Similarity Calculation

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First, words will be selected from the SUBTLEX projects that are: 1) Not stopwords (the, an, of) 2) Three or more characters 3) In the top 10,000 words

We are using the `Lg10WF` data - this is the log of the word frequency from the subtitle counts. Using log of frequency is advantageous, we can compare the frequencies across datasets, as well as deal with the large skew present in frequency data.

```r
##Library to read excel files
library(readxl)

##library for stopwords
library(stopwords)

library(dplyr)
```

```
##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':
##
##     filter, lag

## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```r
##Import the US English Data
US_freq <- read_excel("similarity_data/SUBTLEXusfrequencyabove1.xls")
##Import the Dutch Data
load("similarity_data/SUBTLEX-NL.cd-above2.Rdata")
NL_freq <- subtlex.nl.cdgt2
rm(subtlex.nl.cdgt2)

##lower case all words
US_freq$Word <- tolower(US_freq$Word)
NL_freq$Word <- tolower(NL_freq$Word)

##Grab the top 10,000 words
US_subset <- US_freq %>% #data frame
  filter(!Word %in% stopwords(language = "en")) %>%  #take out stop words
  filter(nchar(Word) >= 3) %>% #words greater than or equal 3
  arrange(Lg10WF) %>% #sort by Log10WF
  top_n(10000) #Take the top 10k
```

```
## Selecting by Lg10CD
```

```r
NL_subset <- NL_freq %>% #data frame
  filter(!Word %in% stopwords(language = "nl")) %>%  #take out stop words
  filter(nchar(Word) >= 3) %>% #words greater than or equal 3
  arrange(Lg10WF) %>% #sort by Log10WF
  top_n(10000) #Take the top 10k
```

```
## Selecting by Lg10CD
```

```
##these libraries will be combined with translate R
##this service is not free, uses google's API
##will work with the university to see if we have
##a service already for this type of task
#library(translateR)
```