





Article: Hoffmann, J., Lenhard, A., Sebald, A., & Pfister, R. (2009). Movements or targets: What makes an action in action-effect learning? *Quarterly Journal of Experimental Psychology*, 62(12), 2433-2449. doi: 10.1080/17470210902922079

File list

Icon key:  = tab-delimited data;  = SPSS syntax

	Hoffmann_et_al_2009_Exp1_Aggr.dat	Data of Exp. 1
	Hoffmann_et_al_2009_Exp1_Syntax.sps	Syntax for Exp. 1
	Hoffmann_et_al_2009_Exp2_Raw.dat	Data of Exp. 2
	Hoffmann_et_al_2009_Exp2_Syntax.sps	Syntax for Exp. 2
	Hoffmann_et_al_2009_Exp3_Aggr.dat	Data of Exp. 3 (not reported in the article)

Experiment 1

For Experiment 1 the data are only available in an aggregated format. The critical variables in this summary file are described below.

exper	Always 1
vp	Subject number
gr	Group number
hand_key_mapping	1 = Constant, 2 = switched
lok	0 = incongruent effect-key mapping in the test phase, 1 = congruent mapping
mot	0 = incongruent effect-finger mapping in the test phase, 1 = congruent mapping
t1-t5	Mean response times in block 1-5 of the test phase
ft1-5	Mean error percentages in block 1-5 of the test phase

Experiment 2

Experiment	21 = Experiment 2a, 22 = Experiment 2b
Subject	Subject number
RE_Mapping	1 = Distant key triggers high tone, 2 = distant key triggers low tone
Block	1 = Demonstration trials for acquisition phase, 2-5 = acquisition blocks, 6 = demonstration trials for test phase, 7-8 = test phase
Part	1 = Acquisition phase, 2 = test phase
PartBlock	0 = Demonstration trials of either part (acquisition or test), 1+ = acquisition/test blocks
Trial	Continuous trial number
TargetSound	Sound that was played as the imperative stimulus in the test phase. -99 = No sound (acquisition phase), 0 = NoGo sound, 1 = low tone (400 Hz), 2 = high tone (800 Hz)
Resp	-99 = Anticipation, 1 = Key 1 (distant key), 2 = Key 2 (near key)
Consistency	Acquisition phase: -99 = anticipation error, 0 = normal response; Test phase: -99 = error/correct nogo, 0 = inconsistent choice, 2 = consistent choice. Importantly, consistency is coded in terms of keys, not in terms of fingers! The data of Experiment 2b therefore have to be recoded to replicate the results in the paper
RT	Response time in ms
RTTime	Response time timestamped relative to program start
Effect	0 = No effect, 1 = low tone, 2 = high tone (see TargetSound)
ErrType	0 = Correct, 1 = anticipation, 2 = error (during nogo)

Experiment 3

The original manuscript contained another potentially relevant experiment that was a direct replication of Experiment 1 but the two response keys were now placed closer together (7 cm inter-key distance instead of 25 cm). The experiment was eventually dropped during multiple rounds of reviews at Journal of Experimental Psychology: Human Perception and Performance, and we did not reintroduce the experiment when submitting to the Quarterly Journal of Experimental Psychology where the study was eventually published.

The data yielded a complete null effect (no evidence for action-effect learning) which we attributed to the decreased distinctiveness of the two responses. Aggregated data for this experiment are still available and can be assessed with the same syntax as the data of Experiment 1.

Due to the mentioned reviews, we also had to drop this nice illustration of the experimental setup:

