Supplemental Material

Between-Subject Analyses

We have conducted mixed 2x4 ANOVAs for each modality (within-subject factor: response condition, between-subject factor: experiment) which we did not include in the manuscript for the sake of brevity. The gist of this analysis is that the interaction of "response condition" x "experiment" is almost always significant, with the sole exception being error rates in the vocal modality.

Reaction times

Table 1: Manual modality

Effect	$\hat{\eta}_p^2$	F	df	df_{res}	p
Exp	.861	253.30	2	82	$< .001$
Cond	.007	0.54	1	82	.465
Exp $\times$ Cond	.175	8.71	2	82	$< .001$

Note. Exp=experiment, Cond=response condition.

Table 2: Vocal modality

Effect	$\hat{\eta}_p^2$	F	df	df_{res}	p
Exp	.851	234.74	2	82	$< .001$
Cond	.197	20.09	1	82	$< .001$
Exp $\times$ Cond	.072	3.17	2	82	.047

Note. Exp=experiment, Cond=response condition.

Error rates

Table 3: Manual modality

Effect	$\hat{\eta}_p^2$	F	df	df_{res}	p
Exp	.414	28.99	2	82	$<$ .001
Cond	.068	5.94	1	82	.017
Exp $\times$ Cond	.156	7.59	2	82	.001

Note. Exp=experiment, Cond=response condition.

Table 4: Vocal modality

Effect	$\hat{\eta}_p^2$	F	df	df_{res}	p
Exp	.672	84.05	2	82	$<$ .001
Cond	.031	2.59	1	82	.112
Exp $\times$ Cond	.062	2.71	2	82	.073

Note. Exp=experiment, Cond=response condition.