# Developing An Emotional Lexicon Using Landscape Segmentation Analysis (LSA) and Graph Theoretic Analysis (GTA)

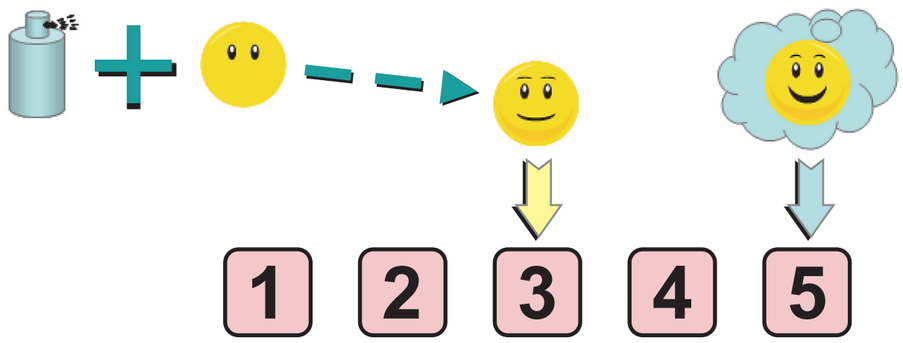
John M. Ennis and Benoît Rousseau
The Institute for Perception, Richmond, VA
mail@ifpress.com ● www.IFPress.com

## Observation

Emotion research requires the development of emotional lexicons that best span the emotional space

## Example

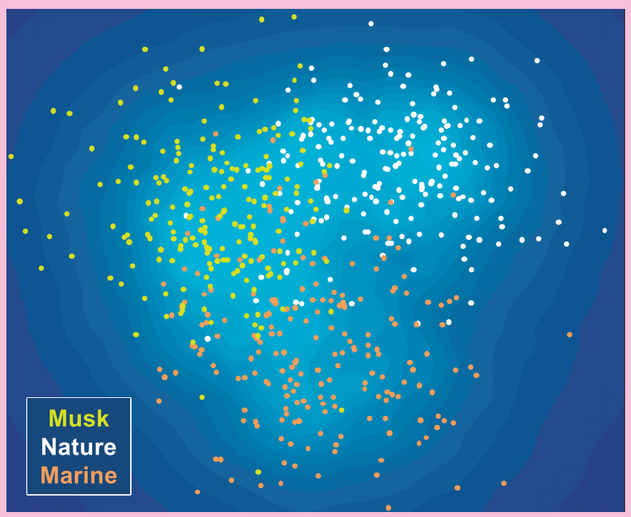
600 consumers evaluate their emotional response to one of three deodorant spray fragrances




Five point scale ratings of 50 emotions elicited by each fragrance:

**"How much did this fragrance make you feel…?"**

## LSA representation of consumers and emotions










**Use of GTA to select best set of 30 emotions (23 positive and 7 negative) that span the space**

## *Using GTA to determine an optimal 30 emotion lexicon from 50 emotion terms*

References and Notes

1. King, S. C., and Meiselman, H. L. (2010). Development of a method to measure consumer emotions associated with foods. *Food Quality and Preference,* **21**(2), 168-177.
2. King, S. C., Meiselman, H. L., and Carr, T. B. (2010). Measuring emotions associated with foods in consumer testing. *Food Quality and Preference,* **21**(8), 1114-1116.
3. Ennis, D. M. (2001). Drivers of Liking® for multiple segments. *IFPress,* **4**(1), 2-3.
4. Ennis, D. M., and Rousseau, B. (2004). Motivations for product consumption: Application of a probabilistic model to adolescent smoking. *Journal of Sensory Studies,* **19**(2), 107-117.
5. Ennis, D. M., and Rousseau, B. (2004). Product-concept fits. *IFPress,* **7**(3), 2-3.
6. Rousseau, B., Ennis, D. M., and Rossi, F. (2012). Internal preference mapping and the issue of satiety. *Food Quality and Preference,* **24**(1), 67-74.
7. Ennis, J. M., Ennis, D. M., and Fayle, C. M. (2010). Optimum product selection for a Drivers of Liking® project. *IFPress,* **13**(1), 2-3.
8. Ennis, J. M., Fayle, C. M., and Ennis, D. M. (2011). From many to few: A graph theoretic screening tool for product developers. *IFPress,* **14**(2), 3-4.
9. Ennis, J. M., Loss, C. R., Nestrud, M. A., and Rossi, F. (2011). Combinatorial tools in Sensory science and consumer research. *Workshop presented at 2011 Pangborn Sensory Science Symposium.*