

A Lesk-inspired Unsupervised Algorithm for Lexical Choice from WordNet Synsets

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Lesk* WSD

Talking with your hands is a sign of passion

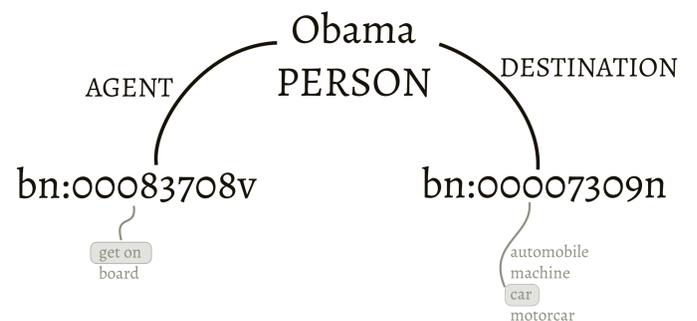
exchange thoughts; talk with
express in speech
use language
reveal information
deliver a lecture or talk

the (prehensile) extremity of
the superior limb
a hired laborer on a farm
or ranch
something written by hand
ability
a position given by its location
to the side of an object
the cards held in a card game
by a given player at any given time
one of two sides of an issue

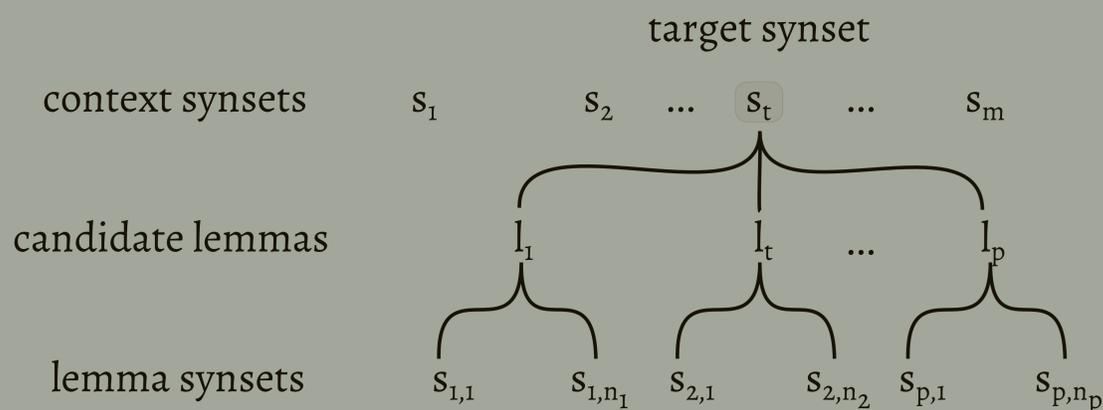
a perceptible indication of something
not immediately apparent
a public display of a message
any nonverbal action or gesture
that encodes a message
structure displaying a board on
which advertisements can be posted
one of 12 equal areas into which
the zodiac is divided

a strong feeling or emotion
the trait of being intensely
emotional
something that is
desired intensely
an irrational but irresistible
motive for a belief or action
a feeling of strong
sexual desire

Lexical Choice



Ksel

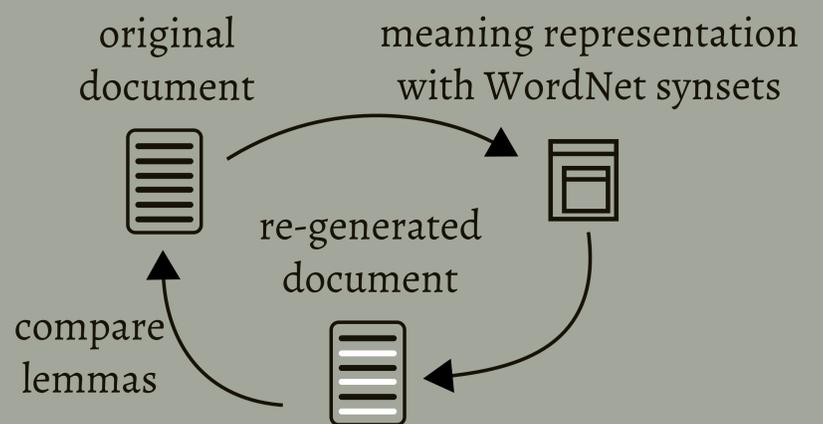


$$s_{LS}(l_j, s_i) = f_1(\text{sim}(s_1, s_{j,k}) : 1 \leq k \leq n_j)$$

$$s_{LC}(l_j, C) = f_2(s_{LS}(l_j, s_i) : s_i \in C, 1 \leq i \leq m)$$

$$l_t = \arg \max_j s_{LC}(l_j, C)$$

f_1, f_2 { max
mean
median } sim { path similarity
Leacock & Chodorow
Wu & Palmer
Resnik's
Jiang
Lin }



- 1,000 documents from the Groningen Meaning Bank
- Nouns annotated with WordNet 3.0 synsets
- 54 combinations of parameters

*Michael Lesk (1986)

Automatic sense disambiguation using machine readable dictionaries: How to tell a pine cone from an ice cream cone.
In Proceedings of the 5th Annual International Conference on Systems Documentation, SIGDOC '86

Method	Accuracy
Random	0.552
Most Frequent Lemma	0.748
Ksel	0.776

