13TH PANGBORN SENSORY SCIENCE SYMPOSIUM
PANGBORN 2019

The Ideal Pair Method, an Alternative to the Ideal Profile Method Based on Pairwise Comparisons

Sébastien Lê - Margot Brard

AGRO CAMPUS OUEST

Organised by:

ELSEVIER

I am happy for you to photograph or tweet the slides from my talk…but if you are really interested we can talk after my presentation : +33609756160 ;-)

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The Ideal Profile Method : a quick reminder

- 3 pieces of information are collected from (usually) a consumer panel, amongst which 2 are “classical”, a third one very original
    - Sensory profile
    - Hedonic data
    - A description of their ideal, each time consumers taste a product (very important to assess the reliability of the data)

The Ideal Profile Method : the data set and its structure

Product	Subject	Desc. 1	Desc. 1 Ideal	…	Desc. K	Desc. K Ideal	Liking
1	1						
2	1						
…	1						
N	1						
1	2						
…	2						
N	2						

Our motivation

- To adapt the Ideal Profil Method to make it accessible for children

  How can we ask children to describe products and in particular an imaginary product such as their ideal product ?

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- To adapt the Ideal Profil Method to make it accessible for children

  - How can we ask children to describe products and in particular an imaginary product such as their ideal product ?

  - How can we be sure that they understand the concept of ideal product ?

Our solution: the ideal pair method

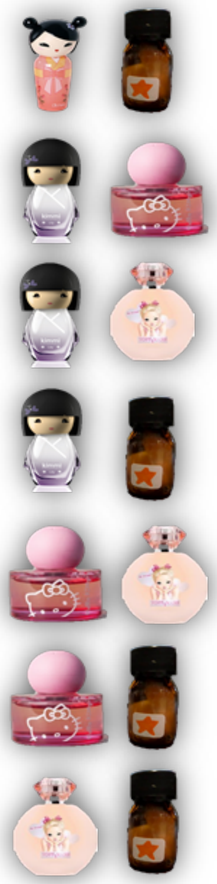
Our experience

- 105 children ranging from 5 to 11 years old
- Complex products : 7 fragrances (perfumes for kids) + the ideal product (materialized with an empty brown flask)

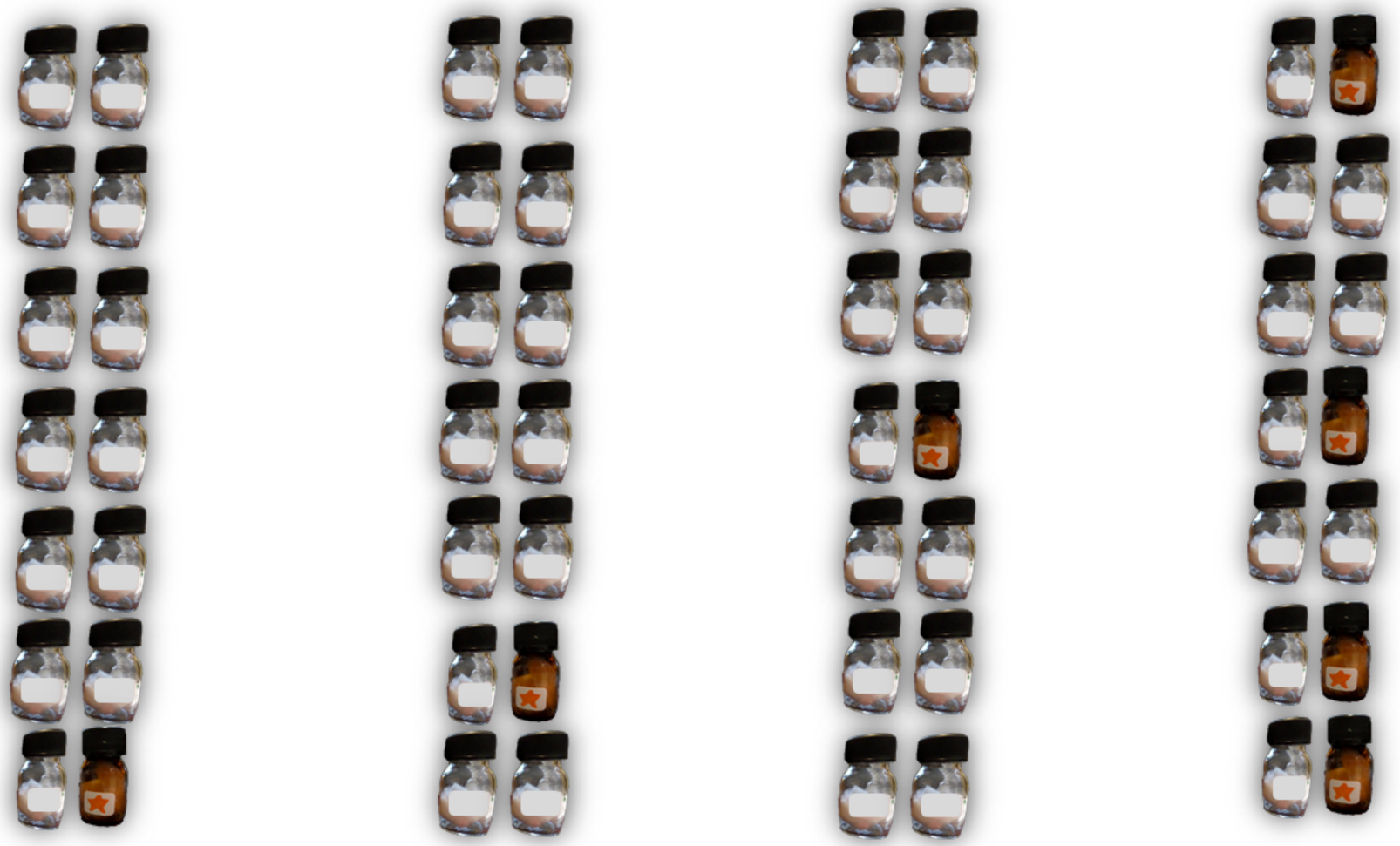
- 8 olfactory & sensory descriptors

How can we ask children to describe products and in particular an imaginary product such as their ideal product ?

The pairs…



The pairs…



A gamification based on cooperation

A gamification based on cooperation

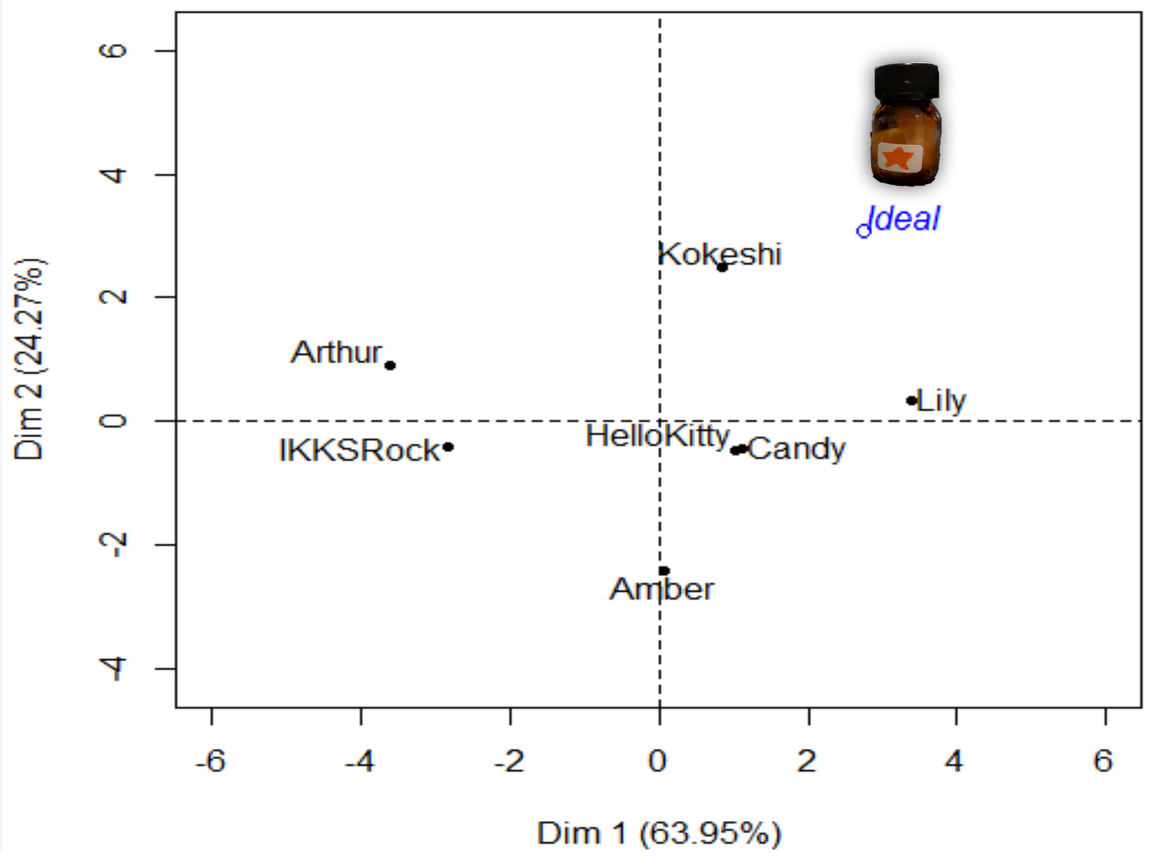
- 8 sensory descriptors represented by cards
- 5 pairs per kid
- 2 red/green stickers
- 1 hedonic stair to climb

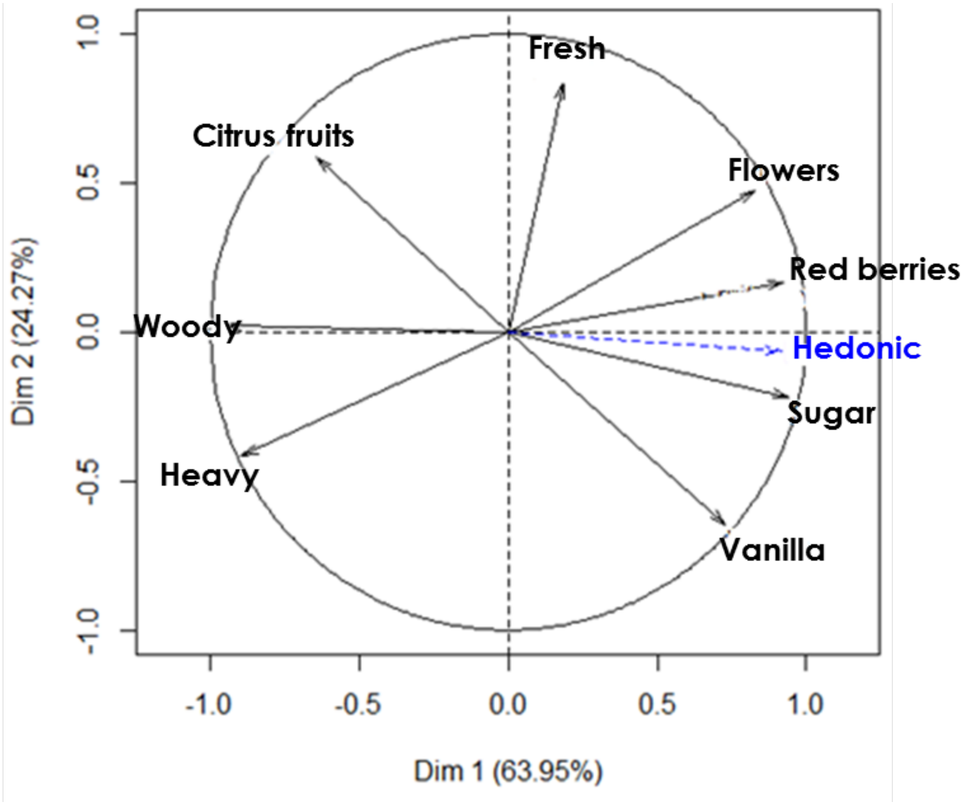
A Bradley-Terry model for each descriptor…

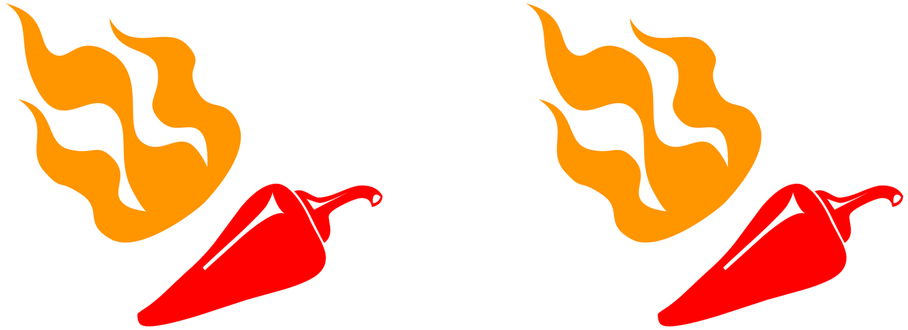
	Descriptor 1	…	Descriptor M
Product 1			
Product i		ability of i	
Product I			

Quantitative data

…to get a sensory profile of the products





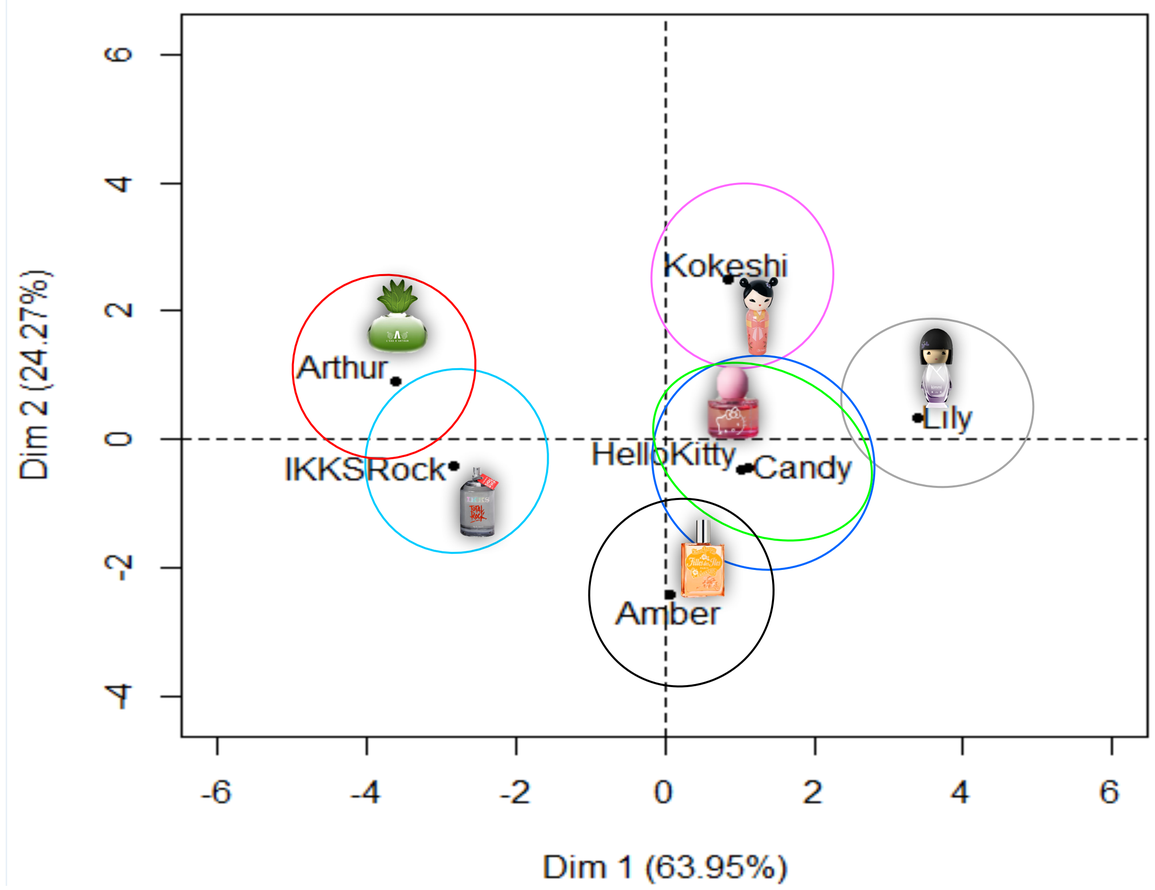


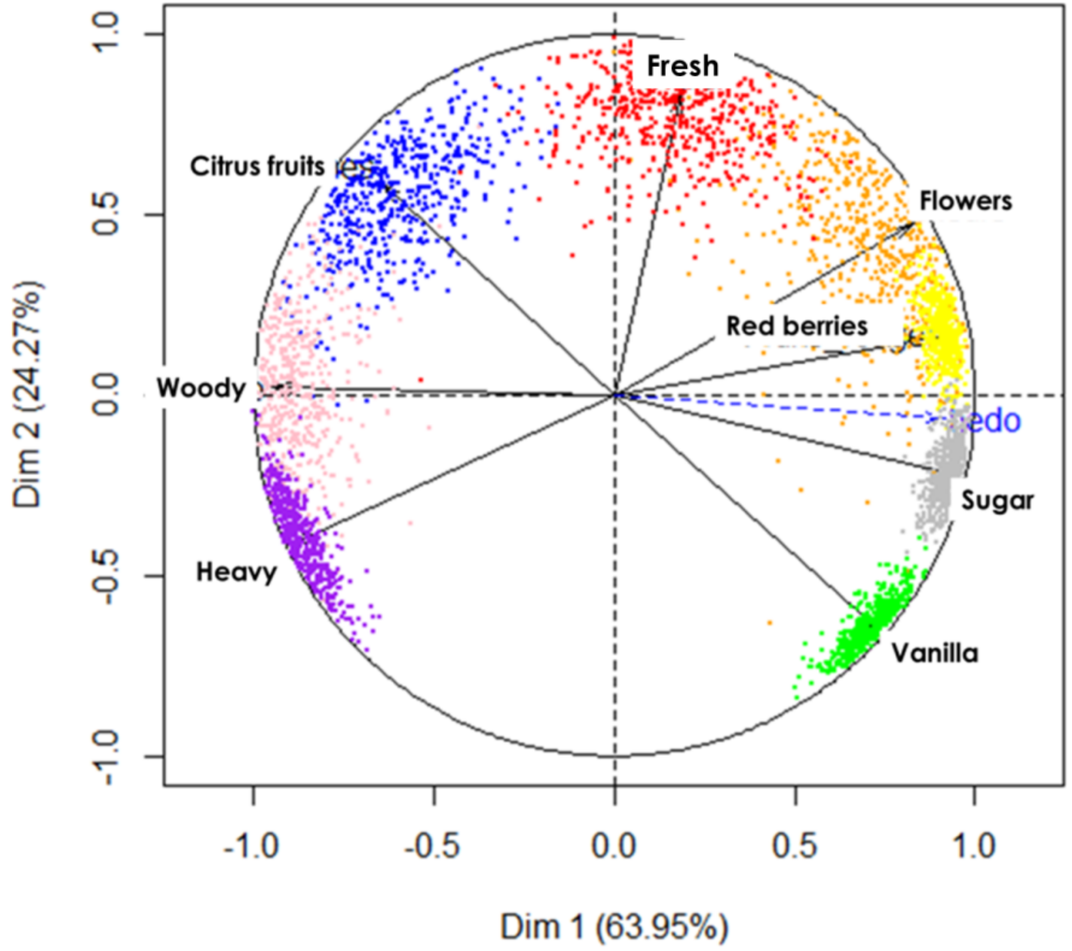
How can we be sure that they understand the concept of ideal product ?

First step

Bootstrap / Resampling techniques

Sensory stability





Second step

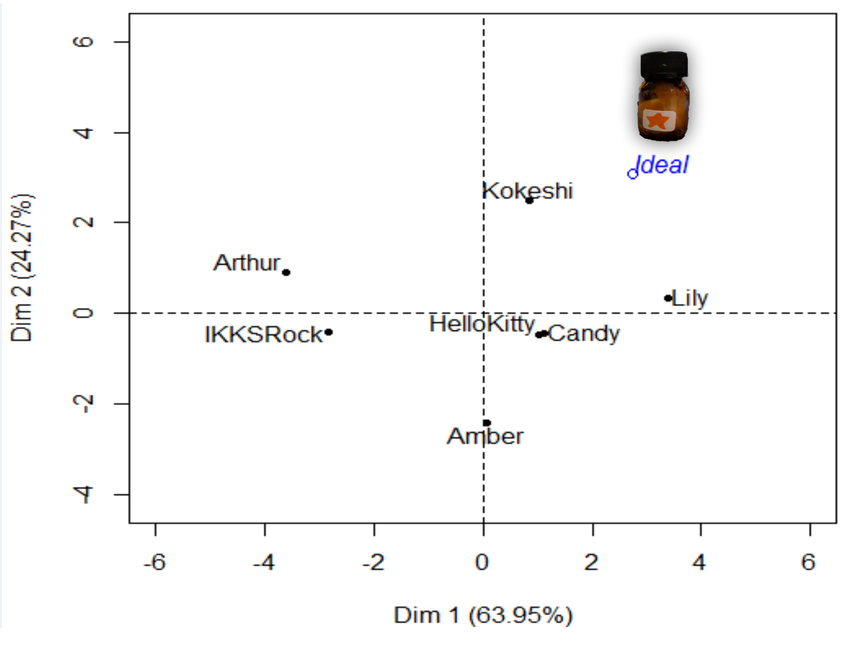
Sensory consistency

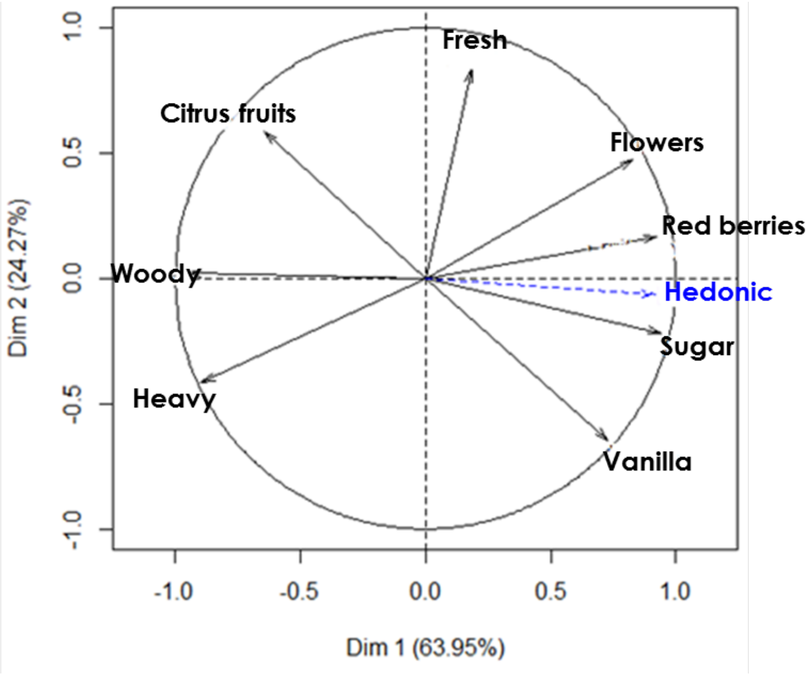
- The ideal data provided by a consumer are “sensory” consistent if the sensory profile associated to this ideal has similar sensory characteristics as the most appreciated product.

- From an attribute point of view, this means that consumer who said they have a higher appreciation for the products perceived as sweeter should also rate their ideals as rather sweet.

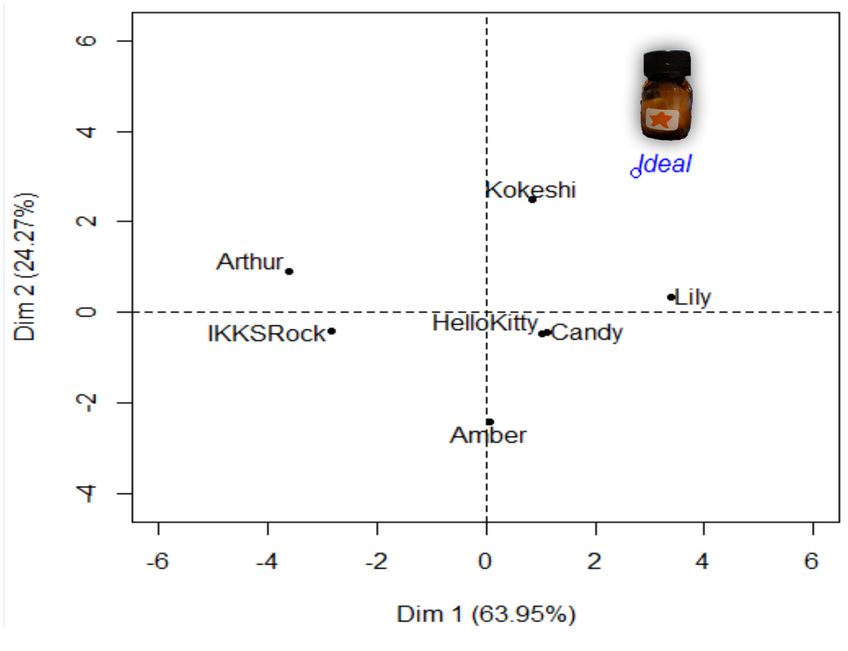
- We need to investigate whether the ideal is making the link between the sensory and the hedonic.

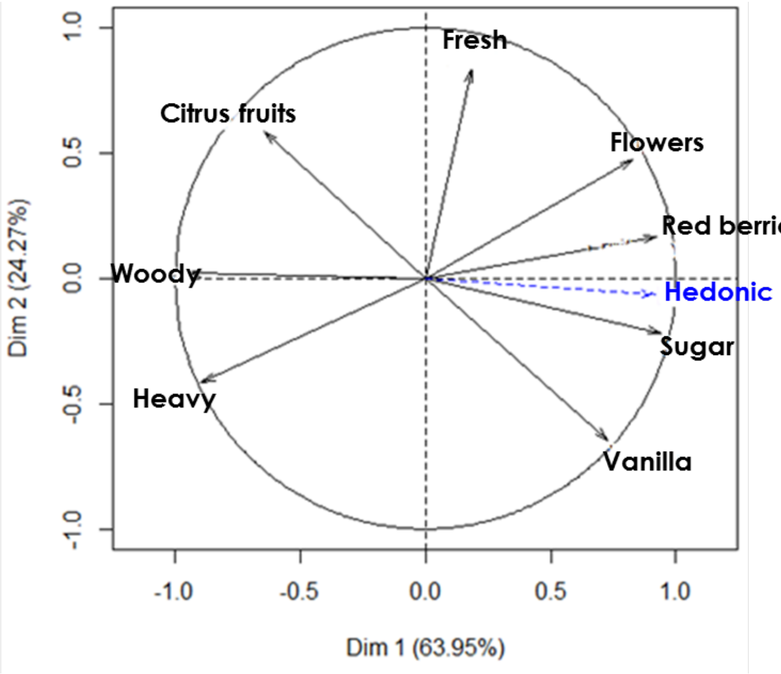
Sensory consistency





Sensory consistency





<=>

	Descriptor
1	Vanilla
2	Sugar
2	Flowers
4	Red berries
5	Fresh
6	Citrus fruits
7	Woody
8	Heavy

Rankings of the characteriscs the most associated with the ideal product

Conclusion

- Beyond the versatility of the Bradley-Terry model in terms of usage, the key lesson for me would be the use of gamification to get data from children.

- This gamification can be seen as a nudge, in the true sense of the word.

Conclusion

- The future of sensory and consumer science?
    - A lot of common sense
    - Some behavioral economics
    - A pinch of statistics which is as salt, the spice of life: essential if not overused!
- « Free JAR, nudging your consumers for relevant data: an application to product development », Alexiane Luc et al. (to appear in FQP)
- « From Free JAR to sentiment analysis », Alexiane Luc et al. Poster P1_140