

Confrontation of products spaces based on consumers' spontaneous data and experts' conventional profile.

Application to the sensory evaluation of twelve luxury fragrances

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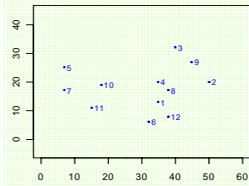
INTRODUCTION

This study tries to evaluate the consumers' ability to agree on a consistent products space and compares consumers' products space to experts' one.

In this context, sensory analysis sessions have been conducted with a products space made of twelve luxury fragrances [1] [2].



CONSUMERS' DATA: NAPPING



- 99 consumers
- Spontaneous data
- 2 fragrances are close if they are perceived as similar and far when they are judged differently

EXPERTS' CONVENTIONAL PROFILE

		0	5	10	
SPICY	Not spicy	-----			Very spicy
	Not green	-----			Very green
MARINE NOTES	No marine	-----			Very marine

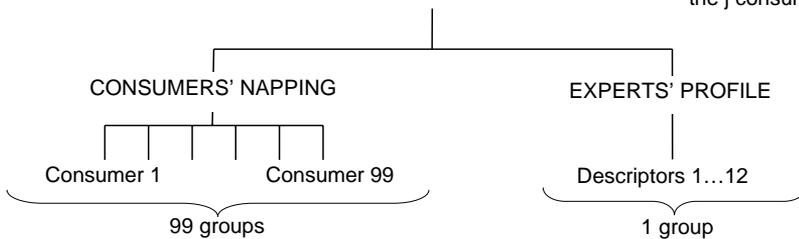
- 12 experts at fragrances
- 2 sessions
- 12 compulsory descriptors
- Scaling evaluation

METHODOLOGY: HMFA

Products	Napping						Conventional profile					
1	X1	Y1	...	X99	Y99		Descriptor 1	...	Descriptor 12			
...												
12			X_{ij}							X_{ik}		

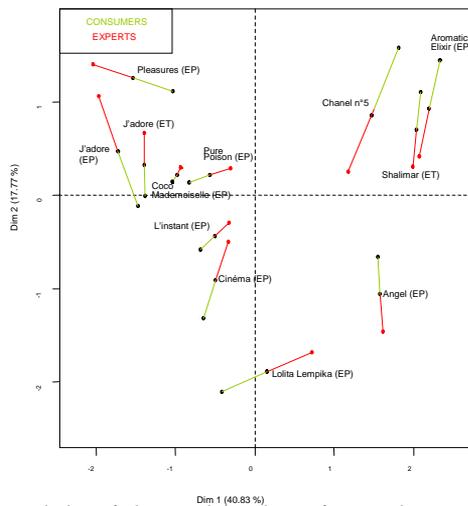
X_{ij} : coordinate of the i product for the j consumer

X_{ik} : mean score for the k descriptor and the i product

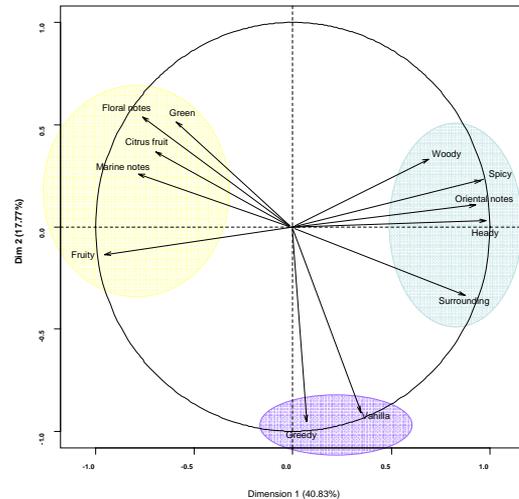


The HMFA (Hierarchical Multiple Factor Analysis)[3], by attributing the same weight to the different groups on each level of the hierarchy, helps us to confront the two points of view on the same graph.

RESULTS



- The proximity of the partial points of a product conveys a strong consensus between experts and consumers, especially for the fragrances Coco Mademoiselle, Pure Poison and L'Instant.
- The products space given by consumers is nearly the same as the one given by experts.



- The descriptors used by experts are particularly well correlated with the two first axes, hence a clear interpretation.
- 3 groups are visible:
 - Woody, spicy and oriental fragrances: Aromatics Elixir, Shalimar
 - Floral, Fresh and citrus fragrances: J'adore, Pleasures
 - Vanilla and greedy fragrances: Lolita Lempicka

CONCLUSION

- Non-trained and inexperienced consumers are able to find an agreement on the description of twelve luxury fragrances by using a very spontaneous data collection method.
- Moreover the HMFA highlights that differences made by consumers are the same than those made by the experts, both obtained products spaces distinguish the same three groups.
- An interesting extension of this study is the analysis of textual data given by the consumers for the characterisation of the products.

References:

- [1] Gazano G., Ballay S., Eladan N., Sieffermann J.M. (2005). Flash Profile and fragrance research: using the words of the naive consumers to better grasp the perfume's universe In: *ESOMAR Fragrance Research Conference*, 15-17 May 2005, New York, NY.
- [2] Gazano G., Ballay S., Sieffermann J.M. (2006). Transposing fragrance olfactory research into the consumers' worlds and words. In: *24th Congress of the International Federation of Societies of Cosmetic Chemists* (October 16-19, 2006, Osaka, Japan), PD-162, 9 pp.
- [3] Le Dien S. & Paqès J. (2003). Hierarchical Multiple Factor Analysis: application to the comparison of sensory profiles. *Food Quality and Preference*, 14, pp. 397-403.