

Meaning change in words

*“you heard it on the **wireless** at the time,
but you couldn’t never see it like you do on the television now”**

Studying changes in word meaning by integrating
statistical NLP outcomes with Wordnet

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CWI

*Credits: <http://www.bl.uk/learning/langlit/sounds/changing-voices/lexical-change/>

Combining statistical NLP outcomes with WordNet

background information for
+/- 8.900 of these words:

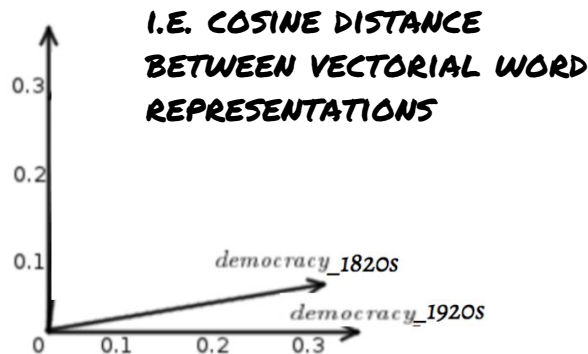
- **Meanings**
i.e. synsets
- **Parts-of-speech**
e.g. adjective
- **Semantic types**
e.g. process noun
- **Relations with other words**
e.g. hypernymy



10.000 words and scores of their degree of semantic change
between pairs of decades (1810^s-2000^s)

democracy, writings, yellow, four,
woods, preface, aggression, marching,
looking, granting, eligible, electricity,
rouse, originality, lord, meadows,
sinking, hormone, regional, pierce,
appropriation, foul, politician, bringing,
disturb, recollections, prize, wooden,
persisted, succession, immunities,
reliable, charter, specially, nigh, tired,
hanging, bacon, pulse, empirical,
elegant, second, valiant, sustaining,
sailed, errors, relieving, thunder, ...

e.g. “democracy” 1820^s vs. 1920^s



PRINCETON UNIVERSITY

WordNet
A lexical database for English



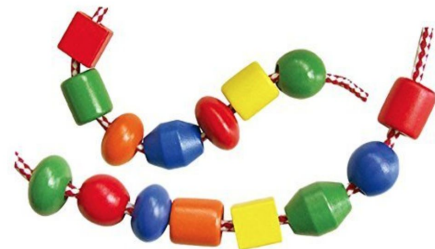
**HistWords:
Word Embeddings for Historical Text**

William L. Hamilton, Jure Leskovec, Dan Jurafsky

Example applications

ARE WORDS OF SOME SEMANTIC CATEGORIES MORE SUBJECT TO CHANGE THAN OTHERS?

Mean change score	Domain	Mean change score	Domain
0.909	noun.process	0.814	verb.body
0.872	noun.phenomenon	0.791	noun.animal
0.869	noun.event	0.784	noun.food
0.867	noun.act	0.778	noun.feeling
0.86	noun.possession	0.737	verb.weather



AND ALSO:

DO MORE POLYSEMOUS WORDS AND LESS POLYSEMOUS WORDS CHANGE AT A DIFFERENT RATE?

DO WORDS OF DIFFERENT LINGUISTIC CATEGORIES SHOW DIFFERENT DEGREES OF CHANGE?

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INTERESTED? GOT USE CASES? PLEASE COME CHAT WITH US!