Supplementary Analysis: does the pattern in error rates hold across hand and foot response modalities?

The effects in Experiments 1 to 3, and supplementary Experiment A were driven more strongly by the trials requiring foot responses compared hand responses. Indeed, while the difference for foot response was significant for most experiments (see Table 3), too few errors were generally made for hand responses to demonstrate similar statistical differences. It is therefore crucial to verify our prediction that the effects are not just an unspecific effect on foot responses, but a general tendency to respond with the effector not used in mental practice, for both hand and foot responses. First, the consistency of results across experiments supports the presence of such a crossover interaction. In all experiments, error rates were reduced for foot as well as for hand responses when a different effector was used for mental practice. Second, and more importantly, this consistency was also supported statistically, when the data was pooled (and standardized) across Experiments 1 to 3, and supplementary Experiment A to increase power. Pairwise tests, ran separately for trials requiring hand responses and foot responses, revealed significant reductions of error rates when different body parts were used for mental practice and responding to the sounds for both foot responses ($t = 4.82$; $p < .001$) and hand responses ($t = 2.37$; $p = .020$). This verified that the negative compatibility effects indeed effect both response modalities: for both feet and hand responses, participants are more likely to utilize a different body part, when the required body part is already in use for mentally practicing the rhythms.

Table 3.

Significance tests for compatibility effects across Experiments 1 to 3 and when data is pooled across experiments, separately for trials requiring foot or hand responses.

	Foot responses		Hand responses	
Experiment	t	p	t	p
1 (from memory)	1.65	.112	1.00	.333
2 (immediate production)	2.71	.015	0.90	.380
3 (delayed production)	2.01	.062	1.46	.164
4 (imitation)	3.23	.003	1.33	.196
Pooled	4.82	.001	2.37	.020