

Function Words and Content Words

Function words, also referred to as junk words or particles, include

Pronouns (*POSTag* = *PRP*, *PRP\$*, *WP*, *WP\$*)

Prepositions (*POSTag* = *IN*)

Articles (*POSTag* = *DT*)

Conjunctions (*POSTag* = *CC*, *IN*)

Auxiliary verbs (*DEPREL* = *aux*, *auxpass*)

For more information on tag values, see the TIPS files on Part of Speech Tags (POSTAG) and Dependency Relations (DEPREL)

Fewer than 400 function words account for over half of the words we use in daily speech, considering that the average native English speaker has a vocabulary of over 100,000 words.

The use of function words has been shown to vary with the gender, age, and, especially, with the psychological state of a language user. For instance, *females* use first person singular pronouns (“I”) more frequently than *males*. They also use more verbs (especially auxiliary verbs), while men use more nouns, especially concrete nouns. *Depressed individuals* also tend to use the “I” more often. Paradoxically, the analysis of auxiliary verbs shows that *older people* use more future tense and less past tense the older they get.

Do your documents show a differential use of function words?

Does the use of function words vary along a text, if you plot function words by sentence index?

References

- Argamon, Shlomo, Moshe Koppel, Jonathan Fine, and Anat Rachel Shimoni. 2003a. “Gender, Genre, and Writing Style in Formal Written Texts,” *Text*, Vol. 23, No. 3, pp. 321–346.
- Chung, Cindy and James Pennebaker. 2007. “The Psychological Functions of Function Words.” In: pp. 343–359, Klaus Fiedler (Ed.), *Social Communication*, New York: Psychology Press.
- Koppel, Moshe, Shlomo Argamon, and Anat Rachel Shimoni. 2002. “Automatically Categorizing Written Texts by Author Gender.” *Literary and Linguistic Computing*, Vol. 17, No. 4, pp. 401–412.
- Newman, Matthew L, James W. Pennebaker, Diane S. Berry, and Jane M. Richards. 2003. “Lying Words: Predicting Deception from Linguistic Styles.” *Personality and Social Psychology Bulletin*, Vol. 29 No. 5, pp. 665–675.
- Pennebaker, James W. and Laura A. King. 1999. “Linguistic Styles Language Use as an Individual Difference,” *Journal of Personality and Social Psychology*, Vol. 77, No.6, pp. 1296–1312.

Pennebaker, James W., Matthias R. Mehl, and Kate G. Niederhoffer. 2003. "Psychological Aspects of Natural Language Use: Our Words, Our Selves." *Annual Review of Psychology*, Vol. 54, pp. 547–77.