45.00
11.00	AU	72.50
21.00	AU	37.50
26.00	AU	50.00
27.00	AU	55.00
37.00	AU	57.50
89.00	NT	35.00
90.00	NT	45.00
91.00	NT	67.50
92.00	NT	22.50
93.00	NT	85.00
95.00	NT	45.00

Appendix B: Participant Information and Consent Form

Mr. Paul Wilson
546 Lawrence Hargrave Dve.,
Wombarra, NSW, 2515
ph: (02) 4268 3508

Dr. Bruce Stevenson
School of Psychology, UNE
ph: (02) 6773 2565
email: bstevens@metz.une.edu.au

Information for participants

Dear Parent/Guardian,

A feature of the autobiographical accounts of high functioning people with autism is the description of the difficulty they have in predicting the behaviour of other people. This problem in understanding the nature of the social fabric makes it hard for them to find their niche in society. Various cognitive theories have made inroads towards an explanation for these social difficulties. Another consistent feature of the autobiographical accounts is the description of unusual perceptual experiences. Uta Frith's approach has shown that there appears to be a consistent pattern of unusual perceptual processing that may be specific to autism and can lead to surprisingly good, as well as deficient, performances in test situations. The aim of this project is to test whether people with autism show an unusual pattern of perception to variations of some simple, non-threatening, perceptual stimuli.

The purpose of this letter is to ask whether your son/daughter would like to participate in the project. The session will last for approximately 60 minutes during which time participants will respond to variations of well established visual perception displays. In the first task, participants register their impressions from the movements of square figures on a computer screen by pressing one of two buttons. In a second task, participants will match the length of a line to one of two static displays on the screen. Both types of task are well established in the study of perception and there are no 'right' or 'wrong' answers in either instance, so there will be no pressure on the participants to perform to any standard. If you are willing to allow for their participation could you please sign the accompanying form, and return it to Paul Wilson.

Questions regarding this project can be directed to myself (Paul Wilson) or Dr. Bruce Stevenson (contact numbers are provided above). Should you give consent for your son or daughter's participation in the project, but then have any complaints concerning the manner in which the research was conducted, please contact the U.N.E. Human Research Ethics Committee at the following address: The Secretary, Human Research Ethics Committee, Research Services, University of New England, Armidale, NSW, 2351. (Ph:02 6773 2352; Fax: 02 6773 3543).

Paul Wilson.

Mr. Paul Wilson
Ph: (02) 4268 3508

Consent Form – Perceptual Processes and Autism

Dear Parent or Guardian

To allow your child to participate in this study, could you please complete this form, as required by the ethics committee at the University of New England.

Do you understand the nature of the research sufficiently well to make a free informed decision on behalf of the person under 18 (or with a developmental disorder) to consent to it?

Answer (Yes or No) _____

Are you satisfied that the circumstances in which the research is being conducted provide for the physical, emotional and psychological safety of the person on whose behalf you are giving consent?

Answer (Yes or No) _____

I (the parent or guardian) have read the information sheet and any questions I have asked have been answered to my satisfaction. I agree that my child may participate in this activity, realising that I may withdraw my child's participation at any time. I agree that research data gathered for the study may be published, provided that my name or that of my child is not used.

.....
Parent or Guardian's Name Parent or Guardian's Signature Date

.....
Child's Name Telephone number

.....
Signature of Investigator Date