

Supplementary Material

S1

List of objects used as stimuli.

- | | | |
|-------------------------------|-----------------------------|------------------------------------|
| 1. Thermos mug black | 29. Ship figurine | 57. Lunch box pink |
| 2. Tea tin | 30. Thermos mug colorful | 58. Camera battery |
| 3. Salt/pepper mill | 31. Ballet figurine 1 | 59. Jar of oats |
| 4. Duct tape | 32. Plastic plant 1 | 60. Headband |
| 5. Tool box blue | 33. Bamboo plant pot | 61. Gloves black |
| 6. Scissors | 34. Hair brush | 62. Striped clay jug |
| 7. Headphones blue/grey | 35. Plastic plant blue | 63. Glasses case black |
| 8. Coffeepot | 36. Hair detangler | 64. Lunch box yellow |
| 9. TV remote | 37. Tee package | 65. Plastic rose 2 |
| 10. Thestral figurine | 38. Cotton swab | 66. Fine strainer |
| 11. Power strip | 39. Hair clip | 67. Wool socks |
| 12. Stuffed spaghetti monster | 40. Tealight holder glass | 68. Top |
| 13. Stuffed squid | 41. Candle red | 69. Small drinking bottle metallic |
| 14. Sunglasses | 42. Stuffed flamingo | 70. Vegetable stock |
| 15. Flowers in vase | 43. Smartphone stand silver | 71. Loaf pan |
| 16. Lunch box green | 44. Hawaiian lei necklace | 72. Cloth striped |
| 17. Ice cube form | 45. Plastic rose 1 | 73. Towel |
| 18. Mini camera | 46. Pencil case colorful | 74. Tissue box |
| 19. Mug pink | 47. Pointe shoe | 75. Trophy |
| 20. Tee strainer | 48. Ballet slipper black | 76. Electric bell |
| 21. Bowl purple/white | 49. Wood log | 77. Shoe brush |
| 22. Bedroom slipper | 50. Dance sneaker | 78. Workout item |
| 23. Pencil case pink | 51. Jewelry box | 79. Toy horse |
| 24. Grater | 52. Ballet figurine 2 | 80. Stuffed bear blue |
| 25. Yoga block | 53. Banana | 81. Plastic cup green |
| 26. Smoothie bottle | 54. Washcloth | 82. Dish soap |
| 27. Folding rule | 55. Banana lunch box | 83. Cloth green |
| 28. Milk frother | 56. Sandal beige | 84. Dish towel green/white |

85.	Coffee tin metal	118.	Drinking bottle grey	149.	Sauce boat
86.	Mug orange	119.	Wallet	150.	Bottle brush
87.	Knife	120.	Plastic pipe	151.	Dish brush
88.	Spoon	121.	Rolling pin	152.	Hanger white
89.	Fork	122.	Salt mill	153.	Tablet case
90.	Blackboard sponge	123.	Plastic plate orange	154.	Tablet
91.	Large decoration heart	124.	Potato masher	155.	Toilet paper
92.	Dustpan blue	125.	Hammer	156.	Mug with lid
93.	Hand brush	126.	Food processor	157.	Make-up brush
94.	Lint roller	127.	Hand brush white	158.	Wooden horse with sleigh
95.	Gloves grey	128.	Dustpan red	159.	Soap dish
96.	Umbrella	129.	Baking tin round metal	160.	Bicycle bag
97.	Purse	130.	Baking tin round silicon	161.	Lemon squeezer beige
98.	Picture frame white	131.	Music box	162.	Carton box colorful
99.	Picture frame brown	132.	Green jewelry box	163.	Dog bowl
100.	Beanie	133.	Lemon squeezer blue	164.	Heated slippers
101.	Duster	134.	Punch	165.	Oven dish
102.	Lid	135.	Shell figurine	166.	Bicycle lock
103.	Carton box	136.	Booklet green	167.	Purse pink
104.	Sponge	137.	Blue box	168.	Drinking bottle yellow
105.	Tambourine	138.	Apple	169.	Perfume
106.	Dish towel blue/white	139.	Pear	170.	Wooden spoon
107.	Dishcloth blue dotted	140.	Salat lunch box	171.	Spatula black
108.	Pasta strainer	141.	Small toilet bag	172.	Spatula white
109.	Mixing bowl	142.	Fitness band	173.	Small painting brush
110.	Shoes grey	143.	Wooden turtle	174.	Dough scraper pink
111.	Piece of wood	144.	Rooster figurine	175.	Knife black
112.	Plastic flowers purple	145.	Painting brush	176.	Boulder shoe
113.	Respiratory mask	146.	Hair dryer	177.	Muffin tin
114.	Wooden plant pot	147.	Cable bag	178.	Lunchbox turquoise
115.	Metallic plant pot	148.	Small bin	179.	Lighthouse light chain
116.	Tissue box empty			180.	Plant pot purple
117.	Plastic plant pot				

181. Plant pot pink	213. Shower wiper	246. Cable green
182. Small plant	214. Plant pot white	247. Big candle purple
183. Wooden dish brush	215. Bottle cover	248. Hot glue gun
184. Porcelain plate flowers	216. Sellotape roll	249. Dustpan metal
185. Kitchen paper roll	217. Fan	250. Charging cable black
186. Bowl blue	218. Buddha figurine	251. Hard disk
187. Bowl beige	219. Laptop	252. Saw
188. Aluminium foil	220. Measuring instrument	253. Wood glue
189. Cloth blue	221. Alarm clock	254. Computer mouse
190. Candle white	222. Stapler black	255. Pliers red
191. Baby powder	223. Pencil box	256. Book black
192. Light chain	224. Can opener	257. First aid bag
193. Polaroid camera	225. Toolbox green	258. Paint roller
194. Basket	226. Measuring tape	259. Plastic mug red
195. Champagne	227. Stuffed Pokémon ball	260. Pepper mill
196. Coffee machine	228. Small shovel	261. Hanger blue
197. Controller	229. Small rake	262. Round box blue
198. Headphones blue/ black	230. Wool ball	263. Toaster attachment
199. Laptop carton	231. Insect house	264. Spice jar
200. Coffee pot black	232. Napkin holder	265. House figurine white
201. Graduation hat	233. Pencil case blue	266. Gift bag
202. Starwars figurine	234. Calculator case	267. Notebook
203. Big punch black	235. Calculator	268. Cash box
204. Cable white	236. Small vase blue	269. Autumn decoration
205. Blue folder	237. Small box purple	270. Radio clock
206. Bedside lamp	238. Rattan ball light chain	271. Coffee tin brown/ white
207. Fabric bag	239. Pencil case red	272. Red candle in glass
208. Make-up bag black	240. Ribbon package	273. Pot
209. Paintbox	241. Wooden star	274. Whisk
210. Ribbon roll	242. Weight cuff	275. Pizza board
211. Christmas decoration	243. Dumbbell	276. House figurine blue
212. Star candle holder	244. Fascia Roller	277. Lighter
	245. Glass with straw	278. Plant 1

279.	Plant 2	306.	Office chair castor	333.	VHS cassette
280.	Plant 3	307.	Digital clock	334.	Make-up bag blue
281.	Plant 4	308.	Toy car	335.	Make-up
282.	Plant 5	309.	Sandal brown	336.	Seagull figurine
283.	Plant 6	310.	Ballet slippers blue/ red	337.	Wooden box
284.	Plant 7	311.	Stuffed monkey	338.	Manicure set
285.	Egg carton	312.	Box grater	339.	Coffee mill
286.	Orange	313.	Skipping rope	340.	Popsicle mold
287.	Board game	314.	Remote control	341.	Pen holder
288.	Scarf	315.	Notepad	342.	Round notepad
289.	Foot massage roller	316.	Plastic plant 2	343.	Small lantern
290.	Chalk	317.	Hand blender attachment	344.	Stamp pad
291.	Bicycle helmet	318.	Boot brown	345.	Watering can
292.	Soap dispenser	319.	Fitness band loop	346.	Rubber duck
293.	Steam iron	320.	Desk calendar	347.	Pan
294.	Carton box white/ green	321.	Chess board	348.	Microwave grid
295.	Paper bag	322.	Christmas ornaments	349.	Soup ladle
296.	Small decoration cabinet	323.	Candle purple	350.	Potholder
297.	Birdhouse	324.	Hair straightener case	351.	Dough scraper grey
298.	Clay vase	325.	Hair straightener	352.	Hand mixer attachment
299.	Plunger	326.	Camera bag	353.	Small remote
300.	Picture frame black	327.	Camera	354.	Pizza cutter
301.	Plastic folder	328.	Metronome	355.	Bread basket
302.	Pylon	329.	Camera flash light	356.	Flip-flop
303.	Hot-water bottle	330.	Vase white	357.	Hanger black
304.	Nutcracker	331.	Picture frame green/white	358.	Wig stand
305.	Pliers grey	332.	Smartphone stand black	359.	Hair straightener brush
				360.	Spider catcher

Table S2

Test statistics for rmANOVA with the factors Modality, Repetition and Cluster for the P1 time window (125-165).

Tests of Within-Subjects Effects^a

	Type III Sum of Squares	df	Mean Square	F	p	η^2
Modality	1.52	1.00	1.52	6.74	.016	0.22
Repetition	<0.01	1.00	<0.01	0.02	.878	<0.01
Cluster	2723.23	1.31	2072.30	50.42	<.001	0.68
Modality*Repetition	0.02	1.00	0.02	0.32	.577	0.01
Modality*Cluster	180.99	1.88	96.06	20.03	<.001	0.45
Repetition*Cluster	0.50	3.66	0.14	0.38	.804	0.02
Modality*Repetition*Cluster	1.34	2.58	0.52	0.72	.525	0.03

a. Greenhouse-Geisser corrected ANOVA

Table S3

Test statistics for post-hoc paired t-tests regarding ERP amplitudes in the PC and the VR condition for each cluster for the P1 time window (125-165ms).

	<i>Paired Samples Statistics</i>		<i>Paired Samples Test</i>					
	<i>M</i>	<i>SD</i>	<i>Paired Differences</i>		<i>t</i>	<i>df</i>	<i>p</i>	<i>Cohen's d^a</i>
PC: frontal	-2.99	1.75	-1.38	1.51	-4.59	24	<.001	-0.918
VR: frontal	-1.60	1.85						
PC: mid-frontal	-2.50	1.59	-1.19	1.05	-5.67	24	<.001	-1.133
VR: mid-frontal	-1.30	1.31						
PC: left temporal	-0.40	0.94	-0.45	0.91	-2.48	24	.021	-0.496
VR: left temporal	0.05	0.93						
PC: right temporal	-0.25	0.98	0.47	0.95	2.48	24	.020	0.497
VR: right temporal	-0.72	0.82						
PC: posterior	5.18	3.14	1.88	1.94	4.86	24	<.001	0.971
VR: posterior	3.30	2.61						
PC: centro-parietal	-0.53	0.77	0.07	0.64	0.58	24	.569	0.116
VR: centro-parietal	-0.61	0.73						

a. Cohen's d uses the sample standard deviation of the mean difference.

Table S4

Test statistics for rmANOVA with the factors Modality, Repetition and Cluster for the N1 time window (165-205ms).

Tests of Within-Subjects Effects^a

	<i>Type III Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>p</i>	<i>η^2</i>
Modality	0.79	1.00	0.79	2.64	.117	0.10
Repetition	0.08	1.00	0.08	1.17	.290	0.05
Cluster	1881.53	1.52	1234.73	37.39	<.001	0.61
Modality*Repetition	0.02	1.00	0.02	0.41	.528	0.02
Modality*Cluster	133.72	2.15	62.23	12.10	<.001	0.34
Repetition*Cluster	4.31	2.57	1.68	1.79	.166	0.07
Modality*Repetition*Cluster	1.27	2.20	0.58	0.53	.610	0.02

a. Greenhouse-Geisser corrected ANOVA

Table S5

Test statistics for post-hoc paired t-tests regarding ERP amplitudes in the PC and the VR condition for each cluster for the N1 time window (165-205ms).

	<i>Paired Samples Statistics</i>		<i>Paired Samples Test</i>					
			<i>Paired Differences</i>		<i>t</i>	<i>df</i>	<i>p</i>	<i>Cohen's d^a</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
PC: frontal	-260	1.85	-0.70	1.81	-1.92	24	.066	-0.38
VR: frontal	-1.91	2.04						
PC: mid-frontal	-1.75	1.45	-1.01	1.12	-4.50	24	<.001	-0.90
VR: mid-frontal	-0.74	1.38						
PC: left temporal	-0.59	1.10	-0.53	1.25	-2.13	24	.044	-0.43
VR: left temporal	-0.06	1.10						
PC: right temporal	-0.74	0.93	0.05	0.65	0.38	24	.705	0.08
VR: right temporal	-0.79	0.73						
PC: posterior	4.38	2.85	1.89	2.03	4.66	24	<.001	0.93
VR: posterior	2.48	2.48						
PC: centro-parietal	-0.35	0.98	-0.14	0.84	-0.83	24	.413	-0.17
VR: centro-parietal	-0.21	0.73						

a. Cohen's d uses the sample standard deviation of the mean difference.

Table S6

Test statistics for rmANOVA with the factors Modality, Repetition and Cluster for the L1 time window (220-800ms).

Tests of Within-Subjects Effects^a

	<i>Type III Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>p</i>	<i>η²</i>
Modality	0.18	1.00	0.18	0.49	.490	0.02
Repetition	0.21	1.00	0.21	2.85	.104	0.11
Cluster	4165.47	1.76	2369.67	113.26	<.001	0.83
Modality*Repetition	0.02	1.00	0.02	0.45	.510	0.02
Modality*Cluster	86.55	1.63	53.02	7.02	.004	0.23
Repetition*Cluster	51.34	2.46	20.84	22.29	<.001	0.48
Modality*Repetition*Cluster	3.51	2.53	1.39	2.16	.112	0.08

a. Greenhouse-Geisser corrected ANOVA

Table S7

Test statistics for post-hoc paired t-tests regarding ERP amplitudes in the PC and the VR condition for each cluster for the L1 time window (220-800ms).

	<i>Paired Samples Statistics</i>		<i>Paired Samples Test</i>					
	<i>M</i>	<i>SD</i>	<i>Paired Differences</i>		<i>t</i>	<i>df</i>	<i>p</i>	<i>Cohen's d^a</i>
PC: frontal	-3.89	1.51	0.41	2.40	0.85	24	.406	0.17
VR: frontal	-4.29	2.42						
PC: mid-frontal	-2.92	1.24	-0.69	1.10	-3.13	24	.005	-0.63
VR: mid-frontal	-2.23	1.11						
PC: left temporal	-0.56	1.01	-0.84	0.82	-5.12	24	<.001	-1.02
VR: left temporal	0.28	0.68						
PC: right temporal	0.16	0.76	-0.26	0.84	-1.57	24	.130	-0.31
VR: right temporal	0.42	0.55						
PC: posterior	5.06	2.40	1.41	1.91	3.70	24	.001	0.74
VR: posterior	3.65	2.09						
PC: centro-parietal	-0.09	1.08	-0.23	0.82	-1.42	24	.169	-0.28
VR: centro-parietal	0.14	0.80						

a. Cohen's d uses the sample standard deviation of the mean difference.

Table S8

Test statistics for post-hoc paired t-tests regarding the RS effect for each cluster for the L1 time window (220-800ms).

	<i>Paired Samples Statistics</i>		<i>Paired Samples Test</i>					
	<i>M</i>	<i>SD</i>	<i>Paired Differences</i>		<i>t</i>	<i>df</i>	<i>p</i>	<i>Cohen's d^a</i>
First frontal	-4.39	1.69	-0.59	0.88	-3.35	24	.003	-0.67
Second frontal	-3.80	1.66						
First mid-frontal	-2.87	1.08	-0.60	0.54	-5.55	24	<.001	-1.11
Second mid-frontal	-2.27	1.06						
First left temporal	<0.01	0.87	0.28	0.64	2.22	24	.036	0.44
Second left temporal	-0.28	0.77						
First right temporal	0.27	0.60	-0.05	0.48	-0.50	24	.623	-0.10
Second right temporal	0.31	0.52						
First posterior	4.89	2.08	1.07	0.75	7.14	24	<.001	1.43
Second posterior	3.82	2.07						
First centro-parietal	-0.15	0.89	-0.35	0.34	-5.20	24	.001	-1.04
Second centro-parietal	0.20	0.85						

a. Cohen's d uses the sample standard deviation of the mean difference.

Table S9

Test statistics for rmANOVA with the factors Modality, Repetition and Cluster for the L2 time window (800-1500ms).

Tests of Within-Subjects Effects^a

	<i>Type III Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>p</i>	<i>η^2</i>
Modality	0.89	1.00	0.89	4.38	.047	0.15
Repetition	0.22	1.00	0.22	2.90	.102	0.11
Cluster	173.62	1.82	95.30	7.88	.002	0.25
Modality*Repetition	0.13	1.00	0.13	2.61	.119	0.10
Modality*Cluster	67.64	1.71	39.61	6.75	.004	0.22
Repetition*Cluster	5.26	2.54	2.07	2.12	.117	0.08
Modality*Repetition*Cluster	14.00	2.66	5.27	5.78	.002	0.19

a. Greenhouse-Geisser corrected ANOVA

Table S10

Test statistics for post-hoc paired t-tests regarding ERP amplitudes in the PC and the VR condition for each cluster for the L2 time window (800-1500ms).

	<i>Paired Samples Statistics</i>		<i>Paired Samples Test</i>					
			<i>Paired Differences</i>		<i>t</i>	<i>df</i>	<i>p</i>	<i>Cohen's d^a</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
PC: frontal	-0.71	0.85	0.56	2.10	1.33	24	.196	0.27
VR: frontal	-1.27	2.40						
PC: mid-frontal	-0.49	0.77	-0.26	0.98	-1.33	24	.195	-0.27
VR: mid-frontal	-0.22	1.10						
PC: left temporal	0.02	0.79	-1.09	0.88	-6.16	24	<.001	-1.23
VR: left temporal	1.10	0.74						
PC: right temporal	0.13	0.63	-0.62	0.79	-3.94	24	.001	-0.79
VR: right temporal	0.75	0.55						
PC: posterior	0.79	1.45	0.89	1.73	2.57	24	.017	0.51
VR: posterior	-0.10	1.78						
PC: centro-parietal	-0.04	0.73	0.06	0.68	0.46	24	.650	0.09
VR: centro-parietal	-0.10	0.62						

a. Cohen's d uses the sample standard deviation of the mean difference.

Table S11

Test statistics for post-hoc paired *t*-tests regarding the RS effect in the PC and the VR condition for each cluster for the L2 time window (800-1500ms).

	Paired Samples Statistics		Paired Samples Test					
			Paired Differences		<i>t</i>	<i>df</i>	<i>p</i>	Cohen's <i>d</i> ^a
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
PC_1: frontal	-0.61	0.87	0.20	1.18	0.85	24	.406	0.17
PC_2: frontal	-0.81	1.18						
VR_1: frontal	-1.75	2.55	-0.96	1.24	-3.85	24	.001	-0.77
VR_2: frontal	-0.79	2.40						
VR_1: frontal	-1.75	2.55	-1.14	2.32	-2.45	24	.022	-0.49
PC_1: frontal	-0.61	0.87						
VR_1: frontal	-1.75	2.55	-0.94	2.20	-2.13	24	.044	-0.43
PC_2: frontal	-0.81	1.18						
PC_1: mid-frontal	-0.38	0.82	0.21	0.74	1.42	24	.168	0.28
PC_2: mid-frontal	-0.59	0.89						
VR_1: mid-frontal	-0.39	1.20	-0.33	0.74	-2.17	24	.040	-0.43
VR_2: mid-frontal	-0.06	1.11						
PC_1: left temporal	0.02	1.04	0.01	1.05	0.06	24	.952	0.01
PC_2: left temporal	0.01	0.84						
VR_1: left temporal	1.26	0.91	0.32	0.91	1.75	24	.093	0.35
VR_2: left temporal	0.94	0.83						
PC_1: right temporal	-0.10	0.83	-0.46	0.86	-2.67	24	.013	-0.53
PC_2: right temporal	0.36	0.69						
VR_1: right temporal	0.82	0.71	0.14	0.70	0.99	24	.334	0.20
VR_2: right temporal	0.68	0.59						
PC_1: posterior	0.73	1.65	-0.11	1.03	-0.55	24	.590	-0.11
PC_2: posterior	0.84	1.42						
VR_1: posterior	0.06	1.96	0.32	1.09	1.48	24	.153	0.30
VR_2: posterior	-0.26	1.76						
PC_1: centro-parietal	0.01	0.80	0.10	0.62	0.77	24	.450	0.15
PC_2: centro-parietal	-0.09	0.78						
VR_1: centro-parietal	-0.06	0.65	0.09	0.46	0.98	24	.339	0.20
VR_2: centro-parietal	-0.15	0.67						

a. Cohen's *d* uses the sample standard deviation of the mean difference.

Table S12

Test statistics for post-hoc paired t-tests regarding the RS effects within the PC and the VR condition for the frontal, the midfrontal and the right temporal cluster for the L2 time window (800-1500ms).

	<i>Paired Samples Statistics</i>		<i>Paired Samples Test</i>					
			<i>Paired Differences</i>		<i>t</i>	<i>df</i>	<i>p</i>	<i>Cohen's d^a</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
PC: frontal difference	0.20	1.18	1.16	1.66	3.49	24	.002	0.70
VR: frontal difference	-0.96	1.24						
PC: mid-frontal difference	0.21	0.74	0.53	0.97	2.73	24	.012	0.55
VR: mid-frontal difference	-0.32	0.74						
PC: right temporal difference	-0.46	0.86	-0.60	1.18	-2.53	24	.018	-0.51
VR: right temporal difference	0.14	0.70						

a. Cohen's d uses the sample standard deviation of the mean difference.

Table S13*ERP components in source space.*

	effect	center of gravity	MNI coordinates			hemi-sphere	brain region	fig
			x	y	z			
P1	average	CG	-28	-98	-17	L	occipital pole	5.A1
			28	-98	-17	R	occipital pole	5.A1
	modality	CG	-72	-26	5	L	superior temporal gyrus	5.A2
N1	average	CG	-28	-98	-17	L	occipital pole	5.B1
			28	-98	-17	R	occipital pole	5.B1
	modality	CG	7	-105	-2	R	cuneus	5.B2
			-14	-69	-2	L	medial occipitotemporal gyrus	5.B2
L1	RS	CG	-50	-62	-17	L	lateral occipitotemporal gyrus	5.C1
			28	-76	-17	R	lateral occipitotemporal gyrus	5.C1
			28	-98	-17	R	occipital pole	5.C1
	modality	CG	-28	-98	-17	L	occipital pole	5.C2
			43	-69	-17	R	lateral occipitotemporal gyrus	5.C2
			28	-98	-17	R	occipital pole	5.C2
L2	VR RS	CG	-28	-98	-17	L	occipital pole	6.B
			28	-98	-17	R	occipital pole	6.B
			-65	-19	-24	L	middle temporal gyrus	6.B
	PC RS	CG	28	-98	-17	R	occipital pole	6.A
	RS difference	CG	-28	-98	-17	L	occipital pole	6.C
			-65	-11	-17	L	middle temporal gyrus	6.C
			50	-69	-17	R	inferior temporal gyrus	6.C

Note. CG = center of gravity, RS = repetition suppression effect.