

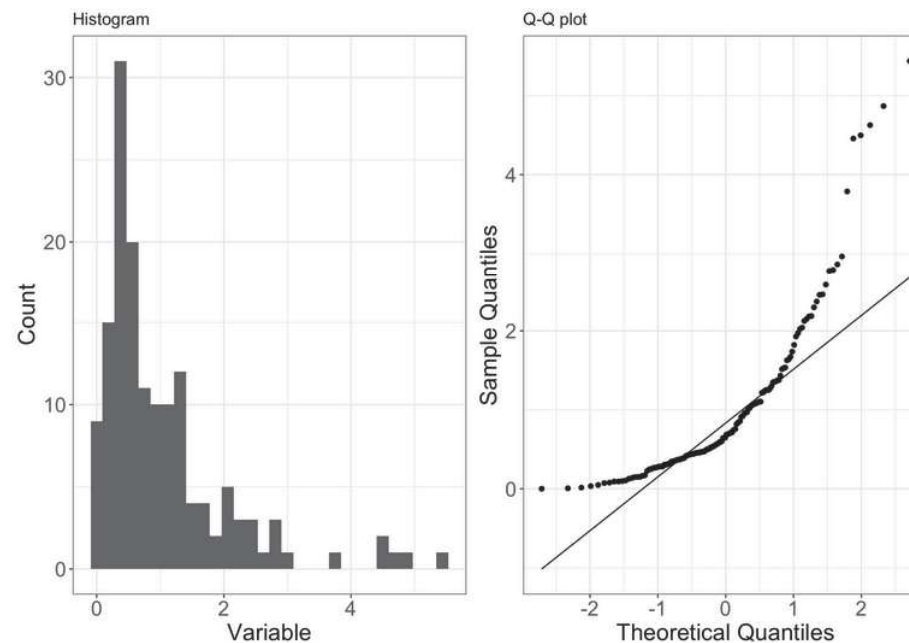
Examples of QQ plots: some frequent scenarios

https://www.ucd.ie/ecomodel/Resources/QQplots_WebVersion.html

Right-skewed data

Below is an example of data (150 observations) that are drawn from a distribution that is **right-skewed** (in this case it is the exponential distribution). Right-skew is also known as **positive skew**.

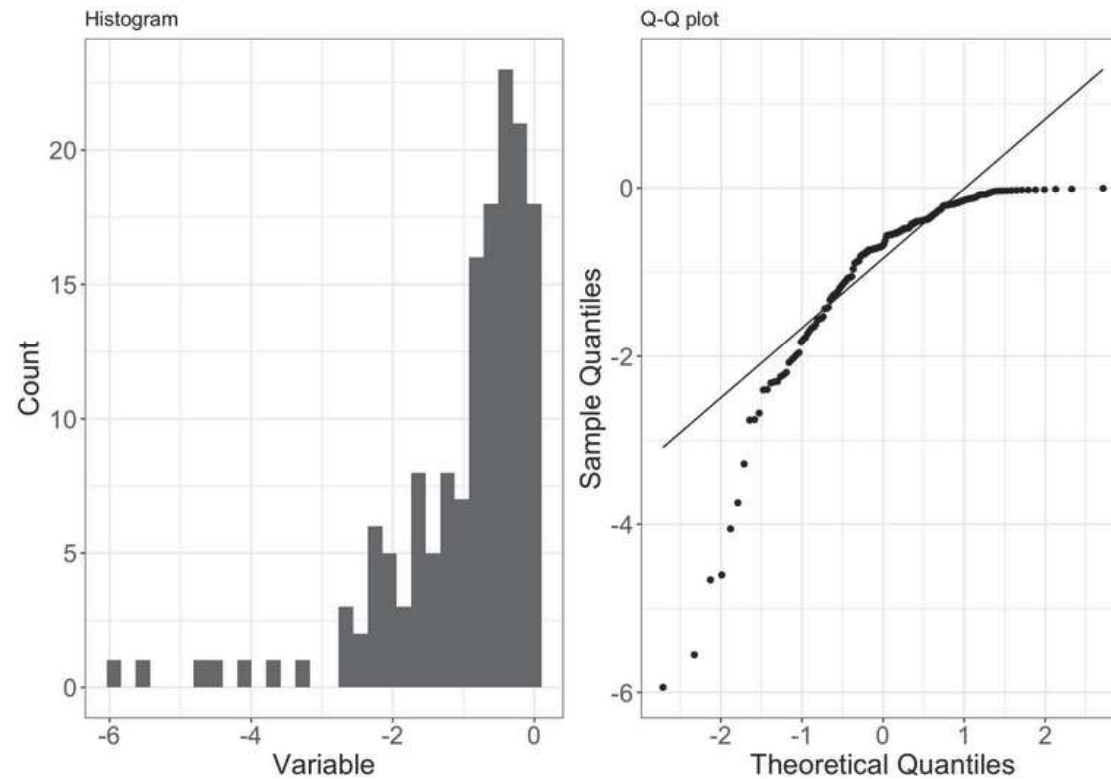
On a Q-Q plot right-skewed data appears curved.



Left-skewed data

Below is an example of data (150 observations) that are drawn from a distribution that is **left-skewed** (in this case it is a negative exponential distribution). Left-skew is also known as **negative skew**.

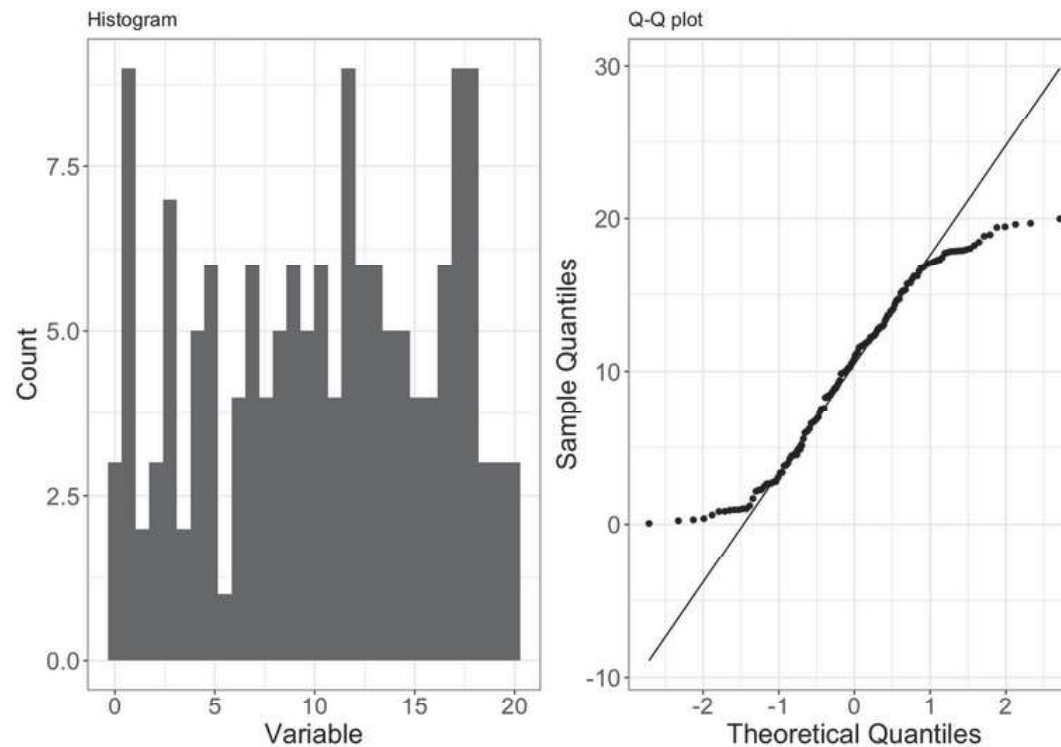
On a Q-Q plot left-skewed data appears curved (the opposite of right-skewed data).



Under-dispersed data

Below is an example of data (150 observations) that are drawn from a distribution that is **under-dispersed** relative to a normal distribution (in this case it is the uniform distribution). Under-dispersed data has a reduced number of outliers (i.e. the distribution has thinner tails than a normal distribution). Under-dispersed data is also known as having a **platykurtic distribution** and as having **negative excess kurtosis**.

On a Q-Q plot under-dispersed data appears S shaped.



Over-dispersed data

Below is an example of data (150 observations) that are drawn from a distribution that is **over-dispersed** relative to a normal distribution (in this case it is a Laplace distribution). Over-dispersed data has an increased number of outliers (i.e. the distribution has fatter tails than a normal distribution). Over-dispersed data is also known as having a **leptokurtic distribution** and as having **positive excess kurtosis**.

On a Q-Q plot over-dispersed data appears as a flipped S shape (the opposite of under-dispersed data).

