

From graphics to models (boxplots)

- Single boxplot
 - outliers, median compared to a standard
- Highlighted boxplot
- Boxplot of group in parallel with boxplot of rest of data
- Boxplots in parallel by grouping variable
- Boxplots of different, but comparable, variables in parallel
 - variables of the same cases
 - variables of different cases

From graphics to models (histograms)

- Histogram
 - modes
 - gaps
 - compared to a specific distribution
 - ...
- Highlighted histogram
- Spinogram, CD plots
- Set of histograms

From graphics to models (scatterplots)

- Scatterplot
 - bivariate outliers
 - clusters
 - density
 - association
- Highlighted scatterplot
 - density, outliers, form
- Scatterplots side by side or in a trellis

From graphics to models (barcharts)

- Barchart
 - equality of groups
 - shape of distribution
 - (ordinal) multimodal, monotone
 - (nominal) specific distribution
- Highlighted barchart
 - equality of absolute values
 - equality of relative rates

Comparisons of subgroups

- Given groups $\{G_i; i=1, \dots, m\}$, we might compare
 - G_i v. rest
 - G_i v. G_j
 - G_1 v. G_2 v. ... G_m
 - $\{G_1 \cup G_2\}$ v. $\{G_3 \cup G_7 \cup G_{11}\}$ v. ...
- This applies to
 - groups of boxplots y by x
 - categories in a nominal bar chart
 - any subgroup comparison

Parallel coordinate plots

- Examples
 - EcoTestAutos
 - World Cup
- Features
 - Outliers, multivariate outliers
 - Multivariate comparisons
 - Clusters
 - Discrimination between groups
 - Multivariate structures (?)

Mosaicplots

- Examples
 - Titanic
 - visual
 - Rochdale
- Features
 - conditional comparisons
 - categorical outliers
 - categorical clusters