Introduction to SPSS for Windows

This workbook is based upon the personal computer version of SPSS, SPSS for Windows. One of the advantages of using the Windows version of SPSS is that many of the features will be familiar to users of other programs which operate in a Windows environment, such as the wordprocessing package Word for Windows or the spreadsheet package Excel for Windows.

SPSS is a computer software package that is specifically designed to perform statistical operations and facilitate data analysis and is by far the most popular statistical package used by social scientists. It is worth pointing out at this stage that one of the best sources of information and help about SPSS and its various functions is literally at your fingertips, and can be accessed through the comprehensive Help menu within the SPSS program. Some of the important features of this Help menu include:

The Online Tutorial

this provides a good introduction to the program and adopts a clear step-by-step approach to the various features of SPSS.

The Statistics Coach

This provides some basic assistance with many of the statistical procedures available in SPSS. For one or more detailed statistical explanations you are advised to consult the SPSS applications guide or any good introductory statistics text.

The Contextual Help System

This provides information on specific features of SPSS. Pointing the mouse at the specific particular feature or control you want to know more about and clicking the right mouse key activates this help facility.

Getting started on SPSS

The SPSS program (assuming, of course, that it is installed on your computer) is accessed by clicking on the **Start** button situated on the bottom left-hand side of the computer screen and selecting **SPSS for Windows** from the **Programs** menu. (You should note that the menu system may be configured slightly differently on the computer you are using and therefore the location of SPSS may not be identical to that illustrated in Figure O.1a).

- This will start SPSS (the SPSS icon will appear in the Windows **Task bar** at the bottom of the screen) and the **Data Editor** window will open up automatically.

- Once opened, there are a number of ways to begin using the SPSS package. The opening dialog box (shown in Figure O.1b) offers five options and you can proceed by clicking on the required option button and then on OK.

Figure O.1a Starting SPSS

Start button

Task bar
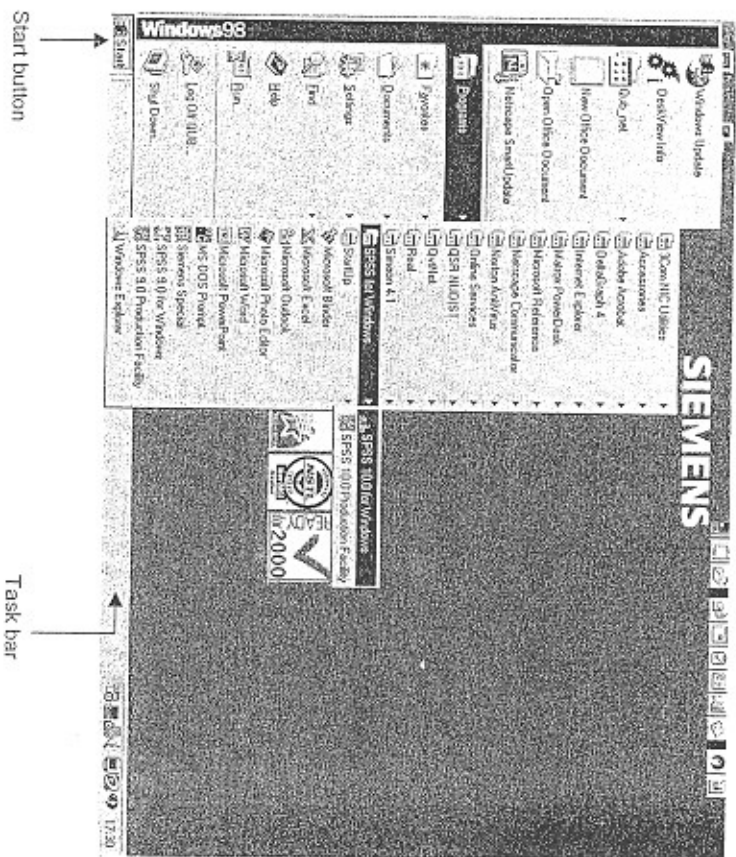
It is worth pointing out that this dialog box may not always appear when you open SPSS (for example, if the previous user has clicked on the 'Don't show this dialog box in the future' option). Fortunately, all of the options available in the opening dialog box can be accessed through the SPSS menu system.
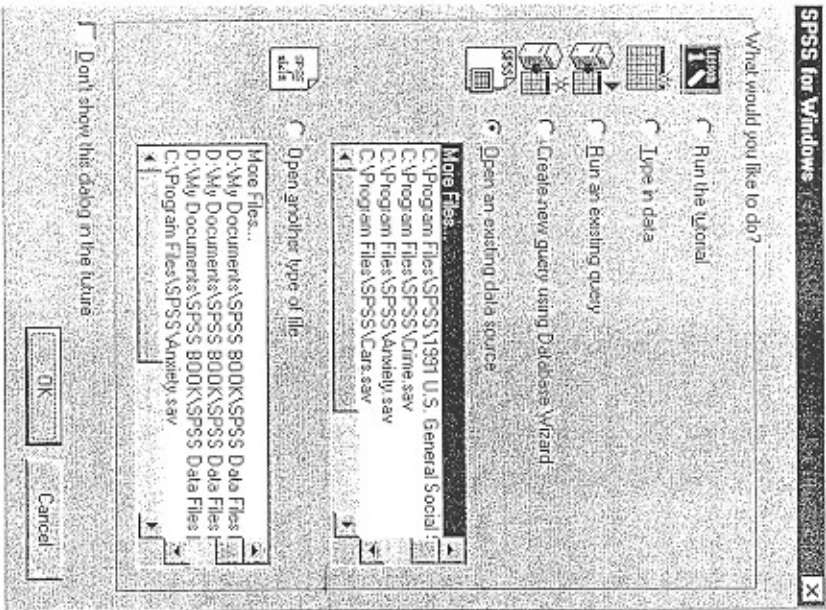
The opening dialog box can also be removed by clicking on Cancel and, as we want to take a closer look at the Data Editor window, you can do this now.

The Data Editor window is blank at this stage and contains no data (see Figure O.2). You will need to become familiar with the window in Figure O.2 if you are to navigate around SPSS successfully. Some of its main features are explained below.
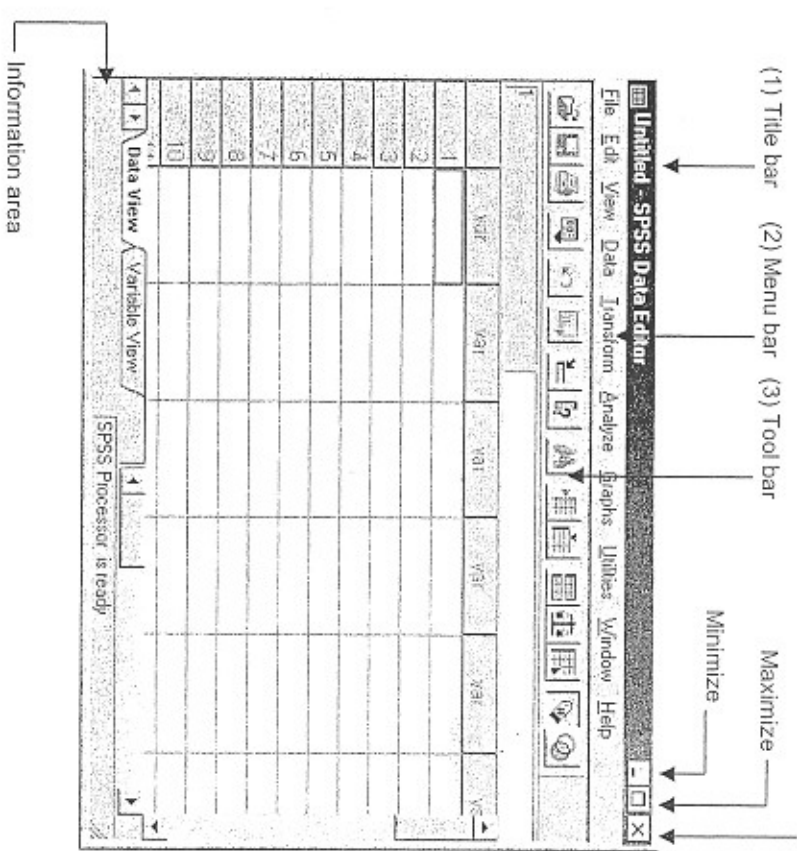
(1) The Title bar

The top section of the window is known as the Title bar and by clicking and dragging on this you can reposition the window anywhere on the screen. On the right-hand side of the Title bar are three small squares:

Figure O.1b   SPSS for Windows 'opening dialog box'

SPSS for Windows

What would you like to do?

- Run the tutorial
- Type in data
- Run an existing query
- Create new query using Database Wizard
- Open an existing data source

  More Files...
  C:\Program Files\SPSS\1991 U.S. General Social
  C:\Program Files\SPSS\Crime.sav
  C:\Program Files\SPSS\Anxiety.sav
  D:\My Documents\SPSS BOOK\SPSS Data Files
  D:\My Documents\SPSS BOOK\SPSS Data Files
  C:\Program Files\SPSS\Cars.sav

- Open another type of file

  More Files...
  D:\My Documents\SPSS BOOK\SPSS Data Files
  D:\My Documents\SPSS BOOK\SPSS Data Files
  C:\Program Files\SPSS\Anxiety.sav

☐ Don't show this dialog in the future

  [OK]   [Cancel]

☐ The first is the **Minimize** button and clicking on this reduces the window to an icon in the Windows Task bar at the bottom of the screen. Try this, but don't panic when the window disappears. This window is still open and you simply click on the SPSS icon in the Windows **Task bar** to restore it to its original size.

☐ The second square represents the Maximize button and if you click on this the Data Editor window will fill the screen. To restore the window to its original size click on this button again.

☐ Clicking on the third square in the top right hand corner of the Data Editor window closes the SPSS program down altogether. If you have made any changes to the dataset or produced any output you will be asked if you want to Save them (there will be more on saving SPSS files later in this chapter).

Figure O.2   Blank Data Editor window (Data View)

(1) Title bar   (2) Menu bar   (3) Tool bar

Minimize   Maximize   Close

Information area

You can also resize the Data Editor window by clicking and dragging the sides or the corners of the window.

(2) The Menu bar

Underneath the **Title bar** you will find the **Menu bar** which is the primary means of getting SPSS to carry out the tasks you require.

As can be seen from Figure O.2, the **Menu bar** contains ten broad menu headings, beginning with **File** and ending with **Help**. If you click the mouse on any of these headings a variety of options relating to this topic will appear in a drop-down menu. Figure O.3, for instance (p. 17), displays the **Edit** drop-down menu. To get rid of the drop-down menu simply click anywhere outside it.

A brief summary of some of the main functions associated with each of these ten menus is appropriate at this stage.

File – The File menu includes facilities for creating, opening, closing, saving and printing files.

Edit – The Edit menu is used if you want to cut, copy or paste items, either within SPSS or from SPSS to other programs such as Word.

View – The View menu allows you to alter various features of what you see in the window. For example, in the Data Editor window you are given the option of displaying value labels rather than number codes or removing grid lines.

Data – The Data menu allows you to manipulate the dataset in various ways. You can weight the dataset, insert additional variables or merge two datasets together via this menu. Also available in this menu is the facility for selecting out a subset of the data.

Transform – The Transform menu contains facilities for transforming and modifying the dataset, including Recode, Compute and Count (these data modification procedures are explained in detail in Module 3).

Analyze – The Analyze menu is where the various forms of statistical analysis available in SPSS are located. We will be examining many of these statistical procedures in the course of this workbook.

Graphs – The Graphs menu provides a range of facilities to enable you to create various charts and graphs.

Utilities – The Utilities menu includes a number of useful tools including facilities for creating smaller subsets of the data. Complete information about all the variables in the dataset can also be accessed through the Utilities menu.

Window – The Window menu allows you to switch between different windows (for example between the Data Editor window and the Viewer window).

Help – The Help menu provides a comprehensive range of information and help on various aspects of the SPSS package (see above for a brief summary of some of the main features of the Help menu).

(3) The Tool bar

The Tool bar in SPSS is located just below the Menu bar and, like the Tool bar in other Windows-based applications, provides a number of shortcuts for commonly used procedures or tasks. For instance, the first three icons in the Data Editor Tool bar perform the functions of opening a file, saving a file and printing a file. If you place the mouse pointer on any of the icons in the Tool bar a brief description of the function it performs will appear directly underneath the icon (and also in the information area at the bottom left-hand side of the screen). *Do not click the mouse unless you want to carry out the procedure in question!*

Some minor adjustments to SPSS

Before we proceed any further there are a couple of changes that we recommend you make to the *default options* in SPSS. You will find that resetting these options has two main advantages: (1) variables will be much easier to locate; (2) the results of your analysis will be labelled more fully. Moreover, you should find this workbook easier to follow if your SPSS settings are identical to ours.

Resetting variable lists

Before you carry out any kind of analysis in SPSS you need to select the *variables you are interested* in from a list of all the variables in your dataset. This selection process is much easier if the variables are displayed *alphabetically*, using *variable names* rather than variable labels. However, in order to achieve this we need to change the Variable Lists default options. Click on Edit to open up the Edit drop-down menu (see Figure O.3) and select Options by clicking on it.

Figure O.3 Edit drop-down menu

This will open up the Options dialog box shown in Figure O.4. Click on the General tab to ensure that the Variable Lists options are displayed and then select Alphabetical and Display names by clicking on them. Finally click on OK.

These changes will be implemented the next time you open a data file (this is covered in the following section, 'Loading a Data File?') and their effect can be observed in Figure O.9 (p. 22). You will notice in Figure O.9 that *variable names*, rather than variable labels, appear in the variable list and that this is ordered *alphabetically* (see Module 1 for more details on the distinction between variable names and variable labels).
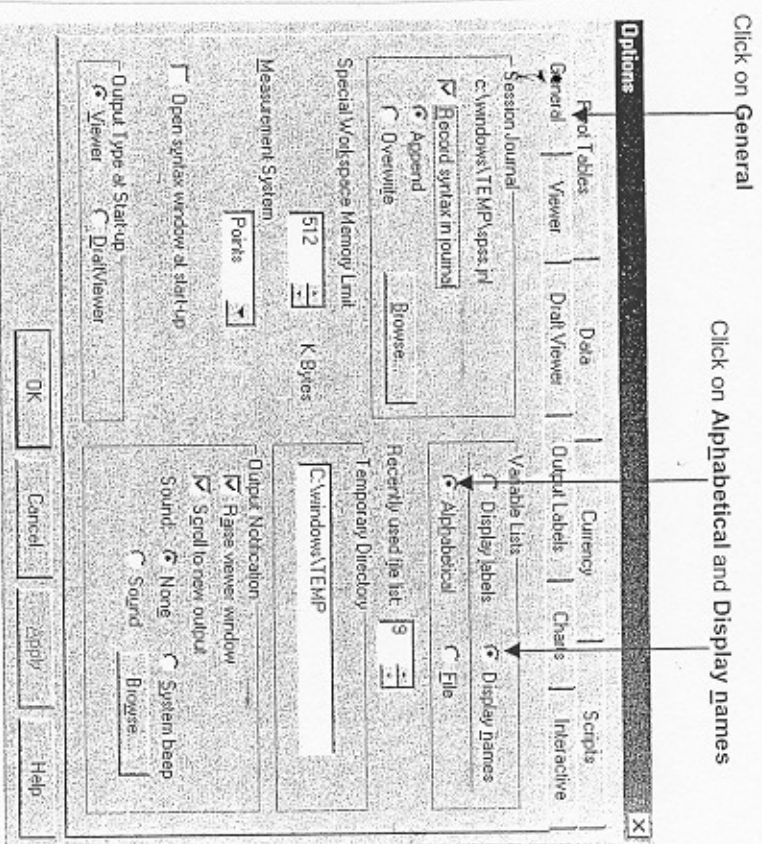
Resetting output labels

The second change we want to make relates to the *output or results* of our analysis. In general, we want our results to contain as much information as possible about the variables we used. We therefore need to change the output settings in SPSS so that our output includes the variable names and labels and also the *category codes* (values) and their labels.

Click on Edit to open up the Edit drop-down menu (see Figure O.3 again) and select Options as before.

This time, however, we need to click on the Output Labels tab in the Options dialog box and then change the settings in the four boxes to either Names and Labels or Values and Labels (see Figure O.5).

These adjustments to the output labels will take effect immediately, and when you come to produce your first frequency table (see Module 2) your output should contain not just the

Click on General

Click on Alphabetical and Display names
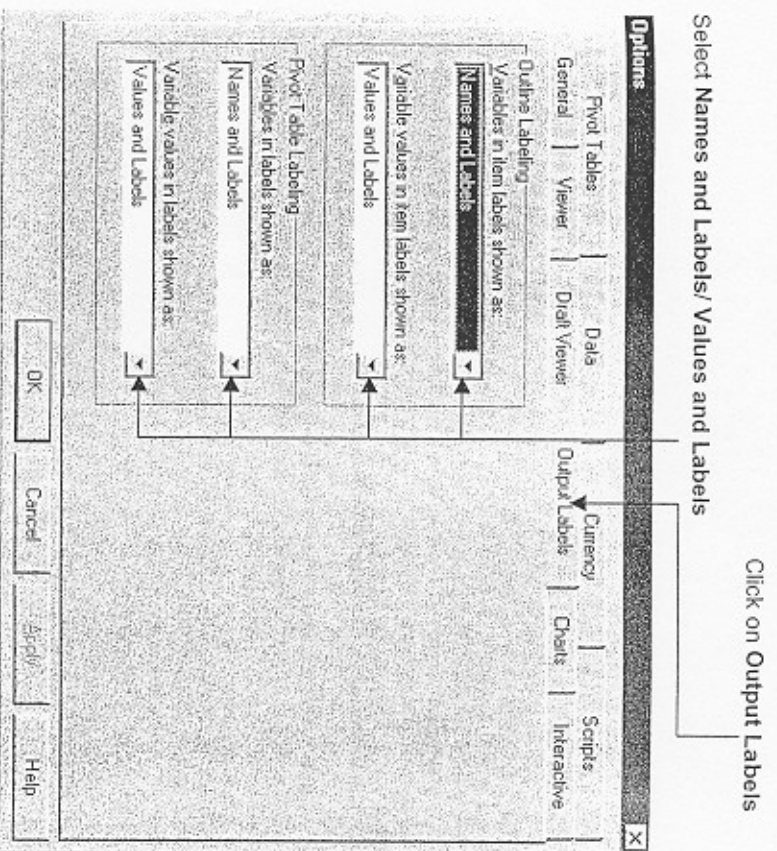

Figure O.4   Edit   Options: General dialog box

variable names and category codes, but also a description of what these represent (i.e. variable and value labels).

Loading a data file

So far we have been looking at a Data Editor window which contains no data! There are two main ways of rectifying this situation. The first is to create a data file by inputting your own data (this process will be examined in detail in Module 1), while the alternative option is to open a previously created SPSS data file. Here we will go through the steps for opening an already existing SPSS data file, the Crime dataset.

First, click on **File** from the Menu bar and then on **Open** from the drop-down menu that appears (see Figure O.6). This will give you the option of opening different types of files. As we want to open a data file, click on **Data**.

Select Names and Labels/ Values and Labels

Click on Output Labels

Figure O.5   Edit: Options: Output Labels dialog box

This will bring up the **Open File** dialog box (see Figure O.7). You now need to select the appropriate location of the SPSS file you wish to open (the relevant *drive* and *folder*).

For example, I have saved the British Social Attitudes Survey data file in a folder entitled SPSS. To open this dataset I simply locate the SPSS folder and double click on BSACrime, as illustrated in Figure O.7.

After a few moments the Data Editor window will reappear, but this time complete with the Crime data from the British Social Attitudes Survey (see Figure O.8). It is important to note that the Data Editor provides two different views of the data, the **Data View** and the **Variable View**. The Data View displays the actual data values (or value labels) in a spreadsheet format, while the Variable View displays variable information including variable and value labels, level of measurement and missing values (see Module 1 for more details on these). You can switch between these two views by clicking the **Data View** and **Variable View** buttons at the bottom left-hand corner of the screen (see Figure O.8).