

Action sound-shape congruencies explain sound symbolism

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Supplementary Material

TableS1: Mean ratings (M) and standard deviations (SD) obtained from a Likert scale (1-totally sharp; 7- totally round) for **a)** each action shape and for the sounds produced while drawing these shapes **b)** for each abstract sound symbolic shape **c)** and for the two pseudoword categories ('sharp' and 'round'). All ratings were administrated online.

Action shapes		Shape ratings (N=13)	Sound ratings (N=41)
a)		1.07±0.26	2.19±0.98
		1.15±0.36	2.09±1.04
		1±0	2.24±1.09
		1.15±0.36	2.51±0.86
		2.15±1.79	1.87±0.81
		6.69±0.46	5.60±1.33
		6.76±0.42	5.65±1.45
		6.53±0.63	4.80±1.69
		5.92±0.91	4.85±1.31



6.78±0.80

5.25±1.60

b)

Sound symbolic shapes Shape ratings (N=110)

	2.36±1.18
	2.31±1.53
	2.26±0.99
	1.58±1.01
	1.80±1.05
	1.62±0.93
	1.85±0.97
	1.49±1.04
	2.34±0.99
	2.40±1.14
	4.73±1.27
	4.79±1.15
	4.75±1.18
	4.93±1.18
	5.22±1.25
	5.68±1.00
	5.01±1.23
	6.09±1.00
	5.49±1.05

c)

Sharp	Round
kiki	nono
keke	nunu
sisi	momo
sese	mumu
fifi	lolo
fefe	lulu
zizi	dodo
zeze	dudu
pipi	gogo
pepe	gugu
(N=92) M=2.8±0.22	M=5.4±0.34

Table S2. One-tailed Steiger's z test (Steiger, 1980) was used to compare Spearman's correlation coefficients using the package cocor in R (Diedenhofen, 2016). Correlation pairs are depicted between the SoSy, Action and the Crossed conditions against the control Animal task. Steiger's Z scores are shown in the middle and p-values in the right column. P-values in bold were significant after controlling for multiple comparisons testing with Bonferroni correction (adjusted threshold $p=0.05/12=0.004$).

Correlation pairs	Steiger's Z	p-value
SoSyAction vs. SoSyAnimals	1.67	0.04
SosyAction vs. ActionAnimals	0.55	0.29
SoSyCrossed1 vs. Crossed1Animals	3.38	0.004
SoSyCrossed1 vs. SoSyAnimals	2.62	0.004
ActionCrossed1 vs. ActionAnimals	0.84	0.19
ActionCrossed1 vs. Crossed1Animals	2.74	0.003
SoSyCrossed2 vs. SoSyAnimals	1.94	0.02
SoSyCrossed2 vs. Crossed2Animals	0.92	0.17

Crossed1Crossed2 vs. Crossed1Animals	2.37	0.008
Crossed1Crossed2 vs. Crossed2Animals	0.69	0.24
ActionCrossed2 vs. ActionAnimals	3.40	0.0003
ActionCrossed2 vs. Crossed2Animals	3.6	0.0002