

Supplementary Methods

Trials used in the current paper's analyses:

	80% 1 st Fear	80% 1 st Neutral	50% 1 st Fear	50% 1 st Neutral	20% 1 st Fear	20% 1 st Neutral
Total Number of Trials Presented	28	30	35	37	30	29
Average Number of Trials Included in Analysis	27±1.5 SD	29±1.4 SD	31±3.7 SD	35±3.1 SD	26±3.0 SD	25±2.7 SD

Trials not used in the current paper's analyses but were presented as part of the experiment:

	80% 1 st Fear	80% 2 nd Fear	80% 3 rd Fear	80% 4+ Fear	80% 1 st Neutral	80% 2 nd Neutral	80% 3 rd Neutral	80% 4+ Neutral	50% 1 st Fear	50% 2 nd Fear	50% 3 rd Fear	50% 1 st Neutral	50% 2 nd Neutral	50% 3 rd Neutral	20% 1 st Fear	20% 1 st Neutral
Total Trials Presented	28	28	23	38	30	24	22	41	35	21	11	37	23	11	30	29

Table S1: Demographics of Subject Population

All Subjects N = 24

Mean Reaction Times in milliseconds	
80% Fear	820.10 ± 118.75
80% Neutral	821.81 ± 103.10
50% Fear	877.25 ± 135.01
50% Neutral	871.84 ± 110.09
20% Fear	899.95 ± 134.05
20% Neutral	925.87 ± 126.92
Age	27.8 ± 6.6
Female:Male Ratio	15:9
Valence Bias Scores	22.22 ± 204.11
Mean Personality Measure Scores (N = number of subjects with scores)	
STAI (N = 24)	
Trait Anxiety	32.2 ± 9.3
State Anxiety	28.6 ± 8.5
NEO FFI (N=16)	
Neuroticism	13.6 ± 8.0
Extraversion	32.4 ± 7.0
Openness to Experience	33.7 ± 5.0
Agreeableness	32.4 ± 5.7
Conscientiousness	36.5 ± 5.6
TPQ-HA (N=13)	
Harm Avoidance	9.9 ± 5.9
HA 1: Anticipatory worry & pessimism	2.8 ± 2.2
HA 2: Fear of Uncertainty	3.5 ± 1.5
HA 3: Shyness with strangers	1.8 ± 1.8
HA 4: Fatigability & asthenia	1.8 ± 2.0
Mean Percentage Correct	
80% Fear	95 ± 5%
80% Neutral	96 ± 5%
50% Fear	91 ± 8%
50% Neutral	95 ± 5%
20% Fear	87 ± 10%
20% Neutral	88 ± 9%

Table S2: Group Main Effect of Expectation

Expectation Main Effect for each timepoint individually						
Starting p value < 0.001, corrected to p<0.05 (17 voxels), p<0.01 (21 voxels)						
Timepoint	Anatomical Location	Peak Voxel Talairach Coordinates			Peak F-statistic	Number of Voxels in Cluster
		x	y	z		
0-2 s post-cue	None					
2-4 s post-cue	None					
4-6 s post-cue (0-2 s post-face)	None					
6-8 s post-cue (2-4 s post-face)	L Precentral Gyrus	-34	-22	50	12.32	36
	L Medial Frontal Gyrus / SMA	-7	-7	53	12.48	27
	L Middle Frontal Gyrus	-22	-10	53	12.04	20*
	R Lingual Gyrus	23	-76	-4	9.84	18*
8-10 s post-cue (4-6 s post-face)	L IPL / Postcentral Gyrus	-28	-19	32	17.27	71
	L Medial Frontal Gyrus / SMA	-7	-7	56	16.14	29
	L Middle Cingulate	-4	-25	29	16.39	28
	L Precentral Gyrus	-40	-16	53	12.78	28
	R Middle Temporal Gyrus	53	-22	-10	13.98	25
	L Anterior Insula	-31	20	5	10.18	23
	L Thalamus	-16	-22	11	15.17	22
10-12 s post-cue (6-8 s post-face)	L Insula (including Caudate and Putamen)	-40	-4	14	21.69	199
	L Thalamus	-16	-22	11	24.89	62
	R Caudate and Putamen	17	5	14	13.51	58
	R Sup Temporal Gyrus	59	-55	17	13.49	35
	L Medial Frontal Gyrus (SMA)	-7	-7	53	15.96	35
	L Postcentral Gyrus/ IPL	-52	-22	23	15.03	31
	R Anterior Insula	44	17	8	12.52	29
	R Inferior Frontal Gyrus	59	8	23	14.88	29
	L Middle Cingulate	-4	-25	29	11.55	23
	L Postcentral Gyrus/ IPL	-40	-28	44	9.55	17*
	12-14 s post-cue (8-10 s post-face)	L Putamen	-19	5	8	23.93
L Thalamus		-16	-19	11	22.87	
R Caudate		14	5	14	19.15	
L Anterior Insula		-37	20	5	19.42	45
L Medial Frontal Gyrus/SMA		-7	-10	50	13.85	36
L Superior Frontal Gyrus		-25	35	32	11.33	28
R Middle Temporal Gyrus		53	-22	-13	14.83	25
L IPL		-40	-49	44	12.08	24
L Cingulate/SMA		-1	-1	44	10.53	17*
14-16 s post-cue (10-12 s post-face)	L Caudate/Thalamus	-7	-1	11	12.25	65
	R Caudate/Thalamus	8	-1	11	12.99	56

Table S3: Behavior and Personality Assessment Correlations

Values in bold are significant at $p < 0.05$ corrected for multiple comparisons

¹R values found in these cells were calculated with data from sixteen subjects

	Valence Bias	STAI State Anxiety	STAI Trait Anxiety	NEO-FFI Neuroticism ¹	NEO-FFI Extraversion ¹	NEO-FFI Openness to Experience ¹	NEO-FFI Agreeableness ¹	NEO-FFI Conscientiousness ¹	Harm Avoidance ²	HA1 ²	HA2 ²	HA3 ²	HA4 ²
Valence Bias	x												
State Anxiety	0.32	x											
Trait Anxiety	0.20	0.75	X										
Neuroticism ¹	0.45	0.70	0.91	X									
Extraversion ¹	-0.38	-0.59	-0.75	-0.78	x								
Openness to Experience ¹	0.33	0.42	0.26	0.42	-0.32	x							
Agreeableness ¹	-0.03	-0.32	-0.18	-0.08	0.48	-0.03	X						
Conscientiousness ¹	-0.12	-0.53	-0.58	-0.55	0.38	-0.19	0.24	X					
Harm Avoidance ²	0.79	0.84	0.85	0.85	-0.83	0.48	-0.19	-0.46	x				
HA1 ²	0.55	0.60	0.79	0.82	-0.70	0.59	-0.04	-0.35	x	x			
HA2 ²	0.84	0.54	0.47	0.56	-0.60	0.44	-0.01	-0.02	x	0.73	X		
HA3 ²	0.43	0.83	0.85	0.78	-0.77	0.33	-0.27	-0.73	x	0.61	0.38	x	
HA4 ²	0.70	0.68	0.53	0.50	-0.55	0.16	-0.27	-0.33	x	0.28	0.50	0.50	x

²R values found in these cells were calculated with data from thirteen subjects

STAI : Spielberger State and Trait Anxiety, NEO-FFI : Neuroticism Extraversion Openness to Experience Five Factor Inventory

Harm Avoidance Subscales:

HA1: Anticipatory worry

HA2: Fear of uncertainty

HA3: Shyness/Shyness with strangers

HA4: Fatigability/Fatigability and asthenia

Table S4: Demographics by Valence Bias Group

Demographics by Valence Bias Group		
	Fear Fast Responders (N = 15)	Fear Slow Responders (N = 9)
Mean Reaction Times in milliseconds		
80% Fear	775.45 ± 97.46	894.53 ± 118.12**
80% Neutral	815.18 ± 97.09	832.86 ± 117.66
50% Fear	817.54 ± 106.67	976.76 ± 121.11**
50% Neutral	865.07 ± 119.07	883.13 ± 99.01
20% Fear	848.87 ± 108.10	985.09 ± 134.78**
20% Neutral	913.23 ± 145.33	946.94 ± 92.49
Age	27.9 ± 8.1	27.4 ± 3.1
Female:Male Ratio	10:5	5:4
Valence Bias Scores	151.63 ± 118.66	-193.46 ± 106.80
Mean Personality Measure Scores (N = number of subjects with scores)		
STAI (N = 24)		
Trait Anxiety	32.4 ± 9.8 (N = 15)	31.8 ± 8.8 (N = 9)
State Anxiety	29.5 ± 9.3	27.1 ± 7.3
NEO FFI (N = 16)		
Neuroticism	15.3 ± 9.1 (N = 10)	10.8 ± 5.2 (N = 6)
Extraversion	31.3 ± 6.2	34.3 ± 8.4
Openness to Experience	34.7 ± 4.9	32.0 ± 5.2
Agreeableness	31.5 ± 5.9	33.8 ± 5.6
Conscientiousness	36.4 ± 6.2	36.7 ± 5.0
TPQ-HA (N = 13)		
Harm Avoidance	11.9 ± 5.8 (N = 8)	5.5 ± 3.7 (N = 5)
HA 1: Anticipatory worry & pessimism	3.2 ± 2.3	2.0 ± 1.8
HA 2: Fear of Uncertainty	4.1 ± 0.9	2.0 ± 1.6**
HA 3: Shyness with strangers	1.9 ± 2.1	1.5 ± 1.0
HA 4: Fatigability & asthenia	2.7 ± 1.9	0 ± 0.0*
Mean Percentage Correct		
80% Fear	96 ± 5%	93 ± 5%
80% Neutral	97 ± 5%	94 ± 4%
50% Fear	91 ± 9%	90 ± 7%
50% Neutral	95 ± 5%	96 ± 4%
20% Fear	86 ± 11%	89 ± 9%
20% Neutral	87 ± 11%	89 ± 8%

* p < 0.05 ** p < 0.01, t-test uncorrected