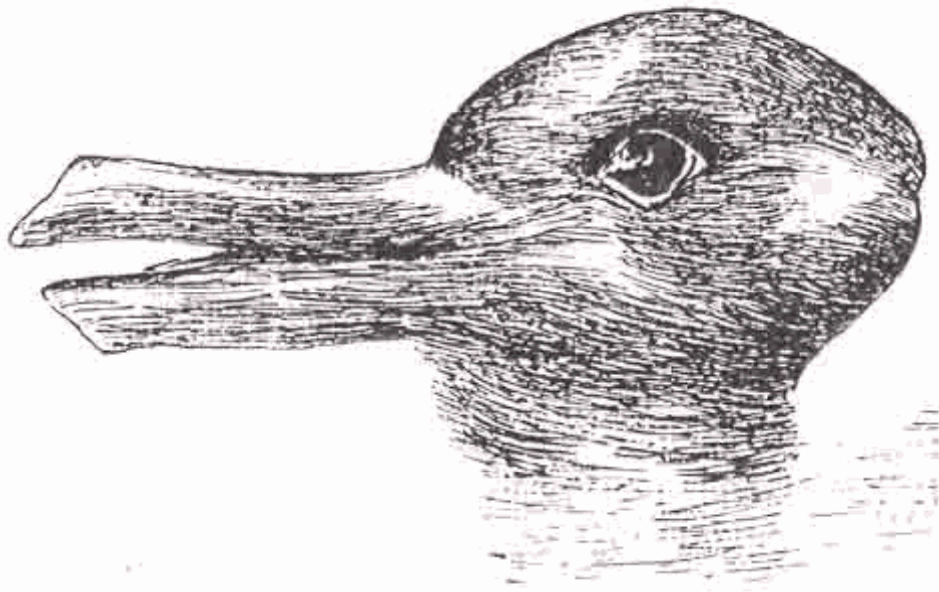


Consumer perception of meat from boar pigs as affected by labeling and malodorous compounds

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Perception is reality!



(Jastrow, 1899)

“**The quality of an experience** is jointly determined by...

... **bottom-up processes**, which reflect **characteristics of the stimulus** impinging on the perceiver’s sensory organs, and

... **top-down processes**, which reflect the perceiver’s **beliefs, desires, and expectations.**”

(Lee et al. 2006, Psychological Science)

Research question: *What matters more?*

Does labelling effect the consumer acceptance of loin chops?

- label: ***top-down effect***
- actual meat type: ***bottom-up effect***

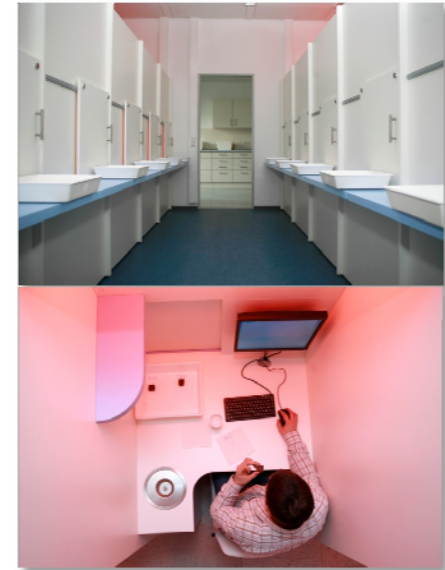
Related Studies

- impact of label organic. free-range conventional and no label (Scholderer et al. 2004)
- free-range vs. regular pork. awareness and experience (Oude-Ophuis 1994)

Consumer study

- n = 145

 53.1 %  46.9 %



- central test location: sensory lab
- hedonic evaluation of loins: 1 = like extremely ...9 = dislike extremely

overall liking, tenderness, juiciness, taste

- 2 x 2 factorial (meat type x label)
- balanced sample order

Meat samples

- label: „**pork**“ vs. „**young boar**“ given prior to the samples
- 4 samples / consumer
- loins selected for AS:
 - Androstenone: 0.5 up to 2.5 $\mu\text{g/g}$ melted fat (GC-MS)
 - Skatole: $< 0.2 \mu\text{g/g}$ melted fat (HPLC)
 - control meat gilts/castrates



Sample preparation



- loin chops 1.5 cm thickness
max. 1 mm fat cover
- convection oven cooking
210 °C hot steam
20 % humidity
8 minutes
- core temperature ~ 68°C
- 0.4 g salt per 125 g meat



Analysis of variance

$$y_{ijklm} = \mu + M_i + L_j + M^*L_{ij} + A_k + G_l + e_{ijklm}$$

M_i = fixed effect of **meat type** (j = control. boar)

L_j = fixed effect of **label** (k = pork. young boar)

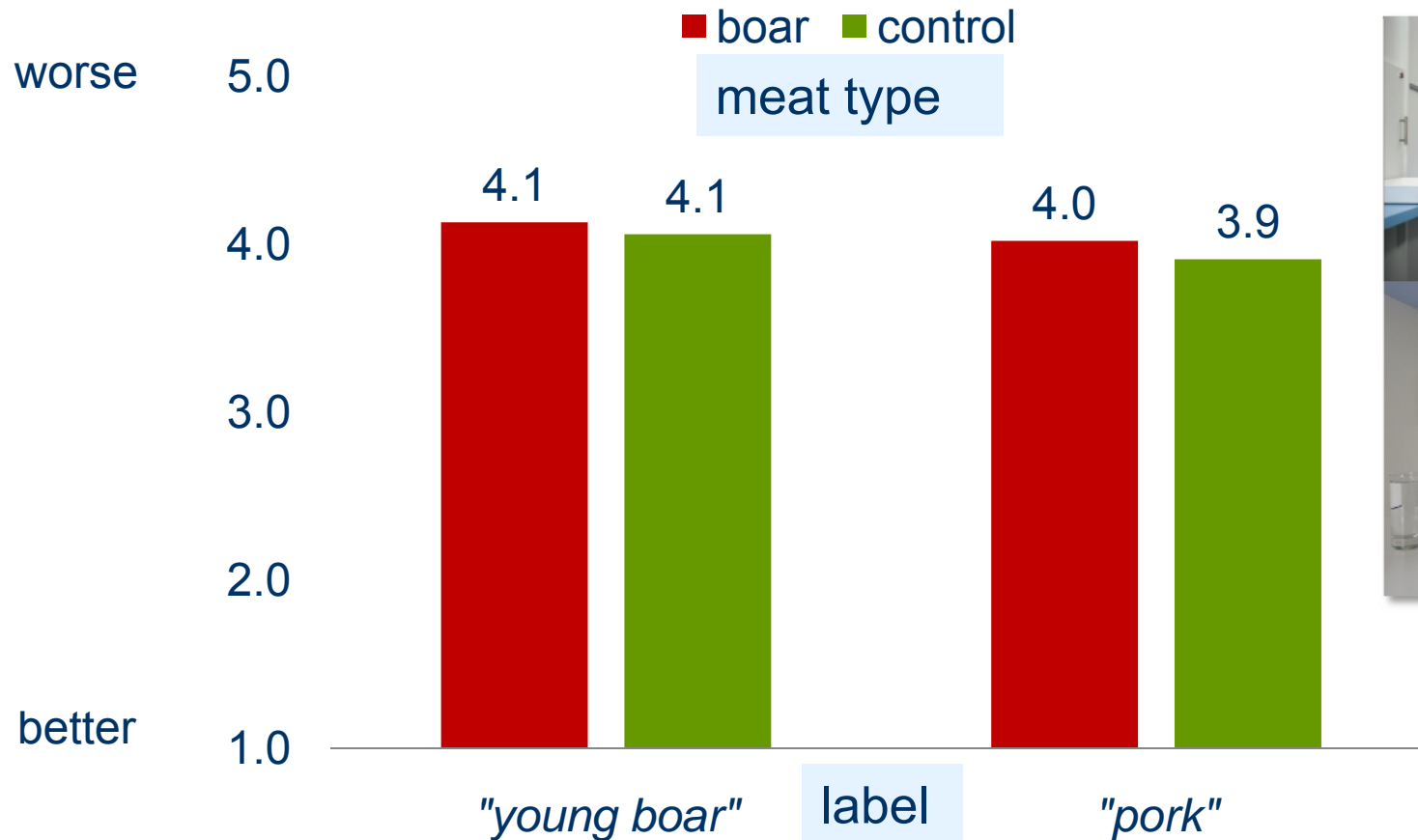
M^*L_{ij} = interaction effect **meat*label**

A_k = random effect of **assessor** (l = 1...145)

G_l = fixed effect of **gender** (i = male. female)

PROC MIXED. SAS v9.2

What matters more: meat type or label? *overall liking (ls-means)*

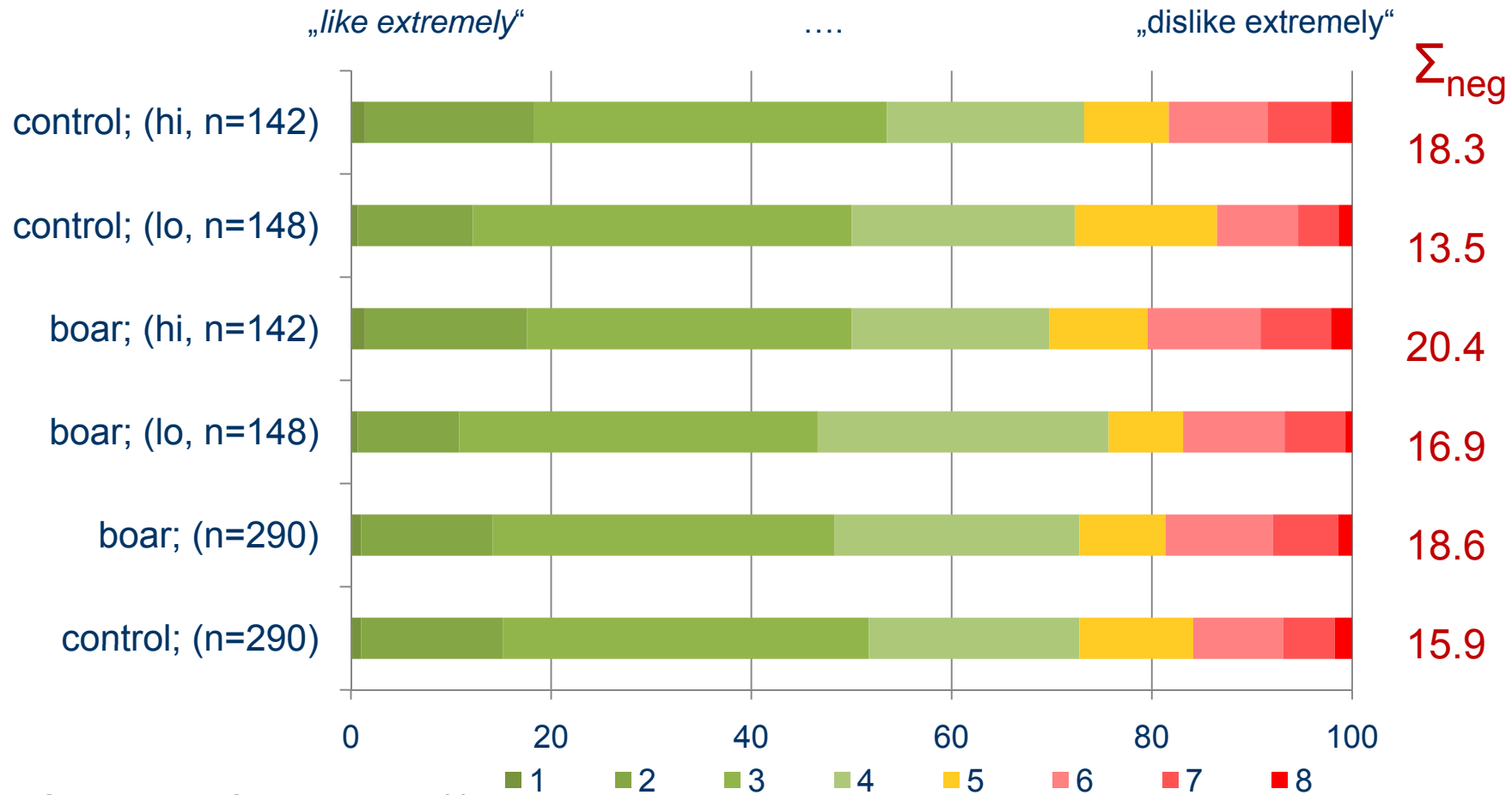


1 = like extremely ... 5 = neither like nor dislike ... 9 = dislike extremely

low (ng/g)	900.3	87.0
high (ng/g)	1484.8	178.2

Cause & effect?

combined A-on & S-ol (in fat) vs. taste



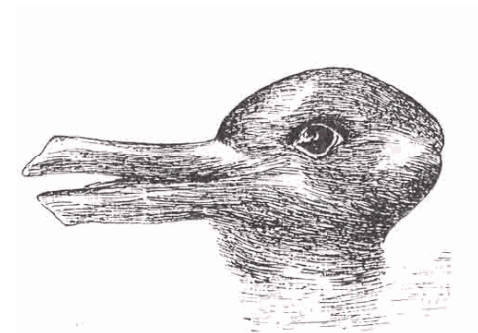
Cumulative frequencies (%)

boar vs. control without regard to label

Reasons for positive results !?

- lack of consumer knowledge
- very lean meat
- low concentration of skatole
- meat prepared for the consumers

Summary and implications



- effect of labelling
- effect of consumer gender
- additional research areas
 - higher AS
 - influence of information on consumer
 - acquired taste
 - higher fat content

Thank you!

May your next pork chop meet
your expectations!

Questions ?





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