Semantic Measures

Semantic Analysis

- *Name Entity Recognition (NER)* is a process of information extraction that can be used to determine how semantic relationships are presented linguistically. For example, Napoleon [Person] was the king of France [Place].

- *Word Embeddings*

Discourse Analysis

- *Idea density:* the number of ideas expressed in the number of words or sentences (Danner et al., 2001), and measures of rhetorical structure (e.g., Elaboration, Attribution, and Joint) (Abdalla et al., 2018). Topics in discourse

- *Lexical richness*
  - *type-token ratio (TTR),*
  - *Herdan's C (Herdan, 1955),*
  - *Maas's TTR, Mean segmental TTR,*
  - *Moving-Average Type–Token Ratio (MATTR) (Covington & McFall, 2010), word variation index,*
  - *counts on function words, hapax legomena (i.e., words that appear once in the corpus), and*

- *n-grams:* which are sequences of n (2, 3, or 4, etc.) words that occur in a text and can be employed to identify the speaker characteristics in a text.

- *Sentiment analysis:* lexical and semantic analysis quantify subjective information from texts to analyze the emotional tone and can provide insights into the attitudes, such as the speaker's stance, and positive or negative emotions associated with pathology.

3. Offers a set of tools for scoring

| Semantic Scoring | Phonological Scoring | Spelling Scoring |

Citation Information

Language Scoring Application with Large Language Models	Themistocleous, Charalambos (2023). A Tool for Automatic Sentece Scoring using Large Language Models. Version 2.0.0
Semantic Scoring Application	Themistocleous, Charalambos (2023). A Tool for Automatic Scoring of Semantics using Semantic measures from Large Language Models. Version 2.0.0
Phonological Scoring Application	Themistocleous, Charalambos (2021). A Tool for Automatic Scoring of Phonological distance. Version 2.0.0
Spelling Scoring Application	Themistocleous, Charalambos, Neophytou, Kyriaki, Rapp, Brenda, & Tsapkini, Kyrana (2020). A Tool for Automatic Scoring of Spelling Performance. *Journal of Speech, Language, and Hearing Research*. doi:10.1044/2020_JSLHR-20-00177