BREAKING DOWN Nonparametric Method

Parametric and nonparametric methods are often used on different types of data. Parametric statistics generally require interval or ratio data. An example of this type of data is age, income, height, and weight in which the values are continuous and the intervals between values have meaning.

In contrast, nonparametric statistics are typically used on data that nominal or ordinal. [Nominal variables](https://www.investopedia.com/terms/n/nominal.asp) are variables for which the values have not quantitative value. Common nominal variables in social science research, for example, include sex, whose possible values are discrete categories, "male" and "female."' Other common nominal variables in social science research are race, marital status, educational level and employment status (employed versus unemployed).

Ordinal variables are those in which the value suggests some order. An example of an ordinal variable would be if a survey respondent asked, "On a scale of 1 to 5, with 1 being Extremely Dissatisfied and 5 being Extremely Satisfied, how would you rate your experience with the cable company?"

Although nonparametric statistics have the advantage of having to meet few assumptions, they are less powerful than parametric statistics. This means that they may not show a relationship between two variables when in fact one exists.