

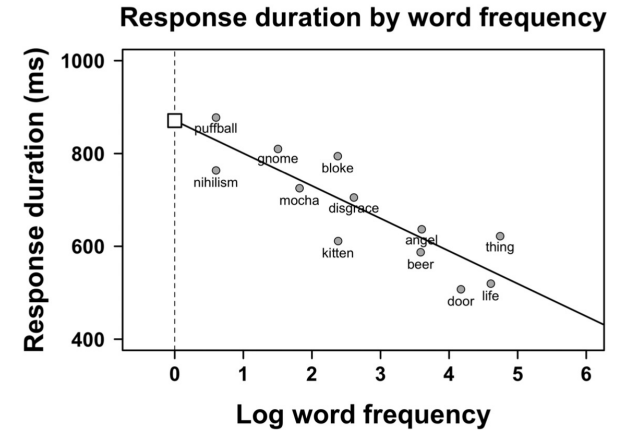
# Centering and standardizing

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# 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.



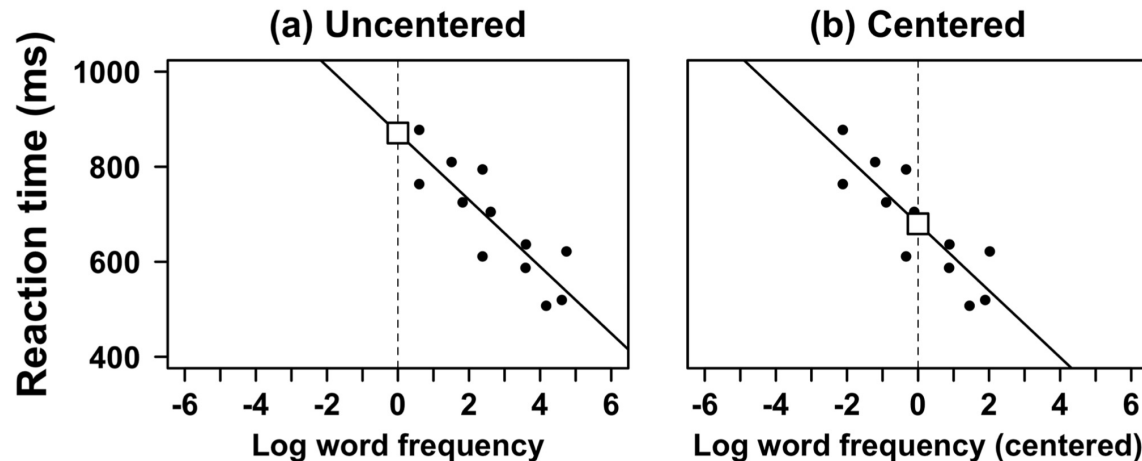
# Centering

**What?**

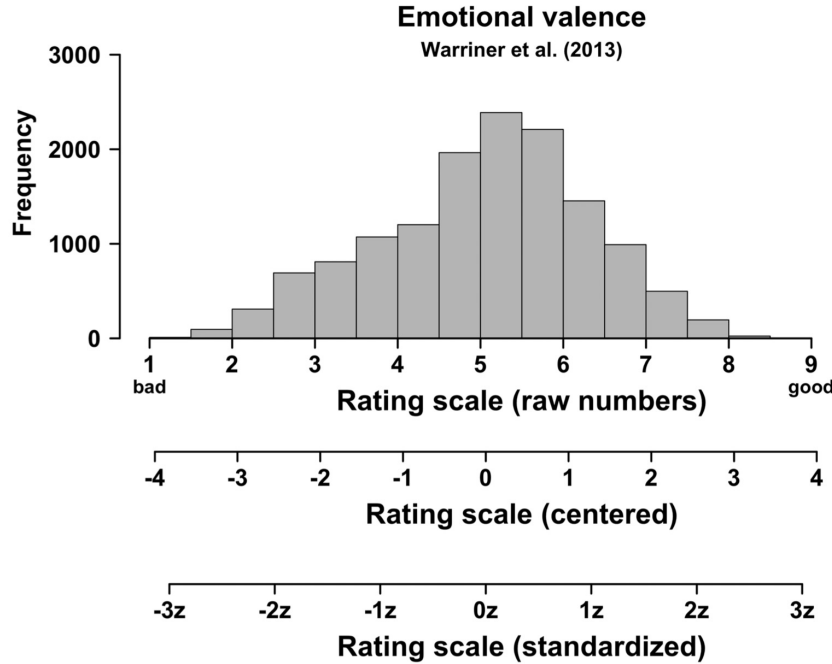
Subtract the mean of that predictor variable from each data point.

**Why?**

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



# Standardizing



**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.

