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Giacalone, Davide; Bredie, Wender Laurentius Petrus; Frøst, Michael Bom

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[P8.15]

**Stimulus collative properties in food products and their importance for consumer liking:  
A case study with novel beers**

D. Giacalone\*, W.L.P. Bredie, M.B. Frøst  
*University of Copenhagen, Denmark*

**Introduction**

There is a dilemma between liking for familiar stimuli and a wish to experiment with new ones. Berlyne's theory on aesthetic preference<sup>1</sup>, predicts that to maximize sensory appreciation, a (food) product should aim at optimizing the balance between familiarity and novelty.

**Methods**

Eight beers were tested by a consumer panel (N=135), for which relevant consumer characteristics – namely product knowledge, food neophobia and variety seeking tendency – were known. Consumers evaluated liking and three collative properties: novelty, familiarity and complexity.

**Results**

A multiple linear regression model was carried out to analyze effects of the three collative properties on liking (Adj.  $R^2 = .4$ ,  $F_{(3, 1076)} = 239.66$ ,  $p < .001$ ). All properties significantly positively predicted liking, with complexity ( $b = .47$ ,  $t_{(1076)} = 14.67$ ,  $p < .001$ ) and familiarity ( $b = .39$ ,  $t_{(1076)} = 15.06$ ,  $p < .001$ ) being the strongest regressors, followed by novelty ( $b = .27$ ,  $t_{(1076)} = 8.23$ ,  $p < .001$ ). Non-linear relationships were assessed by computing smoothing points using locally weighted polynomial regression<sup>2</sup>. Berlyne's predicted trajectory (inverse U-shaped) described most accurately the relationship between novelty and liking (Figure 1a), whereas the relationships between liking and the two other collative properties is linear and monotonic (Figure 1b+c).

ANOVA was performed using consumer traits as main effects. High variety seeking consumers gave significantly higher overall liking ( $p = .008$ ). Consumers with higher product knowledge rated the beers significantly more familiar ( $p = .02$ ), less novel ( $p = .03$ ) and less complex ( $p < .001$ ). No significant effects of degree of neophobia were observed.

**Conclusion**

Taken overall, our results confirm that liking is indeed a result from a combination of novelty, familiarity and complexity. Furthermore, we expand prior work on collative properties in a food context, by showing that several different consumer variables need to be taken into consideration for predicting consumer liking.

**References:**

<sup>1</sup> Berlyne, D. E. (1970). Novelty, complexity and hedonic value. *Perception and Psychophysics*, 8, 279-286.

<sup>2</sup> Cleveland, W. S. (1979). Robust Locally Weighted Regression and Smoothing Scatterplots. *Journal of the American Statistical Association*, 74, 829-836.

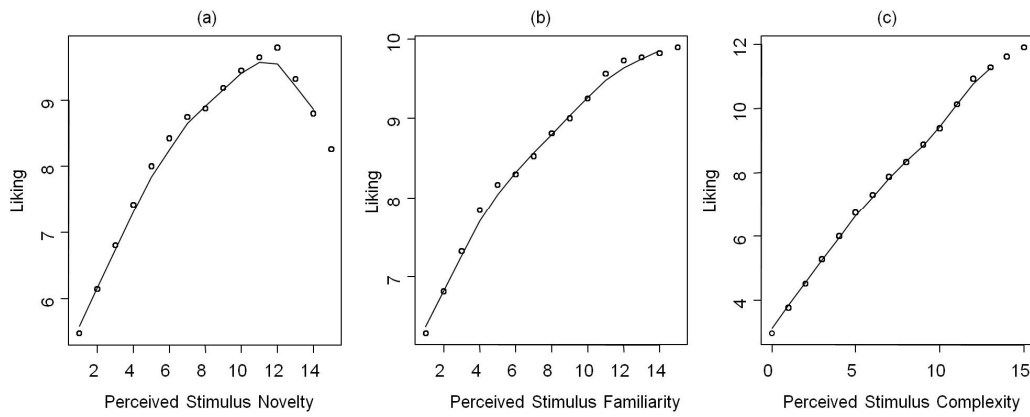


Fig. 1 – Robust smoothed values of novelty (a), familiarity (b) and complexity (c) against liking.

Keywords: Product experience, Arousal theory, Novelty, Consumer psychographics