# Learning Sentiment Polarity of Multiword Expressions

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#### What?

- Previous work
  - Contextual polarity of single words
- Our work
  - Contextual polarity of multiword expressions
- MWE = multiple words that are one single lexical item.
  - o throw up, make out, kick the bucket
- Train a classifier that can find sentiment of MWEs

### Why?

- Noncompositional semantics == noncompositonal polarity
  - Problem: sentiment(playing with fire) != sentiment(play) + sentiment(with) + sentiment(fire)
  - Solution: special classifier
- Noncompostional semantics == hard to detect
  - Kick the bucket vs Kick the ball
  - o One approach is to use semantic context (a la lesk)
  - o Maybe "polarity context" will help us detect them?

#### How?

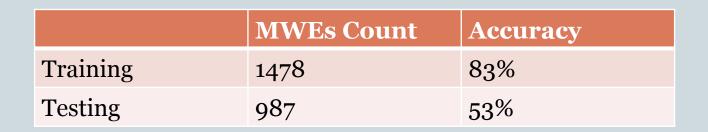
- Based off of the paper Recognizing Contextual Polarity in Phrase-Level Sentiment Analysis by Wilson et al.
- Create a list of MWEs from the figurative language category of Wiktionary.
- Treat the sentiment of these expressions from the Stanford Sentiment Treebank as the gold standard.
- Using the same corpus used to build the Treebank, create a list of contextual features for each MWE.
- Use these features and the gold standard to train a classifier.

#### Features

- POS
- Prior polarity (General Inquirer)
- Previous/next 1 and 2 words
- Previous/next POS
- Contains intensifier?
- Sentence has pronoun?
- Sentence has modal?

- Adjective count
- Adverb count
- Weak/strong subjectivity clue count (MPQA)
- Subjective modifier count

## **Progress**



	Negativ e	Very Negativ e	Neutral	Positive	Very Positive	Total
Negative	173	0	60	87	0	320
Very Negative	3	0	1	2	0	6
Neutral	72	0	187	87	0	348
Positive	78	0	68	162	0	308
Very Positive	1	О	3	2	О	5

#### This week

#### Things we will do

- o 2 classifiers
  - Binary: Neutral vs polar
  - Positive vs Very Positive vs Very Negative vs Negative
- Feature Ablation
- Use definitions from Wiktionary
  - Playing with fire -> in a dangerous situation
- Things we wont do
  - Incorporate sense information
    - X Kick the bucket (fig.) vs Kick the bucket (lit.)