



Where
• consumer and
product meet

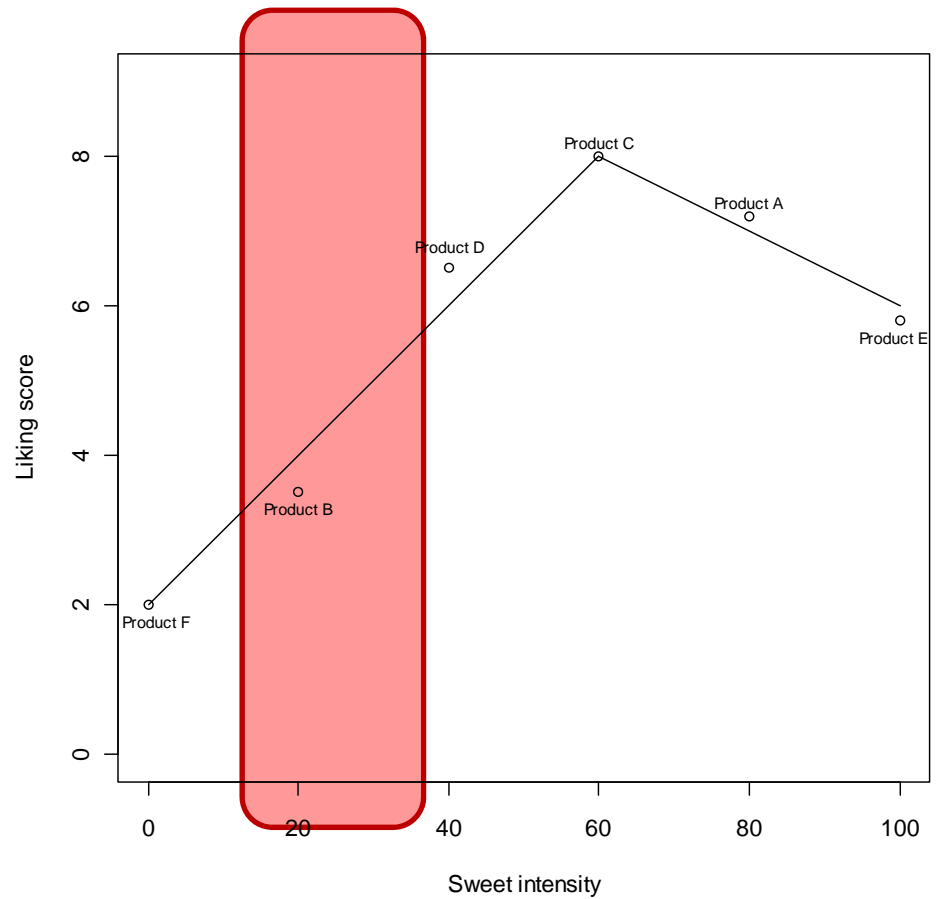
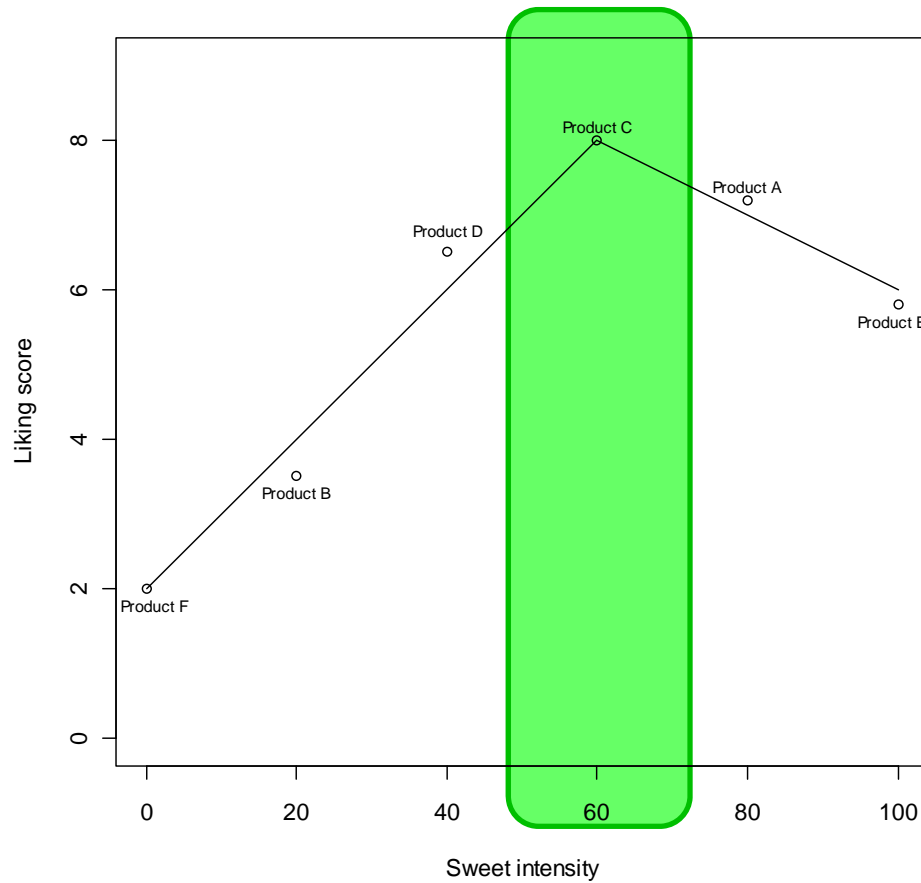
Validation of ideal data using Multivariate Analysis: the ideal products? Space as a link between the products and their preferences

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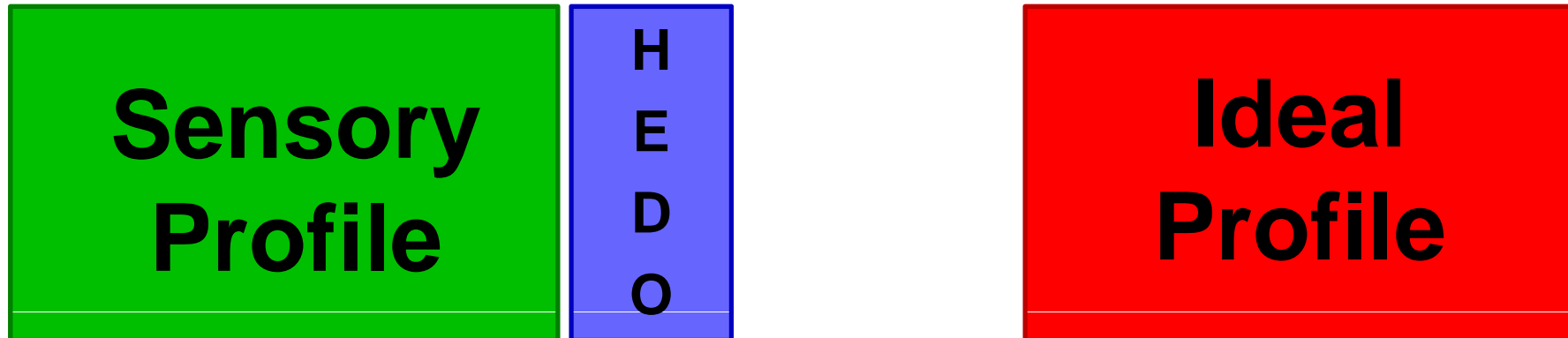
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consistency of ideal data



Ideal Profile Method, in practice

CONSUMER j



**Before using the Ideal Profile data to improve the actual product,
we need to validate this type of data!**

validation of the ideal data

1. Are the consumers able to describe their ideal correctly ?
 - are the ideal descriptions random or do they make sense?
 - internal validation (Worch et al., 2010b)

2. Are the consumers consistent in their descriptions?
 - are the ideal products described by consumers “potential ideals”?
 - are the ideals in accordance with the other descriptions of the actual products?
 - external validation

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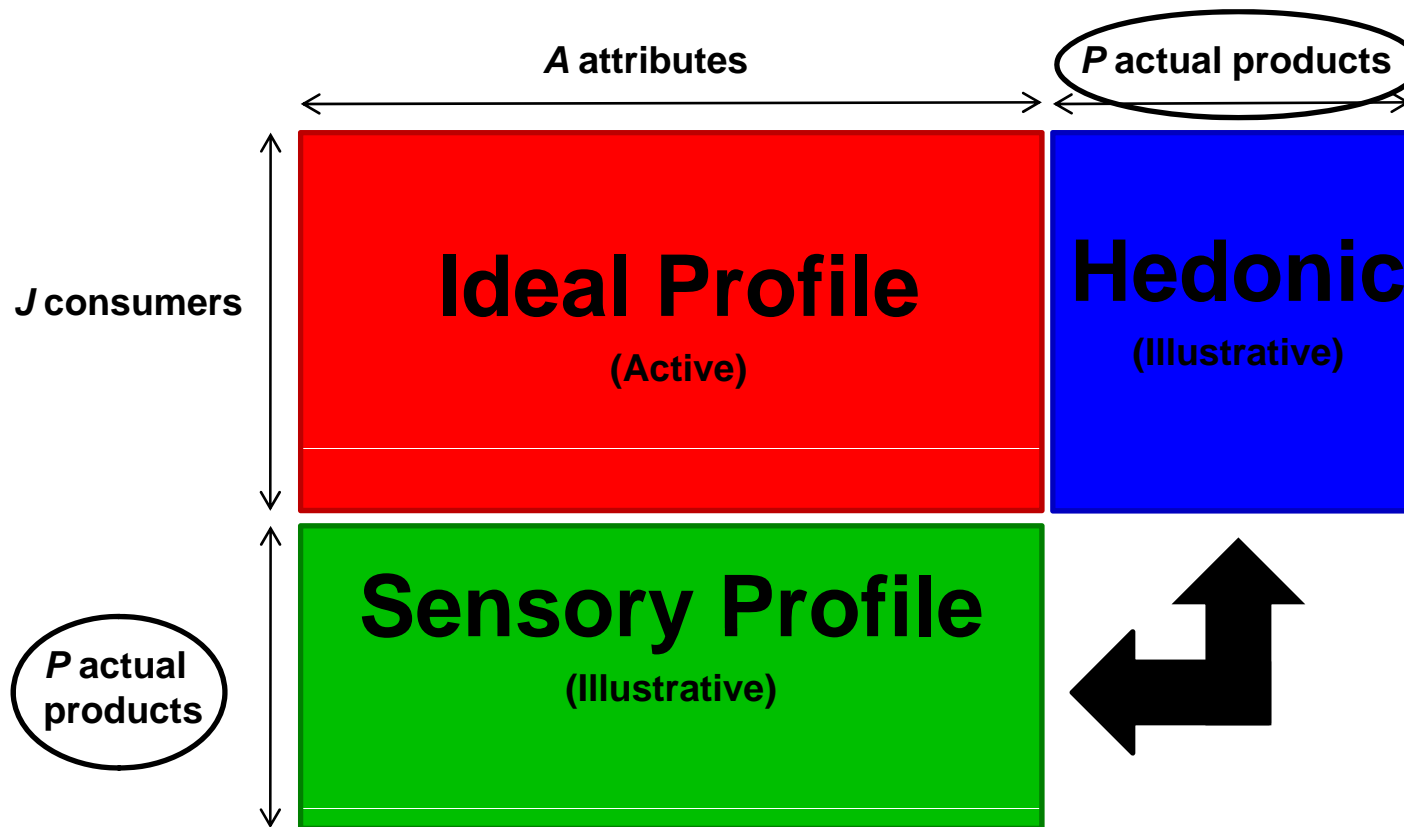
dataset used for illustration

- 14 luxurious women perfumes
- 103 Dutch consumers
- 21 attributes
- overall liking

consistency of ideal data

- definition of the Ideal profile:
 - the ideal profile given by a consumer is the profile of a product, for which the particular sensory characteristics would maximize his appreciation of the type of product tested
- how to check for consistency?
 - the ideal should make the link between sensory and hedonic
 - investigate the relationship between hedonic data and sensory profile, within the consumers/ideal product space

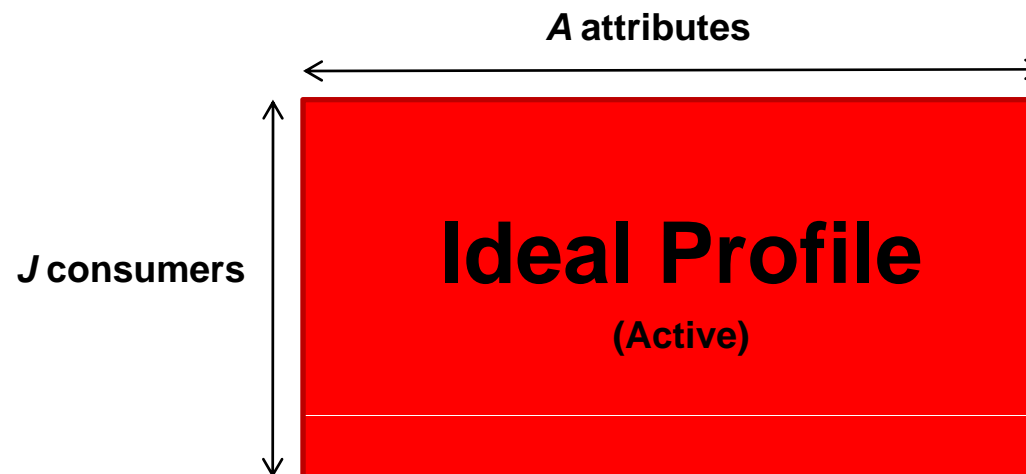
consistency of ideal data



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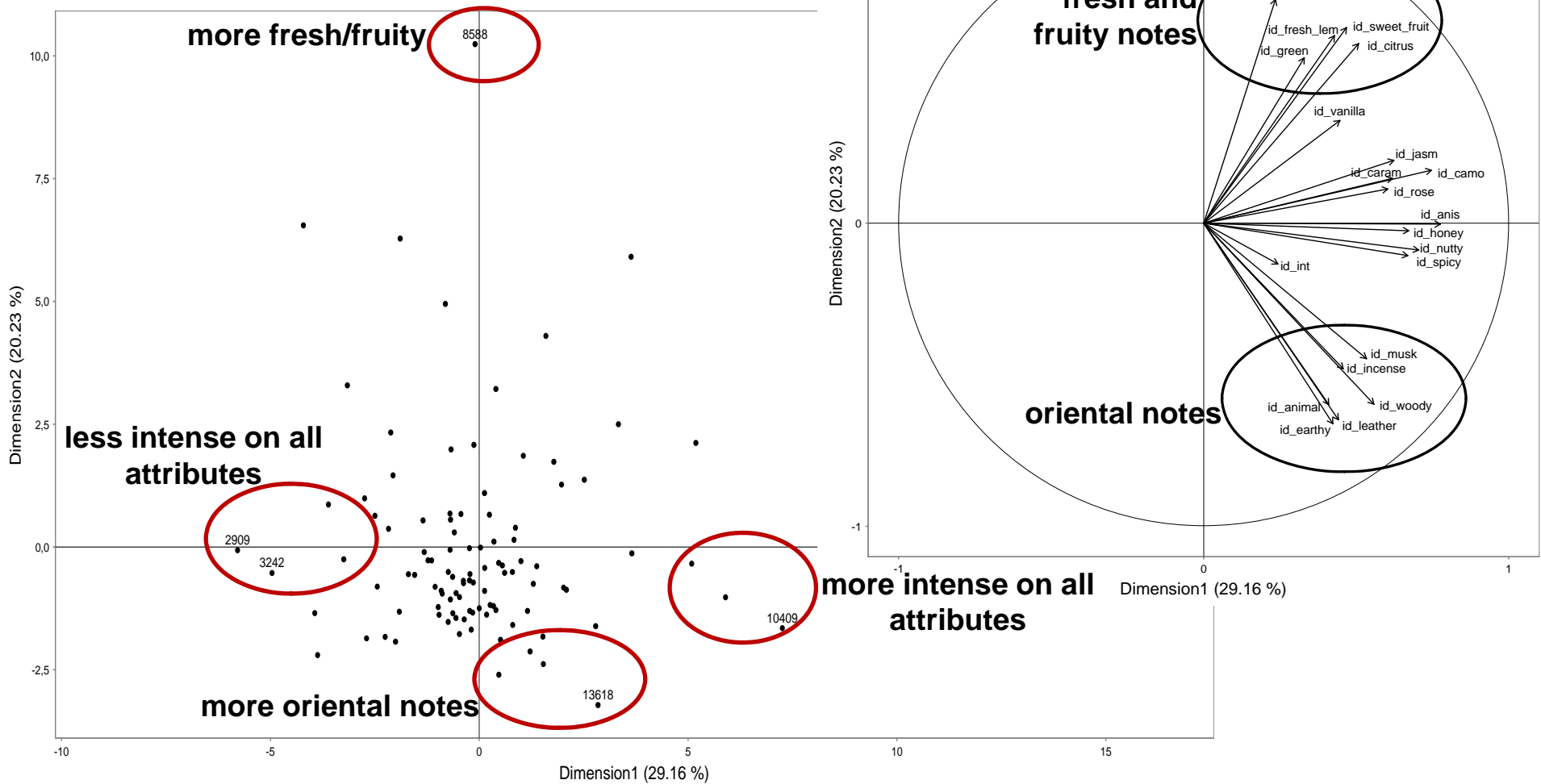
- methodology in four steps:
 1. Study of the variability of the ideal profiles
 2. Relationship between ideal profiles and appreciation of the actual product
 3. Relationship between ideal profiles and the actual product profiles
 4. Relationship between the profiles and the appreciation of the actual products, within the ideal product space
- if the relationship between the sensory profiles and the appreciation of the actual products is strong, within the ideal product space, the ideal profiles are considered consistent

definition of the ideal space

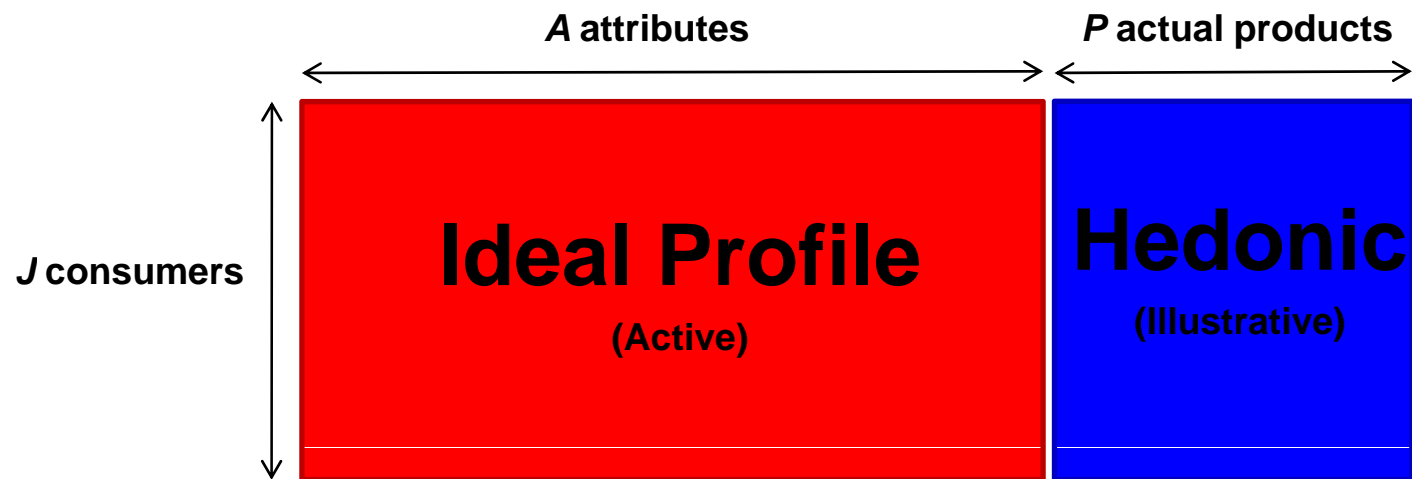


- one statistical entity represents the averaged ideal profile defined by one consumer

definition of the ideal space



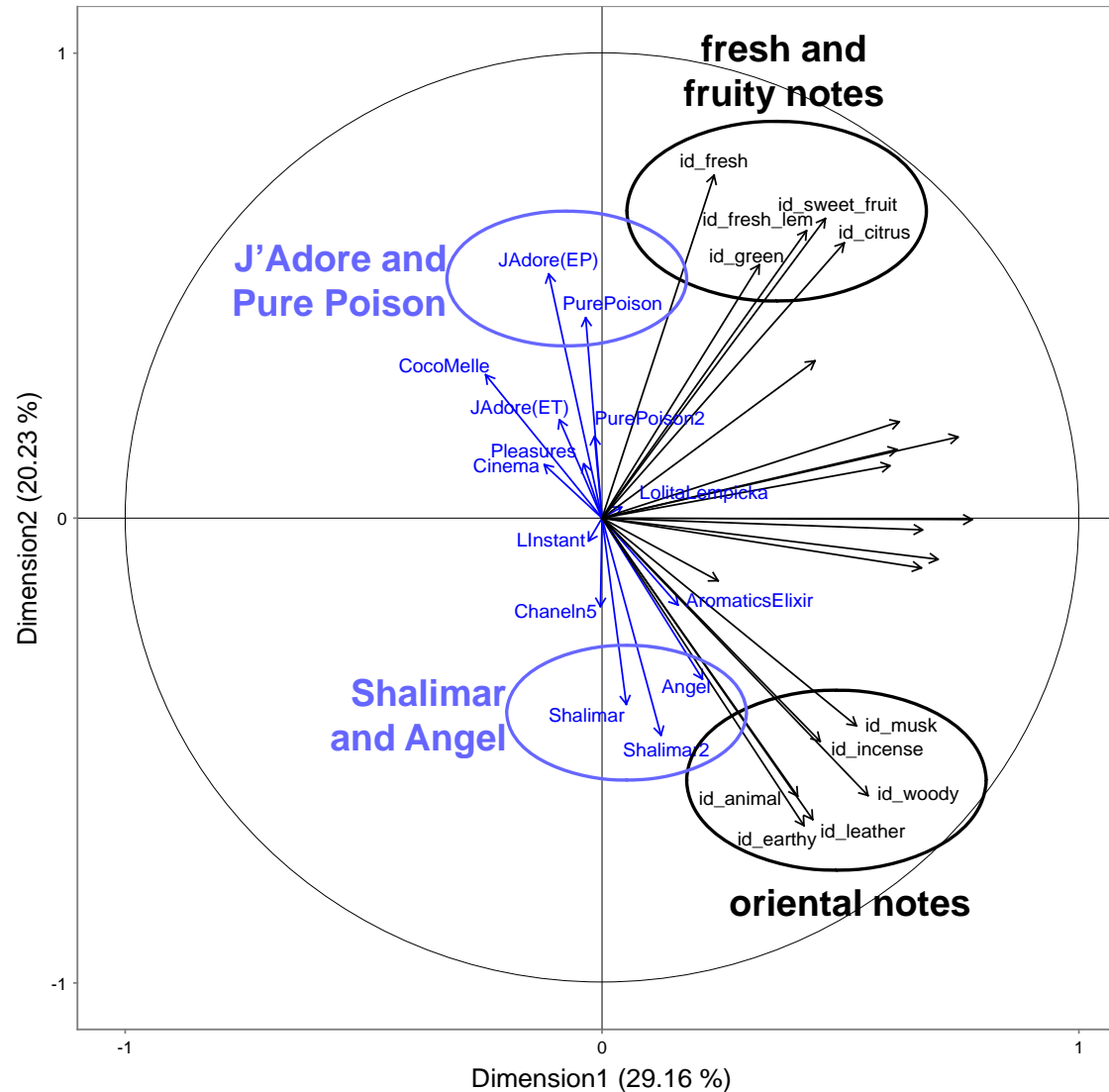
ideal space and preference



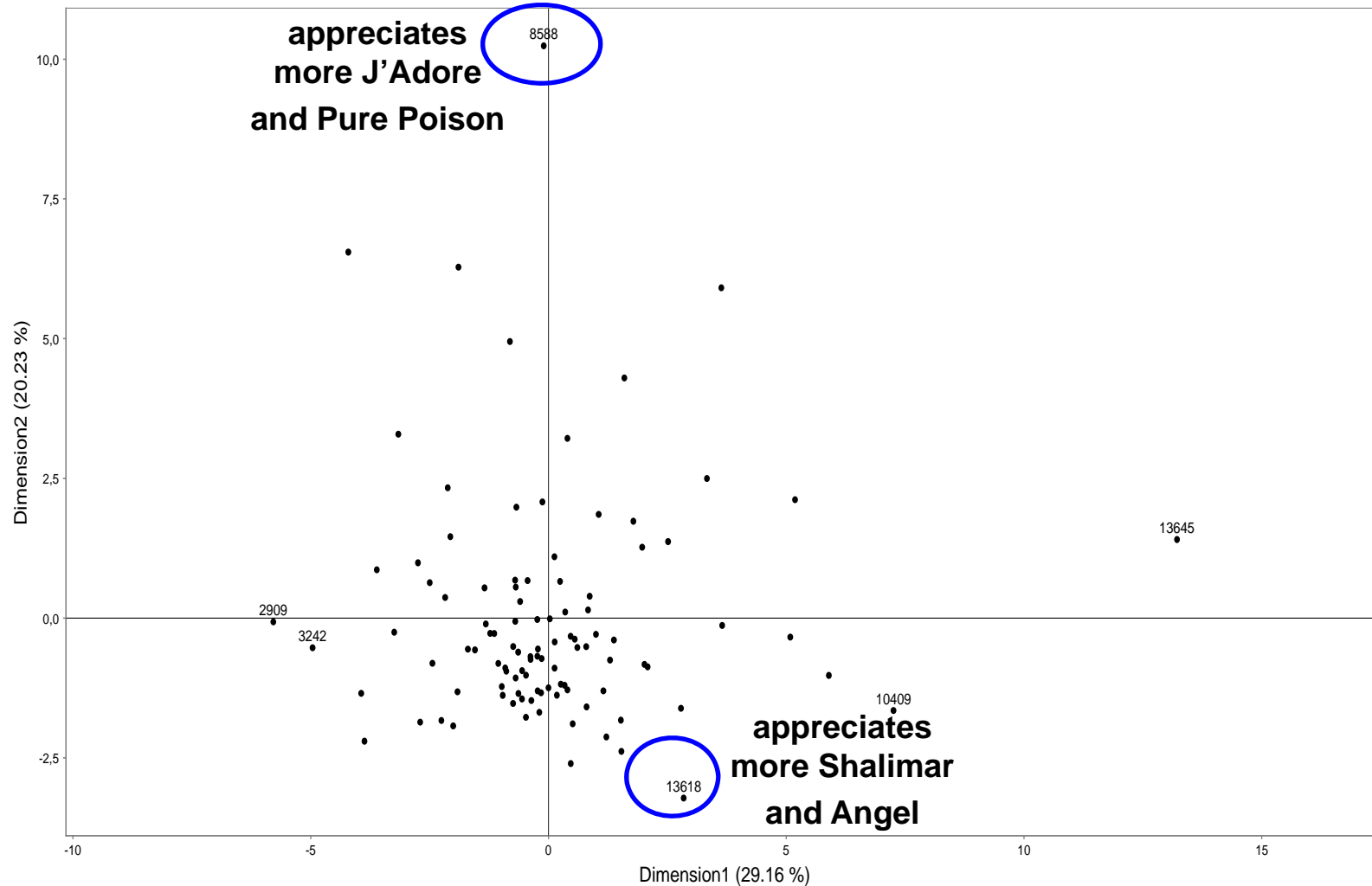
ideal space and preference

- the projection as illustrative of the variables of preference shows the link between the ideal profile and the preference of the consumers:
 - this link is measured through the correlation coefficient
 - if the correlation between the preference of a product p and the ideal intensity of the attribute a is positive and strong, then the consumers who described their ideal profile with a strong intensity on a also appreciate p more than the other actual products.

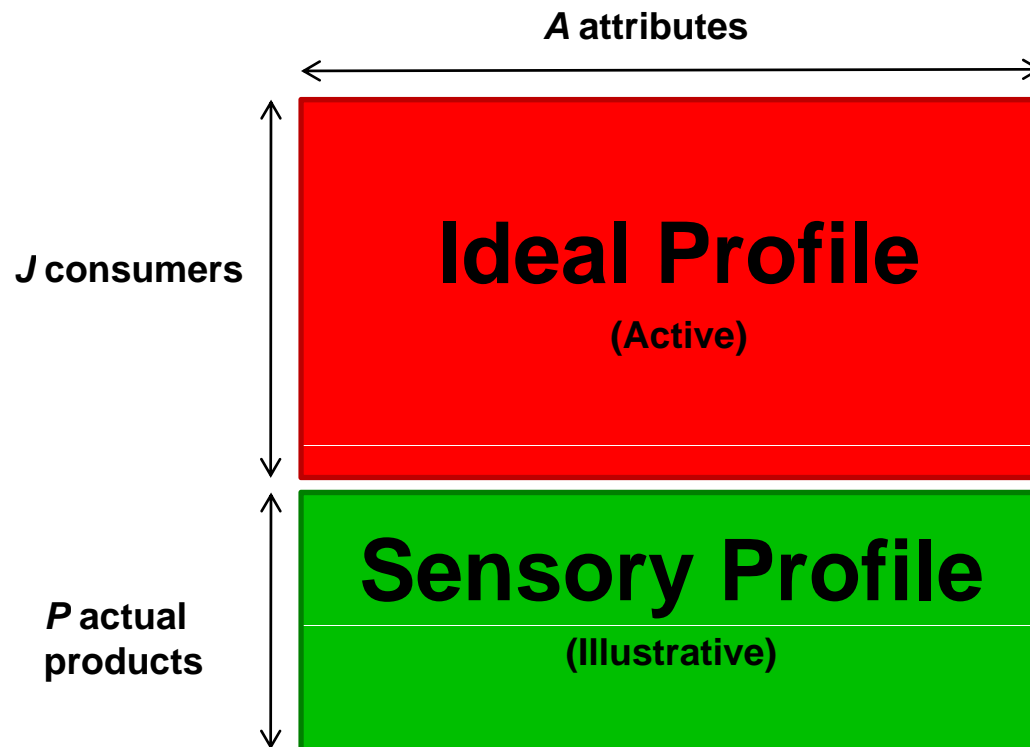
ideal space and preference



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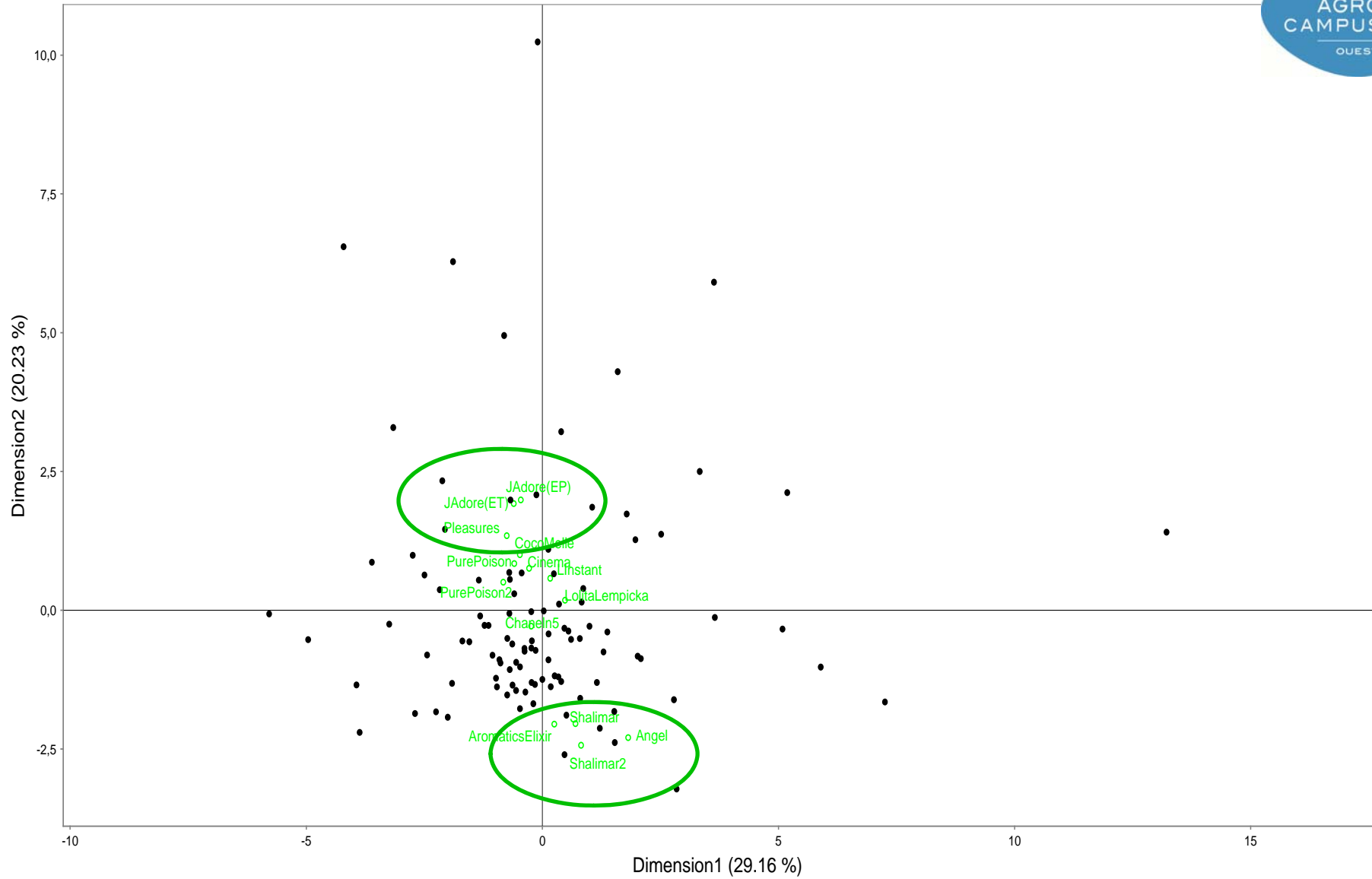


ideal space and sensory profiles of the actual products

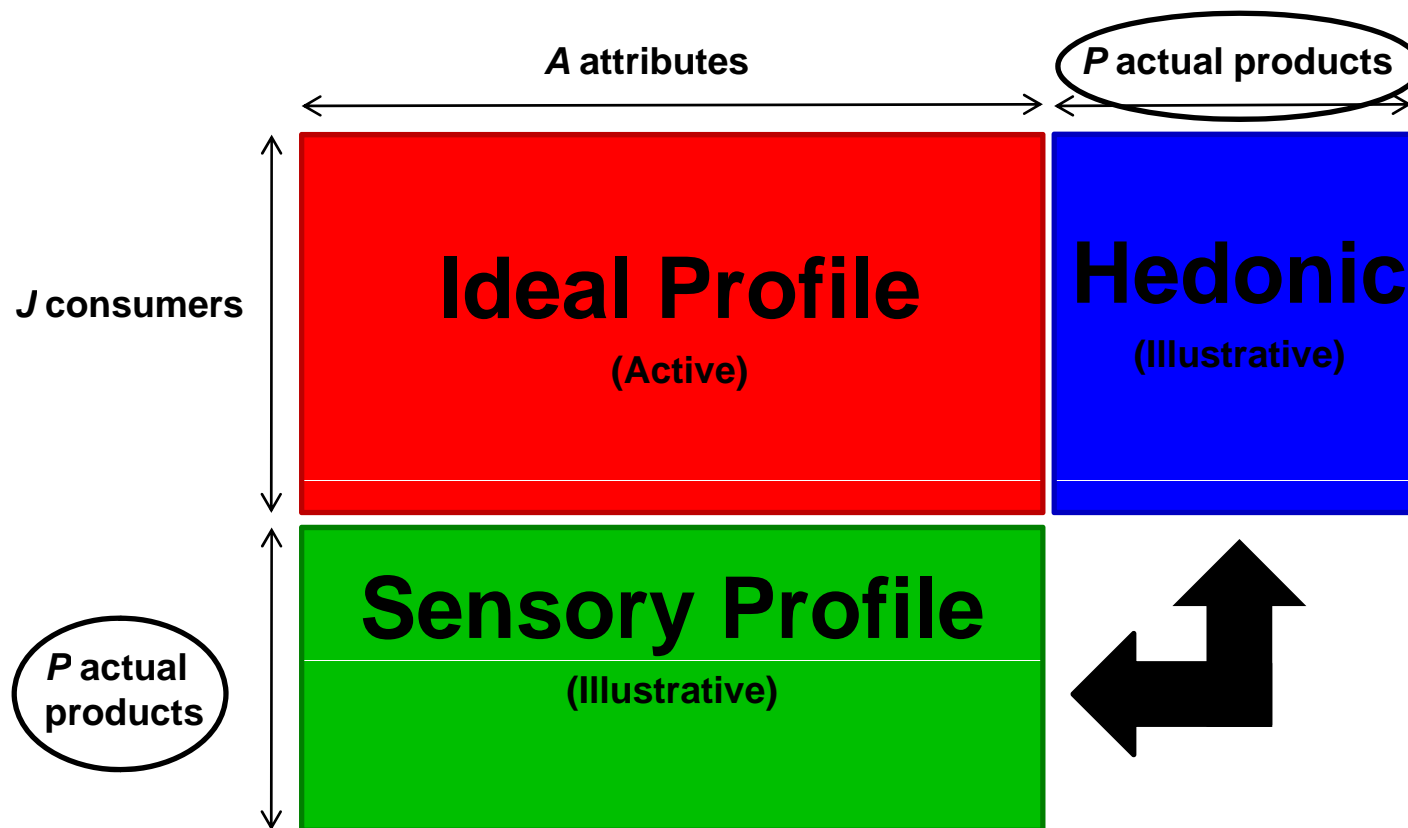


ideal space and sensory profiles of the actual products

- the projection as illustrative of the actual products shows the link between the ideal profile and the actual products:
 - each actual product is considered here as a particular consumer, who would have the actual product as an ideal
 - Angel is a particular consumer who would have Angel as an ideal
 - the link between two ideal profiles is measured by the distance on the map
 - two consumers are close if they share a “common” ideal and are separated if their ideals are different
 - hence, a consumer is close to an actual product p if his ideal profile is similar to the profile of p



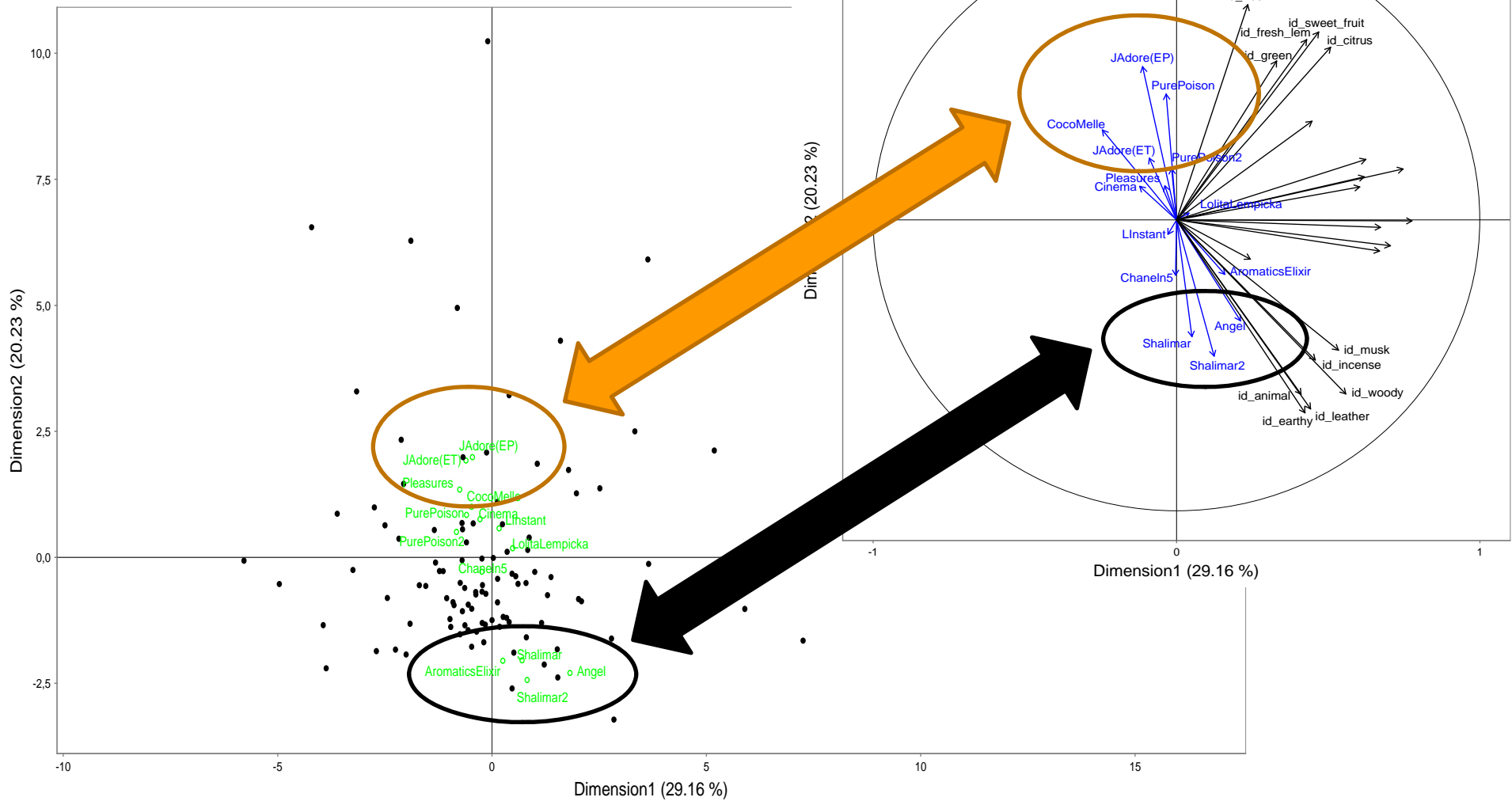
consistency of the ideal data



consistency of the ideal data

- by definition, ideal is making the link between *sensory* and *hedonic*
- the link is measured here by the relationship between *sensory* and *hedonic*, within the *ideal* space:
 - we expect that a consumer, who appreciated more the products he perceived as rather intense for an attribute a should describe his ideal profile as rather intense for a
 - in other words, a consumer who appreciated more an actual product p should describe an ideal with similar characteristics than p
- in our case, this can be shown by the relationship of the same objects (actual products) seen through the different tables (sensory and hedonic) within the ideal product space

consistency of the ideal data



conclusion

- through multivariate analysis, we've shown that the ideal data globally are consistent (panel level)
 - the description of the ideal makes the gap between sensory and hedonic (by definition)
 - consumers who preferred the product of reference p also described an ideal with similar characteristics as p
 - when a consumer has an ideal close to an actual product, he also indicates that he appreciates this actual product more than the others
- this consistence can be checked at the consumer level
- to finalise the validation, the hedonic power of the ideal profiles should be checked
- once the data are considered valid, they can be used for guidance on improvement of the actual products

references

- Worch, T., Lê, S., Punter, P.H., & Pagès, J. (2010). Can we trust consumers' Ideals? Study of the relationship between the consumers' preference and their ideals. *Oral presentation at the 10th Sensometrics*, July 25-28, Rotterdam, the Netherlands.
- Worch, T., Lê, S., Punter, P.H., & Pagès, J. (2010). Can the consumers express their needs? Use of Ideal Profiles to understand and validate what is in the consumers' mind. *Oral presentation at the Society of Sensory Professionals meeting*, October 27-29, Napa, Ca, USA.

THANK YOU

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