Statistics with Spa  ows

Lecture 17

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- Non-parametric tests

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- Non-parametric tests
- Avoid if possible

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- -0.23, 0.4, 10.9

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- Loss of information
- Aim for collecting quantitative data!
- We are quantitative biologists, and proud of that ☺

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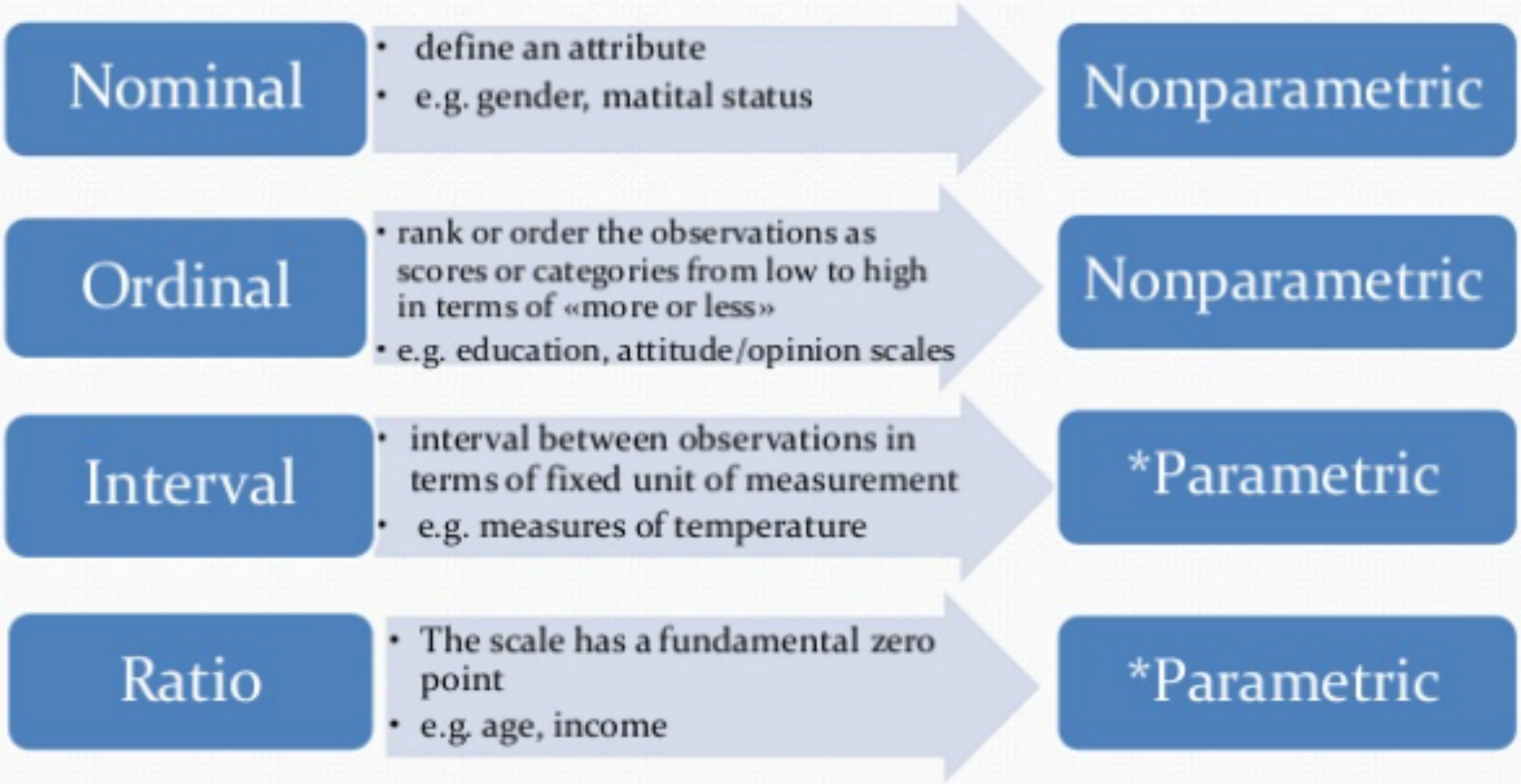
Nominal
define an attribute
e.g. gender, matital status
Nonparametric
Ordinal
rank or order the observations as scores or categories from low to high in terms of «more or less»
e.g. education, attitude/opinion scales
Nonparametric
Interval
interval between observations in terms of fixed unit of measurement
e.g. measures of temperature
*Parametric
Ratio
The scale has a fundamental zero point
e.g. age, income
*Parametric

Non-parametric statistics for ranked stuff

- Parametric
  - Paired t-test
  - Unpaired t-test
  - Pearson correlation
  - One way ANOVA
- Non-parametric
  - Wilcoxon Rank sum test
  - Mann-Whitney-U test
  - Spearman correlation
  - Kruskall Wallis test

Non-parametric statistics for nominal data

- χ^2 test (chi-square)
- Fisher's exact test