

The First Position Effect: Strength and Determinants

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Quantifying the 1PoE

The first position effect (1PoE) is known as an order effect in sequential-monadic CLT: Liking of the first sample per session often is higher than on else positions. However, the 1PoE's strength and determinants of its emergence are yet unknown. Some scholars believe it to be rooted in weak expectations, i.e., an unclear frame of reference. In consequence the first judgement can be symmetrically biased, sometimes gaining higher, sometimes lower scores than later judgements. Others admit the effect's direction: "The first is the best" (Carney & Banaji, 2012) even if they are all the same (Mantonakis et al. 2009). A meta-analytically derived effect size of the 1PoE across CLT projects should remove this traces of doubt.

H1: $1PoE_{CLT} > 0$

Problems	What To Do
Sample on the first position per session receives a higher liking.	For sample means: randomize presentation order or parallelize it by a design across respondents.
Monadic assessments result in higher means than sequential-monadic assessments.	Specify benchmarks depending on the assessment approach (e.g., 6.5 vs. 6,0 for a "good sample's" OL).
Means from first position and hence in monadic assessments suffer from lower differentiation.	Where differentiation is critical (e.g., in blinded taste projects), chose the sequential approach.
A segmentation based on likings is biased by artificial enhancement of the first position.	Exclude the first position (i.e., insert a dummy sample), or model the 1PoE and adjust the data (Hottenstein et al. 2008; Lee & Meullenet, 2010).

Theory: contrasting two explanations

Social Psychology Perspective explains 1PoE with test anxiety reduction. Hence, experience should reduce 1PoE.

H2.1: 1PoE decline over multiple sessions.

H2.2: 1PoE decline, the more experienced the respondents.

Physiology Perspective explains 1PoE with breaking of sensorial rest and/or palate desensitization (e.g., Dean, 1980). Null results for H2.1 and H2.2, a 1PoE also in trained panels (Descriptive Analysis), and higher likings for the first sample per category in multi-category sessions are predicted.

H2.3: $1PoE_{DA_intensity} > 0$

H2.4: First > else position per category .

Meta-analytical effect sizes:

• **1PoE:** d_w = the within-respondents decline of OL comparing the first with the average of else positions divided by SD_{Δ} . In multi-session projects d_w per session are averaged. $d_w \geq .20$ small, $d_w \geq .50$ medium effect size.

• **1PoE x Session:** The correlation of 1PoE across sessions was estimated by $\pm\sqrt{(\eta^2)}$ of the linear contrast for the sessions x first/else position interaction in repeated measures anova. $r \geq .10$ small, $r \geq .30$ medium effect size.

• **1PoE for respondents with first vs. repeated participation:**

d_w separately computed for both respondent subgroups for a projects' first session were compared by a paired data t-test.

Small but robust positive 1PoE

$d_w = .250$ (se .020; 80 CLT)

H1 accepted.

1PoE does not decline over multiple sessions

$r = .019$ (se .032; 21 multisession CLT).

H2.1 not accepted.

1PoE does not decline for experienced participants

$d_w = .020$ (se .040; 39 CLT, 1th session, both respondent groups)

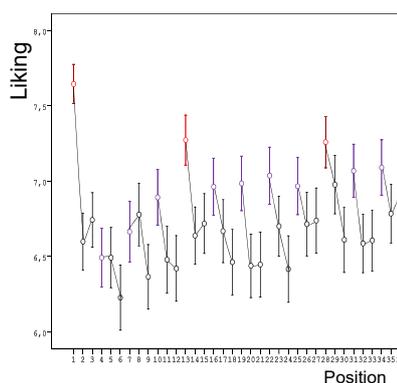
H2.2 not accepted.

1PoE also emerged in trained descriptive panels

$d_w = .107$ (se .043; 20 projects overall intensity)

H2.3 accepted.

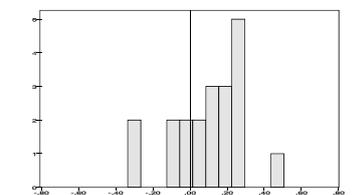
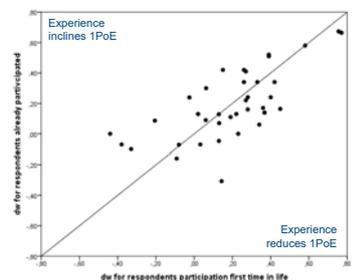
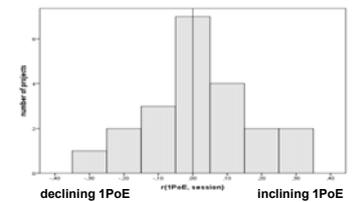
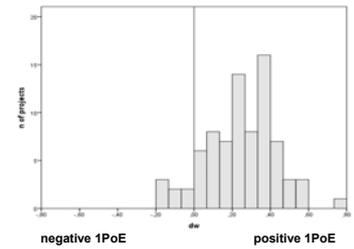
Category change evokes intensity peaks. H2.4 accepted.



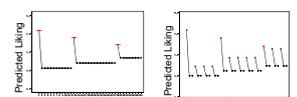
CLT (n=500): 36 samples (12 categories x 3 variants); 3 sessions. First position per session: $d_w +.42$, 1PoE trend: $r = -.266$.

Conclusion

- In CLT the 1PoE should not be ignored (especially for segmentation).
- Experience does not reduce the 1PoE!
- The 1PoE seem to result from physiological processes.



modeled as single-category multiple-category



Source of DV: Liking	Coefficient	se	t	p
Constant	6.697	0.02	381.81	.001
First_per_session (0/1)	.695	0.06	11.40	.001
Session_c (centered: -1,0,1)	.140	0.02	6.14	.001
First_per_session * Session_c	-.333	0.08	-4.44	.001

Source of DV: Liking	Coefficient	se	t	p
Constant	6.613	0.02	323.76	.001
First_per_session (0/1)	.462	0.07	6.85	.001
Session_c (centered: -1,0,1)	.117	0.03	4.42	.001
First_per_session * Session_c	-.401	0.09	-4.73	.001
First_per_category (0/1)	.316	0.04	7.97	.001
First_per_category * Session_c	+.091	0.05	1.73	.083

References: Carney DR, Banaji MR (2012) First is Best. *PLoS ONE* 7(6): e35088. doi:10.1371/journal.pone.0035088

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