

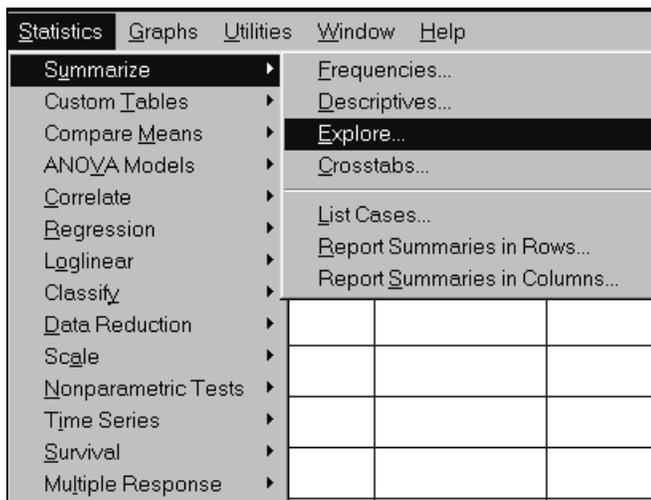
BREAKDOWN TIMES

11. Displaying and Describing the Data with SPSS

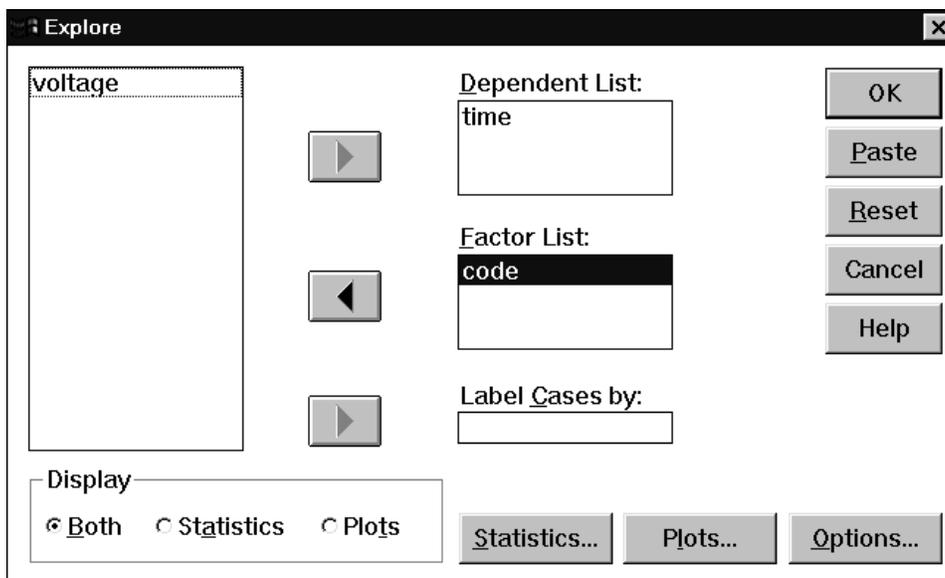
In this part, we will demonstrate how to use SPSS to produce the computer outputs we referred to in Sections 4 and 5. There are hyperlinks between the section and Sections 3 and 4 containing the statistical outputs.

Open the file *break.sav* with the data in the experiment. It consists of three columns, named *Time*, *Voltage*, and *Code*. The column *Time* contains the times to breakdown expressed in minutes, the column *Voltage* contains the voltage level (in kV), and the column *Code* contains the number of the group the observation comes from.

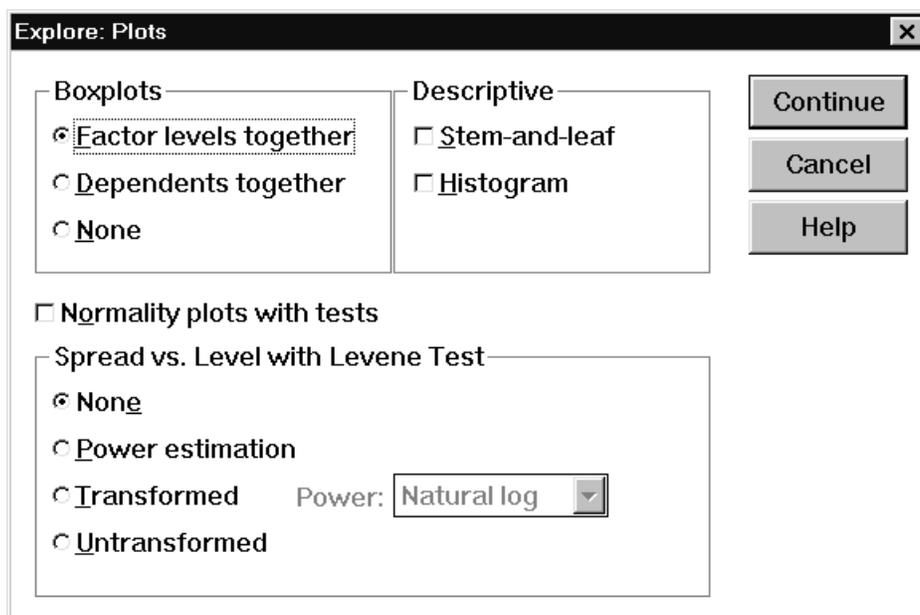
In order to obtain side-by-side boxplots of the breakdown times for the seven groups, and then the summary statistics for each group, click on *Statistics* in the main menu, select *Summarize*, and then *Explore* from the pull-down menu.



Fill out the *Explore* dialog box as follows:



In order to make sure that your output will include side-by-side boxplots, click on *Plots* and check the radio button *Factor levels together*.



The image shows the 'Explore: Plots' dialog box in SPSS. It is divided into several sections. The 'Boxplots' section has three radio buttons: 'Factor levels together' (which is selected), 'Dependents together', and 'None'. The 'Descriptive' section has two checkboxes: 'Stem-and-leaf' and 'Histogram', both of which are unchecked. To the right of these sections are three buttons: 'Continue', 'Cancel', and 'Help'. Below the 'Boxplots' section is a checkbox for 'Normality plots with tests', which is unchecked. Underneath that is a section for 'Spread vs. Level with Levene Test' containing four radio buttons: 'None' (selected), 'Power estimation', 'Transformed', and 'Untransformed'. Next to the 'Transformed' radio button is a 'Power:' label and a dropdown menu currently set to 'Natural log'.

The side-by-side boxplots and summary statistics will be displayed. In order to view the SPSS outputs click on the corresponding hyperlinks to **Section 4** and **Section 5**.