HW 8

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Sentence complexity and text readability is a very useful way to compare writing styles of different authors or the same author of different times (Pakhomov et al). The Yngve scoring, Frazier scoring, and grammatical dependencies are the three main types of scoring in CLAS. The first two analyze the sentence as a tree in left-to-right or bottom-up manner while the grammatical dependencies compute the complexity based on length of grammatical dependencies. (Pakhomov et al). The result of the CLAS can classify the readability of the text into different grades. One way of grading is based on the concreteness of over 40000 lemmas in English and is adopted by the website readability.io (Brysbaert et al).

The PC-ACE CLAS will report error on 0 length sentences, which include ellipsis and last line of the document if it is blank. Thus, the CLAS analysis was made on the prologues of the five books of the Song of Ice and Fire. The comparison chart of Mean\_FDepth is reported as below.

The y-axis is the Mean-FDepth and the x-axis is sentence id; different colors represent different prologue.

Despite the density of this chart, it is easy to see that George R.R. Martin kept his work very readable. In fact, a mean f-depth lower than 2 means that on average the phrases he used is always shorter than 2 words. The readbility.io website gives the Song of Ice and Fire a Grade-5 readbility.

The result is kind of suprsing to be honest, as one would expect such an epic novel would be very hard to understand. For example, many people found another similar masterpiece Lord of Rings very involved and abstrue. However, Martin managed to build a grand word with very simple words.

The Nobel Prize winning work *Dry September* and the story from James Murphy *Miracle Thicker than Fog*, however shows some differencecs in sentence complexity. The individual Y-depth vs. SynDepth charts are reported below.

Apparently, Faulkner used more complicated sentences than Murphy. This is nor suprising as Murphy wrote this and published it to davisenterprise.com while Faulkner, this world famous writer won the Nobel Prize and his work was rearranged to a movie.