*Homework 3 – Linear regression*

*a) In about 2 paragraphs summarize your answer to the research question based on the analysis. Mention which predictors turned out to be significant and which not. Offer possible explanations of why that might be.*

The main predictor for the amount of associations a person makes for the given words was the words’ imageability. On the other hand, factors like the amount of letters and syllables in a words and their concreteness did not seem to have a big impact on how many associations were made.

That the amount of letters and syllables in the words did not correlate with associativity seems intuitive. One syllable words like deed and earth, have quite different associative scores. If there was a positive or negative correlation with amount of either letters or syllables, then words with high values in those should tend to either higher or lower associative scores than if they had few letters or syllables respectively. In the dataset there are examples that would imply that this correlation at least isn’t obvious, as there are long words like university with a high associative score and others, such as impropriety, with quite low scores.

That concreteness is not as impactful on associativity isn’t as understandable on the other hand. We could not come up with an explanation as to why it is not a significant predictor for the associativity of the words in the data.

What characteristics of a word predict how many associations (on average) a

person makes?

If the amount of syllables is below 3 the associations tend to be higher.

The higher the imageability the higher the association?

The higher the concreteness the higher the association rate, concreteness value of 2.5.

But was that significant?

*b) For each significant predictor or interaction, describe the kind of effect they have on the dependent variable.*

If the words has 2 or less syllables is is most likely to have between 5 to 8 associations.

In a lot of languages words with 2 syllables often contain two words with “potential” individual meaning. This could be one explanation for the higher amount of association. Words with more than two syllables als tend to be more specific and there for allow for less association to be made.

For words that contain between 2 and 9 letter most of them seem to lead to 5 – 8 associations. For longer word associations tend to be between 3 to 6 associations.

The plot about imageability shows an almost linear distribution of the interaction between imageability and association. The higher the value for imageability is, the higher the value for association.

The concreteness doesn’t really seem to directly impact the number of associations being made with a certain word. Most data points are between 5 and 8, regardless of the concreteness value.

*c) Finally, mention anything that was surprising or striking to you and suggest one question or issue for further research.*

We were surprised by the fact that concreteness did not turn out to be a significant predictor of associativity. It would be interesting to research if this finding would remain if a similar study was to be repeated. If so, one might also look into why concreteness of word dies not significantly predict how many associations someone makes when hearing certain words.