Does your past define you? The role of previous visual experience in predicting new affective pictures and sounds

Supplementary materials

Contents

1 Experiment 1

1.1 Stimuli

Table S1: List of NAPS picture names used as S2s in Experiment 1, sorted by valence (Neg = negative, Neu = neutral).

Valence	NAPS pictures names
NEG	Animals_001_h; Animals_024_h; Animals_025_h; Animals_027_h; Animals_033_h; Animals_038_h; Animals_054_h; Animals_068_h; Animals_071_h; Animals_074_h; Animals_077_h; Animals_078_h; Faces_146_h; Faces_150_h; Faces_152_h; Faces_170_h; Faces_271_h; Faces_272_h; Faces_285_h; Faces_290_h; Faces_291_h; Faces_293_h; Faces_294_h; Faces_302_h; Landscapes_002_h; Landscapes_004_h; Landscapes_005_h; Landscapes_007_h; Landscapes_010_h; Landscapes_011_h; Landscapes_014_h; Landscapes_017_h; Landscapes_022_h; Landscapes_026_h; Landscapes_139_h; Landscapes_177_h; Objects_001_h; Objects_002_h; Objects_003_h; Objects_007_h; Objects_011_h; Objects_022_h; Objects_125_h; Objects_132_h; Objects_139_h; Objects_149_h; Objects_283_h; Objects_285_h; People_001_h; People_008_h; People_020_h; People_022_h; People_118_h; People_127_h; People_136_h; People_140_h; People_200_h; People_215_h; People_225_h; People_226_h
NEU	Animals_109_h; Animals_114_h; Animals_122_h; Animals_125_h; Animals_126_h; Animals_136_h; Animals_165_h; Animals_169_h; Animals_170_h; Animals_197_h; Animals_202_h; Animals_206_h; Faces_184_h; Faces_186_h; Faces_188_h; Faces_282_h; Faces_304_h; Faces_314_h; Faces_316_h; Faces_326_h; Faces_329_h; Faces_331_h; Faces_335_h; Faces_343_h; Landscapes_009_h; Landscapes_041_h; Landscapes_048_h; Landscapes_050_h; Landscapes_089_h; Landscapes_100_h; Landscapes_107_h; Landscapes_127_h; Landscapes_143_h; Landscapes_149_h; Landscapes_163_h; Landscapes_172_h; Objects_025_h; Objects_033_h; Objects_041_h; Objects_069_h; Objects_075_h; Objects_078_h; Objects_079_h; Objects_103_h; Objects_254_h; Objects_262_h; Objects_263_h; Objects_270_h; People_069_h; People_089_h; People_099_h; People_101_h; People_109_h; People_153_h; People_162_h; People_167_h; People_173_h; People_178_h; People_194_h; People_250_h

Table S2: Means (M), standard deviations (SD), and results of two-tailed t-tests assuming unequal variance in luminance, contrast, complexity indices (i.e., JPEG size, entropy), and color space indices (i.e., LABL, LABA, LABB), referred to negative (Neg) and neutral (Neu) NAPS pictures employed as S2s in Experiment 1.

	NEG		NEU			
Measure	**M**	**SD**	**M**	**SD**	**t(118)**	**p**
luminance	114.149	27.503	116.943	27.615	-0.555	0.580
contrast	65.682	11.569	66.225	11.490	-0.258	0.797
complexity						
jpeg_size	350,012.367	118,541.318	331,739.683	120,579.766	0.837	0.404
entropy	7.579	0.338	7.608	0.311	-0.489	0.626
color space						
LABL	47.078	11.035	48.411	11.090	-0.660	0.511
LABA	1.684	4.600	0.541	7.901	0.969	0.335
LABB	7.444	9.766	7.492	11.416	-0.025	0.980

1.2 Congruency model

Table S3: Results of exploratory LMMs investigating the effect of S2 congruency (congruent vs. incongruent) on valence and arousal ratings in Experiment 1. SE = standard error.

Model	Parameter	Estimate	SE	t	df	p	95% CI	
Arousal	Intercept	47.33	0.64	73.48	194.20	< 0.001	46.06	48.60
	UG - CG	0.17	1.29	0.13	194.20	0.893	-2.37	2.71
	neg - neu	25.53	1.48	17.26	191.40	< 0.001	22.62	28.45
	congruent - incongruent	1.36	0.44	3.09	7,026.00	0.002	0.50	2.23
	valence x group	-2.47	2.96	-0.83	191.40	0.405	-8.31	3.37
	group x congruency	-0.01	0.88	-0.02	7,026.00	0.987	-1.74	1.71
	valence x congruency	4.61	0.88	5.22	7,026.00	< 0.001	2.88	6.33
	group x valence x congruency	-0.77	1.76	-0.44	7,026.00	0.663	-4.22	2.69
	σ ID	8.19						
	σ valence	19.11						
	σ residual	16.33						
Valence	Intercept	46.44	0.42	111.05	208.84	< 0.001	45.62	47.27
	UG - CG	-0.52	0.84	-0.62	208.84	0.535	-2.17	1.13
	neg - neu	-45.60	1.29	-35.30	193.21	< 0.001	-48.14	-43.05
	congruent - incongruent	-3.83	0.42	-9.06	7,026.01	< 0.001	-4.66	-3.00
	valence x group	1.10	2.58	0.43	193.21	0.669	-3.99	6.20
	group x congruency	-0.84	0.85	-0.99	7,026.01	0.322	-2.50	0.82
	valence x congruency	-7.82	0.85	-9.24	7,026.01	< 0.001	-9.47	-6.16
	group x valence x congruency	-1.82	1.69	-1.07	7,026.01	0.283	-5.14	1.50
	σ ID	4.88						
	σ valence	16.51						
	σ residual	15.68						

Table S4: Anova table of exploratory LMMs investigating the effect of S2 congruency (congruent vs. incongruent) on valence and arousal ratings in Experiment 1.

Model	Effect	SS	Df_{num}	Df_{den}	F	p
Arousal	Group	4.80	1	194.20	0.02	0.893
	Valence	79,456.98	1	191.40	297.83	< 0.001
	Cong	2,547.30	1	7,026.00	9.55	0.002
	Group x Valence	185.90	1	191.40	0.70	0.405
	Group x Congruency	0.07	1	7,026.00	0.00	0.987
	Valence x Congruency	7,283.37	1	7,026.00	27.30	< 0.001
	Group x Valence x Congruency	50.54	1	7,026.00	0.19	0.663
Valence	Group	94.93	1	208.84	0.39	0.535
	Valence	306,341.33	1	193.21	1,246.30	< 0.001
	Cong	20,172.18	1	7,026.01	82.07	< 0.001
	Group x Valence	44.95	1	193.21	0.18	0.669
	Group x Congruency	240.74	1	7,026.01	0.98	0.322
	Valence x Congruency	20,963.97	1	7,026.01	85.29	< 0.001
	Group x Valence x Congruency	283.85	1	7,026.01	1.15	0.283

2 Experiment 2

2.1 Stimuli

Table S5: List of NAPS picture names used as S2s in Experiment 1, sorted by valence (Neg = negative, Neu = neutral).

Valence	NAPS pictures names	IADS-2 sounds numbers
NEG	Animals_074_h, Animals_077_h, Animals_078_h, Animals_024_h, Faces_293_h, Faces_290_h, Faces_302_h, Faces_152_h, Landscapes_139_h, Landscapes_005_h, Landscapes_026_h, Landscapes_002_h, Objects_139_h, Objects_125_h, Objects_149_h, Objects_003_h, People_226_h, People_022_h, People_140_h, People_127_h	105, 106, 115, 116, 241, 242, 244, 255, 276, 277, 279, 283, 285, 286, 289, 290, 292, 293, 295, 296, 420, 422, 423, 424, 501, 502, 600, 611, 624, 625, 626, 703, 709, 711, 712, 713, 714, 719, 730, 732
NEU	Animals_170_h, Animals_206_h, Animals_125_h, Animals_109_h, Faces_304_h, Faces_316_h, Faces_331_h, Faces_326_h, Landscapes_127_h, Landscapes_149_h, Landscapes_163_h, Landscapes_107_h, Objects_262_h, Objects_254_h, Objects_263_h, Objects_078_h, People_194_h, People_099_h, People_173_h, People_101_h	107, 109, 113, 120, 132, 150, 152, 170, 171, 172, 206, 225, 254, 262, 270, 355, 360, 361, 363, 364, 365, 370, 374, 375, 377, 378, 400, 403, 601, 602, 610, 698, 704, 705, 716, 721, 724, 725, 726, 808

Table S6: Means (M), standard deviations (SD), and results of two-tailed t-tests assuming unequal variance in luminance, contrast, complexity indices (i.e., JPEG size, entropy), and color space indices (i.e., LABL, LABA, LABB) for affective pictures, and in physical properties (i.e., min dB, max dB, peak dB) for affective sounds, referred to negative (Neg) and neutral (Neu) NAPS pictures and IADS-2 sounds employed as S2s in Experiment 2.

	NEG		NEU				
Measure	**M**	**SD**	**M**	**SD**	**t**	**df**	**p**
luminance	110.232	23.168	121.242	24.168	-1.471		0.150
contrast	65.834	10.017	61.919	10.617	1.199		0.238
jpeg_size	345,480.200	115,725.462	357,945.550	111,068.563	-0.348		0.730
entropy	7.623	0.399	7.663	0.216	-0.394	38	0.695
LABL	45.552	9.136	50.539	9.667	-1.677		0.102
LABA	2.089	4.294	-1.576	10.822	1.408		0.167
LABB	5.316	5.992	6.630	15.278	-0.358		0.722
min dB	-0.673	0.058	-0.657	0.094	-0.916		0.362
max dB	0.668	0.052	0.681	0.116	-0.638	78	0.526
peak amp dB	-93.125	566.920	-3.582	1.347	-0.999		0.321

2.2 Congruency model

Table S7: Results of exploratory LMMs investigating the effect of S2 congruency (congruent vs. incongruent) on valence and arousal ratings in Experiment 2. SE = standard error.

Model	Parameter	Estimate	SE	t	df	p	95% CI	
Arousal	Intercept	59.48	0.60	99.45	186.22	< 0.001	58.30	60.66
	UG - CG	-0.15	1.20	-0.12	186.22	0.903	-2.51	2.21
	neg - neu	23.85	0.89	26.67	201.72	< 0.001	22.09	25.61
	congruent - incongruent	1.83	0.52	3.52	6,494.00	< 0.001	0.81	2.86
	valence x group	3.40	1.79	1.90	201.72	0.058	-0.12	6.93
	group x congruency	0.18	1.04	0.17	6,494.00	0.866	-1.87	2.22
	valence x congruency	5.56	1.04	5.34	6,494.00	< 0.001	3.52	7.60
	group x valence x congruency	2.15	2.08	1.03	6,494.00	0.303	-1.94	6.23
	σ ID	7.03						
	σ valence	9.49						
	σ residual	18.62						
Valence	Intercept	42.13	0.43	98.30	204.39	< 0.001	41.29	42.98
	UG - CG	0.44	0.86	0.52	204.39	0.607	-1.25	2.13
	neg - neu	-35.69	1.01	-35.36	193.50	< 0.001	-37.68	-33.70
	congruent - incongruent	-2.70	0.52	-5.22	6,494.00	< 0.001	-3.71	-1.69
	valence x group	-3.52	2.02	-1.74	193.50	0.083	-7.50	0.46
	group x congruency	-0.09	1.03	-0.09	6,494.00	0.929	-2.12	1.93
	valence x congruency	-7.93	1.03	-7.68	6,494.00	< 0.001	-9.96	-5.91
	group x valence x congruency	-2.87	2.07	-1.39	6,494.00	0.165	-6.92	1.18
	σ ID	4.47						
	σ valence	11.32						
	σ residual	18.47						

Table S8: Anova table of exploratory LMMs investigating the effect of S2 congruency (congruent vs. incongruent) on valence and arousal ratings in Experiment 2. SE = standard error.

Model	Effect	SS	Df_{num}	Df_{den}	F	p
Arousal	Group	5.12	1	186.22	0.01	0.903
	Valence	246,692.83	1	201.72	711.26	< 0.001
	Cong	4,303.90	1	6,494.00	12.41	< 0.001
	Group x Valence	1,256.14	1	201.72	3.62	0.058
	Group x Congruency	9.85	1	6,494.00	0.03	0.866
	Valence x Congruency	9,893.29	1	6,494.00	28.52	< 0.001
	Group x Valence x Congruency	368.58	1	6,494.00	1.06	0.303
Valence	Group	90.81	1	204.39	0.27	0.607
	Valence	426,702.52	1	193.50	1,250.23	< 0.001
	Cong	9,307.90	1	6,494.00	27.27	< 0.001
	Group x Valence	1,038.68	1	193.50	3.04	0.083
	Group x Congruency	2.69	1	6,494.00	0.01	0.929
	Valence x Congruency	20,111.42	1	6,494.00	58.93	< 0.001
	Group x Valence x Congruency	659.45	1	6,494.00	1.93	0.165