

# Why sentiment is useful in making business?

Pasi Tapanainen, Ph.D.

Etuma, Chief Scientist, Founder

Connexor, CEO, Founder

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# Company

## **Etuma**

- Automatic service for helping to understand customer needs from written feedback and taking action.
- The service is used by Finnair, Veikkaus, DNA, Elisa, Kesko, among others.

## **Connexor**

- Technology to service providers.
- Customers include Thomson Reuters, SAS Institute, McGrawHill, Etuma.

# Macro-level sentiment data

- Consumer Confidence Index
  - based on data from a monthly survey of 5,000 US households
- University of Michigan Consumer Sentiment Index
  - based on monthly telephone survey of US household data
  - has implications that can affect the value of the dollar, stocks, and bonds

# Financial (news) sentiment

- high-frequency trading
  - makes use of computers to initiate orders, before human traders are capable of processing the information they observe
- ... picking stocks for a portfolio based on the results of news sentiment analysis generated yearly returns of 5% for a low-risk strategy and 12% for a high-risk strategy (Deutsche Bank)

# Document-level sentiment

- brand sentiment, in Web 2.0, Social CRM
- classifying a review/document as either positive or negative, or on a 3-5 star scale
- overall contextual polarity of a document
  - two main methodologies: (1) a statistical or model-based approach by analyzing large quantities of pre-scored material and (2) a large dictionary of pre-scored phrases
- technology-driven

# Aspect-based sentiment analysis

- The love/affection or hate/dislike towards a feature/aspect of a company or a product.
  - A document or sentence may contain several distinct aspect-based sentiments
  - Customer feedback, questionnaires, etc.
- *“The atmosphere was good but the food tasted like soap.”*

# Comparing the sentiments

## Document level

- “4000 people talked about your Brand X this month compared to 3500 last month. 40% of them had a positive opinion, 20% neutral and 40% negative. Women like your products more than men, and people in France dislike them the most.”

## Aspect based

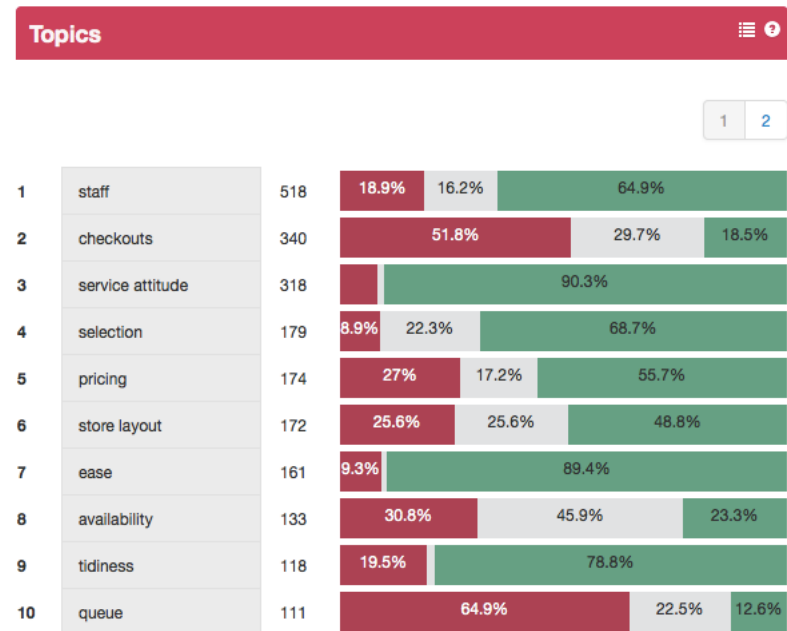
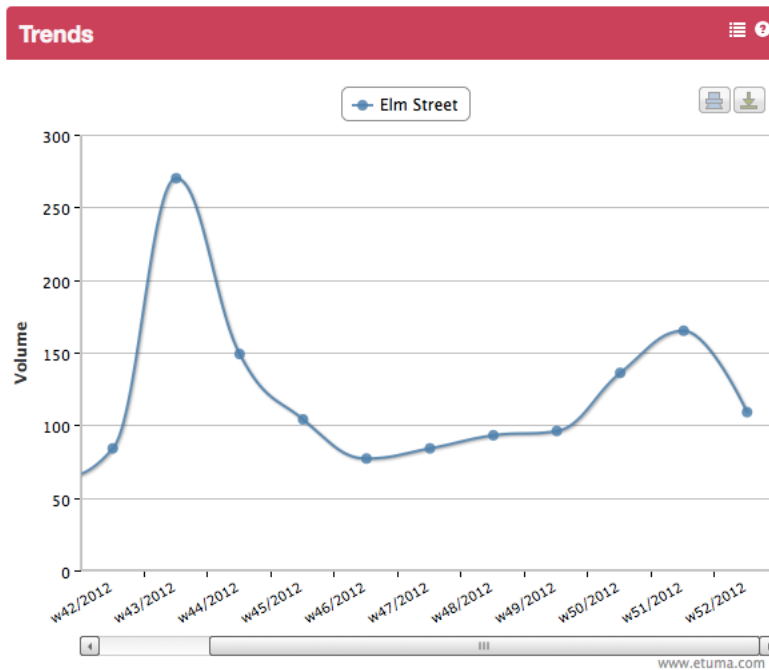
- “4000 people talked about your Brand X this month compared to 3500 last month. 2400 of them were specifically discussing Brand X’s price – 60% had a negative opinion of the price compared to 30% last month. Women were more dissatisfied with Brand X’s advertising, and in France people were most concerned about Brand X’s environmental impact.”



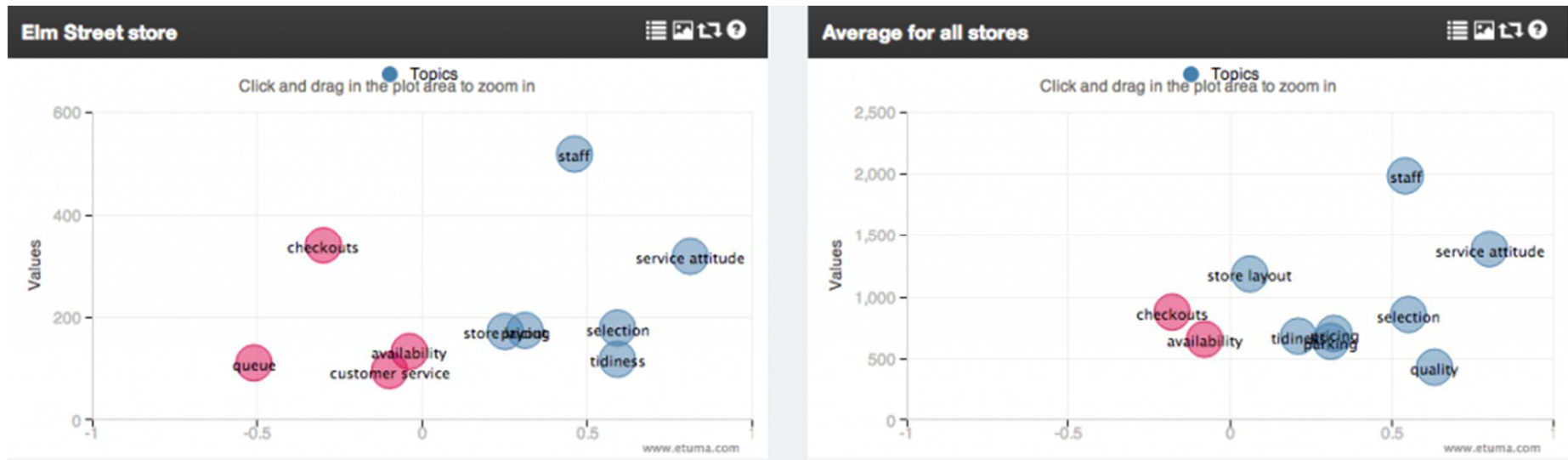
# Insight & Action

- 1) Investigate why there was a jump in dissatisfaction with the price of Brand X: Was there a price increase? Did this price increase affect sales adversely?
- 2) Investigate recent advertising campaigns that may have been offensive to women. Why and how did this happen? What action can be taken to remedy the situation?
- 3) Look into the environmental impact of Brand X. Do customers in France have a misperception (informative marketing campaign needed), or are their concerns valid (possible study on how to reduce this impact)?

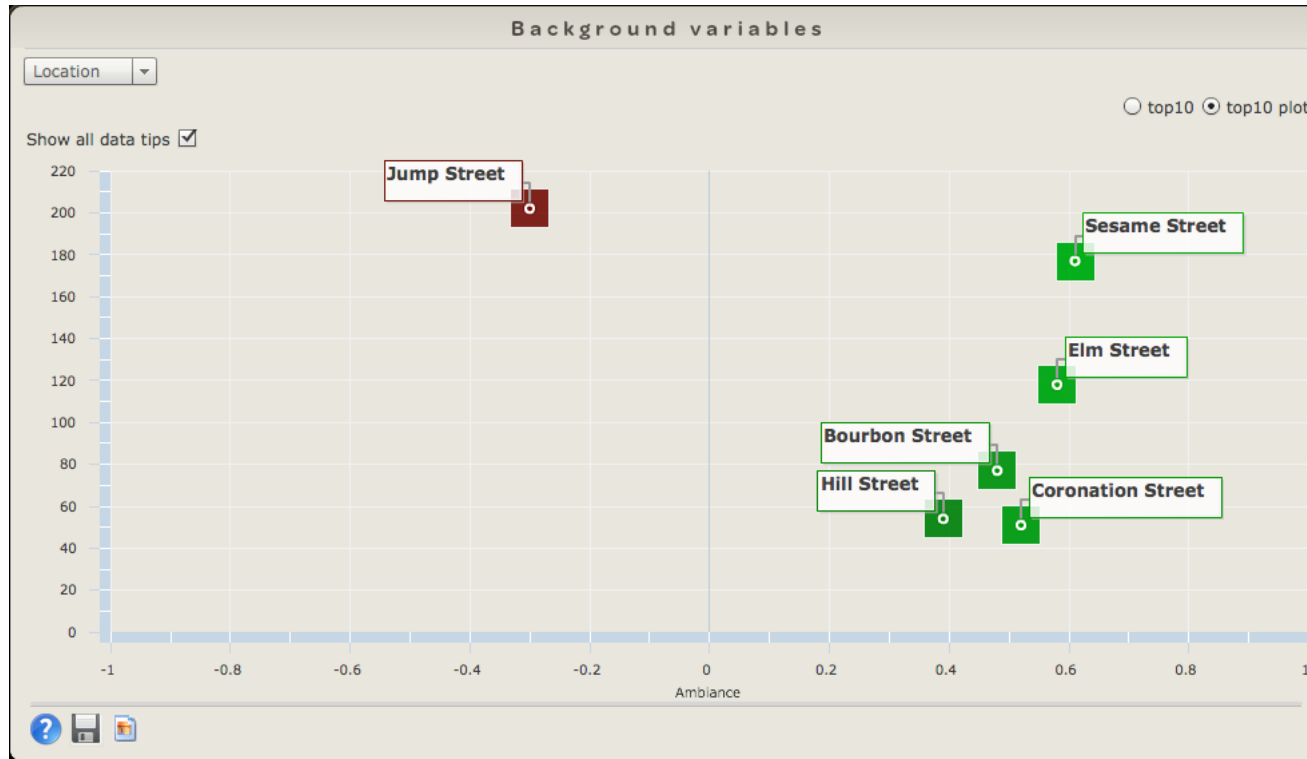
# Finding a syndrome: time (peak) + topic (sentiment)



# Comparing is a must



# Finding the odd one out



# What do we get?

- "10% saving in customer service process"
- "Enabled us for the first time to transfer social media into action"
- Customer quotes from Etuma breakfast meeting Oct 8, 2013.