



Where
consumer and
product meet

Can we trust consumers' ideal? Study of the relationship between the consumers' preference and their ideals.

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THE SENSOMETRIC SOCIETY

introduction

- product development and consumers
 - understand characteristics important to the consumer
 - consumers are the ultimate decider of marketplace success
 - help to improve the actual products
- developing an ideal product for a target consumer is critical
 - estimation through statistical methods:
 - external preference mapping
 - data collection methods:
 - JAR or Ideal Profile method

measurements of the ideal

- the Ideal Profile Method
 - as opposed to JAR, consumers rate their ideal explicitly
 - every time they are asked to rate the perceived intensity of an attribute, they are also asked to rate the intensity of that attribute, if it was ideal
 - P actual products tested will yield P ideal products per consumer

the bitter taste



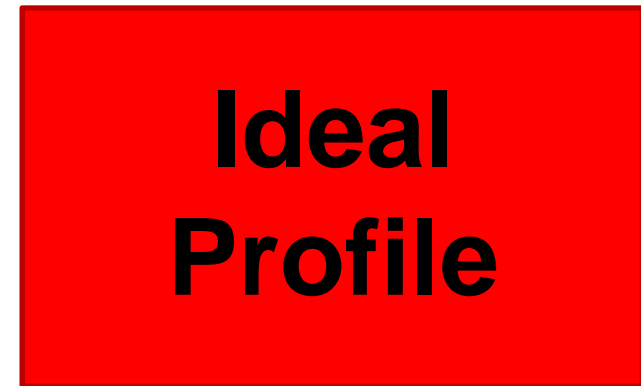
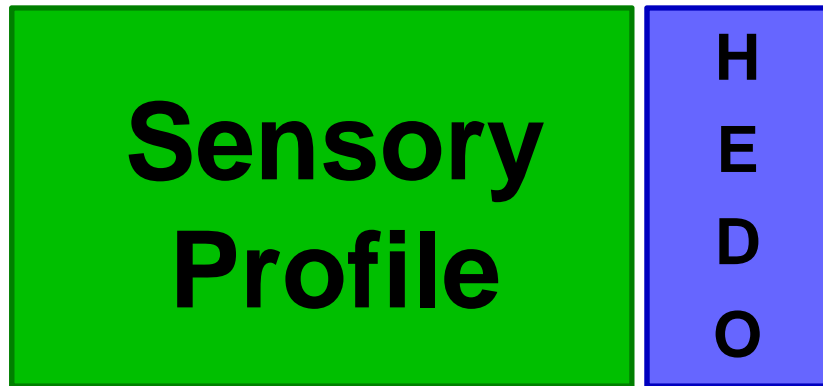
your ideal bitter taste



Next >>

the Ideal Profile data

consumer j



the Ideal Profile data

1. Are the consumers able to describe their ideal correctly ?
 - is the ideal meaningful or random?
 - internal validation

2. Are the consumers consistent in their descriptions?
 - are the ideals in accordance with the perception and the ideal description?
 - consistency between ideal, sensory description and hedonic data

3. Are the ideal products described by consumers “potential ideals”?
 - would the ideal product be more appreciated than the actual products?
 - estimation of the “liking potential” of the ideal products

dataset used for illustration

- 12 + 2 luxurious women perfumes
- 103 Dutch consumers, who were users of the products
- 21 attributes rated on an unstructured 100-point scale
 - both the perceived and ideal intensities have been described every time
- description of the overall liking on a structured 9-point scale
- the products were tested during two one-hour sessions
 - 7 products being evaluated in each session

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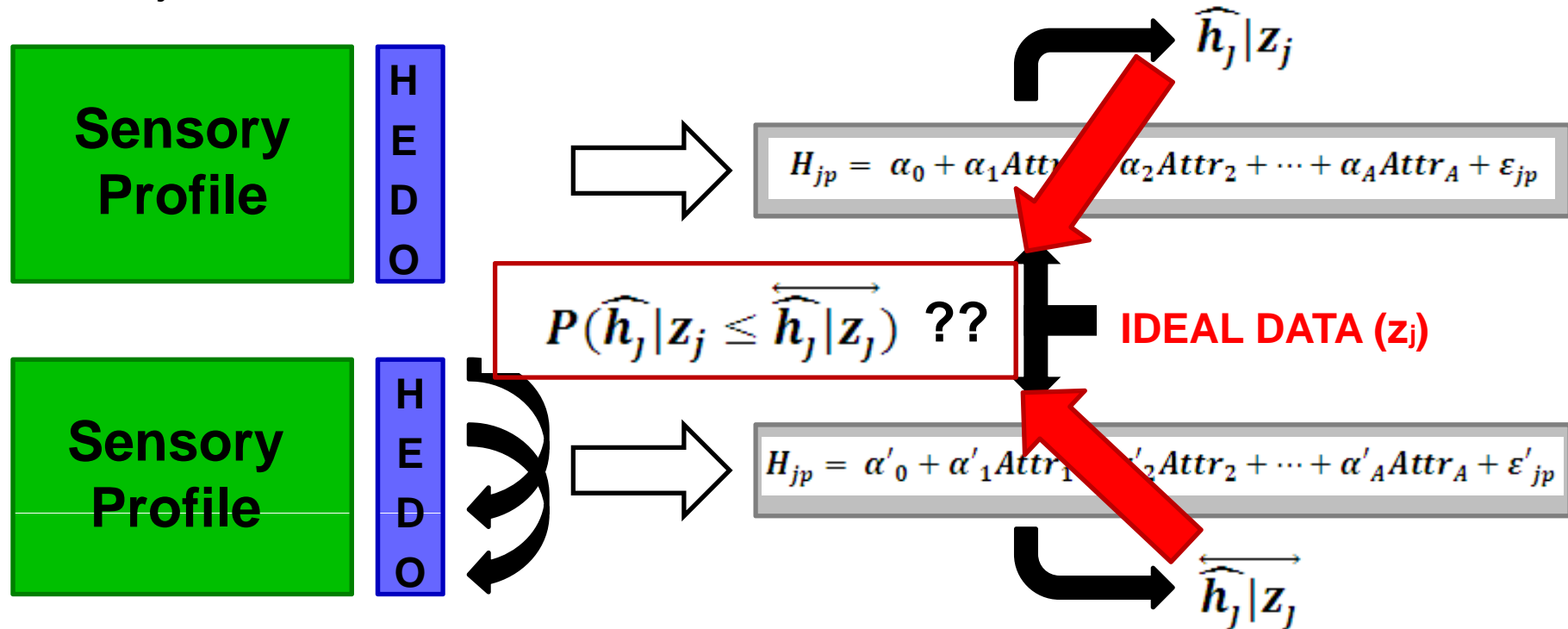
meaningful or random?

- the idea here is to check that the ideal data provided by a consumer j is meaningful
- to do so, we can check that the ideal product has a higher prediction in liking in the original case than in a random situation
- internal validation:
 - we look at the difference between prediction of liking in the original situation and in the particular situation when consumers would score the liking randomly
 - we compare the two results by expecting to have a higher liking in the original situation
 - we count (in percentage) how many times it isn't the case and estimate the a p-value associated to $\widehat{h}_j|z_j$

$$P(\widehat{h}_j|z_j \leq \overline{\widehat{h}_j|z_j})$$

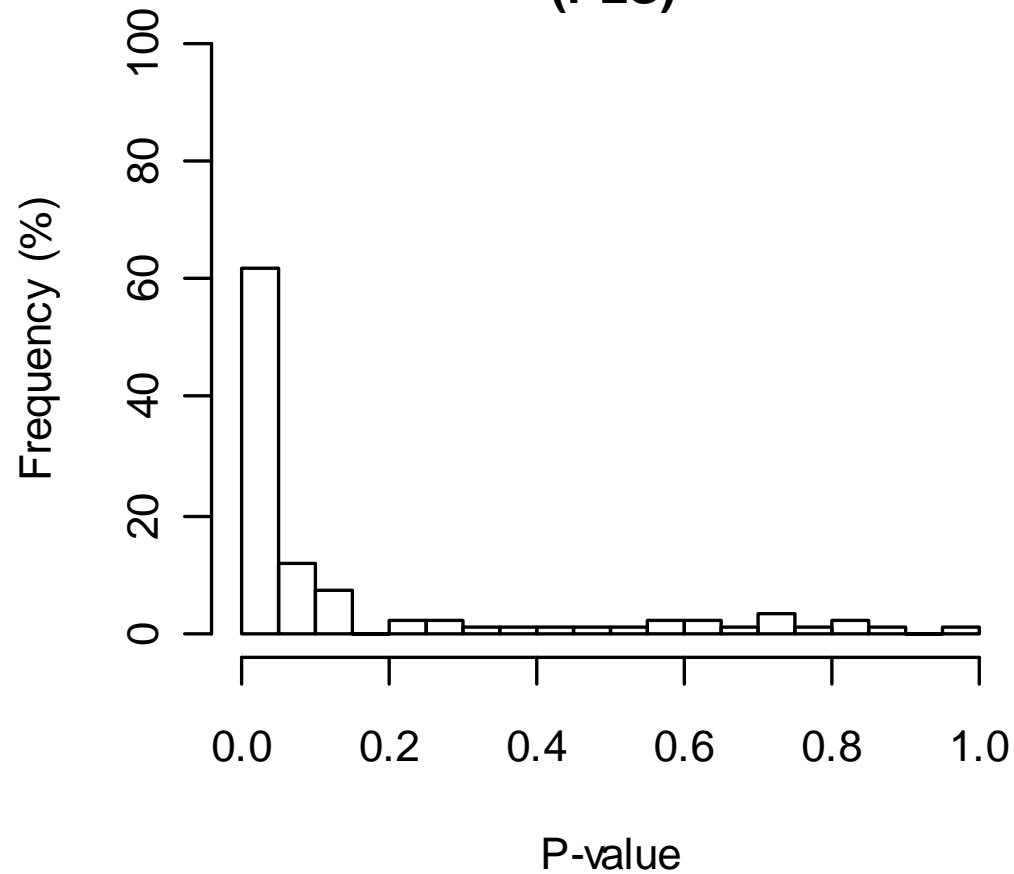
meaningful or random?

CONSUMER j



meaningful or random?

Distribution of the p-values over all the consumers (PLS)



meaningful or random?

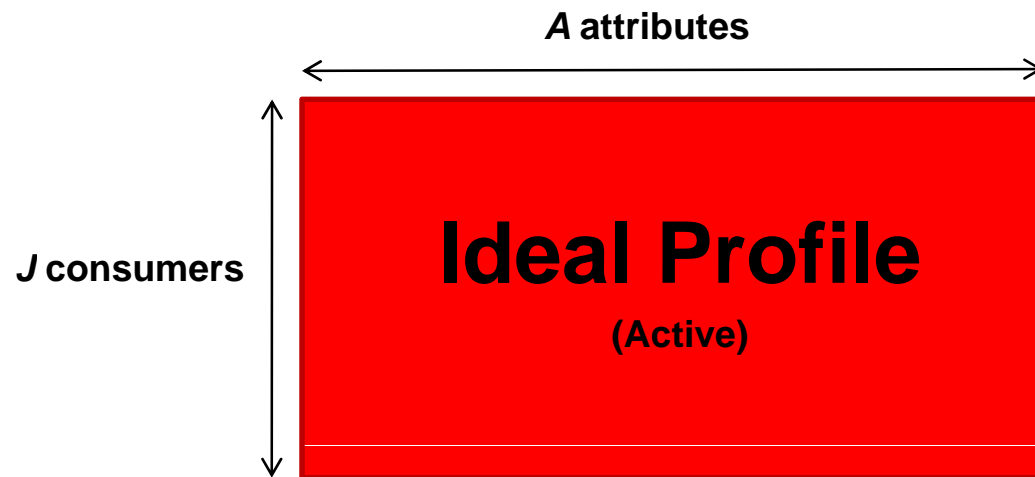
- the results are globally promising:
 - for most consumers, the liking of the ideal is higher than the one obtained after permutation (a lot of significant p-values are observed)
- the hypothesis that the ideal products are not random values is accepted

1. Internal validation of ideal data
 - are the consumers able to describe their ideal correctly ?
 - is the ideal given by a consumer meaningful? Is it the results of “random click”?
2. Consistency between ideal, sensory description and hedonic data
 - are the consumers consistent in their descriptions?
 - are the descriptions of the ideals in accordance with their perception/liking?
3. Estimation of the “liking potential” of the ideal products
 - are the ideal products described by consumers “potential ideals”?
 - would the ideal products be more appreciated than the actual products?

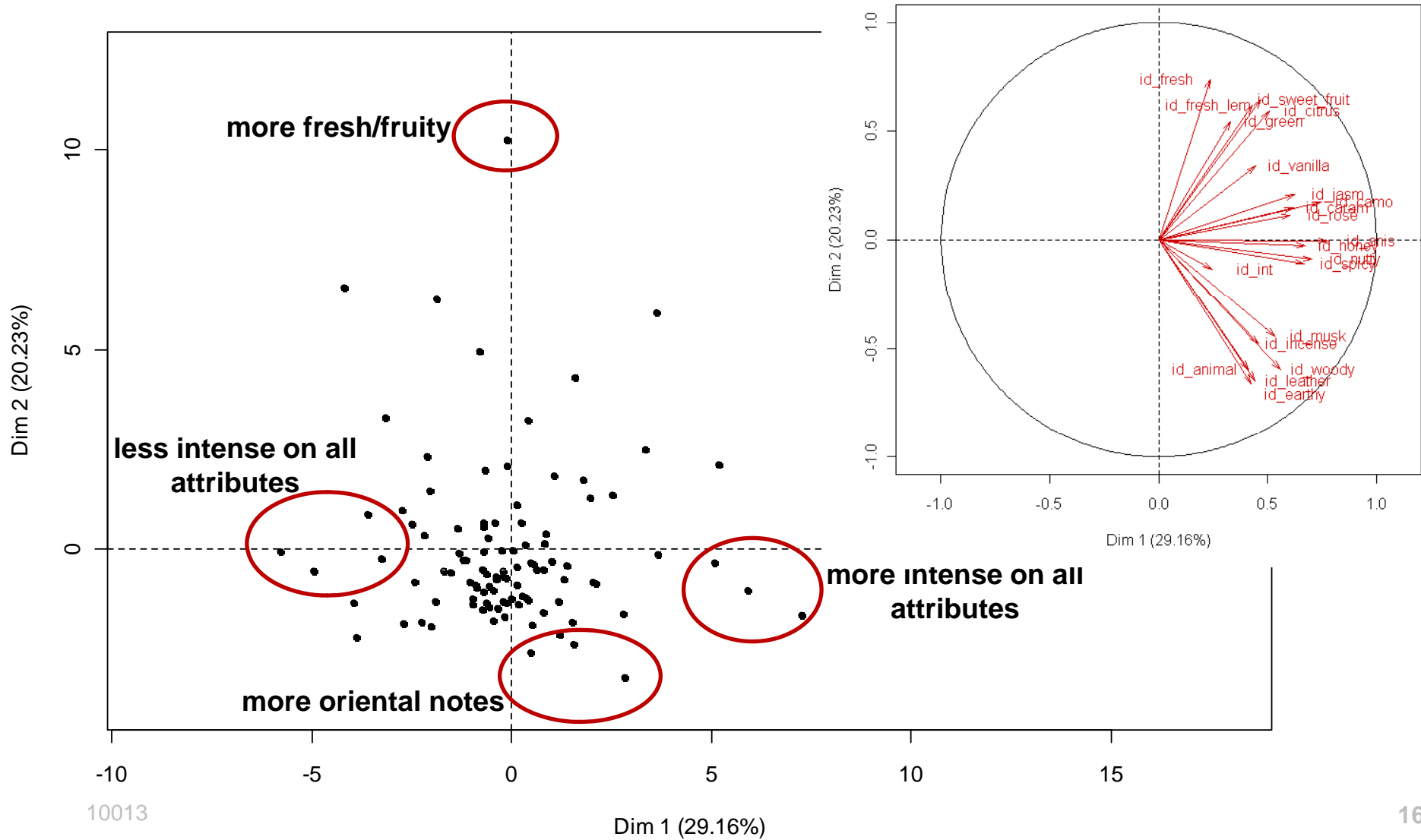
consistency of the data

- what is consistency?
 - for consumers with higher appreciation for the products they perceived as sweeter, the ideal should be described as rather sweet
- how to check for consistency?
 - looking for consistency lies in the study of the relationship between hedonic data and sensory profile, within the ideal product space
 - it is an indirect demonstration, as it needs to study more deeply the relationship between pairs of table
 - ideal and hedonic
 - ideal and sensory
 - hedonic and sensory

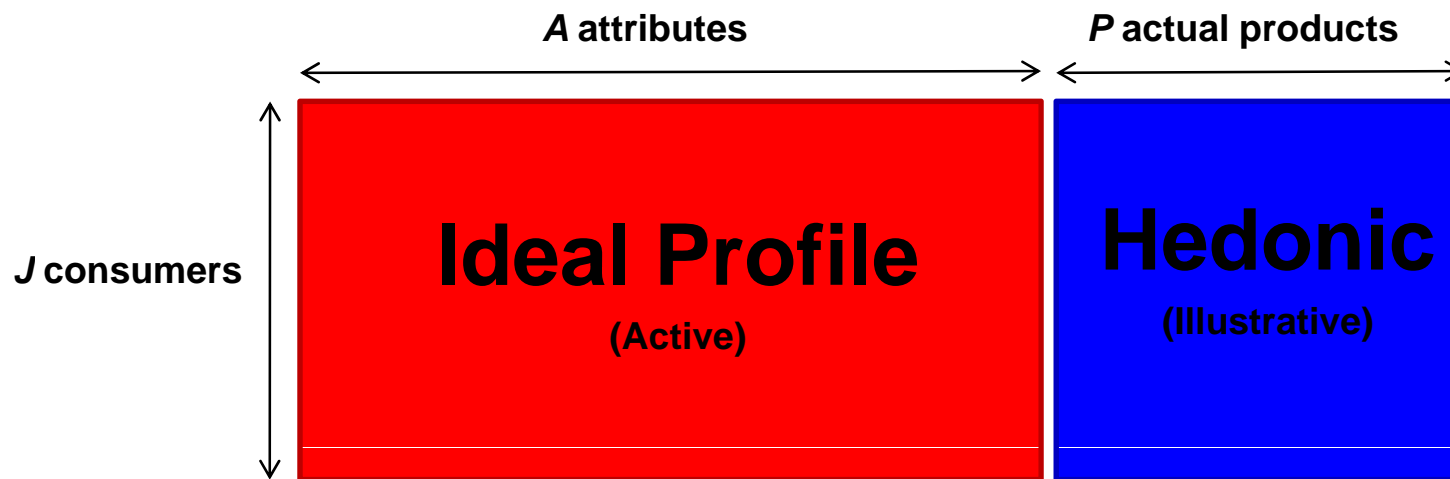
consistency of the data



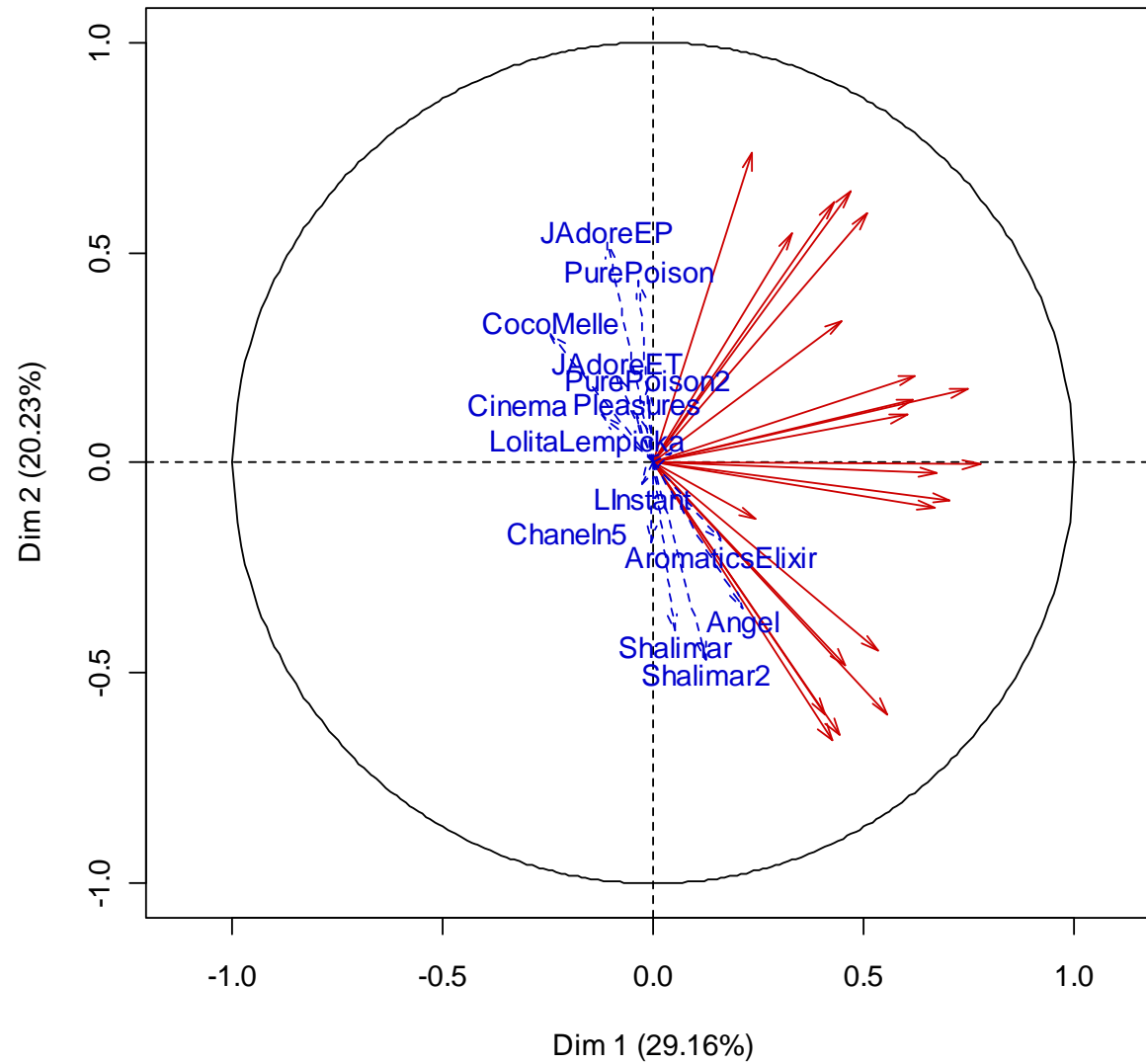
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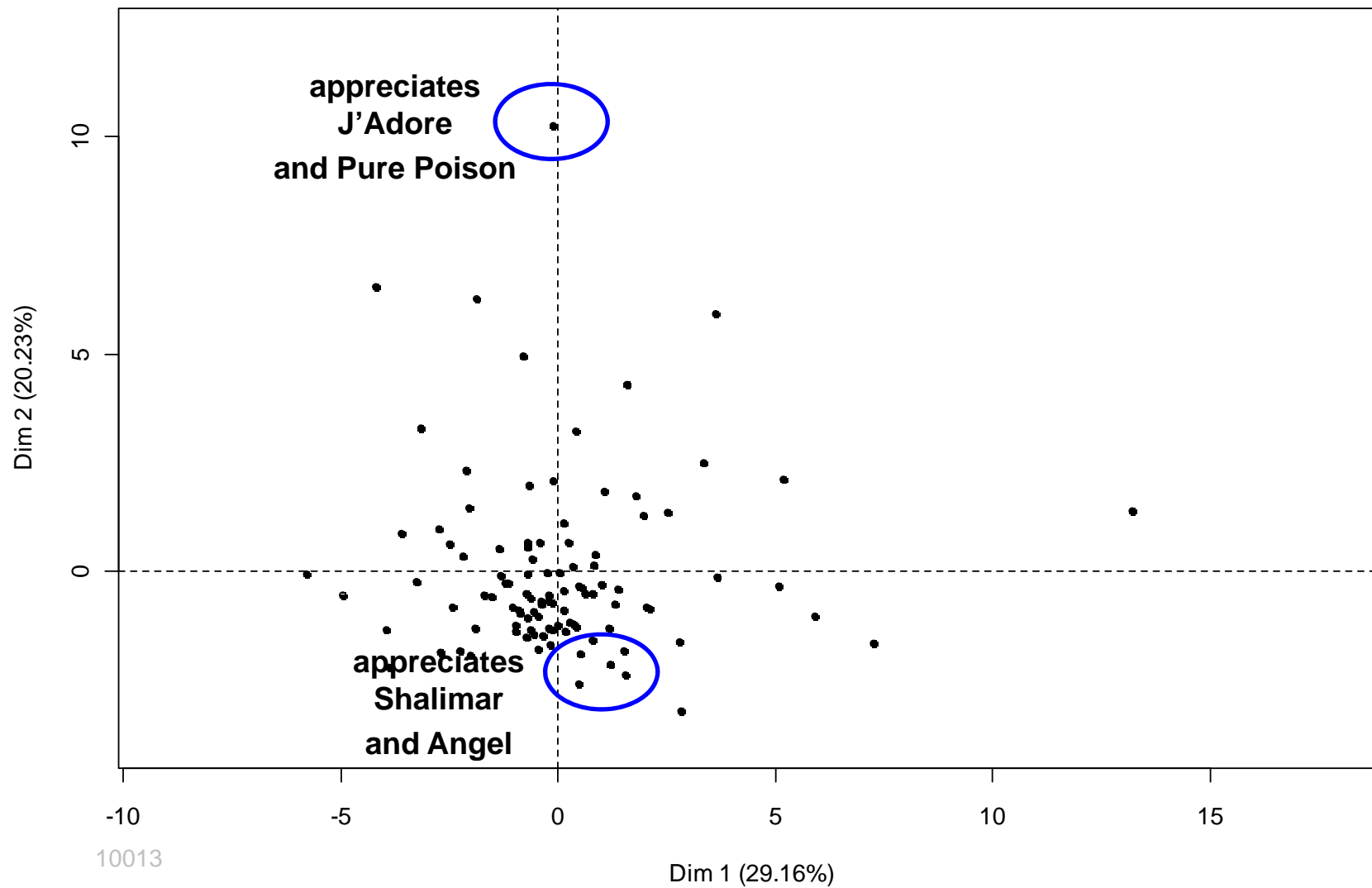
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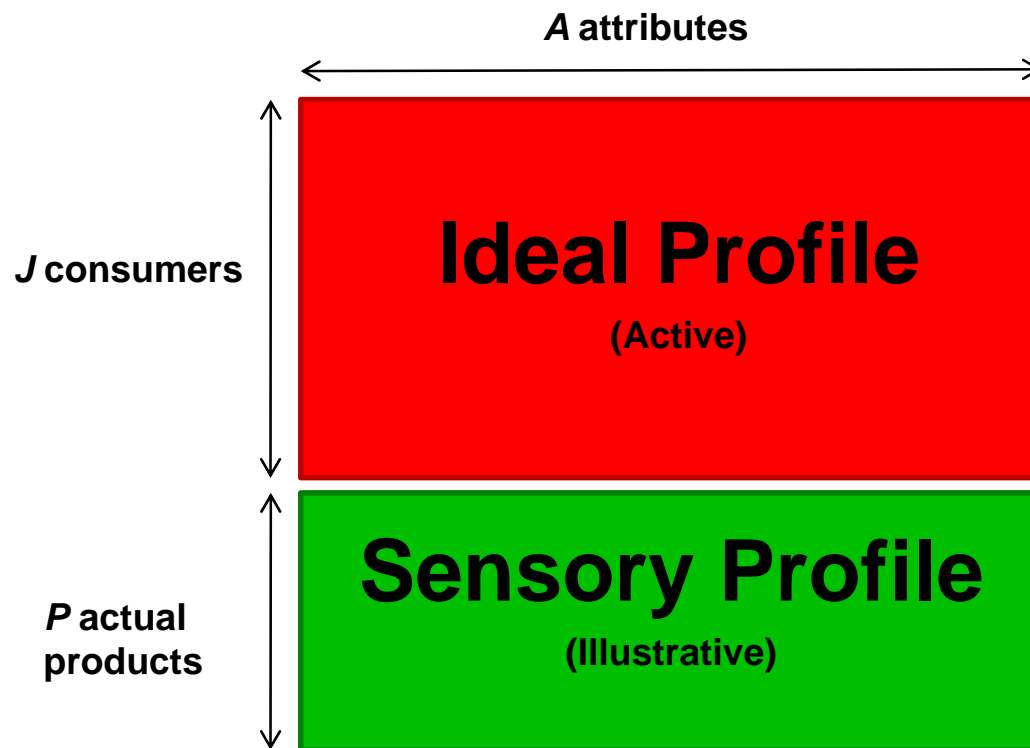
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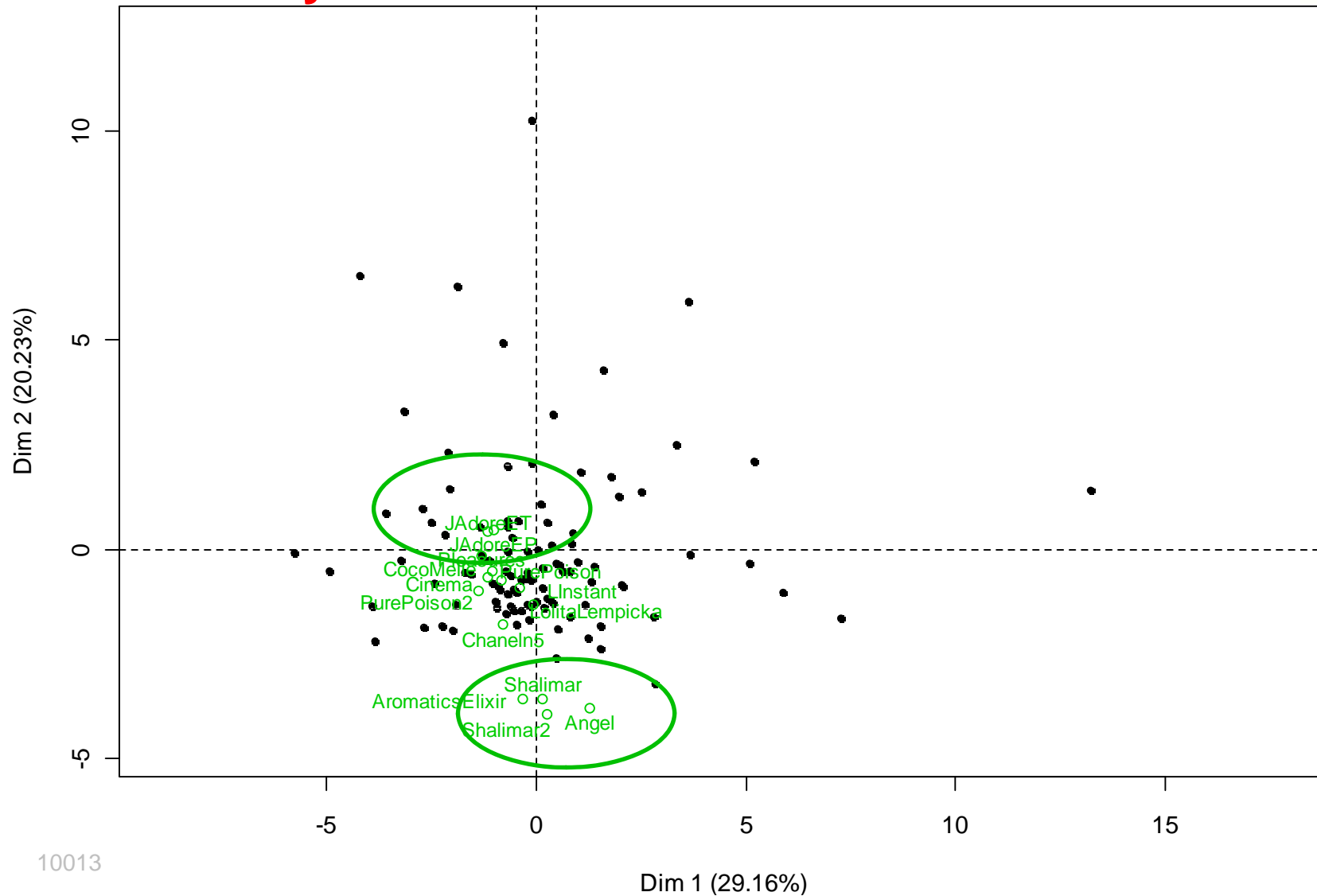


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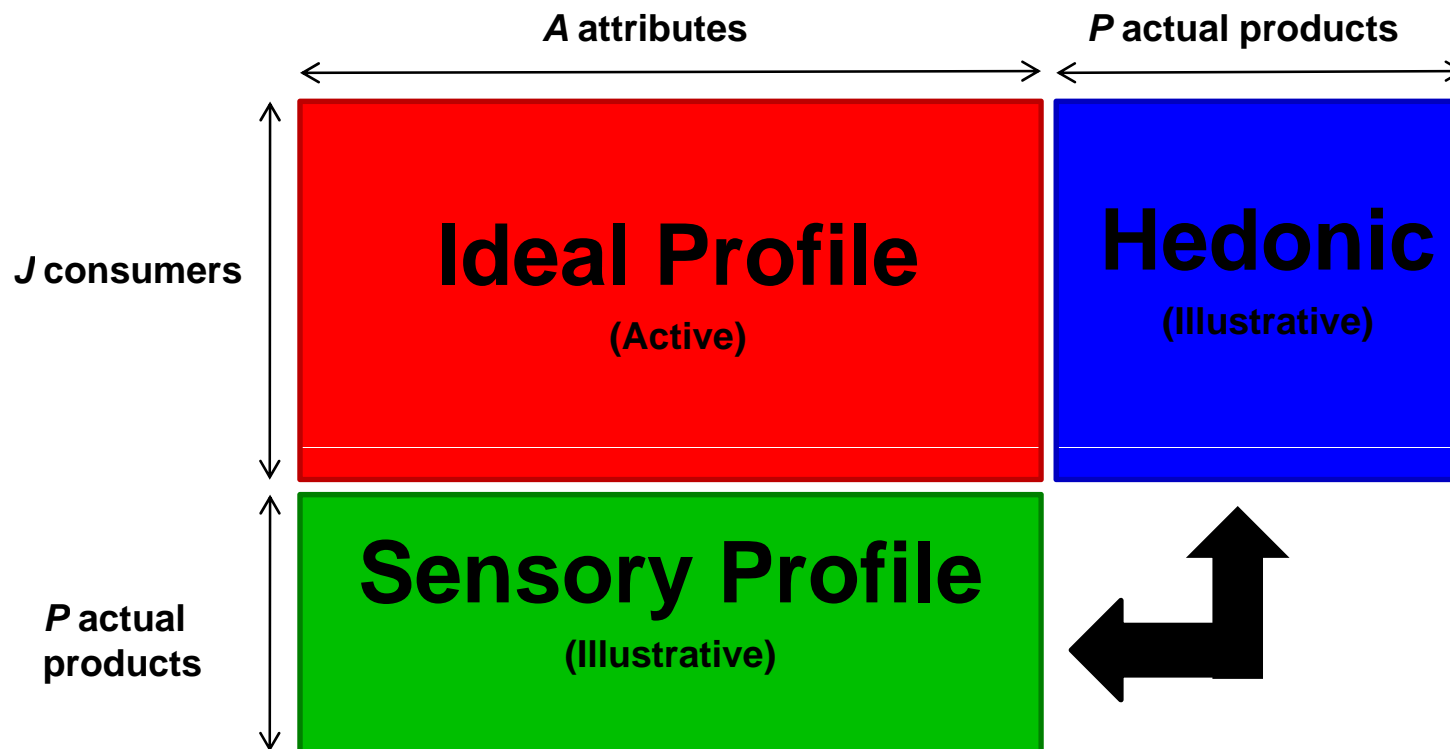


the actual product p is considered as a particular consumer who would have the product p as ideal

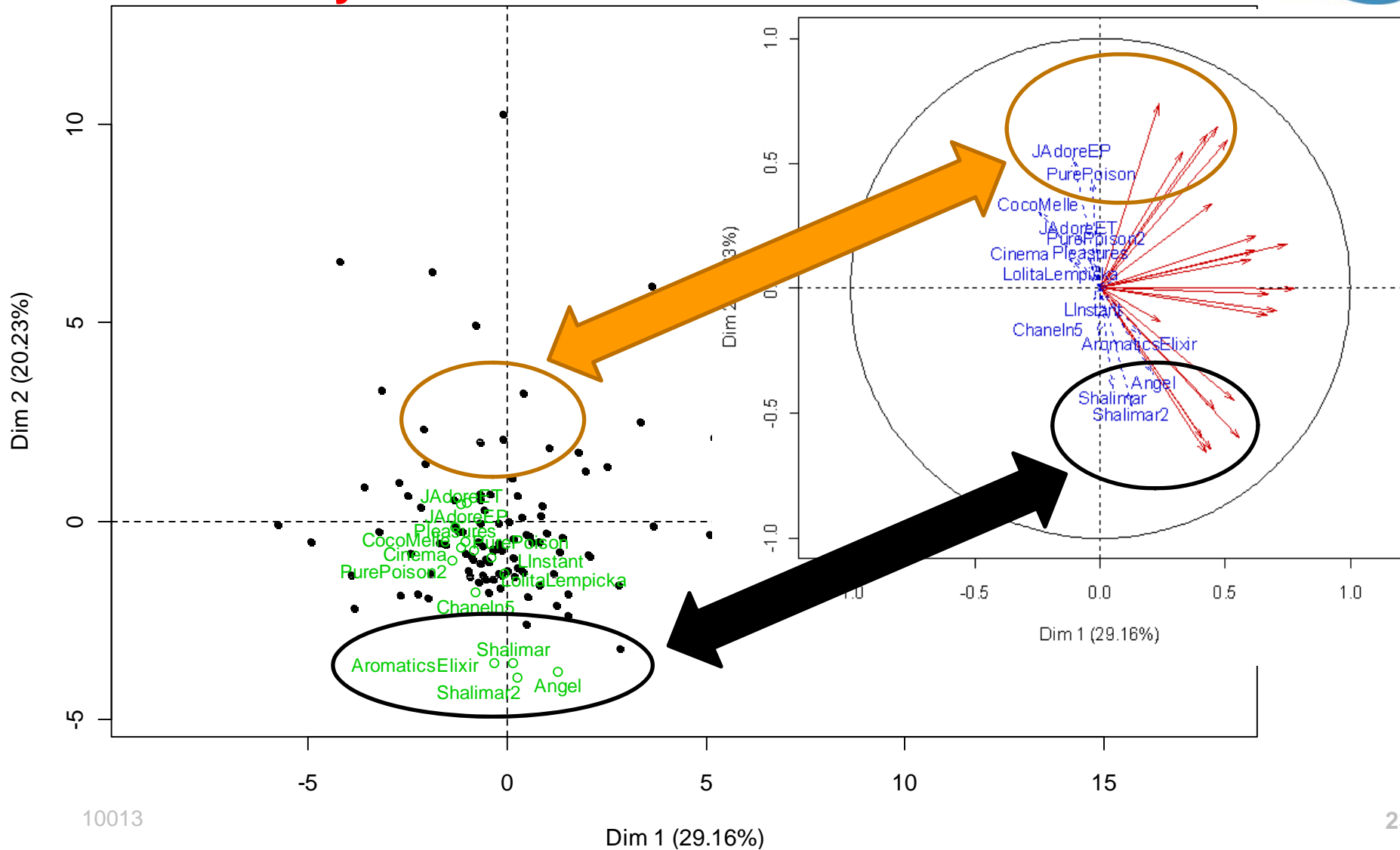
consistency of the data



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consistency of the data

- the strong link between the configurations, and especially between the sensory profiles and the liking within the ideal space, shows that the data are consistent
 - when a consumer has an ideal close to an actual product

general conclusions

- Ideal Profiles can be a difficult task for consumers, but still:
 - most of them are able to describe their ideals, although some of them struggle
 - the ideals are not a random description
 - the ideals are consistent with the sensory description and with the liking of the products
- all these statements validate the description of ideals by consumers
 - this can aid the improvement of the actual products
 - it has the advantage for each consumer, each product and each attribute, the exact difference between the perceived and the ideal intensities is known

THANK YOU

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