Supplementary Material

Table T1. Interclass correlations (rho [ρ]) of mixed-model baseline analyses for each behavioral measure, planned task comparisons, and test session.

	Sensitivity (d_L)				Median response latency			Inverse efficiency		
	N	ρ	*t*	*p*	ρ	*t*	*p*	ρ	*t*	*p*
Sessions 1 & 2										
Ignore/Suppress	312	.417	8.08	<.0001	.319	5.92	<.0001	.309	5.73	<.0001
Suppress/Remember	312	.456	9.01	<.0001	.194	3.49	.0003	.236	4.28	<.0001
Session 1										
Ignore/Suppress	160	.378	5.14	<.0001	.212	2.72	.004	.178	2.28	.012
Suppress/Remember	160	.397	5.44	<.0001	.097	1.22	.111	.095	1.20	.115
Session 2										
Ignore/Suppress	152	.459	6.33	<.0001	.263	3.33	.0005	.282	3.60	.0002
Suppress/Remember	152	.519	7.43	<.0001	.074	0.91	.183	.176	2.19	.015

Note. *N*: number of observations. *t* statistics (with one-tailed *p* values) report ICC (ρ) differences from zero. The generic R code to compute unconditional ICCs for a baseline model (i.e., with no explanatory variables in the equation; Bickel, 2007; McGraw & Wong, 1996) and to convert ρ to its corresponding *t* and *p* values, along with the data, is provided as Supplement B.

Table T2. Summary of linear mixed effect regression models comparing Ignore, Suppress, and Remember tasks across test sessions.

	Sensitivity (d_L)						Median response latency						Inverse efficiency					
	df_1	df_2	F	p		R^2_β	df_2	F	p		R^2_β	df_2	F	p		R^2_β
T	2	417.1	25.1	< .0001	***	.107	415.7	69.8	< .0001	***	.251	417.1	48.1	< .0001	***	.187
C	1	417.1	327.1	< .0001	***	.440	415.7	702.6	< .0001	***	.628	417.1	648.1	< .0001	***	.608
S	1	419.1	21.4	< .0001	***	.049	418.1	13.2	.0003	***	.031	419.4	14.1	.0002	***	.033
T*C	2						415.7	28.4	< .0001	***	.120	417.1	20.2	< .0001	***	.088
T*S																
C*S																
T*C*S																

Note. T = Task (Ignore, Suppress, Remember); C = Condition (Control, Lure); S = Session (1, 2). *F* ratios with $p \geq .10$ are omitted.

R^2_β represents the semi-partial R^2 estimate of effect size. (*) $p \leq .1$, * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$, **** $p \leq .0001$.

Table T3. Means (±SD) and effect sizes (Cohen's *d*) of behavioral performance measures for condition effects (Lure/Control) during visual and auditory implementations of Ignore/Suppress tasks.

			Ignore			Suppress		
			Lure	**Control**	***d***	**Lure**	**Control**	***d***
Visual	***N* = 24** [a]	**RT_{mean}**	741 ±189	708 ±174	.181	898 ±311	720 ±195	.685
		ER	1.9 ±4.0	0.7 ±2.0	.379	6.1 ±7.0	1.8 ±4.0	.754
Auditory	***N* = 40** [b]	**RT_{med}**	1320 ±483	923 ±180	1.08	1646 ±474	1004 ±182	1.78
		ER	19.1 ±17.0	1.7 ±3.7	1.41	27.9 ±17.2	3.1 ±6.3	1.91
		d_L	3.9 ±2.0	5.8 ±1.3	.830	2.9 ±2.2	5.1 ±1.6	1.14
	***N* = 38** [c]	**RT_{med}**	1243 ±499	885 ±214	.932	1518 ±494	897 ±183	1.66
		ER	13.3 ±14.0	1.7 ±3.1	1.14	21.2 ±18.2	2.4 ±3.9	1.42
		d_L	4.6 ±2.1	6.0 ±1.5	.767	3.5 ±2.1	5.3 ±1.6	.964

Note. RT_{mean} = mean response latency; RT_{med} = median response latency; ER = error rate; d_L = sensitivity (Snodgrass & Corwin, 1988); *d* = effect size (Cohen, 1988). [a] Data from Smith et al. (2011), Table 2; [b] Data from session 1; [c] Data from session 2.

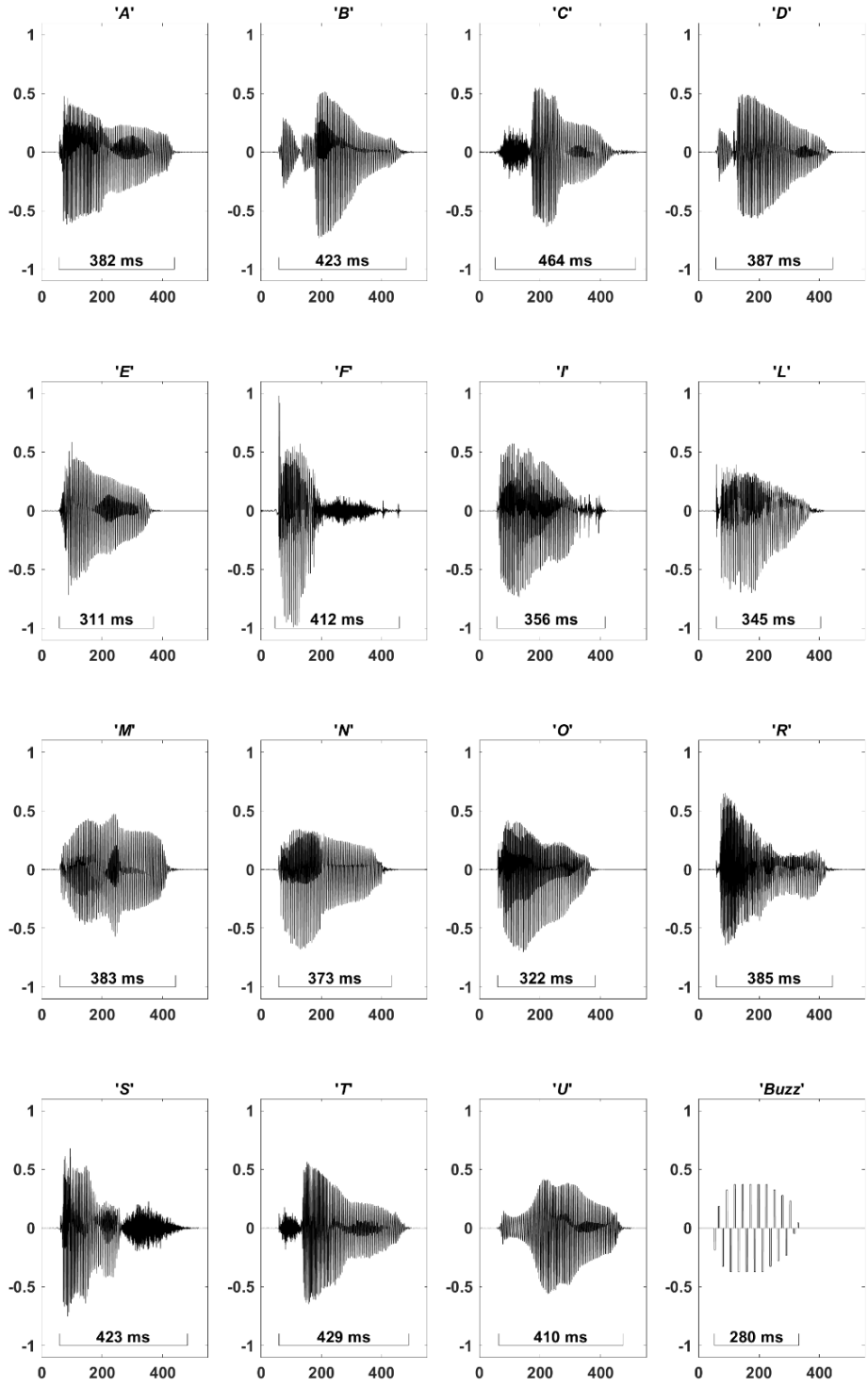

Figure S1. Amplitude waveforms of 15 letter sounds (A to F, I to O, R to U) and one cue ('buzz') stored in digital WAV file format (48,000 samples/s, 550 ms duration). An individual stimulus duration was determined by identifying the time points when the signal amplitude first and last exceeded an arbitrary threshold (7.5×10^{-5}), as indicated by horizontal brackets. Note that within each sound file, signal amplitudes are preceded by approximately 50 ms of silence.

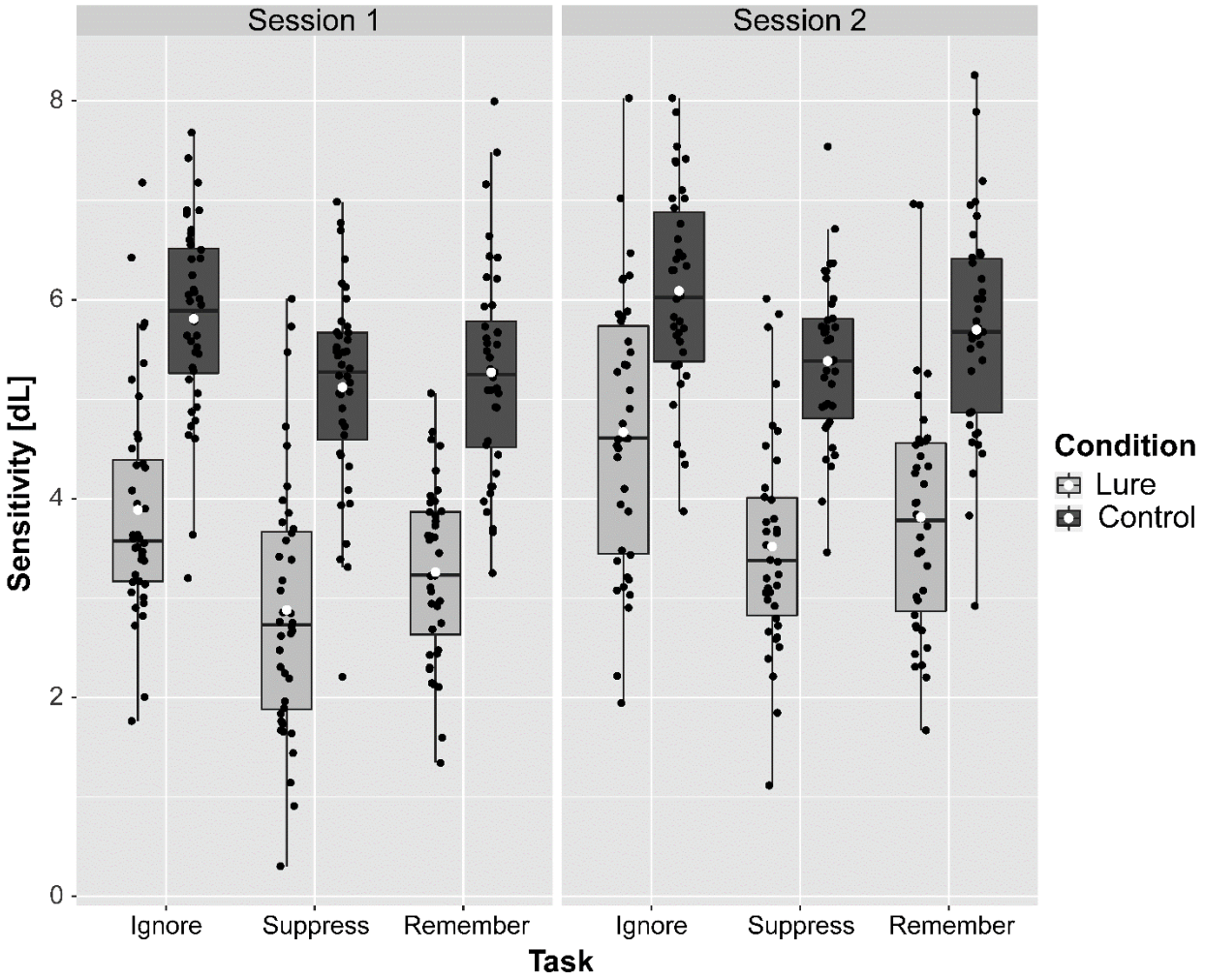

Figure S2. Box and whisker plots of response sensitivity [d_L] for each condition (Control, Lure) and task (Ignore, Suppress, Remember), separately plotted for each session. Plots were constructed using the geom-boxplot function in the ggplot2 package within R (Wickham, 2016). Dots represent individual participant data points (i.e., per-subject/condition means). White dots represent group means. Boxes represent first (Q1) and third (Q3) quartiles of the overall dataset. Horizontal black lines through the body of the box represent the median. Upper whiskers extend to Q3 + 1.5 * inter-quartile range (IQR), while lower whiskers extend to Q1 – 1.5*IQR.

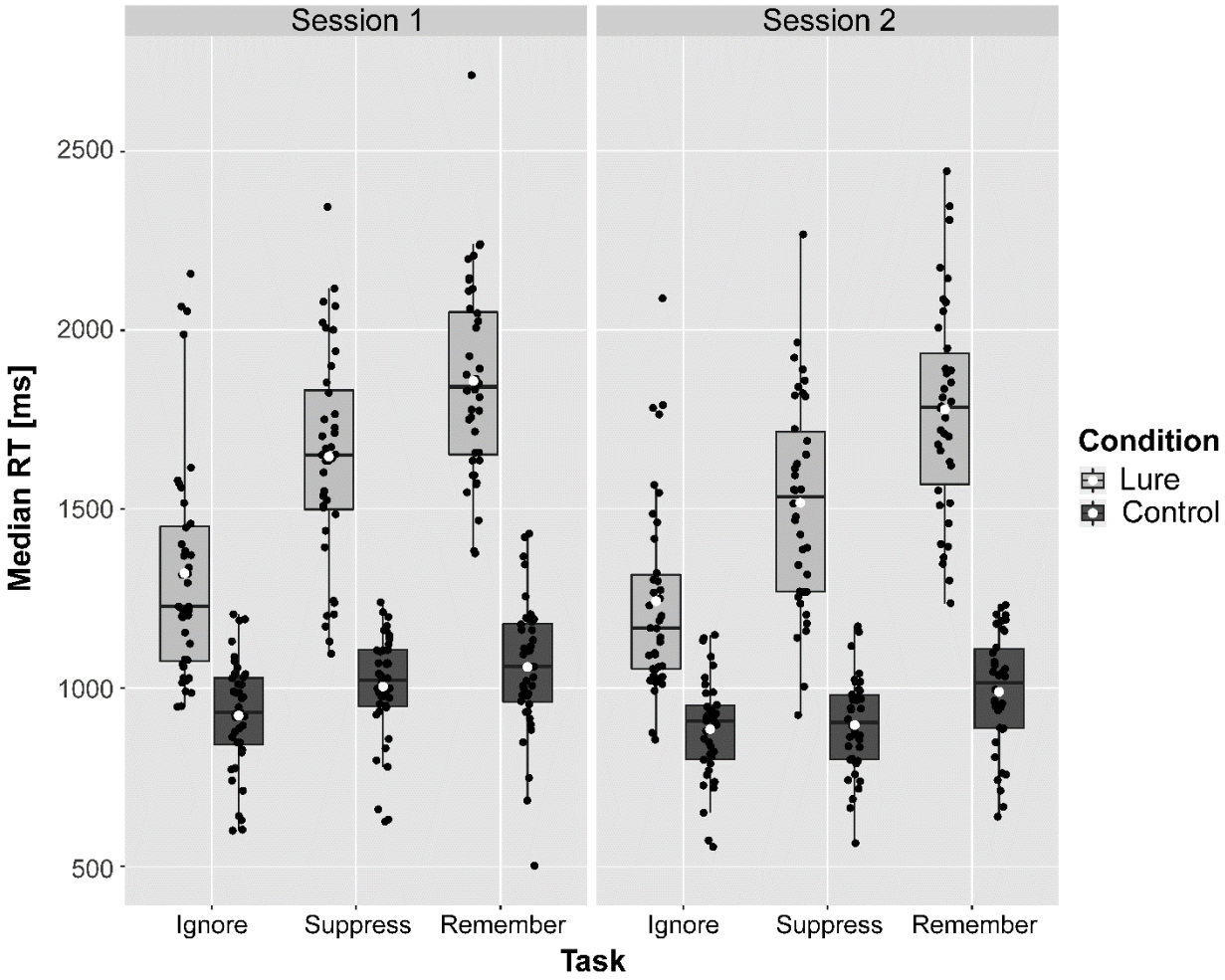

Figure S3. Box and whisker plots of median response latency [ms] as in Fig. S2.

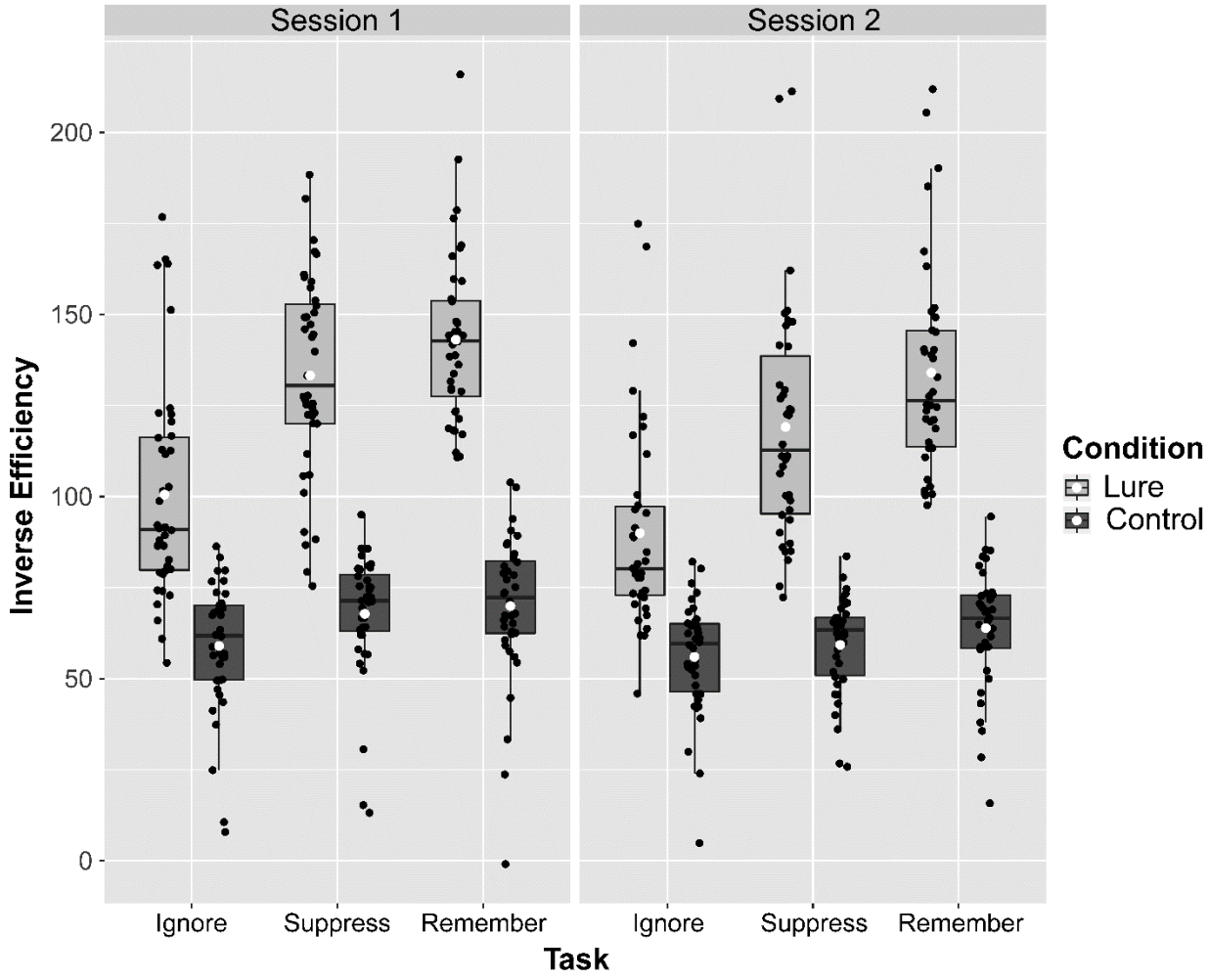

Figure S4. Box and whisker plots of inverse efficiency [ms / (d_L + 10)] as in Fig. S2.

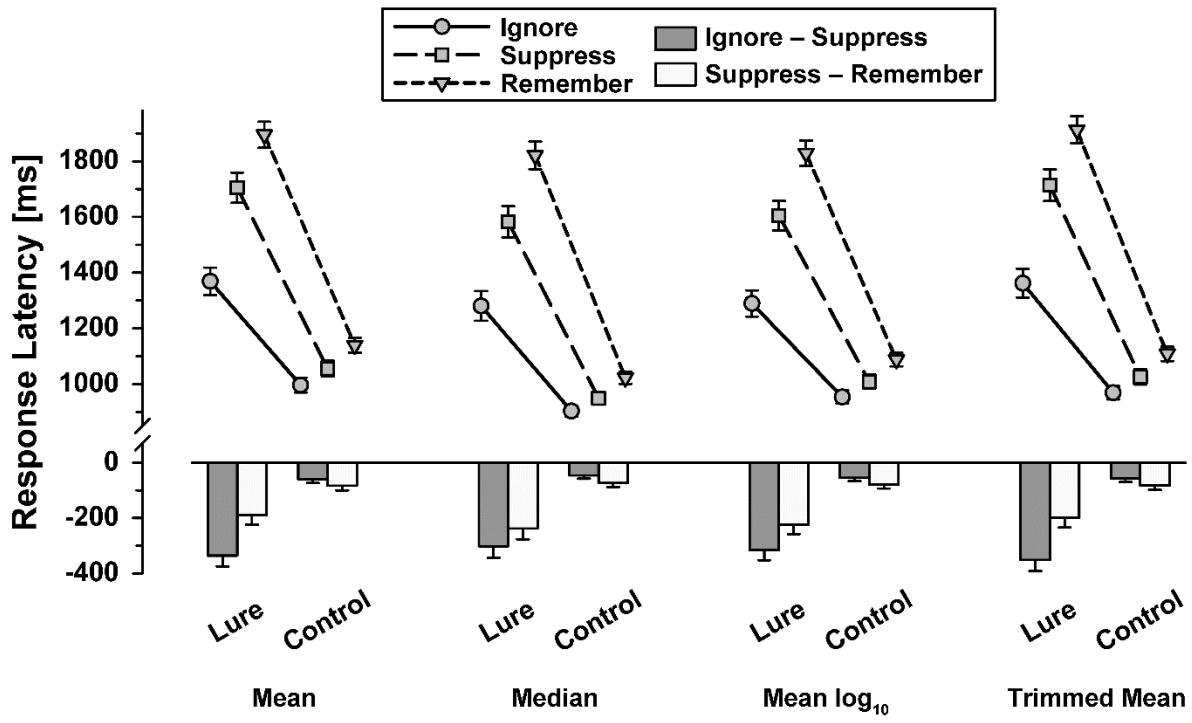

Figure S5. Mean (±SEM) response latency [ms] for four different data transformations: mean, median, mean log_{10} (back-transformed to ms), and trimmed mean (after discarding 10% at each end of the individual distribution). Data were pooled across session and are shown for each condition (Control, Lure) and task (Ignore, Suppress, Remember). Condition means (line graphs) are supplemented by mean difference scores (bar graphs) showing Ignore-minus-Suppress and Suppress-minus-Remember. Graphs depict raw data.

Supplement A

All sounds (.wav file format), graphic stimuli (.pcx file format), and Presentations® stimulation sequences and scripts (.sce, .pcl, .tem and .exp files) are available for download (archive *BRM_Kayser_etal_2019_Procedure.zip*; see text file *Readme.txt* included in archive for further documentation).

Supplement B

The R code syntax used for all mixed effect models and a spread sheet containing the behavioral data are available for download (archive BRM_Kayser_etal_2019_R.zip; see comments in R script for further documentation).