Dynamics of Food Preferences

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Development and change of food preferences

- Preferences are not stable over time
- Predominantly learned (exception sweet and bitter)
- Influenced by many factors, such as
  - Food culture
  - Diversity and availability of food products
  - Physiological changes (ageing, disease)
  - Psychological factors, e.g. emotion, cognition, motivation
  - Situational factors
- Learning starts pre-natally and can change throughout life (garlic, Menella; variety, Niklaus)

The role of perception & learning

- **Very early childhood (pre-verbal)**
  - Imprinting, conditioning, and above all imitation
  - Unconscious incorporation of sensory experiences/preferences
  - Separation edible – non-edible
  - Unconscious learning in very early childhood has a strong and long lasting influence and is very resistant to change by cognitive reasoning

- **Early childhood**
  - Imitation, reward or punishment by parents or peers
  - Counterproductive effect (reward or restriction)

- **Preference can change by repeated exposure**

Product related factors of preference change

Influence of repeated exposure to food products

- **Short-term change in perception** (e.g. during a meal)
  - Analytical: Adaptation or habituation
  - Hedonical: Loss of pleasure

- **Long-term change in product perception**
  - Analytical: changes in perceived complexity
  - Hedonical: product boredom or slowly growing aversion

- Adaptation diminishes perceived intensity under the influence of stimulation

- It does not occur at the same rate for all components of a product

- Adaptation also changes the interactions (mainly suppressions) between the perceptible components of a product

- Adaptation is loss of sensitivity
- Habituation is loss of attention (sensory specific satiety)

Adaptation and interaction in beer
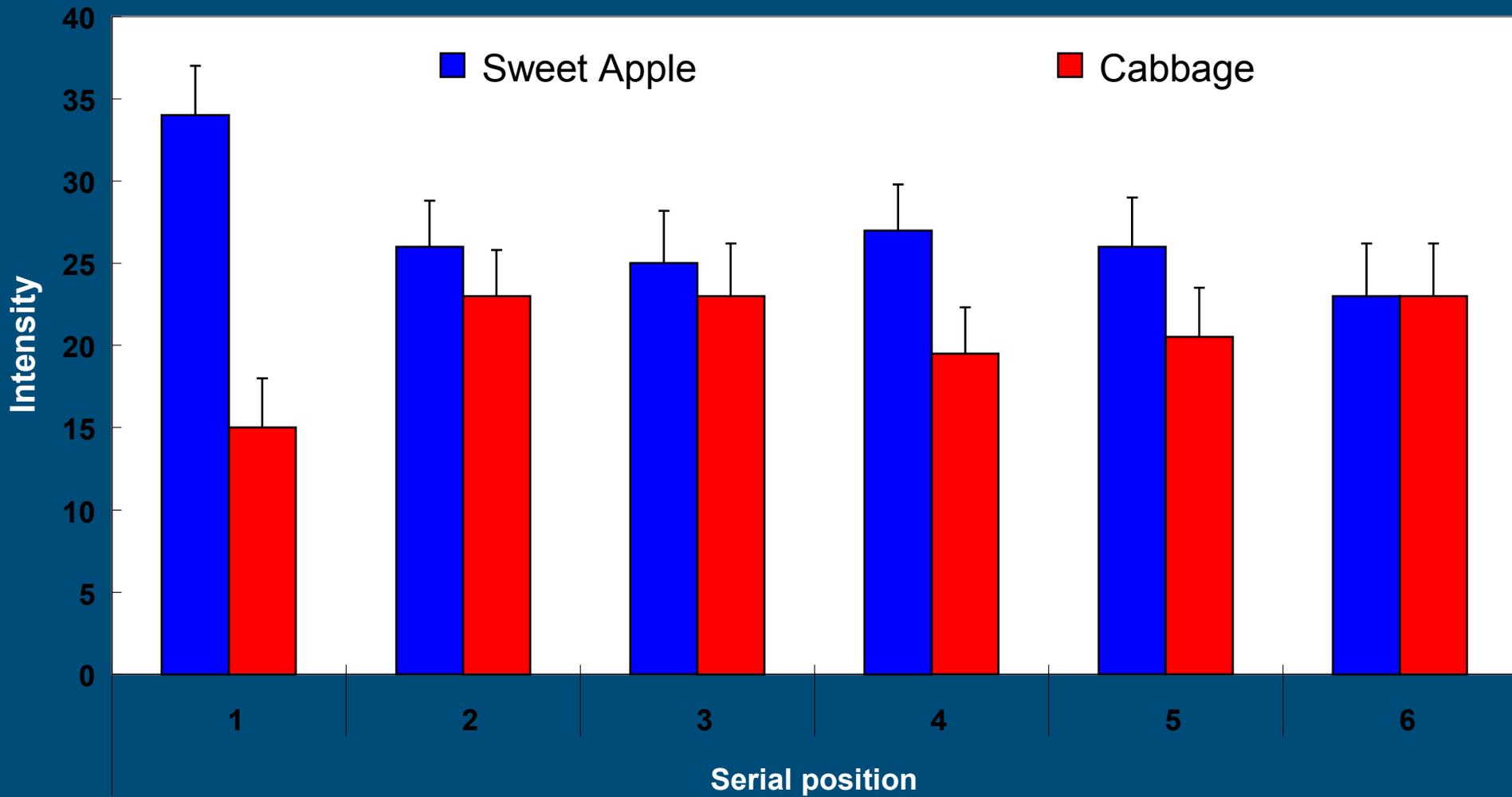
- Lack of perceived complexity leads to boredom
  - Some products you like in the beginning, after 3 weeks you ask yourself why did I like it?

- Product boredom leads to indifference towards the product

- Slowly rising aversion leads to a real dislike of the product
  - A little irritating note in anotherwise liked product grows into a real nuisance

Preference change and consumer consistency

- **First impressions do not predict anything about long-term perception and acceptance**
  - Preference change is more likely than preference stability
  - A negative first impression leads to rejection, but a positive one does not always predict success

- **Psychological theories in general predict change rather than monotony and stability**
- (see Zajonc, Berlyne, Dember and Earl, Walker)

- **How can we predict long-term preference? New Methods**

Conditions to perform an adequate home-use test

- Amount of product adjusted to the size of normal consumption

- Time should be sufficient for normal frequency of consumption

- Diary for noting the quantities for this and other products consumed

- Unexpected home visits to ask general questions and check use of product

- Questionnaires limited to first (hedonic rating and frequency of previous use) and last (hedonic rating and than sensory questions etc.) consumption day

- One week after the experiment, questions about their opinion about the product and test (indication of any bad

Quick central location screening

- To test 2 or 3 versions of a new products
- 80-120 subjects from target consumer group
- Per product version 40-60 subjects
- Pre-test: hedonic rating of all versions in duplicate
- Main test: hedonic rating of monotonous series of 15 stimuli (mentioning very minor differences)
- Post-test: hedonic rating all variations twice in same order as pre-test
  Deliverables
- Comparison of the development of liking over time
- Comparison of the results of pre- and post-test for each stimulus variety

Development of liking
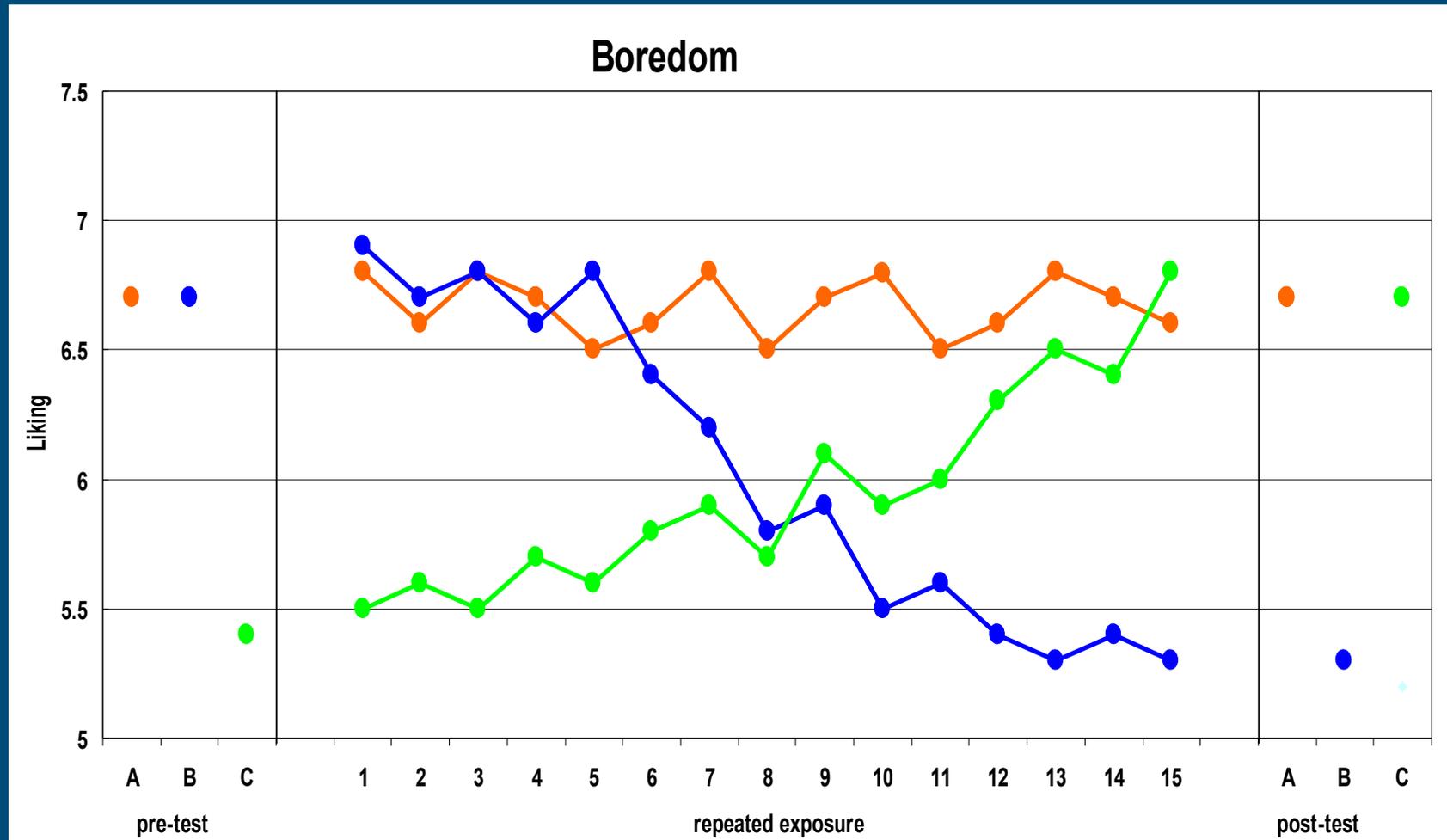
Boredom

Extended boredom test

- Combined in-home-use and central location test
- Developed for products that can not be presented in rapid succession to subjects (e.g. cosmetic creams or alcoholic beverages)
- Pre- and post-test at the central location, but take-home products in between for in-home-use test

Authenticity test

- This method tries to evoke and enhance merely affective reactions (works very well with products people are attached to)
  - Upsetting story e.g. about the selling a cheap copy of a favorite product where in fact there are only very small differences in the same product
  - Used to set the limits of tolerance for the degree in acidity or bitterness in a particular type of product, while retaining the acceptibility
- In a number of cases this method has been shown to be more sensitive in detecting differences than a trained panel

Consumers will not do what they tell you they do

Recommendation:

- Avoid unanswerable questions (always an answer)
  - Why do you like this? Answers are usually nonsensical or non-informative
- Avoid questionnaires on attitudes and values
  - They do not predict behaviour and are often misleading
- But use questionnaires about frequency of behaviour in stead
  - Situational analysis "How often are you eating alone in front of the TV?" "How often do you drink water from the tap?"
- Observational methods
  - Observation of food choice consumption, habits, eating and drinking behaviour, influence of surroundings and social company

Thank you !

Questions ?
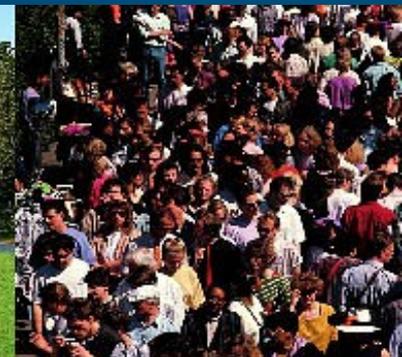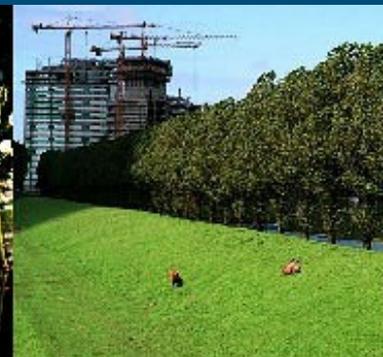
Influence of personal factors

- **Personal factors involved are:**
  - Genes
  - Age, gender, anatomy
  - Oro-, gastro-, intestinal physiology
  - Motivation, Cognition, Emotion psychology
  - Memory, previous experiences
  - Health, Well-being
  - Education, socio-economical status

  Eating behaviour is the interplay between a food and a person in a particular situation

Influence of situational factors

- **People's food choice is related to the situation**
  - **Company**: eating alone, with family, with friends, with boss
  - **Location**: in front of TV, on-the-go, in restaurant
  - **Time frame**: little time, time to indulge
  - **Ambience**: size and colour of plates, ambient odour, lighting, music
  - **Intentions**: eat to live or live to eat
  - **Task definition**: raising children, entertaining friends, inviting boss