Measuring implicit associations in sensory research? An exploratory study with the aid of the Single Category Implicit Association Test (SC-IAT)

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Abstract:
When we want to know people's attitudes towards sensory features of a product, we ask test persons to report them, usually by selecting one of several response alternatives or by marking a rating scale. But we are also aware of the fact that respondents may be unwilling or unable to report their opinion, consequently we get biased results. The development of implicit measures has generated much of attention in social psychology and lately in marketing or neuromarketing. Above that it is important to know on which strings to pull to deliver a specific message about a product. Besides advertising, branding, graphic design or packaging – sensory features carry explicit but mainly implicit meanings of which to identify could be a useful convenience. Therefore the aim of this study is to measure implicit associations of sensory features.

Primary source was an unpublished study of 2007 where, by using direct measurements and PLS regressions, sensory product qualities of cereal bars were related to affected images and associations of consumers.

By using a response time based and indirect measurement – the *Single Category Implicit Association Test (SC-IAT)* – it was tested if the sensory features of two cereal bars have an impact of the implicit associations. To be specific: if a cereal bar which was perceived by the descriptive panel as slightly sweet, rather hard, dry and with a strong cereal taste and odor is regarded by subjects as "healthy" and if a second cereal bar which was rated as sweet, crunchy, with a fluffy consistency and a chocolate taste is associated with "treat".

The empirical part was carried out on a 2 (cereal bar) x 2 (implicit association) within-subject design. To ensure that all 140 participants preserved a difference between both cereal bars in a first step general acceptance data was gathered. During the SC-IAT the time a subject needed to response to e.g. "cereal bar vs. healthy" or "treat" was measured. When instructions oblige highly associated categories to share a response key, performance is faster than when less associated categories share one key.

Comparing response times of the respectively first cereal bar we found an effect of sensory features ($F(1,138)=2,98$; $p=.086$) concluding that implicit associations are related to sensory codes.