

Supplementary document S1. List of laboratory animals with entrance and leaving date as well as number of images. * One image missing in week 3.

Individual	Date of capture	1 st day in the experiment	Week number	Last day in the experiment	Week number	N weeks in the experiment	N images left side	N images right side
1	29.04.2018	10.05.2018	2	05.07.2018	10	9	9	9
2	22.04.2018	03.05.2018	1	21.06.2018	8	8	8	8
3	29.04.2018	10.05.2018	2	21.06.2018	8	7	7	7
4	29.04.2018	10.05.2018	2	21.06.2018	8	7	7	7
5	29.04.2018	10.05.2018	2	21.06.2018	8	7	6*	7
6	29.04.2018	10.05.2018	2	21.06.2018	8	7	7	7
7	29.04.2018	10.05.2018	2	28.06.2018	9	8	8	8
8	29.04.2018	10.05.2018	2	05.07.2018	10	9	9	9
9	29.04.2018	10.05.2018	2	07.06.2018	6	5	5	5
10	29.04.2018	10.05.2018	2	07.06.2018	6	5	4*	5
11	29.04.2018	10.05.2018	2	21.06.2018	8	7	7	7
12	29.04.2018	10.05.2018	2	05.07.2018	10	9	9	9
13	22.04.2018	03.05.2018	1	14.06.2018	7	7	7	7
14	22.04.2018	03.05.2018	1	21.06.2018	8	8	8	8
15	29.04.2018	10.05.2018	2	28.06.2018	9	8	8	8
16	22.04.2018	03.05.2018	1	21.06.2018	8	8	8	8
17	29.04.2018	10.05.2018	2	05.07.2018	10	9	9	9
18	22.04.2018	03.05.2018	1	14.06.2018	7	7	7	7
19	22.04.2018	03.05.2018	1	14.06.2018	7	7	7	7
20	29.04.2018	10.05.2018	2	14.06.2018	7	6	6	6
21	29.04.2018	10.05.2018	2	28.06.2018	9	8	8	8
22	22.04.2018	03.05.2018	1	21.06.2018	8	8	8	8
23	29.04.2018	10.05.2018	2	21.06.2018	8	7	7	7
24	29.04.2018	10.05.2018	2	05.07.2018	10	9	9	9
25	29.04.2018	10.05.2018	2	28.06.2018	9	8	8	8
26	29.04.2018	10.05.2018	2	21.06.2018	8	7	7	7
27	29.04.2018	10.05.2018	2	21.06.2018	8	7	7	7
28	29.04.2018	10.05.2018	2	05.07.2018	10	9	9	9
29	29.04.2018	10.05.2018	2	21.06.2018	8	7	7	7
30	22.04.2018	03.05.2018	1	21.06.2018	8	8	8	8
31	29.04.2018	10.05.2018	2	21.06.2018	8	7	7	7
32	29.04.2018	10.05.2018	2	28.06.2018	9	8	8	8
33	29.04.2018	10.05.2018	2	05.07.2018	10	9	9	9
34	22.04.2018	03.05.2018	1	21.06.2018	8	8	8	8
35	29.04.2018	10.05.2018	2	21.06.2018	8	7	7	7
36	29.04.2018	10.05.2018	2	05.07.2018	10	9	9	9
37	29.04.2018	10.05.2018	2	28.06.2018	9	8	8	8
38	29.04.2018	10.05.2018	2	21.06.2018	8	7	7	7
39	29.04.2018	10.05.2018	2	05.07.2018	10	9	9	9
40	29.04.2018	10.05.2018	2	24.05.2018	4	3	3	3
sum							299	301

Supplementary document S2. Test statistics of Shapiro-Wilk tests on normal distribution and Friedman and Wilcoxon tests on differences among matching scores.

Pre-test

Shapiro-Wilks test for normal distribution

Version	Descriptive statistics			Shapiro-Wilks test on normality		
	N	Average	S.E.	χ^2	df	p
ORG	90	0.9741	0.0067	0.4690	90	< 0.001
COL	90	0.9088	0.0191	0.4030	90	< 0.001
BGS	90	0.8721	0.0254	0.4020	90	< 0.001

Friedmann test among contrast versions within weeks

N	$\chi^2_{\text{org-col-bgs}}$	$P_{\text{org-col-bw}}$	$\chi^2_{\text{org-col}}$	$P_{\text{org-col}}^*$	$\chi^2_{\text{org-bgs}}$	$P_{\text{org-bgs}}^*$	$\chi^2_{\text{col-bgs}}$	$P_{\text{col-bgs}}^*$
90	13.455	<0.01	0.256	>0.05	0.344	>0,05	0.089	>0.05

*adjusted significance after sequential Bonferroni correction for multiple testing

Change over time test

Shapiro-Wilks test for normal distribution

Version	Descriptive statistics			Shapiro-Wilks test on normality		
	N	Average	S.E.	χ^2	df	p
ORG						
week 2 with 3	40	0.3740	0.0229	0.925	9	> 0.05
week 2 with 4	40	0.2505	0.0262	0.711	9	< 0.001
week 2 with 5	39	0.1084	0.0162	0.683	9	< 0.001
week 2 with 6	39	0.0618	0.0100	0.721	9	< 0.001
week 2 with 7	37	0.0226	0.0059	0.636	9	< 0.001
week 2 with 8	36	0.0141	0.0049	0.421	9	< 0.001
week 2 with 9	21	0.0040	0.0026	0.390	9	< 0.001
week 2 with 10	9	0.0014	0.0010	0.576	9	< 0.001
COL						
week 2 with 3	40	0.1469	0.0324	0.866	9	> 0.05
week 2 with 4	40	0.0678	0.0191	0.684	9	< 0.001
week 2 with 5	39	0.0316	0.0107	0.445	9	< 0.001
week 2 with 6	39	0.0178	0.0080	0.390	9	< 0.001
BGS						
week 2 with 3	40	0.0551	0.0229	0.522	9	< 0.001
week 2 with 4	40	0.0293	0.0111	0.551	9	< 0.001
week 2 with 5	39	0.0084	0.0043	0.390	9	< 0.001
week 2 with 6	39	0.0000	0.0000			
week 2 with 7	37	0.0002	0.0002	0.390	9	< 0.001

Kruskal-Wallis test within contrast versions among weeks

ORG

Weekly comparison	2 with 3		2 with 4		2 with 5		2 with 6		2 with 7		2 with 8		2 with 9	
	H	p*	H	p*	H	p*	H	p*	H	p*	H	p*	H	p*
2 with 4	28.73	> 0.05												
2 with 5	78.29	< 0.001	49.56	> 0.05										
2 with 6	102.43	< 0.001	73.70	< 0.001	24.14	> 0.05								
2 with 7	145.05	< 0.001	116.33	< 0.001	66.77	< 0.01	42.63	> 0.05						
2 with 8	164.73	< 0.001	136.00	< 0.001	86.44	< 0.001	62.30	< 0.01	19.67	> 0.05				
2 with 9	183.76	< 0.001	155.03	< 0.001	105.47	< 0.001	81.33	< 0.01	38.70	> 0.05	19.03	> 0.05		
2 with 10	184.91	< 0.001	156.18	< 0.001	106.62	< 0.01	82.48	> 0.05	39.85	> 0.05	20.18	> 0.05	1.15	> 0.05

*adjusted significance after sequential Bonferroni correction for multiple testing

COL

Weekly comparison	2 with 3		2 with 4		2 with 5	
	H	p*	H	p*	H	p*
2 with 4		16.46 > 0.05				
2 with 5		29.99 < 0.01	13.52	> 0.05		
2 with 6		44.59 < 0.001	28.13	< 0.05	14.60	> 0.05

*adjusted significance after sequential Bonferroni correction for multiple testing

BGS

Weekly comparison	2 with 3		2 with 4		2 with 5		2 with 6	
	H	p*	H	p*	H	p*	H	p*
2 with 4		7.66 > 0.05						
2 with 5		8.96 > 0.05	16.62					
2 with 6		18.59 > 0.05	26.25	< 0.01	9.63	> 0.05		
2 with 7		18.70 > 0.05	26.37	< 0.01	9.74	> 0.05	0.11	> 0.05

*adjusted significance after sequential Bonferroni correction for multiple testing

Left versus right tail side

Shapiro-Wilks test for normal distribution

average scores per individual over time were used

Version/tail side	N	Descriptive statistics			Shapiro-Wilks test on normality		
		Median	Average	S.E.	Chi ²	df	p
ORG/left	40	0.1155	0.1284	0.0117	0.109	40	> 0.05
ORG/right	40	0.1195	0.1297	0.0633	0.099	40	> 0.05
COL/left	40	0.0207	0.0494	0.0711	0.243	40	< 0.001
COL/right	40	0.0077	0.0362	0.0099	0.315	40	< 0.001
BGS/left	40	0	0.0167	0.0056	0.356	40	< 0.001
BGS/right	40	0	0.0119	0.0048	0.452	40	< 0.001

Shapiro-Wilk test for normal distribution
average scores per individual over time were used

version/tail side	descriptive statistics				Shapiro-Wilk test on normality		
	N	median	average	S.E.	χ ²	df	p
ORG/left	40	0.1155	0.1284	0.0117	0.109	40	>0.05
ORG/right	40	0.1195	0.1297	0.0633	0.099	40	>0.05
COL/left	40	0.0207	0.0494	0.0711	0.243	40	<0.001
COL/right	40	0.0077	0.0362	0.0099	0.315	40	<0.001
BGS/left	40	0	0.0167	0.0056	0.356	40	<0.001
BGS/right	40	0	0.0119	0.0048	0.452	40	<0.001

side comparison	ORG left		ORG right		COL left		COL right		BGS left	
	W/χ ²	p*	W/χ ²	p*	W/χ ²	p*	W/χ ²	p*	W/χ ²	p*
ORG right	421.000	> 0,05								
COL left	1.013	< 0,001								
COL right			1.063	< 0,001	176.000	> 0.05				
BGS left	1.463	< 0,001			0.450	> 0.05				
BGS right			1.638	< 0,001			0.575	< 0,05	45.000	> 0.05

*adjusted significance after sequential Bonferroni correction for multiple testing

Wilcoxon test (W): only left-right comparisons
Friedman test (χ²): all left comparisons
Friedman test (χ²): all right comparisons

Friedmann test among contrast versions within weeks

comparison	N	χ ² _{ORG-COL-BGS}	P _{ORG-COL-BGS}	χ ² _{ORG-COL}	P _{ORG-COL} *	χ ² _{ORG-BGS}	P _{ORG-BGS} *	χ ² _{COL-BGS}	P _{COL-BGS} *
week 2 with 3	40	59.197	< 0.001	0.988	< 0.001	1.638	< 0.001	0.650	< 0.05
week 2 with 4	40	60.179	< 0.001	1.188	< 0.001	1.588	< 0.001	0.400	> 0.05
week 2 with 5	39	50.063	< 0.001	1.051	< 0.001	1.410	< 0.001	0.359	> 0.05
week 2 with 6	39	61.382	< 0.001	1.218	< 0.001	1.474	< 0.001	0.256	> 0.05
week 2 with 7	37					-4.458	< 0.001		

*adjusted significance after sequential Bonferroni correction for multiple testing Wilcoxon test for week 2 with 7