Methods: Correlation

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Learning Goals

- Explain what is meant by the term ‘correlation.’
- Describe what a scatterplot is and why it can be useful.
- Explain the difference between a positive and a negative correlation.
- Explain how an artificial correlation might arise and how to be on the lookout for artificial correlations.

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-height and weight
-number of neurons and age

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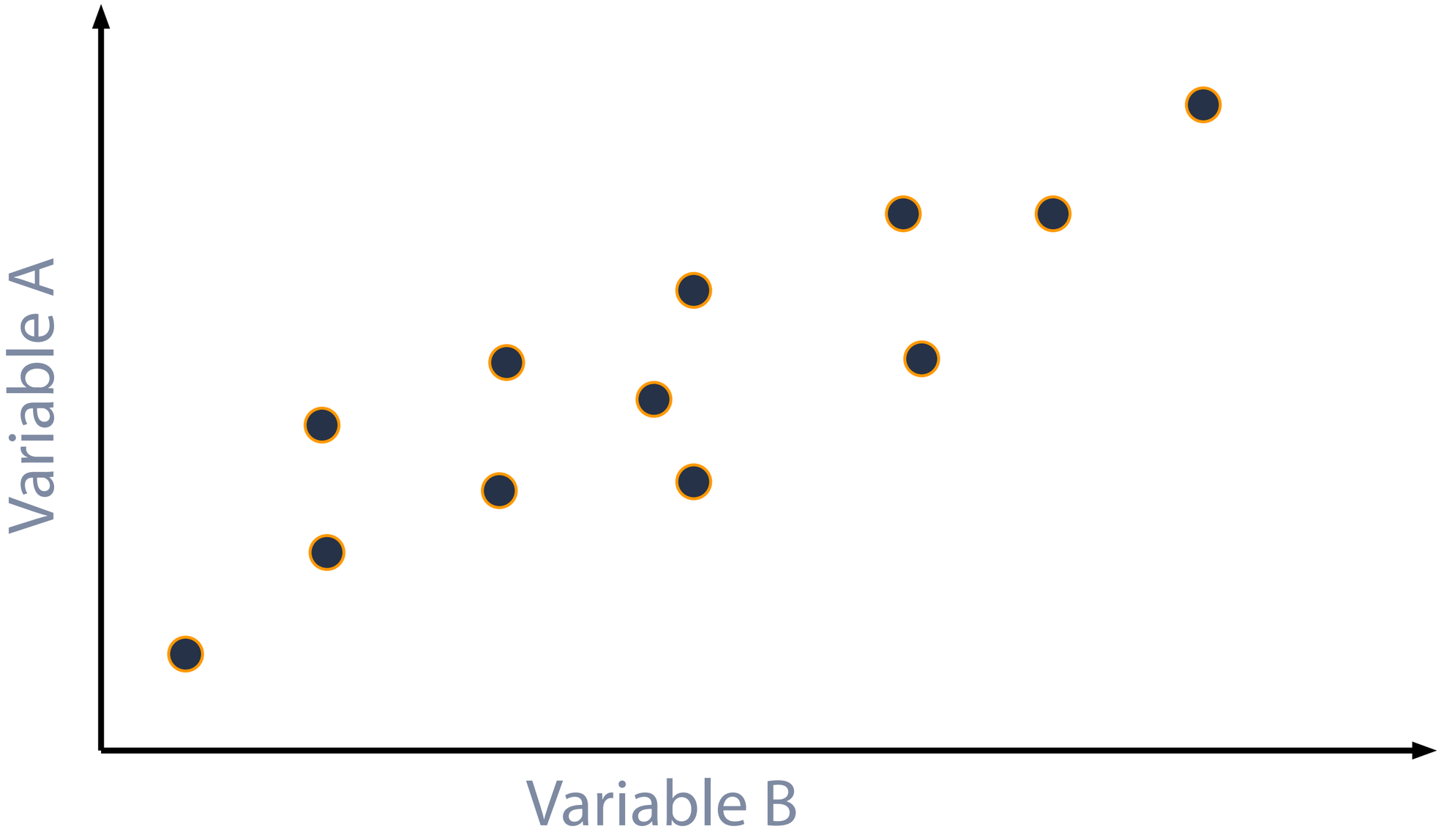
Correlations make it possible to use the value of one variable to predict the value of another.

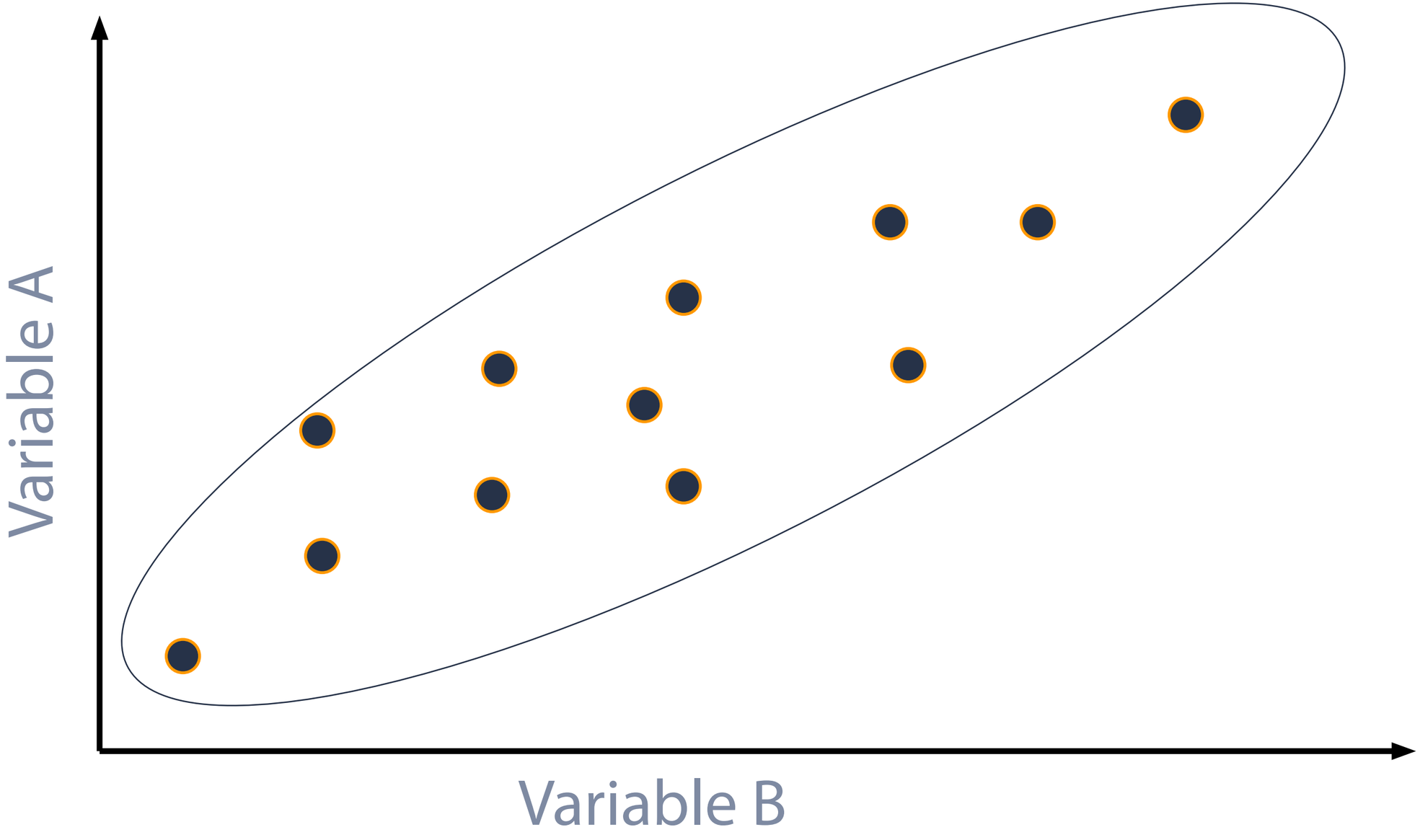
Correlations

Scatterplot



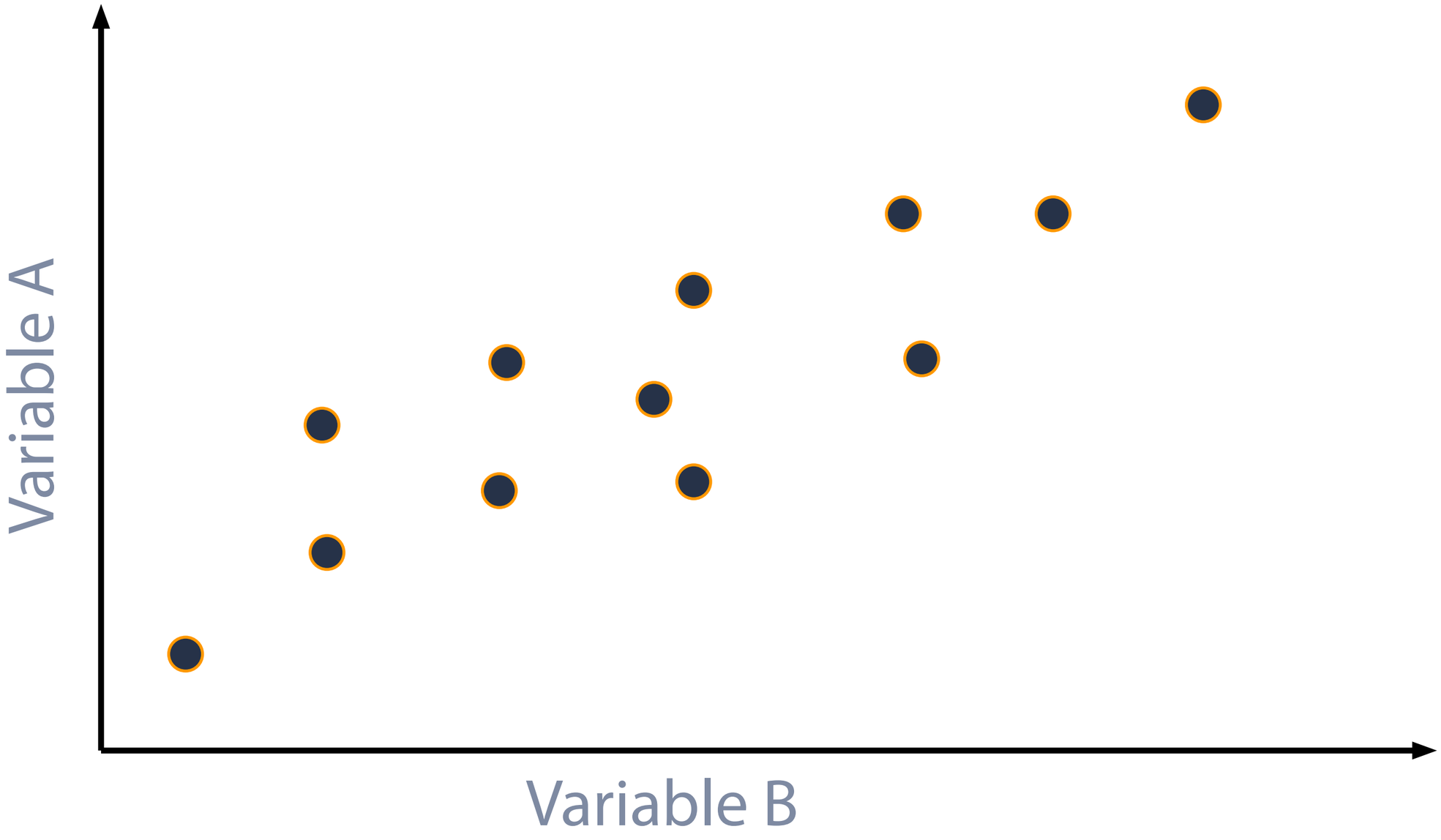
Correlations

Scatterplot



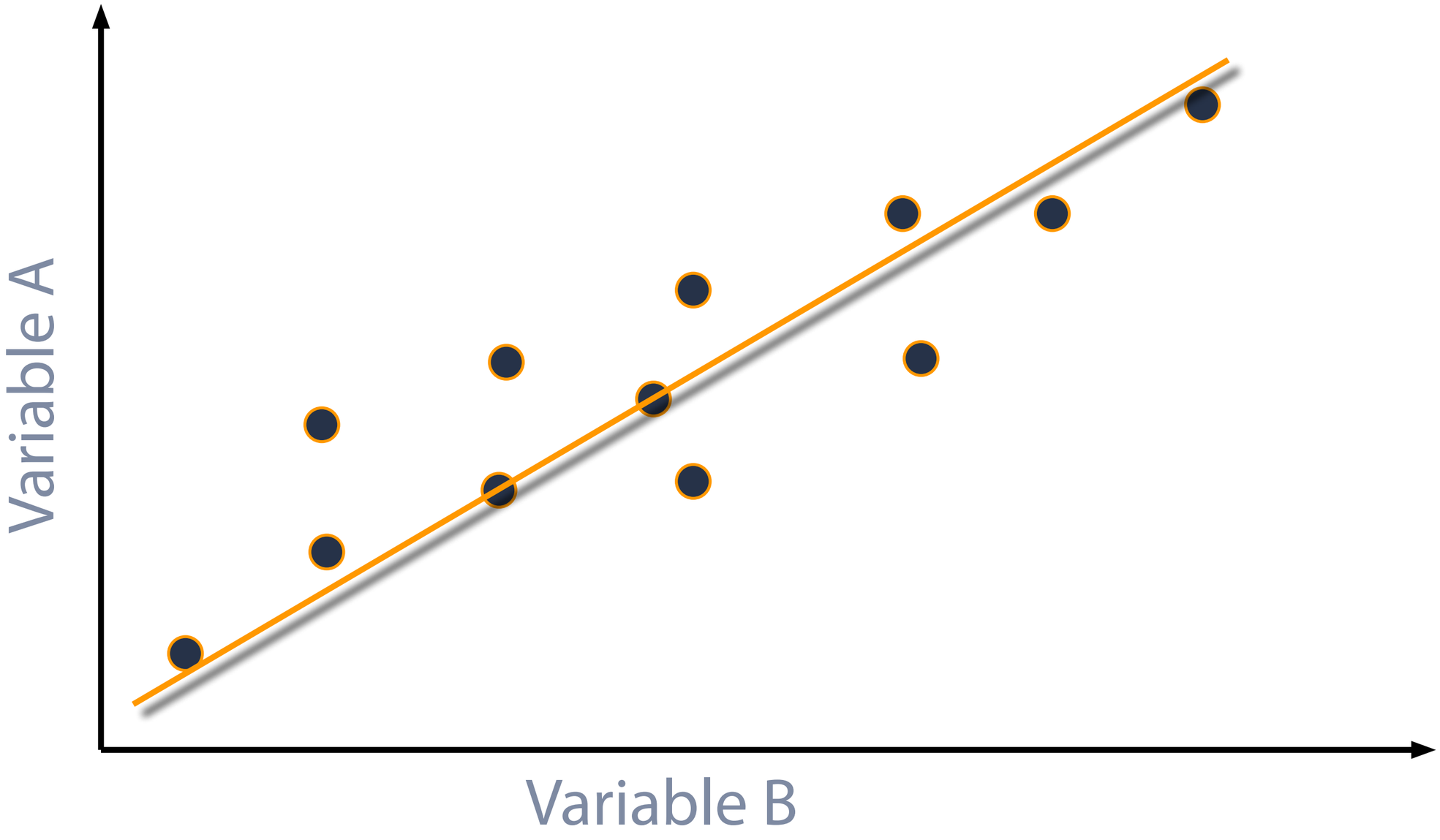
Correlations

Positive Correlation



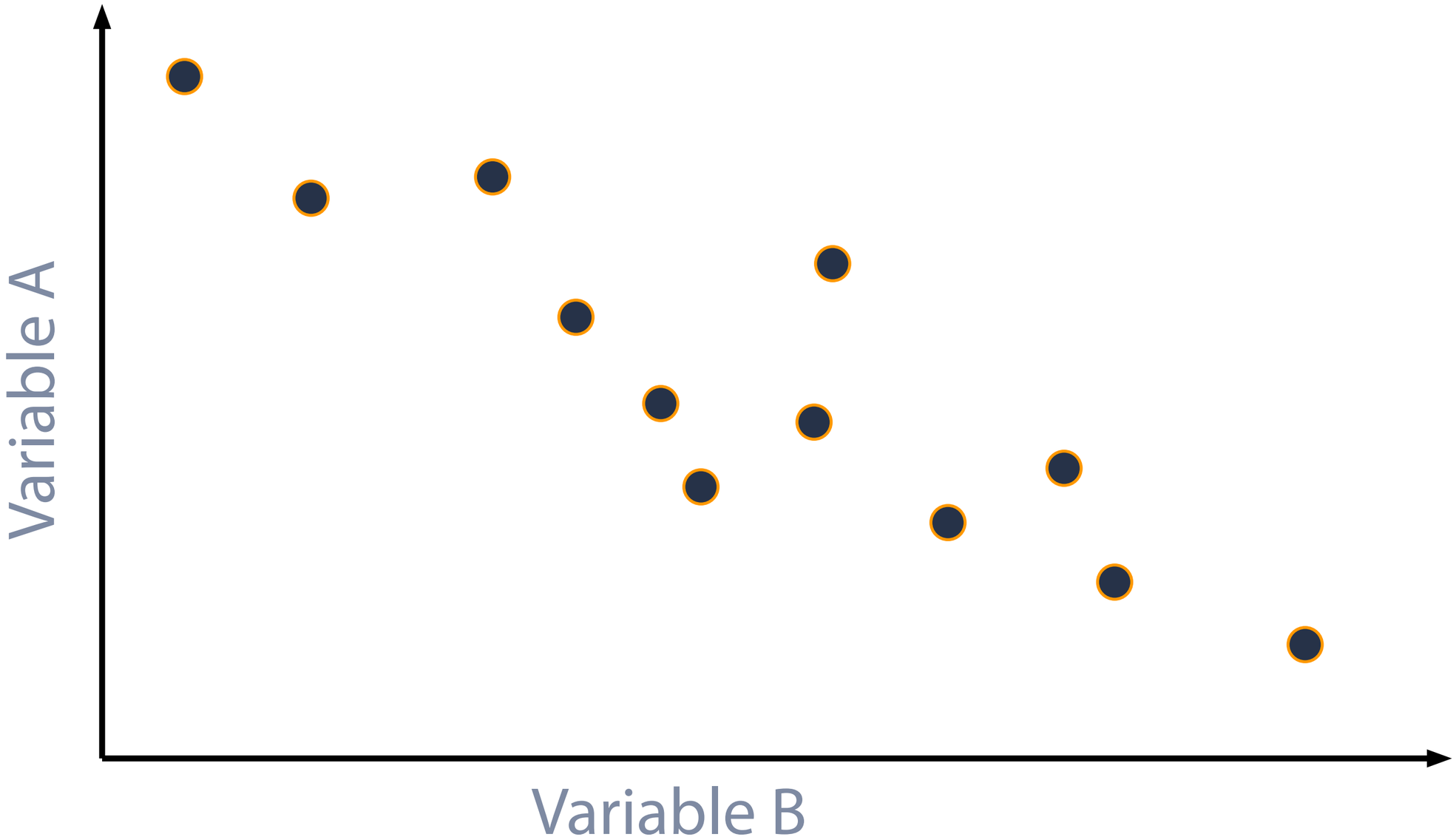
Correlations

Positive Correlation



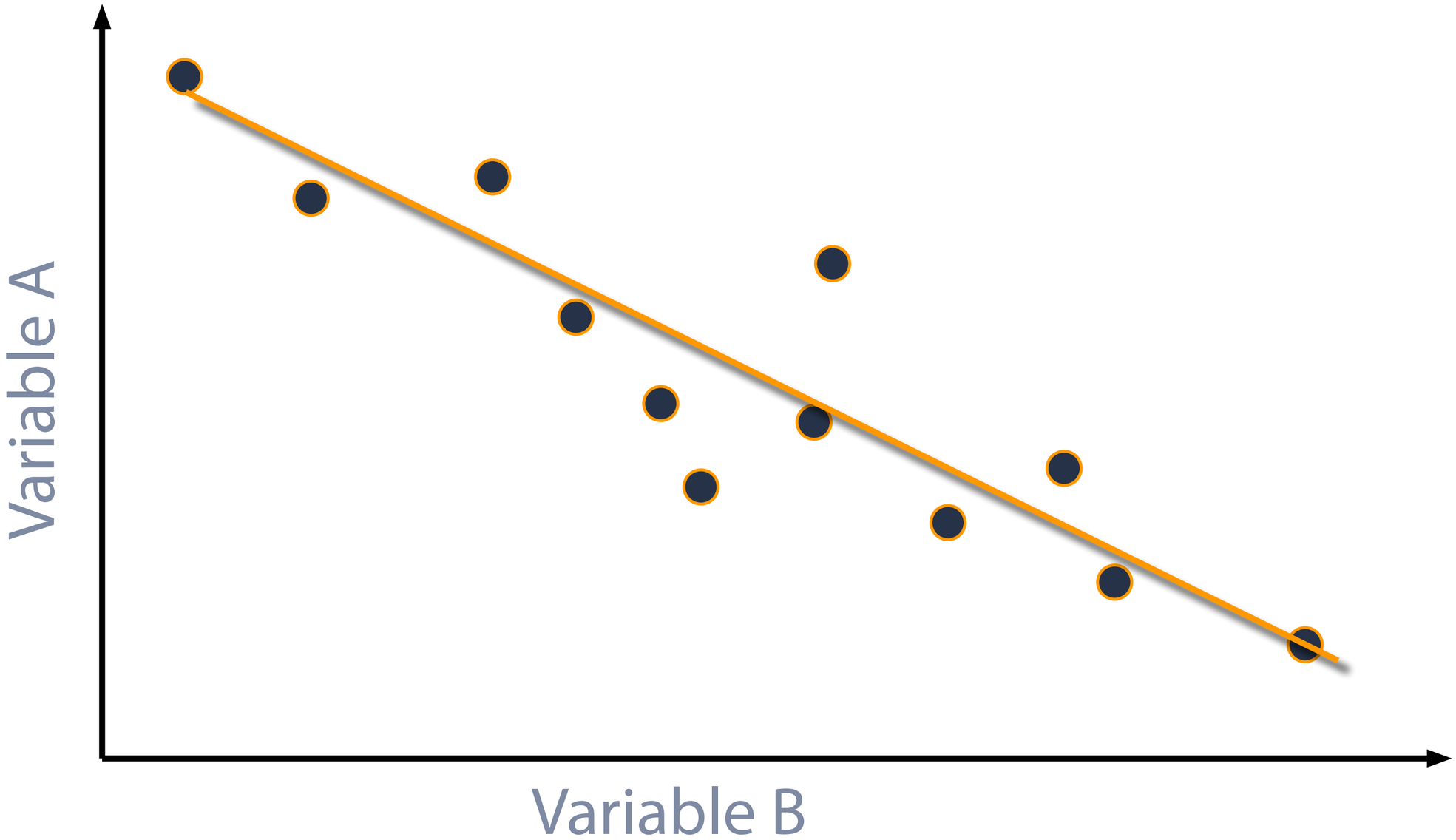
Correlations

Negative Correlation



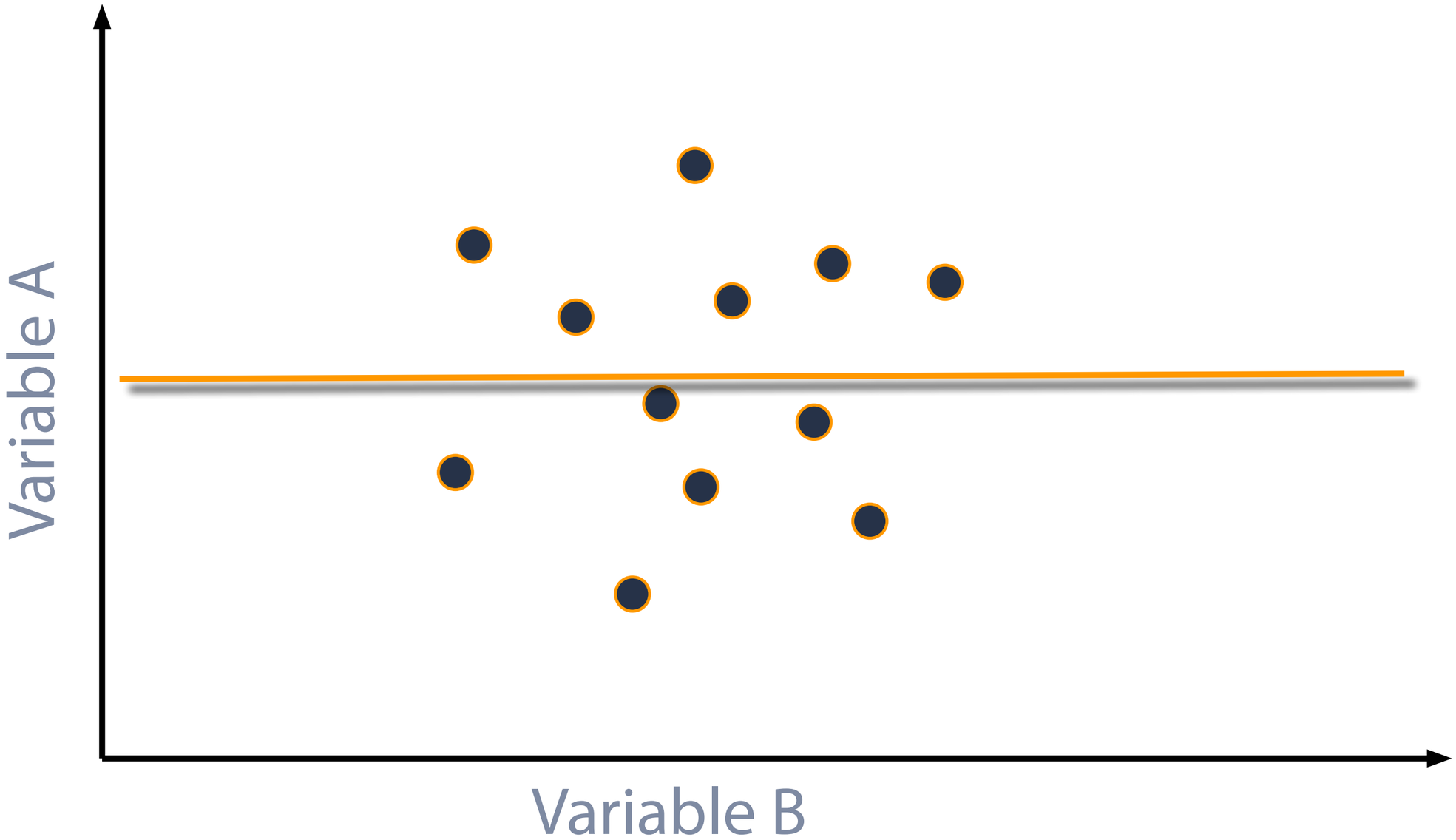
Correlations

Negative Correlation



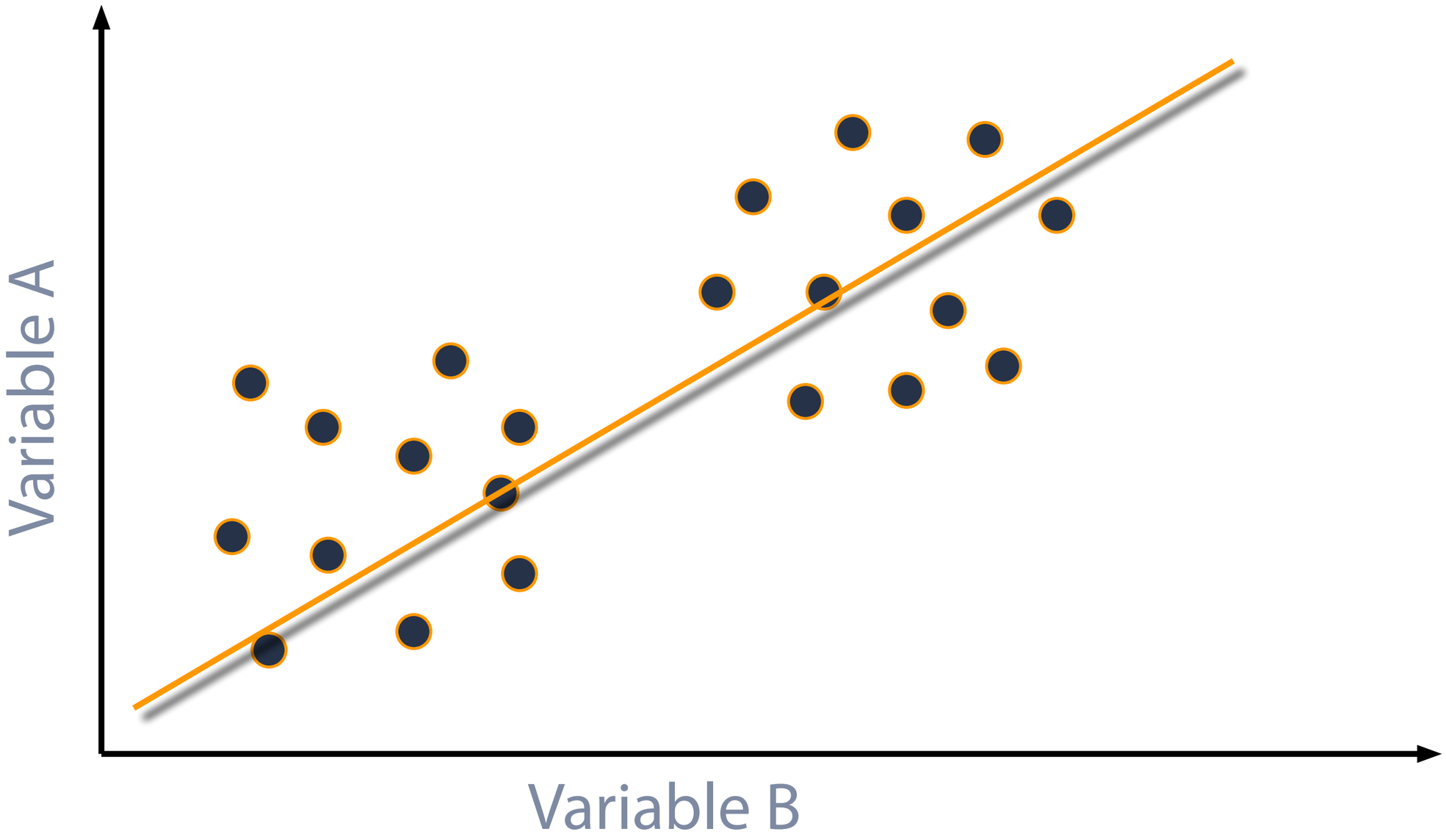
Correlations

No Correlation



Correlations

Artificial Correlation



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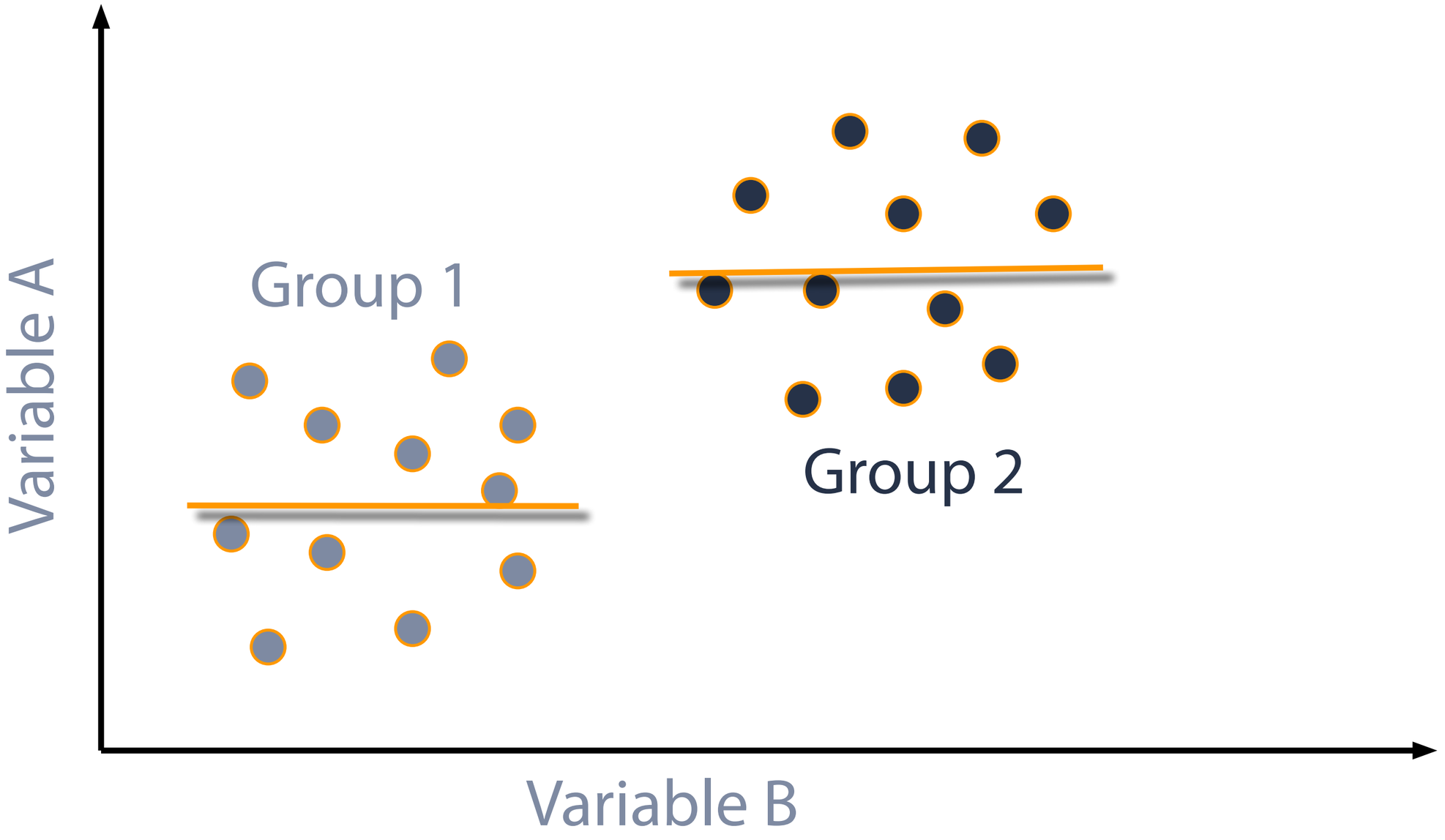
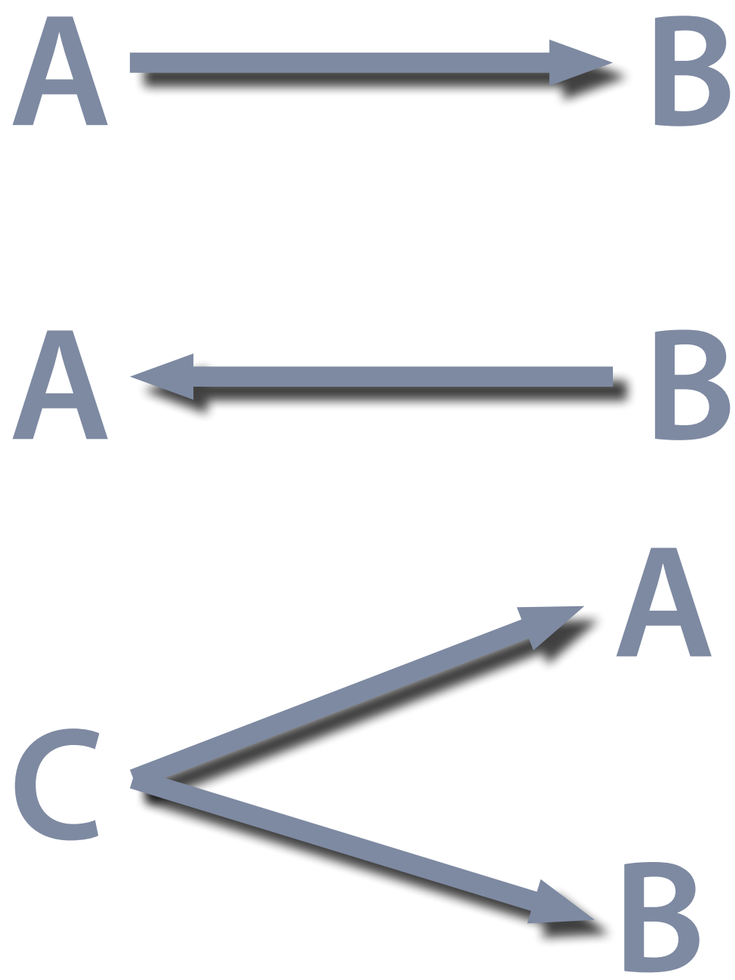


Correlations

Correlation and Causation

Can we be sure variable A causes variable B?



Correlations

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Low self esteem → **Depression**

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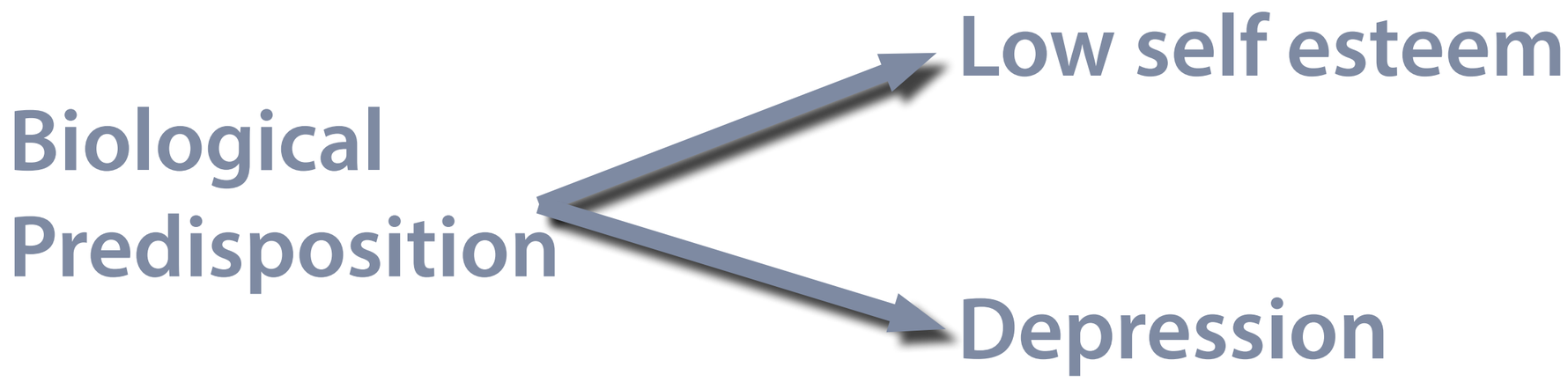

Correlations