SentiGeek

Brand & Product Insights via Review Text Analytics & Reviewer Profiling

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LT-Accelerate, 21-22 November 2016

Customer reviews

- 88% have read reviews to determine the quality of a local business (vs. 85% in 2013)

Customer reviews in:

- e-shops
- forums
- online retailers
- e-commerce platforms
- etc.

* https://www.brightlocal.com/learn/local-consumer-review-survey-2014/

Codes used by customers to express experience

Examples from Amazon:

- Verbal message

- I love this phone but the freezing problem really gets me angry

- I've wanted to smash my phone on multiple occasions.

- Punctuation marks – visual sign

- Amazing phone !!!! (cf Amazing phone)

- Emoticons; Emoji – visual signs

- The batery drains too fast... :(

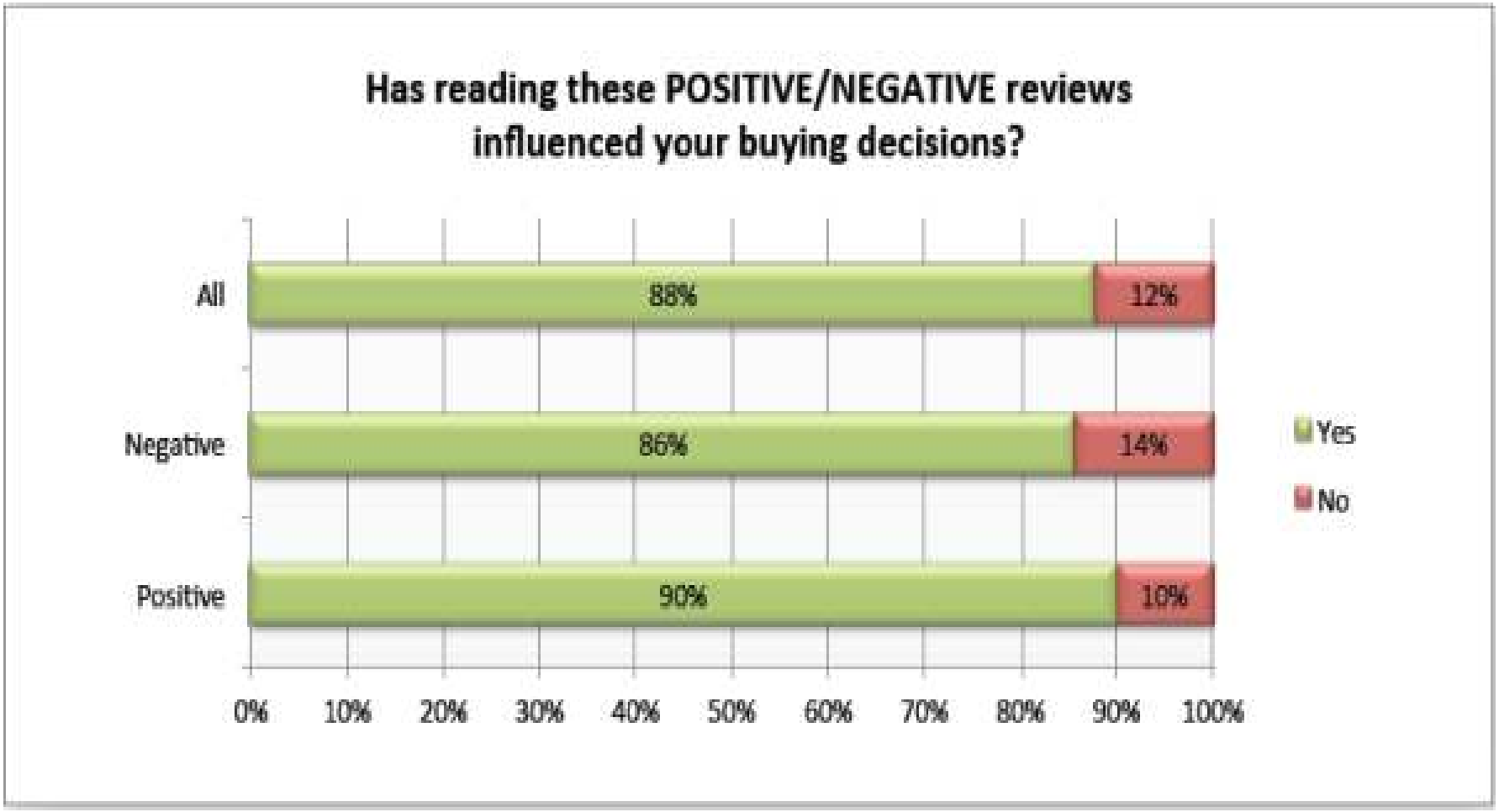
[synergy of verbal message (semantics+grammar+context) & visual signs (ellipsis+emoticon)]

In-depth analysis – Text analytics

Useful results about:

- product development
- marketing
- brand impact
- customer service
- customer communication

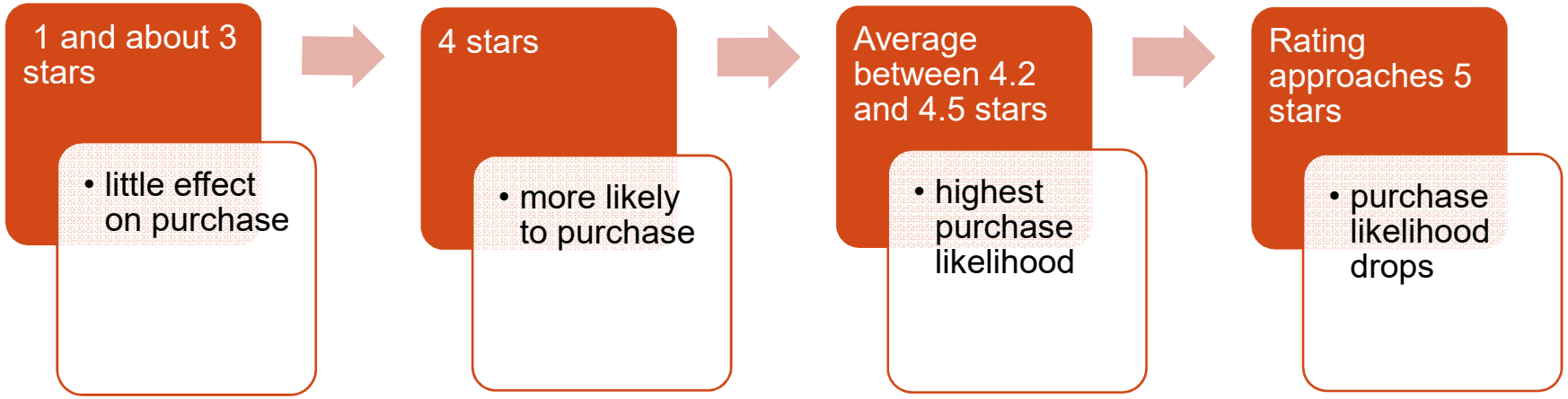
Ratings & consumer behavior



2013 (Source: http://marketingland.com/survey-customers-more-frustrated-by-how-long-it-takes-to-resolve-a-customer-service-issue-than-the-resolution-38756)

How rating influences customers

Ratings & reviews: one of top factors influencing purchase decisions, 2nd after price. (Source: PowerReviews (2014): The Proven Power of Reviews)



Stars: may signify satisfaction **without** providing specific information though.

Source: http://www.powerreviews.com/wp-content/uploads/2016/04/Northwestern-Vol1.pdf

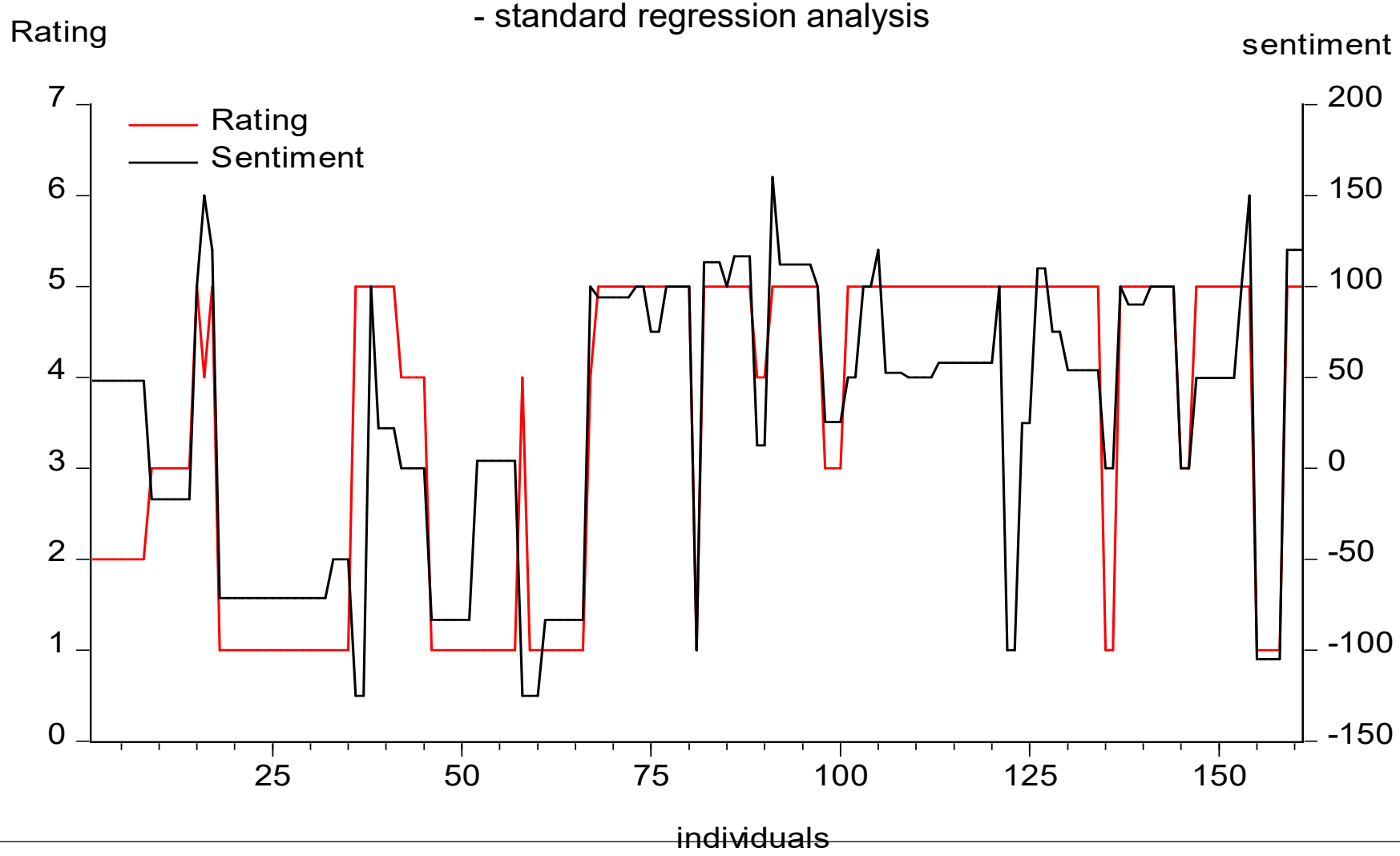
SentiGeek sentiment analysis

- Assigns sentiment value and score to each opinion.
- Connects each opinion with a product or an aspect of the product.
- Constructs sentiment scores for specific characteristics of the product (e.g. camera, battery).
- Connects each opinion with a product/aspect of product and an opinion holder.

Experiment: 161 reviews from Amazon about Samsung Galaxy s6 from 1/1/2016 to 31/3/2016.

SentiGeek sentiment measure vs 5-level product rating

- plot the overall sentiment against rating
- standard correlation coefficient
- standard regression analysis



SentiGeek architecture

- Constructs:
  - Aggregate (for the smartphone as a whole)
  - Disaggregate (for specific aspects of the phone) sentiment indices.

Another experiment with the same sample of 161 reviews about Samsung Galaxy S6.

1st question

1) Is our constructed index of general sentiment significant in explaining consumers purchasing behavior?

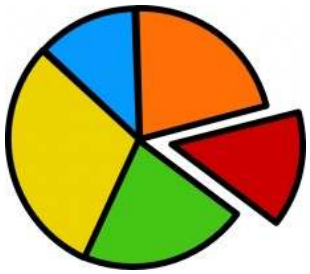
- Yes, it significantly identifies the purchasers of the phone (standard Logit specification)
-

+10 units of sentiment scale

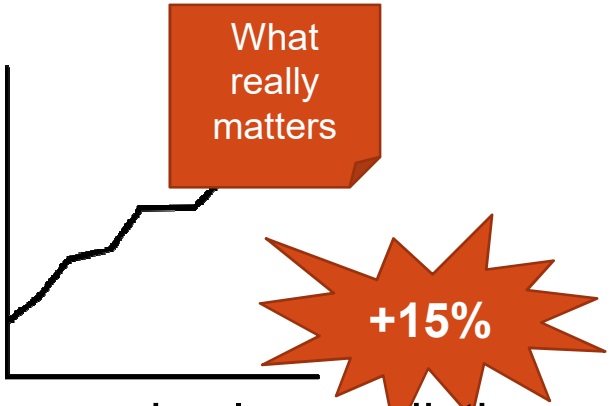
+2% to **buy**

2nd question

2) Can we increase further our explanatory power with respect to consumers purchasing behavior?

- Yes, by “fine-grained” sentiment analysis.
- In the specific experiment: battery & camera were statistically significant.
- 

Aspect-based sentiment analysis



Improved sales prediction accuracy compared to general sentiment analysis

Types of fine-grained information

- Analysis of 1 review:
  - Per sentence
  - Per total review
  - Per opinion holder
- Customer profiles, customer maps
- Results:
  - Domain-specific
  - Opinion holders
  - General
  - Reviewers
- Reports: Customer personas

http://demo.sentigeek.com/brussels/