



Sensory evaluation...

- *is a scientific discipline used to evoke, measure, analyze and interpret reactions to those characteristics of foods and materials as they are perceived by the senses of sight, smell, taste, touch and hearing.* Sensory Evaluation Division, IFT (1975)

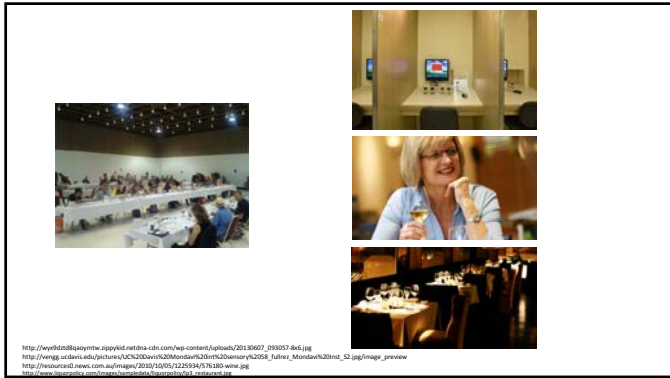


Wine = Coffee

- Complexity – number of volatile and non-volatile compounds
- Processing
 - Fermentation
 - Roasting/Barrel Aging
- Regionality (*terroir*)
- Passionate consumers, experts




http://blog.seattlecoffeegear.com/wp-content/uploads/2009/05/coffee_like_wine_logo.jpg





Region	Medals	Scores	Mean Price (\$)
North Coast (NC)	G, S, NA	94, 88, 82	25
Sonoma (S)	G, S, NA	94, 89, 84	35
Napa (N)	GG, S, NA	98, 90, 83	54
Greater Bay Area (GBA)	G, S, NA	94, 88, 82	30
North Central Coast (NCC)	S, NA	89, 82	12
South Central Coast (SCC)	G, S, B, NA	95, 89, 87, 83	18
South Coast (SC)	GG, S, NA	98, 90, 82	44
Sierra Foothills (SF)	S, B, NA, NA	92, 86, 83, 83	28
Lodi/Woodbridge (LW)	G, S	95, 89	23

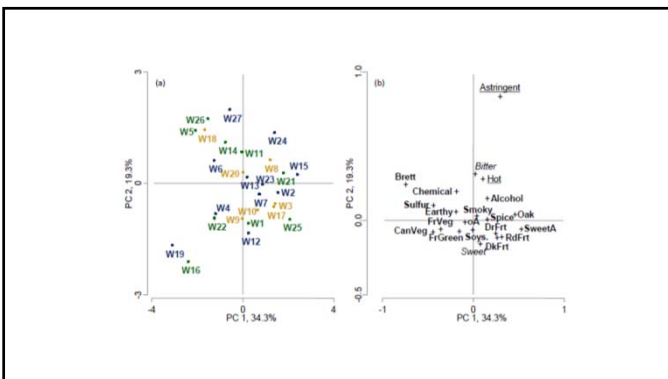


Descriptive Analysis

- 15 panelists (10 female, 37 ± 17 years old)
- 27 wines in triplicate
- 21 aroma terms (17) + 3 taste terms (2) and 3 mouth feel terms (2)
- Overall Aroma, Dark Fruit, Red Fruit,, Sweet Aroma, Fresh Veg, Fresh Green, Smoky, Spicy, Oak, Alcohol, Earthy, Brett, Chemical, Sulfur, Canned Veg, Soy Sauce, Dry Fruit
- Sweet, Bitter
- Astringent, Hot







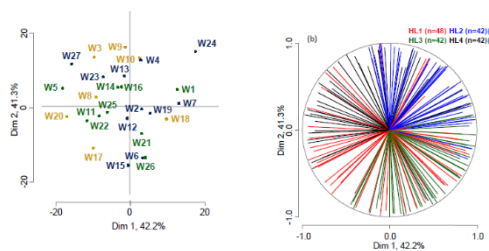
Consumers

- 174 red wine consumers
- 6 wines per consumer using a balanced incomplete block design
- Liking: Unstructured line scale (dislike extremely to like extremely)
- Quality: Unstructured line scale (low quality to high quality)
- Demographics
- Wine Expertise quiz:
 - Low <6/15
 - Medium 7 – 11/15
 - High 12-15/15

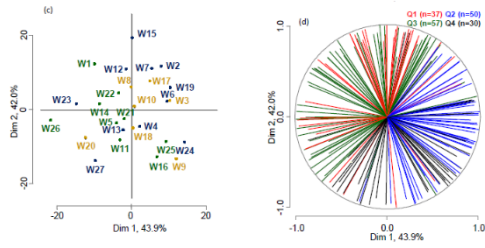




Internal Preference map of Consumer data



Internal Quality Map of Consumer data



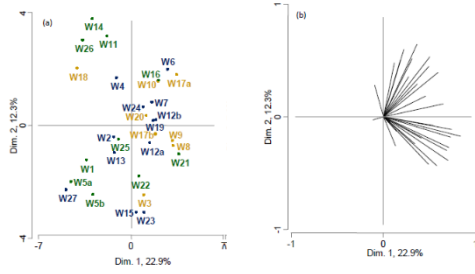
Experts

- 28 experts
- 30 wines (3 blind duplicates) – two separate sets
- Liking: 9 point hedonic scale (dislike extremely through neutral to like extremely)
- Sorted wines into 5 Quality Categories
- Identified attributes associated with High and Low quality
- Demographics

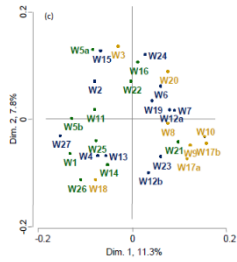




Internal Preference map of Experts Liking Data



Internal Quality map of Experts Sorting data



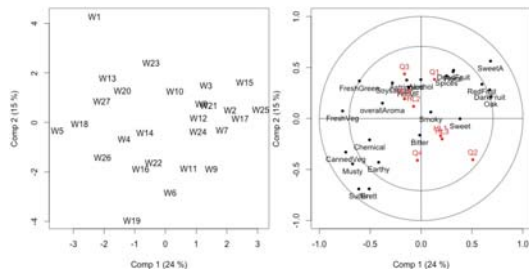
Now lets combine all the sensory data



Correlations with Price, Alcohol content & State Fair Points

- Price
 - significantly **positively** correlated with Hot Mf, Bitter, Brett, Alcohol Content, Astringent
 - significantly **negatively** correlated with Floral, Red Fruit, HL4 cluster
- Alcohol content
 - significantly **positively** correlated with Price, Hot MF
 - Significantly **negatively** correlated with Canned Veg
- Points
 - significantly **positively** correlated with Expert Quality evaluations

DA predicting consumer liking & quality scores



DA predicting expert liking and quality scores

