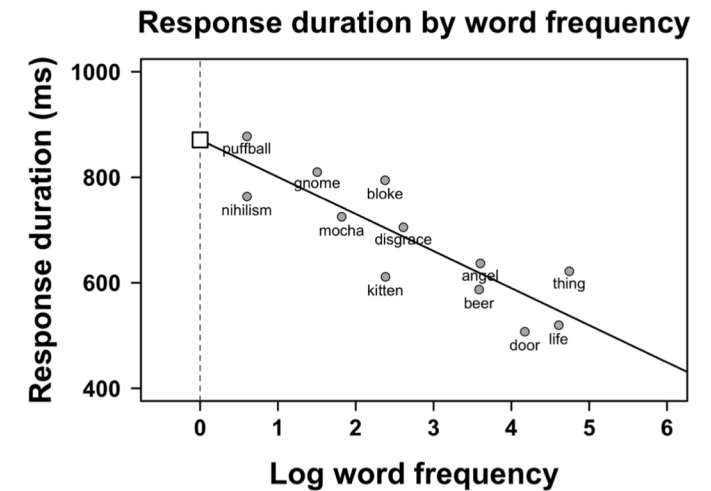# Centering and standardizing

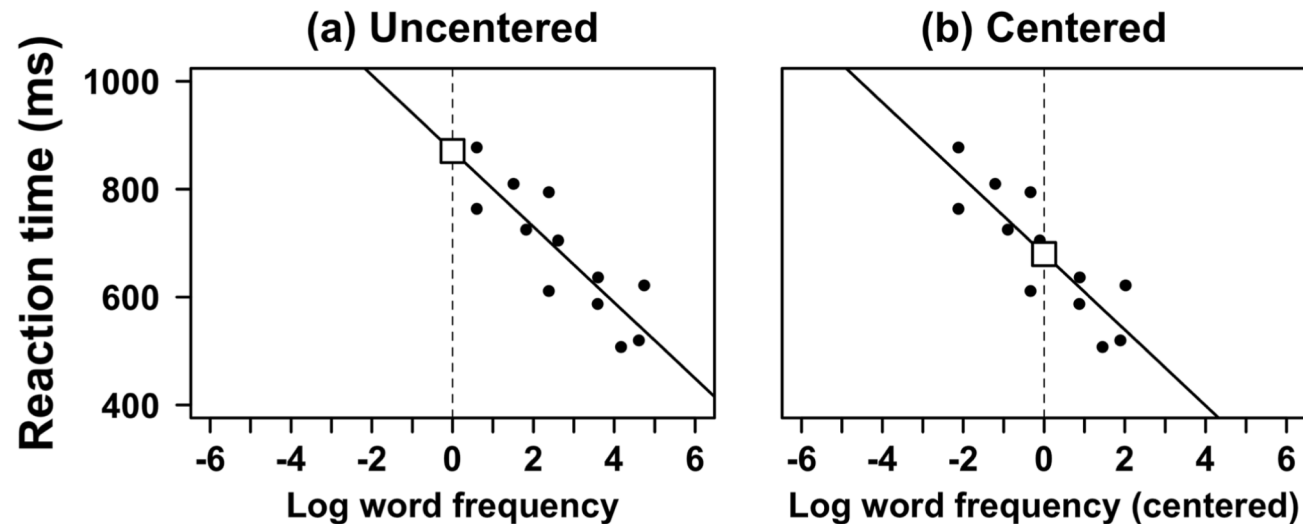Dr. Margriet A. Groen

Linear transformations

- Involve addition, subtraction, multiplication, or division with a constant value.
- They don't change the relations between the numbers, because each number is affected the same way.
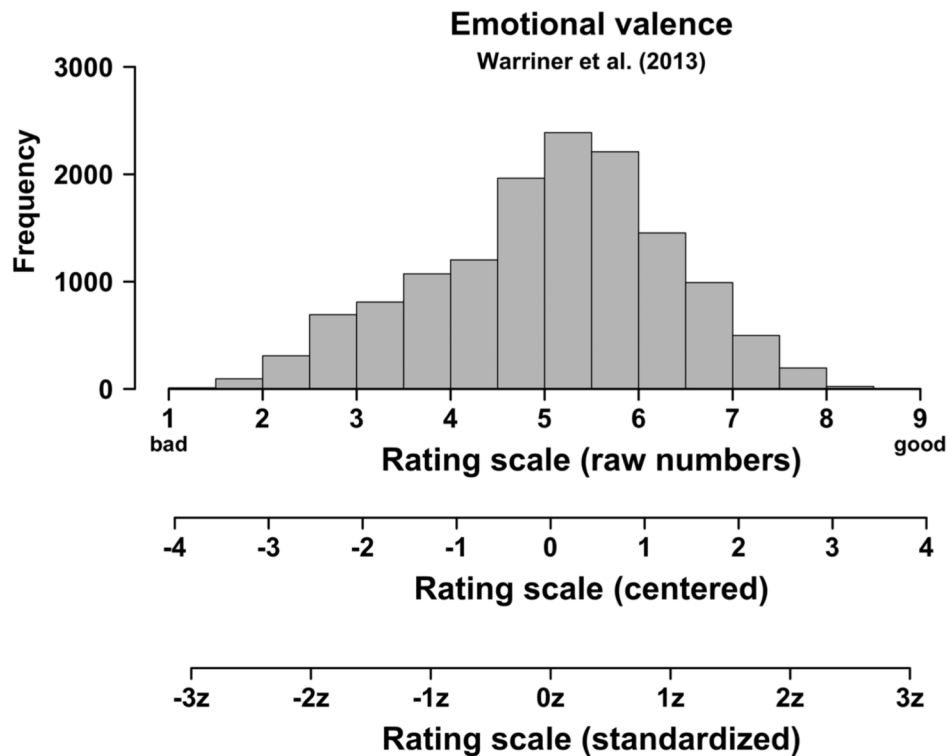- They affect the representation of the data.

Response duration by word frequency

Centering

What?   Subtract the mean of that predictor variable from each data point.

Why?   It helps with the interpretation of regression coefficients, and is essential when dealing with interactions.

Standardizing

Emotional valence
Warriner et al. (2013)

What? Divide the centered variable by the standard deviation of the sample.

Why? In a context with multiple variables, it converts all variables into a scale of standard units. This makes them more comparable when assessing the relative impact of multiple predictors.