

Results : Sensitivity (d-prime) (corrected: 05.09.22)

Repeated Measures ANOVA

Within Subjects Effects

	Sum of Squares	df	Mean Square	F	p	η^2_p
Probe Type	0.0235	1	0.0235	0.0303	0.864	0.002
Probe Type * YesKey	0.5251	1	0.5251	0.6759	0.421	0.034
Residual	14.7599	19	0.7768			
Compatibility	75.1080	1	75.1080	90.3579	< .001	0.826
Compatibility * YesKey	0.5946	1	0.5946	0.7153	0.408	0.036
Residual	15.7933	19	0.8312			
Presentation Time	76.3404	5	15.2681	54.0781	< .001	0.740
Presentation Time * YesKey	2.0348	5	0.4070	1.4414	0.217	0.071
Residual	26.8217	95	0.2823			
Probe Type * Compatibility	64.7497	1	64.7497	88.2133	< .001	0.823
Probe Type * Compatibility * YesKey	0.0131	1	0.0131	0.0179	0.895	0.001
Residual	13.9462	19	0.7340			
Probe Type * Presentation Time	6.8393	5	1.3679	3.3666	0.008	0.151
Probe Type * Presentation Time * YesKey	2.1348	5	0.4270	1.0508	0.393	0.052
Residual	38.5988	95	0.4063			
Compatibility * Presentation Time	24.2632	5	4.8526	12.8629	< .001	0.404
Compatibility * Presentation Time * YesKey	0.3158	5	0.0632	0.1674	0.974	0.009
Residual	35.8395	95	0.3773			
Probe Type * Compatibility * Presentation Time	11.9651	5	2.3930	6.4409	< .001	0.253
Probe Type * Compatibility * Presentation Time * YesKey	1.2894	5	0.2579	0.6941	0.629	0.035
Residual	35.2962	95	0.3715			

Note. Type 3 Sums of Squares

[3]

Between Subjects Effects

	Sum of Squares	df	Mean Square	F	p	η^2_p
YesKey	3.08	1	3.08	1.14	0.300	0.056
Residual	51.46	19	2.71			

Note. Type 3 Sums of Squares

Assumptions

Tests of Sphericity

	Mauchly's W	p	Greenhouse-Geisser ϵ	Huynh-Feldt ϵ
Probe Type	1.000	NaN ^a	1.000	1.000
Compatibility	1.000	NaN ^a	1.000	1.000
Presentation Time	0.593	0.837	0.820	1.000
Probe Type * Compatibility	1.000	NaN ^a	1.000	1.000
Probe Type * Presentation Time	0.519	0.674	0.816	1.000
Compatibility * Presentation Time	0.368	0.257	0.782	1.000
Probe Type * Compatibility * Presentation Time	0.507	0.642	0.775	0.999

^a The repeated measures has only two levels. The assumption of sphericity is always met when the repeated measures has only two levels.

Repeated Measures ANOVA

Action probes

Within Subjects Effects

	Sum of Squares	df	Mean Square	F	p	η^2_p
Presentation Time	59.116	5	11.823	30.916	< .001	0.619
Presentation Time * YesKey	2.477	5	0.495	1.295	0.273	0.064
Residual	36.331	95	0.382			
Compatibility	0.192	1	0.192	1.480	0.239	0.072
Compatibility * YesKey	0.216	1	0.216	1.661	0.213	0.080
Residual	2.466	19	0.130			
Presentation Time * Compatibility	3.306	5	0.661	1.827	0.115	0.088
Presentation Time * Compatibility * YesKey	1.341	5	0.268	0.741	0.594	0.038
Residual	34.374	95	0.362			

Note. Type 3 Sums of Squares

[3]

Between Subjects Effects

	Sum of Squares	df	Mean Square	F	p	η^2_p
YesKey	3.07	1	3.07	1.65	0.215	0.080
Residual	35.44	19	1.87			

Note. Type 3 Sums of Squares

Repeated Measures ANOVA

Scene probes

Within Subjects Effects

	Sum of Squares	df	Mean Square	F	p	η^2_p
Presentation Time	24.063	5	4.8127	15.717	< .001	0.453
Presentation Time * YesKey	1.693	5	0.3386	1.106	0.363	0.055
Residual	29.090	95	0.3062			
Compatibility	139.666	1	139.6656	97.298	< .001	0.837
Compatibility * YesKey	0.392	1	0.3921	0.273	0.607	0.014
Residual	27.273	19	1.4354			
Presentation Time * Compatibility	32.923	5	6.5845	17.016	< .001	0.472
Presentation Time * Compatibility * YesKey	0.264	5	0.0528	0.136	0.983	0.007
Residual	36.762	95	0.3870			

Note. Type 3 Sums of Squares

[3]

Between Subjects Effects

	Sum of Squares	df	Mean Square	F	p	η^2_p
YesKey	0.531	1	0.531	0.328	0.574	0.017
Residual	30.782	19	1.620			

Note. Type 3 Sums of Squares

Repeated Measures ANOVA

Scene probes : Congruent

Within Subjects Effects

	Sum of Squares	df	Mean Square	F	p	η^2_p
Presentation Time	55.2	5	11.050	39.1	< .001	0.661
Residual	28.3	100	0.283			

Note. Type 3 Sums of Squares

[3]

Between Subjects Effects

	Sum of Squares	df	Mean Square	F	p	η^2_p
Residual	29.4	20	1.47			

Note. Type 3 Sums of Squares

Repeated Measures ANOVA

Scene probes : Incongruent

Within Subjects Effects

	Sum of Squares	df	Mean Square	F	p	η^2_p
Presentation Time	1.85	5	0.370	0.937	0.461	0.045
Residual	39.52	100	0.395			

Note. Type 3 Sums of Squares

[3]

Between Subjects Effects

	Sum of Squares	df	Mean Square	F	p	η^2_p
Residual	29.6	20	1.48			

Note. Type 3 Sums of Squares

Post Hoc Tests

Post Hoc Comparisons - Presentation Time

Comparison						
Presentation Time	Presentation Time	Mean Difference	SE	df	t	
33	- 50	-0.1109	0.158	20.0	-0.702	
	- 66	-0.1433	0.215	20.0	-0.667	
	- 83	-0.0648	0.217	20.0	-0.298	
	- 100	0.0975	0.187	20.0	0.521	
	- 133	0.2041	0.209	20.0	0.977	
50	- 66	-0.0324	0.154	20.0	-0.210	
	- 83	0.0461	0.214	20.0	0.215	
	- 100	0.2084	0.223	20.0	0.935	
	- 133	0.3150	0.220	20.0	1.430	
66	- 83	0.0786	0.182	20.0	0.431	
	- 100	0.2409	0.190	20.0	1.267	
	- 133	0.3474	0.166	20.0	2.091	
83	- 100	0.1623	0.200	20.0	0.811	
	- 133	0.2689	0.170	20.0	1.579	
100	- 133	0.1066	0.183	20.0	0.582	

[4]

References

- [1] The jamovi project (2022). *jamovi*. (Version 2.3) [Computer Software]. Retrieved from <https://www.jamovi.org>.
- [2] R Core Team (2021). *R: A Language and environment for statistical computing*. (Version 4.1) [Computer software]. Retrieved from <https://cran.r-project.org>. (R packages retrieved from MRAN snapshot 2022-01-01).
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- [4] Lenth, R. (2020). *emmeans: Estimated Marginal Means, aka Least-Squares Means*. [R package]. Retrieved from <https://cran.r-project.org/package=emmeans>.