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Dan Jurafsky



The General Inquirer

Philip J. Stone, Dexter C Dunphy, Marshall S. Smith, Daniel M. Ogilvie. 1966. The General Inquirer: A Computer Approach to Content Analysis. MIT Press

- Home page: <http://www.wjh.harvard.edu/~inquirer>
- List of Categories: <http://www.wjh.harvard.edu/~inquirer/homecat.htm>
- Spreadsheet: <http://www.wjh.harvard.edu/~inquirer/inquirerbasic.xls>
- Categories:
 - Positiv (1915 words) and Negativ (2291 words)
 - Strong vs Weak, Active vs Passive, Overstated versus Understated
 - Pleasure, Pain, Virtue, Vice, Motivation, Cognitive Orientation, etc
- Free for Research Use



LIWC (Linguistic Inquiry and Word Count)

Pennebaker, J.W., Booth, R.J., & Francis, M.E. (2007). Linguistic Inquiry and Word Count: LIWC 2007. Austin, TX

- Home page: <http://www.liwc.net/>
- 2300 words, >70 classes
- **Affective Processes**
 - negative emotion (*bad, weird, hate, problem, tough*)
 - positive emotion (*love, nice, sweet*)
- **Cognitive Processes**
 - Tentative (*maybe, perhaps, guess*), Inhibition (*block, constraint*)
- **Pronouns, Negation** (*no, never*), **Quantifiers** (*few, many*)
- \$30 or \$90 fee



MPQA Subjectivity Cues Lexicon

Theresa Wilson, Janyce Wiebe, and Paul Hoffmann (2005). Recognizing Contextual Polarity in Phrase-Level Sentiment Analysis. Proc. of HLT-EMNLP-2005.

Riloff and Wiebe (2003). Learning extraction patterns for subjective expressions. EMNLP-2003.

- Home page: http://www.cs.pitt.edu/mpqa/subj_lexicon.html
- 6885 words from 8221 lemmas
 - 2718 positive
 - 4912 negative
- Each word annotated for intensity (strong, weak)
- GNU GPL



Bing Liu Opinion Lexicon

Minqing Hu and Bing Liu. Mining and Summarizing Customer Reviews. ACM SIGKDD-2004.

- [Bing Liu's Page on Opinion Mining](#)
- <http://www.cs.uic.edu/~liub/FBS/opinion-lexicon-English.rar>
- 6786 words
 - 2006 positive
 - 4783 negative



SentiWordNet

Stefano Baccianella, Andrea Esuli, and Fabrizio Sebastiani. 2010 SENTIWORDNET 3.0: An Enhanced Lexical Resource for Sentiment Analysis and Opinion Mining. LREC-2010

- Home page: <http://sentiwordnet.isti.cnr.it/>
- All WordNet synsets automatically annotated for degrees of positivity, negativity, and neutrality/objectiveness
- [estimable(J,3)] “may be computed or estimated”
Pos 0 Neg 0 Obj 1
- [estimable(J,1)] “deserving of respect or high regard”
Pos .75 Neg 0 Obj .25



Disagreements between polarity lexicons

Christopher Potts, [Sentiment Tutorial](#), 2011

	Opinion Lexicon	General Inquirer	SentiWordNet	LIWC
MPQA	33/5402 (0.6%)	49/2867 (2%)	1127/4214 (27%)	12/363 (3%)
Opinion Lexicon		32/2411 (1%)	1004/3994 (25%)	9/403 (2%)
General Inquirer			520/2306 (23%)	1/204 (0.5%)
SentiWordNet				174/694 (25%)
LIWC				



Analyzing the polarity of each word in IMDB

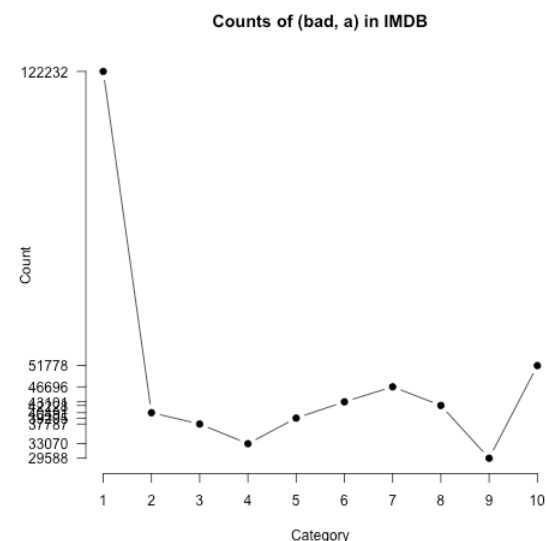
Potts, Christopher. 2011. On the negativity of negation. SALT 20, 636-659.

- How likely is each word to appear in each sentiment class?
- Count("bad") in 1-star, 2-star, 3-star, etc.
- But can't use raw counts:

- Instead, **likelihood**:
$$P(w | c) = \frac{f(w, c)}{\sum_{w \in c} f(w, c)}$$

- Make them comparable between words

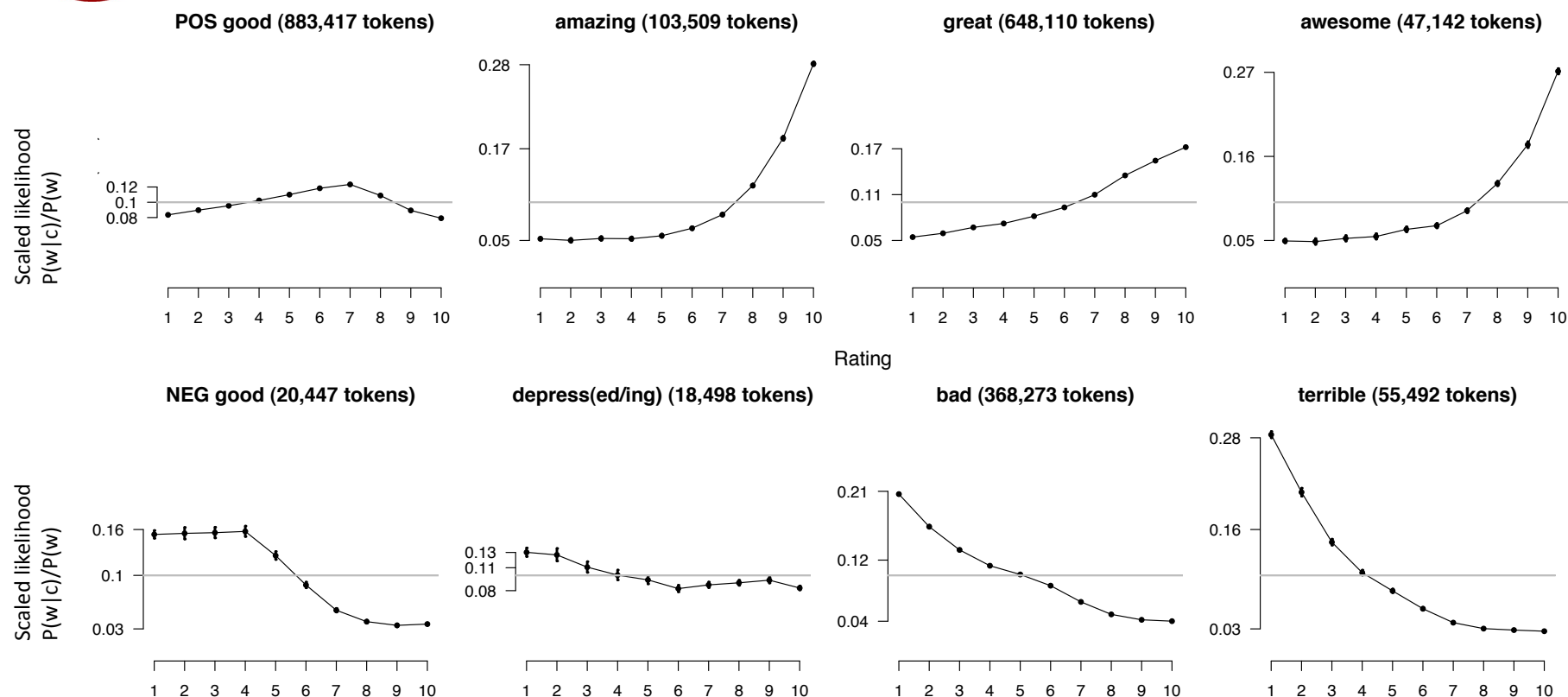
- **Scaled likelihood**:
$$\frac{P(w | c)}{P(w)}$$





Analyzing the polarity of each word in IMDB

Potts, Christopher. 2011. On the negativity of negation. SALT 20, 636-659.





Other sentiment feature: Logical negation

Potts, Christopher. 2011. On the negativity of negation. *SALT* 20, 636-659.

- Is logical negation (*no*, *not*) associated with negative sentiment?
- Potts experiment:
 - Count negation (*not*, *n't*, *no*, *never*) in online reviews
 - Regress against the review rating

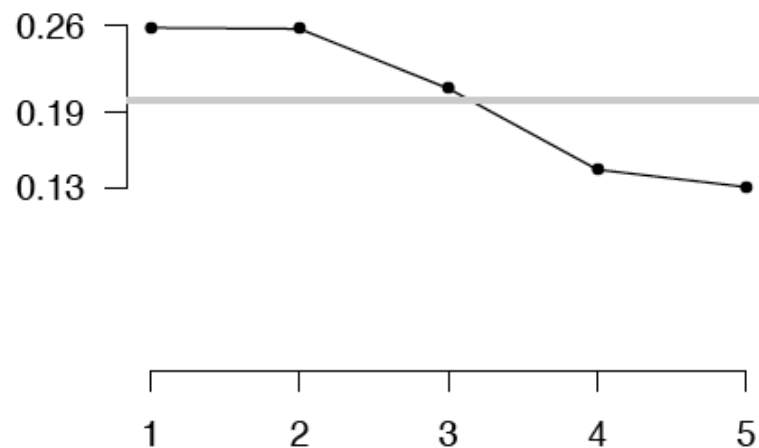
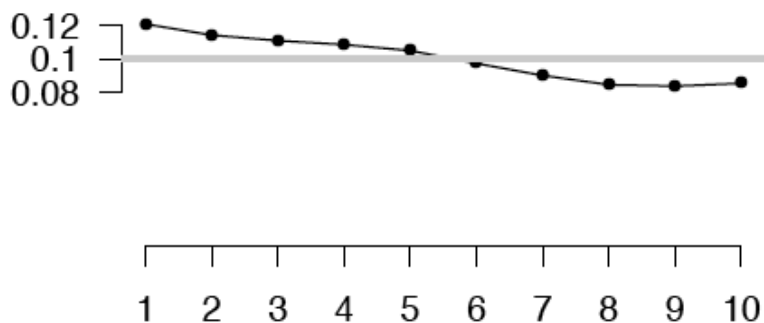


Potts 2011 Results: More negation in negative sentiment

IMDB (4,073,228 tokens)

Five-star reviews (846,444 tokens)

Scaled likelihood
 $P(w|c)/P(w)$



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