

Experiment 2 Output Main Analyses

using source(„analysis_Exp2.R“)

Clear workspace

Loading local-lib.R

Read data of Experiment 2 / Indirect Task: Experiment2_indirectTask.dat

Excluding trials with display timing errors:

Total no. trials: 8881

Timing error trials: 1

Excluding practice trials:

Total no. trials: 8880

Practice trials: 371

Excluding too fast/slow responses:

Total no. trials: 8509

Too early trials: 5

Too late trials: 22

Excluding trials with wrong response:

Total no. trials: 8482

Correct trials: 7680

Error trials: 802

Working on prime contrast: 0.3

Working on prime contrast: 0.7

Working on prime contrast: 1.4

Working on prime contrast: 2.9

Working on prime contrast: 4.9

Working on prime contrast: 7.8

Working on prime contrast: 11.6

Working on prime contrast: 16.4

Perform ezANOVA on RTs with congruency and prime contrast

...number of participants, indirect task: 20

Head of aggregated results per participant and prime contrast,
indirect task:

	part	primecontrast	conN	inconN	conRTmean	inconRTmean	conRTsd	inconRTsd	RTdiff	dprime
1	1	0.3	24	24	459.9040	439.1699	94.82878	78.34571	-20.7341250	-0.4208568
2	2	0.3	24	24	484.1576	491.1696	89.00354	86.59179	7.0119833	0.0000000
3	3	0.3	24	24	437.5072	434.4027	66.83503	61.81165	-3.1044917	0.0000000
4	4	0.3	24	24	463.5938	462.9019	63.45193	72.16926	-0.6919833	-0.2092669
5	5	0.3	24	24	509.2421	476.4389	92.49705	79.14627	-32.8032667	-0.4208568
6	6	0.3	24	24	375.7336	368.0672	70.24190	79.39396	-7.6664083	0.2092669

RT-difference betw. congruent and incongruent conditions at 4.9 cd/m²:

Mean RTcongruent: 429.21 ms

Mean RTincongruent: 441.94 ms

Mean of RTdiff: 12.733 ms

SD of RTdiff: 16.434 ms

SEM of RTdiff: 3.6747 ms

t-test of RTdiff against zero: t(19) = 3.4651 p = 0.0025926

Results ezANOVA with contrast and congruency (indirect task):

main effect of congruency: F(1,19) = 57.663 p = 3.6035e-07

interaction effect congruency*contrast F(1,19) = 21.667 p = 0.00017267

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Sensitivity dprime (indirect task) at 4.9 cd/m²:

Mean dprime: 0.17917
SD dprime: 0.24955
SEM dprime: 0.055802
t-test dprime against 0: t(19) = 3.2109 p = 0.0046007

Read data of Experiment 2 / Direct Task: Experiment2_directTask.dat

Excluding trials with display timing errors:

Total no. trials: 8921
Timing error trials: 0

Excluding practice trials:

Total no. trials: 8921
Practice trials: 336

Excluding too fast/slow responses:

Total no. trials: 8585
Too early trials: 8
Too late trials: 1

Working on prime contrast: 0.3
Working on prime contrast: 0.7
Working on prime contrast: 1.4
Working on prime contrast: 2.9
Working on prime contrast: 4.9
Working on prime contrast: 7.8
Working on prime contrast: 11.6
Working on prime contrast: 16.4
...number of participants, direct task: 20

Head of aggregated results per participant and prime contrast, direct task:

part PrimeContrast Ntrials PCorr dprime
1 1 0.3 48 39.58333 -0.5353608
2 2 0.3 48 58.33333 0.4438888
3 3 0.3 48 52.08333 0.1082110
4 4 0.3 48 47.91667 -0.1120879
5 5 0.3 48 39.58333 -0.5290678
6 6 0.3 48 56.25000 0.3558504

Percent-correct (direct task) at 2.9 cd/m²:

Mean PCorr: 60.859
SD of PCorr: 7.8522
SEM of PCorr: 1.7558
t-test of PCorr against chance t(19) = 6.1848 p = 6.0781e-06

sensitivity dprime (direct task) at 2.9 cd/m²:

Mean dprime: 0.59076
SD of dprime: 0.42719
SEM of dprime: 0.095523
t-test of dprime against zero t(19) = 6.1845 p = 6.0831e-06

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Perform sensitivity analysis comparing both tasks(ITA check) at 4.9 cd/m² :

difference in dprime (indirect-direct) at 4.9 cd/m²:

Mean of	dprime	indirect task:	0.17917	
Mean of	dprime	direct task:	1.1458	
SD of	dprime	indirect task:	0.24955	
SD of	dprime	direct task:	0.46963	
mean of	dprimeDiff	(indirect-direct):	-0.96662	
SEM of	dprimeDiff	indirect-direct:	0.12484	
t-test of	dprimeDiff	against zero	t(19) = 6.1845	p = 6.0831e-06
