

Phonology is “the study of sound pertaining to the system of language” whereas Lass1998 [66] wrote that phonology refers broadly with the sounds of language, concerned with sub-discipline of linguistics, behavior and organization of sounds. Phonology includes semantic use of sound to encode meaning of any Human language.

b) Morphology

The different parts of the word represent the smallest units of meaning known as Morphemes. Morphology which comprises Nature of words, are initiated by morphemes. An example of Morpheme could be, the word *precancellation* can be morphologically scrutinized into three separate morphemes: the prefix *pre*, the root *cancella*, and the suffix *-tion*. The interpretation of morphemes stays the same across all the words, just to understand the meaning humans can break any unknown word into morphemes. For example, adding the suffix *-ed* to a verb, conveys that the action of the verb took place in the past. The words that cannot be divided and have meaning by themselves are called Lexical morpheme (e.g.: table, chair). The words (e.g. -ed, -ing, -est, -ly, -ful) that are combined with the lexical morpheme are known as *Grammatical morphemes* (eg. Worked, Consulting, Smallest, Likely, Use). The Grammatical morphemes that occur in combination called bound morphemes (eg. -ed, -ing) Bound morphemes can be divided into inflectional morphemes and derivational morphemes. Adding Inflectional morphemes to a word changes the different grammatical categories such as tense, gender, person, mood, aspect, definiteness and animacy. For example, addition of inflectional morphemes *-ed* changes the root *park* to *parked*. Derivational morphemes change the semantic meaning of the word when it is combined with that word. For example, in the word *normalize*, the addition of the bound morpheme *-ize* to the root *normal* changes the word from an adjective (*normal*) to a verb (*normalize*).

c) Lexical

In Lexical, humans, as well as NLP systems, interpret the meaning of individual words. Sundry types of processing bestow to word-level understanding – the first of these being a part-of-speech tag to each word. In this processing, words that can act as more than one part-of-speech are assigned the most probable part-of-speech tag based on the context in which they occur. At the lexical level, Semantic representations can be replaced by the words that have one meaning. In fact, in the NLP system the nature of the representation varies according to the semantic theory deployed. Therefore, at lexical level, analysis of structure of words is performed with respect to their lexical meaning and PoS. In this analysis, text is divided into paragraphs, sentences, and words. Words that can be associated with more than one PoS are aligned with the most likely PoS tag based on the context in which they occur. At lexical level, semantic representation can also be replaced by assigning the correct POS tag which improves the understanding of the intended meaning of a sentence. It is used for cleaning and feature extraction using various techniques such as removal of stop words, stemming, lemmatization etc. Stop words such as ‘in’, ‘the’, ‘and’ etc. are removed as they don’t contribute to any meaningful interpretation and their frequency is also high which may affect the computation time. Stemming is used to stem the words of the text by removing the suffix of a word to obtain its root form. For example: *consulting* and *consultant* words are converted to the word *consult* after stemming, *using* word gets converted to *us* and *driver* is reduced to *driv*. Lemmatization does not remove the suffix of a word; in fact, it results in the source word