

Measuring Food Induced Emotions with Different Groups of Observers



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Introduction

Science of sensory analysis differentiates between two groups of people: expert sensory assessors and untrained consumers. In contrast to sensory research the level of experience of the panelists has not been considered in studies about food induced emotions up to now. The question arises if the measurement of food induced emotions is affected by the level of training.

Method

The power to discriminate sensorially similar product pairs was compared by three different panels.

- Untrained consumers (n=62)**
 - sensory laboratory of the ttz Bremerhaven
 - no experience in the examination of food induced emotions
- Sensory experts (n=14)**
 - sensory laboratory of the ttz Bremerhaven
 - no experience in the examination of food induced emotions
- Trained in the observation of food induced emotions (n=11)**
 - conducted at the Forschungsring in a natural setting.
 - trained at least ten times

The panellists analysed the emotional response using the questionnaire “EmphaticFoodTest” (Geier et al. 2016).

Polar items of the “EmphaticFoodTest” assigned to the corresponding scale

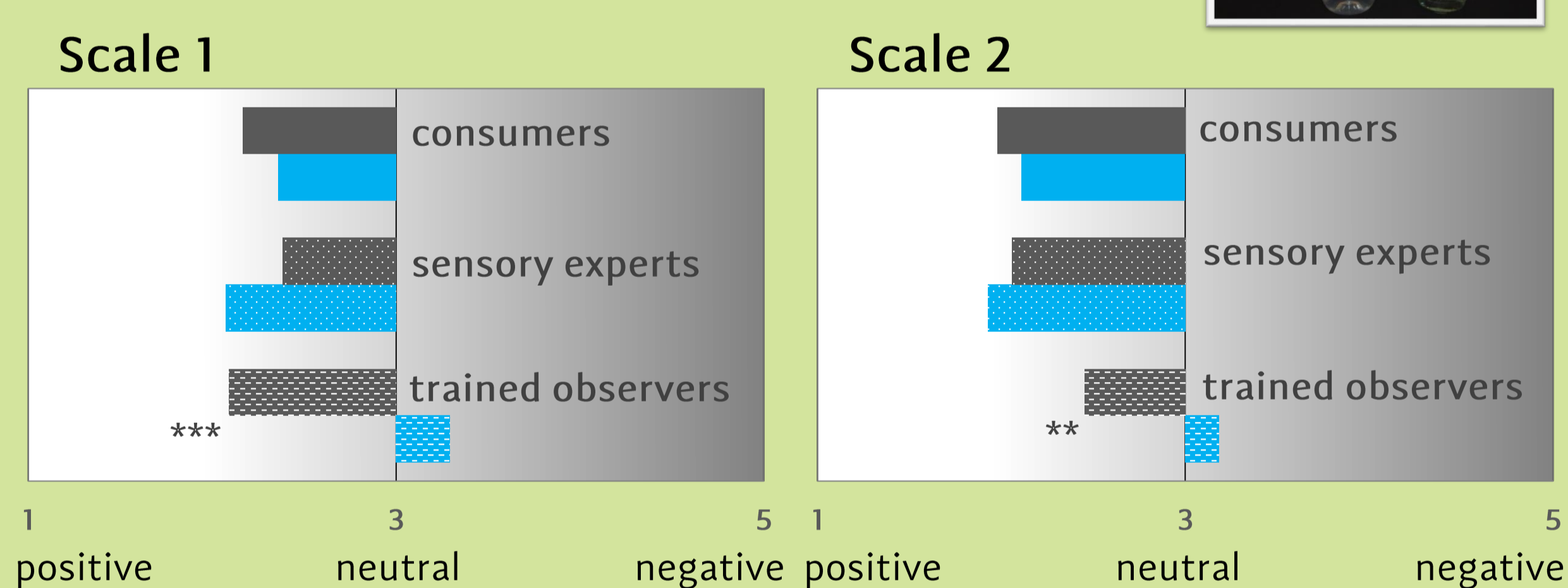
Scale 1		Scale 2	
rather emotional items		rather mentally/bodily items	
relaxed	- nervous	light	- heavy
comforted	- unwell	fresh	- exhausted
satisfied	- unsatisfied	energized	- not energized
balanced	- unbalanced	awake	- tired
bright	- dark	concentrated	- not concentrated

Results

The untrained consumers found few and the sensory experts no differences between the analyzed food pairs. The trained observers were able to differentiate almost all food samples in all attributes.

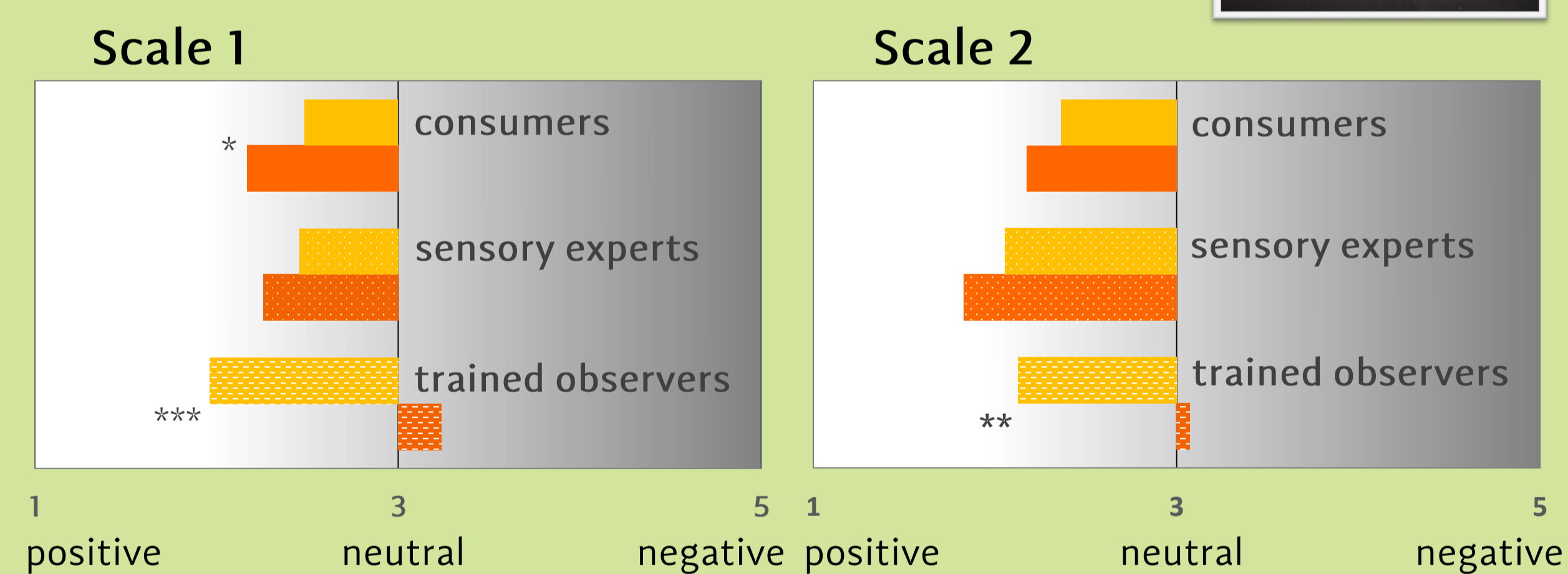
Natural mineral water

- 1.5 l mineral water plastic bottle
- 0.75 l mineral water glass bottle



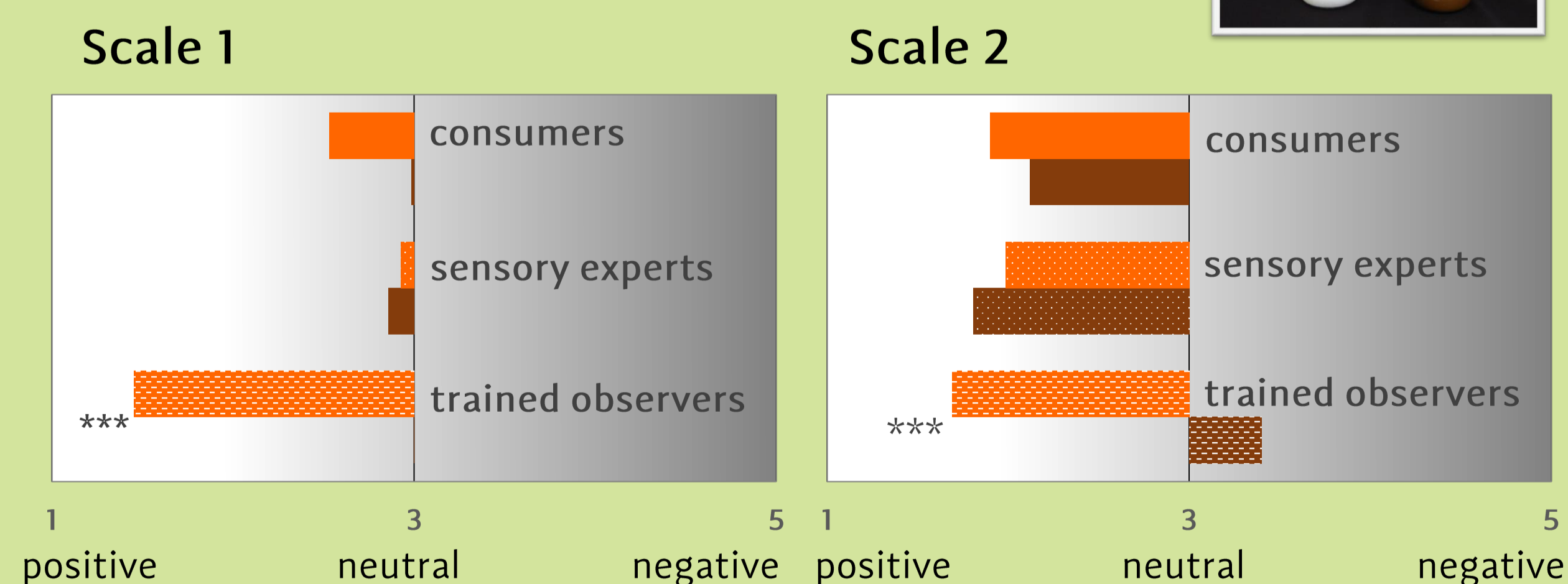
Bread same recipe

- Organic whole wheat flour, variety Goldblume
- Organic whole wheat flour, variety Naturastar



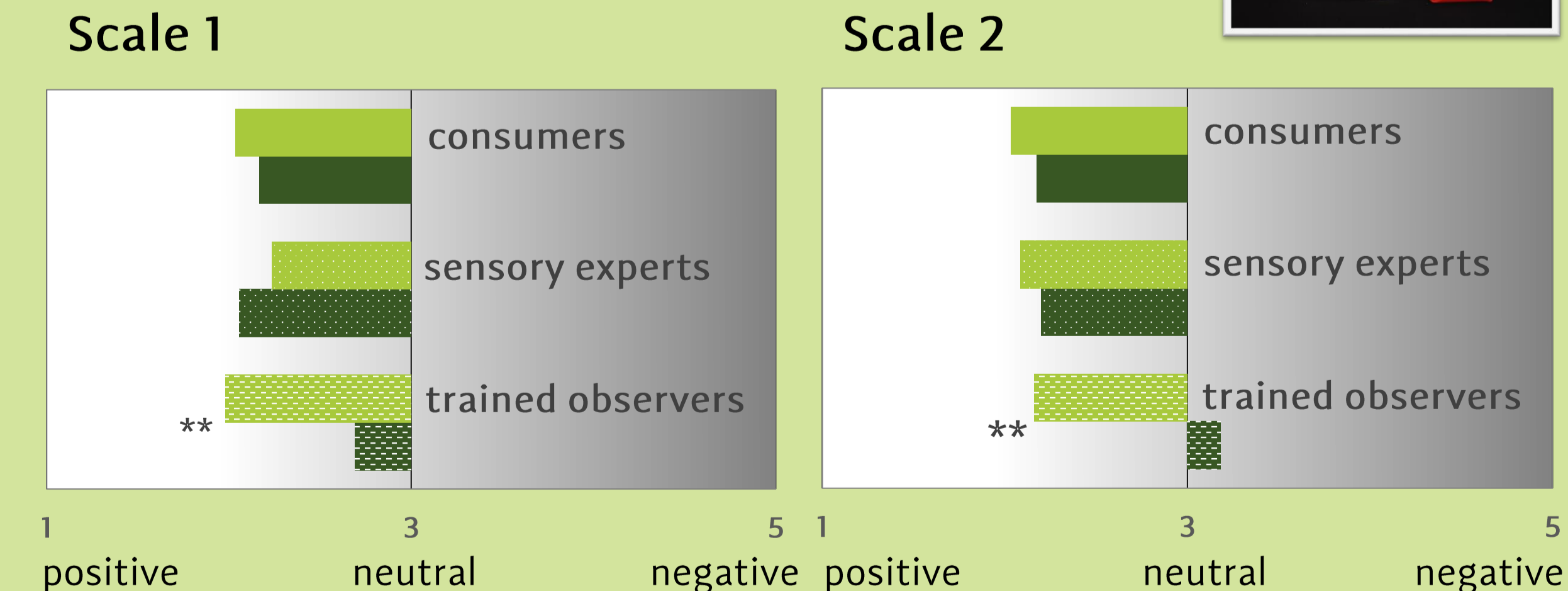
Cow milk

- Organic milk, pasteurized, non homogenized
- Conventional milk, ESL (extended shelf life)



White, crystal sugar

- From sugar cane, Brazil
- From sugar beet, Germany



Analysis of variance: * = p < 0.05 ** = p < 0.01 *** = p < 0.001

Conclusions

The three groups of observers are different in the power to discriminate similar food samples using food induced emotions.

Further research has to clarify how the distinction between the panels with different backgrounds can be explained. Furthermore it has to be proved if the observation of food induced emotions can be improved by training.

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References
 Geier, U., Büssing, A., Kruse, P., Greiner, R., Buchecker, K. 2016 Development and application of a test for food induced emotions. PlosOne. Submitted.