Survey Crafter
PROFESSIONAL
The Complete Survey and Analysis Tool

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Welcome to Survey Crafter Professional

Welcome to Survey Crafter Professional, the complete survey and analysis tool from Survey Crafter.

Survey Crafter Professional is a powerful yet simple-to-use tool for survey research that enables you to quickly collect and easily understand critical information about your customers, prospects, employees, and other audiences. By helping you get closer to your customers and employees, Survey Crafter Professional lets you empower your decision-making with real data and enables you to win in a competitive environment.

Read this preface for an overview of the *Survey Crafter Professional User's Guide*.

Preface Contents

Audience

Survey Crafter Professional is designed for a variety of users including:

- People with customer service responsibilities

- People with product and marketing strategy development responsibilities

- People who need a better understanding of their customers' needs

- Organizations and individuals who previously have had little time, money, or expertise for conducting surveys

- Organizations or individuals interested in retaining customers

- Organizations or managers interested in employee satisfaction and other human resource issues

- Organizations who are in a very fast-paced market or who are facing increased competition

- Organizations that have a new or growing need for survey automation

- Organizations or individuals who may have done simple surveys before by hand but are now using larger or more complex surveys

- Organizations and individuals who need to turn information into results quickly

- Organizations or individuals who are interested in reducing consultant costs

Purpose

The *Survey Crafter Professional User's Guide* features step-by-step instructions for a wide range of Survey Crafter Professional tasks including:

- Creating surveys

- Building or importing and editing a database of survey responses

- Analyzing survey data

To use Survey Crafter Professional, you should have experience using software with a graphical user interface like Microsoft Windows or the Macintosh. You should also have a basic understanding of the survey research process. To learn more about the survey research process, see *Understanding Survey Research: A Primer for Success*.

Using This Manual

The chapters of the *Survey Crafter Professional User's Guide* cover the following information:

Part I Learning the Basics

- Chapter 1, "Survey Crafter Professional Basics," explains procedures common to all studies including opening and closing files, printing, and saving.

Part II Working with a Study

- Chapter 2, "Surveys," explains how to create a survey in Survey Crafter Professional.

- Chapter 3, "Data," explains how to populate a study database by entering survey responses manually or by importing a data file containing them and how to edit and export survey data.

- Chapter 4, "Analyses: Tables," explains how to perform calculations on survey data and present the results in formatted tables.

- Chapter 5, "Analyses: Charts," explains how to show the results of an analysis as a chart and how to format charts.

- Chapter 6, "Variables," explains how to create variables to store imported data and variables to store the results of calculations.

Part III Working with Expressions

- Chapter 7, "Expressions," explains how to write formulae Survey Crafter Professional uses to perform calculations. This chapter includes examples of expressions.

Part IV Reports

- Chapter 8, "Batch Reports," explains how to design, print and export batch reports.

Appendices

- Appendix A, "About Import Files and Data Dictionary Files," describes the structure of import files and data dictionary files, which are used when you import data into a Survey Crafter Professional study.

- Appendix B, "Setting Startup Preferences," explains how to set preferences for your copy of Survey Crafter Professional.

- Appendix C, "Glossary," defines Survey Crafter Professional and survey research terms.

Typographical Conventions

Before you start using Survey Crafter Professional, read Table P - 1 to familiarize yourself with the conventions used in the *Survey Crafter Professional User's Guide*.

Table P - 1: Conventions followed in the *Survey Crafter Professional User's Guide*.

Convention	Type of information	Example
Square brackets [ ]	Keyboard keys	Press [Enter].
Italic type	Variable names	The variable *age* stores respondents' ages.
Courier type	• An expression, function, or function argument	Use the MEAN() function to compute an average.
	• Parameters in supporting files like a data dictionary file.	Define the Text Qualifier parameter.
CAPITAL LETTERS	File names or path names	C:\SURVEY\PROJ1.MKT
Bold type	Text you type	In the Units field, type **US dollars**. (In this case, you would type the letters "US" and then a space and then the word "dollars".)
Warning appearing as the first word in a shaded box with an exclamation mark in a triangle	Caution against possible data loss	**Warning** Pressing the Reset button deletes all of the chart's current formatting and cannot be undone.
Note appearing as the first word in a shaded box	Extra information	**Note** If a cell contains the message #Update, its value needs to be recalculated. Choose the Update command from the Edit menu.

Table P - 1:   Conventions followed in the *Survey Crafter Professional User's Guide.* (Continued)

Convention	Type of information	Example
Tip appearing as the first word in a shaded box	Hints for using Survey Crafter Professional more efficiently	**Tip** To print a survey quickly, click the Print button on the toolbar.
In the Primer	Cross-reference to *Understanding Survey Research: A Primer for Success*	In the Primer For guidelines on writing effective survey questions, see the section "Designing, Writing, and Testing the Survey" in Chapter 4 of *Understanding Survey Research: A Primer for Success.*

1 Survey Crafter Professional Basics
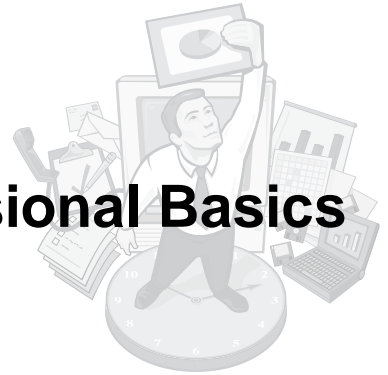
A Survey Crafter Professional file is called a study. This chapter covers basic procedures for working with Survey Crafter Professional studies.

Chapter Contents

Creating and Opening Studies

You can have only one Survey Crafter Professional study open at a time. If you have a study open and try to create or open another, Survey Crafter Professional prompts you to save any changes to the open study and then closes it before creating or opening the other study.

Creating a New Study

Use the File menu's New command to create a new study.

• **To create a new study**

New Study button

From the File menu, choose New or click on the New Study button on the toolbar.

An untitled study appears in the Study window.

Opening an Existing Study

Use the Open command from the File menu to open a study saved on disk.

• **To open an existing study**

Open Study button

1 From the File menu, choose Open or click on the Open Study button on the toolbar.

2 From the Locations (Look in) drop-down list, select the location that contains the study you want to open.

All the locations connected to your machine appear in the list.
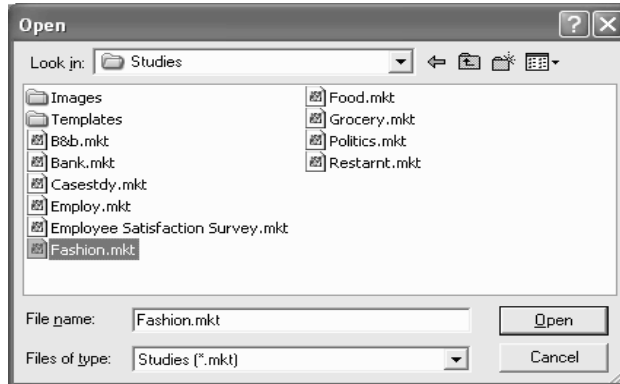
Figure 1 - 1:   The *Open* dialog box.

3   In the *Folders* list, select the folder that contains the study.

4   In the *Folders* list, select the study.

5   Click on the Open button.

Using the Study Window

The Study window is your home base in Survey Crafter Professional. Its tabs organize and provide access to the four categories of study components (surveys, the data set, analyses, and variables).

Access any category of study components by doing one of the following:

- Clicking on the Study window tab corresponding to the category you want.

- When the Study window is the active window, choosing the View menu's command corresponding to the category you want.

Each tab is described below.

Surveys Tab

From the *Surveys* tab, you can create, rename, edit, copy and delete the study's surveys.

Click on the Edit button to edit an existing survey, the Info button to change a survey's name and description, the New button to create a survey, the Copy button to make a copy of a survey and the Delete button to delete a survey.
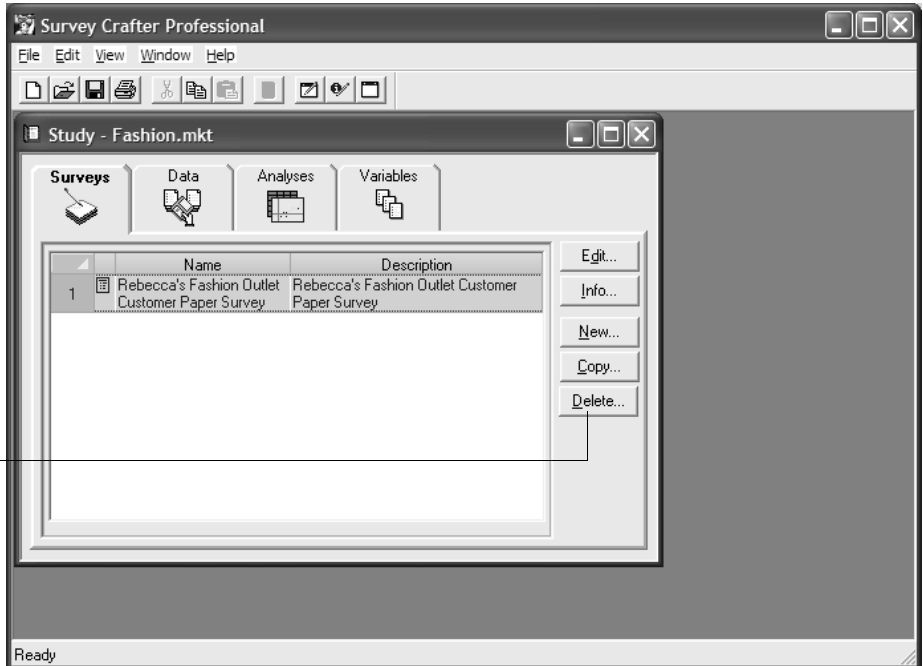
Figure 1 - 2:   The *Surveys* tab of the Study window.

Data Tab

From the *Data* tab, you can enter the name and description of the study's data set. Click on the Edit button to have Survey Crafter Professional display the Data window.

Click on the Edit button to enter or import, view, and edit the study's data set.
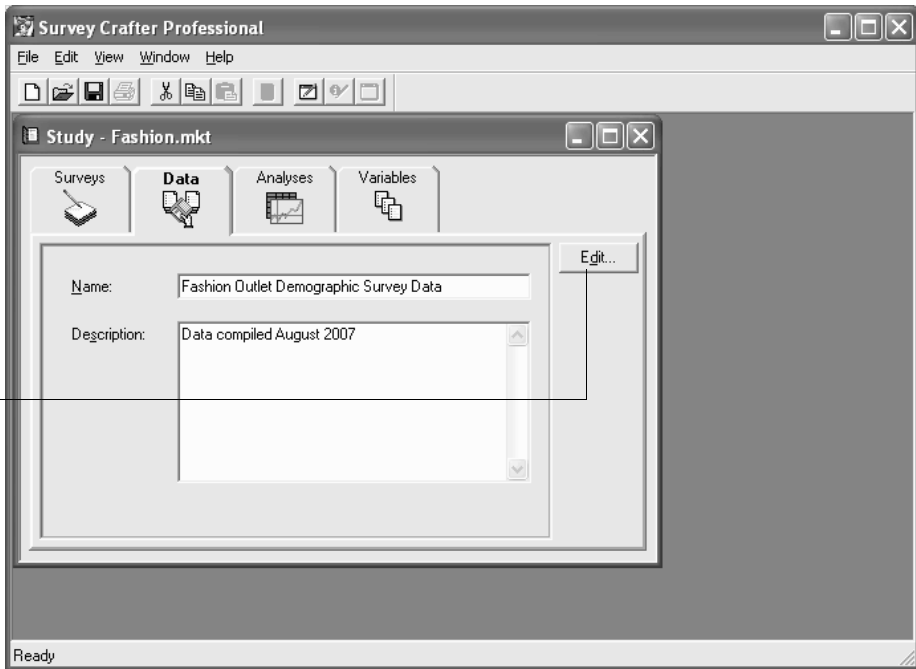
Figure 1 - 3:   The *Data* tab of the Study window.

Analyses Tab

From the *Analyses* tab, you can create, rename, edit, copy and delete analysis tables, charts and batch reports.

This tab lists analyses currently in the study. The icon indicates whether the analysis is in table or chart format, or if the analysis is a batch report.
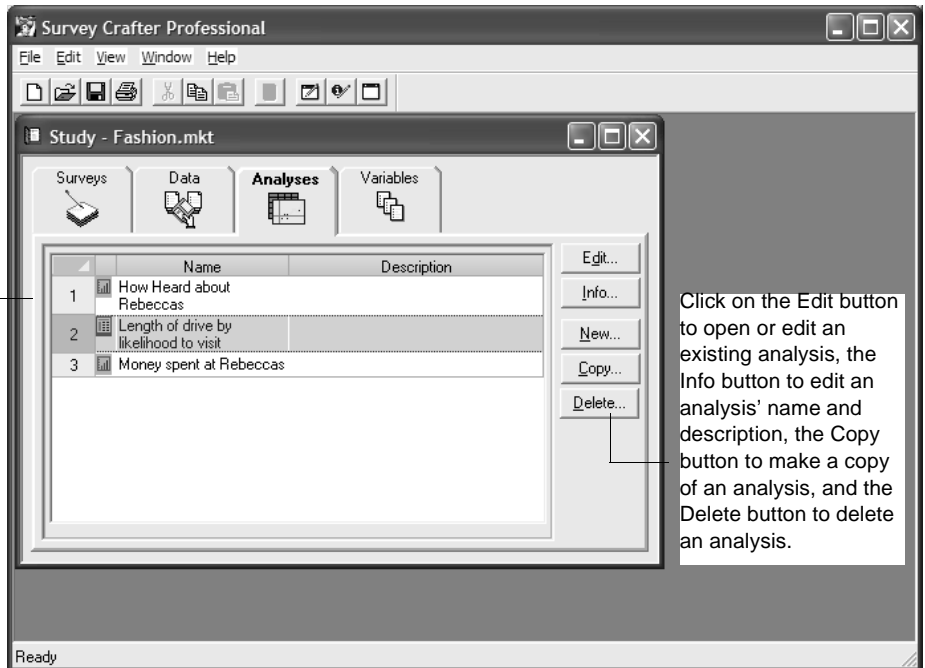
Click on the Edit button to open or edit an existing analysis, the Info button to edit an analysis' name and description, the Copy button to make a copy of an analysis, and the Delete button to delete an analysis.

Figure 1 - 4:   The *Analyses* tab of the Study window.

Variables Tab

From the *Variables* tab, you can create, rename, edit, copy and delete the study's imported and computed variables, which store responses to survey questions or results of calculations.

This tab lists variables currently in the study. The letter indicates the variable's type.

Click on the Edit button to open or edit an existing variable, the Info button to edit a variable's name and description, the Copy button to make a copy of a variable, and the Delete button to delete a variable.
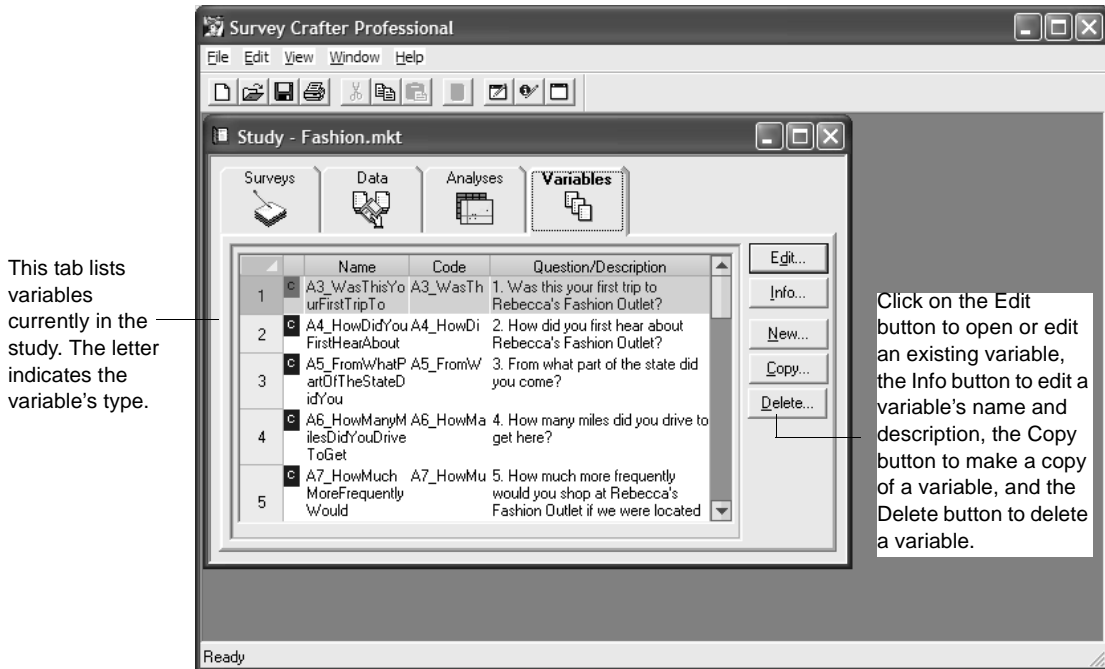
Figure 1 - 5:   The *Variables* tab of the Study window.

Organizing a Study's Windows

While working in Survey Crafter Professional, you may have several windows open at once. To make it easy to find the window you want, you can arrange the windows by using the Window menu's Cascade command.

- **To organize a study's windows**

From the Window menu, choose Cascade.

Survey Crafter Professional arranges all of the study's open windows so that they overlap but have their title bars visible.
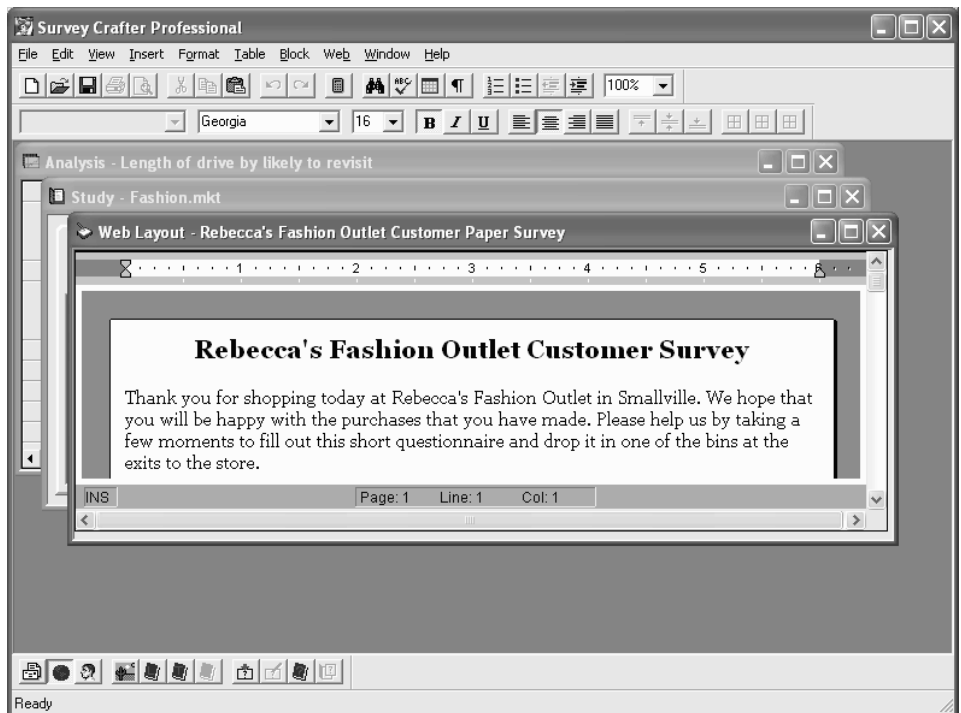
Figure 1 - 6:   Cascaded windows.

Printing Surveys, Tables, Charts and Batch Reports

This section covers the following procedures for setting print options and for printing surveys, tables, charts and batch reports:

- Selecting a Printer

- Previewing a Printed Survey

- Previewing a Printed Analysis Table

- Printing a Survey, Table, Chart, or Batch Report

- Specifying the Page Orientation and Size

- Reducing or Enlarging What You Want to Print

- Controlling the Alignment of Printed Surveys, Tables, Charts and Batch Reports

- Setting the Page Printing Order for Tables

- Creating Headers and Footers for Printed Surveys, Tables and Batch Reports

- Printing a Table's Grid Lines, Row Numbers, and Column Letters

- Controlling Color in Printed Tables

- Printing Multiple Copies

Selecting a Printer

Selecting a printer for surveys, tables, charts and batch reports requires different procedures. Each procedure appears below.

- **To select a printer for surveys**

    1   Open the survey to print.

    Make sure that the Survey Designer window is the active window.

    2   From the View menu, choose Print Layout.

3   From the File menu, choose Print Setup.

4   Under *Printer*, select a printer.
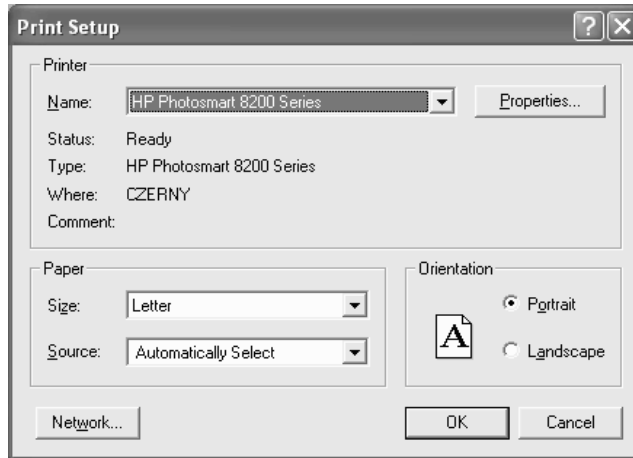
Figure 1 - 7:   The Survey *Print Setup* dialog box.

5   Click on the OK button.

•   **To select a printer for tables and charts**

1   Open the table or chart to print.

Make sure that the Analysis window that contains the table or chart is the active window.

2   From the File menu, choose Print.

3   Under *Printer*, select a printer.
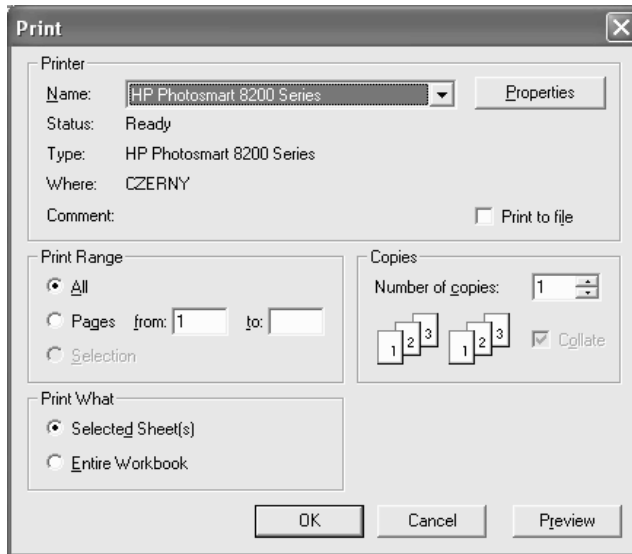
Figure 1 - 8:   The Table *Print* dialog box.

4   Click on the OK to print now. Click on the Cancel to abort the operation.

• **To select a printer for batch reports**

1   Open the batch report to print.

Make sure that the Batch Report Designer window is the active window.

2   From the File menu, choose Print.

3   In the *Print/Export* tab of the *Batch Report Print/Export* dialog box, select the *Print the tables and charts* check box.

4   Complete the *Batch Report Print/Export* dialog box.

5   Click on the Finish button.

Survey Crafter Professional displays the *Print* dialog box.

6   Under *Printer*, select a printer.
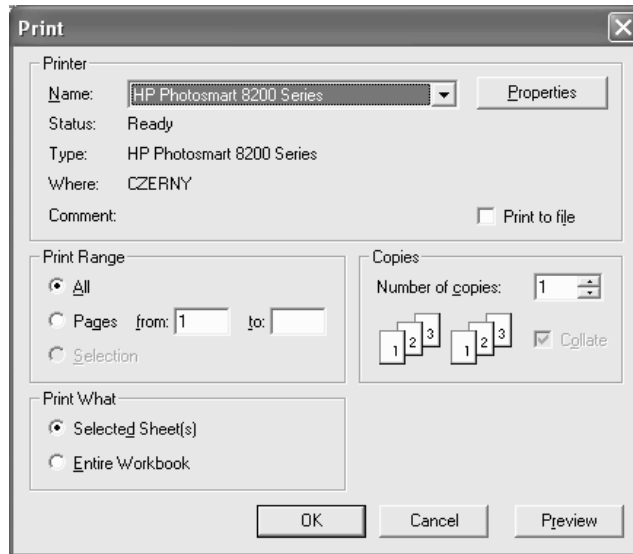
Figure 1 - 9:   The Batch Report *Print* dialog box.

7   Click on the OK button to print now. Otherwise, Click on the Cancel button to abort the operation.

Previewing a Printed Survey

By previewing the printed survey, you can see what your survey will look like on paper before sending it to your printer.

• **To preview a printed survey**

1   Open the survey to print.

Make sure that the Survey Designer window is the active window.

2   From the View menu, choose Print Layout.

3   From the File menu, choose Print Preview.

4   To print the survey, click on the Print button.

5   To edit the survey, click on the Edit button.

Previewing a Printed Analysis Table

By previewing the printed analysis table, you can see what your table will look like on paper before sending it to your printer.

- **To preview a printed analysis table**

    1   Open the analysis table to print.

    Make sure that the Analysis window is the active window.

    2   From the File menu, choose Print Preview.

    3   To print the table, click on the Print button.

    4   To edit the table without printing, click on the Close button.

Printing a Survey, Table, Chart, or Batch Report

You can print an entire survey, table, chart, or batch report. If you want, you can print a selected portion of a survey or table. Charts and batch reports can be printed in their entirety only.

Print button

> **Tip** For a printing short cut, open the survey, table, chart, or batch report to print. Then click on the Print button on the toolbar.

Printing an Entire Survey, Table, Chart, or Batch Report
Printing a survey, table, chart or batch report requires different procedures. Each procedure appears below.

- **To print a survey or table**

    1   Open the survey or table to print.

    Make sure that the Survey Designer window or the Analysis window that contains the table is the active window. Also make sure that the Survey Designer window is in the Print Layout mode.

    2   From the File menu, choose Print.

    3   Under *Print Range*, select the *All* option.

    4   Click on the OK button.

- **To print a chart**

  1   Open the chart to print.

  Make sure that the Analysis window that contains the chart is the active window.

  2   From the File menu, choose Print.

  3   Click on the OK button.

- **To print a batch report**

  1   Open the batch report to print.

  Make sure that the Batch Report Designer window is the active window.

  2   From the File menu, choose Print.

  3   In the *Print/Export* tab of the *Batch Report Print/Export* dialog box, select the *Print the tables and charts* check box.

  4   Complete the *Batch Report Print/Export* dialog box.

  5   Click on the Finish button.

Printing a Range of Pages from a Survey or Table

You can print a selected page or range of pages from a survey or table. Charts and batch reports, however, can be printed in their entirety only.

- **To print a range of pages from a survey or table**

  1   Open the survey or table to print.

  Make sure that the Survey Designer window or the Analysis window that contains the table is the active window. Also make sure that the Survey Designer window is in the Print Layout mode.

  2   From the File menu, choose Print.

  3   Under *Print Range*, select the *Pages* option.

  4   In the *From* field, enter the number of the first page in the print range.

  5   In the *To* field, enter the number of the last page in the print range.

To print a single page, enter the same number in the *From* and *To* fields.

6   To print the range, click on the OK button.

Specifying the Page Orientation and Size

Portrait view

Landscape view

You can print surveys, tables, charts and batch reports in portrait or landscape view. You can also choose a paper size and source.

Specifying page orientation and size for surveys, tables, charts and batch reports requires different procedures. Each procedure appears below.

The location and names of some of the features described below can vary depending on the printer you have selected.

- **To specify page orientation and size for surveys**

  1   Open the survey to print.

  Make sure that the Survey Designer window is the active window.

  2   From the View menu, choose Print Layout.

  3   From the File menu, choose Print Setup.

  4   Under *Paper*, select a paper size.

  5   Under *Orientation*, select either the *Portrait* or *Landscape* option.

  6   Click on the OK button to close the *Print Setup* dialog box.

- **To specify page orientation and size for tables**

  1   Open the table to print.

  Make sure that the Analysis window that contains the table is the active window.

  2   From the File menu, choose Page Setup.

  3   Select the *Page* tab.

  4   Under *Orientation*, select either the *Portrait* or *Landscape* option.

  5   From the *Paper Size* drop-down list, select a paper size.

6   Click on the OK button to close the *Page Setup* dialog box.

7   To print the table, choose Print from the File menu and then click on the OK button.

- **To specify page orientation and size for charts**

    1   Open the chart to print.

    Make sure that the Analysis window that contains the chart is the active window.

    2   From the File menu, choose Print.

    3   Click on the Layout button on the *Print* dialog box.

    4   Under *Orientation*, select either the Portrait or Landscape option.

    5   Click on the OK button to close the *Print Layout* dialog box.

    6   Click on the Properties button on the *Print* dialog box.

    7   From the *Paper Size* drop-down list, select a paper size.

    8   Click on the OK button to close the *Printer Properties* dialog box.

    9   To print the chart, click on the OK button.

- **To specify page orientation for batch reports**

    1   Open the batch report to print.

    Make sure that the Batch Report Designer window is the active window.

    2   From the File menu, choose Print.

    3   In the *Print/Export* tab of the *Batch Report Print/Export* dialog box, select the *Print the tables and charts* check box.

    4   Click on the *Print Setup* tab.

    5   Under *Set the orientation*, select either the *Portrait* or *Landscape* option.

    6   Complete the *Batch Report Print/Export* dialog box.

    7   To print the batch report, Click on the Finish button.

Reducing or Enlarging What You Want to Print

You can reduce or enlarge a survey, table, or chart by a percentage. You can also fit a table to a specified number of pages or have Survey Crafter Professional automatically size a chart.

These options are not available for batch reports. In addition, some printers do not support reducing or enlarging what you want to print.

Reducing or enlarging surveys, tables, and charts requires different procedures. Each procedure appears below.

- **To reduce or enlarge a survey**

    1 Open the survey to print.

    Make sure that the Survey Designer window is the active window.

    2 From the View menu, choose Print Layout.

    3 From the File menu, choose Print Setup.

    4 Click on the Properties button.

    5 In the *Printer Properties* dialog box, click on the Options button.

    6 In the *Scaling* field, enter the percentage by which to reduce or enlarge the survey.

    100 percent prints the survey at normal size.

    7 Click on the OK button to close the *Options* dialog box.

    8 Click on the OK button to close the *Printer Properties* dialog box.

    9 Click on the OK button to close the *Print Setup* dialog box.

- **To reduce or enlarge a table**

    1 Open the table to print.

    Make sure that the Analysis window that contains the table is the active window.

    2 From the File menu, choose Page Setup.

    3 Select the *Page* tab.

    4 Do one of the following:

- To fit the printed table to a number of pages, select the *Fit To Pages* radio button. Then go to step 5.

- To reduce or enlarge the table by a percentage, select the *Adjust To % Normal Size* radio button. Enter the percentage in the *Scale* field. Then go to step 7.

5   In the *Pages Wide* field, enter the number of pages wide you want the printed table to be.

6   In the *Pages High* field, enter the number of pages high you want the printed table to be.

7   Click on the OK button.

8   To print the table, choose Print from the File menu, and then click on the OK button.

- **To reduce or enlarge a chart**

    1   Open the chart to print.

    Make sure that the Analysis window that contains the chart is the active window.

    2   From the File menu, choose Print.

    3   Do one of the following:

    - To have Survey Crafter Professional automatically size the chart, click on the Layout button. Then go to step 4.

    - To reduce or enlarge the chart by a percentage, select the *Print Setup* tab. Then go to step 6.

    4   Under *Scaling*, select a sizing option.

Best Fit scales the chart proportionately to fit the page. *Actual Size* prints the chart using the current size in the Analysis window.

Select an automatic sizing option here.
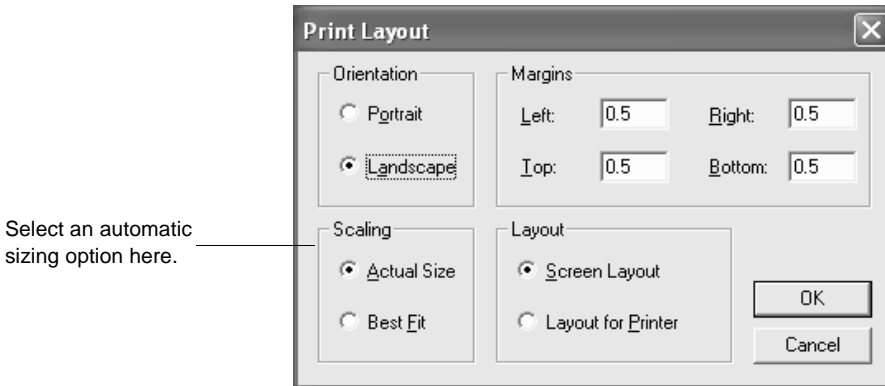
Figure 1 - 10:   The *Print Layout* dialog box.

5 Go to step 9.

6 Click on the Printer Properties button.

7 In the *Scaling* field, enter the percentage by which to reduce or enlarge the chart.

8 Click on the OK button.

9 To print the chart, click on the OK button.

Controlling the Alignment of Printed Surveys, Tables, Charts and Batch Reports

You can center and set margins for printed surveys, tables, charts and batch reports. Aligning surveys, tables, charts and batch reports requires different procedures. Each procedure appears below.

- **To control the alignment of printed surveys**

  1 Open the survey to print.

     Make sure that the Survey Designer window is the active window.

  2 From the View menu, choose Print Layout.

3 From the File menu, choose Page Setup.
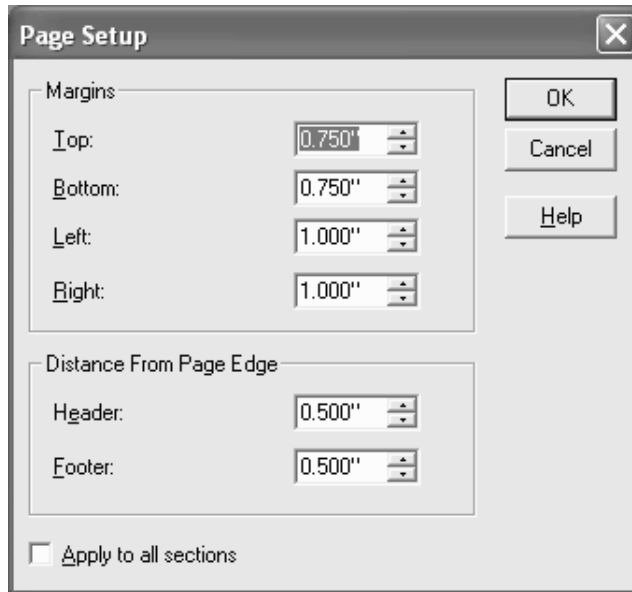
Figure 1 - 11: The Survey *Page Setup* dialog box.

4 If you want to change the page's margins, enter new values under *Margins*.

5 If you want to change the distance between the edge of the page and the header and footer, enter new values under *Distance From Page Edge*.

6 Click on the OK button.

7 To print the survey, choose Print from the File menu, and then click on the OK button.

• **To control the alignment of printed tables**

1 Open the table to print.

Make sure that the Analysis window that contains the table is the active window.

2 From the File menu, choose Page Setup.

3 Select the *Margins* tab.

4   If you want to center the table, select one or both check boxes under *Center on page*.

5   If you want to define the table's margins, enter values in the margin fields.

6   Click on the OK button.

7   To print the table, choose Print from the File menu, and then click on the OK button.

- **To control the alignment of printed charts**

1   Open the chart to print.

   Make sure that the Analysis window that contains the chart is the active window.

2   From the File menu, choose Print.

3   Click on the Layout button.

4   If you want to define the chart's margins, enter values in the fields under *Margins*.

5   Click on the OK button.

6   To print the chart, click on the OK button.

- **To control the alignment of batch reports**

1   Open the batch report to print.

   Make sure that the Batch Report Designer window is the active window.

2   From the File menu, choose Print.

3   In the *Print/Export* tab of the *Batch Report Print/Export* dialog box, select the *Print the tables and charts* check box.

4   Select the *Print Setup* tab.
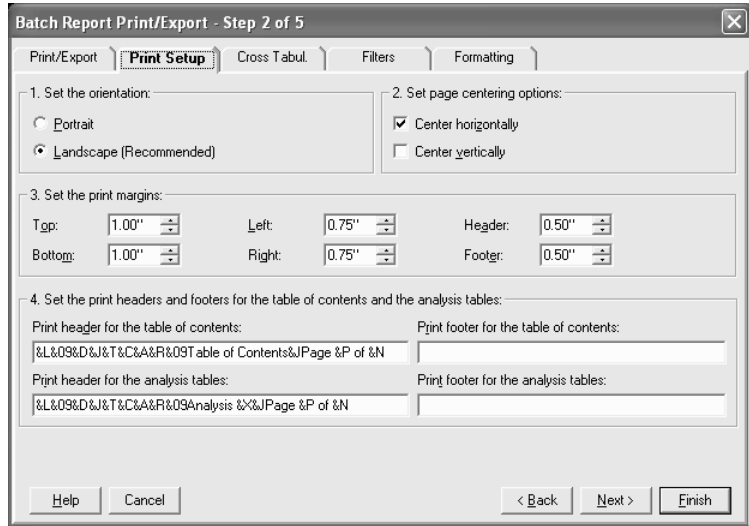
Figure 1 - 12:   The *Print Setup* tab of the *Batch Report Print/Export* dialog box.

5   Specify the orientation, centering, margins, headers and footers.

6   Complete the *Batch Report Print/Export* dialog box.

7   To print the batch report, click on the Finish button.

Setting the Page Printing Order for Tables
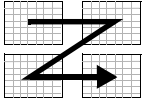
Printing by row
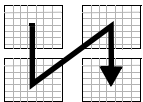
Printing by column

If a table is more than one page wide and long, you can specify whether Survey Crafter Professional prints the table's pages by row or by column.

- **To set the page printing order for tables**

    1 Open the table to print.

    Make sure that the Analysis window that contains the table is the active window.

    2 From the File menu, choose Page Setup.

    3 Select the *Sheet* tab.

    4 Under *Page Order*, select one of the following options:

    - *Top To Bottom* to print the pages by column

    - *Left To Right* to print the pages by row

    5 Click on the OK button.

    6 To print the table, choose Print from the File menu, and then click on the OK button.

Creating Headers and Footers for Printed Surveys, Tables and Batch Reports

Creating headers and footers for printed surveys, tables and batch reports requires different procedures. Each procedure appears below.

- **To create headers and footers for printed surveys**

    1 Open the survey to print.

    Make sure that the Survey Designer window is the active window.

    2 From the View menu, choose Print Layout.

    3 From the Edit menu, choose Edit Header and Footer.

    Survey Crafter Professional draws a line at the top and a line at the bottom of the Survey Designer window to mark the header and footer areas.

4 Type text for the header and footer inside the header and footer areas in the Survey Designer window.

5 From the Edit menu, choose Edit Header and Footer.

- **To create headers and footers for printed tables**

1 Open the table to print.

Make sure that the Analysis window that contains the table is the active window.

2 From the File menu, choose Page Setup.

3 Select the *Header/Footer* tab.

4 Enter codes and text for the header and footer in the Header and Footer fields, respectively.

Enter an alignment code first, followed by one or more font codes, and then one or more text codes. If you do not enter the codes in this order, the text may not display correctly. Table 1 - 1, Table 1 - 2, and Table 1 - 3 show the available codes for headers' and footers' alignments, fonts, and text. For example, to create a header showing the analysis' name in 14 point bold type right justified on the page, type the following in the Header field: **&R&B&14&F**.

Table 1 - 1:   Alignment codes for the Header and Footer fields.

Alignment code	Description
&L	Left-aligns the characters that follow
&C	Centers the characters that follow
&R	Right-aligns the characters that follow

By default, text is centered unless you specify &L or &R.

Table 1 - 2 shows codes for controlling the font used in a table's header and footer. Font codes must appear before text or text codes. Otherwise, Survey Crafter Professional ignores them.

Table 1 - 2:   Font codes for the Header and Footer fields.

Font code	Description
&B	Uses a bold font.

Table 1 - 2:   Font codes for the Header and Footer fields. (Continued)

Font code	Description
&I	Uses an italic font.
&U	Underlines the header.
&O	Ignored.
&H	Ignored.
&"name of font"	Uses the font named between the double quotes.
&nn	Used the specified point size. The point size must be a two digit number like 08 or 14.

The text codes in Table 1 - 3 determine what prints. You can also display text you enter in a header or footer by typing the text in the Header or Footer fields.

Table 1 - 3:   Text codes for the Header and Footer fields.

Text code	Description
&&	Prints an ampersand.
&D	Prints the current date.
&F	Prints the table's name.
&N	Prints the total number of pages in the table.
&P	Prints the page number.
&P+number	Prints the page number plus the number you enter. For example, &P+2 prints 3 on the table's first page.
&P-number	Prints the page number minus the number you enter. For example, &P-2 prints 3 on the table's fifth page.
&T	Prints the current time.

5   Click on the OK button.

6   To print the table, choose Print from the File menu, and then click on the OK button.

- **To create headers and footers for printed batch reports**

    1   Open the batch report to print.

    Make sure that the Batch Report Designer window is the active window.

    2   From the File menu, choose Print.

    3   In the *Print/Export* tab of the *Batch Report Print/Export* dialog box, select the *Print the tables and charts* check box.

    4   Select the *Print Setup* tab.

    5   Enter the codes for the headers and footers for the table of contents and analysis tables. Print headers and footers are not used by the batch report's analysis charts.

    You can enter text and format it by using the codes in the tables below. Enter an alignment code first, followed by one or more font codes, and then one or more text codes. If you do not enter the codes in this order, the text may not display correctly. Table 1 - 1, Table 1 - 2, and Table 1 - 3 show the available codes for headers' and footers' alignments, fonts, and text. For example, to create a header showing the current analysis table's name in 14 point bold type right justified on the page, type the following in the *Print header for the analysis tables* field: **&R&B&14&F**.

    Table 1 - 4:   Alignment codes for the Header and Footer fields.

Alignment code	Description
&L	Left-aligns the characters that follow
&C	Centers the characters that follow
&R	Right-aligns the characters that follow

    By default, text is centered unless you specify &L or &R.

Table 1 - 2 shows codes for controlling the font used in an analysis table's header and footer. Font codes must appear before text and text codes. Otherwise, Survey Crafter Professional ignores them.

Table 1 - 5:   Font codes for the Header and Footer fields.

Font code	Description
&B	Uses a bold font.
&I	Uses an italic font.
&U	Underlines the header.
&O	Ignored.
&H	Ignored.
&"name of font"	Uses the font named between the double quotes.
&nn	Used the specified point size. The point size must be a two digit number like 08 or 14.

The text codes in Table 1 - 3 determine what prints. You can also display the text you enter.

Table 1 - 6:   Text codes for the Header and Footer fields.

Text code	Description
&&	Prints an ampersand.
&A	Prints the title of the batch report.
&D	Prints the current date.
&F	Prints the title of the batch report.
&J	Prints a newline character.
&N	Prints the total number of pages in the current table.
&P	Prints the current table's page number.
&P+number	Prints the page number plus the number you enter. For example, &P+2 prints 3 on the current table's first page.

Table 1 - 6:   Text codes for the Header and Footer fields. (Continued)

Text code	Description
&P-number	Prints the page number minus the number you enter. For example, &P-2 prints 3 on the current table's fifth page.
&T	Prints the current time.
&X	Prints the total number of tables and charts in the batch report

6   Complete the *Batch Report Print/Export* dialog box.

7   To print the batch report, click on the Finish button.

Printing a Table's Grid Lines, Row Numbers, and Column Letters

You can show or hide a printed table's grid lines, row numbers, and column letters. Row numbers appear to the left of the table's rows and column letters appear above the table's columns.

- **To print a table's grid lines, row numbers, and column letters**

    1   Open the table to print.

    Make sure that the Analysis window that contains the table is the active window.

    2   From the File menu, choose Page Setup.

    3   Select the *Sheet* tab.

    4   Under Print Options, select one or all of the following:

    - The Grid Lines check box to print grid lines

    - The Row Headings check box to print row numbers

    - The Column Headings check box to print column letters

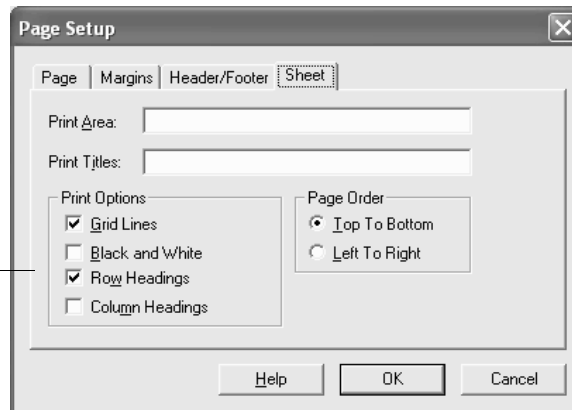Specify whether you want to print grid lines, row numbers, or column letters here.

Figure 1 - 13:   The *Sheet* tab of the *Page Setup* dialog box.

5   Click on the OK button.

6   To print the table, choose Print from the File menu, and then click on
the OK button.

Controlling Color in Printed Tables

On a black and white printer, colors in tables typically print as gray
shading. However, you can print the table in black and white only, making
colors and gray shading in the table print as white.

•   **To control color in printed tables**

1   Open the table to print.

Make sure that the Analysis window that contains the table is the
active window.

2   From the File menu, choose Page Setup.

3   Select the *Sheet* tab.

4   Under Print Options, do one of the following:

•   To print the table using black and white only, select the Black &
White check box.

•   To print the table using colors (if a color printer is available) or gray
shading, clear the Black & White check box.

5   Click on the OK button.

6   To print the table, choose Print from the File menu, and then click on
the OK button.

Printing Multiple Copies

You can print several copies of a survey, table, chart or batch report at
once. Printing multiple copies of surveys, tables, charts and batch reports
requires a different procedure. Each procedure appears below.

•   **To print multiple copies of a survey or table**

1   Open the survey or table to print.

Make sure that the Survey Designer window or the Analysis window that contains the table is the active window. Also make sure that the Survey Designer window is in the Print Layout mode.

2   From the File menu, choose Print.

3   In the *Copies* field, enter the number of copies to print.

4   If you want to print all of the pages of one copy before printing the next copy, select the *Collate Copies* check box.

5   To print the survey or table, click on the OK button.

- **To print multiple copies of a chart**

    1   Open the chart to print.

        Make sure that the Analysis window that contains the chart is the active window.

    2   From the File menu, choose Print.

    3   In the *Number of Copies* field, enter the number of copies to print.

    4   To print the copies, click on the OK button.

- **To print multiple copies of a batch report**

    1   Open the batch report to print.

        Make sure that the Batch Report Designer window is the active window.

    2   From the File menu, choose Print.

    3   In the *Print/Export* tab of the *Batch Report Print/Export* dialog box, select the *Print the tables and charts* check box.

    4   Complete the *Batch Report Print/Export* dialog box.

    5   Click on the Finish button.

    6   In the *Number of Copies* field, enter the number of copies to print.

    7   To print the copies, click on the OK button.

Updating a Study

A study may contain several calculated items including computed variables, edited survey responses, and analyses of survey data. As you work on a study, you can change or add new calculated items. For example, you might edit a table showing the results of an analysis on survey data or create 12 new computed variables.

Each time you edit or create a calculated item, you need to update (calculate or recalculate) the item's values. You can update each calculated item's values individually or edit and create several calculated items and update them all at once.

The procedure below explains how to update all the calculated items in a study at once. For instructions on updating individual analyses or the Data window only, see the sections "Updating Tables" on page 4 - 78, "Updating Charts" on page 5 - 124, "Editing Data Sets" on page 3 - 33, and "Updating Variables' Values" on page 6 - 68.

- **To update a study**

  1 Select any tab of the Study window.

  To update a study, the Study window must be the active window.

Update Study button

  2 From the Edit menu, choose Update Study or click on the Update Study button on the toolbar.

  In addition to calculating values, the Update Study command applies color coding to values in the Data window. For more on color coding, see the section "Color Coding in the Data Window" on page 3 - 6.

Saving Your Work

You can save changes to the current study or save a study under a different name.

Saving the Current Study

Save your work often to guard against data loss should your computer fail or lose power. You should also periodically back up your files in a location other than your computer's hard disk.

- **To save your work**

Save Study button

From the File menu, choose Save or click on the Save Study button on the toolbar.

If you are saving an untitled study, the *Save As* dialog box appears. For instructions on completing the *Save As* dialog box, see the section "Saving a Study under a Different Name" below.

Saving a Study under a Different Name

To make changes to a study while saving the original version, save the study under a different name before making the changes.

- **To save a study under a different name**

    1   From the File menu, choose Save As.

    2   In the File name field, type the name of the new version of the study.

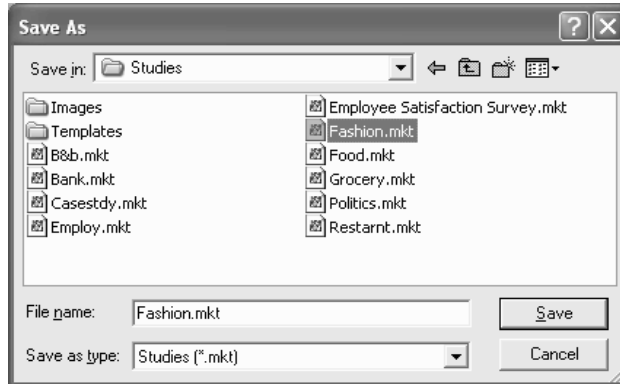Include the .MKT extension with the new version's name.

Figure 1 - 14:   The *Save As* dialog box.

3   From the Locations (Save in) drop-down list, select the location where you want to save the version of the study.

4   In the Folders list, select the folder in which you want to save the new version of the study.

5   Choose Save.

Compacting a Study

If you frequently import different data sets into a study or if you frequently add and delete study components such as variables and analyses, the study can become fragmented. A fragmented study typically uses disk space inefficiently and can affect Survey Crafter Professional's performance.

Compacting a study corrects any fragmentation, often reducing the disk space a study uses and improving Survey Crafter Professional's performance.

- **To compact a study**

   1   Run Survey Crafter Professional but do not open or create a study.

   2   From the File menu, choose Compact.

   3   In the *Compact* dialog box, select the study you want to compact.

   4   Click on the OK button.

   After Survey Crafter Professional finishes compacting the study, you can open any study or create a new study.

Closing Studies and Exiting Survey Crafter Professional

This section explains how to end the session with a current study and how to quit Survey Crafter Professional.

Closing a Study

You must close the current study before opening or creating another study.

- **To close a study**

  1 Save any changes to the study.

  2 From the File menu, choose Close.

Exiting Survey Crafter Professional

Use the File menu's Exit command to quit Survey Crafter Professional.

- **To exit Survey Crafter Professional**

  1 If a study is open, save any changes to the study.

  2 From the File menu, choose Exit.

2 Surveys

Before creating a survey, it is important to clearly define its purpose. This ensures that the data the survey gathers addresses the project's key issues. For more on the relationship between a survey's questions and a project's key issues, see Chapter 2, "Identifying the Problem," in *Understanding Survey Research: A Primer for Success*. After defining the survey's purpose, you are ready to create the survey in Survey Crafter Professional.

This chapter explains how to create and edit a survey in Survey Crafter Professional. Read the section "Survey Basics" first to learn key concepts about working with a survey in Survey Crafter Professional.

Chapter Contents

Survey Basics

This section introduces key features and concepts that will help you as you enter your surveys in Survey Crafter Professional.

This section introduces the following features and concepts:

- The Survey Designer Window

- Survey Blocks

- Survey Block Layouts

- Primary and Secondary Blocks

- Survey Layout Modes

- The Question Block Layouts Toolbar

- The Survey Explorer Toolbar

- The Question Block Wizard

- The List Library

The Survey Designer Window

The Survey Designer window is where you enter and format your survey. It has many features that you can use to arrange and format the titles, instructions, pictures and questions that make up your survey.
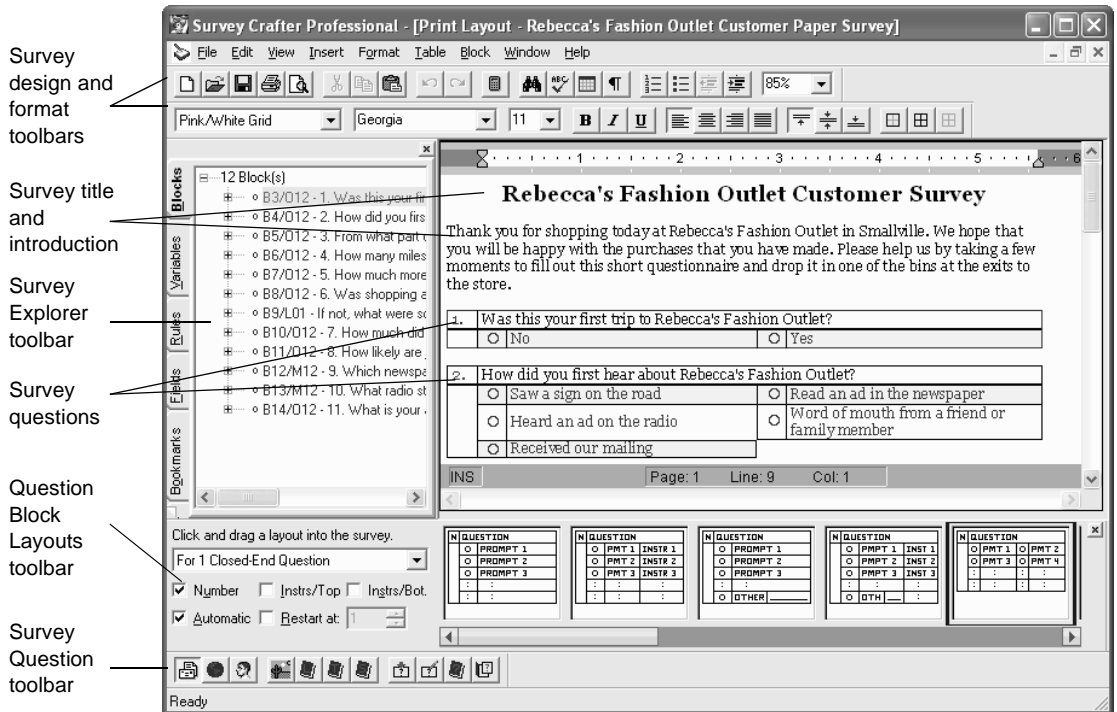

Figure 2 - 1:   Survey Crafter Professional's Survey Designer window.

Typing Directly in the Survey Designer Window

You can type titles, section headings, instructions and other text directly in the Survey Designer window.

Text that was typed and formatted directly in the Survey Designer window.
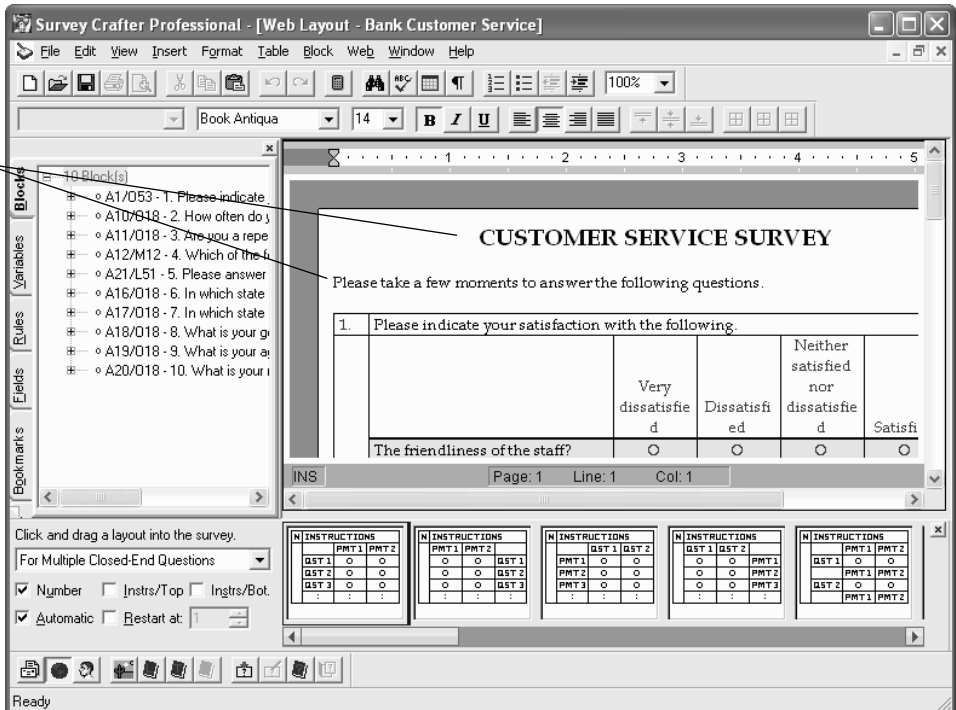
Figure 2 - 2:   Typing and formatting directly in the Survey Designer window.

You can format the text by changing its font, font size, style, spacing, foreground and background colors. You can format a paragraph of the text by changing its alignment, indentation, spacing, borders and shading. You can use tables, tab stops, bullets and numbering to organize and align the text. You can also have Survey Crafter Professional automatically check your spelling as you type.

You can also insert pictures, hyperlinks, hyperlink targets, bookmarks, frames, drawing objects, page breaks, page numbers, page counts, and dates in your survey.

Inserting Pictures in the Survey Designer Window

You can insert, resize and format pictures like a company logo just about anywhere in your survey. When you insert a picture, you either embed it in or link it to the survey. An embedded picture is stored with the survey. A linked picture has only its location stored with the survey.

Ross Printers' company logo.

Figure 2 - 3:   An embedded picture in the Survey Designer window.

You can insert a picture if it is in one of the following file formats:

- Windows Bitmap (*.bmp)

- JPEG File Interchange Format (*.jpg; *.jpeg)

- Graphic Interchange Format (*.gif)

- Portable Network Graphics (*.png)

- Windows Metafile Format (*.wmf)

- Windows Enhanced Metafile Format (*.emf)

Survey Blocks

You can type and format titles, section headings, instructions and other text directly in the Survey Designer window. However, when you want to enter a question, you must use a survey block.
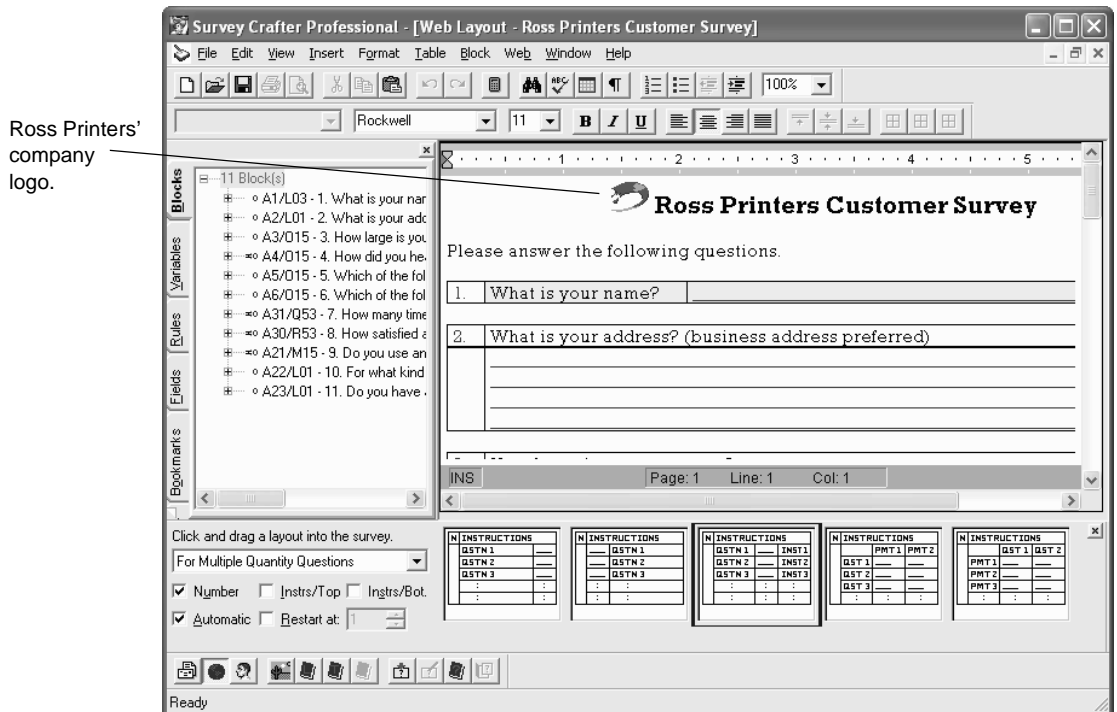
A survey block in the Survey Designer window is a special table that can contain one or more survey questions, or just text or pictures.

When the cursor is inside a block in the Survey Designer window, Survey Crafter Professional draws a border around the block.

Displays the block style for the currently selected block.

Formatted text not inside any block.

When the cursor is inside a block in the Survey Designer window, Survey Crafter Professional draws a border around the block.
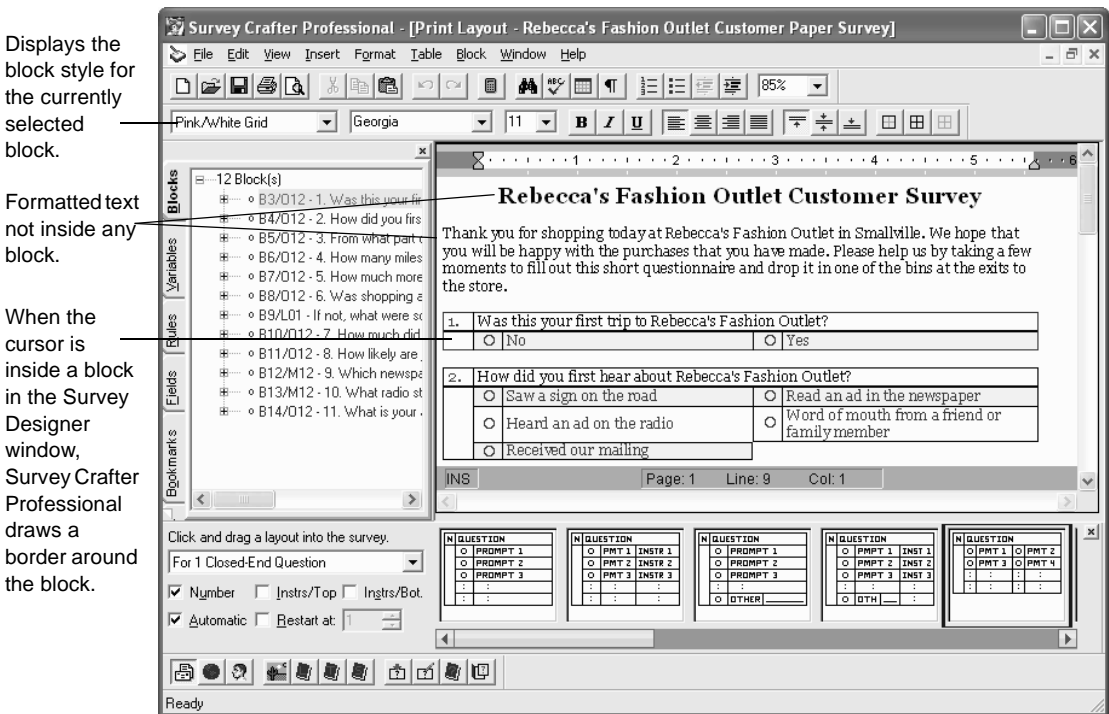

Figure 2 - 4: A survey in the Survey Designer window.

Question Blocks

A block that contains one or more survey questions is called a question block.

Table 2 - 1 lists the 7 types of questions Survey Crafter Professional supports.

Table 2 - 1:   The 7 types of questions Survey Crafter Professional supports.

Question Type	Description
All-That-Apply	A question that asks the respondent to check one or more prompts from a predefined list of prompts. For example, "Which of the following restaurants have you visited? Burger World, King Taco, Broilin' Bill's, The Chicken Coop, Marsha's Mex."
Closed-End	A question that requires the respondent to pick at most one prompt from a predefined list of prompts. Also called a forced choice or multiple-choice question. For example, "Which of the following restaurants is your favorite? Burger World, King Taco, Broilin' Bill's, The Chicken Coop, Marsha's Mex."
Constant Sum	A question that respondents reply to by assigning points to a series of items. The points they assign across items add up to a total you decide. For example: "Divide 100 points among the following three fast food restaurants according to how likely you are to visit them (the more points, the more likely you are to visit): Burger World, Marsha's Mex, Broilin' Bill's."
Open-End	A question that respondents answer in their own words rather than by selecting an answer from a list of choices or stating a number. For example, "What is your name?"
Quantity	A question a respondent answers with a number. For example, "What is your age?"
Ranking	Respondents reply to a ranking question by ordering a list of items according to some criterion. For example, "Please rank the following three fast food restaurants according to how likely you are to visit them (1 is most likely to visit, 3 least likely): Burger World, Marsha's Mex, Broilin' Bill's."
Rating	A question respondents reply to by picking a point on a scale. For example, "Please rate the importance you place on customer service at fast food restaurants on a scale of 1 to 5. (1 = Not at all important, 5 = Extremely important.)"

When you use a question block for a survey question, Survey Crafter Professional automatically creates and maintains the necessary imported variables in the study's database to store the responses to the question. These variables are called imported because they store data coming from outside Survey Crafter Professional.

> **Tip** You will use the imported variables associated with your survey's question blocks in a variety of ways. For example, you may use a few of the variables in expressions for skipping and branching rules. If you use Survey Crafter Professional's analysis wizards, the wizards will ask you to select the variables you want to analyze.

The type and number of imported variables associated with a question block depend on the types and number of questions contained by the block. For example, Survey Crafter Professional would automatically create and maintain 7 imported category variables for a block that contains 7 closed-end questions.

A block of type *For Multiple Closed-End* questions that contains 7 closed-end questions.

The Survey Explorer toolbar lists the 7 imported category variables associated with the question block.
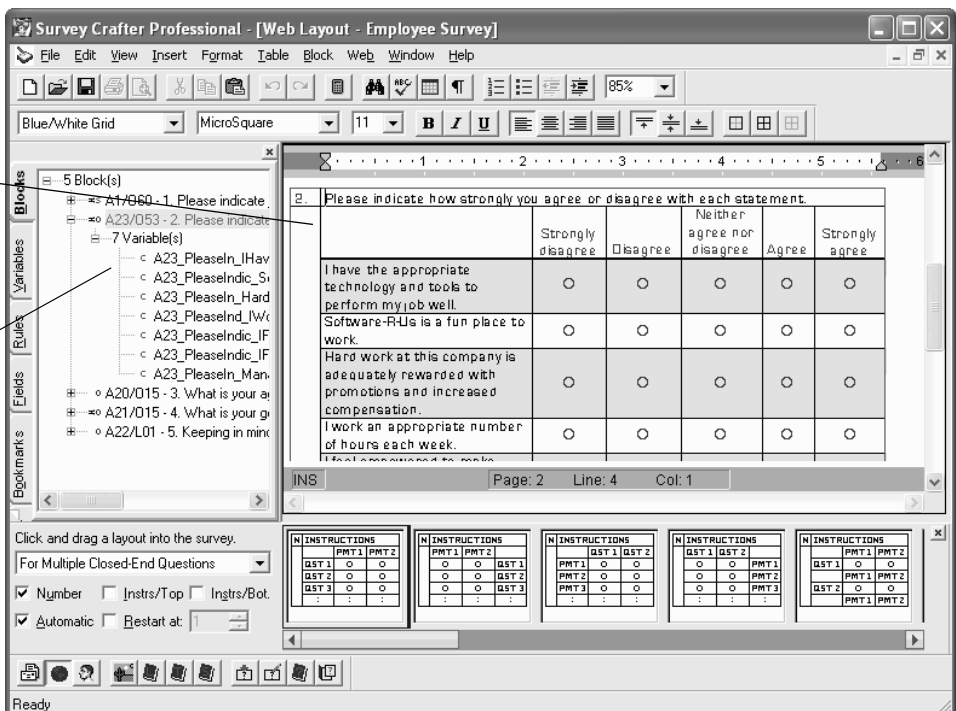

Figure 2 - 5:   A block that contains 7 closed-end questions in the Survey Designer window.

Table 2 - 2 lists the 14 types of question blocks Survey Crafter Professional provides and the number and type of imported variables the program would automatically create and maintain for the block.

Table 2 - 2:   The 14 types of question blocks Survey Crafter Professional provides.

The Type of Question Block	The imported variable(s) Survey Crafter Professional would automatically create and maintain for the block
• For 1 All-That-Apply Question • For Multiple All-That-Apply Questions	• 1 imported category variable for each prompt of each all-that-apply question in the block. • For example, Survey Crafter Professional would create and maintain 5 imported category variables for a block of type *For 1 All-That-Apply Question* that contains 1 all-that-apply question having 5 prompts. • Another example, Survey Crafter Professional would create and maintain 24 imported category variables for a block of type *For Multiple All-That-Apply Questions* that contains 4 all-that-apply questions, each having 6 prompts.
• For 1 Closed-End Question • For Multiple Closed-End Questions	• 1 imported category variable for each closed-end question in the block. • For example, Survey Crafter Professional would create and maintain 4 imported category variables for a block of type *For Multiple Closed-End Questions* that contains 4 closed-end questions, each having any number of prompts.
• For 1 Constant Sum Question • For Multiple Constant Sum Questions	• 1 imported quantity variable for each prompt of each constant sum question in the block • For example, Survey Crafter Professional would create and maintain 6 imported quantity variables for a block of type *For 1 Constant Sum Question* that contains 1 constant sum question having 6 prompts.
• For 1 Open-End Question • For Multiple Open-End Questions	• 1 imported literal variable for each open-end question in the block. • For example, Survey Crafter Professional would create and maintain 1 imported literal variable for a block of type *For 1 Open-End Question* that contains 1 open-end question.

Table 2 - 2:   The 14 types of question blocks Survey Crafter Professional provides. (Continued)

The Type of Question Block	The imported variable(s) Survey Crafter Professional would automatically create and maintain for the block
• For 1 Quantity Question • For Multiple Quantity Questions	• 1 imported quantity variable for each quantity question in the block. • For example, Survey Crafter Professional would create and maintain 10 imported quantity variables for a block of type *For Multiple Quantity Questions* that contains 10 quantity questions.
• For 1 Ranking Question • For Multiple Ranking Questions	• 1 imported quantity variable for each prompt of each ranking question in the block. • For example, Survey Crafter Professional would create and maintain 15 imported quantity variables for a block of type *For Multiple Ranking Questions* that contains 3 ranking questions, each having 5 prompts.
• For 1 Rating Question • For Multiple Rating Questions	• 1 imported quantity variable for each rating question in the block. • For example, Survey Crafter Professional would create and maintain 7 imported quantity variables for a block of type *For Multiple Rating Questions* that contains 7 rating questions, each having any number of prompts.

In the Primer

To read more about variable types, see the section "Variable Basics" on page 6 - 2. Also see the section "Understanding Variables and Scales" in Chapter 4 of *Understanding Survey Research: A Primer for Success*.

Instructions-Only Blocks

A survey block can also contain no questions. A block that contains no questions is called an instructions-only block. Typically, instructions-only blocks contain instructions, pictures, section headings, tables, lists or other text.

Note Survey Crafter Professional does not create and maintain any imported variables for an instructions-only block.

Use an instructions-only block when:

- you want the instructions to be the origin or destination of a custom branching or skipping rule. For more information, see the section "Custom branching, skipping and hiding rule issues" on page 2 - 134.

- you want the instructions displayed in the built-in Interviewer when the Interviewer is in its block-only mode. The Interviewer has an optional data-entry mode in which only blocks are displayed.

- you want to use the numbering or some of the other features offered by the instructions-only block. Other features include splitting the block into multiple rows and columns, having the rows and/or columns displayed in random order and having a subset of the rows and/or columns displayed depending on the answer to another question.

- you want to be able to save the instructions in the Question Library. The Question Library only stores blocks.

- you want to see the instructions listed in the Blocks tab of the Survey Explorer toolbar.

Otherwise, consider typing directly in the Survey Designer window.

Survey Block Layouts

Before you insert a block into the Survey Designer window, you must choose a layout for the block. You can choose a layout for your block from Survey Crafter Professional's gallery of block layouts. Survey Crafter Professional displays the gallery on the Question Block Layouts

toolbar as well as on the Type tab of the Question Block Wizard dialog box.

Choose the type of block you want from the drop down.

Each type of block has its own gallery of block layouts.

Double-click on a layout's picture to see an example and read about the layout.

Many of the block layouts designed for 1 closed-end question employ radio button controls.

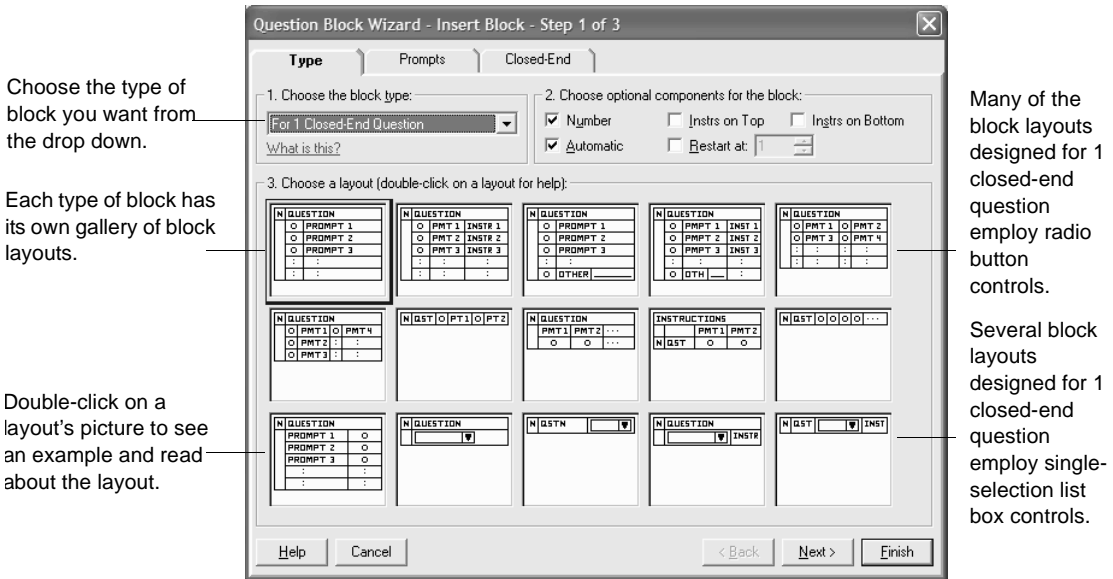Several block layouts designed for 1 closed-end question employ single-selection list box controls.

Figure 2 - 6:   The gallery of block layouts in the Question Block Wizard dialog box.

A block layout represents a particular organization and presentation of the components of a survey block. A block layout dictates how the instructions, questions, prompts and other components of a block are arranged. For example, one block layout may display a closed-end question's prompts in a single column below the question whereas another may display the prompts in a single row to the right of the question.

A block layout can also dictate the type and location of the block's controls. For example, when the Survey Designer window is in Web Layout or Interviewer Layout mode, many of the block layouts designed for 1 closed-end question employ radio button controls while others employ single-selection list box controls.

Most block layouts are designed to work with one or more of just one type of question. However, there are several block layouts that are designed to work with more than one type of question. For example, there is a block

layout that combines multiple closed-end questions with one ranking question.

This question block contains 5 closed-end questions and 1 ranking question.

Lists the 5 imported category variables and 5 imported quantity variables associated with the question block.
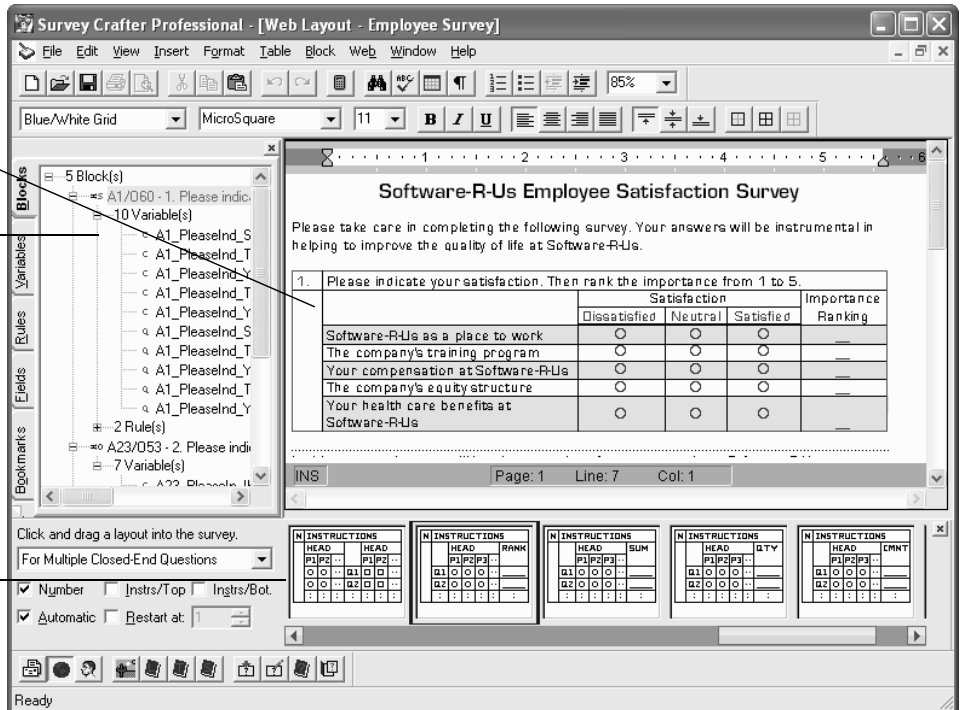
These block layouts combine question types.

Figure 2 - 7:   A block that combines multiple closed-end questions with one ranking question.

Optional Block Components
Blocks can include an area for a block number as well as areas for additional instructions.

• Including an area for a block number

When you include an area in a block for a block number, Survey Crafter Professional can automatically number the block for you or you can number the block yourself.

These question blocks each include an area for a block number that is automatically calculated by Survey Crafter Professional.
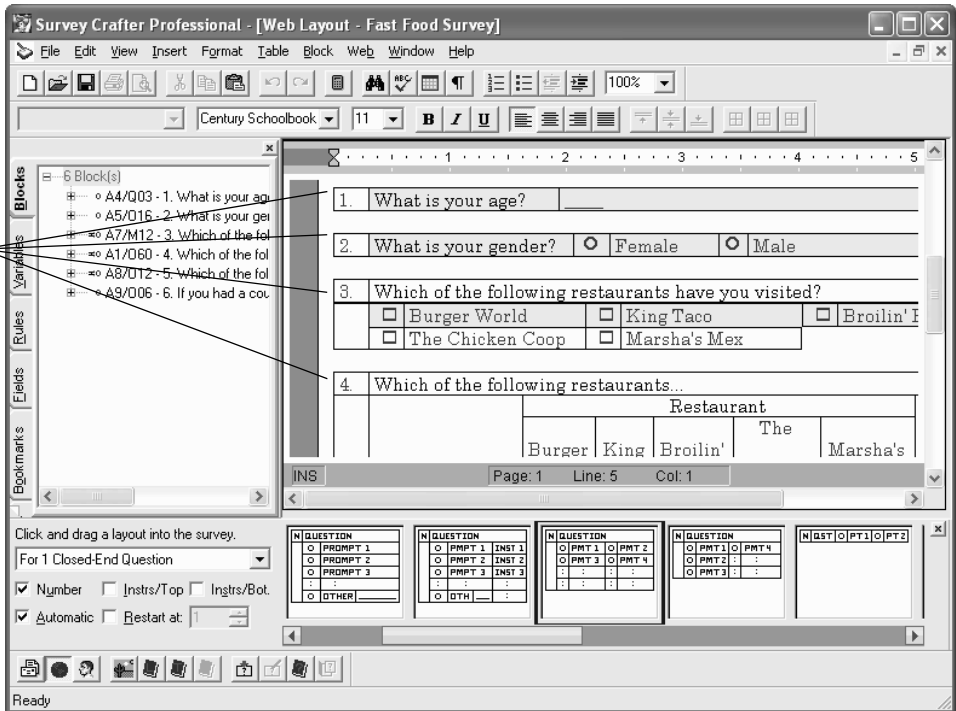

Figure 2 - 8:   Blocks in the Survey Designer window that each include an area for a block number.

When you choose to have Survey Crafter Professional number a block for you, Survey Crafter Professional calculates the number to be one greater than the number of the last automatically numbered block. The calculation does not include blocks you number yourself.

When you choose to number a block yourself, it is up to you to update the block's number if you move or insert other blocks before the block.

• Including an area for additional instructions on top

Including an additional area at the top of a block can be useful for labeling the block or for including additional instructions or pictures.

For example, let's say you have a numbered question that asks for the respondent's age. For a paper version of the survey, you could label the question by writing [AGE] in this area and have skip logic instructions elsewhere in the survey tell the respondent to jump to the label rather than to the number of the question. If the block's number were to change, there would be no need to revise the skip logic instructions.

• Including an area for additional instructions on the bottom

Including an additional area at the bottom of a block can be useful for providing skip logic or other instructions to interviewers and respondents.

For example, you might want to instruct respondents to skip a section of questions on home loans if they have never bought a house.

Showing Associated Variable Information

You can have Survey Crafter Professional display information about each question block's associated imported variables in the Survey Designer window. This information includes the name and code as well as the values and limits of each variable.

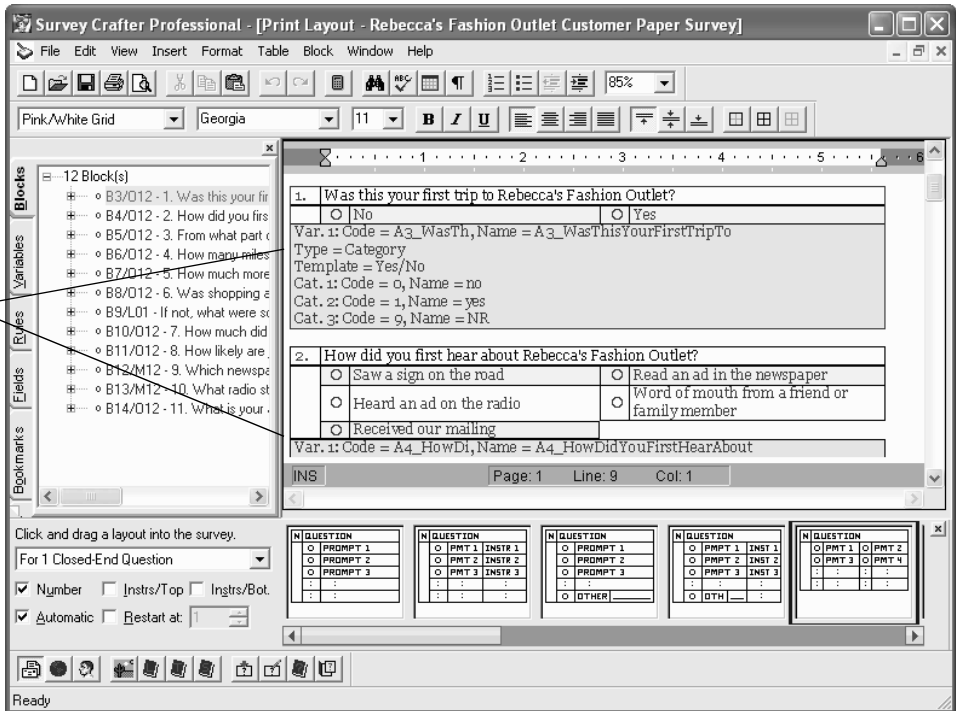Information about the variables associated with the question blocks

Figure 2 - 9:   The Survey Designer window showing associated variable information.

To have Survey Crafter Professional display information about each question block's associated variables, choose Survey Options from the View menu when the Survey Designer window is active. Choose the options you want under Display Options in the General tab of the Survey Options dialog box.

Primary and Secondary Blocks

A primary block is a block that serves as the primary source of information for its associated imported variables. Survey Crafter Professional uses primary blocks in the Survey Designer window to set the properties of the blocks' associated variables.

A newly inserted question block is by default a primary block. However, if you copy a block from one Survey Designer window and paste it inside another Survey Designer window from the stame study, the pasted block is by default a secondary block. A secondary block's associated variables are the same as those associated with the original primary block in the other Survey Designer window.

Secondary blocks are useful when you want to administer your survey in more than one language or you want to create another variation of your survey. Changes made to question and prompt text in a secondary block are not reflected in the block's associated variables.

To show when the cursor is inside a primary block, Survey Crafter Professional displays a blue rectangle around the block. To show when the cursor is inside a secondary block, Survey Crafter Professional displays a green rectangle around the block.

Identifiers for secondary blocks in the Blocks tab of the Survey Explorer toolbar are colored green.

You can click inside a secondary block and then click on Primary Block from the Block menu to convert the block to a primary block. When a secondary block is converted to a primary block, the block that shares the associated variables and is the primary block is automatically converted to a secondary block.

Survey Layout Modes

The Survey Designer window's layout modes allow you to tailor your survey for printing, the World Wide Web and telephone interviewing. This means you can use Survey Crafter Professional to simultaneously administer paper, Web and telephone interview versions of your survey.

Survey Crafter Professional displays the current layout mode in the caption of the Survey Designer window. You can change the current layout mode by choosing a different layout mode from the View menu or by clicking on one of the layout mode buttons on the Survey Question toolbar.

The caption indicates the Survey Designer window is in Print Layout mode.

The last 4 block layouts are only for the Print Layout mode.

The Survey Question toolbar indicates the Survey Designer window is in Print Layout mode.
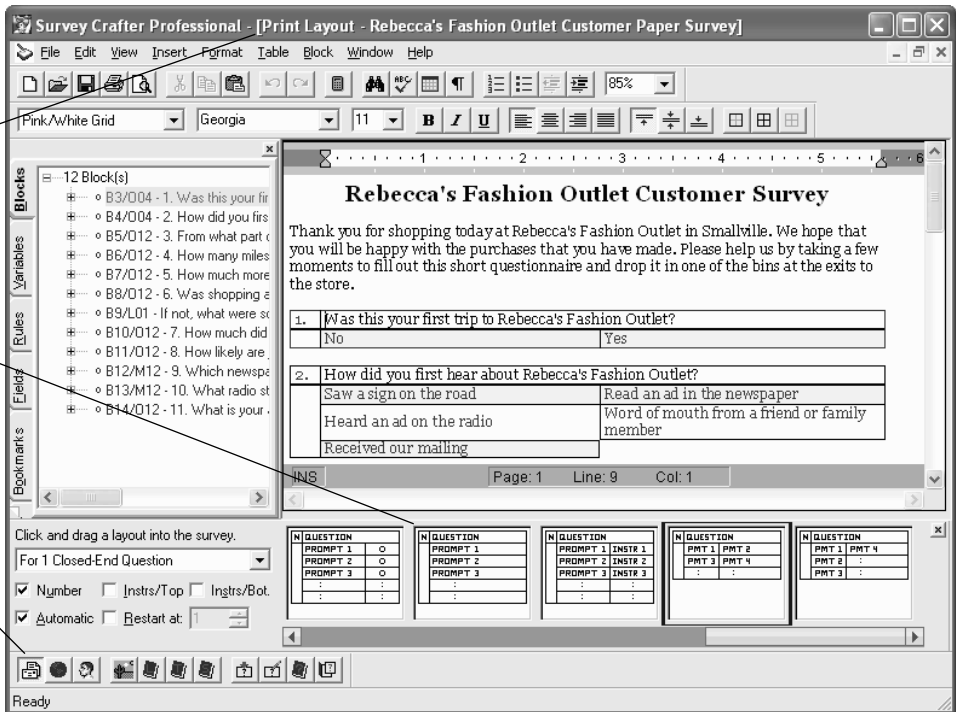

Figure 2 - 10:   The Survey Designer window in Print Layout mode.

When the Survey Designer window is in one layout mode and you choose a block layout for a question block that is not compatible with another layout mode, Survey Crafter Professional automatically assigns a similar but compatible block layout for the question block when the Survey Designer window is switched to the other layout mode.

For example, if you choose a block layout that has respondents circle the prompts for a question block when the Survey Designer is in the Print Layout mode, Survey Crafter Professional automatically assigns a block layout that uses radio button or check box controls for the question block when the Survey Designer window is switched to the Web Layout or Interviewer Layout modes.

Survey Crafter Professional displays the same survey text and graphics in all layout modes. If you change the survey text or graphics when the Survey Designer window is in one layout mode, the same change appears when the Survey Designer window is switched to the other layout modes. Survey Crafter Professional only allows a question block's layout to be different between layout modes.

You can view the Survey Designer window at any time in Print Layout, Web Layout or Interviewer Layout mode.

Print Layout

Use the Print Layout mode to tailor your survey for printing. When in Print Layout mode, the Survey Designer window offers question block layouts that are compatible with printed surveys. For example, you can choose a question block layout that has respondents circle the prompts. When in Print Layout mode, the Survey Designer window also offers page size and orientation options and automatic pagination. The Survey Designer window must be in Print Layout mode for you to configure, preview and print your survey on paper.

Web Layout

Use the Web Layout mode to tailor your survey for the World Wide Web. When in Web Layout mode, the Survey Designer window offers question block layouts that are compatible with web surveys. For example, you can choose a question block layout that uses drop-down, single selection or multiple selection list box controls. The Survey Designer window must be

in Web Layout mode for you to configure, preview and publish your survey for the World Wide Web.

The caption indicates the Survey Designer window is in Web Layout mode.

A few of the layouts are only for the Web and Interviewer Layout modes.

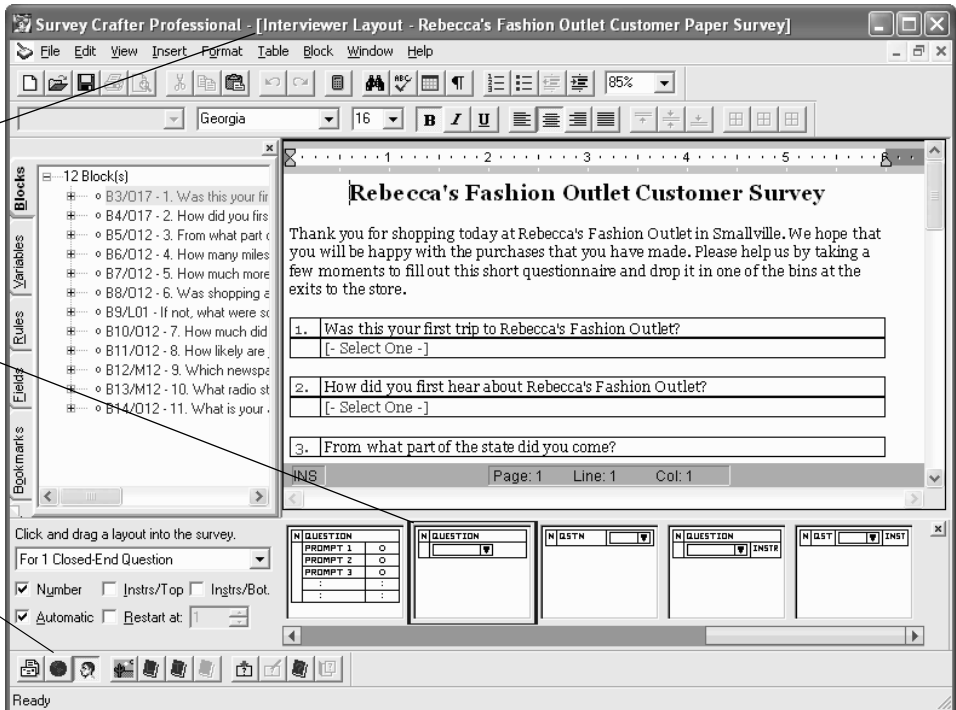The Survey Question toolbar indicates the Survey Designer window is in Web Layout mode.

Figure 2 - 11:   The Survey Designer window in Web Layout mode.

Interviewer Layout

Use the Interviewer Layout mode to tailor your survey for the built-in Interviewer. When in Interviewer Layout mode, the Survey Designer window offers question block layouts that are compatible with the built-in

Interviewer. For example, you can choose a question block layout that uses drop-down, single selection or multiple selection list box controls.

The caption indicates the Survey Designer window is in Interviewer Layout mode.

A few of the layouts are only for the Web and Interviewer Layout modes.

The Survey Question toolbar indicates the Survey Designer window is in Interviewer Layout mode.
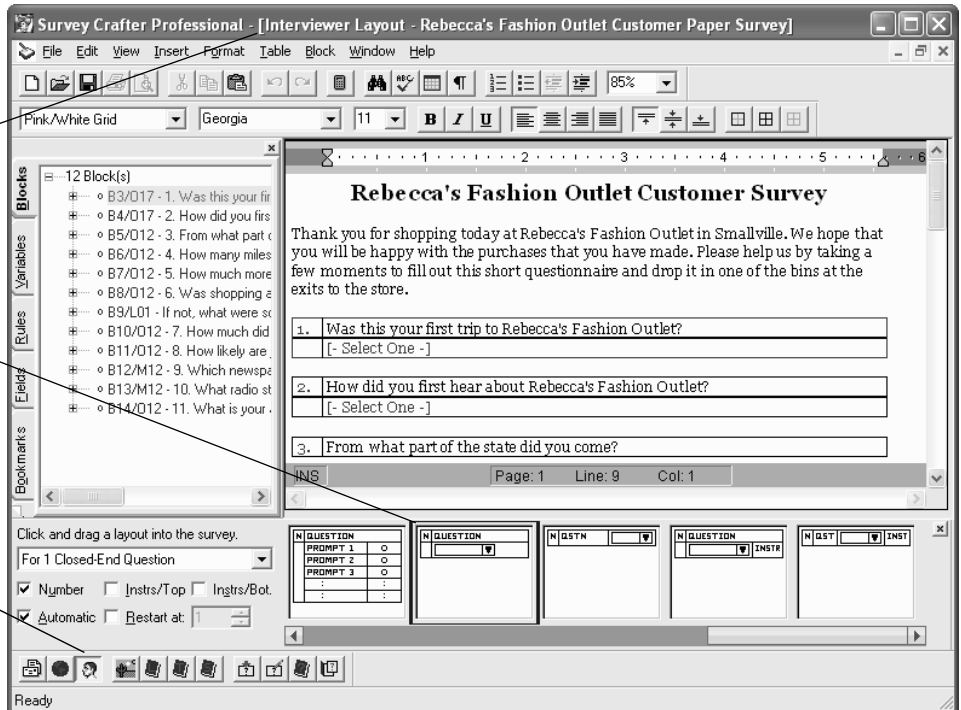

Figure 2 - 12: The Survey Designer window in Interviewer Layout mode.

The Question Block Layouts Toolbar

Use the Question Block Layouts toolbar to drag new blocks into the Survey Designer window.

> **Tip** To show or hide the Question Block Layouts toolbar, when the Survey Designer window is active, click on the View menu, Toolbars and then on Question Block Layouts.

The Question Block Layouts toolbar displays pictures of all of the available block layouts for each of the 15 types of blocks Survey Crafter Professional provides.

The Question Block Layouts toolbar displays all of the available block layouts for the current layout mode and the selected type of block.
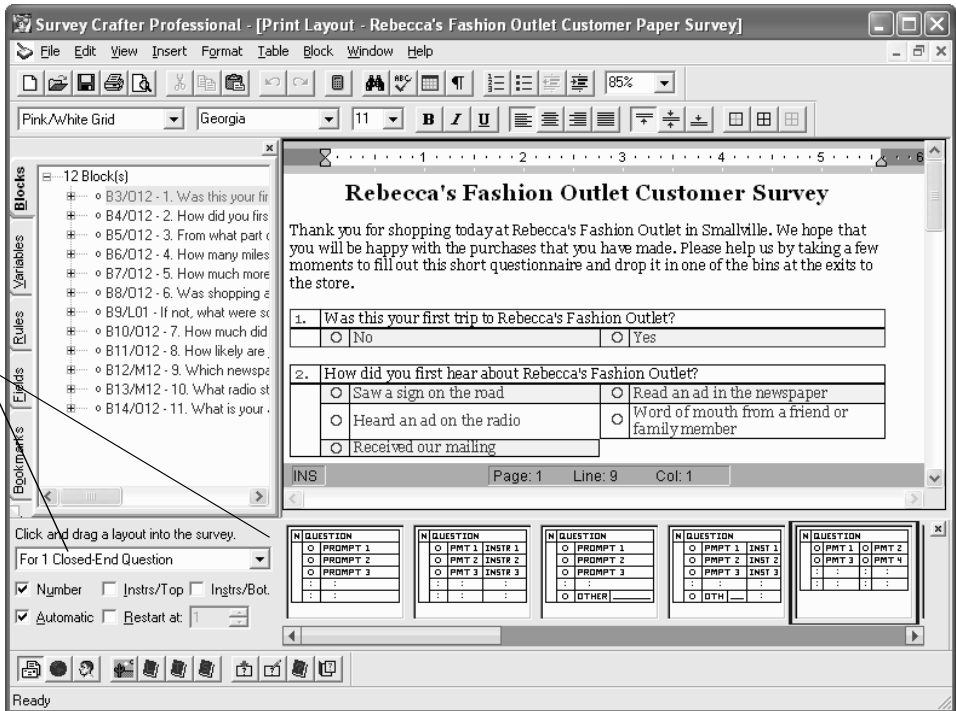
Figure 2 - 13: The Survey Designer window's Question Block Layouts toolbar.

To drag and drop a block into the Survey Designer window, click on and drag the block layout you want into the Survey Designer window. If you would like the Survey Designer window to scroll, move the mouse pointer near an edge of the window and press the [ALT] key. If you want, you can configure the block by right-clicking on the layout's picture and choosing Settings from the pop-up menu.

You can also drag the block layout you want over another block in the Blocks tab of the Survey Explorer toolbar. Survey Crafter Professional inserts the new block before the block in the Survey Designer window.

Alternatively, you can move the cursor to the location in the Survey Designer window where you want to insert a new block and double-click on the block layout you want.

Moving the Question Block Layouts Toolbar

You can anchor the Question Block Layouts toolbar to the top, bottom, right or left of the Survey Designer window or even have the toolbar float over the Survey Designer window. To move the Question Block Layouts toolbar, click on and drag the toolbar to the location where you want it to appear.

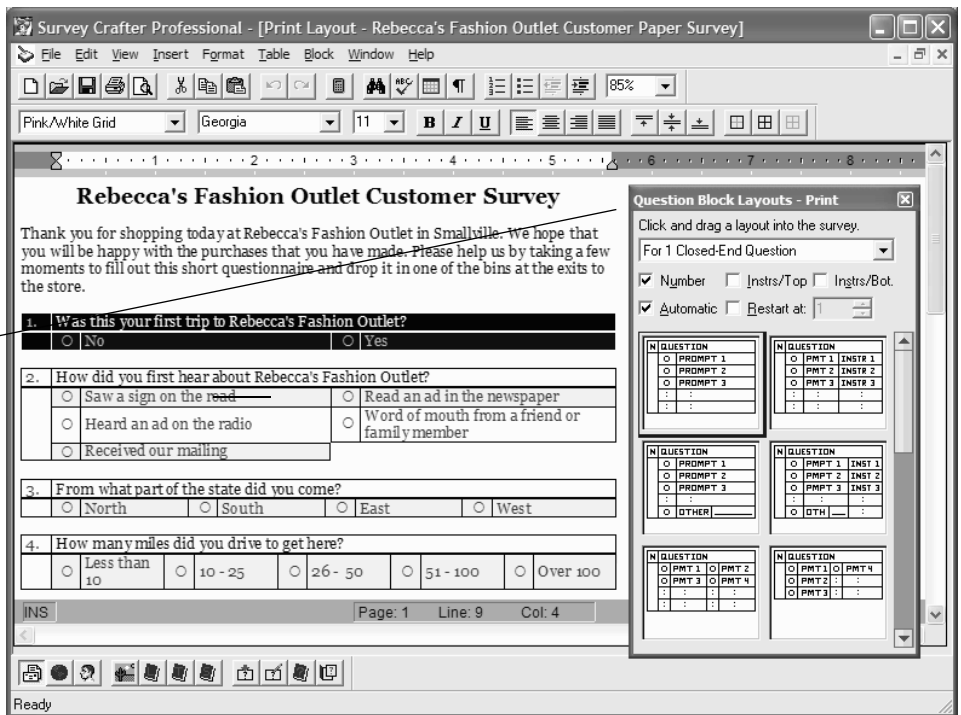The Question Block Layouts toolbar floating over the Survey Designer window.

Figure 2 - 14: The Question Block Layouts toolbar floating over the Survey Designer window.

If you want, you can change the default starting position of the toolbar in Survey Crafter Professional's Preferences dialog box.

The Survey Explorer Toolbar

Use the Survey Explorer toolbar to manage the blocks, imported variables, custom rules, survey fields, bookmarks and hyperlink targets in the Survey Designer window.

> **Tip** To show or hide the Survey Explorer toolbar, when the Survey Designer window is active, click on the View menu, Toolbars and then on Survey Explorer.

The Survey Explorer toolbar lists all of the blocks, imported variables, rules, survey fields, bookmarks and hyperlink targets in your survey.

The Survey Explorer toolbar lists all of the blocks, imported variables, rules, survey fields, bookmarks and hyperlink targets in your survey.
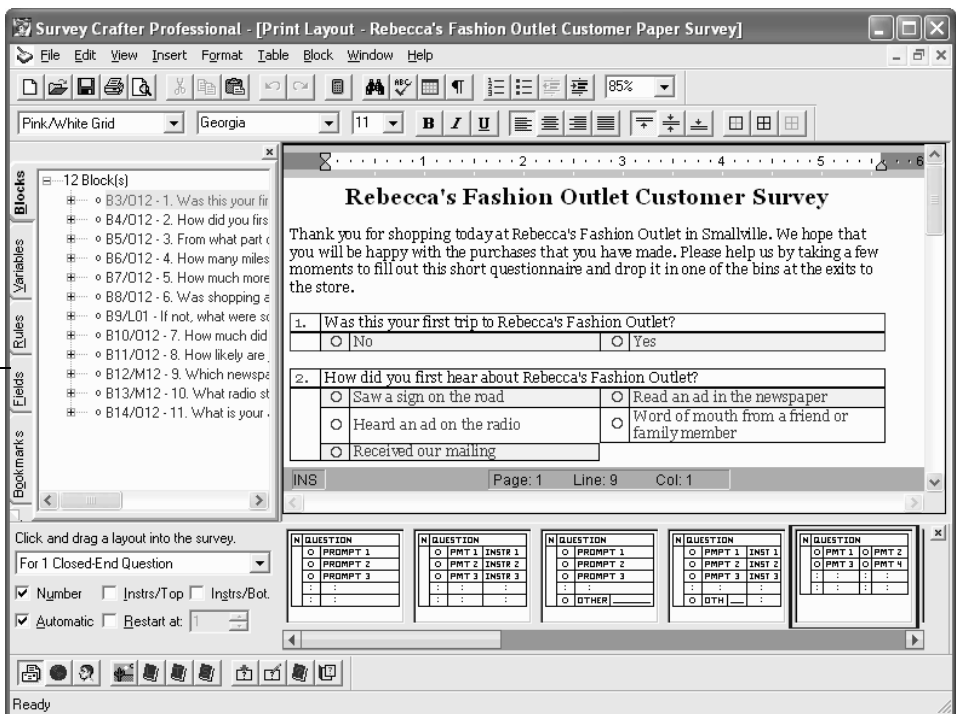

Figure 2 - 15:   The Survey Designer window's Survey Explorer toolbar.

Whenever you insert, cut, paste, move or delete a block, custom rule, survey field, bookmark or target in the Survey Designer window, Survey Crafter Professional automatically synchronizes the Survey Explorer toolbar with your survey.

> **Note** For information about custom rules, see "Adding Custom Rules" on page 2 - 101. For information about survey fields, see "Inserting Survey Fields" on page 2 - 137. For information about targets, see "Inserting Hyperlinks and Targets" on page 2 - 96.

You can use the Survey Explorer toolbar to drag and drop as well as copy and paste blocks, custom rules and survey fields.

Table 2 - 3 briefly describes the purpose of as well as some of the ways you can use the Survey Explorer toolbar's tabs.

Table 2 - 3:   The Survey Explorer toolbar's tabs.

Tab	Description
Blocks	• Displays a list of all of the blocks in your survey.
	• Click on a block in the Survey Explorer toolbar to have Survey Crafter Professional highlight the block in the Survey Designer window.
	• Click on the plus sign to the left of the block to see a list of the imported variables as well as a list of the custom rules associated with the block.
	• Double-click on the block to edit the block's settings.
	• Right-click on the block for other options.
Variables	• Displays a list of all of the imported variables used by your survey.
	• Click on a variable in the Survey Explorer toolbar to have Survey Crafter Professional highlight the block with which the variable is associated in the Survey Designer window.
	• Double-click on the variable to edit the variable's name, code and other properties.
	• Right-click on the variable for other options.

Table 2 - 3:   The Survey Explorer toolbar's tabs. (Continued)

Tab	Description
Rules	• Displays a list of all of the custom rules used by your survey. • Click on a rule in the Survey Explorer toolbar to have Survey Crafter Professional highlight the block with which the rule is associated in the Survey Designer window. • Click on the plus sign to the left of the rule to see a list of some of the rule's settings. • Double-click on the rule to edit the rule's settings. • Right-click on the rule for other options.
Fields	• Displays a list of all of the survey fields in your survey. • Click on a survey field in the Survey Explorer toolbar to have Survey Crafter Professional highlight the field in the Survey Designer window. • Double-click on the field to edit the field's settings. • Right-click on the field for other options.
Bookmarks	• Displays a list of all of the bookmarks in your survey. • Click on a bookmark in the Survey Explorer toolbar to have Survey Crafter Professional move the cursor to the location of the bookmark in the Survey Designer window. • Right-click on the bookmark for other options.
Targets	• Displays a list of all of the targets. in your survey. • Click on a target in the Survey Explorer toolbar to have Survey Crafter Professional move the cursor to the location of the target in the Survey Designer window. • Right-click on the target for other options.

Moving the Survey Explorer Toolbar

You can anchor the Survey Explorer toolbar to the top, bottom, right or left of the Survey Designer window or even have the toolbar float over the Survey Designer window. To move the Survey Explorer toolbar, click on and drag the toolbar to the location where you want it to appear.

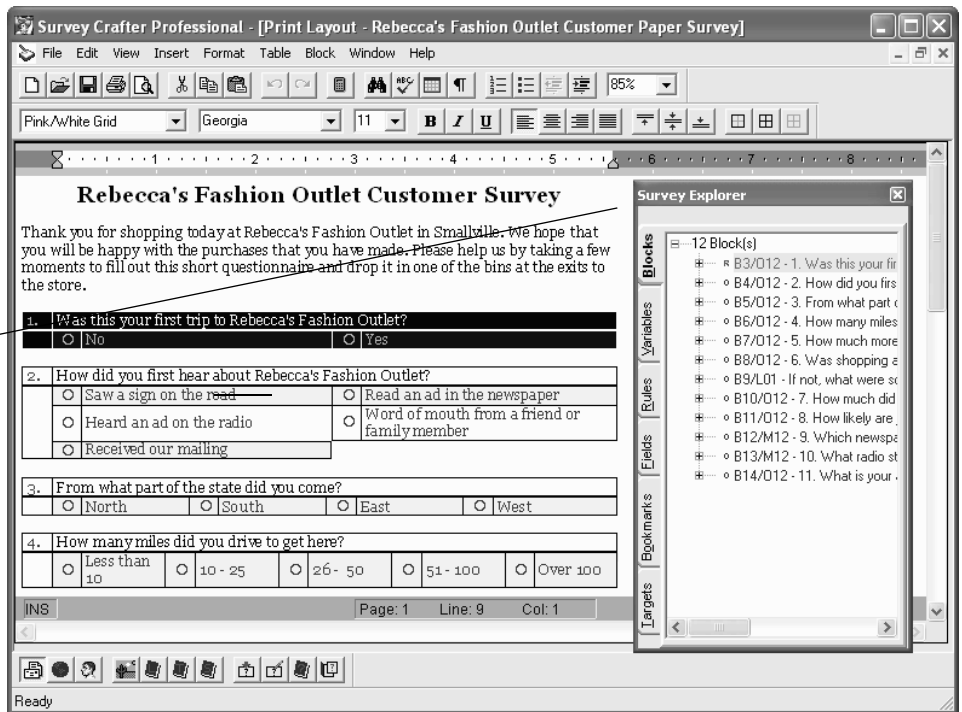The Survey Explorer toolbar floating over the Survey Designer window.

Figure 2 - 16:   The Survey Explorer toolbar floating over the Survey Designer window.

If you want, you can change the default starting position of the toolbar in Survey Crafter Professional's Preferences dialog box.

Using the Survey Explorer Toolbar to Review Your Survey

Table 2 - 4 lists a few ways you can use the Survey Explorer toolbar to review your survey.

Table 2 - 4:   Ways you can use the Survey Explorer toolbar to review your survey.

What to check	How to check
Which question blocks are configured to require one or more answers?	• Click on the Blocks tab of the Survey Explorer toolbar. Survey Crafter Professional lists all of the blocks in your survey.
	• If you see a red R to the left of a block's identifier, the block has been configured to require one or more answers. In this case, respondents must answer the question(s) in the block in order to continue with the survey. If you see a red S, answering the question(s) in the block is suggested but not mandatory. In this case, respondents are warned but may choose to continue with the survey without answering the question(s). If you see a green O, answering the question(s) in the block is optional.
	• To edit the settings for the block, double-click on the block in the Survey Explorer toolbar.
What are the types of the blocks?	• Click on the Blocks tab of the Survey Explorer toolbar. Survey Crafter Professional lists all of the blocks in your survey.
	• Review the identifiers for the blocks. A block's identifier is made up of a letter assigned to the survey that contains the block (eg. A), a unique number assigned to the block (eg. 455), a forward slash (/), and a code that identifies the layout selected for the block (eg. M06). Putting this together, A455/M06 is an example of an identifier for a block.
	• The first letter of the layout identifier determines the block's type. O indicates closed-end, M indicates all-that-apply, R indicates rating, L indicates open-end, Q indicates quantity, K indicates ranking and C indicates constant sum.
	• For example, the identifier A455/M06 is for an all-that-apply block.

Table 2 - 4:   Ways you can use the Survey Explorer toolbar to review your survey. (Continued)

What to check	How to check
Which question blocks are configured to have their prompts or questions shown in random order when the survey is on the Web?	• Click on the Blocks tab of the Survey Explorer toolbar. Survey Crafter Professional lists all of the blocks in your survey. • If you see 2 lines crossing each other to the left of a block's identifier, the block has been configured to have either its prompts or its questions or both shown in random order when the survey is on the Web. • To edit the settings for the block, double-click on the block in the Survey Explorer toolbar.
How many imported variables are associated with a block?	• Click on the Blocks tab of the Survey Explorer toolbar. Survey Crafter Professional lists all of the blocks in your survey. • Click on the plus sign to the left of the block's identifier to expand the block's listing. Survey Crafter Professional will indicate how many imported variables are associated with the block.
How many imported variables are used by the survey?	• Click on the Variables tab of the Survey Explorer toolbar. Survey Crafter Professional lists all of the imported variables used by the survey in the order they are used.
How many custom rules does the survey use?	• Click on the Rules tab of the Survey Explorer toolbar. Survey Crafter Professional lists all of the custom rules used by the survey in the order they are used.
How many survey fields does the survey use?	• Click on the Fields tab of the Survey Explorer toolbar. Survey Crafter Professional lists all of the survey fields in your survey.
Which blocks are primary and which are seconday?	• Click on the Blocks tab of the Survey Explorer toolbar. Survey Crafter Professional lists all of the blocks in your survey. • Review the identifiers for the blocks. If a block is a primary block, its identifier is black. If a block is a secondary block, its identifier is green.

The Question Block Wizard

Use the Question Block Wizard to configure a newly inserted block or to edit an existing block's settings. For example, after you drag a block layout from the Question Block Layouts toolbar into the Survey Designer window, double-click on the block and Survey Crafter Professional will display the Question Block Wizard dialog box for you to use to configure the new block.

The Type Tab

Use the Type tab to choose the block's type, optional components and layout.

The Question Block Wizard uses the block type and the selected block layout to determine the remaining tabs to display in the dialog box.
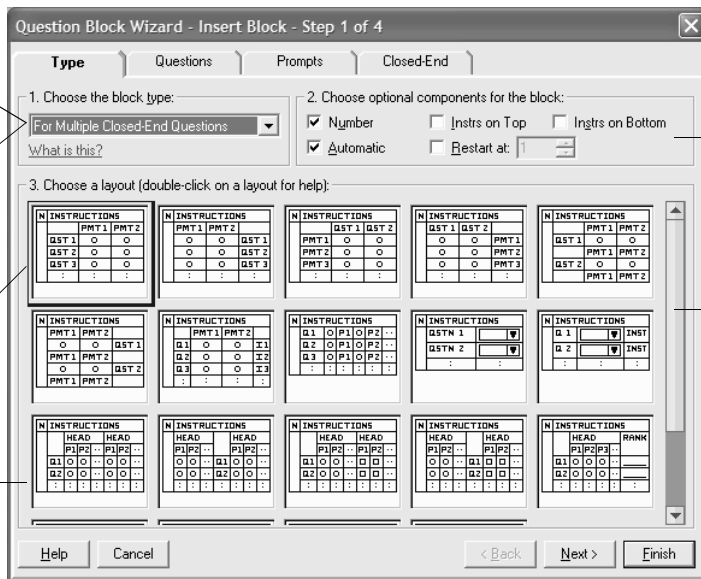
Figure 2 - 17 shows the Type tab of the Question Block Wizard dialog box.

Choose the type of block you want from the drop down.

To have more than one question in the block, choose one of the multiple question block types.

Choose a layout from the gallery of block layouts. Each type of block has its own gallery of block layouts.

Double-click on a layout's picture to see an example and read about the layout.

If you want, include an area in the block for optional components.

Use the scroll bar to view more block layouts in the gallery.

Figure 2 - 17:   The Type tab of the Question Block Wizard dialog box.

To see an example and read about a block layout, double-click on the layout's picture.

The Questions Tab

Use the Questions tab to choose how you want to enter the questions in the question block. Survey Crafter Professional displays this tab only when the block can contain more than one question.

Figure 2 - 18 shows the Questions tab of the Question Block Wizard dialog box.
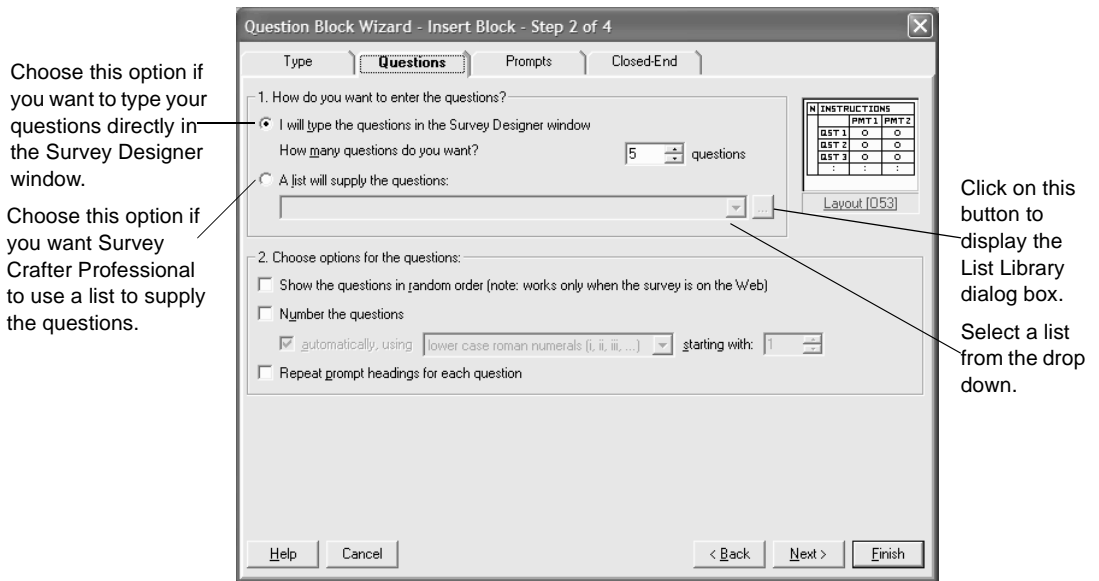
Choose this option if you want to type your questions directly in the Survey Designer window.

Choose this option if you want Survey Crafter Professional to use a list to supply the questions.

Click on this button to display the List Library dialog box.

Select a list from the drop down.

Figure 2 - 18:   The Questions tab of the Question Block Wizard dialog box.

The Prompts Tab

Use the Prompts tab to choose how you want to enter the prompts in the question block. Survey Crafter Professional displays this tab only when the block contains one or more closed-end, all-that-apply, rating, ranking or constant sum questions.

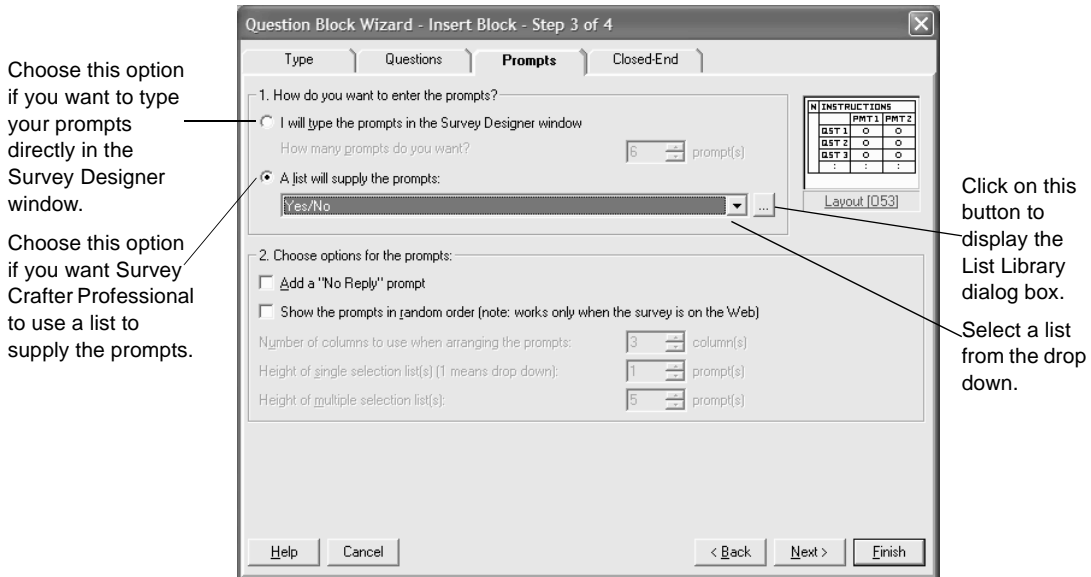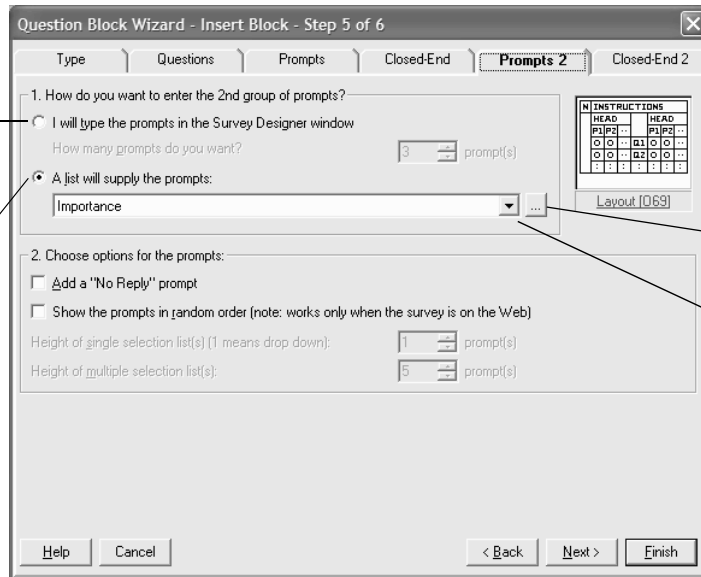Figure 2 - 19 shows the Prompts tab of the Question Block Wizard dialog box.

Choose this option if you want to type your prompts directly in the Survey Designer window.

Choose this option if you want Survey Crafter Professional to use a list to supply the prompts.

Click on this button to display the List Library dialog box.

Select a list from the drop down.

Figure 2 - 19:   The Prompts tab of the Question Block Wizard dialog box.

The Prompts 2 Tab

Use the Prompts 2 tab to choose how you want to enter the prompts for the second group of questions in the question block. Survey Crafter Professional displays this tab only when the block's layout calls for a second group of closed-end, all-that-apply, rating, ranking or constant sum questions.

Figure 2 - 20 shows the Prompts 2 tab of the Question Block Wizard dialog box.

Choose this option if you want to type your prompts directly in the Survey Designer window.

Choose this option if you want Survey Crafter Professional to use a list to supply the prompts.

Click on this button to display the List Library dialog box.

Select a list from the drop down.

Figure 2 - 20:   The Prompts 2 tab of the Question Block Wizard dialog box.

The Other Tab

Use the Other tab to choose options for the 'Other' prompts in the question block. Survey Crafter Professional displays this tab only when the block's layout calls for one or more 'Other' prompts.

Figure 2 - 21 shows the Other tab of the Question Block Wizard dialog box.

Enter the number of 'Other' prompts you want each question in the block to have.

Choose what you want to happen when a respondent does not specify what he or she means by other.

Enter the height and width of the box(es) for the 'Other' prompts.
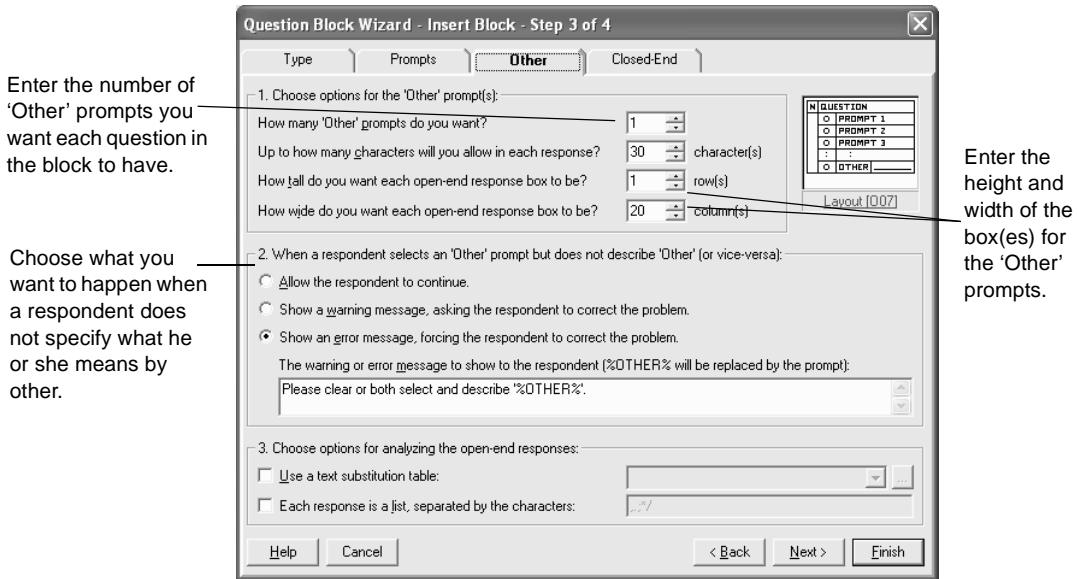
Figure 2 - 21:   The Other tab of the Question Block Wizard dialog box.

The All-That-Apply Tabs

Use the All-That-Apply tabs to choose options for the all-that-apply questions in the question block. Survey Crafter Professional displays these tabs only when the block's type or layout calls for one or more all-

that-apply questions. Figure 2 - 22 shows an All-That-Apply tab of the Question Block Wizard dialog box.

Choose how many prompts you want the respondent to select.

If you want, you can make one or more of the last prompts exclusive.

Figure 2 - 22:   An All-that-Apply tab of the Question Block Wizard dialog box.

The Closed-End Tabs

Use the Closed-End tabs to choose options for the closed-end questions in the question block. Survey Crafter Professional displays these tabs only when the block's type or layout calls for one or more closed-end

questions. Figure 2 - 23 shows a Closed-End tab of the Question Block Wizard dialog box.

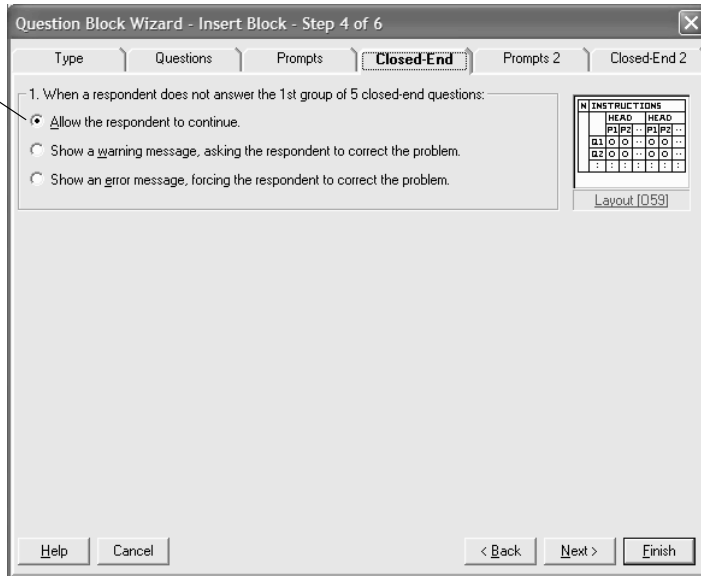Choose what you want to happen when a respondent does not answer the closed-end questions.

Figure 2 - 23: A Closed-End tab of the Question Block Wizard dialog box.

The Constant Sum Tabs

Use the Constant Sum tabs to choose options for the constant sum questions in the question block. Survey Crafter Professional displays these tabs only when the block's type or layout calls for one or more

constant sum questions. Figure 2 - 24 shows a Constant Sum tab of the
Question Block Wizard dialog box.

Choose how many
items among which
you want the
respondent to
distribute points.

Enter the number
you want the points
to sum to.

Have respondents
see a running total
for each question.

Link a slider control
to each quantity box
for the web version of
the survey.

Figure 2 - 24:   A Constant Sum tab of the Question Block Wizard dialog box.

The Open-End Tabs

Use the Open-End tabs to choose options for the open-end questions in
the question block. Survey Crafter Professional displays these tabs only
when the block's type or layout calls for one or more open-end questions.

Figure 2 - 25 shows an Open-End tab of the Question Block Wizard dialog box.

Choose what you want to happen when a respondent does not answer the open-end questions.

Choose limits, size and behavior options for the open-end question(s).

Figure 2 - 25:   An Open-End tab of the Question Block Wizard dialog box.

The Quantity Tabs

Use the Quantity tabs to choose options for the quantity questions in the question block. Survey Crafter Professional displays these tabs only when the block's type or layout calls for one or more quantity questions. Figure 2 - 26 shows a Quantity tab of the Question Block Wizard dialog box.

Choose what you want to happen when a respondent does not answer the quantity questions.

Enter the minimum and maximum values you want to allow in each response to the quantity questions.

If your survey will be on the web, choose if you want to link a slider control to each quantity box in the question block.

Figure 2 - 26:   A Quantity tab of the Question Block Wizard dialog box.

The Ranking Tabs

Use the Ranking tabs to choose options for the ranking questions in the
question block. Survey Crafter Professional displays these tabs only when
the block's type or layout calls for one or more ranking questions. Figure
2 - 27 shows a Ranking tab of the Question Block Wizard dialog box.

Choose how many
items you want the
respondent to rank.

Should the
respondent receive a
warning or an error
message if the
required number of
items are not
ranked?

If your survey will be
on the web, choose if
you want to link a
slider control to each
ranking box in the
question block.

Figure 2 - 27:   A Ranking tab of the Question Block Wizard dialog box.

The Rating Tabs

Use the Rating tabs to choose options for the rating questions in the question block. Survey Crafter Professional displays these tabs only when the block's type or layout calls for one or more rating questions. Figure 2 - 28 shows a Rating tab of the Question Block Wizard dialog box.

Choose what you want to happen when a respondent does not answer the rating questions.

Choose how you want to assign the numbers to the prompts.

Figure 2 - 28:   A Rating tab of the Question Block Wizard dialog box.

The List Library

One way to create the questions or prompts for a question block is to use a list. A list is a collection of unformatted text fragments. Survey Crafter Professional provides several standard lists. You can also create new lists to use within a study.

Saving Time by Using Lists

Lists, similar to styles in word processors, allow you to create question blocks more quickly. When using a word processor, you apply a style to text to format it quickly. When creating a question block in Survey Crafter Professional, you can select a list to define the question block's questions or prompts.

Suppose your survey asks several questions in which respondents pick from the same list of fast food restaurants. Instead of typing the fast food restaurant prompts for each new question, you can create and save the list of restaurants as the Fast Food Restaurant list. Survey Crafter Professional will automatically type your prompts for you when you select the Fast Food Restaurant list.

• **Editing Lists**

Each Survey Crafter Professional study contains its own library of lists. You can create and edit the lists in a study using the List Library dialog box. To have Survey Crafter Professional display the List Library dialog box, do one of the following:

• Choose List from the Insert menu.

• Click on the Insert List from Library toolbar button.

• Click on the button to the right of the drop down under the *A list will supply the questions* option in the Questions tab of the Question Block Wizard dialog box.

• Click on the button to the right of the drop down under the *A list will supply the prompts* option in the Prompts or Prompts 2 tab of the Question Block Wizard dialog box.

Figure 2 - 29 shows the List Library dialog box.

Displays all of the lists in the study.

Use these buttons to create a new list, create a copy of an existing list, edit an existing list, rename an existing list or delete an existing list.

Use these buttons to import and export lists from and to a text file.

Use this button to save the current set of lists as the default for new studies.

Previews the currently highlighted list.
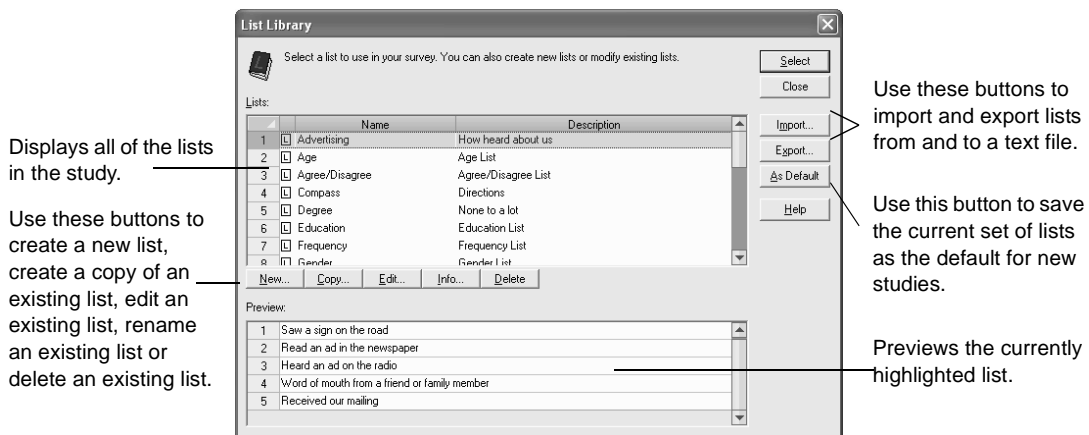
Figure 2 - 29:   The List Library dialog box

Suppose you create your own list called "Advertising," and you have Survey Crafter Professional automatically type your prompts for you by using the list in a few question blocks. Suppose you later add "Saw an ad on television" to the "Advertising" list. Survey Crafter Professional automatically updates all question blocks that use the "Advertising" list to include the newly added list item.

Creating, Opening and Copying Surveys

This section contains step-by-step instructions for doing the following:

- Creating a New Survey

- Opening an Existing Survey

- Copying an Existing Survey

- Renaming a Survey

- Deleting a Survey

Creating a New Survey

Follow the steps below to create a new survey.

> **Tip** It is important to know that there is only one data set in a study and that all surveys in the study share that data set. Although you can create an unlimited number of surveys in one study, if you want to keep the data obtained from your next survey separate from that of your previous survey, create a new study file first and then create your new survey in that.

- **To create a new survey**

    1   Select the Surveys tab of the Study window.

The Surveys tab lists all of the surveys in the study.

Typically, you will be creating a new survey when there are no surveys in the study.

Click on the New button to create a new survey.
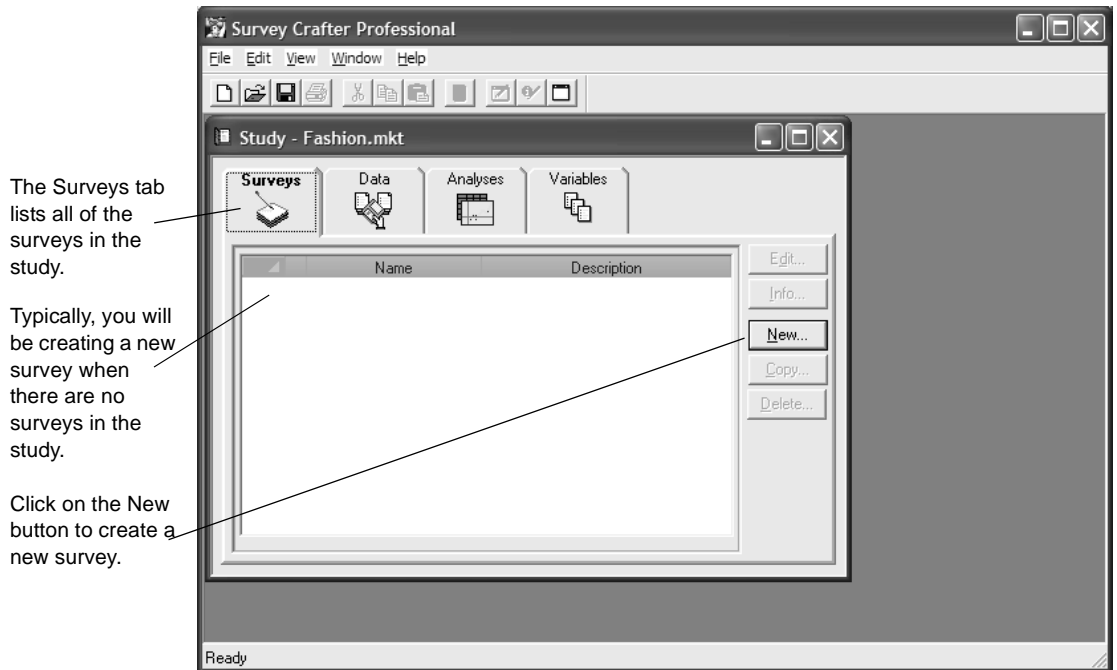
Figure 2 - 30:   The Surveys tab of the Study window.

    2   Click on the New button on the tab.

    Survey Crafter Professional displays the New Survey Wizard dialog box.

3 Follow the instructions on the screen to complete the New Survey
Wizard dialog box.

Choose the initial layout
mode for the Survey
Designer window.

Choose how you want
Survey Crafter
Professional to help you
enter your survey.

Click on the Help button
for detailed explanations
of the options.
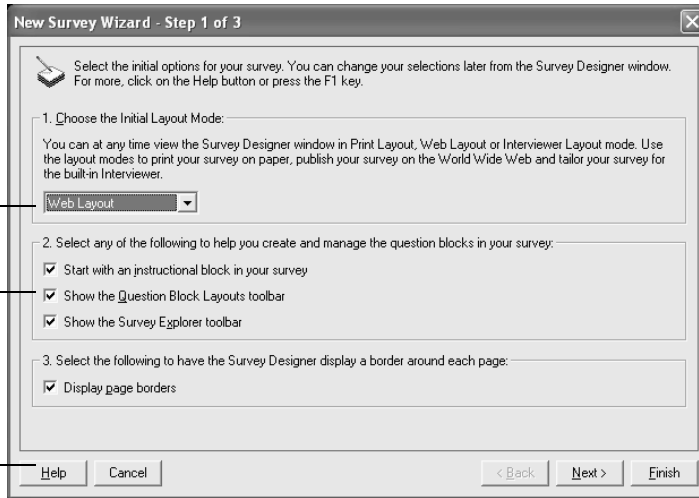
Figure 2 - 31:   Step 1 of the New Survey Wizard.

For help on any of the options, click on the Help button on the dialog
box.

4 When you have completed the dialog box, click on the Finish button.

Survey Crafter Professional displays the Survey Information dialog
box.

5 In the Survey Information dialog box, enter a name and description for your survey.

Enter a name that has not already been given to another survey in the study. The name must begin with a letter and may contain up to 49 additional letter, digit, or underscore characters.
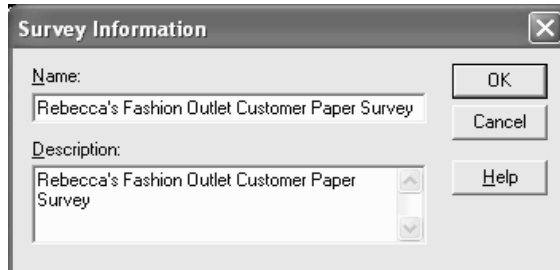
Figure 2 - 32:   The Survey Information dialog box.

The name and description will appear in the Surveys tab of the Study window.

6 Click on the OK button.

Survey Crafter Professional displays the Survey Designer window.

Survey design and Survey format toolbars.

Survey Explorer toolbar.

Instructional block that allows you to quickly insert new survey question blocks. You can remove this block.

Question Block Layouts toolbar

Survey Question toolbar.

Figure 2 - 33: The Survey Designer window.

You can now enter your survey. For instructions on entering your survey's questions, see the section "Inserting Survey Blocks" on page 2 - 67.

Opening an Existing Survey

You can have an unlimited number of surveys open at the same time.

> **Tip** You can copy and paste as well as drag and drop text and blocks from one survey to another.

- • **To open an existing survey**

    1   Select the Surveys tab of the Study window.

The Surveys tab lists all of the surveys in the study.

Click on the Edit button to open the highlighted survey.
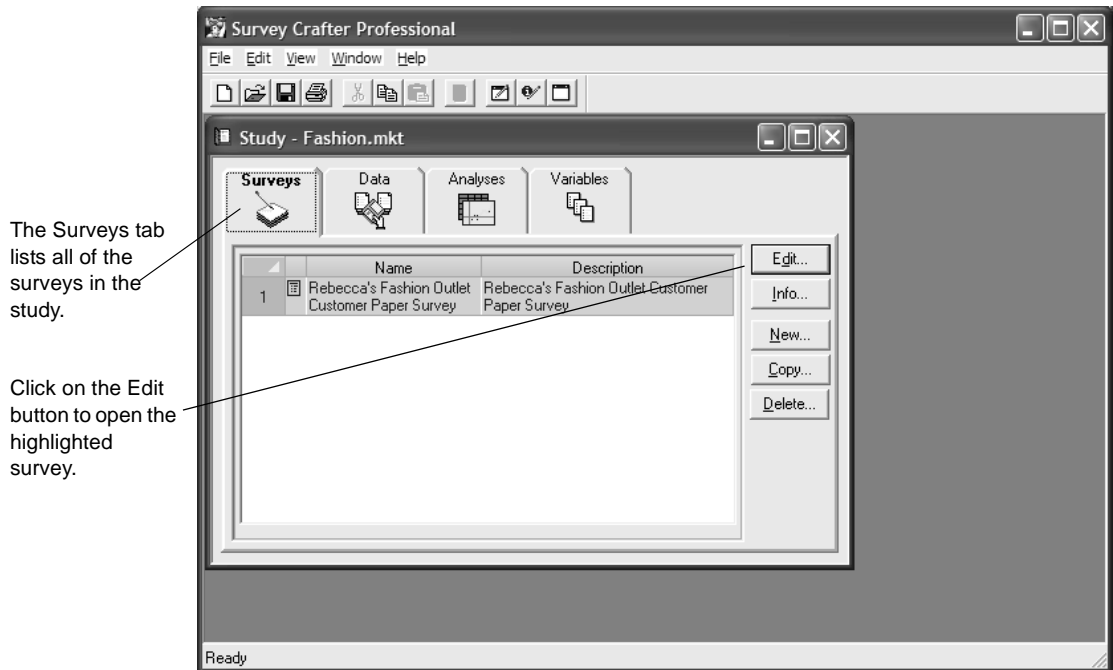
Figure 2 - 34:   The Surveys tab of the Study window.

    2   Select the survey you want to open.

    3   Click on the Edit button on the tab.

    The survey appears in the Survey Designer window.

You can now make changes to your survey.

For instructions on entering your survey's questions, see the section "Inserting Survey Blocks" on page 2 - 67. For instructions on editing surveys, see the section "Editing Survey Questions" on page 2 - 150.
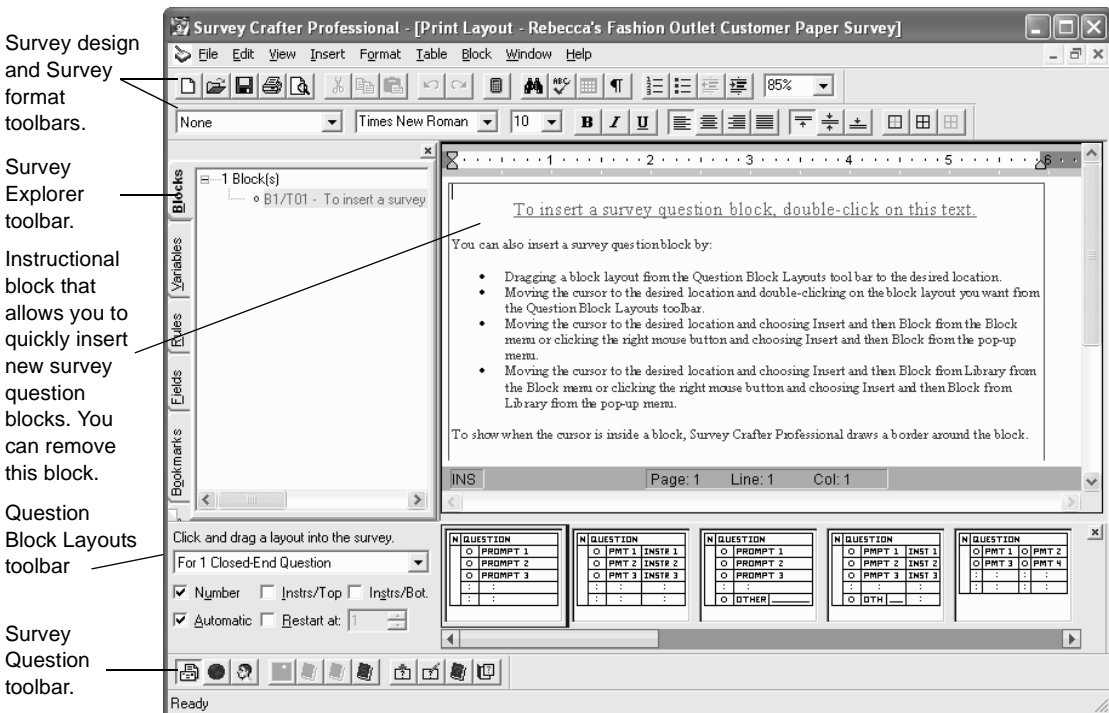
Copying an Existing Survey

Copying an existing survey in Survey Crafter Professional creates a new survey that is not only identical in appearance but also uses exactly the same study variables as the original survey. This is useful when you want to offer your respondents different variations of the same survey and you want to analyze the data obtained from each together.

> **Tip** If you want to make your survey available to your respondents in more than one language, use the New Survey Wizard as described previously to create a first or master copy. Then, when your survey has been finalized, use the feature described in this section to create a copy of it. Translate the copy and then use the copy feature again to create another copy to translate. You may create as many copies as you want. Because the surveys share exactly the same study variables, you will be able to analyze the data obtained from each together.
>
> Although it is recommended, it is not required that you wait until the master copy of your survey is finalized before making copies. In the first step of the Copy Survey Wizard, you can instruct Survey Crafter Professional to maintain the copy you are making as structurally identical to the original. Structurally identical surveys share the same blocks with the same variables in the same order. Words, pictures and formatting may be different. When this relationship has been established between two surveys, when you add, move or remove a block in one survey, Survey Crafter Professional automatically does the same in the other.

Follow the steps below to copy an existing survey.

> **Tip** Is is important to know that there is only one data set in a study and that all surveys in the study share that data set. If you want to create a new version of an existing survey and want to keep the data for the new version separate from the data of the original survey, copy the study file instead. Alternatively, create a new survey in a new study file, copy the original survey to the clipboard and paste it into the Survey Designer window of the new survey.

- **To copy an existing survey**

  1 Select the Surveys tab of the Study window.

  2 Click on to select the survey you want to copy.

The Surveys tab lists all of the surveys in the study.

Click on to select the survey you want to copy..

Click on the Copy button to copy the highlighted survey.
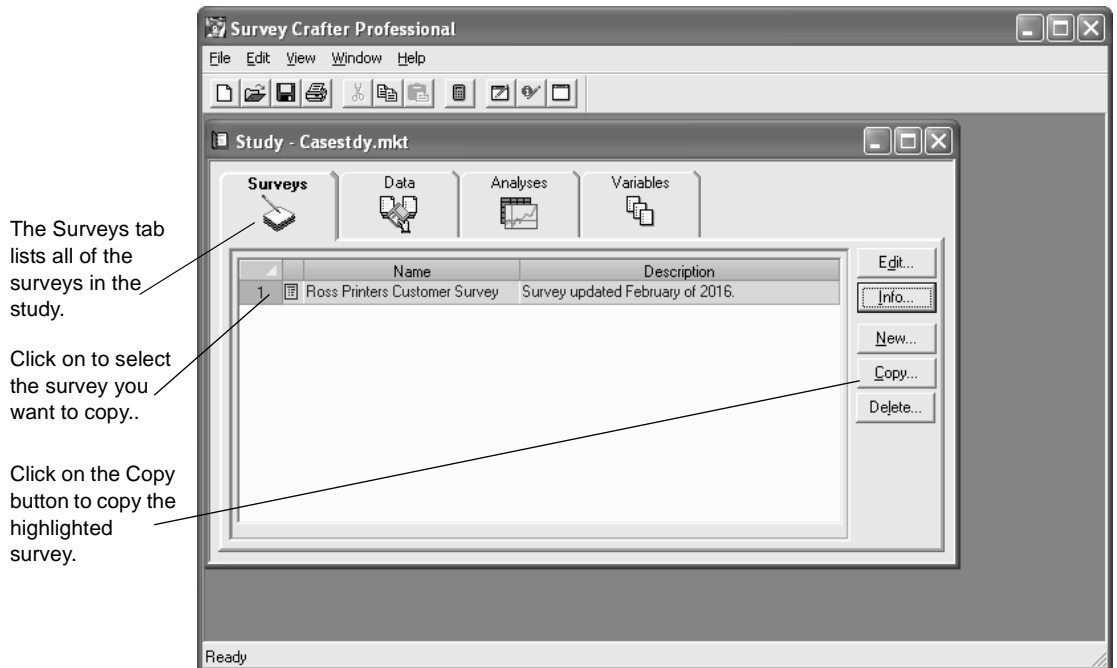
Figure 2 - 35: The Surveys tab of the Study window.

  3 Click on the Copy button on the tab.

  Survey Crafter Professional displays the Copy Survey Wizard dialog box.

4 Follow the instructions on the screen to complete the Copy Survey Wizard dialog box.

Discusses what copying a survey means in Survey Crafter Professional..

Choose the relationship you want between the new survey and the one you are copying.

Click on the Help button for detailed explanations of the options.
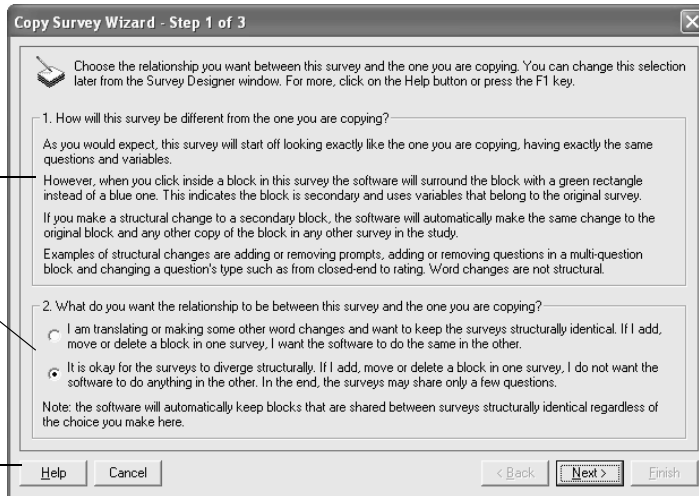
Figure 2 - 36: Step 1 of the Copy Survey Wizard.

For help on any of the options, click on the Help button on the dialog box.

5 When you have completed the dialog box, click on the Finish button.

Survey Crafter Professional displays the Survey Information dialog box.

6   In the Survey Information dialog box, enter a name and description for the new copy.

Make sure the name has not already been given to another survey in the study. The name must begin with a letter and may contain up to 49 additional letter, digit, or underscore characters.

Figure 2 - 37:   The Survey Information dialog box.

The name and description will appear in the Surveys tab of the Study window.

7 Click on the OK button.

Survey Crafter Professional displays the Survey Designer window.

Survey design and Survey format toolbars.

Survey Explorer toolbar.

The survey appears exactly as the original. All study variables used by the blocks are from the original survey.

Question Block Layouts toolbar

Survey Question toolbar.
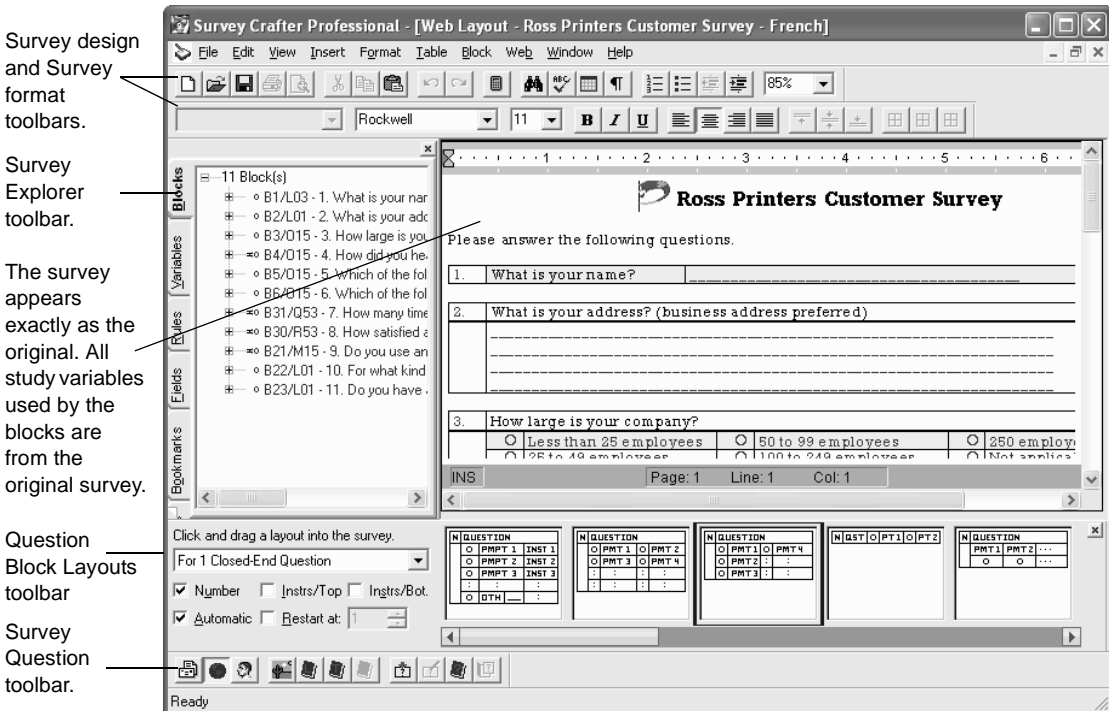
Figure 2 - 38: The Survey Designer window.

You can now modify the survey, perhaps translating it into another language.

Renaming a Survey

You can rename a survey at any time. Follow the steps below to rename a survey.

• **To rename a survey**

   1   Select the Surveys tab of the Study window.

The Surveys tab lists all of the surveys in the study.

Click on the Info button to rename the highlighted survey.
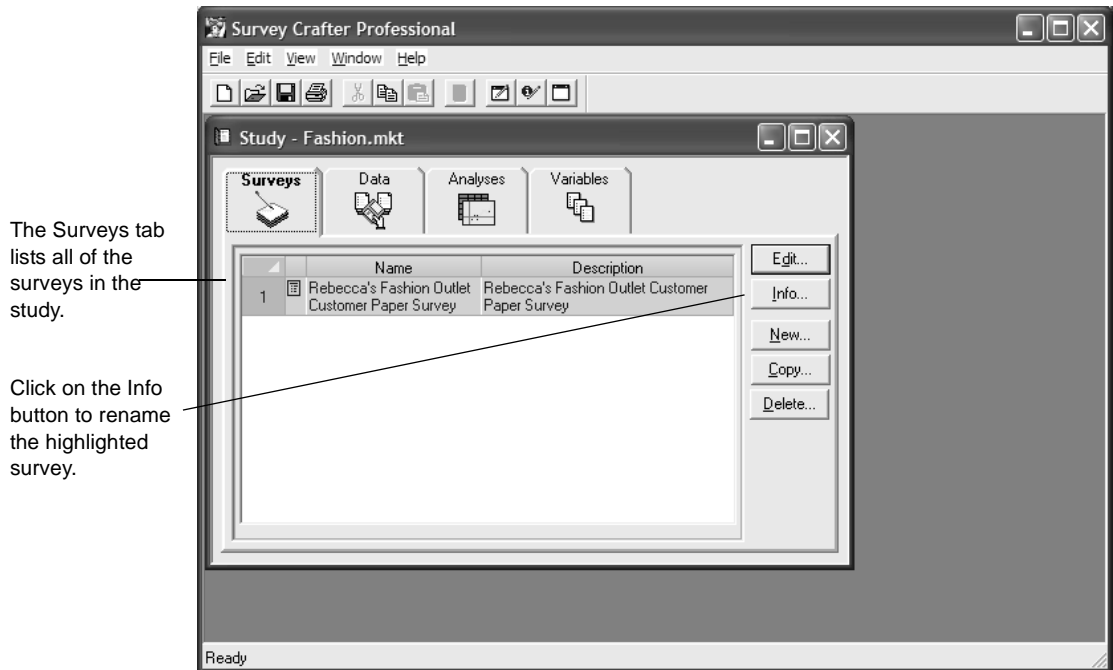
Figure 2 - 39:   The Surveys tab of the Study window.

   2   Select the survey you want to rename.

   3   Click on the Info button on the tab.

        Survey Crafter Professional displays the Survey Information dialog box.

4   In the Survey Information dialog box, type the new name for the survey.

Enter a name that has not already been given to another survey in the study. The name must begin with a letter and may contain up to 49 additional letter, digit, or underscore characters.
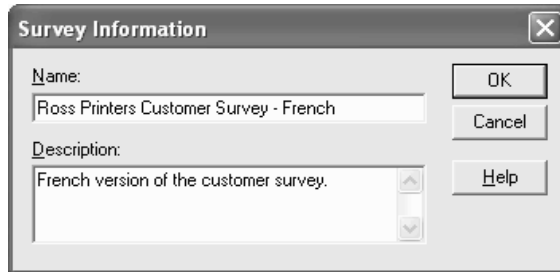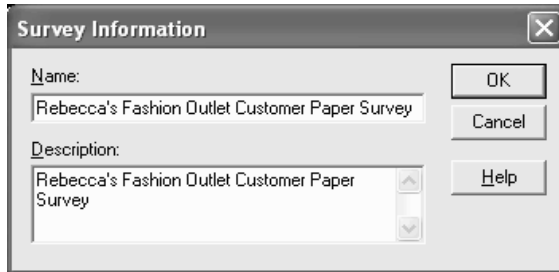

Figure 2 - 40:   The Survey Information dialog box.

5   Click on the OK button.

The new name and description will appear in the Surveys tab of the Study window.

Deleting a Survey

Follow the steps below to delete a survey.

WARNING! This operation cannot be undone.

- **To delete a survey**

    1   Select the Surveys tab of the Study window.

    2   Select the survey you want to delete

3   From the Edit menu, choose Delete or press the [Delete] key.

Survey Crafter Professional removes the survey from the study.

Note Survey Crafter Professional will automatically remove the imported variables associated with the survey's question blocks as long as the variables are not used by any analysis tables or charts or computed variables.

Deciding What Types of Questions to Write

This section describes the types of survey questions Survey Crafter Professional supports and then explains some of the differences between the question types.

For guidelines on writing effective survey questions, see the section "Designing, Writing, and Testing the Survey" in Chapter 4 of *Understanding Survey Research: A Primer for Success*.

In the Primer

Types of Survey Questions Survey Crafter Professional Supports

Table 2 - 5 lists the 7 types of questions Survey Crafter Professional supports. The Fast Food survey on page 2 - 59 illustrates a few of the different types of questions.

Table 2 - 5:   The 7 types of questions Survey Crafter Professional supports.

Question Type	Description
All-That-Apply	A question that asks the respondent to check one or more prompts from a predefined list of prompts. For example, "Which of the following restaurants have you visited? Burger World, King Taco, Broilin' Bill's, The Chicken Coop, Marsha's Mex."
Closed-End	A question that requires the respondent to pick at most one prompt from a predefined list of prompts. Also called a forced choice or multiple-choice question. For example, "Which of the following restaurants is your favorite? Burger World, King Taco, Broilin' Bill's, The Chicken Coop, Marsha's Mex."
Constant Sum	A question that respondents reply to by assigning points to a series of items. The points they assign across items add up to a total you decide. For example: "Divide 100 points among the following three fast food restaurants according to how likely you are to visit them (the more points, the more likely you are to visit): Burger World, Marsha's Mex, Broilin' Bill's."
Open-End	A question that respondents answer in their own words rather than by selecting an answer from a list of choices or stating a number. For example, "What is your name?"

Fast Food Survey

Thank you for participating in this survey.

1.   What is your name? _____

2.   What is your age? _____

Open-end question

3.   What is your marital status?

  o Never married
  o Married
  o Widowed
  o Divorced

Closed-end question

All-that-apply question —— 4.   Which of the following fast food restaurants have you visited? (Check all that apply.)

  o Burger World
  o King Taco
  o Broilin' Bill's
  o The Chicken Coop
  o Marsha's Mex

5.   Which of the following is your favorite fast food restaurant? (SKIP THIS QUESTION IF NO RESTAURANTS WERE CHECKED IN QUESTION 4.)

  o Burger World
  o King Taco
  o Broilin' Bill's
  o The Chicken Coop
  o Marsha's Mex

Rating question ——— 6.   Please rate the importance you place on customer service at fast food restaurants. (Choose one.)

  1 Not at all important
  2 Somewhat important
  3 Important
  4 Very important
  5 Extremely important

Have a good day.

Table 2 - 5:   The 7 types of questions Survey Crafter Professional supports. (Continued)

Question Type	Description
Quantity	A question a respondent answers with a number. For example, "What is your age?"
Ranking	Respondents reply to a ranking question by ordering a list of items according to some criterion. For example, "Please rank the following three fast food restaurants according to how likely you are to visit them (1 is most likely to visit, 3 least likely): Burger World, Marsha's Mex, Broilin' Bill's."
Rating	A question respondents reply to by picking a point on a scale. For example, "Please rate the importance you place on customer service at fast food restaurants on a scale of 1 to 5. (1 = Not at all important, 5 = Extremely important.)"

Should I write a closed-end, rating or all-that-apply question?

Survey Crafter Professional uses imported variables to store the answers to survey questions. A Survey Crafter Professional imported variable can be of type category, quantity, or literal.

In the Survey Crafter Professional analysis tables and charts, category variables are used to filter respondent data as well as to calculate counts and frequencies. Quantity variables, on the other hand, are used by the analysis tables and charts not only to filter respondent data and to calculate counts and frequencies but also to calculate means, medians, modes, minimums, maximums, standard deviations and so on.

What does this have to do with choosing between writing your question as a closed-end, rating or all-that-apply question?

• When you write a closed-end question, Survey Crafter Professional automatically creates and maintains one imported category variable to store the answers.

• When you write a rating question, Survey Crafter Professional automatically creates and maintains one imported quantity variable to store the answers.

• When you write an all-that-apply question, Survey Crafter Professional automatically creates and maintains an imported category variable for each prompt in the question. For example, if your all-that-apply question has a list of 5 prompts, Survey Crafter Professional automatically creates and maintains 5 imported category variables.

When should I consider writing my question as a closed-end question?

You should consider writing your question as a closed-end question when all of the following conditions are true:

• The prompts in your question can be listed for the respondent

• The respondent may pick at most one prompt from the list of prompts

• The prompts do not lend themselves well to being analyzed as numbers

For example, the question "What is your gender? Male, or Female" is an example of a closed-end question. Although it makes sense to assign 1 to Male and 2 to Female, it does not make sense to calculate the mean.

When should I consider writing my question as a rating question?

You should consider writing your question as a rating question when all of the following conditions are true:

• The prompts in your question can be listed for the respondent

• The respondent may pick at most one prompt from the list of prompts

• The prompts lend themselves well to being analyzed as numbers

For example, the question "How satisfied are you with our customer service? Very Satisfied, Satisfied, Neither Satisfied nor Dissatisfied, Dissatisfied, or Very Dissatisfied" is an example of a rating question. It makes sense to have 1 assigned to Very Satisfied, 2 assigned to Satisfied and so on and then to calculate the mean as well as the counts and frequencies.

However, sometimes it makes sense to calculate the mean but there are complicating factors. The following are situations where you should consider writing your question as a closed-end question instead:

- The list of prompts in your question includes one or more 'Other' prompts. It may not make sense to calculate the mean when the list of prompts includes 'Other'. If you choose to write the question as a closed-end question you can then use the Category to Quantity Variable wizard to create a computed quantity variable that automatically takes on numbers for all but the 'Other' prompts. You can then use the computed quantity variable to calculate the mean.

- Similarily, you want only a subset of the numbers associated with the prompts to be included in the statistical calculations. If you choose to write the question as a closed-end question you can then use the Category to Quantity Variable wizard to create a computed quantity variable that automatically takes on numbers for the prompts you want to include. You can then use the computed quantity variable in the statistical calculations.

When should I consider writing my question as an all-that-apply question?

You should consider writing your question as an all-that-apply question when all of the following conditions are true:

- The prompts in your question can be listed for the respondent

- The respondent may pick one or more prompts from the list of prompts

For example, the question "Which restaurants have you visited in the last month? Burger World, King Taco, Broilin' Bill's, The Chicken Coop, or Marsha's Mex " is an example of an all-that-apply question.

To make it easier to analyze all-that-apply questions, Survey Crafter Professional provides the All-that-apply Question analysis wizard.

Should I write a rating or a ranking question?

Unfortunately, the terms rating and ranking are often confused and used interchangeably.

In Survey Crafter Professional a rating question refers to a question that asks the respondent to pick at most one prompt from a predefined list of prompts. Further, each prompt is coded as a number. When you write a rating question, Survey Crafter Professional automatically creates and maintains one imported quantity variable to store the answers.

On the other hand, a ranking question in Survey Crafter Professional refers to a question that asks the respondent to rank a predefined list of items against each other assigning each item a unique number starting with 1. When you write a ranking question, Survey Crafter Professional automatically creates and maintains an imported quantity variable for each item to be ranked. For example, if your ranking question has a list of 5 items to be ranked, Survey Crafter Professional automatically creates and maintains 5 imported quantity variables to store the rankings.

When should I consider writing my question as a ranking question?

You should consider writing your question as a ranking question when all of the following conditions are true:

- The items to be ranked can be listed for the respondent

- You want the respondent to assign a unique number to each item starting with 1

For example, the question "Please rank the following restaurants in order of your preference. Burger World, King Taco, Broilin' Bill's, The Chicken Coop, and Marsha's Mex" is an example of a ranking question.

To make it easier to analyze ranking questions, Survey Crafter Professional provides the Ranking Question analysis wizard.

For more information about writing a rating question, see "Should I write a closed-end, rating or all-that-apply question?" on page 2 - 60

Should I write a ranking or a constant sum question?

It is sometimes difficult to decide whether or not to write a question as a ranking or a constant sum question.

In Survey Crafter Professional, a ranking question refers to a question that asks the respondent to rank a predefined list of items against each other assigning each item a unique number starting with 1. When you write a ranking question, Survey Crafter Professional automatically creates and maintains an imported quantity variable for each item to be ranked. For example, if your ranking question has a list of 5 items to be ranked, Survey Crafter Professional automatically creates and maintains 5 imported quantity variables to store the rankings.

On the other hand, a constant sum question in Survey Crafter Professional refers to a question that asks the respondent to distribute points among a predefined list of items such that the sum of the points equals a number you specify. When you write a constant sum question, Survey Crafter Professional automatically creates and maintains an imported quantity variable for each item in the list. For example, if your constant sum question has a list of 5 items, Survey Crafter Professional automatically creates and maintains 5 imported quantity variables to store the points.

When should I consider writing my question as a constant sum question?

You should consider writing your question as a constant sum question when all of the following conditions are true:

- The items can be listed for the respondent

- You would like to know how much respondents prefer one item over another item

For example, the question "Please distribute 100 points among the following restaurants. Assign the higher points to the restaurants that you prefer. Please make sure the total points add to 100. Burger World, King Taco, Broilin' Bill's, The Chicken Coop, and Marsha's Mex" is an example of a constant sum question.

Please note that in general a constant sum question requires more effort from the respondent than a ranking question requires. You should decide whether or not finding out how much respondents prefer one item over another item is worth the additional effort required of your respondents.

For more information about writing a ranking question, see "Should I write a rating or a ranking question?" on page 2 - 62

Should I write a quantity, closed-end or rating question?

In Survey Crafter Professional a quantity question refers to a question that asks the respondent to answer with a number. When you write a quantity question, Survey Crafter Professional automatically creates and maintains an imported quantity variable to store the answers.

When should I consider writing my question as a quantity question?

You should consider writing your question as a quantity question when all of the following conditions are true:

- The answer to the question will always be a number

- You want respondents to answer with an exact number

- Respondents are generally capable of answering with an exact number

- Describing the scale in words is not desirable, not possible or not feasible

For example, the question "How many children do you have?" is an example of a quantity question. In this example, it is safe to assume respondents will provide an exact number.

You can use the Quantity to Category Variable wizard to create a computed category variable that groups the answers to a quantity question. You can then use the computed category variable to calculate counts and frequencies of the groups.

When should I consider writing my question as a rating question?

You should consider writing your question as a rating question when all of the following conditions are true:

- The answer to the question will always be a number

- Most if not all numbers in the scale can be described in words

For example, the question "Please indicate on a scale of 1 to 5 the importance of sleeping 8 hours a night" is an example of a quantity question that can be rewritten as a rating question with a list of predefined prompts that describe in words the 1 to 5 scale.

If providing a predefined list of prompts that describe the scale in words makes the job of answering the question easier for the respondent, then writing the question as a rating question is worth the effort.

When should I consider writing my question as a closed-end question?

It is often possible to rewrite a quantity question to provide the respondent a list of ranges from which to choose. You should consider writing your question as a closed-end question when any of the following conditions are true:

- The answer to the question may not always be a number

- You do not need respondents to answer with an exact number

- Respondents may not be able to answer with an exact number

For example, the question "What is your annual income?" is an example of a quantity question that can be rewritten as a closed-end question with a list of ranges from which to choose.

If providing a list of ranges from which to choose makes the job of answering the question easier for the respondent and the loss of accuracy is not significant, then writing the question as a closed-end question is worth the effort.

For information about writing a closed-end, rating or all-that-apply question, see "Should I write a closed-end, rating or all-that-apply question?" on page 2 - 60

Inserting Survey Blocks

This section explains how to insert survey blocks into your survey.

In the Primer

For guidelines on writing effective survey questions, see the section "Designing, Writing, and Testing the Survey" in Chapter 4 of *Understanding Survey Research: A Primer for Success*.

Inserting Instructions-Only Blocks

You can type and format instructions, section headings and other text or insert pictures, tables and lists directly in the Survey Designer window or you can insert one or more instructions-only blocks and add the same content inside the blocks.

The instructions-only block is listed in the Blocks tab of the Survey Explorer toolbar.

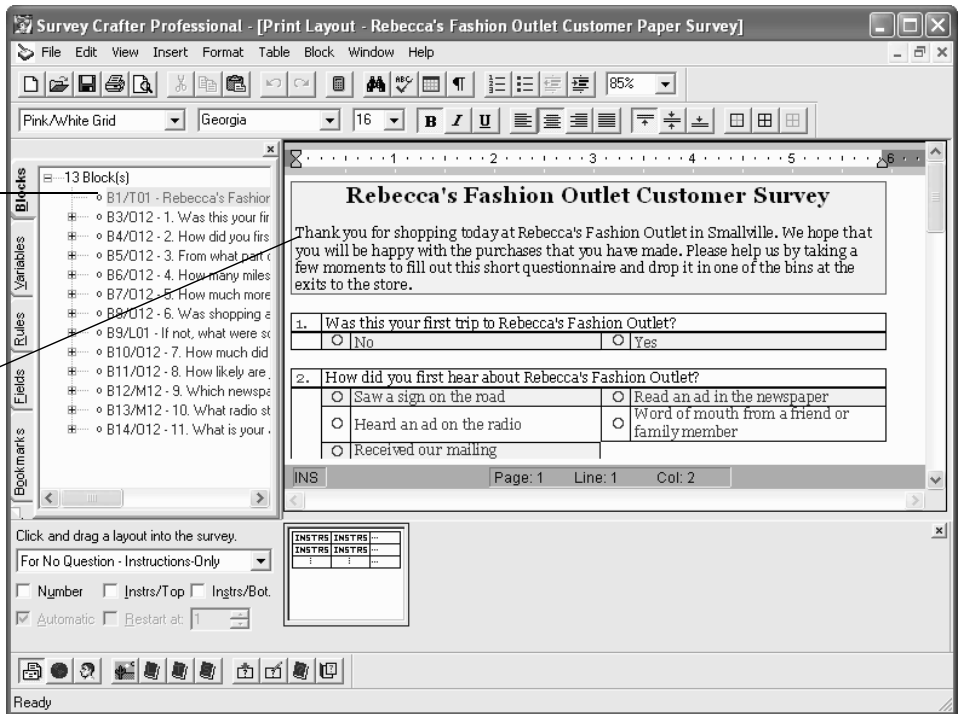A title, introduction and instructions inside an instructions-only block.

Figure 2 - 41: An instructions-only block in the Survey Designer window.

Survey Crafter Professional does not create and maintain any imported variables for an instructions-only block.

> **Tip** Use an instructions-only block when:
>
> • you want the instructions to be the origin or destination of a custom branching or skipping rule. For more information, see the section "Adding custom branching, skipping and hiding rules" on page 2 - 104.
>
> • you want the instructions displayed in the built-in Interviewer when the Interviewer is in its block-only mode. The Interviewer has an optional data-entry mode in which only blocks are displayed.
>
> • you want to use the numbering or some of the other features offered by the instructions-only block. Other features include splitting the block into multiple rows and columns, having the rows and/or columns displayed in random order and having a subset of the rows and/or columns displayed depending on the answer to another question. For more on a block's components, see the section "Survey Basics" on page 2 - 2.
>
> • you want to be able to save the instructions in the Question Library. The Question Library only stores blocks.
>
> • you want to see the instructions listed in the Blocks tab of the Survey Explorer toolbar.
>
> Otherwise, consider typing directly in the Survey Designer window.

- **To insert an instructions-only block**

    1 Select "For No Question - Instructions-Only" from the drop down on the Question Block Layouts toolbar.
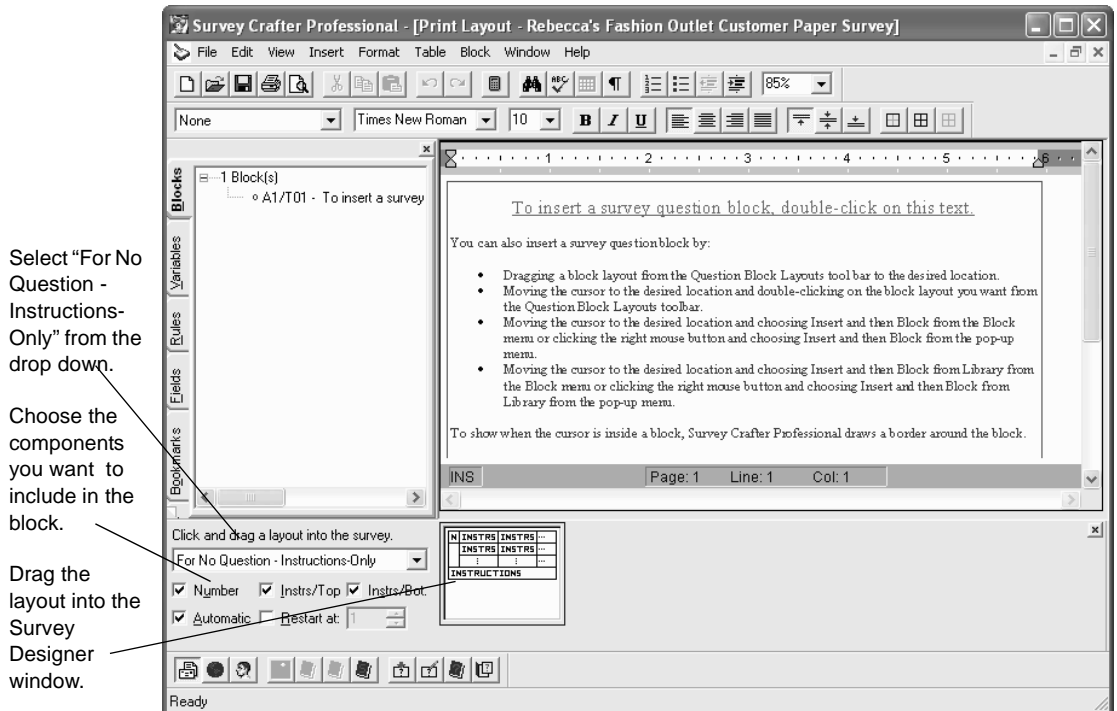
Select "For No Question - Instructions-Only" from the drop down.

Choose the components you want to include in the block.

Drag the layout into the Survey Designer window.

Figure 2 - 42:   Inserting a new instructions-only block into the Survey Designer window.

If the Question Block Layouts toolbar is not visible, click on the View menu, Toolbars and then on Question Block Layouts.

    2 Choose the components you want to include in the block. Do any of the following:

- If you want to include an area in the block for a number, select the *Number* check box. Survey Crafter Professional will automatically update the gallery of block layouts on the toolbar to show how each layout accommodates the area.

- If you selected the *Number* check box and you want Survey Crafter Professional to automatically number the block for you, select the *Automatic* check box.

- If you selected both the *Number* and *Automatic* check boxes and you want to restart the automatic numbering, click on the *Restart at* check box and enter the new starting number.

- If you want to include an additional area at the top of the block for instructions, select the *Instrs on Top* check box. This area can be useful for labeling the block or for including additional instructions or pictures.

- If you want to include an additional area at the bottom of the block for instructions, select the *Instrs on Bottom* check box. This area can be useful for skip logic or other instructions for interviewers and respondents. Survey Crafter Professional will automatically update the gallery of block layouts on the toolbar to show how each layout accommodates the area.

3 Click on the layout from the gallery of block layouts and drag it into the Survey Designer window.

If you would like the Survey Designer window to scroll, move the mouse pointer near an edge of the window and press the [ALT] key.

Tip Alternatively, if you drag and release the mouse button over an existing block in the Blocks tab of the Survey Explorer toolbar, Survey Crafter Professional will insert the new block before the existing block in the Survey Designer window.

4 Release the mouse button over the location where you want to insert the new block.

If you release the mouse button over an existing block in the Survey Designer window, Survey Crafter Professional will insert the new block before the existing block.

If you release the mouse button after the end of the survey, Survey Crafter Professional will insert the new block at the end of the survey.

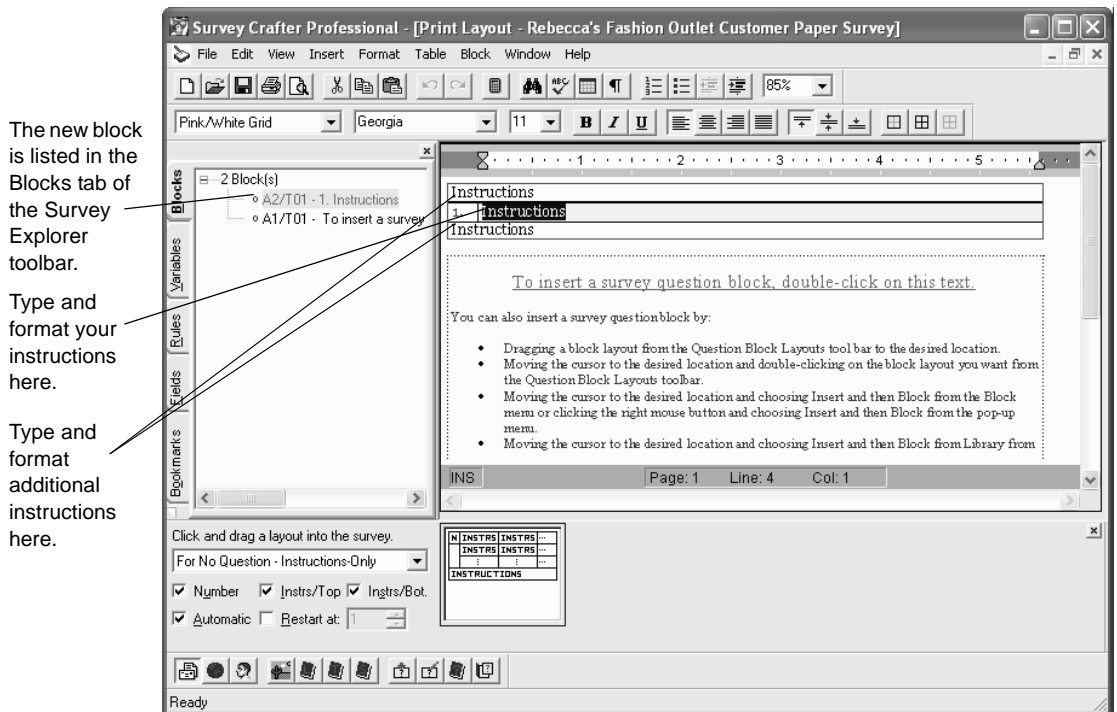Otherwise, Survey Crafter Professional will insert the new block where you release the mouse button.

The new block is listed in the Blocks tab of the Survey Explorer toolbar.

Type and format your instructions here.

Type and format additional instructions here.

Figure 2 - 43: A new instructions-only block in the Survey Designer window.

5 In the Survey Designer window, if you included an area in the block for a number and chose to number the block yourself, enter the number in the block's number cell.

6 Go to the section "Configure the New Block" below.

Configure the New Block

Because Survey Crafter Professional remembers the settings of the last question block you inserted or updated, you may not need to change the settings of the newly inserted instructions-only block.

- **To configure the new block**

    1 Double-click anywhere inside the block or right-click inside the block and choose Edit Block from the pop-up menu.

    You can also move the cursor inside the block and choose Edit from the Block menu.

Edit Block button

    Survey Crafter Professional displays the Type tab of the Question Block Wizard dialog box.

The block type determines the type of questions contained by the block.

Survey Crafter Professional changes the pictures in the gallery of block layouts when you change any of the block type or block component settings.
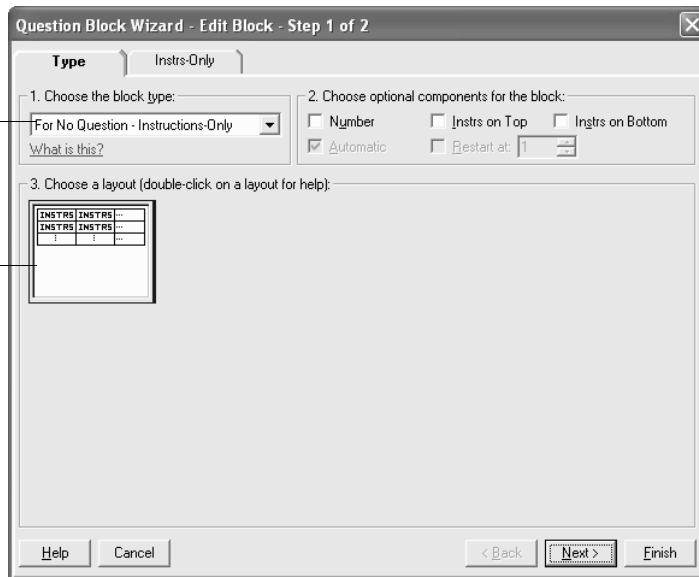
Figure 2 - 44:   The Type tab of the Question Block Wizard dialog box.

    If you want, you can change the block type, optional components and the selected block layout.

    2 Click on the Next button.

    3 Use the instructions on the screen to complete the Question Block Wizard dialog box.

For help on any of the options, click on the Help button on the dialog box.

4   When you have completed the dialog box, click on the Finish button.

Survey Crafter Professional updates the instructions-only block in the Survey Designer window.

5   Type the information in the block's cells.

Inserting Question Blocks

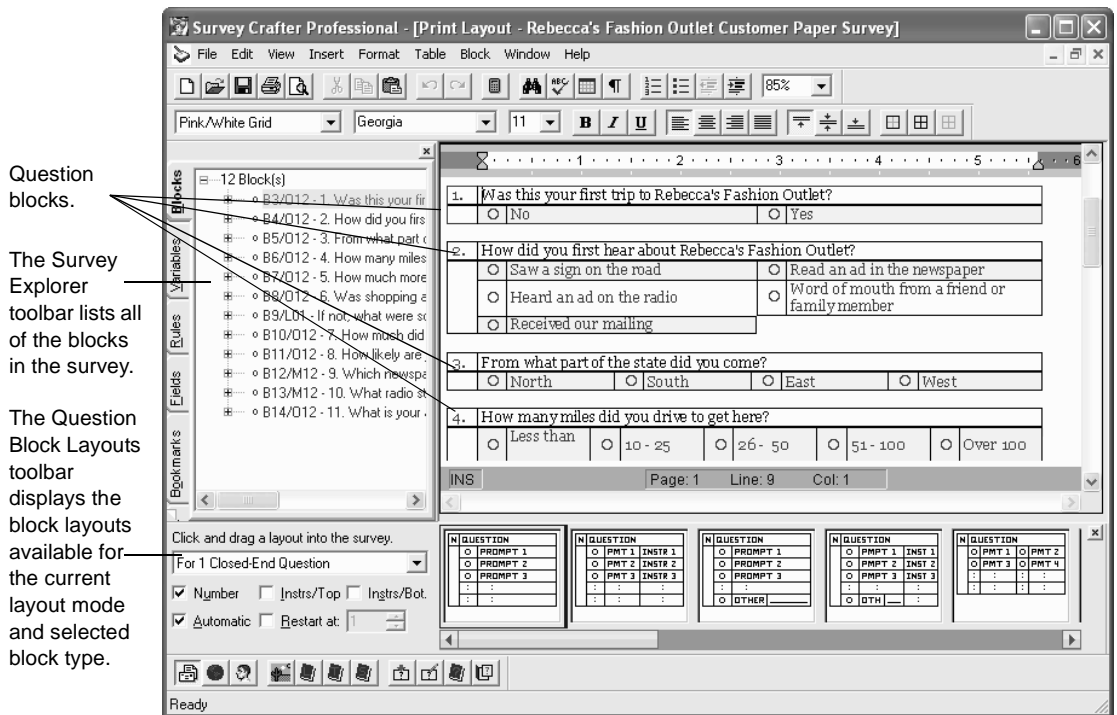When you want to add a question to your survey, you must use a question block.

Question blocks.

The Survey Explorer toolbar lists all of the blocks in the survey.

The Question Block Layouts toolbar displays the block layouts available for the current layout mode and selected block type.

Figure 2 - 45:   Question blocks in the Survey Designer window.

To add a question to your survey, complete the following tasks:

• Insert a New Question Block

- Configure the New Block

- Type and Format the Block's Text

- Review the Block's Imported Variables

Each of these tasks is explained below.

Insert a New Question Block

The instructions below use just one of the many ways you can insert a new question block into the Survey Designer window.

- **To insert a new question block**

  1 Select the type of block you want from the drop down on the Question Block Layouts toolbar.

Select the type of block you want from the drop down.

Choose the components you want to include in the block.

Drag a layout into the Survey Designer window.
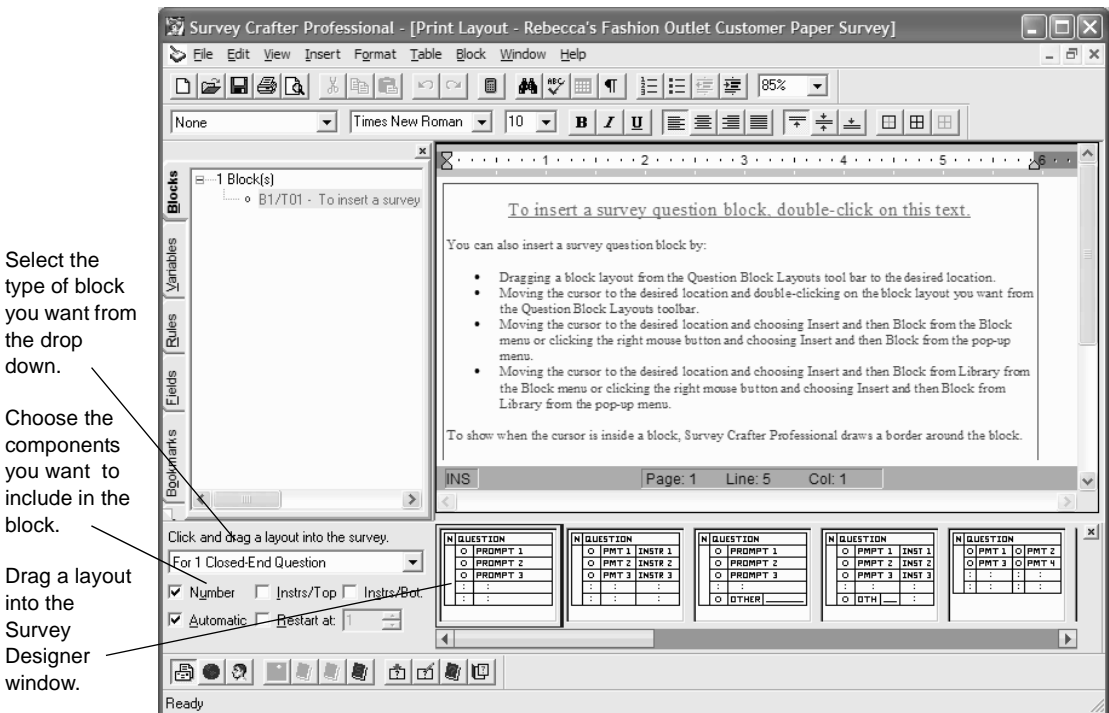
Figure 2 - 46:   Inserting a new question block into the Survey Designer window.

If the Question Block Layouts toolbar is not visible, click on the View menu, Toolbars and then on Question Block Layouts.

2   Choose the components you want to include in the block. Do any of the following:

- If you want to include an area in the block for a number, select the *Number* check box. Survey Crafter Professional will automatically update the gallery of block layouts on the toolbar to show how each layout accommodates the area.

- If you selected the *Number* check box and you want Survey Crafter Professional to automatically number the block for you, select the *Automatic* check box.

- If you selected both the *Number* and *Automatic* check boxes and you want to restart the automatic numbering, click on the *Restart at* check box and enter the new starting number.

- If you want to include an additional area at the top of the block for instructions, select the *Instrs on Top* check box. This area can be useful for labeling the block or for including additional instructions or pictures.

- If you want to include an additional area at the bottom of the block for instructions, select the *Instrs on Bottom* check box. This area can be useful for skip logic or other instructions for interviewers and respondents. Survey Crafter Professional will automatically update the gallery of block layouts on the toolbar to show how each layout accommodates the area.

3   Review the available layouts in the gallery of block layouts. You may need to scroll the gallery to see all of the layouts.

To read about a block layout, right-click on the layout's picture and choose Help from the pop-up menu.

4   Click on the layout you want from the gallery of block layouts and drag it into the Survey Designer window.

If you would like the Survey Designer window to scroll, move the mouse pointer near an edge of the window and press the [ALT] key.

> **Tip** Alternatively, if you drag and release the mouse button over an existing block in the Blocks tab of the Survey Explorer toolbar, Survey Crafter Professional will insert the new block before the existing block in the Survey Designer window.

5 Release the mouse button over the location where you want to insert the new block.

If you release the mouse button over an existing block in the Survey Designer window, Survey Crafter Professional will insert the new block before the existing block.

If you release the mouse button after the end of the survey, Survey Crafter Professional will insert the new block at the end of the survey.

Otherwise, Survey Crafter Professional will insert the new block where you release the mouse button.

The new block is listed in the Blocks tab of the Survey Explorer toolbar.

The question will go here.

The prompts will go here.
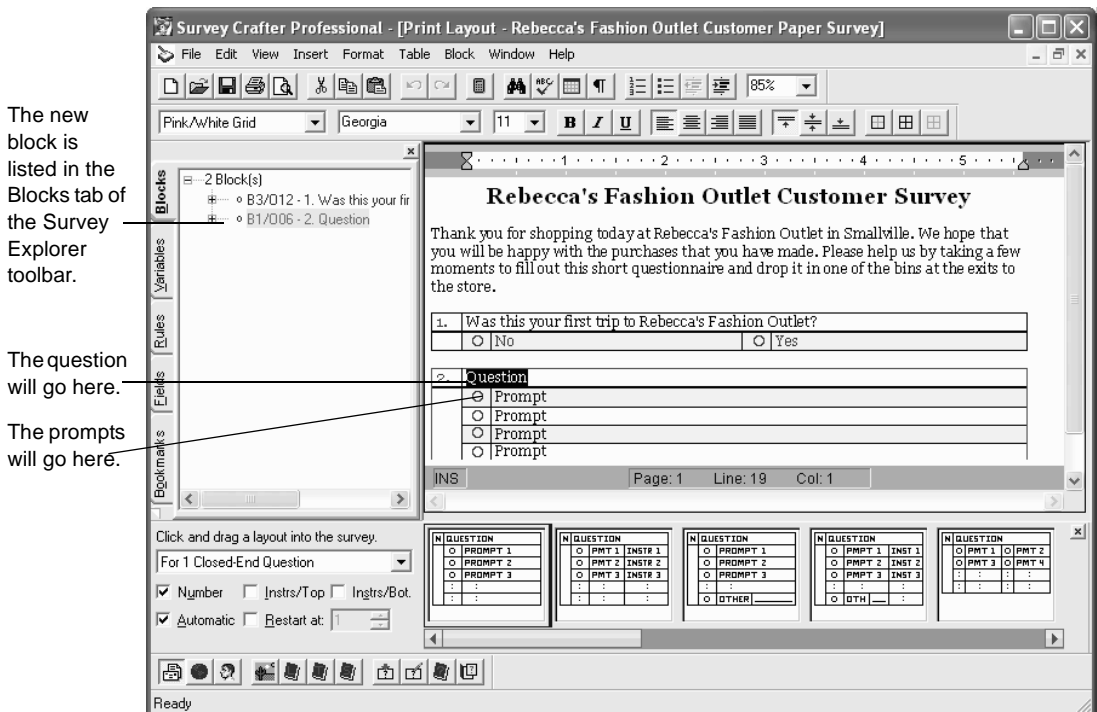
Figure 2 - 47: A new question block in the Survey Designer window.

6 Go to the section "Configure the New Block" below.

Configure the New Block

Because Survey Crafter Professional remembers the settings of the last question block you inserted or updated, you may not need to change the settings of the newly inserted question block.

・ **To configure the new block**

1   Double-click anywhere inside the question block or right-click inside the question block and choose Edit Block from the pop-up menu.

You can also move the cursor inside the question block and choose Edit from the Block menu.

Edit Block button

Survey Crafter Professional displays the Type tab of the Question Block Wizard dialog box.

The block type determines the type of questions contained by the block.

Survey Crafter Professional changes the pictures in the gallery of block layouts when you change any of the block type or block component settings.
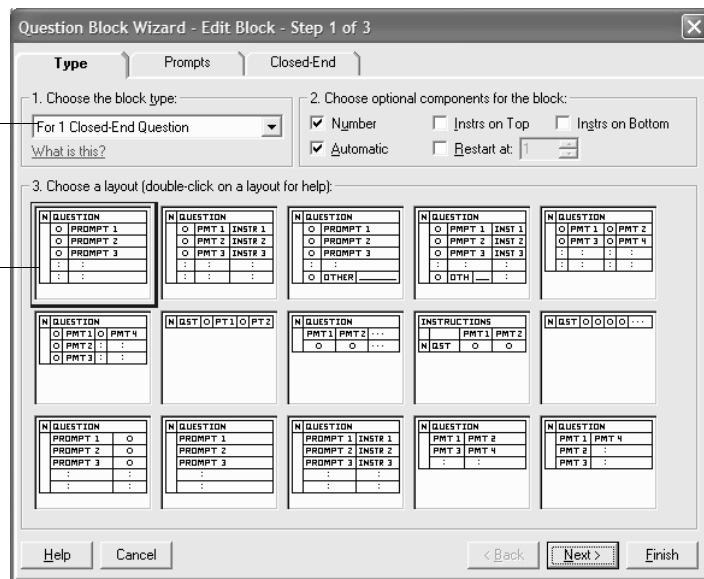
Figure 2 - 48:   The Type tab of the Question Block Wizard dialog box.

If you want, you can change the block type, optional components and the selected block layout.

2   Click on the Next button.

3   Use the instructions on the screen to complete the Question Block Wizard dialog box.

For help on any of the options, click on the Help button on the dialog box.

4   When you have completed the dialog box, click on the Finish button.

Survey Crafter Professional updates the question block in the Survey Designer window.

5   Go to the section "Type and Format the Block's Text" below.

Type and Format the Block's Text

You can type and insert pictures inside the cells of the question block.

> **Note** The organization of the cells of the question block is dictated by the block's layout. To change the block's selected layout, move the cursor inside the question block, click the right mouse button and choose Edit Block from the pop-up menu. Then follow the instructions in the Type tab of the Question Block Wizard dialog box.

Survey Crafter Professional may prevent you from typing over some areas in the question block. For example, if you chose to have a list supply the question(s), Survey Crafter Professional will prevent you from typing over the questions in the Survey Designer window.

If you cannot type over the question(s) in the Survey Designer window and you want to change the questions, move the cursor inside the question block, click the right mouse button and choose Edit Block from the pop-up menu. Then click on the Questions tab of the Question Block Wizard dialog box and follow the instructions on the screen.

Even if Survey Crafter Professional prevents you from typing over an area in the question block, you can still change the area's formatting options. For example, if you chose to have Survey Crafter Professional automatically number the block for you, you can still change the block number's formatting options in the Survey Designer window.

You can also change a block cell's width and height by clicking on and dragging its left, right or bottom border. You can also format a cell by moving the cursor inside the cell and choosing commands from the Table menu.

• **To type and format the block's text**

  1   If you chose to include an area in the block for a number and also to number the block yourself, enter the number in the block's number cell.
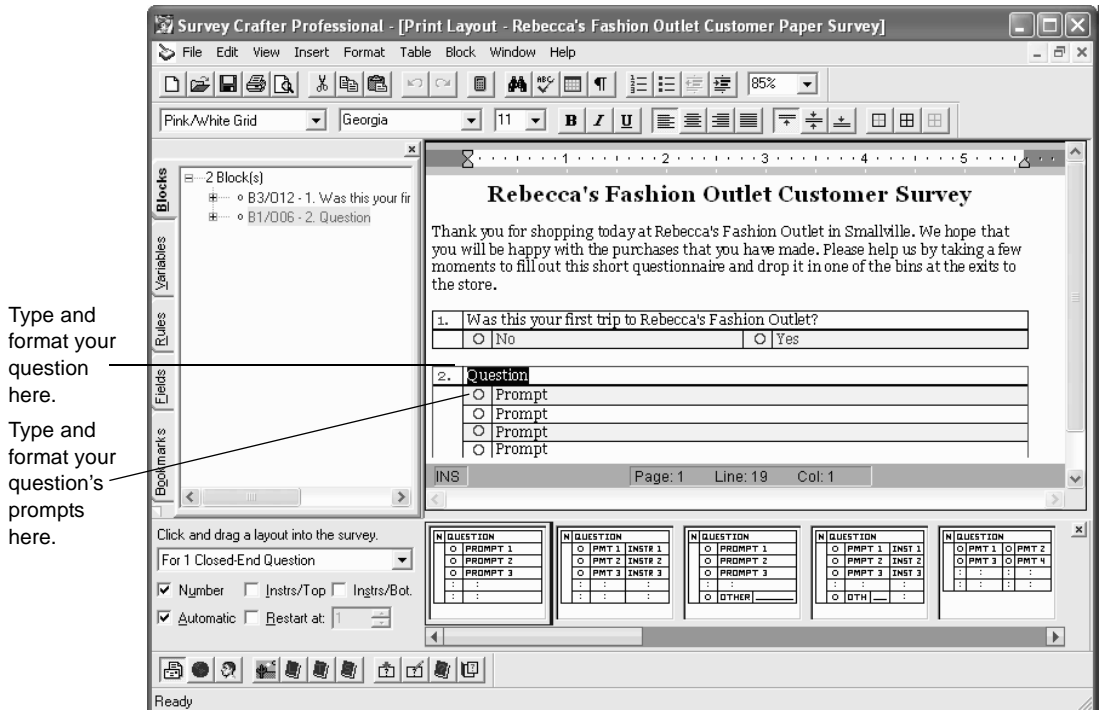

Type and format your question here.

Type and format your question's prompts here.

Figure 2 - 49:   A new question block in the Survey Designer window.

  2   If the block is for one question or the block supports more than one question and you chose to type the question(s) in the Survey Designer window, type the question(s) in the block's question cell(s).

  3   If the layout you selected for the block calls for one or more prompts and you chose to type the prompts in the Survey Designer window, type the prompt(s) in the block's prompt cell(s).

  4   If you chose to include additional areas in the block for instructions, type the instructions in the block's cells.

  5   Go to the section "Review the Block's Imported Variables" below.

Review the Block's Imported Variables

The type and number of imported variables associated with a question block depend on the types and number of questions contained by the block.

Table 2 - 6 lists the 14 types of question blocks Survey Crafter Professional provides and the number and type of imported variables the program would automatically create and maintain for the block.

Table 2 - 6:   The 14 types of question blocks Survey Crafter Professional provides.

The Type of Question Block	The imported variable(s) Survey Crafter Professional would automatically create and maintain for the block
• For 1 All-That-Apply Question • For Multiple All-That-Apply Questions	• 1 imported category variable for each prompt of each all-that-apply question in the block. • For example, Survey Crafter Professional would create and maintain 5 imported category variables for a block of type *For 1 All-That-Apply Question* that contains 1 all-that-apply question having 5 prompts. • Another example, Survey Crafter Professional would create and maintain 24 imported category variables for a block of type *For Multiple All-That-Apply Questions* that contains 4 all-that-apply questions, each having 6 prompts.
• For 1 Closed-End Question • For Multiple Closed-End Questions	• 1 imported category variable for each closed-end question in the block. • For example, Survey Crafter Professional would create and maintain 4 imported category variables for a block of type *For Multiple Closed-End Questions* that contains 4 closed-end questions, each having any number of prompts.
• For 1 Constant Sum Question • For Multiple Constant Sum Questions	• 1 imported quantity variable for each prompt of each constant sum question in the block • For example, Survey Crafter Professional would create and maintain 6 imported quantity variables for a block of type *For 1 Constant Sum Question* that contains 1 constant sum question having 6 prompts.

Table 2 - 6:   The 14 types of question blocks Survey Crafter Professional provides. (Continued)

The Type of Question Block	The imported variable(s) Survey Crafter Professional would automatically create and maintain for the block
• For 1 Open-End Question • For Multiple Open-End Questions	• 1 imported literal variable for each open-end question in the block. • For example, Survey Crafter Professional would create and maintain 1 imported literal variable for a block of type *For 1 Open-End Question* that contains 1 open-end question.
• For 1 Quantity Question • For Multiple Quantity Questions	• 1 imported quantity variable for each quantity question in the block. • For example, Survey Crafter Professional would create and maintain 10 imported quantity variables for a block of type *For Multiple Quantity Questions* that contains 10 quantity questions.
• For 1 Ranking Question • For Multiple Ranking Questions	• 1 imported quantity variable for each prompt of each ranking question in the block. • For example, Survey Crafter Professional would create and maintain 15 imported quantity variables for a block of type *For Multiple Ranking Questions* that contains 3 ranking questions, each having 5 prompts.
• For 1 Rating Question • For Multiple Rating Questions	• 1 imported quantity variable for each rating question in the block. • For example, Survey Crafter Professional would create and maintain 7 imported quantity variables for a block of type *For Multiple Rating Questions* that contains 7 rating questions, each having any number of prompts.

In the Primer

To read more about variable types, see the section "Variable Basics" on page 6 - 2. Also see the section "Understanding Variables and Scales" in Chapter 4 of *Understanding Survey Research: A Primer for Success*.

• **To review the block's imported variables**

1   Right-click inside the question block and choose Edit Survey/Block Variables from the pop-up menu.

Alternatively, you can move the cursor inside the question block and choose Edit Survey/Block Variables from the Block menu.

Survey Crafter Professional displays the Survey/Block Variables dialog box.

Survey Crafter Professional automatically creates and maintains an imported category variable for each closed-end question in the question block.

Click on the Info button to change the name or description of the highlighted variable.

Click on the Edit button to view the definition of the highlighted variable.
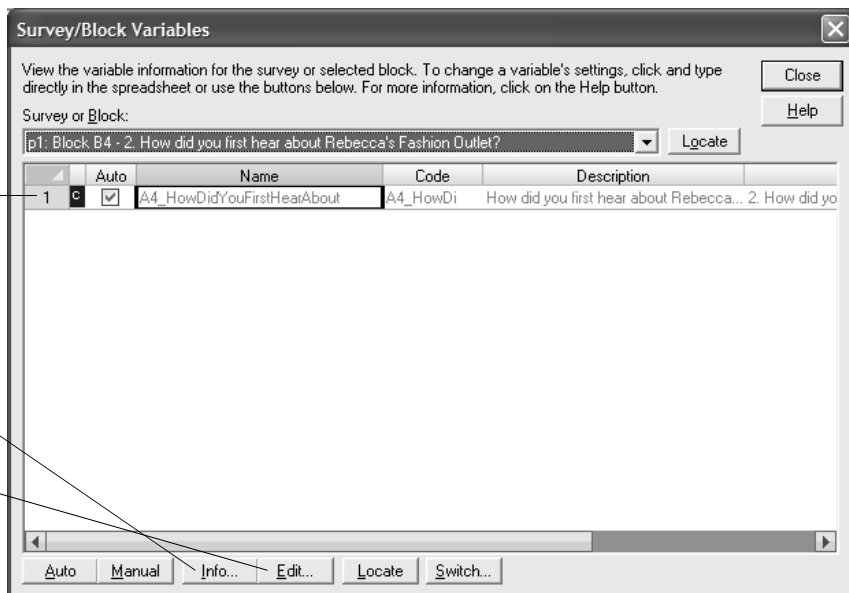
Figure 2 - 50:   The Survey/Block Variables dialog box.

2   If you want to change the name or description of a variable, click on the variable and then click on the Info button.

3   To view the definition of a variable, click on the variable and then click on the Edit button.

Note You cannot change the definition of a variable associated with a question block.

4   Click on the Close button.

Using the Question Library

Survey Crafter Professional's Question Library is a collection of common survey questions and stand-alone text. The Library is available to all studies. By inserting questions from the Library into your survey, you can create a survey more quickly.

The Library comes loaded with questions called standard questions. Each standard question has its text, layout, and variable(s) already defined. After inserting a question in your survey, you can edit it if you want. You can also add your own questions (called user-defined questions) to the Library and reorganize the Library to suit your needs best.

Note This section uses the term "question" to refer to both question blocks and instructions-only blocks. The procedures below apply to both types of blocks.

A group of questions. Click on the plus sign to the left of the group to open it.

Each question in a group has a name.

View the selected question here.

If the Delete button is disabled, the selected group or question is standard. Otherwise, it is user-defined.
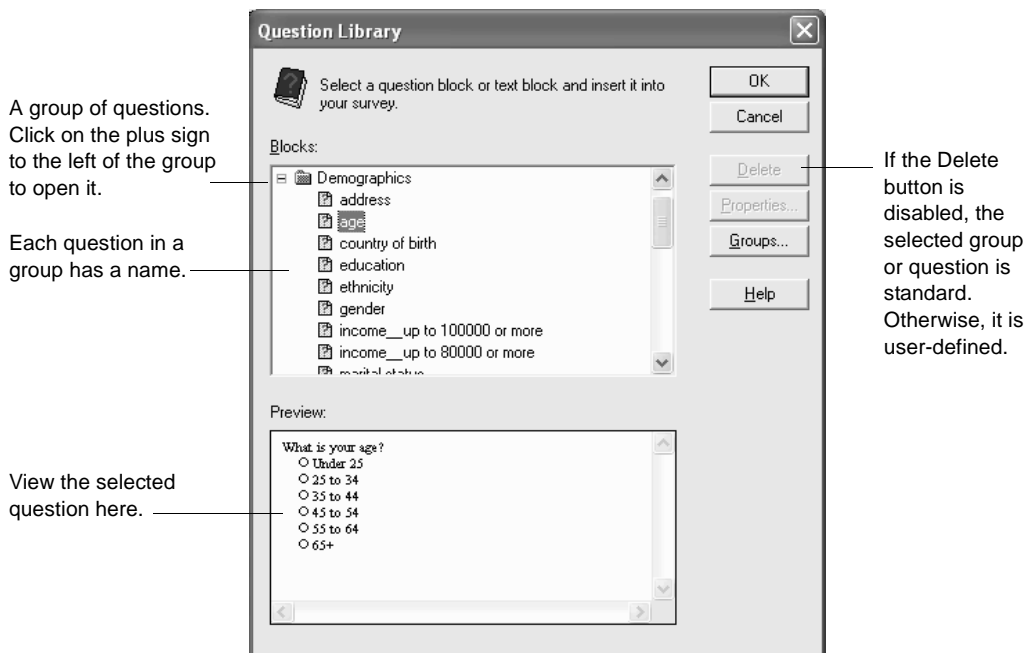
Figure 2 - 51: The Question Library dialog box.

Inserting a Question from the Library into Your Survey

You can insert a question from the Library anywhere in your survey.

- **To insert a question from the Library into your survey**

  1   Select the Surveys tab of the Study window.

  2   Select the survey you want to change and then click on the Edit button on the tab.

  3   In the Survey Designer window, move the cursor to the location where you want to insert a question from the Library.

Insert Block from
Library button

  4   From the Block menu, choose Insert and then Block from Library or click on the Insert Block from Library button on the toolbar.

  Survey Crafter Professional displays the Question Library dialog box.

  5   In the Blocks list, select the block you want to insert into the survey.

  6   Click on the OK button.

  Survey Crafter Professional inserts the block in the Survey Designer window and adds the block's imported variable(s) to the study. Survey Crafter Professional also adds the variable templates used by the block's variable(s) if the templates are not already in the study.

  If the block was numbered manually and then added to the Library, it appears with that number in the Survey Designer window. It uses that number even if it is not consecutive with the previous block in the survey. To change the number, type over the number in the Survey Designer window, double-click on the block or right-click inside the block and choose Edit Block from the pop-up menu.

Adding a Question to the Library

By adding a question to the Library, you can reuse the question in other studies. When you add a block to the Library, Survey Crafter Professional also adds the block's imported variable(s) to the Library.

・ **To add a question to the library**

1 In the Survey Designer window, move the cursor inside the block you want to add to the Library.

Add Block to Library button

2 From the Block menu, choose Add to Library or click on the Add Block to Library button on the toolbar.

3 In the Name field, enter a name for the block.

The name is used to help identify the block in the Blocks list in the Question Library dialog box. The name may be up to 50 characters long and may contain letters, digits, underscores, and spaces.

4 In the Group field, select the group to which you want to assign the block.

For example, assign the block to the Behavior group. Each block may be assigned to only one group.

If you want to create a new group, click on the New button.

A name and group for the question "How many times a week do you eat at fast food restaurants?"

Figure 2 - 52:   The Add Question to Library dialog box.

5 Click on the OK button.

Survey Crafter Professional adds the block to the Library.

Organizing the Library

You can customize the Library's structure by deleting a question or group from the Library, changing a question's group and name, and adding and renaming groups.

These customizations apply only to user-defined questions and groups. To find out whether a group or question is user-defined, select it in the Blocks list. If the Delete button in the Question Library is available, the group or question is user-defined.

Deleting a Question or Group from the Library

You can delete only user-defined questions and groups from the Library. Deleting a block or group from the Library does not affect your survey in any way.

WARNING! Deleting a group deletes all of the questions in that group.

- **To delete a question or group from the Library**

    1   Select the Surveys tab of the Study window.

    2   Select any survey and then click on the Edit button on the tab.

    3   From the Block menu, choose Insert and then Block from Library or click on the Insert Block from Library button on the toolbar.

    Survey Crafter Professional displays the Question Libary dialog box.

    4   In the Blocks list, select the user-defined question or group you want to delete.

    5   Click on the Delete button.

    Survey Crafter Professional deletes the question or group from the Library.

Insert Block from
Library button

Changing a Question's Group or Name

To help you find questions in the Library more easily, a question has two properties: a group and a name. Both groups and names appear in the Blocks list in the Question Library dialog box.

Groups are categories that help organize the questions in the Library. For example, the Demographics group contains questions like "What is your age?" and "What is your gender?"

Names are text tags that identify each question in a group. For example, you could assign the names "age" and "gender" to the questions "What is your age?" and "What is your gender?"

You can move user-defined questions to new groups or change their names at any time. You cannot move or rename standard questions.

- • **To change a question's group or name**

  1   Select the Surveys tab of the Study window.

  2   Select any survey and then click on the Edit button on the tab.

Insert Block from Library button

  3   From the Block menu, choose Insert and then Block from Library or click on the Insert Block from Library button on the toolbar.

  Survey Crafter Professional displays the Question Libary dialog box.

  4   In the Blocks list, select the user-defined question for which you want to change the group or name.

  5   Click on the Properties button.

  6   If you want to change the question's name, edit the text in the Name field.

  Use up to 50 characters for the name. The name may contain letters, digits, underscores, and spaces.

  7   If you want to change the question's group, select another group from the Groups list.

  If you want to create a new group for this question, click on the New button.
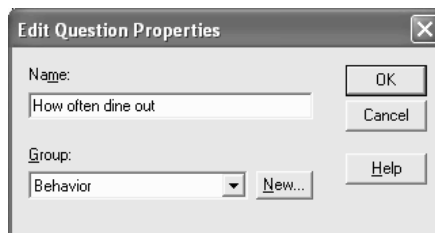
Figure 2 - 53:   The Edit Question Properties dialog box.

  8   Click on the OK button on the Edit Question Properties dialog box.

Survey Crafter Professional makes the changes in the Blocks list.

Adding and Renaming Groups

You can rename only user-defined groups.

The Question Library does not support a hierarchy of groups. You cannot, for example, add a subgroup called Home and Family to the Demographics group.

• **To add a group to the Library**

1 Select the Surveys tab of the Study window.

2 Select any survey and then click on the Edit button on the tab.

Insert Block from Library button

3 From the Block menu, choose Insert and then Block from Library or click on the Insert Block from Library button on the toolbar.

Survey Crafter Professional displays the Question Libary dialog box.

4 Click on the Groups button.

5 In the Edit Groups dialog box, click on the New button.

Figure 2 - 54:   The Edit Groups dialog box.

6   In the Name field, enter the name of the group to add.

Use up to 50 characters for the group name. The name may contain letters, digits, underscores, and spaces.
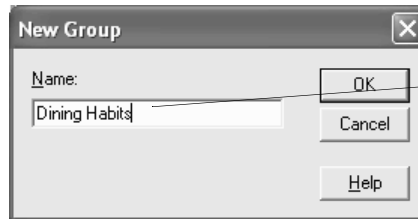
Enter a unique name for the new group.

Figure 2 - 55:   The New Group dialog box.

7   Click on the OK button.

Survey Crafter Professional adds the group to the Groups list in the Edit Groups dialog box.

8   Click on the Close button on the Question Library dialog box.

•   **To rename a group in the Library**

1   Select the Surveys tab of the Study window.

2   Select any survey and then click on the Edit button on the tab.

Insert Library
Question button

3   From the Block menu, choose Insert and then Block from Library or click on the Insert Block from Library button on the toolbar.

Survey Crafter Professional displays the Question Libary dialog box.

4   In the Edit Groups dialog box, select the group you want to rename.

5   Click on the Rename button.

6   In the Name field, enter the group's new name.

Use up to 50 characters for the name. The name may contain letters, digits, underscores, and spaces.
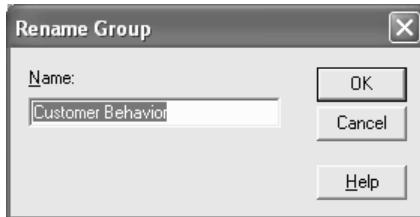
Figure 2 - 56: The Rename Group dialog box.

7 Click on the OK button.

Survey Crafter Professional updates the group's name in the Groups list in the Edit Groups dialog box.

8 Click on the Close button on the Question Libary dialog box.

Inserting Pictures

Pictures are useful in many ways including illustrating your survey's questions.

The sections below cover the following:

• Embedding and Linking Picture Files

• Copying and Pasting Pictures

Embedding and Linking Picture Files

You can embed and link picture files in the Survey Designer window.

When you embed a picture file, Survey Crafter Professional stores the file in its entirety with the survey text. When you link a picture file, Survey Crafter Professional stores only a reference to the file on your computer.

Embedding a picture file in the Survey Designer window is a good choice if the file is not large and you plan to copy the study file to or access the study file from other computers. Since the picture file is stored with the survey text, copying the study file copies the picture.

Linking a picture file in the Survey Designer window is a good choice if the file is large or you do not want to lose any amount of the picture's resolution. However, if you copy the study file to another computer and the picture file is not in exactly the same location on the other computer, Survey Crafter Professional will not display the linked picture.

When publishing web survey files, Survey Crafter Professional creates a new picture file for each embedded picture in the Survey Designer window. New picture files are created either in JPEG File Interchange Format (JPG), Graphic Interchange Format (GIF), Portable Network Graphics (PNG) or Windows Metafile File Format (WMF).

- **To embed a picture file in your survey**

    1   In the Survey Designer window, move the cursor to the location where you want to insert the picture file.

    Survey Crafter Professional may prevent you from inserting a picture in some areas of the Survey Designer window.

    2   Choose Embed Picture from the Insert menu.

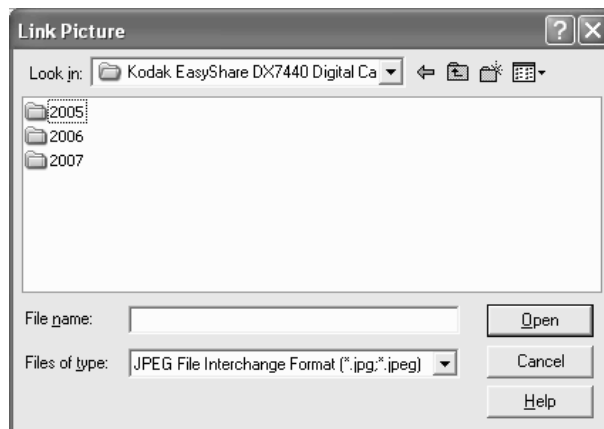   Survey Crafter Professional displays the Embed Picture dialog box.
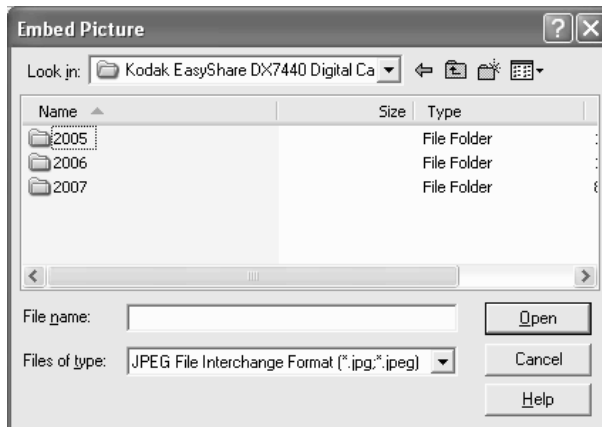
Figure 2 - 57:   The Embed Picture dialog box.

    3   Select the type of picture file you want to insert from the Files of Type drop down.

    4   Use the Locations (Look in) drop down list and Folders list to find the folder containing the picture file.

    5   Select the picture file from the Folders list.

    6   Click on the Open button.

    Survey Crafter Professional inserts the picture file in the Survey Designer window.

    7   If you want to resize the picture, you can either use the mouse to drag the picture's borders or choose Picture from the Format menu.

- **To link a picture file in your survey**

    1 In the Survey Designer window, move the cursor to the location where you want to insert a reference to the picture file.

    Survey Crafter Professional may prevent you from inserting a picture in some areas of the Survey Designer window.

    2 Choose Link Picture from the Insert menu.

    Survey Crafter Professional displays the Link Picture dialog box.

Figure 2 - 58: The Link Picture dialog box.

    3 Select the type of picture file you want to insert from the Files of Type drop down.

    4 Use the Locations (Look in) drop down list and Folders list to find the folder containing the picture file.

    5 Select the picture file from the Folders list.

    6 Click on the Open button.

    Survey Crafter Professional inserts a reference to the picture file in the Survey Designer window.

Note If you copy the study file to another computer and the picture file is not in exactly the same location on the other computer, Survey Crafter Professional will not display the linked picture.

7 If you want to resize the picture, you can either use the mouse to drag the picture's borders or choose Picture from the Format menu.

Copying and Pasting Pictures

You can copy and paste pictures in the Survey Designer window.

When you paste a picture in the Survey Designer window, Survey Crafter Professional stores the picture with the survey text.

Pasting a picture in the Survey Designer window is a good choice if the file is not large and you plan to copy the study file to or access the study file from other computers. Since the picture is stored with the survey text, copying the study file copies the picture.

Alternatively, linking a picture in the Survey Designer window is a good choice if the picture is large or you do not want to lose any amount of the picture's resolution.

When publishing web survey files, Survey Crafter Professional creates a new picture file for each pasted picture in the Survey Designer window. New picture files are created either in JPEG File Interchange Format (JPG), Graphic Interchange Format (GIF), Portable Network Graphics (PNG) or Windows Metafile File Format (WMF).

• **To copy a picture from your survey**

   1 In the Survey Designer window, use the mouse to highlight the picture you want to copy to the clipboard.

Copy button

   2 Choose Copy from the Edit menu or press [CTRL-C].

   Survey Crafter Professional copies the highlighted picture to the clipboard.

• **To paste a picture into your survey**

   1 In the Survey Designer window, move the cursor to the location where you want to paste the picture from the clipboard.

   Survey Crafter Professional may prevent you from pasting a picture in some areas of the Survey Designer window.

Paste button

2   Choose Paste from the Edit menu or press [CTRL-V].

Survey Crafter Professional pastes the picture from the clipboard into the Survey Designer window.

3   If you want to resize the picture, you can either use the mouse to drag the picture's borders or choose Picture from the Format menu.

Inserting Hyperlinks and Targets

You may find it useful to allow your respondents to click on a hyperlink in your web survey to jump to another location or even to launch a new web browser to view additional information about the survey.

The sections below cover the following:

• Inserting Targets

• Inserting Hyperlinks

Inserting Targets

A target in the Survey Designer window is a named location that you can use as a destination for a hyperlink. Use a target as a hyperlink's destination when you want your respondents to click on a hyperlink to jump to another location in your survey.

Before you can insert a hyperlink to jump to another location in your survey, you need to insert a target in your survey.

• **To insert a target in your survey**

1   In the Survey Designer window, move the cursor to the location where you want to insert the new target.

2   Choose Target from the Insert menu.

Survey Crafter Professional displays the Insert Target dialog box.
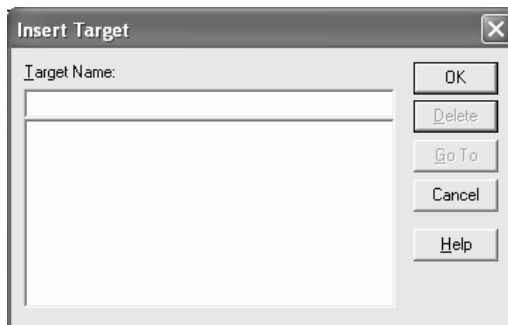
Figure 2 - 59:   The Insert Target dialog box.

3   Enter the new target's name in the Target Name field.

Survey Crafter Professional lists all of the targets that you have already inserted in your survey.

If you want, you can click on an existing target and then click on the Go To button to jump to the target's location in the Survey Designer window.

4   Click on the Add button.

Survey Crafter Professional inserts the new target in the Survey Designer window.

The new target will appear in the Targets tab of the Survey Explorer toolbar.

Inserting Hyperlinks

You can insert a hyperlink in the Survey Designer window to:

- jump to another location in your survey

- launch a new web browser displaying a web page you specify

- launch your respondent's default e-mail program displaying a new e-mail message addressed to a recipient you specify

Before you can insert a hyperlink to jump to another location in your survey, you need to insert a target in your survey. See "Inserting Targets" on page 2 - 96.

Note Respondents only need to single-click on a hyperlink in a published web survey whereas you need to double-click on a hyperlink in both the Survey Designer window and in the built-in Interviewer.

- **To insert a hyperlink to jump to another location in your survey**

    1   In the Survey Designer window, move the cursor to the location where you want to insert the new hyperlink.

    2   Choose Hyperlink from the Insert menu.

Survey Crafter Professional displays the Insert Hyperlink dialog box.
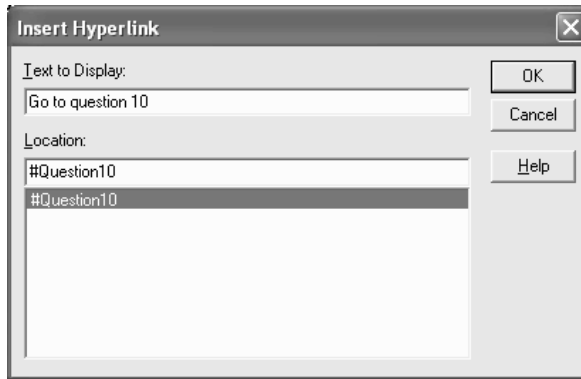
Figure 2 - 60:   The Insert Hyperlink dialog box.

3   Enter the text you want your respondents to click on.

4   Select the target you want to use.

Survey Crafter Professional lists all of the targets that you have already inserted in your survey.

If the list is empty, click on the Cancel button and insert a target in your survey. See "Inserting Targets" on page 2 - 96.

5   Click on the OK button.

Survey Crafter Professional inserts the new hyperlink in the Survey Designer window.

6   Double-click on the hyperlink in the Survey Designer window.

Survey Crafter Professional jumps to the location of the target selected in step 4.

- **To insert a hyperlink to display a web page in a new web browser**

    1   In the Survey Designer window, move the cursor to the location where you want to insert the new hyperlink.

    2   Choose Hyperlink from the Insert menu.

Survey Crafter Professional displays the Insert Hyperlink dialog box.
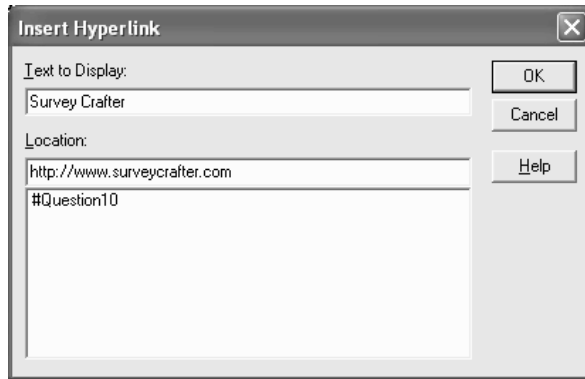
Figure 2 - 61:   The Insert Hyperlink dialog box.

3   Enter the text you want your respondents to click on.

4   Enter the URL of the web page you want to display in a new web browser.

For example, type http://www.surveycrafter.com to have the new web browser display Survey Crafter's website.

5   Click on the OK button.

Survey Crafter Professional inserts the new hyperlink in the Survey Designer window.

6   Double-click on the hyperlink in the Survey Designer window.

Survey Crafter Professional launches a new web browser displaying the web page you specified in step 4.

•   **To insert a hyperlink for e-mailing a message**

1   In the Survey Designer window, move the cursor to the location where you want to insert the new hyperlink.

2   Choose Hyperlink from the Insert menu.

Survey Crafter Professional displays the Insert Hyperlink dialog box.

Figure 2 - 62:   The Insert Hyperlink dialog box.

3   Enter the text you want your respondents to click on.

4   Enter mailto: followed by the e-mail address you want your respondent to send an e-mail message to.

For example, type mailto:info@surveycrafter.com to have your respondent's default e-mail program display a new e-mail message addressed to info@surveycrafter.com.

5   Click on the OK button.

Survey Crafter Professional inserts the new hyperlink in the Survey Designer window.

6   Double-click on the hyperlink in the Survey Designer window.

Survey Crafter Professional launches your default e-mail program displaying a new e-mail message addressed to the recipient you specified in step 4.

Adding Custom Rules

Survey Crafter Professional provides 18 different types of rules for you to use to guide your survey's respondents.

The sections below cover the following:

- Adding custom opening and closing web survey rules

- Adding custom branching, skipping and hiding rules

- Adding custom validation rules

- Adding custom assignment rules

- Adding custom web cookie rules

- Adding custom data cleaning rules

- Adding custom commands

- Custom branching, skipping and hiding rule issues

Adding custom opening and closing web survey rules

You can add rules to your study that have your web surveys automatically open or close on specified dates and times or alternatively when custom conditions are being met.

These rules are called custom opening and closing web survey rules. You can add these kinds of rules to your study from either Survey Crafter Professional's Survey Designer window or Survey Crafter Professional's Data window.

- **To add custom opening and closing web survey rules to your study**

    1   In the Survey Designer window, choose *Custom Rules* from Survey Crafter Professional's *Block* menu.

    Alternatively, from the Data window, choose *Custom Rules* from Survey Crafter Professional's *Edit* menu.

    Survey Crafter Professional displays the *Custom Rules* dialog box.

Survey Crafter Professional lists all of the custom rules that belong to the selected rule group.
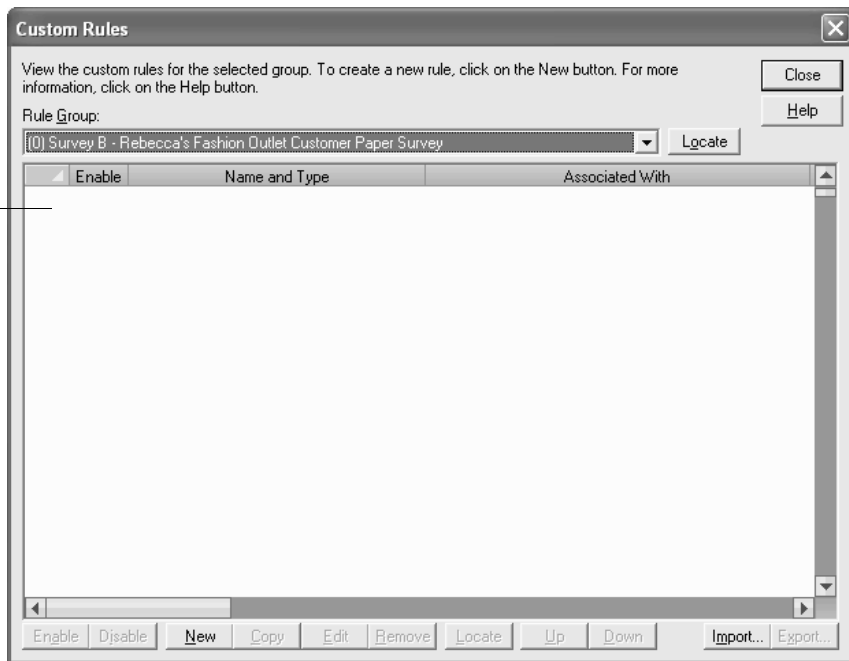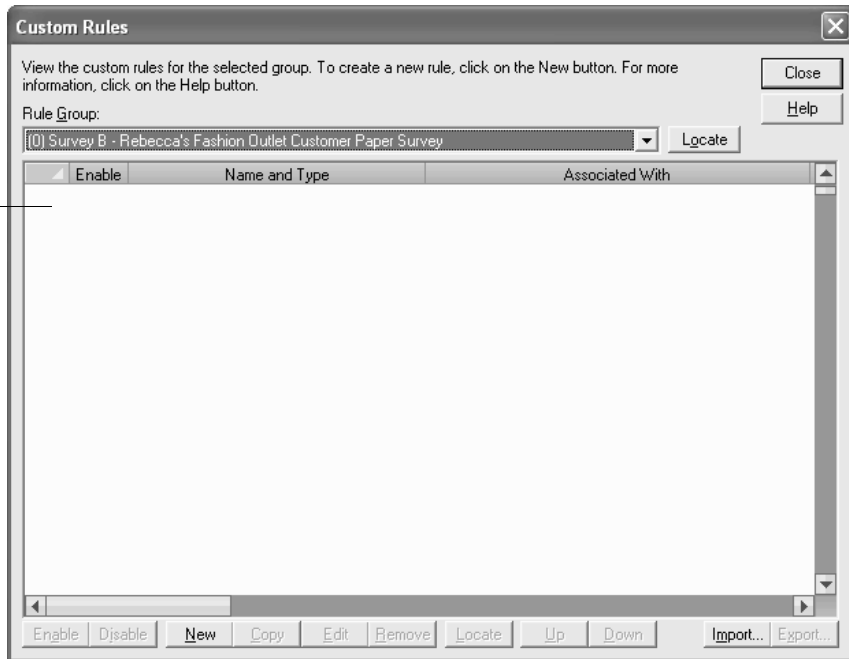

Figure 2 - 63:   The Custom Rules dialog box.

2   Click on the *New* button at the bottom of the *Custom Rules* dialog box.

Survey Crafter Professional displays the *Custom Rule - New* dialog box.

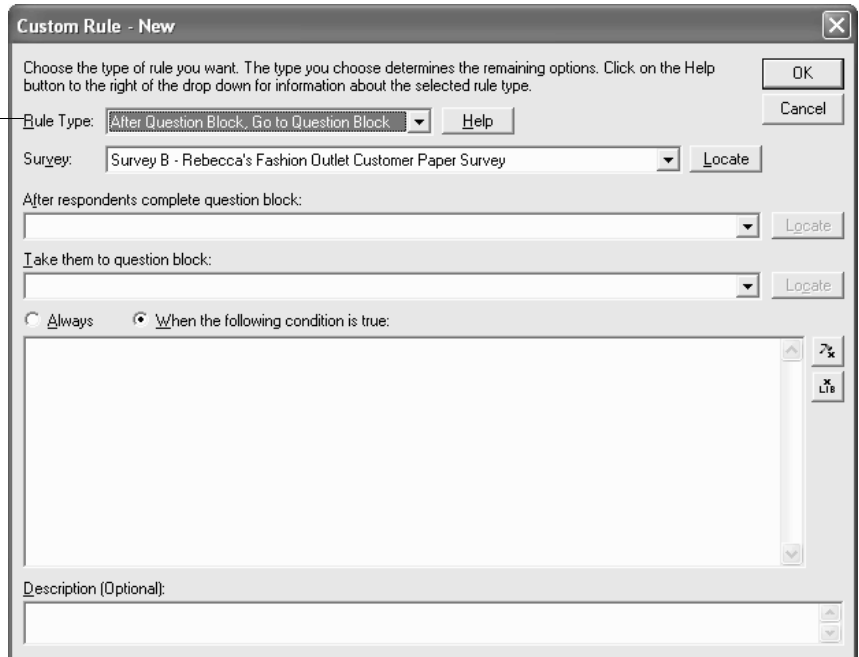The type of rule you choose determines the remaining options.
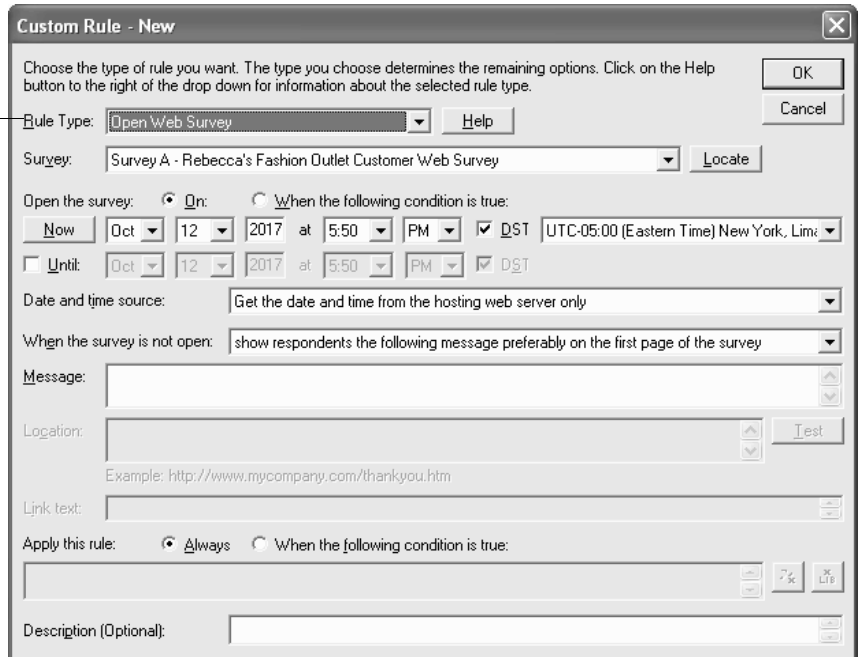
Figure 2 - 64:   The Custom Rule - New dialog box.

3   Choose the type of rule you want to add to your study.

The type of rule you choose determines the remaining options. There are two types of custom opening and closing web survey rules.

- Open Web Survey

  Since Survey Crafter Professional web surveys are open by default, it is not necessary to use a rule of this type when you want to your web survey to start out open. Instead, use a rule of this type when you want your web survey to start out closed and then have it open at a specific date and time or alternatively when a custom condition is being met. Survey Crafter Professional's built-in Interviewer ignores rules of this type.

• Close Web Survey

Close your web survey on a specified date and time or while a custom condition is being met. Survey Crafter Professional's built-in Interviewer ignores rules of this type.

4   Select the remaining options for your rule.

Click on the *Locate* buttons to the right of the drop downs to have Survey Crafter Professional display the selected items in the Survey Designer window.

If your rule uses an expression, your expression must evaluate to either TRUE or FALSE for each respondent in your study's data set. For example, the expression FORMAT_UTCTIME(1,1)>="2017/09/01 00:00" evaluates to TRUE when the current date and time in Coordinated Universal Time (UTC) is on or after 12AM, September 1, 2017.

To get help writing the expression, click on the Expression Builder button. Also see Chapter 7, "Expressions."

5   Click on the OK button.

Survey Crafter Professional adds the new rule to the end of the list of rules in the *Custom Rules* dialog box.

6   Repeat steps 2 through 5 until you are done.

7   Click on the *Close* button.

Adding custom branching, skipping and hiding rules

You can add rules to your study that have Survey Crafter Professional automatically take respondents from one question block or page to another question block or page. You can also add rules that automatically hide some of a block's questions or prompts.

These rules are called custom branching, skipping and hiding rules. You can add these kinds of rules to your study from either Survey Crafter Professional's Survey Designer window or Survey Crafter Professional's Data window.

> **Note** When your survey is on the Web, there are browser compatibility issues you should be aware of regarding the enforcement of your custom branching, skipping and hiding rules.
>
> For more information, see section "Custom branching, skipping and hiding rule issues" on page 2 - 134

- **To add custom branching, skipping and hiding rules to your study**

    1   In the Survey Designer window, choose *Custom Rules* from Survey Crafter Professional's *Block* menu.

    Alternatively, from the Data window, choose *Custom Rules* from Survey Crafter Professional's *Edit* menu.

    Survey Crafter Professional displays the *Custom Rules* dialog box.

Survey Crafter Professional lists all of the custom rules that belong to the selected rule group.

Figure 2 - 65:   The Custom Rules dialog box.

2 Click on the *New* button at the bottom of the *Custom Rules* dialog box.

Survey Crafter Professional displays the *Custom Rule - New* dialog box.

The type of rule you choose determines the remaining options.

Figure 2 - 66:   The Custom Rule - New dialog box.

3 Choose the type of rule you want to add to your study.

The type of rule you choose determines the remaining options. There are nine types of custom branching, skipping and hiding rules.

• After Question Block, Go to Question Block

When a custom condition of your making is met, this rule has the survey automatically disable all of the question blocks between the block to which the rule is attached and the selected destination block as well as skip all of the pages that follow, up to the page that contains the destination block, forcing the respondent to skip all of the intervening questions and pages.

Note: Since all question blocks are available by default, it is not necessary to create and attach a rule of this type to a block in your survey when you always want the question(s) in the following block to be answered. Instead, create and attach a rule of this type to a block when there are times when you want the question(s) in one or more of the following blocks to be skipped.

• After Question Block, Go to Page

When a custom condition of your making is met, this rule has the survey automatically disable the question blocks between the block to which the rule is attached and the end of the page as well as skip all of the pages that follow, up to the selected destination page, forcing the respondent to skip all of the intervening questions and pages.

Note: Since all question blocks and pages are available by default, it is not necessary to create and attach a rule of this type to a block in your survey when you always want the remaining question(s) on the page and the following page to be answered. Instead, create and attach a rule of this type to a block when there are times when you want the remaining question(s) on the page and one or more of the following pages to be skipped.

• After Page, Go to Page

When a custom condition of your making is met, this rule has the survey automatically skip all of the pages that follow the page that contains the block to which the rule is attached, up to the selected destination page, forcing the respondent to skip all of the intervening pages.

Note: Since all pages are available by default, it is not necessary to create and attach a rule of this type to a block in your survey when you always want the following page to be available. Instead, create and attach a rule of this type to a block when there are times when you want one or more of the following pages to be skipped.

• Skip Question Block

If a condition is met, disable or hide a selected question block.

• Skip Page

If a condition is met, skip the page that contains a selected question block.

- Skip Page, Go to Page

    If a condition is met, skip the page that contains question block A and take the respondents to page B.

- After Page, End Web Survey

    If a condition is met, save and end the web survey after respondents complete the page that contains the rule's selected question block. Survey Crafter Professional's built-in Interviewer ignores rules of this type.

- After Question Block, Terminate Interview

    If a condition is met, terminate the interview after respondents complete the rule's selected question block. Survey Crafter Professional web surveys ignore rules of this type.

- Hide Block Components

    Have Survey Crafter Professional automatically hide individual components such as questions or prompts inside a selected question block. When your survey is in Survey Crafter Professional's built-in Interviewer, components that would be hidden are disabled instead.

4   Select the remaining options for your rule.

Click on the *Locate* buttons to the right of the drop downs to have Survey Crafter Professional display the selected items in the Survey Designer window.

If your rule uses an expression, your expression must evaluate to either TRUE or FALSE for each respondent in your study's data set. For example, the expression A1_WhatIsYourGender = 'Male' evaluates to either TRUE or FALSE.

To get help writing the expression, click on the Expression Builder button. Also see Chapter 7, "Expressions."

5   Click on the OK button.

Survey Crafter Professional adds the new rule to the end of the list of rules in the *Custom Rules* dialog box.

6   Repeat steps 2 through 5 until you are done.

7   Click on the *Close* button.

Adding custom validation rules

In addition to using the built-in validation rules, you can add rules that have Survey Crafter Professional validate responses and show respondents your own warning and error messages.

These rules are called custom validation rules. You can add these kinds of rules to your study from either Survey Crafter Professional's Survey Designer window or Survey Crafter Professional's Data window.

- **To add custom validation rules to your study**

    1   In the Survey Designer window, choose *Custom Rules* from Survey Crafter Professional's *Block* menu.

    Alternatively, from the Data window, choose *Custom Rules* from Survey Crafter Professional's *Edit* menu.

    Survey Crafter Professional displays the *Custom Rules* dialog box.

Survey Crafter Professional lists all of the custom rules that belong to the selected rule group.
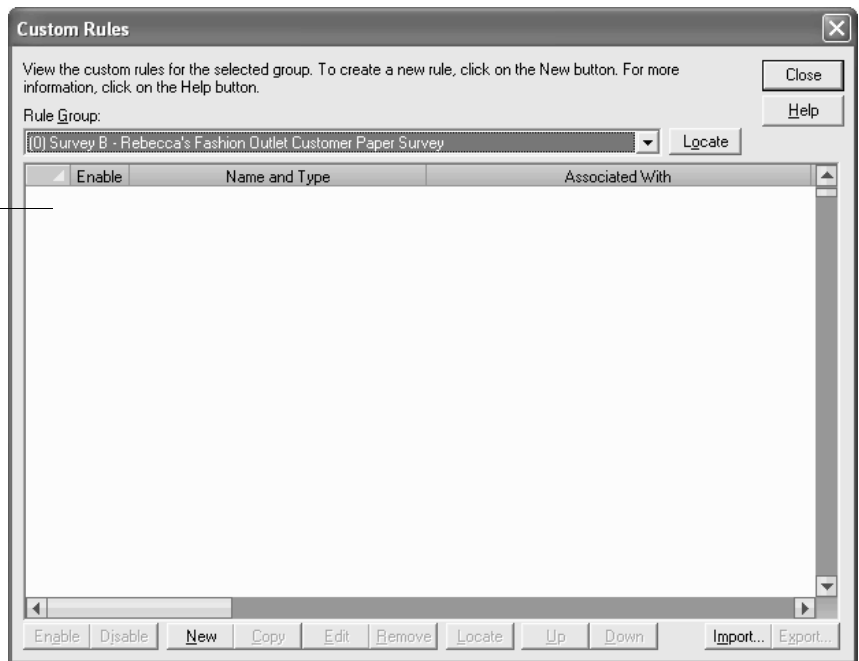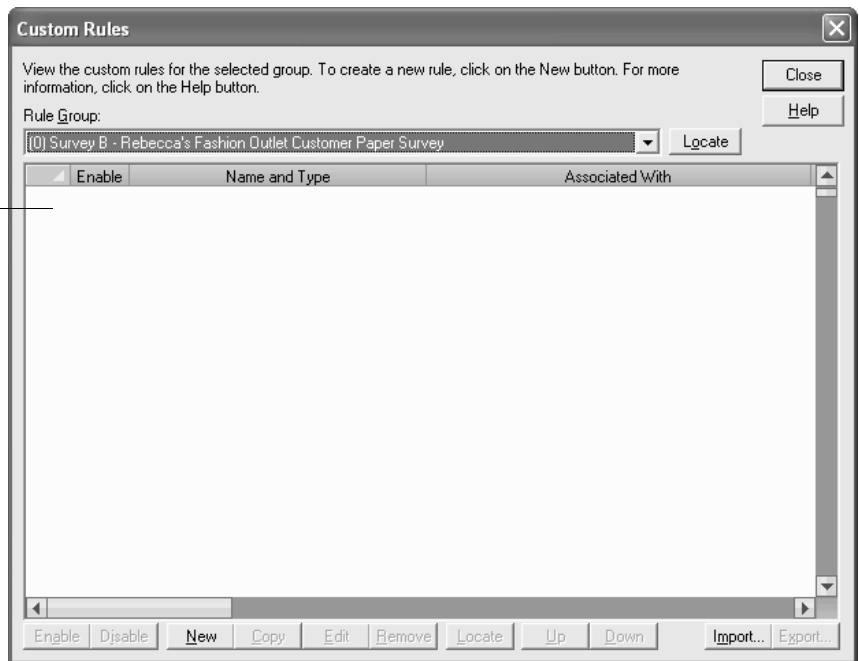

Figure 2 - 67:   The Custom Rules dialog box.

2   Click on the *New* button at the bottom of the *Custom Rules* dialog box.

Survey Crafter Professional displays the *Custom Rule - New* dialog box.

The type of rule you choose determines the remaining options.

Figure 2 - 68:   The Custom Rule - New dialog box.

3   Choose the type of rule you want to add to your study.

The type of rule you choose determines the remaining options. There are two types of custom validation rules.

• After Page, Show Error Message

If a condition is met after respondents complete the page that contains question block A, have Survey Crafter Professional display an error message.

• After Page, Show Warning Message

If a condition is met after respondents complete the page that contains question block A, have Survey Crafter Professional display a warning message.

4   Select the survey to which you want your rule to belong.

The drop down lists all of the surveys in your study.

Click on the *Locate* button to the right of the drop down to have Survey Crafter Professional display the currently selected survey in a Survey Designer window.

5   Choose the originating question block.

The drop down lists all of the blocks in the survey you selected under *Survey.*

Click on the *Locate* button to the right of the drop down to have Survey Crafter Professional highlight the currently selected block in the Survey Designer window.

6   Enter the message you want Survey Crafter Professional to display.

If you are having Survey Crafter Professional display an error message, respondents will not be allowed to continue until the error is fixed.

If you are having Survey Crafter Professional display a warning message, respondents will be given the option to continue without changing their answers.

7   Choose when you want Survey Crafter Professional to display your message.

Choose the *Always* option to have Survey Crafter Professional always display your message.

Choose the *When the following condition is true* option to have Survey Crafter Professional display your message when the expression you provide evaluates to TRUE.

Your expression must evaluate to either TRUE or FALSE for each respondent in your study's data set. For example, the expression A1_WhatIsYourGender = 'Male' evaluates to either TRUE or FALSE.

To get help writing the expression, click on the Expression Builder button. Also see Chapter 7, "Expressions."

8   If you want, enter a description for your rule.

For example, you might want to enter a description that will help you remember the purpose of your rule.

9   Click on the OK button.

Survey Crafter Professional adds the new rule to the end of the list of rules in the *Custom Rules* dialog box.

10   Repeat steps 2 through 9 until you are done.

11   Click on the *Close* button.

Adding custom assignment rules

You can add rules that have Survey Crafter Professional automatically assign values to imported variables as the respondent takes your survey.

These rules are called custom assignment rules. You can add these kinds of rules to your study from either Survey Crafter Professional's Survey Designer window or Survey Crafter Professional's Data window.

• **To add custom assignment rules to your study**

1 In the Survey Designer window, choose *Custom Rules* from Survey Crafter Professional's *Block* menu.

Alternatively, from the Data window, choose *Custom Rules* from Survey Crafter Professional's *Edit* menu.

Survey Crafter Professional displays the *Custom Rules* dialog box.

Survey Crafter Professional lists all of the custom rules that belong to the selected rule group.

Figure 2 - 69: The Custom Rules dialog box.

2   Click on the *New* button at the bottom of the *Custom Rules* dialog
box.

Survey Crafter Professional displays the *Custom Rule - New* dialog
box.

The type of rule you
choose determines
the remaining
options.

Figure 2 - 70:   The Custom Rule - New dialog box.

3   Choose the type of rule you want to add to your study.

The type of rule you choose determines the remaining options. There
are two types of custom assignment rules.

• After Web Page, Assign Variable

If a condition is met after respondents complete the page that
contains question block A, have Survey Crafter Professional assign
a value to an imported variable. Survey Crafter Professional's built-
in Interviewer ignores rules of this type.

• After Interviewer Page, Assign Variable

If a condition is met after respondents complete the page that contains question block A, have Survey Crafter Professional assign a value to an imported variable. Survey Crafter Professional web surveys ignore rules of this type.

4   Select the survey to which you want your rule to belong.

The drop down lists all of the surveys in your study.

Click on the *Locate* button to the right of the drop down to have Survey Crafter Professional display the currently selected survey in a Survey Designer window.

5   Choose the originating question block.

The drop down lists all of the blocks in the survey you selected under *Survey.*

Click on the *Locate* button to the right of the drop down to have Survey Crafter Professional highlight the currently selected block in the Survey Designer window.

6   Choose an imported variable.

Click on the *Select* button to choose an imported variable from a list of all of the imported variables in your study. Displays the *Select Imported Variable* dialog box.

7   Enter the value you want to assign the variable.

Enter an expression that will evaluate to a value of the same type as the imported variable. For example, if you chose a quantity variable, your expression must evaluate to a quantity value. If you chose a literal variable, your expression must evaluate to a literal value.

To get help writing the expression, click on the Expression Builder button. Also see Chapter 7, "Expressions."

8   Choose when you want Survey Crafter Professional to assign the variable.

Choose the *Always* option to have Survey Crafter Professional always assign the variable.

Choose the *When the following condition is true* option to have Survey Crafter Professional assign the variable when the expression you provide evaluates to TRUE.

Your expression must evaluate to either TRUE or FALSE for each respondent in your study's data set. For example, the expression A1_WhatIsYourGender = 'Male' evaluates to either TRUE or FALSE.

To get help writing the expression, click on the Expression Builder button. Also see Chapter 7, "Expressions."

9   If you want, enter a description for your rule.

For example, you might want to enter a description that will help you remember the purpose of your rule.

10   Click on the OK button.

Survey Crafter Professional adds the new rule to the end of the list of rules in the *Custom Rules* dialog box.

11   Repeat steps 2 through 10 until you are done.

12   Click on the *Close* button.

Adding custom web cookie rules

You can add rules that have Survey Crafter Professional get and set cookies from your respondent's browser as the respondent takes your survey.

You can add these rules to your study from either the Survey Designer window or the Data window.

Note When your survey is on the Web, the mechanism that Survey Crafter Professional uses to send and receive cookies to and from your respondent's browser is written in JavaScript. Even though it's the default setting, you should verify that the *Allow the respondent's browser to handle page modifying rules such as randomizing and hiding prompts (JavaScript)* check box in the *Navigation* tab of the *Web Survey Setup* dialog box is selected. If the check box is cleared, the mechanism will not be included in the published HTML and configuration files.

Tip You can use a rule of this type and the settings of the *Respondent* and *Data File* tabs of the *Web Survey Setup* dialog box to allow respondents to revisit your web survey, see and make changes to their answers as well as proceed with the survey, all without their having to enter any identifying information. You can also use such a rule and the settings to prevent respondents from completing your web survey a second time.

Note that cookies can be used this way only when respondents use the same device and browser as they did previously.

For more, see the tips below.

- **To add custom web cookie rules to your study**

  1 In the Survey Designer window, choose *Custom Rules* from Survey Crafter Professional's *Block* menu.

  Alternatively, from the Data window, choose *Custom Rules* from Survey Crafter Professional's *Edit* menu.

  Survey Crafter Professional displays the *Custom Rules* dialog box.

Survey Crafter Professional lists all of the custom rules that belong to the selected rule group.

Figure 2 - 71:   The Custom Rules dialog box.

2 Click on the *New* button at the bottom of the *Custom Rules* dialog box.

Survey Crafter Professional displays the *Custom Rule - New* dialog box.

The type of rule you choose determines the remaining options.

Figure 2 - 72:   The Custom Rule - New dialog box.

3 Click on the drop down to the right of *Rule Type* and choose *Set/Get Web Cookie.*

4 Select the survey to which you want your rule to belong.

The drop down lists all of the surveys in your study.

If you are adding the rule from the Survey Designer window, the survey you are working on will already be selected. Otherwise, select the survey to which you want your rule to belong and if you want, click on the *Locate* button to the right of the drop down to have Survey Crafter Professional display the survey in a *Survey Designer window.*

5   Choose the block to which you want to attach the rule.

The drop down lists all of the blocks that are in the selected survey.

If you are adding the rule from the Survey Designer window and in step 1 the cursor was inside a block, that block will already be selected. Otherwise, select the block to which you want to attach the rule and if you want, click on the *Locate* button to the right of the drop down to have Survey Crafter Professional move the cursor to and highlight the block in the Survey Designer window.

Tip If you want to use this rule to have Survey Crafter Professional automatically identify respondents when they revisit your web survey, choose a block that is on the first page. It is recommended that the first page not contain any questions to which you want the respondents to see their previous answers upon revisiting. You can, however, have such questions on the first page when you have respondents access your web survey using a link that has the Survey Crafter Professional web survey script load the first page.

6   Enter a name for the cookie.

In the box under *Set the cookie*, without using any spaces, enter a name for the cookie.

Tip It is recommended that the name be descriptive enough for you to be able to identify it in a list of cookies. It is also recommended that you enter a name that is not already being used or will likely not be used by another cookie in this or another one of your surveys or your website unless you are doing this intentionally.

If you want, click on the *Insert a unique name* button to have Survey Crafter Professional generate a unique name for you.

Note The name may also not contain the following additional characters: @ ( ) = [{] } \ ; : " , < > / ?. Periods are allowed. If the name contains a space or any of the characters listed here, Survey Crafter Professional will ask you to remove the character(s) when you click on the dialog box's OK button.

7 If you want to have Survey Crafter Professional assign an imported variable the same value as the cookie, click to select the *and the imported variable* check box.

Tip Assigning an imported variable the same value as the cookie allows you to store the value of the cookie in your web survey's data file. In addition, you can use the variable to uniquely identify your respondents, making it possible for you to prevent respondents from using the same browser to complete your survey a second time, for example.

8 If you selected the *and the imported variable* check box, enter a name for the variable or click on the *Select* button to either choose an existing imported variable or create a new one.

Tip It is recommended that you create a new imported literal or quantity variable to store the value of the cookie. Click on the *Select* button to either choose an existing variable or create a new one.

Tip If you decide to have Survey Crafter Professional store the value of the cookie in a new imported variable, you will need to add the variable to your web survey's data file.

Note You may only use imported variables of type literal or quantity to store cookie values.

9   Enter the value you want to assign the cookie.

In the box under *To the result of evaluating the following*, enter an expression that will evaluate to a value of type literal or quantity. If you are having Survey Crafter Professional assign the cookie's value to an imported variable, the expression must evaluate to a value of the same type as the imported variable you chose to use.

Example If you chose to use an imported quantity variable, your expression must evaluate to a quantity value. If you chose to use an imported literal variable, your expression must evaluate to a literal value.

Tip If you want to use the cookie to uniquely identify your web survey's respondents, you will want to enter an expression that will evaluate to a unique value for each respondent. Click on the *Insert an expression that evaluates to a unique value* button to see the expressions Survey Crafter Professional has to offer. If you are having Survey Crafter Professional assign the cookie's value to an imported variable, the generated expressions will evaluate to the same type as the imported variable you chose to use.

To get help writing the expression, click on the Expression Builder button. Also see Chapter 7, "Expressions."

10 Choose when you want Survey Crafter Professional to create or recreate the cookie, calculate a new value for it and send it to the respondent's browser.

• Always

Select this option to have Survey Crafter Professional always create or recreate the cookie, calculate a new value for it and send it to the respondent's browser.

• When the respondent's browser doesn't already have the cookie

Select this option to have Survey Crafter Professional create or recreate the cookie, calculate a new value for it and send it to the respondent's browser only when the respondent's browser does not already have it.

Tip Choose this option if you want to use this rule to have Survey Crafter Professional automatically identify respondents when they revisit your web survey.

- When the following is true:

    Select this option to have Survey Crafter Professional create or recreate the cookie, calculate a new value for it and send it to the respondent's browser only when the expression you provide evaluates to TRUE.

    Your expression must evaluate to either TRUE or FALSE for each respondent in your study's data set. For example, the expression A1_WhatIsYourGender = 'Male' evaluates to either TRUE or FALSE.

    To get help writing the expression, click on the Expression Builder button. Also see Chapter 7, "Expressions."

11 Choose when you want the cookie to expire.

Tip It is considered good practice to have your cookies expire when they are no longer needed.

- On

    Select this option to specify a date and time for the cookie to expire.

- In the following number of days after the cookie has been set

Select this option to enter an expression that when evaluated will specify the number of days after the cookie has been set for the cookie to expire.

> **Example** If you enter 100, and on January 1, 2021 a respondent visits the page of your web survey that contains the block to which this rule attached and the cookie is set, the cookie will expire 100 days later, or on April 11, 2021. This means that the respondent's browser will delete its copy of the cookie the next time it is run on or after April 11, 2021.

Your expression must evaluate to a quantity value. For example, the expression 200 evaluates to 200. The expression IF(UTCTIME_PART(1)=12,110,100) evaluates to 110 when the current month is December and 100, otherwise.

To get help writing the expression, click on the Expression Builder button. Also see Chapter 7, "Expressions."

12 Select the check box *When the cookie is not set, get the cookie from the respondent's browser and assign its value to the imported variable* if you want to assign the imported variable the value that the respondent's browser has for the cookie when Survey Crafter Professional does not calculate a new value for it.

> **Tip** Select this check box if you want to use this rule to have Survey Crafter Professional automatically identify respondents when they revisit your web survey. Selecting this check box will have Survey Crafter Professional assign the imported variable either the cookie's newly calculated value that is sent to the respondent's browser or the value of the cookie the browser already has.

13 If you want, enter a description for your rule.

For example, you might want to enter a description that will help you remember the purpose of your rule.

14 Click on the OK button.

Survey Crafter Professional adds the new rule to the end of the list of rules in the *Custom Rules* dialog box.

15 Repeat steps 2 through 14 until you are done.

16 Click on the *Close* button.

Adding custom data cleaning rules

In addition to using the built-in data cleaning rules, you can add your own rules that have Survey Crafter Professional mark an imported variable's response values unexpected in the Data window.

These rules are called custom data cleaning rules. You can add these kinds of rules to your study from either Survey Crafter Professional's Survey Designer window or Survey Crafter Professional's Data window.

- **To add custom data cleaning rules to your study**

    1   In the Survey Designer window, choose *Custom Rules* from Survey
    Crafter Professional's *Block* menu.

    Alternatively, from the Data wind*ow, choose Custom Rules from
    Survey Crafter Professional's* Edit menu.

    Survey Crafter Professional displays the *Custom Rules* dialog box.

Survey Crafter
Professional lists all
of the custom rules
that belong to the
selected rule group.
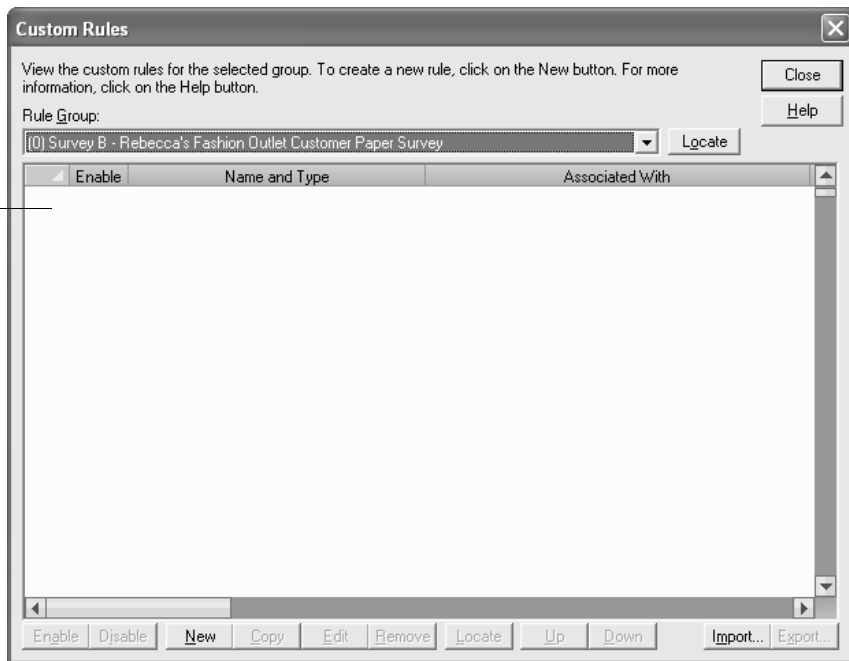
Figure 2 - 73:   The Custom Rules dialog box.

2   Click on the *New* button at the bottom of the *Custom Rules* dialog box.

Survey Crafter Professional displays the *Custom Rule - New* dialog box.

The type of rule you choose determines the remaining options.
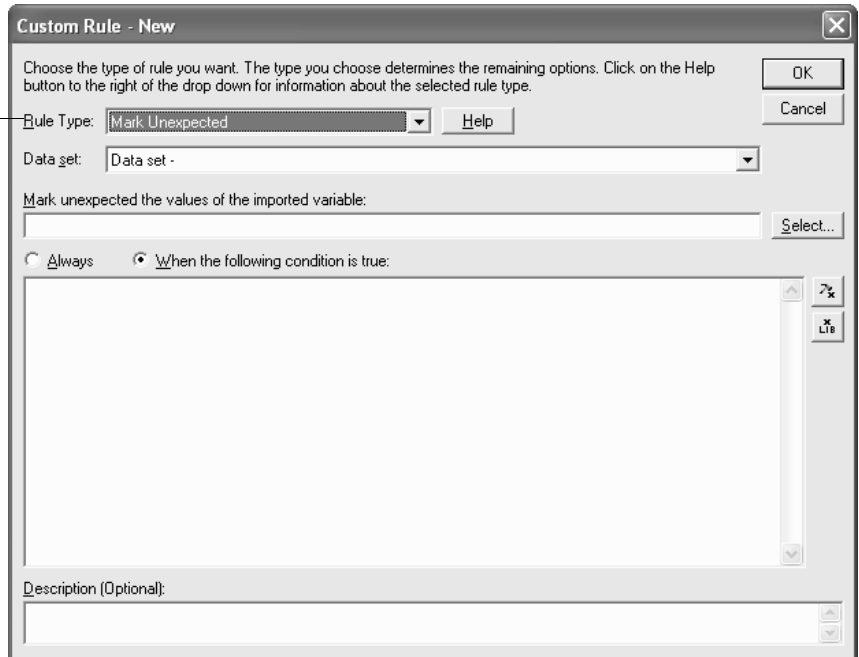
Figure 2 - 74:   The Custom Rule - New dialog box.

3   Choose the type of rule you want to add to your study.

The type of rule you choose determines the remaining options. There is only one type of custom data cleaning rule.

- Mark Variable Unexpected

    When a condition is met, have Survey Crafter Professional mark an imported variable's value unexpected. Survey Crafter Professional colors unexpected values blue in the Data window.

4   Select the data set to which you want your rule to belong.

The drop down lists your study's data set.

5 Choose an imported variable.

Click on the *Select* button to choose an imported variable from a list of all of the imported variables in your study. Displays the *Select Imported Variable* dialog box.

6 Choose when you want Survey Crafter Professional to mark a value unexpected.

Choose the *Always* option to have Survey Crafter Professional mark all of the variable's values unexpected.

Choose the *When the following condition is true* to have Survey Crafter Professional mark a value unexpected when the expression you provide evaluates to TRUE.

Your expression must evaluate to either TRUE or FALSE for each respondent in your study's data set. For example, the expression A1_WhatIsYourGender = 'Male' evaluates to either TRUE or FALSE.

To get help writing the expression, click on the Expression Builder button. Also see Chapter 7, "Expressions."

7 If you want, enter a description for your rule.

For example, you might want to enter a description that will help you remember the purpose of your rule.

8 Click on the OK button.

Survey Crafter Professional adds the new rule to the end of the list of rules in the *Custom Rules* dialog box.

9 Repeat steps 2 through 8 until you are done.

10 Click on the *Close* button.

Adding custom commands

You can add rules directly to your web survey's configuration file.

These rules are called custom commands. You can add these kinds of rules to your study from either Survey Crafter Professional's Survey Designer window or Survey Crafter Professional's Data window.

- **To add custom commands to your study**

    1   In the Survey Designer window, choose *Custom Rules* from Survey
           Crafter Professional's *Block* menu.

    Alternatively, from the Data window, choose *Custom Rules* from
    Survey Crafter Professional's *Edit* menu.

    Survey Crafter Professional displays the *Custom Rules* dialog box.

Survey Crafter
Professional lists all
of the custom rules
that belong to the
selected rule group.

Figure 2 - 75:   The Custom Rules dialog box.

2   Click on the *New* button at the bottom of the *Custom Rules* dialog
box.

Survey Crafter Professional displays the *Custom Rule - New* dialog
box.

The type of rule you
choose determines
the remaining
options.
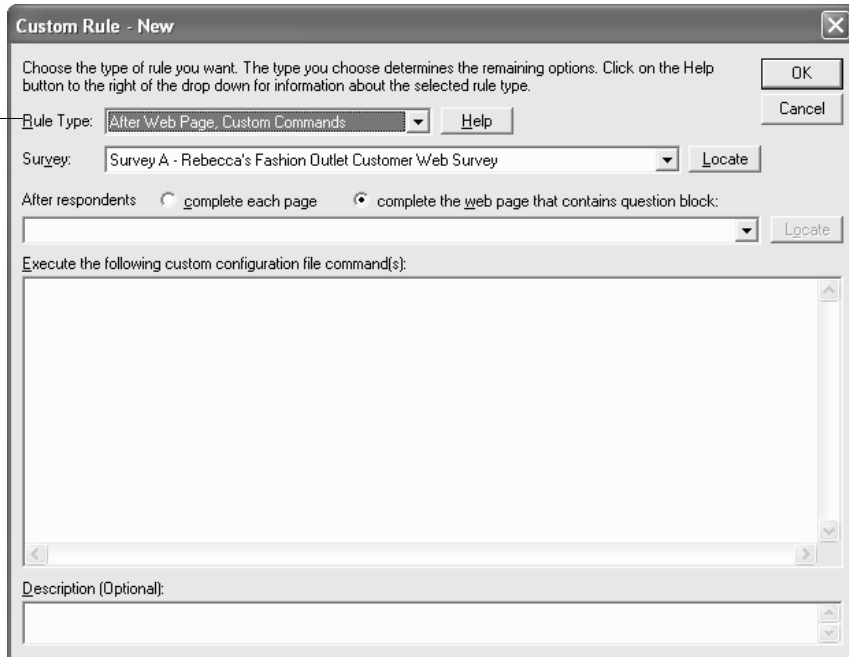
Figure 2 - 76:   The Custom Rule - New dialog box.

3   Choose the type of rule you want to add to your study.

The type of rule you choose determines the remaining options. There
is only one type of custom commands rule.

• After Web Page, Custom Commands

After respondents complete the page that contains question block
A, have Survey Crafter Professional execute commands provided
by Survey Crafter technical support.

4 Select the survey you want your rule to belong to.

The drop down lists all of the surveys in your study.

Click on the *Locate* button to the right of the drop down to have Survey Crafter Professional display the currently selected survey in a Survey Designer window.

5 Choose when you want the commands to be executed.

Choose the *After respondents complete each page* option to have Survey Crafter Professional execute the commands after the respondent completes each page.

Choose the *After respondents complete the web page that contains question block:* option to have Survey Crafter Professional execute the commands after the respondent completes the page that contains the question block you select.

The drop down lists all of the blocks in the survey you selected under *Survey.*

Click on the *Locate* button to the right of the drop down to have Survey Crafter Professional highlight the currently selected block in the Survey Designer window.

6 Enter the commands to add to the configuration file.

You will receive commands from Survey Crafter technical support.

7 If you want, enter a description for your rule.

For example, you might want to enter a description that will help you remember the purpose of your rule.

8 Click on the OK button.

Survey Crafter Professional adds the new rule to the end of the list of rules in the *Custom Rules* dialog box.

9 Repeat steps 2 through 8 until you are done.

10 Click on the *Close* button.

Custom branching, skipping and hiding rule issues

In Survey Crafter Professional, you can create custom rules that have your respondents automatically skip over and jump to any question block in your survey. However, you should be aware of the following issues.

Skipping over Question Blocks vs. Skipping over Pages on Web Surveys

When your survey is on the Web, each of your custom branching and skipping rules is enforced by either the web survey script or the respondent's browser, or both.

The web survey script will enforce custom branching and skipping rules that have respondents skip over pages whereas the respondent's browser will enforce these types of rules when respondents are to skip over question blocks on the same page.

When called upon, you can expect the web survey script to always enforce your custom branching and skipping rules. However, when called upon, you should anticipate the possibility that some of your respondents' browsers will not enforce these types of rules.

To have the respondent's browser enforce these types of rules, Survey Crafter Professional includes JavaScript code with your survey's HTML. The JavaScript code is responsible for directing the browser to disable form controls when the controls' corresponding question blocks are to be skipped. However, a respondent's browser will not disable form controls if it:

• does not support JavaScript 1.3 or later

• does not support disabling form controls

• supports JavaScript 1.3 or later but the feature has been turned off.

Example let's say you have a question that asks for the respondent's gender. Immediately following the question are two questions that are for males only. Following the two questions is a fourth question that is for all respondents. Let's also say that all four of these questions are on the same page. Further, you have added a custom branching rule that has respondents jump to the fourth question, skipping the two follow-up questions, when the respondents are not male.

In this case, your custom branching rule will be enforced by the respondent's browser. The browser should automatically disable the two follow-up questions when the male option is not selected for the gender question.

If you think some of your respondents use browsers that have JavaScript turned off, consider inserting a page break between the first and second question and also between the third and fourth question. Having the second and third questions on their own page will cause your custom branching rule to be enforced by the web survey script instead of the respondent's browser.

In this case, when the male option is not selected for the gender question and the respondent clicks on your web survey's Next button, the page containing the second and third question will be skipped.

Blocks Used by Custom Hiding Rules that Live on the Same Page vs. on a Previous page

As with custom branching and skipping rules, when your survey is on the Web, each of your custom hiding rules is enforced by either the web survey script or the respondent's browser, or both.

The web survey script will enforce custom hiding rules when the block that determines which questions or prompts to hide is on a previous page whereas the respondent's browser will enforce these kinds of rules when the determining block is on the same page.

When called upon, you can expect the web survey script to always enforce your custom hiding rules. However, when called upon, you should anticipate the possibility that some of your respondents' browsers will not enforce these types of rules.

To have the respondent's browser enforce these types of rules, Survey Crafter Professional includes JavaScript code with your survey's HTML. The JavaScript code is responsible for directing the browser to both hide and disable form controls when the controls' corresponding questions or prompts are to be hidden. However, a respondent's browser will not hide or disable form controls if it:

• does not support JavaScript 1.3 or later

• does not support disabling form controls

• supports JavaScript 1.3 or later but the feature has been turned off.

Custom Branching Rules that go Backward

Survey Crafter Professional web surveys support custom branching rules that go forward and backward whereas Survey Crafter Professional's built-in Interviewer only supports custom branching rules that go forward. Survey Crafter Professional's built-in Interviewer ignores custom branching rules that go backward.

Inserting Survey Fields

There are two different types of fields you can insert in your survey: variable fields and calculated fields.

Use variable fields to redisplay answers to previous questions in your survey. Use calculated fields to display calculated values in your survey.

The sections below cover the following:

- Inserting variable fields

- Inserting calculated fields

- Editing survey fields

- Copying and pasting survey fields

- Removing survey fields

- Survey fields on the Web

Inserting variable fields

Use a variable field to redisplay the answer to a previous question in your survey. You can also use a variable field to display the value of an imported variable not associated with any question in your survey.

Variable fields function only when your survey is on the Web or in the built-in Interviewer.

Note When your survey is on the Web, survey fields are by default updated by both the web survey script and the respondent's browser. If you do not want JavaScript in your web survey's HTML files, you can configure your survey to have only the web survey script update survey fields.

For more information, see section "Survey fields on the Web" on page 2 - 148.

- **To insert a variable field**

    1 In the Survey Designer window, move the cursor to the location where you want Survey Crafter Professional to display the current value of an imported variable and choose *Field* from Survey Crafter Professional's *Insert* menu.

    Alternatively, right-click at the location and choose *Insert Field* from the pop-up menu.

   Survey Crafter Professional displays the Survey Field dialog box.
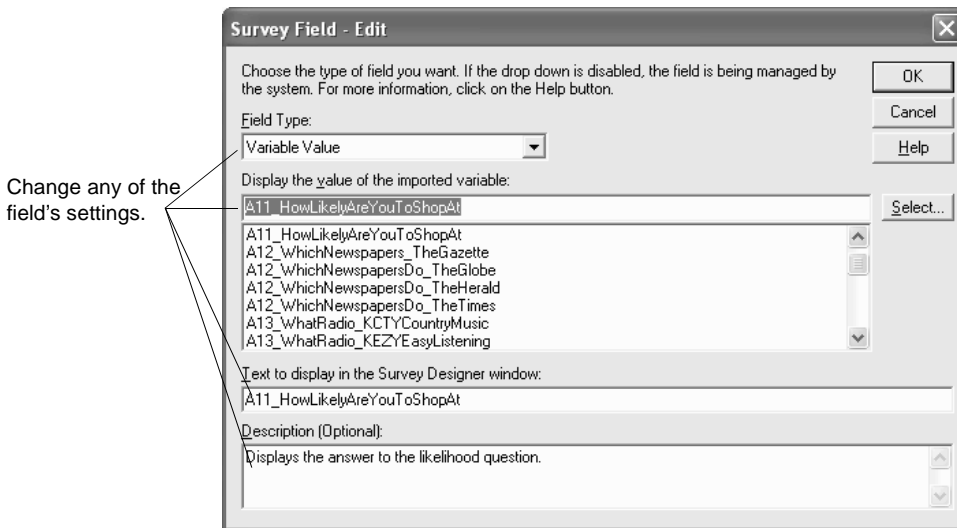
Enter the name of the imported variable the current value of which you want Survey Crafter Professional to display.

Figure 2 - 77:   The Survey Field dialog box.

    2 Choose *Variable Value* under *Field Type*.

3   Under *Display the value of the imported variable*, enter the name of the imported variable the current value of which you want Survey Crafter Professional to display.

If you do not know the name of the variable, click on the *Select* button.

The following table shows what Survey Crafter Professional displays for each of the different types of imported variables.

Table 2 - 7:   What Survey Crafter Professional displays for each of the different types of variables.

The Variable's type and configuration	What Survey Crafter Professional displays
`Category variable`	If the variable is associated with a closed-end question block, Survey Crafter Professional displays the prompt that corresponds to the variable's current value.
	Otherwise, Survey Crafter Professional displays the category prompt that corresponds to the variable's current value.
`Quantity variable with scale points`	If the variable is associated with a rating question block, Survey Crafter Professional displays the prompt that corresponds to the variable's current numeric value.
	Otherwise, Survey Crafter Professional displays the scale label that corresponds to the variable's current numeric value.
`Quantity variable without scale points`	The variable's current numeric value.
`Literal variable`	The variable's current literal value.
	If you want Survey Crafter Professional to limit the number of characters displayed, consider the Computed Value field type, using the LEFT function in your expression.

4   If you want, under *Text to display in the Survey Designer window*, enter the text you would like to see in the gray area that represents the survey field in the Survey Designer window.

The text that you see in the Survey Designer window is not what respondents will see when the survey is on the Web or in the built-in Interviewer. What the respondents will see is instead the current value

of the selected variable. The text Survey Crafter Professional or you enter here should help you understand the purpose of the survey field when you see it in the Survey Designer window.

If you do nothing, Survey Crafter Professional will automatically enter the name of the selected variable. If you want, you can enter your own text instead. To have Survey Crafter Professional enter the name again, clear the contents of the box.

5 If you want, under *Description*, enter a description for your survey field.

For example, you might want to enter a description that will help you remember the purpose of your field.

6 Click on the OK button.

Survey Crafter Professional inserts the new survey field at the current location in the Survey Designer window.

The new survey field also appears in the Fields tab of the Survey Explorer toolbar.

Inserting calculated fields

Use a calculated field to display a calculated value in your survey.

Calculated fields function only when your survey is on the Web or in the built-in Interviewer.

> **Note** When your survey is on the Web, survey fields are by default updated by both the web survey script and the respondent's browser. If you do not want JavaScript in your web survey's HTML files, you can configure your survey to have only the web survey script update survey fields.
>
> For more information, see section "Survey fields on the Web" on page 2 - 148.

- **To insert a calculated field**

  1 In the Survey Designer window, move the cursor to the location where you want Survey Crafter Professional to display the calculated value and choose *Field* from Survey Crafter Professional's *Insert* menu.

  Alternatively, right-click at the location and choose *Insert Field* from the pop-up menu.

  Survey Crafter Professional displays the Survey Field dialog box.

Enter an expression that will evaluate to a category, quantity or literal value.
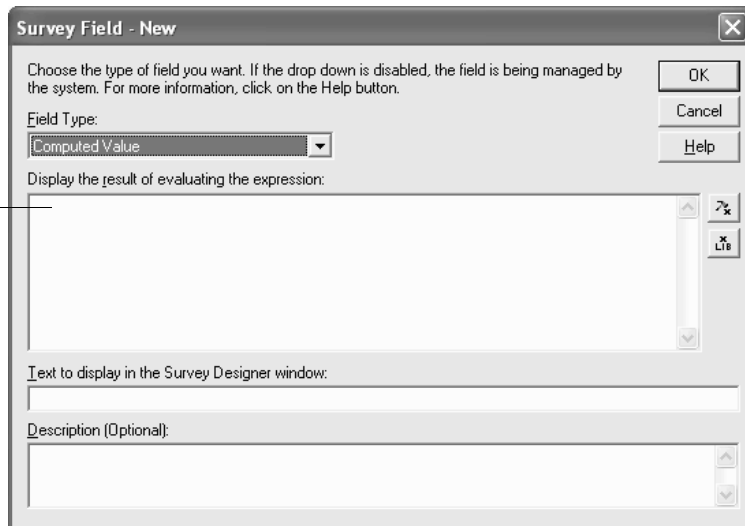
Figure 2 - 78: The Survey Field dialog box.

  2 Choose *Computed Value* under *Field Type*.

  3 Under *Display the result of evaluating the expression*, enter an expression that will evaluate to a category, quantity or literal value.

  To get help writing the expression, click on the *Expression Builder* button. Also see Chapter 7, "Expressions."

4   If you want, under Text to display in the Survey Designer window, enter the text you would like to see in the gray area that represents the survey field in the Survey Designer window.

The text that you see in the Survey Designer window is not what respondents will see when the survey is on the Web or in the built-in Interviewer. What the respondents will see is instead the result of evaluating the expression. The text Survey Crafter Professional or you enter here should help you understand the purpose of the survey field when you see it in the Survey Designer window.

If you do nothing, Survey Crafter Professional will automatically enter a shortened version of the expression. If you want, you can enter your own text instead. To have Survey Crafter Professional automatically enter a shortened version of the expression again, clear the contents of the box.

5   If you want, under *Description*, enter a description for your survey field.

For example, you might want to enter a description that will help you remember the purpose of your field.

6   Click on the OK button.

Survey Crafter Professional inserts the new survey field at the current location in the Survey Designer window.

The new survey field also appears in the Fields tab of the Survey Explorer toolbar.

Editing survey fields

You can change the settings of a survey field at any time.

- **To edit a survey field (method 1)**

  1 In the Survey Designer window, double-click on the survey field.

  Alternatively, right-click on the survey field and choose *Edit Field* from the pop-up menu.

  Survey Crafter Professional displays the Survey Field dialog box.

Change any of the field's settings.
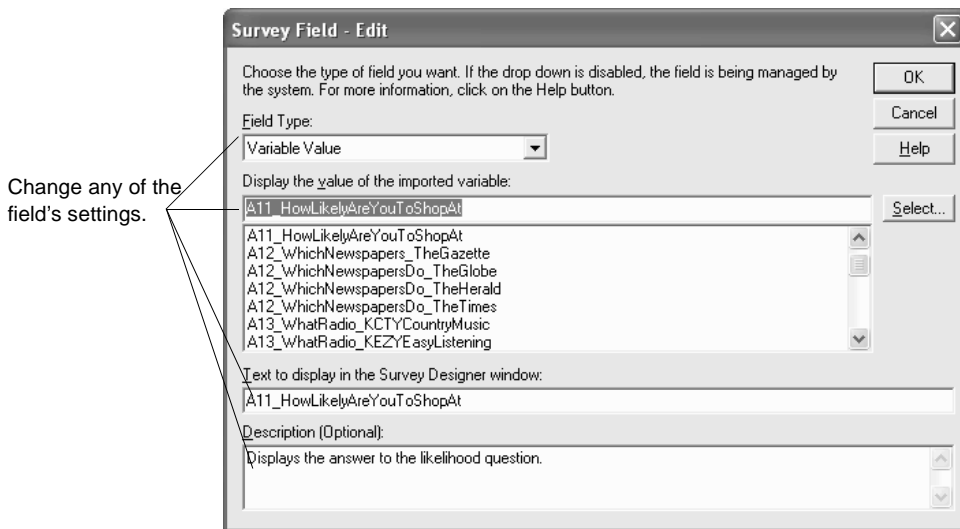
Figure 2 - 79: The Survey Field dialog box.

  2 Change any of the field's settings.

  > **Note** if the *Field Type* drop-down, variable name box and expression box are disabled or read-only, the field must have been generated and is now being managed by a Survey Crafter Professional component such as the Question Block Wizard. For example, when the option to display running totals is selected for a block's constant sum questions, the Question Block wizard generates and manages a survey field for each constant sum question in the block.

  3 Click on the OK button.

  Survey Crafter Professional updates the survey field in the Survey Designer window.

- **To edit a survey field (method 2)**

    1   Click on the Fields tab of the Survey Explorer toolbar.

    If the Survey Explorer toolbar is not visible, click on the View menu, Toolbars and then on Survey Explorer.

    2   In the Survey Explorer toolbar, double-click on the survey field.

    Alternatively, right-click on the survey field and choose Edit Field from the pop-up menu.

    Survey Crafter Professional displays the Survey Field dialog box.

Change any of the field's settings.

Survey Field - Edit

Choose the type of field you want. If the drop down is disabled, the field is being managed by the system. For more information, click on the Help button.

F̲ield Type:

Variable Value

Display the v̲alue of the imported variable:

A11_HowLikelyAreYouToShopAt

A11_HowLikelyAreYouToShopAt
A12_WhichNewspapers_TheGazette
A12_WhichNewspapersDo_TheGlobe
A12_WhichNewspapersDo_TheHerald
A12_WhichNewspapersDo_TheTimes
A13_WhatRadio_KCTYCountryMusic
A13_WhatRadio_KEZYEasyListening

T̲ext to display in the Survey Designer window:

A11_HowLikelyAreYouToShopAt

D̲escription (Optional):

Displays the answer to the likelihood question.

OK   Cancel   H̲elp   Select...

Figure 2 - 80:   The Survey Field dialog box.

3   Change any of the field's settings.

> **Note** if the *Field Type* drop-down, variable name box and expression box are disabled or read-only, the field must have been generated and is now being managed by a Survey Crafter Professional component such as the Question Block Wizard. For example, when the option to display running totals is selected for a block's constant sum questions, the Question Block wizard generates and manages a survey field for each constant sum question in the block.

4   Click on the OK button.

Survey Crafter Professional updates the survey field in the Survey Designer window.

Copying and pasting survey fields

You can paste any number of copies of a survey field in your survey. You can also move a survey field from one location to another.

- **To copy a survey field (method 1)**

    1   In the Survey Designer window, right-click on the survey field you want to copy and choose Copy Field from the pop-up menu.

    2   Right-click on the location where you want to paste a copy of the survey field and choose Paste from the pop-up menu.

    Survey Crafter Professional inserts a copy of the field at the new location in the Survey Designer window.

    The new survey field also appears in the Fields tab of the Survey Explorer toolbar.

- **To copy a survey field (method 2)**

    1   Click on the Fields tab of the Survey Explorer toolbar.

    If the Survey Explorer toolbar is not visible, click on the View menu, Toolbars and then on Survey Explorer.

    2   In the Survey Explorer toolbar, right-click on the survey field you want to copy and choose Copy Field from the pop-up menu.

    3   In the Survey Designer window, right-click on the location where you want to paste a copy of the survey field and choose Paste from the pop-up menu.

    Survey Crafter Professional inserts a copy of the field at the new location in the Survey Designer window.

    The new survey field also appears in the Fields tab of the Survey Explorer toolbar.

- **To move a survey field (method 1)**

    1 In the Survey Designer window, right-click on the survey field you want to move and choose Cut Field from the pop-up menu.

    Survey Crafter Professional removes the field from the Survey Designer window.

    2 Right-click on the location where you want to move the survey field and choose Paste from the pop-up menu.

    Survey Crafter Professional inserts the field at the new location in the Survey Designer window.

- **To move a survey field (method 2)**

    1 Click on the Fields tab of the Survey Explorer toolbar.

    If the Survey Explorer toolbar is not visible, click on the View menu, Toolbars and then on Survey Explorer.

    2 In the Survey Explorer toolbar, right-click on the survey field you want to move and choose Cut Field from the pop-up menu.

    3 In the Survey Designer window, right-click on the location where you want to move the survey field and choose Paste from the pop-up menu.

    Survey Crafter Professional inserts the field at the new location in the Survey Designer window.

- **To copy or move a survey field by dragging and dropping (method 1)**

    1 In the Survey Designer window, right-click on the survey field you want to copy or move and choose Select Field from the pop-up menu.

    Survey Crafter Professional highlights the field in the Survey Designer window.

2   Click on the highlighted field, hold the left mouse button down and drag the mouse until the pointer is over the location where you want to insert a copy of or move the field.

If you want to copy the field, press and hold the [CTRL] key while you are dragging the mouse. Survey Crafter Professional displays a plus sign next to the pointer.

If you move the mouse pointer just below the top or just above the bottom of the Survey Designer window, Survey Crafter Professional will scroll the window.

3   Release the left mouse button.

Survey Crafter Professional inserts a copy of the field at or moves the field to the new location in the Survey Designer window.

4   If you were holding it down, release the [CTRL] key.

- **To copy or move a survey field by dragging and dropping (method 2)**

    1   Click on the Fields tab of the Survey Explorer toolbar.

    If the Survey Explorer toolbar is not visible, click on the View menu, Toolbars and then on Survey Explorer.

    2   In the Survey Explorer toolbar, click on the survey field you want to move and hold the left mouse button down.

    3   Drag the mouse pointer to the location where you want to move the field in the Survey Designer window.

    If you want to copy the field, press and hold the [CTRL] key while you are dragging the mouse. Survey Crafter Professional displays a plus sign next to the pointer.

    If you move the mouse pointer just below the top or just above the bottom of the Survey Designer window, Survey Crafter Professional will scroll the window.

    4   Release the left mouse button.

    Survey Crafter Professional inserts a copy of the field at or moves the field to the new location in the Survey Designer window.

    5   If you were holding it down, release the [CTRL] key.

Removing survey fields

You can remove a survey field at any time.

- **To remove a survey field (method 1)**

    1   In the Survey Designer window, right-click on the survey field you want to remove and choose Delete Field from the pop-up menu.

    Survey Crafter Professional removes the field from the Survey Designer window.

- **To remove a survey field (method 2)**

    1   Click on the Fields tab of the Survey Explorer toolbar.

    If the Survey Explorer toolbar is not visible, click on the View menu, Toolbars and then on Survey Explorer.

    2   In the Survey Explorer toolbar, right-click on the survey field you want to remove and choose Delete Field from the pop-up menu.

    Survey Crafter Professional removes the field from the Survey Designer window.

Survey fields on the Web

In Survey Crafter Professional, you can insert any number of survey fields almost anywhere in your survey

Survey Fields in the Built-In Interviewer

In the built-in Interviewer, survey fields on the current page are updated immediately when answers to questions change. For example, when a variable field is on the same page as the question with which its variable is associated, the built-in Interviewer immediately updates the field with the latest value as the answer to the question is typed or selected.

Survey Fields in a Web Survey

When your survey is on the Web, survey fields are by default updated by both the web survey script and the respondent's browser. The web survey script updates survey fields with the latest values before the page is shown to the respondent and the respondent's browser updates survey fields with the latest values as the respondent answers questions on the page.

If you do not want JavaScript in your web survey's HTML files, you can configure your survey to have only the web survey script update survey fields. If you configure your web survey this way, you will also need to arrange your survey fields so the web survey script has an opportunity to update the fields before they are shown to the respondent. To do this, you will need to do one or both of the following:

- Make sure each survey field lives on a page that follows the pages that contain the questions with which the field's source variable(s) are associated. To do this, you will need to insert page breaks in your survey. See "Inserting Page Breaks" on page 2 - 189.

- If a survey field is on the first page, use the uniform resource locator (URL) that has the web survey script start your survey. The Readme.txt file that Survey Crafter Professional generates when you publish your survey's web files lists this URL.

Editing Survey Questions

You can make changes to your survey at any time. For example, you can rewrite and rearrange the questions that make up your survey. The sections below cover the following:

• Editing Survey Questions and Text

• Editing and Rearranging Prompts

• Editing Variables Associated with Question Blocks

• Copying and Cutting Survey Questions and Text

• Pasting Survey Questions and Text

• Dragging and Dropping Survey Questions and Text

• Deleting Survey Questions and Text

• Checking Spelling in Surveys

• Requiring Answers to your Survey's Questions

Editing Survey Questions and Text

You can change anything that is either outside a survey block or inside an instructions-only block directly in the Survey Designer window. You can also change some components of a survey question block directly in the Survey Designer window. To change most components of a survey question block, however, you will need to use the Question Block Wizard.

Follow the procedure below to make changes to a survey question block.

- **To make changes to a survey question block**

  1 In the Survey Designer window, move the cursor inside the block you want to change.

You may be able to make your changes directly in the cells of the block
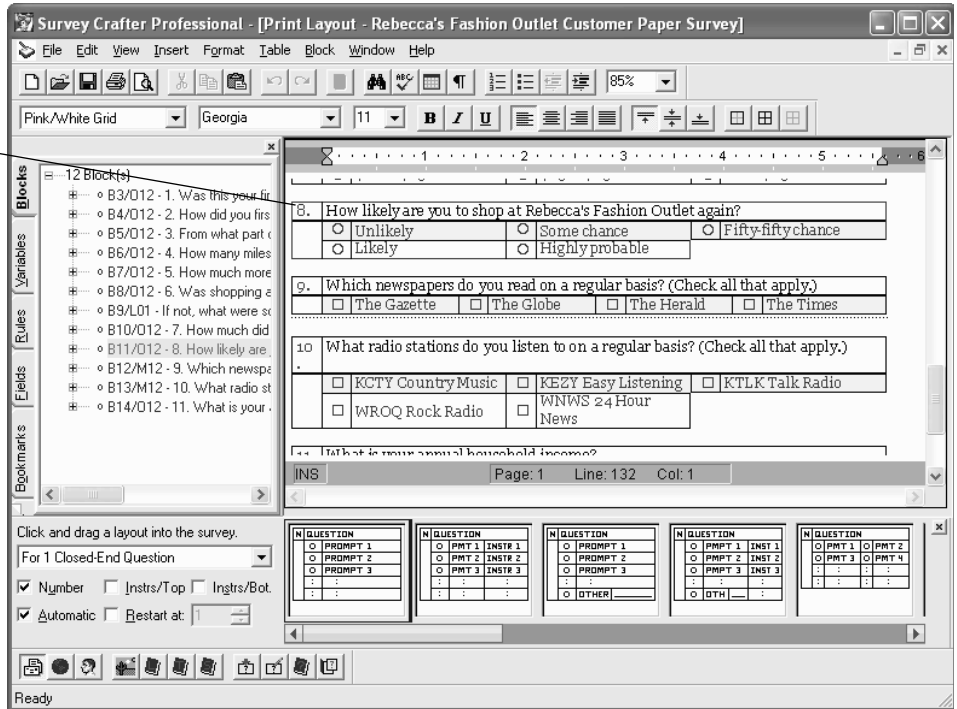
Figure 2 - 81: The Survey Designer window.

  2 Try to make your changes directly in the cells of the block.

  Survey Crafter Professional may prevent you from typing over some areas in the block. For example, if you chose to have a list supply the prompts, Survey Crafter Professional will prevent you from typing over the prompts in the Survey Designer window. You can, however, change the prompts' formatting using the formatting toolbar and the Format menu.

Edit Block button

3 If Survey Crafter Professional prevents you from making your changes to the block in the Survey Designer window or you want to change the configuration or layout options of the block, click the right mouse button and choose Edit Block from the pop-up menu or click on the Edit Block button on the toolbar.

Survey Crafter Professional displays the Type tab of the Question Block Wizard dialog box.

If you want, click on the drop down to change the block's type.

If you want, click on the check boxes to change the optional components included in the block.

If you want, click on a picture to change the selected layout for the block.

Figure 2 - 82: The Type tab of the Question Block Wizard dialog box.

4 If you want to add or remove the block number to or from the block, do one of the following:

• Select the Number check box to include an area in the block for the block number.

• Clear the Number check box to remove the area for the block number.

5 If you want to but cannot change the block number in the Survey Designer window, do one of the following:

• Clear the Automatic check box. Survey Crafter Professional will no longer automatically number the block for you, leaving you to change the block number yourself in the Survey Designer window.

- Select the Restart at check box and enter a number in the following field.

6   If you want to but cannot change the questions or you want to change the number of questions in the question block, click on the Questions tab and do one of the following:

Choose this option to type your questions directly in the Survey Designer window.

Choose this option to use a list to supply the questions.
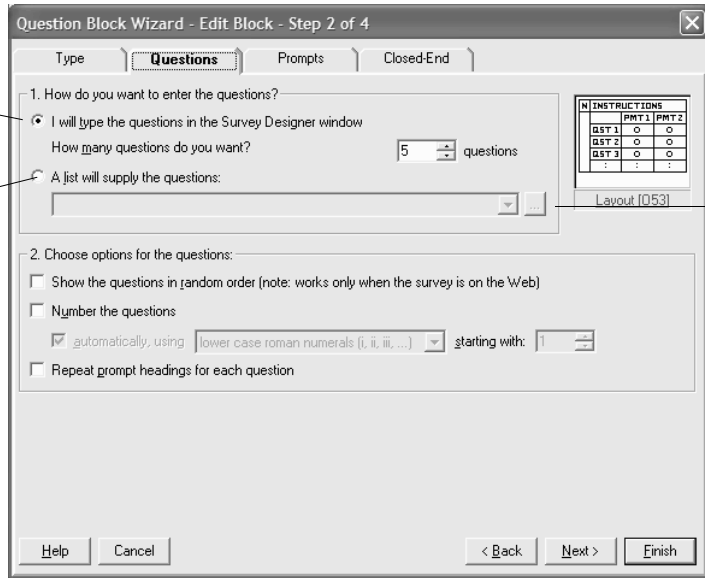
Click on this button to make changes to the selected list or any other list in the library.

Figure 2 - 83:   The Questions tab of the Question Block Wizard dialog box.

- If you want to type the questions directly in the Survey Designer window, choose *I will type the questions in the Survey Designer window* and enter the number of questions you want to include in the block. Enter a number between 1 and 255.

- If you want a list to supply the questions, choose *A list will supply the questions* and select a list from the drop down. If you cannot find the list you want or you want to make a change to the list, click on the button to the right of the drop down.

7   If you want to but cannot change the prompts or you want to change the number of prompts in the question block, click on the Prompts tab and do one of the following:

Choose this option to type your prompts directly in the Survey Designer window.

Choose this option to use a list to supply the prompts.

Click on this button to make changes to the selected list or any other list in the library.

Figure 2 - 84:   The Prompts tab of the Question Block Wizard dialog box.
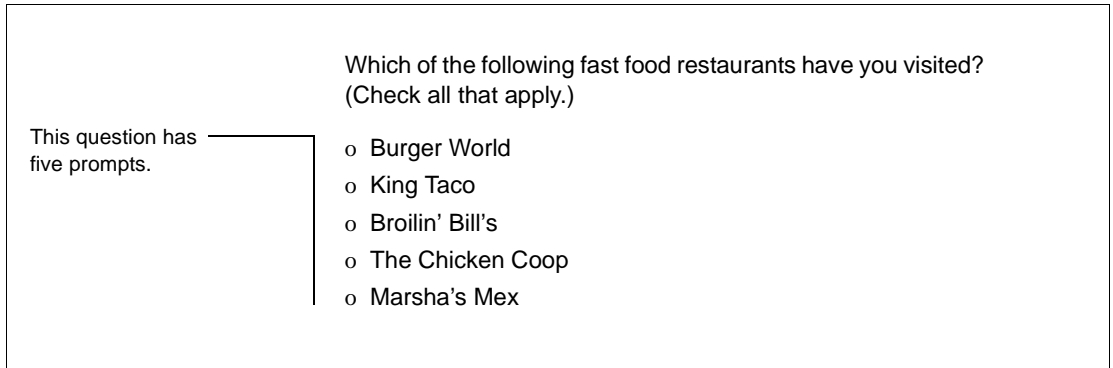
- If you want to type the prompts directly in the Survey Designer window, choose *I will type the prompts in the Survey Designer window* and enter the number of prompts you want. Enter a number between 1 and 255.

- If you want a list to supply the prompts, choose *A list will supply the prompts* and select a list from the drop down. If you cannot find the list you want or you want to make a change to the list, click on the button to the right of the drop down.

8   Click on the Finish button.

Survey Crafter Professional updates the block in the Survey Designer window.

Editing and Rearranging Prompts

Closed-end, all-that-apply, rating, quantity, ranking and constant sum questions use prompts.

For example, the question in Figure 2 - 85 has five prompts.

This question has
five prompts. ────────────

Which of the following fast food restaurants have you visited?
(Check all that apply.)

o Burger World

o King Taco

o Broilin' Bill's

o The Chicken Coop

o Marsha's Mex

Figure 2 - 85:   An all-that-apply question's prompts.

You can change, delete, and reorder a question's prompts at any time.

Changing a Prompt

Change a prompt if, for example, you want the prompt "Broilin' Bill's" in Figure 2 - 85 to read "Broilin' Bill's Steak House."

• **To change a prompt**

   1 In the Survey Designer window, move the cursor inside the question block that contains the prompts you want to change.

   2 If you chose to type the prompts in the Survey Designer window, type over the prompts. Otherwise, proceed with the next steps.

Edit Block button

3 Choose Edit from the Block menu, click the right mouse button and choose Edit Block from the pop-up menu or click on the Edit Block button on the toolbar.

Survey Crafter Professional displays the Type tab of the Question Block Wizard dialog box.

If you want, click on the drop down to change the block's type.

If you want, click on the check boxes to change the optional components included in the block.

If you want, click on a picture to change the selected layout for the block.

Figure 2 - 86: The Type tab of the Question Block Wizard dialog box.

4   Click on the Prompts tab of the Question Block Wizard dialog box.

Choose this option to type your prompts directly in the Survey Designer window.

Choose this option to use a list to supply the prompts.

Click on this button to make changes to the selected list or any other list in the library.

Figure 2 - 87:   The Prompts tab of the Question Block Wizard dialog box.

5   Do one of the following:

- If you want to type the prompts directly in the Survey Designer window, choose *I will type the prompts in the Survey Designer window* and enter the number of prompts you want. Enter a number between 1 and 255.

- If you want a list to supply the prompts, choose *A list will supply the prompts* and select a list from the drop down. If you cannot find the list you want or you want to make a change to the list, click on the button to the right of the drop down.

6   Click on the Finish button.

Survey Crafter Professional updates the block in the Survey Designer window.

7   If you chose *I will type the prompts in the Survey Designer window* in step 5, type over the prompts in the Survey Designer window.

Deleting a Prompt

You can delete a prompt if you do not want the question to include the prompt anymore. For example, if you do not want the question in Figure 2 - 85 to include the prompt "Marsha's Mex."

- **To delete a prompt**

    1 In the Survey Designer window, move the cursor inside the question block that contains the prompt you want to delete.

    2 If you chose to type the prompts in the Survey Designer window, copy and paste the prompts below the one you are going to delete. In a later step, you will change the number of prompts to include in the question block.

Edit Block button

   3 Choose Edit from the Block menu, click the right mouse button and choose Edit Block from the pop-up menu or click on the Edit Block button on the toolbar.

   Survey Crafter Professional displays the Type tab of the Question Block Wizard dialog box.

If you want, click on the drop down to change the block's type.

If you want, click on the check boxes to change the optional components included in the block.

If you want, click on a picture to change the selected layout for the block.

Figure 2 - 88: The Type tab of the Question Block Wizard dialog box.

4 Click on the Prompts tab of the Question Block Wizard dialog box.

Choose this option to type your prompts directly in the Survey Designer window.

Choose this option to use a list to supply the prompts.

Click on this button to make changes to the selected list or any other list in the library.

Figure 2 - 89: The Prompts tab of the Question Block Wizard dialog box.

5 Do one of the following:

- If you want to type the prompts directly in the Survey Designer window, choose *I will type the prompts in the Survey Designer window* and enter the number of prompts you want. Enter a number between 1 and 255.

- If you want a list to supply the prompts, choose *A list will supply the prompts* and select a list from the drop down. If you cannot find the list you want or you want to make a change to the list, click on the button to the right of the drop down.

6 Click on the Finish button

Survey Crafter Professional updates the block in the Survey Designer window.

Rearranging Prompts

You can arrange a question's prompt's in any order.

Which of the following fast food restaurants have you visited?
(Check all that apply.)

For example, you
can move "The
Chicken Coop" to the
top of the list. ————————

o Burger World

o King Taco

o Broilin' Bill's

o The Chicken Coop

o Marsha's Mex

Figure 2 - 90:   Rearranging a question's prompts.

- **To rearrange the prompts in a question block**

    1   In the Survey Designer window, move the cursor inside the question
    block that contains the prompts you want to rearrange.

    2   If you chose to type the prompts in the Survey Designer window,
    rearrange the prompts by copying and pasting the prompts.
    Otherwise, proceed with the next steps.

Edit Block button

3 Choose Edit from the Block menu, click the right mouse button and choose Edit Block from the pop-up menu or click on the Edit Block toolbar button.

Survey Crafter Professional displays the Type tab of the Question Block Wizard dialog box.

If you want, click on the drop down to change the block's type.

If you want, click on the check boxes to change the optional components included in the block.

If you want, click on a picture to change the selected layout for the block.
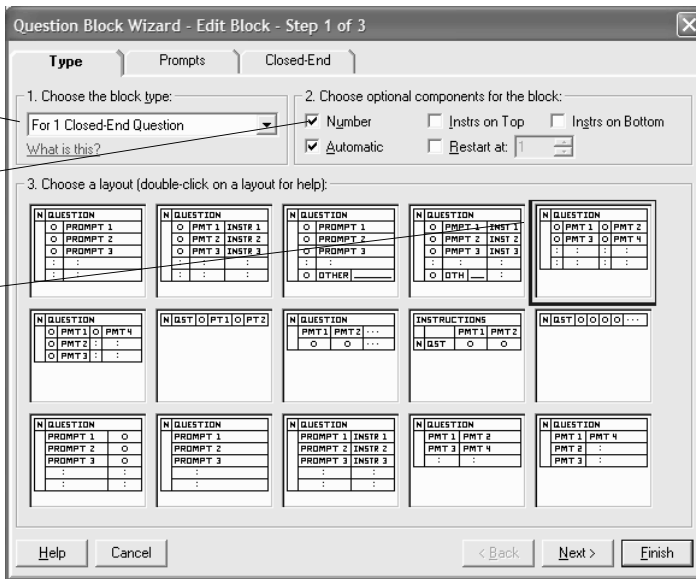
Figure 2 - 91:   The Type tab of the Question Block Wizard dialog box.

4 Click on the Prompts tab of the Question Block Wizard dialog box.

Choose this option to type your prompts directly in the Survey Designer window.

Choose this option to use a list to supply the prompts.

Click on this button to make changes to the selected list or any other list in the library.

Figure 2 - 92:   The Prompts tab of the Question Block Wizard dialog box.

5 Do one of the following:

- If you want to type the prompts directly in the Survey Designer window, choose *I will type the prompts in the Survey Designer window* and enter the number of prompts you want. Enter a number between 1 and 255.

- If you want a list to supply the prompts, choose *A list will supply the prompts* and select a list from the drop down. If you cannot find the list you want or you want to make a change to the list, click on the button to the right of the drop down. See List Library dialog box.

6 Click on the Finish button.

Survey Crafter Professional updates the question block in the Survey Designer window.

7 If you chose *I will type the prompts in the Survey Designer window* in step 5, rearrange the prompts by copying and pasting the prompts.

Editing Variables Associated with Question Blocks

You can change the settings of an imported variable associated with a question block.

Note The changes you can make to the imported variables associated with a question block are limited. For example, you can change the names, and descriptions of the variables. For more information, see the sections "Renaming a Variable" on page 6 - 50, and "Changing a Variable's Description" on page 6 - 51.

Survey Crafter Professional automatically updates the settings of the imported variables associated with a question block. If you want to override some of the variables' settings, follow the steps below.

• **To change the settings of an imported variable associated with a question block**

   1   In the Survey Designer window, move the cursor inside the block that contains the variable you want to edit.

2   Choose Edit Survey/Block Variables from the Block menu or click the right mouse button and choose Edit Survey/Block Variables from the pop-up menu.

Survey Crafter Professional displays the Survey/Block Variables dialog box.

By default, Survey Crafter Professional automatically assigns a name, code and description to each variable associated with the question block.
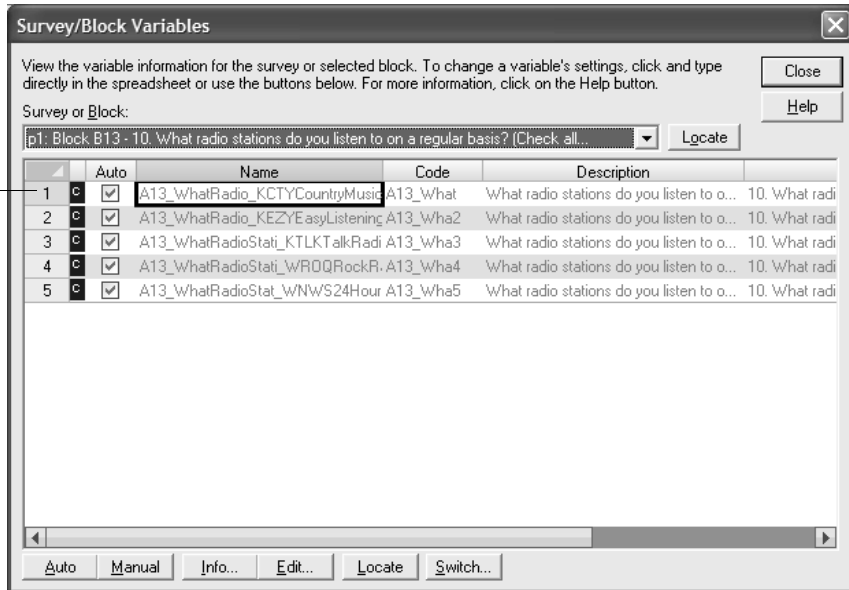
Figure 2 - 93:   The Survey/Block Variables dialog box.

3   In the Survey/Block Variables dialog box, highlight the variable you want to edit.

4   To change the variable's name, code, description, question or prompt, do the following:

• Click on the Info button.

• Clear the *Automatically Generate Variable Information* check box.

• Change the Name, Code, Description, Question or Prompt.

• Click on the OK button.

Survey Crafter Professional may prevent you from changing the name of the variable. For example, Survey Crafter Professional prevents you from changing the name of a variable if the variable is used in an expression in an analysis table.

If you clear the *Automatically Generate Variable Information* check box, Survey Crafter Professional no longer automatically updates the variable's name, code, description, question or prompt.

5   To change other variable settings, do the following:

• Click on the Edit button.

• Edit the variable's settings in the Variable dialog box.

• Click on the OK button.

Survey Crafter Professional may prevent you from making changes to the definition of the variable. For example, Survey Crafter Professional prevents you from adding or removing categories from an imported category variable used by a question block.

6   Click on the Close button.

Copying and Cutting Survey Questions and Text

To rearrange your survey's questions and stand-alone text, you may need to copy or move entire blocks.

You can copy one or more blocks to the clipboard and then paste copies of the blocks elsewhere in your survey. You can also cut one or more blocks to the clipboard and then move the blocks by pasting them elsewhere in your survey.

Note When you cut a block to the clipboard, Survey Crafter Professional removes the block and places it on the clipboard. When it removes a question block, Survey Crafter Professional also removes the block's associated imported variables unless an analysis table or chart references the variables. When it removes a variable, Survey Crafter Professional also removes the custom rules and expressions in the Expression Library that reference the variable.

Because Survey Crafter Professional removes blocks that you cut to the clipboard, consider dragging and dropping instead of cutting blocks. To learn more about dragging and dropping blocks in the Survey Designer window, see the section "Dragging and Dropping Survey Questions and Text" on page 2 - 169.

You can also paste blocks into a word processor. For more, see the section "Exporting a Survey to a Word Processor" on page 2 - 190.

- **To cut a block (method 1)**

   1   Click on the Blocks tab of the Survey Explorer toolbar.

   If the Survey Explorer toolbar is not visible, click on the View menu, Toolbars and then on Survey Explorer.

   2   In the Survey Explorer toolbar, right-click on the block you want to cut and choose Cut Block from the pop-up menu.

   Survey Crafter Professional removes the block from the survey and places it on the clipboard.

- **To cut a block (method 2)**

   1   In the Survey Designer window, move the cursor inside the block you want to cut.

   Survey Crafter Professional draws a border around the block.

2   Right-click inside the block and choose Cut Block from the popup menu.

Cut button

You can also choose Cut Block from the Block menu or right-click inside the block and choose Select Block and then click on the Cut button on the toolbar.

Survey Crafter Professional removes the block from the survey and places it on the clipboard.

- **To copy a block (method 1)**

  1   Click on the Blocks tab of the Survey Explorer toolbar.

  If the Survey Explorer toolbar is not visible, click on the View menu, Toolbars and then on Survey Explorer.

  2   In the Survey Explorer toolbar, right-click on the block you want to cut and choose Copy Block from the pop-up menu.

  Survey Crafter Professional places a copy of the block on the clipboard.

- **To copy a block (method 2)**

  1   In the Survey Designer window, move the cursor inside the block you want to copy.

  Survey Crafter Professional draws a border around the block.

  2   Right-click inside the block and choose Copy Block from the pop-up menu.

Copy button

You can also choose Copy Block from the Block menu or right-click inside the block and choose Select Block and then click on the Copy button on the toolbar.

Survey Crafter Professional places a copy of the block on the clipboard.

- **To copy all of the survey's blocks**

  1   Select the Surveys tab of the Study window

  2   Select the survey you want to copy and then click on the Edit button.

  Survey Crafter Professional displays the Survey Designer window.

3 From the Edit menu, choose Select All.

4 From the Edit menu, choose Copy or click the Copy button on the toolbar.

Copy button

Survey Crafter Professional copies all information appearing in the Survey Designer window to the clipboard. Now you can paste the survey into a word processor for custom formatting and page layout. See the section "Exporting a Survey to a Word Processor" on page 2 - 190.

Pasting Survey Questions and Text

Suppose you paste a question block whose variables are not associated with any other question block in the Survey Designer window. Not only does the newly pasted question block appear in the Survey Designer window exactly as when you copied or cut it, the block also uses exactly the same variables.

Suppose you copy a question block and then paste the question block back in the same Survey Designer window without deleting the original question block. The newly pasted question block appears in the Survey Designer window exactly as when you copied it. However, the new block uses new variables, since the original variables are still associated with the original question block.

Survey Crafter Professional creates new variables because a variable can be associated with at most one question block in the Survey Designer window.

Note You can paste more than one block at a time in the Survey Designer window. You can also copy and paste blocks from one Survey Designer window to another. You can also copy and paste blocks from one study to another.

- **To paste a block (method 1)**

    1 In the Survey Designer window, move the cursor to a location where you want to insert the block on the clipboard.

Paste button

2 From the Edit menu, choose Paste or click on the Paste button on the toolbar.

- **To paste a block (method 2)**

    1 Click on the Blocks tab of the Survey Explorer toolbar.

    If the Survey Explorer toolbar is not visible, click on the View menu, Toolbars and then on Survey Explorer.

    2 In the Survey Explorer toolbar, right-click on the block before which you want to insert the block on the clipboard and choose Paste Block from the pop-up menu.

    Survey Crafter Professional inserts the block at the position in the Survey Designer window immediately before the block that is under the mouse pointer.

Dragging and Dropping Survey Questions and Text

In addition to being able to copy and paste, you can also drag and drop blocks and text in the Survey Designer window.

> **Note** Because Survey Crafter Professional deletes blocks that you cut to the clipboard, consider dragging and dropping instead of cutting blocks.

You can drag and drop blocks and text from one Survey Designer window into another Survey Designer window. You can also drag and drop blocks and text from the Survey Designer window into another application.

- **To move or copy one block by dragging and dropping (method 1)**

    1 Click on the Blocks tab of the Survey Explorer toolbar.

    If the Survey Explorer toolbar is not visible, click on the View menu, Toolbars and then on Survey Explorer.

    2 In the Survey Explorer toolbar, click on the block you want to move or copy and hold the left mouse button down.

    3 Drag the mouse pointer over another the block in the Survey Explorer toolbar.

4   If you want to insert a copy of the block, press and hold down the [CTRL] key.

A plus sign below the mouse pointer indicates the block will be copied. If you do not see a plus sign below the mouse pointer, the block will be moved.

5   Release the left mouse button.

Survey Crafter Professional will move the block to or insert a copy of the block at the position in the Survey Designer window immediately before the block that is under the mouse pointer.

If you release the left mouse button when the mouse pointer is over another application, Survey Crafter Professional will insert the block as formatted text.

If you release the left mouse button when the mouse pointer is over a block in another Survey Designer window, Survey Crafter Professional will produce a copy of the block, even when you are not pressing the [CTRL] key.

6   If you are holding it down, release the [CTRL] key.

- **To move or copy one block by dragging and dropping (method 2)**

1   Click on the Blocks tab of the Survey Explorer toolbar.

If the Survey Explorer toolbar is not visible, click on the View menu, Toolbars and then on Survey Explorer.

2   In the Survey Explorer toolbar, click on the block you want to move or copy and hold the left mouse button down.

3   Drag the mouse pointer to the location in the Survey Designer window where you want to move the block or insert a copy of the block.

4   If you want to insert a copy of the block, press and hold down the [CTRL] key.

A plus sign below the mouse pointer indicates the block will be copied. If you do not see a plus sign below the mouse pointer, the block will be moved.

5 Release the left mouse button.

Survey Crafter Professional will move the block to or insert a copy of the block where the mouse is pointing in the Survey Designer window. If the mouse is over another block, Survey Crafter Professional will move the block to or insert a copy of the block at the position immediately before the block.

If you release the left mouse button when the mouse pointer is over another application, Survey Crafter Professional will insert the block as formatted text.

If you release the left mouse button when the mouse pointer is over another Survey Designer window, Survey Crafter Professional will produce a copy of the block, even when you are not pressing the [CTRL] key.

6 If you are holding it down, release the [CTRL] key.

- **To move or copy one block by dragging and dropping (method 3)**

    1 In the Survey Designer window, move the cursor inside the block you want to move or copy.

    Survey Crafter Professional draws a border around the block.

    2 Choose Select from the Block menu or click the right mouse button and choose Select Block from the pop-up menu.

    You can also press and hold the [ALT] key and click the left mouse button inside the block you want to move or copy. Release both the [ALT] key and the left mouse button once the block has been highlighted.

    3 If you want to move the block, press and hold the [ALT] key and click the left mouse button inside the highlighted block. If you want to copy the block, press and hold the [CTRL] key and click the left mouse button inside the highlighted block.

4   Holding the left mouse button down, drag the mouse pointer to the location where you want to move or copy the block.

A plus sign below the mouse pointer indicates the block will be copied. If you do not see a plus sign below the mouse pointer, the block will be moved.

If you decide you want to copy instead of move the block, release the [ALT] key and press the [CTRL] key while continuing to hold the left mouse button down. If you decide to move instead of copy the block, release the [CTRL] key while continuing to hold the left mouse button down.

5   Release the left mouse button when the mouse pointer is over the location where you want to move or copy the block.

Survey Crafter Professional moves or copies the block.

If you release the left mouse button when the mouse pointer is over another application, Survey Crafter Professional will insert the block as formatted text.

If you release the left mouse button when the mouse pointer is over another Survey Designer window, Survey Crafter Professional will produce a copy of the block, even when you release the [CTRL] key.

- **To move or copy highlighted areas by dragging and dropping**

1   In the Survey Designer window, use the mouse to highlight the blocks and/or text you want to move or copy.

If you want to copy all of the blocks and text in the Survey Designer window, choose Select All from the Edit menu or press [CTRL-A].

If only a portion of a block is highlighted, Survey Crafter Professional will only move or copy the block's highlighted text. You must highlight a block in its entirety to move or copy the block.

2   If you want to move the highlighted area, press and hold the [ALT] key and click the left mouse button inside the highlighted area. If you want to copy the highlighted area, press and hold the [CTRL] key down and click the left mouse button inside the highlighted area.

3 Holding the left mouse button down, drag the mouse pointer to the location where you want to move or copy the highlighted blocks and/ or text.

A plus sign below the mouse pointer indicates the highlighted area will be copied. If you do not see a plus sign below the mouse pointer, the highlighted area will be moved.

If you decide you want to copy instead of move the highlighted area, release the [ALT] key and press the [CTRL] key while continuing to hold the left mouse button down. If you decide to move instead of copy the highlighted area, release the [CTRL] key while continuing to hold the left mouse button down.

4 Release the left mouse button when the mouse pointer is over the location where you want to move or copy the highlighted area.

Survey Crafter Professional moves or copies the highlighted area.

If you release the left mouse button when the mouse pointer is over another application, Survey Crafter Professional will insert the highlighted area as formatted text.

If you release the left mouse button when the mouse pointer is over another Survey Designer window, Survey Crafter Professional will produce a copy of the highlighted area, even when you release the [CTRL] key.

Deleting Survey Questions and Text

To delete stand-alone text like a title or introduction, highlight the text in the Survey Designer window and choose Clear from the Edit menu or press the [Del] key.

To delete a question or text inside a question or instructions-only block, you may need to delete the block containing it. When you delete a question block, Survey Crafter Professional automatically removes the block's associated imported variable(s) from the study if no other part of the study references the variables. When it removes a variable, Survey Crafter Professional also removes the custom rules and expressions in the Expression Library that reference the variable.

- **To delete a question or instructions-only block (method 1)**

  1 In the Survey Designer window, move the cursor inside the block you want to delete.

  2 Right-click inside the block and choose Delete Block from the pop-up menu.

     Survey Crafter Professional removes the block from the Survey Designer window. If no other part of the study references the block's associated imported variable(s), Survey Crafter Professional automatically removes the variables. When it removes a variable, Survey Crafter Professional also removes the custom rules and expressions in the Expression Library that reference the variable.

- **To delete a question or instructions-only block (method 2)**

  1 Click on the Blocks tab of the Survey Explorer toolbar.

     If the Survey Explorer toolbar is not visible, click on the View menu, Toolbars and then on Survey Explorer.

  2 In the Survey Explorer toolbar, right-click on the block you want to remove and choose Delete Block from the pop-up menu.

     Survey Crafter Professional removes the block from the Survey Designer window. If no other part of the study references the block's associated imported variable(s), Survey Crafter Professional automatically removes the variables. When it removes a variable, Survey Crafter Professional also removes the custom rules and expressions in the Expression Library that reference the variable.

Checking Spelling in Surveys

To check a survey's spelling, click on the Check Spelling button on the toolbar or choose Spelling from the Edit menu.

You can also export the entire survey to a word processor. For help on exporting surveys, see the section "Exporting Surveys to Word Processors" on page 2 - 190.

- **To check spelling in a survey**

  1 Select the Surveys tab of the Study window.

2   Select the survey you want to check and then click on the Edit button on the tab.

3   From the Edit menu, choose Spelling or click on the Check Spelling button on the toolbar.

Check Spelling button

Follow the instructions on the screen.

Requiring Answers to your Survey's Questions

You can require answers to your survey's questions. If an answer to a question is required, Survey Crafter Professional notifies the respondent when he or she has not answered the question. You can also instruct Survey Crafter Professional to not allow the respondent to continue until the question has been answered.

• **To require an anwer to a question**

1   In the Survey Designer window, move the cursor inside the question block you want to make required.

2   Choose Edit from the Block menu or click the right mouse button and choose Edit Block from the pop-up menu.

You can also click the Edit Block button on the toolbar.

Edit Block button

3   Click on the tab that corresponds to the type of question an answer to which you want to require.

For example, if you want to require answers to the closed-end question(s) in the block, click on the Closed-End tab.

4   Follow the instructions on the screen.

Select this option to allow respondents to continue even if the questions are not answered.

Select this option to force respondents to answer the question.
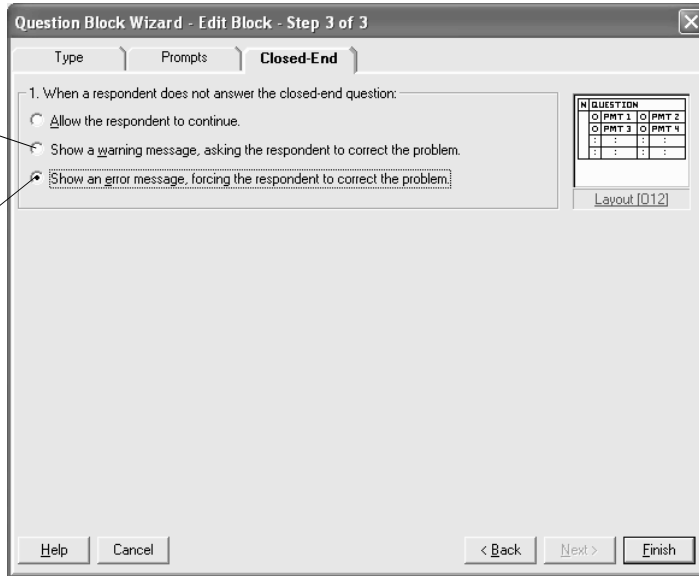
Figure 2 - 94:   The Closed-End tab of the Question Block Wizard dialog box.

5   Click on the Finish button.

Changing a Survey's Language Settings

You can at any time change the spelling dictionary used in the Survey Designer window as well as the language package assigned to your survey. The sections below cover the following:

- Changing a Survey's Spelling Dictionary

- Changing a Survey's Language Package

Changing a Survey's Spelling Dictionary

You can at any time change the spelling dictionary used in the Survey Designer window.

- **To change a survey's spelling dictionary**

    1   Select the Surveys tab of the Study window.

    2   Double-click on the survey you are working on or click on the survey and then on the *Edit* button on the tab.

    3   From the View menu, choose Survey Options.

4   Click on the Language tab of the Survey Options dialog box.

Click on this button to visit the Spell Dictionaries dialog box.

Click on the drop down and choose the dictionary you want to use.

Select this check box to have Survey Crafter Professional check the spelling as you type in the Survey Designer window.
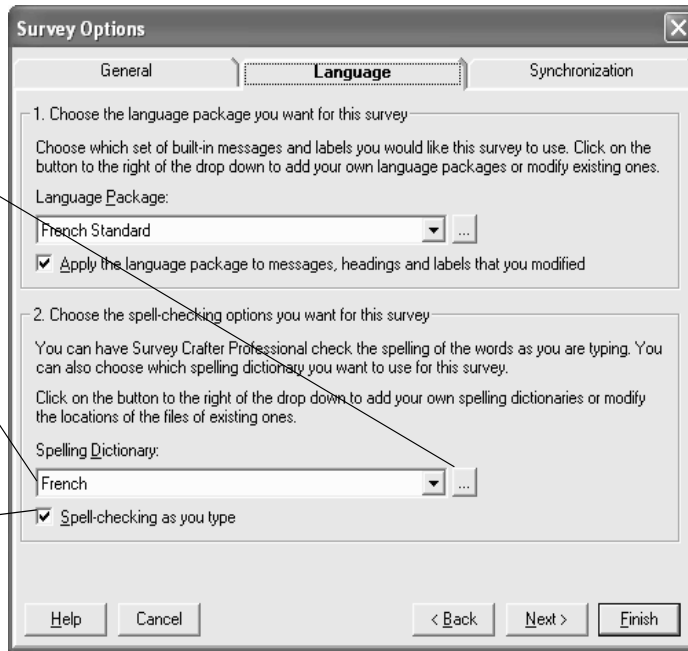
5   Click on the drop down under *Spelling Dictionary* and choose the dictionary you want to use.

To add a new spelling dictionary or to remove or edit an existing spelling dictionary, click on the button to the right of the drop down.

If the spelling dictionary you want to use is not installed, use the Modify feature of the Survey Crafter Professional installation program, available from the Add/Remove Programs application of the Control Panel, to install the dictionary.

6   Select the check box Spell-checking as you type to have Survey Crafter Professional check the spelling as you type in the Survey Designer window.

7   Click on the Finish button.

Changing a Survey's Language Package

A language package is a named collection of translations of built-in messages, headings and labels. Every Survey Crafter Professional survey is assigned a language package. The language package provides the words on the survey's navigation buttons as well as in the survey's informational headings and built-in error messages and warning messages.

You can at any time change the language package assigned to your survey.

• **To change a survey's language package**

   1 Select the Surveys tab of the Study window.

   2 Double-click on the survey you are working on or click on the survey and then on the *Edit* button on the tab.

   3 From the View menu, choose Survey Options.

   4 Click on the Language tab of the Survey Options dialog box.

Click on this button to visit the Language Package Library dialog box.

Click on the drop down and choose the language package you want your survey to use.

Select this check box to have Survey Crafter Professional replace messages, headings and labels that you modified with the defaults from the new language package.

Survey Options

| General | **Language** | Synchronization |

1. Choose the language package you want for this survey

Choose which set of built-in messages and labels you would like this survey to use. Click on the button to the right of the drop down to add your own language packages or modify existing ones.

Language Package:

French Standard ▼ ...

☑ Apply the language package to messages, headings and labels that you modified

2. Choose the spell-checking options you want for this survey

You can have Survey Crafter Professional check the spelling of the words as you are typing. You can also choose which spelling dictionary you want to use for this survey.

Click on the button to the right of the drop down to add your own spelling dictionaries or modify the locations of the files of existing ones.

Spelling Dictionary:

French ▼ ...

☑ Spell-checking as you type

| Help | Cancel | | < Back | Next > | Finish |

5   Click on the drop down under *Language Package* and choose the language package you want your survey to use.

To add a new language package or to remove or edit an existing one, click on the button to the right of the drop down.

6   If you changed the selected language package, select the check box Apply the language package to messages, headings and labels that you modified to have Survey Crafter Professional replace messages, headings and labels that you modified with the defaults from the new language package.

Example Suppose your survey has a closed-end question with a box for respondents to enter a description for a prompt you labeled "other". Let's say you configured the question to require respondents to enter a description when "other" is selected and you modified the default error message. If you change the language package and select this check box, Survey Crafter Professional will replace your modified error message with the default error message from the new language package. If you change the language package but do not select this check box, your error message will remain unchanged.

7   Click on the Finish button.

Changing How a Survey Looks

You can apply block styles to question blocks in the Survey Designer window. You can also change the font, point size, and style of the text in a survey question block or instructions-only block. The sections below cover the following:

- Applying Block Styles to Survey Questions

- Changing the Survey Designer Window Display

- Formatting Survey Text

- Changing Web Survey Input Fields

- Inserting Page Breaks

Applying Block Styles to Survey Questions

You can all at once change the borders, shading and background colors of the cells in a block in the Survey Designer window by applying a block style to the block.

You can also create your own block styles and apply them to any number of blocks in the Survey Designer window.

Even after you have applied a block style to a block, you can still change the border, shading and background color settings of the cells in the block. You can always reapply the block style if you want to restore the settings.

You can also reapply all block styles to all subscribing blocks by clicking on the Reapply All button on the Block Style Library dialog box.

- **To apply your block style to one or more blocks**

    1 In the Survey Designer window, highlight the blocks to which you want to apply your block style.

    To highlight all blocks in the Survey Designer window, choose Select All from the Edit menu or press [Ctrl-A].

2 If your block style has already been defined, choose your block style from the drop down list on the Survey Designer window's formatting toolbar.

Choose "None" to unsubscribe the highlighted blocks from all block styles.

3 If your block style has not yet been defined or you want to change the settings of your block style, choose Style from the Block menu.

Survey Crafter Professional displays the Block Style Library dialog box.

Lists all of the block styles in the current study.
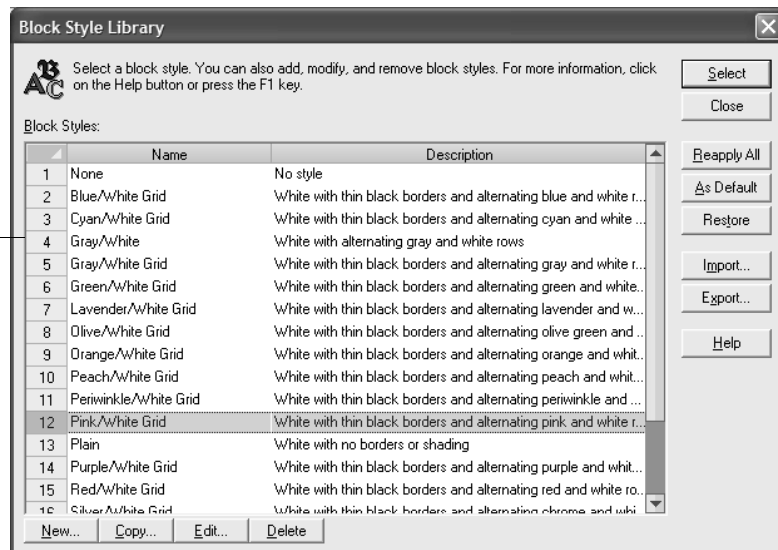
Figure 2 - 95: The Block Style Library dialog box.

4 If you want to add a new block style to the library, click on the New button below the list of block styles.

Survey Crafter Professional displays the Block Style dialog box.

Specify the formatting options for the block style.
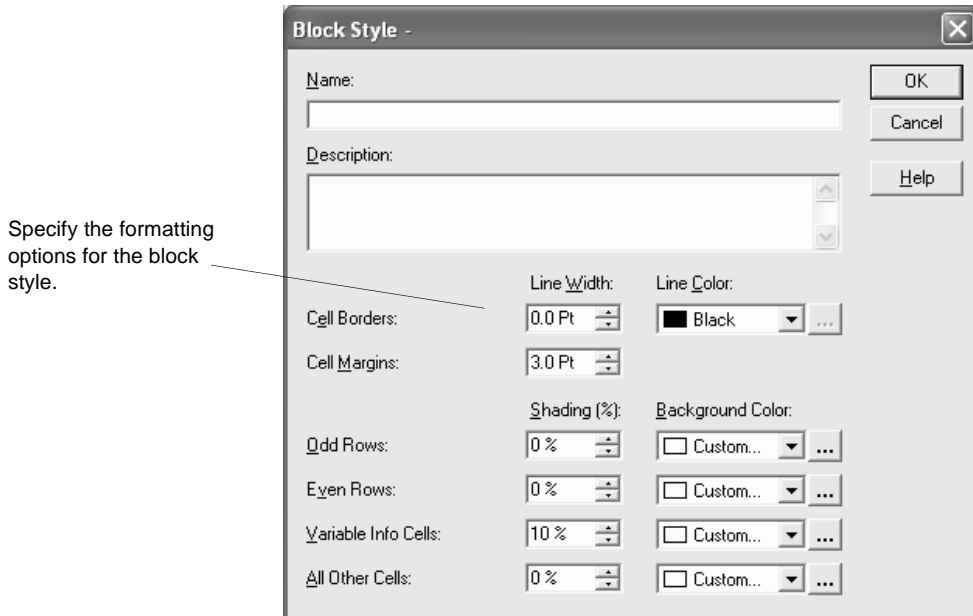
Figure 2 - 96: The Block Style dialog box.

To read about your new block style's settings, click on the Help button or press the F1 key.

Click on the OK button when you are done.

5 If you want to change the settings of an existing block style, double-click on the block style.

Survey Crafter Professional displays the Block Style dialog box.

To read about the block style's settings, click on the Help button or press the F1 key.

Click on the OK button when you are done.

6 Click on the block style you want to apply to the highlighted blocks and click on the Select button.

Survey Crafter Professional changes the appearance of the highlighted blocks in the Survey Designer window according to the settings of the selected block style.

Changing the Survey Designer Window Display

You can show and hide several block components in the Survey Designer window. For example, you can show or hide variable names and variable codes in the Survey Designer window.

Changes you make to the Survey Designer window apply to all of the blocks in the currently displayed survey. Figure 2 - 97 shows the block components you can hide.
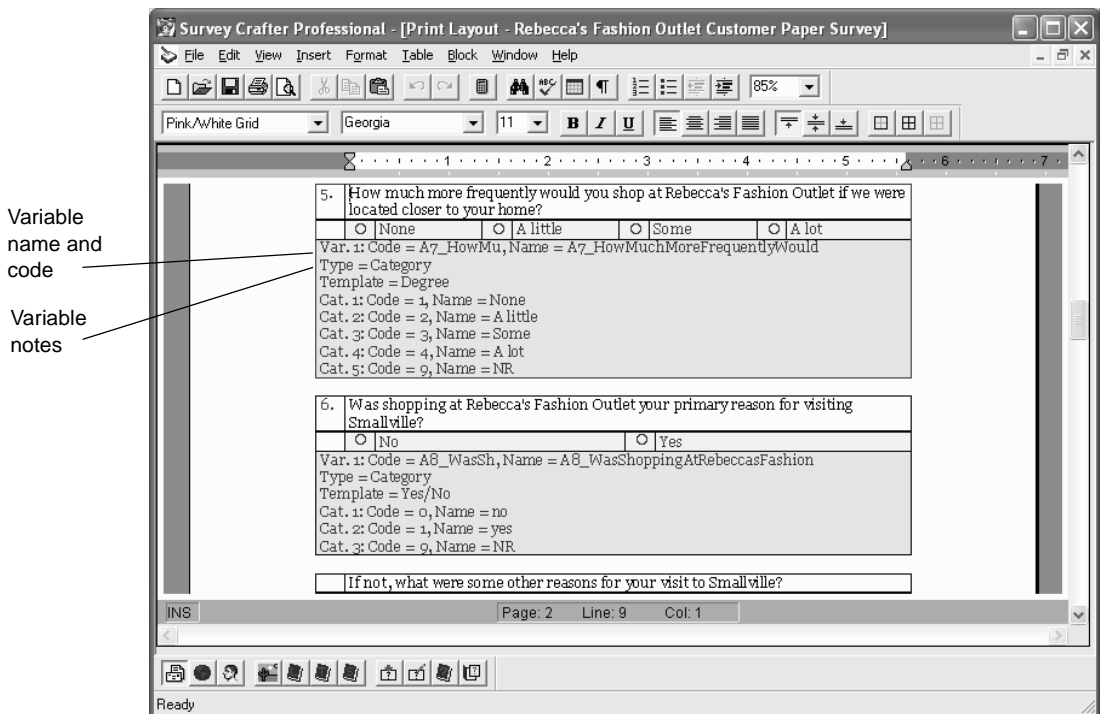
Figure 2 - 97: Block components you can hide by using the Survey Options command.

The procedure below does not cover how to format survey text. For instructions on formatting, see the section "Formatting Survey Text" on page 2 - 186.

- **To change the Survey Designer window display**

    1   Select the Surveys tab of the Study window.

    2   Select the survey you want to display and then click on the Edit button on the tab.

    3   From the View menu, choose Survey Options.

    4   In the General tab of the Survey Options dialog box, select or clear the check boxes corresponding to the information you want to show or hide.

    Each check box applies to the entire survey. For a description of the check boxes, click on the Help button.

To display the block component, select its check box.
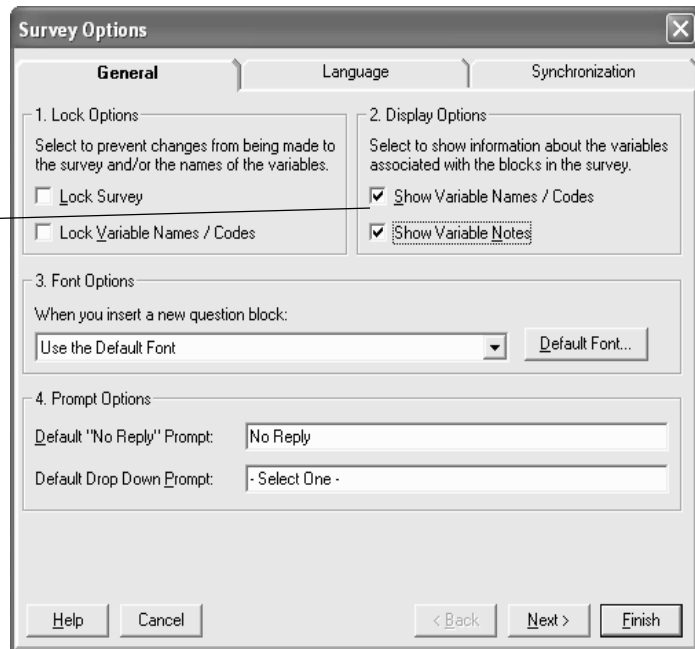
Figure 2 - 98:   The General tab of the Survey Options dialog box.

5   Click on the Finish button.

Survey Crafter Professional changes the Survey Designer window display. Note that the survey prints exactly as it appears in the Survey Designer window.

Formatting Survey Text

You can change the font, point size, style, spacing, foreground color and background color of text in the Survey Designer window. For example, use bold to set off important instructions or a large point size for the survey's title.

Tip   You can also set the font, size, and style for text you have not yet typed. Select the options you want on the Formatting toolbar and start typing.

- **To format survey text**

    1   In the Survey Designer window, highlight the text you want to format.

    2   Choose Character from the Format menu.

3   Select the options you want for the highlighted text.

Choose the font, font style and size for the highlighted text.

Choose the effects you want for the highlighted text.

Displays sample text with the currently selected options.

Choose the foreground and background color of the highlighted text.
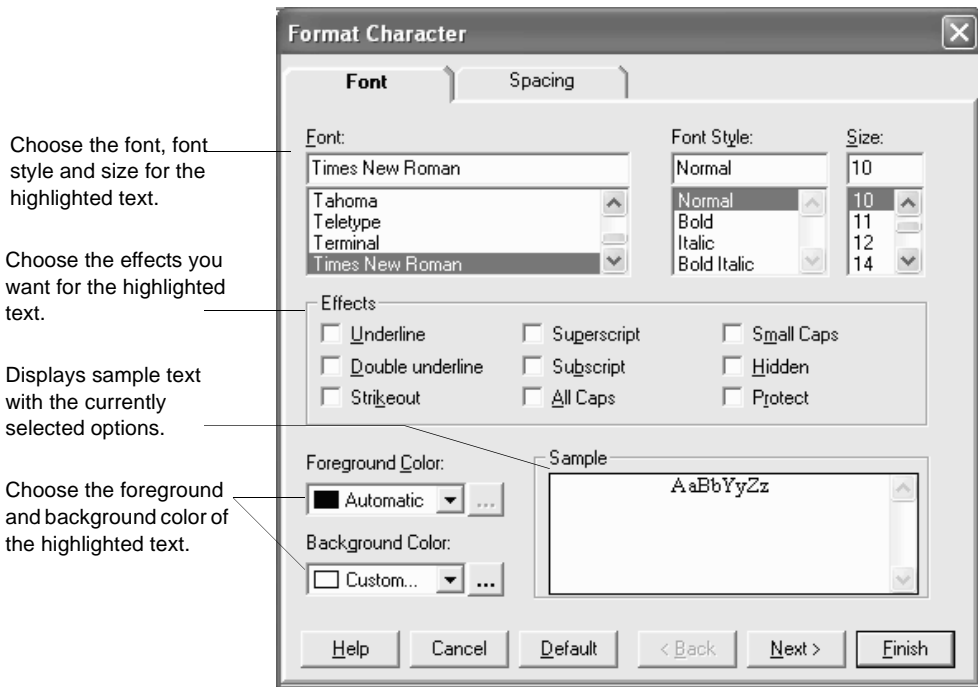
Figure 2 - 99: The Format Character dialog box.

4   Click on the Finish button.

Changing Web Survey Input Fields

You can change the input fields Survey Crafter Professional uses when it generates web survey files. For example, you can choose to have Survey Crafter Professional use a drop down list instead of radio buttons for a closed-end question block.

•   **To change web survey input fields**

    1   Select the Surveys tab of the Study window.

    2   Select the survey you want to change and then click on the Edit button on the tab.

    3   Choose Web Layout from the View menu.

4   Move the cursor inside the block you want to change and choose Edit
from the Block menu or click the right mouse button and choose Edit
Block from the pop-up menu.

Edit Block button

5   In the Type tab, choose the layout that uses the input fields you want
for the block.

.

We are editing a block
for 1 closed-end
question.

This block layout
features a single
selection list. Choose a
size of 1 in the Prompts
tab to display the list as
a drop down.

Figure 2 - 100: The Type tab of the Question Block Wizard dialog box.

6   If Survey Crafter Professional displays the Prompts tab, click on the
Prompts tab and select the options you want for the prompts.

7   Click on the Finish button.

Inserting Page Breaks

You can insert page breaks to override Survey Crafter Professional's automatic page break calculations when printing. You can also use page breaks to define the pages Survey Crafter Professional creates when it generates web survey HTML pages or when it displays the survey in the built-in Interviewer.

- **To insert a page break**

    1 In the Survey Designer window, move the cursor to the location where you want to insert the page break.

    2 Choose Page Break from the Insert menu.

Exporting a Survey

To enhance a survey's format, you can export a survey to a word processor or to a file. The exported survey contains only the information appearing in the Survey Designer window.

Exporting a Survey to a Word Processor

You can export an entire survey or individual survey blocks.

Note You can also copy text from a word processor and paste it into the Survey Designer window.

• **To export an entire survey to a word processor**

1   Select the Surveys tab of the Study window.

2   Select the survey you want to copy and then click on the Edit button on the tab.

3   From the Edit menu, choose Select All to highlight the entire survey.

4   From the Edit menu, choose Copy to transfer the entire survey to the clipboard.

5   Open the word processor and the document you want to paste the survey into.

6   Paste the survey into the document.

• **To export one block to a word processor**

1   Select the Surveys tab of the Study window.

2   Select the survey from which you want to copy and then click on the Edit button on the tab.

3   In the Survey Designer window, move the cursor inside the block you want to transfer to a word processor.

4   Choose Copy Block from the Block menu or click the right mouse button and choose Copy Block from the pop-up menu.

Copy button

You can also choose Select from the Block menu or click the right mouse button and choose Select Block from the pop-up menu and then click the Copy button on the toolbar.

5   Open the word processor document you want to paste the block into.

6   Paste the block into the document.

Exporting a Survey to a File

To enhance a survey's format or to publish the survey in another format, you can export a survey to a file. The exported survey contains only the information that appears in the Survey Designer window.

You can export a survey to the following types of files:

- HyperText Markup Language (HTML) file

- Rich Text Format (RTF) file

- Text file

- **To export a survey to a file**

    1   Select the Surveys tab of the Study window.

    2   Select the survey you want to export and then click on the Edit button.

    3   From the File menu, choose Export.

    Survey Crafter Professional displays the Save Survey File As dialog box.

    > **Note** If you want to export a survey to an HTML file, you may want to review the web survey HTML option settings in the Web Survey Setup dialog box. Survey Crafter Professional uses these settings when it exports a survey to an HTML file.

    4   From the Files of Type drop-down list, select the type of file you want to save.

5   From the Locations (Save in) drop-down list, choose the location to save the file.

6   In the Folders list, select the folder in which you want to save the file.

7   In the File name field, type the name of the file to save.

8   Click on the Save button.

3 Data

After creating your survey in Survey Crafter Professional, you can publish the survey on the World Wide Web, interview respondents yourself, have respondents complete the survey on their own, or contract a market research supplier to conduct interviews for you.

Before you can analyze a set of survey responses, you need to add the data to the Survey Crafter Professional study. If you are interviewing respondents yourself, you can add their responses using Survey Crafter Professional's built-in Interviewer. If you published your survey on the World Wide Web, you can import the web survey's data into the study. If a market research supplier interviewed respondents, you can import the data the supplier returns into the study. Once the data is in the study, you can edit it to prepare it for analysis.

This chapter explains how to enter, import, edit, and export data sets. It also explains how to customize the Data window display. Read the section "Data Basics" first to learn key concepts about working with a study's data set.

Chapter Contents

Data Basics

The study's data set is comprised of values stored in variables. It includes variables with values you enter or import into the study (imported variables) and variables with values you calculate in Survey Crafter Professional (computed variables).

This section describes features of the Data window.

About the Data Window

Figure 3 - 1 shows a data set in the Data window.

Figure 3 - 1: A data set in the Data window.

Each row in a data set is called a record. Each record contains data from a different respondent. Select an entire record by clicking on a row selector. Each column in a data set contains the values in one of the study's variables. The variable's name and code appears at the top of the column. Select an entire variable by clicking on a column selector.

When the Data window is active, you can use commands on the Edit, View and Interviewer menus to modify the window's display and edit variables' values

Records Appearing in the Data Window

You can display all or a portion of the data set's records. For example, you could choose to view only those records for respondents who heard about your company on the radio.

Only those respondents for whom the filter expression evaluates to TRUE appear in the Data window.

The filter expression is *gen_publicity='radio'*

Figure 3 - 2: A filtered data set in the Data window.

To filter the records appearing in the Data window, choose the Edit Filter command from the Edit menu. Then use the Expression Builder to write an expression that evaluates to TRUE or FALSE for each respondent in the data set. For example, `gen_publicity='radio'`.

Records of respondents for whom the expression evaluates to TRUE appear in the Data window. The Data window's Filter field shows the expression applied to the data set's records. When no expression appears in this field, all records are displayed.

For instructions on showing selected records in the Data window, see "Changing the Number of Records Displayed in the Data Window" on page 3 - 54.

Values Appearing in the Data Window

Each variable's column may contain one of three types of values: categories, quantities, or literals (text). Category, quantity, and literal variables' cells may also contain the value NV. NV (No Value) indicates that the record contains no value for the variable. For example, if the respondent was not asked a particular question, the question's variable would contain NV. In addition, category and quantity variables' cells may contain the value NR. NR (No Reply) indicates that the respondent was asked the question with which the variable is associated but refused to answer.

A computed variable's values may all appear as NV. If this is the case, it is likely that Survey Crafter Professional has not yet calculated the variable's values. To calculate the variable's values, make the Data window the active window and then choose the Update command from the Edit menu.

Color Coding in the Data Window

Survey Crafter Professional uses color coding to indicate the status of values in the Data window. Imported variables' values appear in black, blue and red. Computed variables' values appear in gray. See Table 3 - 1 for more information on the color codes shown in the Data window's Key.

Table 3 - 1:   Color coding applied to values in the Data window.

Color	Meaning	Description
Black	Acceptable	The value is acceptable because:
		• its type matches the type of the imported variable that stores the value. For example, the value is a number and is stored in a quantity variable.
		• it meets the specifications of the imported variable that stores the value. For example, the number is within the range of values specified in the definition of the quantity variable.
		• it passes all of the custom data cleaning rules you assigned to the imported variable that stores the value. To add or modify your own data cleaning rules, see Chapter 2, "Adding custom data cleaning rules," page 2 - 127.
		Survey Crafter Professional can perform analyses with this value.

Table 3 - 1:   Color coding applied to values in the Data window. (Continued)

Color	Meaning	Description
Blue	Unexpected	The value is unexpected because: • it does not meet the specifications of the imported variable that stores the value. • it failed to pass one or more custom data cleaning rules you assigned to the imported variable that stores the value.To add or modify your own data cleaning rules, see Chapter 2, "Adding custom data cleaning rules," page 2 - 127. If the column corresponds to a quantity variable, the number is less than the minimum or greater than the maximum value defined for the quantity variable or the number does not follow the rules of its associated ranking or constant sum question. For example, if a quantity variable is associated with a ranking question and if it and none of the other variables associated with the ranking question have a value of 1 and at least one of the variables has a value such as 2, all quantity variables associated with the ranking question are marked unexpected. This is because one of the rules of a ranking question is that if a respondent answers the question, there must be exactly one 1 value -- a ranking may not start with a 2. If the column corresponds to a category variable, the choice does not follow rules of its associated all-that-apply question. For example, if a category variable is associated with an all-that-apply question and if at least one of the variables associated with the all-that-apply question has a value of 'yes' or 'no' and the other variables have a value of 'NV' or 'NR', all category variables associated with the all-that-apply question are marked unexpected. Survey Crafter Professional can perform analyses with this value. The `IS_UNEXPECTED( )` function returns TRUE for unexpected values.
Red	Unreadable	Survey Crafter Professional cannot interpret unreadable values. There are two cases in which values can be unreadable: • A quantity variable receives a non-numeric value • A category variable receives a code outside the range of acceptable codes Survey Crafter Professional displays unreadable values in the Data window but interprets and displays these values as NV in expressions. The `IS_UNREADABLE( )` function returns TRUE for unreadable values. The `IS_MISSING( )` function returns TRUE for missing and unreadable values.

Table 3 - 1:   Color coding applied to values in the Data window. (Continued)

Color	Meaning	Description
Gray	Computed value	The value belongs to a computed variable.

Often, not all of the responses in a data set match values you expected. Some responses may lie outside an acceptable range, or they might not match the kind of information the question was designed to capture. For example, a question might require a 'yes' or 'no' answer but one record shows the value 35 for that question. Survey Crafter Professional features a Data Error Log that flags erroneous values. You can edit these values or delete the record from the data set.

The Data Error Log window shows there's 1 unreadable value in the *gen_company size* column.

Clicking on the Show button automatically sets the Data window's filter to isolate the unreadable value.
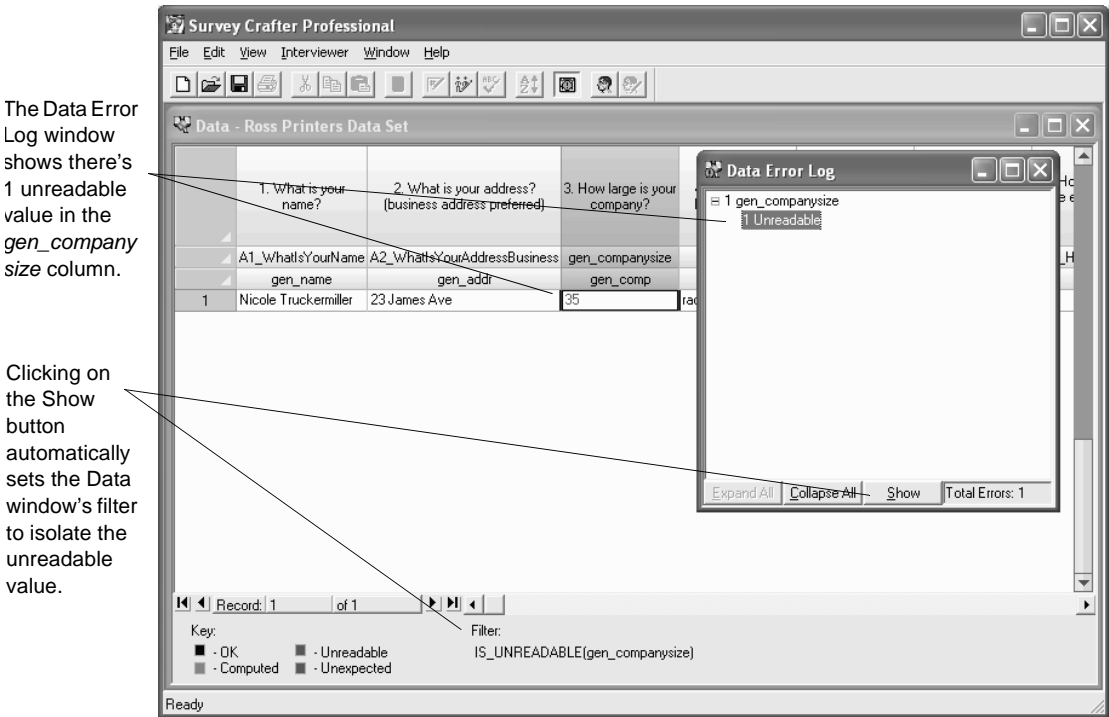
Figure 3 - 3: Using the Data Error Log to isolate unreadable values in the data set.

After editing data, you can have Survey Crafter Professional scan the data set again to check whether the values resulting from your changes meet the variables' specifications as well as pass your own custom data

cleaning rules. To have Survey Crafter Professional scan the data set again, choose Update from the Edit menu. For more instructions, see "Flagging Errors in Data Sets" on page 3 - 41.

You can add your own custom data cleaning rules to your study from either the Survey Designer window or the Data window. For step-by-step instructions, see Chapter 2, "Adding custom data cleaning rules," page 2 - 127.

Opening a Study's Data Set

View the study's data set in the Data window.

- **To open a study's data set**

    1 Select the Data tab of the Study window.

Click on the
Edit button to
open the
study's data
set.
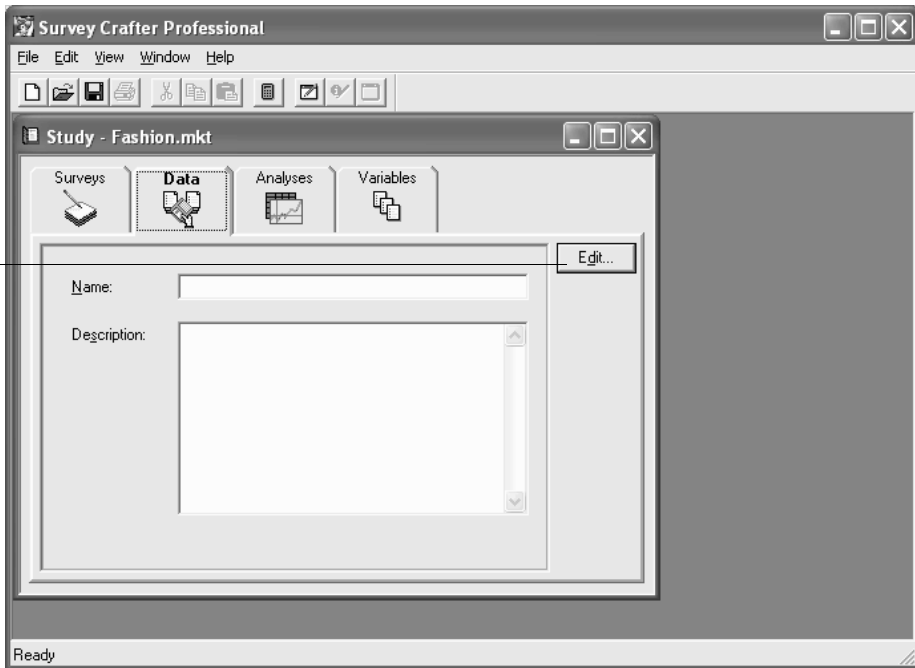
Figure 3 - 4:   The Data tab of the Study window.

    2 Click on the Edit button on the tab.

    If the study contains data, the matrix of variables and values appears
    in the Data window. If the study contains no data, the empty Data
    window appears.

Entering Respondents' Replies

Particularly for smaller samples, you can keep costs lower by interviewing respondents yourself rather than contracting a market research supplier. There are several ways to interview respondents. For example, you can interview respondents over the telephone or mail surveys and have them return the completed forms to you. Whatever means you choose for gathering data from respondents, you can use the Interviewer to build the study's data set.

This section provides an overview of the Interviewer and explains how to navigate the Interviewer and use it to enter respondents' replies.

Note If you published your survey on the World Wide Web, you need to import the web survey's data file into the study. If you contracted a market research supplier, you need to import the data file the supplier returns into the study. See the section "Importing Data Sets" on page 3 - 21.

About the Interviewer

You can use the Interviewer in different ways. For example, if you are interviewing respondents over the telephone, you can enter each respondent's answers question by question while talking to him or her. If respondents fill out and return surveys, you can collect a stack of completed surveys and enter the responses all at once.

Figure 3 - 5 shows the Interviewer for entering the responses to a series of closed-end questions.

Enter the responses here.

Figure 3 - 5:   The Interviewer for adding a new record to the study's data set.

If the Interviewer is configured to display question blocks "one at a time", the Interviewer displays one block at a time. In this case, the Interviewer never displays text and graphics that live outside the survey's question blocks.

If the Interviewer is configured to display question blocks "in groups defined by hard page breaks", the Interviewer displays one page at a time where the pages are defined by your survey's hard page breaks. If your survey has no hard page breaks, the entire survey appears in the Interviewer in one page.

Resizing the Interviewer Window

You can resize the Interviewer window by clicking on and dragging any of the window's borders. You can also double-click on the Interviewer window's caption to have the window occupy the entire screen. Double-clicking on the Interviewer window's caption again returns the window to its previous size.

For your convenience, Survey Crafter Professional remembers the size and position of the Interviewer window so you should not need to resize the window again when you start a new session.

Navigating the Interviewer

You can use the mouse to navigate and answer the survey questions in the Interviewer. For example, to answer a closed-end, rating, or all-that-apply question, click on the radio button, drop down item, selection list item or checkbox that corresponds to the prompt you want to select.

You can also use the keyboard to navigate and answer the survey questions in the Interviewer. For example, use the Enter, Tab and Shift-Tab keys to move from one question to another and the Up Arrow, Down Arrow, Left Arrow and Right Arrow keys to move from one prompt or question to another.

You can also use the Spacebar and the numbers on the numeric keypad to select answers for closed-end, rating, and all-that-apply questions. For a closed-end, rating or all-that-apply question, press a number on the numeric keypad to select the corresponding prompt. For an all-that-apply question, press the number again to unselect the prompt. For example, for an all-that-apply question, press 1 to select the first prompt and then press 1 again to unselect the prompt. Press 0 to unselect all of the question's prompts.

There are two ways to move from page to page in the Interviewer:

• By clicking on the slider control at the bottom of the Interviewer

• By clicking on the Next and Back buttons at the bottom of the Interviewer

Use the first method when you need to skip several pages at once. Use the second method when you want to move to the page immediately before or after the currently selected page.

Entering Responses by Using the Interviewer

Each set of replies you enter for a respondent becomes a record in the study's data set. Survey Crafter Professional adds the record to the bottom of the data set.

The Interviewer checks that the response you enter for a question meets the specifications for the values the question's variable is designed to store. If you enter a value outside a variable's specifications, Survey Crafter Professional displays an error message. A value may lie outside a variable's specifications in two cases: the value is unexpected or it is unreadable. Both of these conditions are described in Table 3 - 1. Unexpected values are allowed, but unreadable values must be changed before you can proceed.

If a respondent is asked a question but refuses to answer it, use the No Reply (NR) value. If a response is missing for any other reason, use the No Value (NV) value.

- **To enter responses by using the Interviewer**

   1   Select the Data tab of the Study window and then click on the Edit button on the tab.

   2   From the Interviewer menu, choose New Respondent or click on the New Respondent button on the toolbar.

New Respondent
button

3   If the Interviewer Options dialog box displays, do the following:

Choose the surveys to display in the Interviewer.

Clear this check box to prevent this dialog box from appearing each time you start the Interivewer.
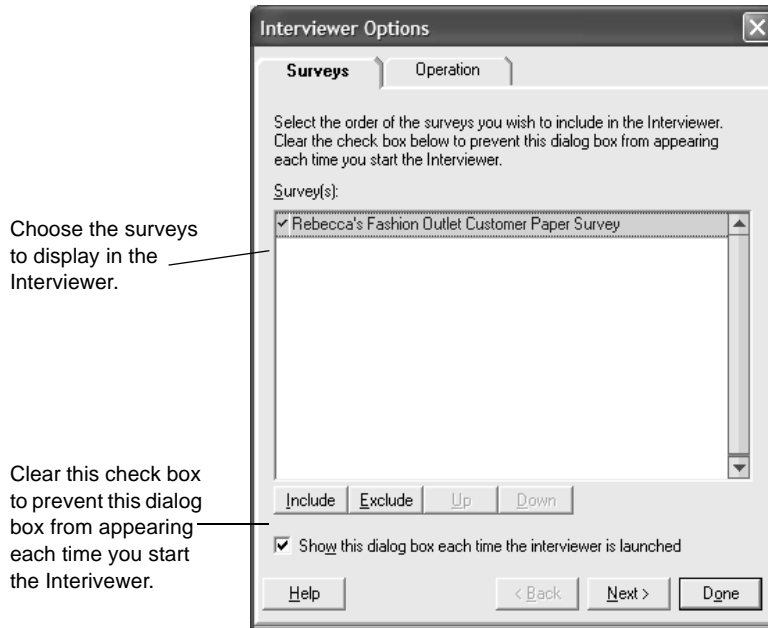
Figure 3 - 6:   The Surveys tab of the Interviewer Options dialog box.

• In the Surveys tab, choose the order of the surveys you want to include in the Interviewer.

- In the Operation tab, choose how you want Survey Crafter Professional to display your survey's blocks in the Interviewer.

Choose how the Interviewer displays the survey blocks.

Clear this check box to prevent this dialog box from appearing each time you start the Interivewer.
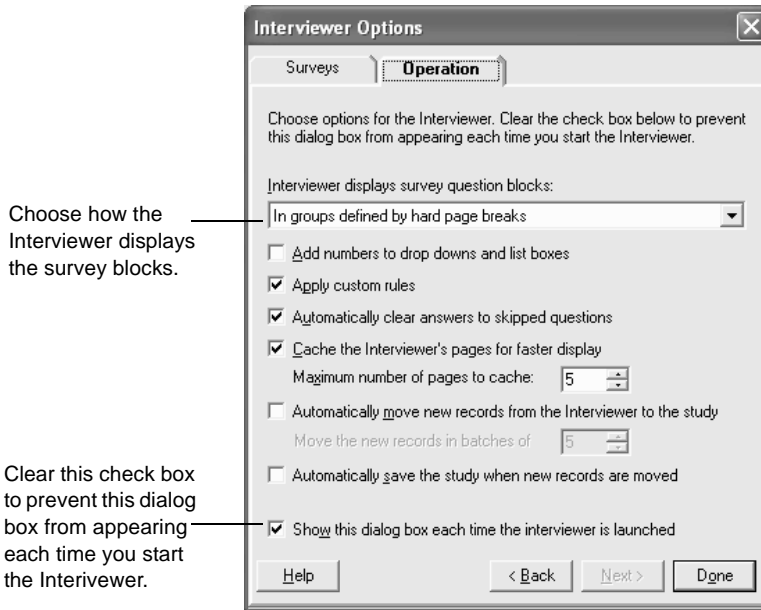
Figure 3 - 7:   The Operation tab of the Interviewer Options dialog box.

- In the Operation tab, if you want, click to select the *Automatically move new records from the Interviewer to the study* check box. If you select this check box, enter the number of new records you want to add before Survey Crafter Professional moves them to the Data window. Survey Crafter Professional moves records when you click on the Interviewer's Finish & New Respondent, New Respondent or Close button.

- In the Operation tab, if you want, click to select the *Automatically save the study when new records are moved* check box. If you select this check box, Survey Crafter Professional will save the study file each time it moves new records from the Interviewer to the Data window.

- In the Operation tab, if you want, click to select the *Cache the Interviewer's pages for faster display* check box and enter the maximum number of pages to store in memory. If you select this check box, Survey Crafter Professional will store up to the number of pages you specify in memory, allowing the Interviewer to display your survey more quickly.

- To prevent the Interviewer Options dialog box from displaying every time you start the Interviewer, clear the *Show whenever the interviewer is launched* check box at the bottom of the dialog box.

- Click on the Done button.

Survey Crafter Professional displays the Interviewer window.

Enter the responses here.
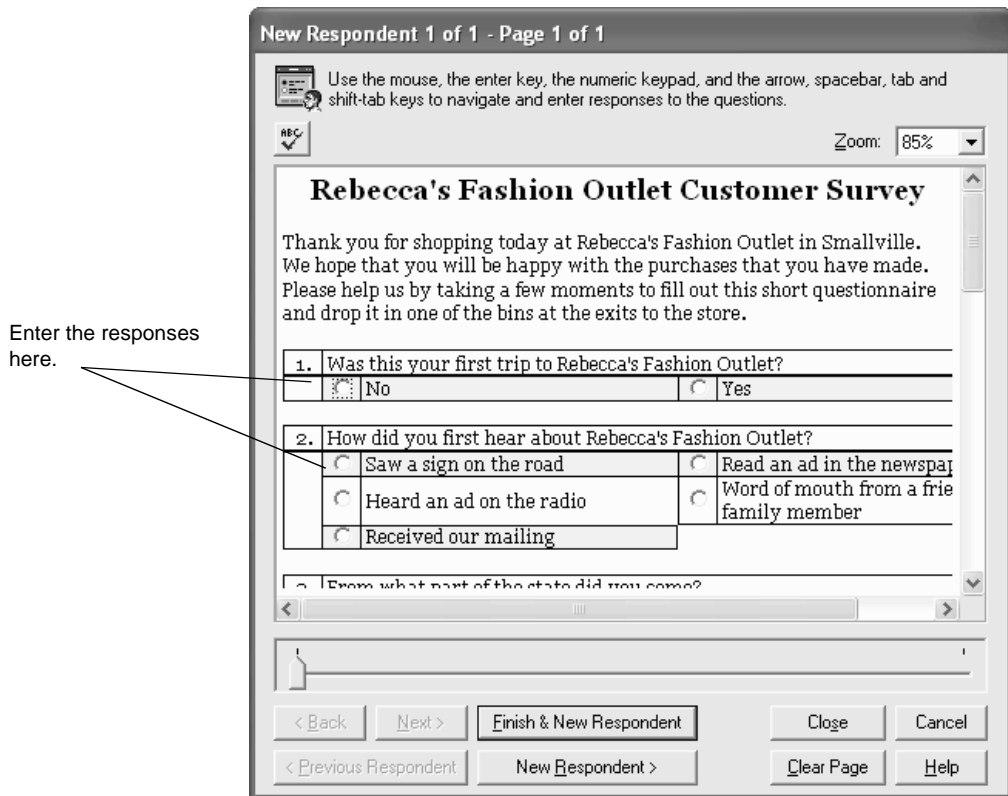
Figure 3 - 8:   The Interviewer for adding new records to the study's data set.

4   If you want, choose the magnification level you want to apply to the elements in the Interviewer.

When you choose 100%, Survey Crafter Professional displays each element normally. When you choose 50%, Survey Crafter Professional reduces the size of each element by one-half. When you choose 200%, Survey Crafter Professional doubles the size of each element.

5   If you want, resize the Interviewer window to better display your survey's questions.

To resize the Interviewer window, click on and drag any of the window's borders. You can also double-click on the Interviewer window's caption to have the window occupy the entire screen. Double-clicking on the Interviewer window's caption again returns the window to its previous size.

6   Using the slider control or the Next and Back buttons, go to the page containing the questions for which you want to enter responses.

7   Use the mouse or the Enter, Up Arrow, Down Arrow, Left Arrow, Right Arrow, Tab and Shift-Tab keys to move from one question or prompt to another. Enter the responses to the questions by following the directions in Table 3 - 2.

Table 3 - 2:   Entering responses using the Interviewer.

For this type of question	Enter the response by	Notes/tips
Closed-end	Selecting the prompt that corresponds to the category the respondent picked	Use the left mouse button to choose a prompt. Alternatively, press a number on the numeric keypad to select the corresponding prompt. For example, pressing 1 selects the first prompt, pressing 2 selects the second prompt, and so on. To unselect a prompt, right-click on it or press 0. To clear all answers on the current page, click on the Clear Page button. A No Reply prompt may be available in the list.
All-that-apply	Selecting the prompts that correspond to the prompts the respondent picked	Use the left mouse button to choose one or more prompts. Alternatively, press a number on the numeric keypad to select the corresponding prompt. Press the number again to unselect the prompt. For example, pressing 1 selects the first prompt and pressing 1 again unselects the prompt. You can also unselect a prompt by right-clicking on it. To unselect all of a question's prompts, press 0. To clear all answers on the current page, click on the Clear Page button. No Reply and No Value prompts are not available.
Rating	Selecting the prompt that corresponds to the scale value the respondent picked	Use the left mouse button to choose a prompt. Alternatively, press a number on the numeric keypad to select the corresponding prompt. for example, pressing 2 selects the second prompt, pressing 3 selects the third prompt, and so on. To unselect a prompt, right-click on it or press 0. To clear all answers on the current page, click on the Clear Page button. A No Reply prompt may be available in the list.

Table 3 - 2:   Entering responses using the Interviewer. (Continued)

For this type of question	Enter the response by	Notes/tips
Quantity	Typing the response in the field	You can type NR for No Reply and NV for No Value.
Open-end	Typing the response in the field	You can type NV for No Value. If the respondent was asked but did not reply to the question, enter text like "Did not answer in the field". (Do not enter NR for "No Reply" since Survey Crafter Professional treats it as the characters "NR" not as the value NR.
Ranking	Type the ranking for each prompt	You can type NR for No Reply and NV for No Value.
Constant sum	Type the points the respondents assigns to each prompt	You can type NR for No Reply and NV for No Value.

8   Go to another page by using the slider control or the Next and Back buttons. Then repeat step 7.

9   When you finish entering the respondent's replies, click on either the Finish & New Respondent button or the Close button.

If you click on the Finish & New Respondent button, Survey Crafter Professional creates a new respondent record and displays the first page of the survey. Repeat steps 6 - 9.

If you click on the Close button, Survey Crafter Professional adds the new respondent records to the Data window. Variables associated with questions you skipped while entering the responses show NV (No Value) in the Data window.

10 If you want, calculate values for the new record's computed variables by choosing the Update command from the Edit menu.

Importing Data Sets

If you published your survey on the World Wide Web, you need to import the set of responses the web survey collected. If a market research supplier conducted interviews for you, you need to import the set of responses the supplier collected.

Importing data involves transferring data from the file the web survey or supplier provides (the import file) to the Survey Crafter Professional study. After importing the data into the study, you can analyze it and create charts and tables showing the analyses' results.

Import Process Overview

Survey Crafter Professional reads the import file and matches the file's data with imported variables created to store the data. Commonly, you create these variables when writing survey questions as discussed in Chapter 2. You can also create imported variables not associated with survey questions to store data from a source other than a Survey Crafter Professional survey. See the section "Creating Imported Variables" in Chapter 6.

Except for CSV (comma separated value) format files, each import file must have a corresponding data dictionary file. Market research suppliers should provide the data dictionary file with the import file they return.

Note It is not necessary to create a data dictionary file if you are importing data from a file used by a Survey Crafter Professional web survey. This is because data files used by Survey Crafter Professional web surveys are in CSV (comma separated value) format.

However, you need to create a data dictionary file if you are importing data from another statistical analysis program or from an import file you created and the file is not in CSV (comma separated value) format. For more on creating import files and data dictionary files, refer to Appendix A, "About Import Files and Data Dictionary Files."

Note You can only import data into an open study.

The flowchart in Figure 3 - 9 illustrates the data import process.
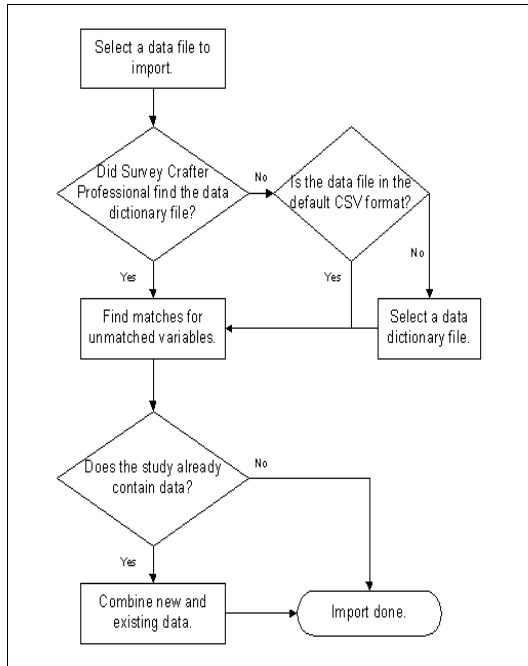
Figure 3 - 9:   The data import process.

Selecting a Data File to Import (Task 1 of 3)

By default, Survey Crafter Professional looks for the data dictionary file in the same folder as the import file. If it does not find it there, Survey Crafter Professional assumes the import file is in the default CSV (comma separated value) format.

If you want Survey Crafter Professional to ask you if the import file is in the default CSV format, clear the Assume CSV Text File Format check box on the Data tab of the Preferences dialog box.

- **To select a data file to import**

    1   Select the Study window's Data tab.

    2   In the Name and Description fields, enter a name and description of the data set.

3   Click on the Edit button on the tab.

The Data window appears.

4   From the File menu, choose Import.

5   From the List Files of Type drop-down list, select ASCII Text Files (*.dat;*.txt;*.csv).

6   Use the Locations (Look in) drop-down list and Folders list to find the folder containing the import file.

7   Select the import file from the Folders list.

8   Click on the OK button.

9   Follow the instructions in Table 3 - 3.

Table 3 - 3:   Next step in the data import process.

If this dialog box appears	Do this
Survey Crafter Professional cannot find... **Survey Crafter Professional** [×] (?) Survey Crafter Professional cannot find the matching data dictionary file. You can import the data using Survey Crafter Professional's defaults (comma delimited values with one row for each record) or find the data dictionary file. Do you want to use the defaults? [Yes] [No] [Cancel]	Click on the Yes button if the file is in CSV (comma separated value) format. Click on the No button if the file is not in CSV format and then complete the task "To select a data dictionary file" below. Click on the cancel button if you do not want to continue.
Import Summary **Import Summary** [×] ┌ Statistics ─────────┐ [OK] 779 record(s) to be imported [Cancel] 11 matched variable(s) 13 unmatched dictionary variable(s) [Help] 14 unmatched study variable(s) [More >>]	Go to the section "Finding Matches for Unmatched Dictionary Variables (Task 2 of 3)" on page 3 - 24.
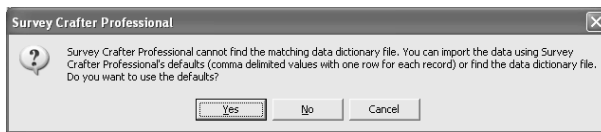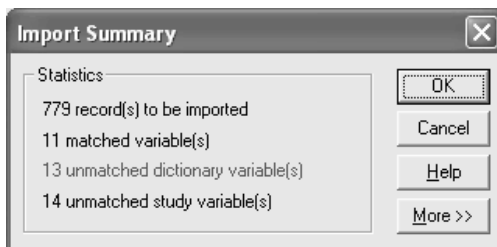
•   **To select a data dictionary file**

1   In the Survey Crafter Professional message box, click on the No button.

The Open Dictionary File dialog box appears.
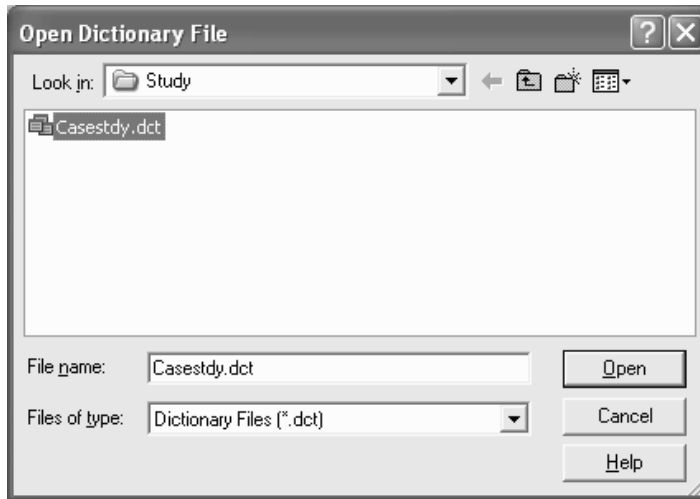
Figure 3 - 10:   The Open Dictionary File dialog box.

2   From the Files of Type drop-down list, select Dictionary Files (*.DCT).

3   Use the Locations (Look in) drop-down list and Folders list to find the folder containing the data dictionary file.

4   Select the data dictionary file from the Folders list.

5   Click on the OK button.

The Import Summary dialog box appears.

6   Go to the section "Finding Matches for Unmatched Dictionary Variables (Task 2 of 3)" below.

Finding Matches for Unmatched Dictionary Variables (Task 2 of 3)

Survey Crafter Professional attempts to pair each variable in the import file (these variables are called dictionary variables) with one of the study's imported variables. It performs this matching by comparing imported variables' codes with the dictionary variables' names as defined in the data dictionary file. If the code and name are the same, Survey

Crafter Professional copies the values in the dictionary variable to the imported variable. Survey Crafter Professional reports any unmatched variables in the Import Summary dialog box shown in Figure 3 - 11.

A variable can go unmatched for two reasons: one, a dictionary variable might not match an imported variable (the import file contains a variable that does not pair with a variable in the study); or two, an imported variable might not match a dictionary variable (the study contains a variable that does not pair with a variable in the import file). Survey Crafter Professional does not import unmatched dictionary variables and assigns the value NV to all unmatched imported variables.
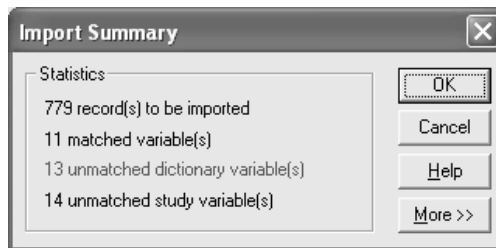
Figure 3 - 11:   The Import Summary dialog box.

Table 3 - 4 explains the information under Statistics in the Import Summary dialog box.

Table 3 - 4:   Information in the Import Summary dialog box.

Statistic	Description
...records to be imported	The number of records in the import file.
...matched variable(s)	Shows the number of dictionary variables in the import file with names that match the codes of the imported variables in the study.
...unmatched dictionary variable(s)	The number of variables in the import file with names that do not match any of the codes of the imported variables in the study.
...unmatched study variable(s)	The number of imported variables in the study with codes that do not match any of the names of the dictionary variables in the import file. Note that this number is not necessarily the same as the number of unmatched dictionary variables.

If Survey Crafter Professional reports any unmatched dictionary variables, you can pair them with imported variables using the Import Summary dialog box. Survey Crafter Professional may not match a dictionary variable and an imported variable if, for example, an imported variable has the code *name* and the corresponding dictionary variable's name is mistyped incorrectly as *names* in the data dictionary file. To correct this problem, map the dictionary variable *names* to the imported variable with the code *name*.

You can also break the match between a dictionary variable and an imported variable. Break this match if you recognize an incorrect dictionary variable-to-imported variable match or if you do not want to import the values in a particular dictionary variable. See "Breaking the Mapping between a Field and an Imported Variable" on page 3 - 29.

- **To find matches for unmatched dictionary variables**

   1   In the Import Summary dialog box, click on the More button.

   If there are no unmatched dictionary variables and you do not want to change any matches, go to step 6.

2 In the Dictionary Variables list, select an unmatched variable. (Unmatched variables appear in red on screen.)

Here the unmatched dictionary variable is *gen_addr*.

Import Summary

Statistics

779 record(s) to be imported

11 matched variable(s)

13 unmatched dictionary variable(s)

14 unmatched study variable(s)

OK

Cancel

Help

More >>

Dictionary **V**ariables:

gen_addr
gen_comp
gen_sugg
gen_name
use_copy
use_twoc
use_late
use_spec
use_two2

Corresponding Study Variable

Variable Code: (No selection)

Variable Name: (No selection)

Select...

Deselect

Figure 3 - 12:   The Import Summary dialog box (expanded).

3 Click on the Select button.

The Select Variable dialog box appears.

4 In the Select Variable dialog box, select the imported variable you want to store the data from the unmatched dictionary variable.

5 Click on the OK button.

Survey Crafter Professional displays the dictionary variable in black to indicate that the variable is now matched with an imported variable.

6 Repeat steps 2 through 5 for each unmatched dictionary variable you want to match with an imported variable.

7 Click on the OK button.

8 Do one of the following:

• If a message box appears stating that Survey Crafter Professional is importing the data, wait until the import is complete.

When the import is complete, the records appear in the Data window. If any values in a variable are erroneous, the Data Error Log appears. See the section "Isolating Errors in Data Sets" on page 3 - 30.

• If the Import Options dialog box (shown below) appears, go to the section "Combining New and Existing Data (Task 3 of 3)" below.

The study already contains records and you need to tell Survey Crafter Professional whether to add the records in the import file to the records in the study or to overwrite the existing records with those in the import file.
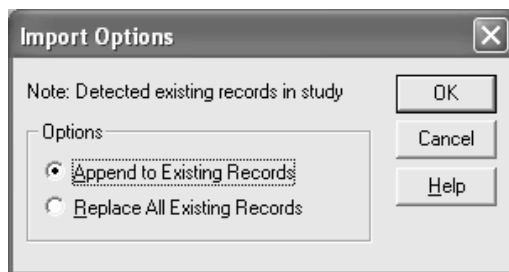
Figure 3 - 13:   The Import Options dialog box.

Combining New and Existing Data (Task 3 of 3)

If the study already contains survey responses, Survey Crafter Professional displays the Import Options dialog box. Use this dialog box to specify how to combine the data from the import file with the data already in the study.

• **To combine new and existing data**

1 In the Import Options dialog box, select one of the following options for combining new and existing data:

• Append to Existing Records to add all records in the current import file to the end of the study's data set

- Replace All Existing Records to overwrite the study's data set with the data in the current import file

2 Click on the OK button to close the Import Options dialog box.

The Import Data dialog box appears, indicating the status of the import.

Survey Crafter Professional imports the data and displays the records in the Data window. If any variable contains unexpected or unreadable values, Survey Crafter Professional displays the Data Error Log. See "Isolating Errors in Data Sets" on page 3 - 30.

Breaking the Match between a Dictionary Variable and an Imported Variable

Break this match if you recognize an incorrect dictionary variable-to-imported variable match or if you do not want to import the values in a particular dictionary variable.

- **To break the match between a field and a variable**

  1 In the Import Summary dialog box, click on the More button.

  2 In the Dictionary Variables list, select the dictionary variable whose match you want to break. (Matched variables appear in black.)

  The Corresponding Study Variable box shows the study's imported variable to which the field is currently matched.

  3 Click on the Deselect button.

  The variable now appears in red in the Dictionary Variables list, indicating that it is no longer matched with an imported variable. You can now match the dictionary variable with a new imported variable. See "Finding Matches for Unmatched Dictionary Variables (Task 2 of 3)" on page 3 - 24.

Isolating Errors in Data Sets

After importing data, Survey Crafter Professional checks whether each variable's values meet the specifications you defined when creating the imported variable. A value outside specifications is either unreadable or unexpected. See Table 3 - 1 for an explanation of these errors.

If a value is outside the specifications, Survey Crafter Professional reports the erroneous value in the Data Error Log, a window that appears on top of the Data window. Survey Crafter Professional also color codes the error in the Data window. Use the Data Error Log to find records containing errors and make the process of editing variables' values faster.

In the Primer

For background information on correcting errors in data sets, see the section "Handling Errors in Survey Data" in Chapter 5 of *Understanding Survey Research: A Primer for Success*.

• **To isolate errors in data sets**

   1   If the Data Error Log is not open, choose the Data Error Log command from the View menu.

The Data Error Log lists the number of unexpected and unreadable values in the data set by variable.

For example, the variable *gen_company size* contains one unreadable value.
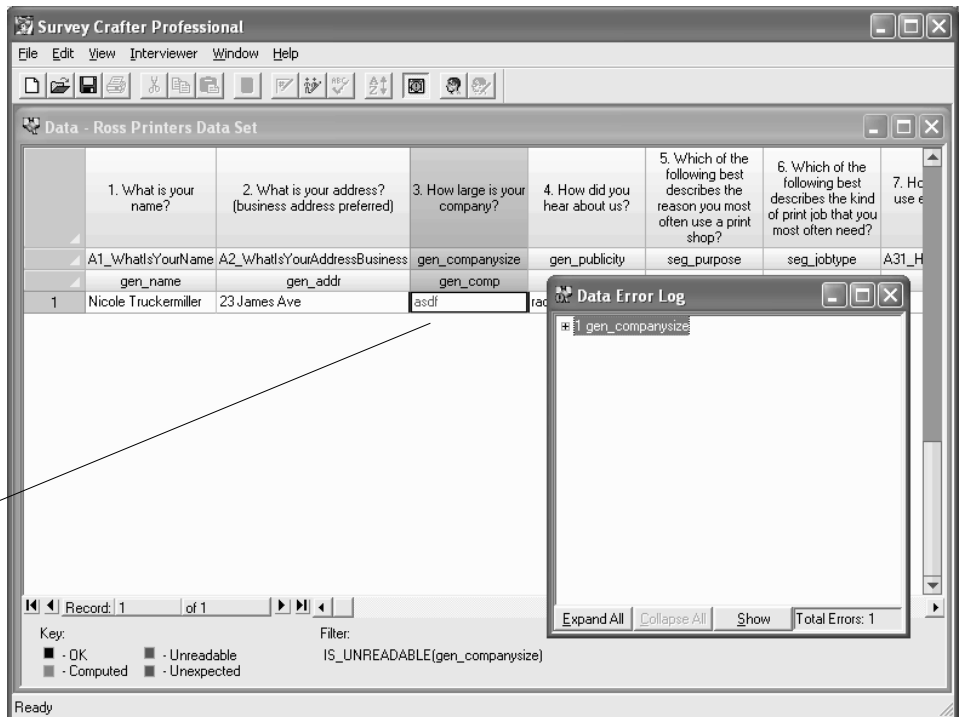
Figure 3 - 14: The Data Error Log.

2   View errors for variables listed in the Data Error Log as follows:

- To list the errors in one variable, double click on a variable.

- To list the errors in all variables, click on the Expand All button.

> **Note** To hide the list of errors in a variable, double click on the variable. To hide the lists of errors in all variables, click on the Collapse All button.

3   Select an error.

4   Click on the Show button.

An expression appears in the Data window's Filter field. This expression limits the records in the Data window to only those containing the error you selected.

You can now edit the erroneous values in the records. See "Editing Data Sets" on page 3 - 33.

Only the records containing the selected error appear. In this case, the Unreadable error for the variable *gen_companysize*.

The variable you selected in the Data Error Log appears in the Data window.
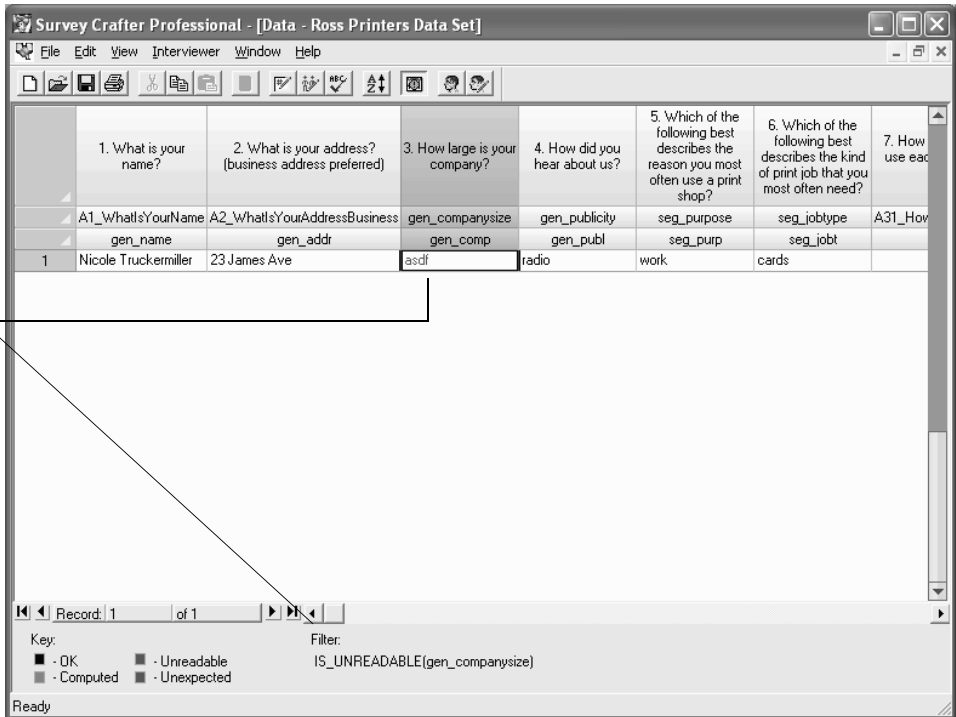
Figure 3 - 15:   Records containing the selected error displayed in the Data window.

Editing Data Sets

There are several reasons for editing a study's data set. Probably the most common reason is to correct erroneous values before analyzing the data. For example, respondents may have answered a question that the survey's skip logic dictates they should not have answered or a respondent's answer may lie outside the range of values you expect for the question. Records sometimes contain so many errors that they are best deleted from the data set.

You may also need to edit a data set to add more responses to records. For example, suppose you are interviewing a respondent and entering his replies using the Interviewer and have to stop the interview. You can call back later to complete the interview and add the rest of his replies to the record.

The following are various ways you can review and edit a data set.

• Using the Interviewer to Edit Values

• Calculating New Values

• Selecting New Values from Cells' Drop-down Lists

• Finding and Replacing Values in the Data

• Flagging Errors in Data Sets

• Checking Spelling in the Data

• Using the Interviewer to Check Spelling in the Data

• Deleting a Record

• Purging All Deleted Records

Using the Interviewer to Edit Values

You can use the Interviewer to edit records or you can type directly in cells in the Data window.

• **To edit a record by using the Interviewer**

    1   In the Data window, select the respondent records you want to edit.

To select more than one respondent record, click on the row selector of the first record you want to edit and then either hold down the [SHIFT] key to highlight adjacent records or hold down the [CTRL] key to highlight nonadjacent records and then click on the row selectors of the other records you want to edit.

To select all of the respondent records in the Data window, click on the top left corner of the spreadsheet.

2 From the Interviewer menu, choose Edit Respondent or click on the Edit Respondent button on the toolbar.

Edit Respondent button

You can also double click on the row selector to access the Interviewer or click the right mouse button and choose Edit Respondent from the pop-up menu.

3 If Survey Crafter Professional displays the Interviewer Options dialog box, do the following:

Choose the surveys to display in the Interviewer.

Clear this check box to prevent this dialog box from appearing each time you start the Interivewer.
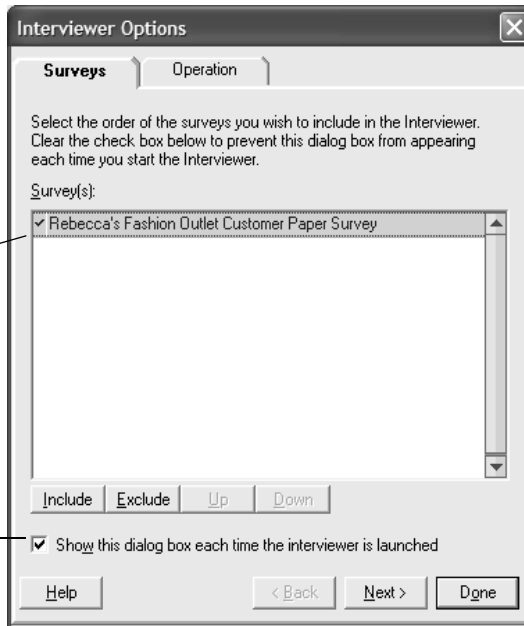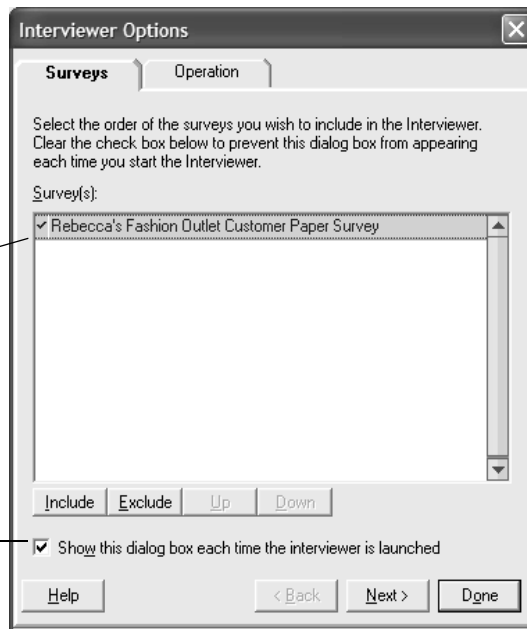

Figure 3 - 16:   The Surveys tab of the Interviewer Options dialog box.

• In the Surveys tab, choose the order of the surveys you want to include in the Interviewer.

• In the Operation tab, choose how you want Survey Crafter Professional to display your survey's blocks in the Interviewer.

Choose how the Interviewer displays the survey blocks.

Clear this check box to prevent this dialog box from appearing each time you start the Interivewer.
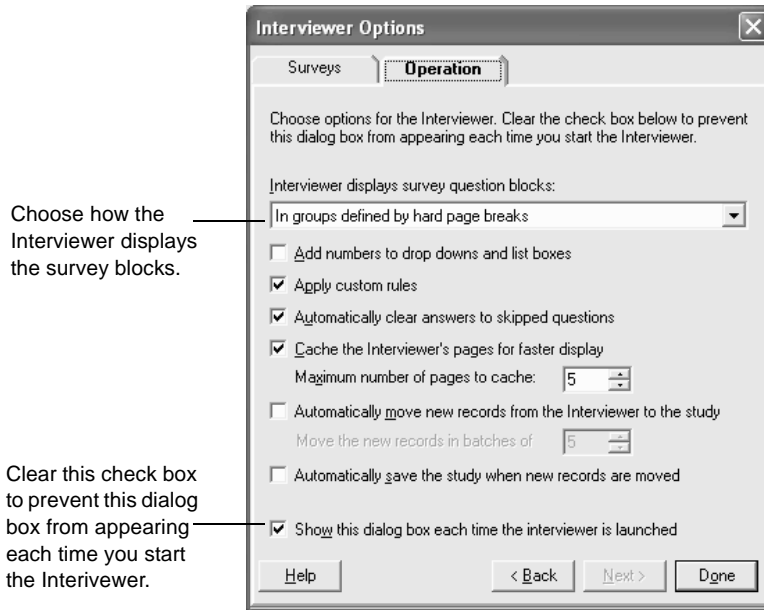
Figure 3 - 17:   The Operation tab of the Interviewer Options dialog box.

• In the Operation tab, if you want, click to select the *Cache the Interviewer's pages for faster display* check box and enter the number of pages to store in memory. If you select this check box, Survey Crafter Professional will store up to the number of pages you specify in memory, making the Interviewer display the pages faster.

• To prevent the Interviewer Options dialog box from displaying every time you start the Interviewer, clear the *Show whenever the interviewer is launched* check box at the bottom of the dialog box.

• Click on the Done button.

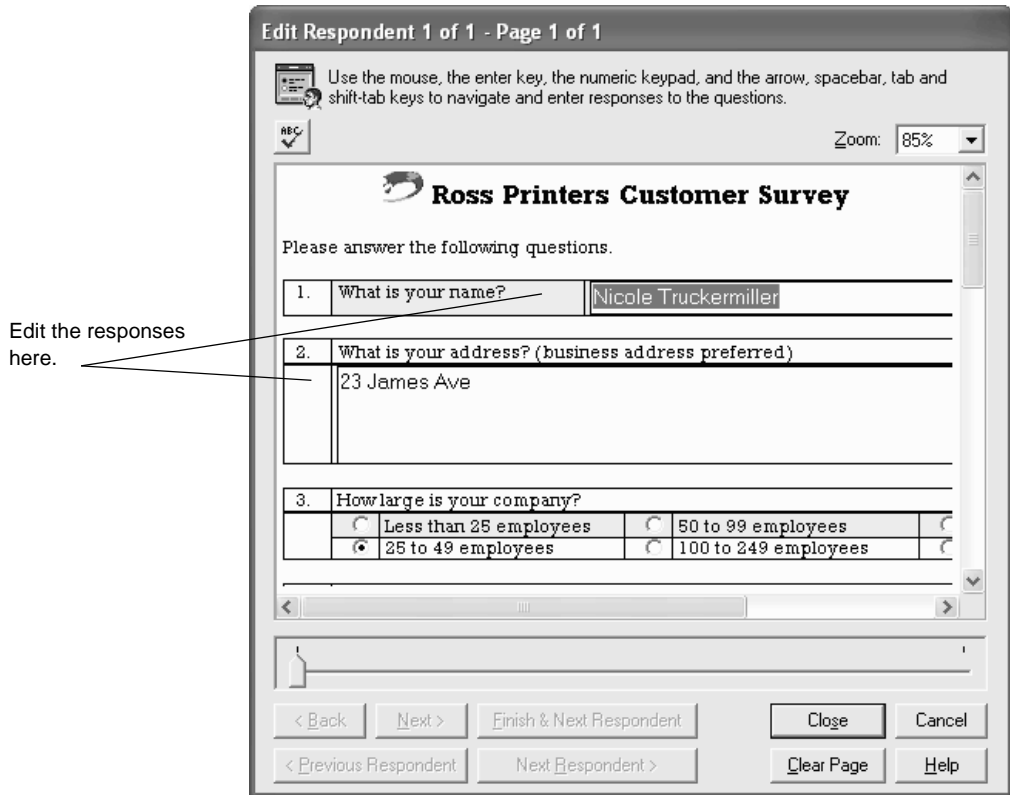Survey Crafter Professional displays the Interviewer window.

Edit the responses here.
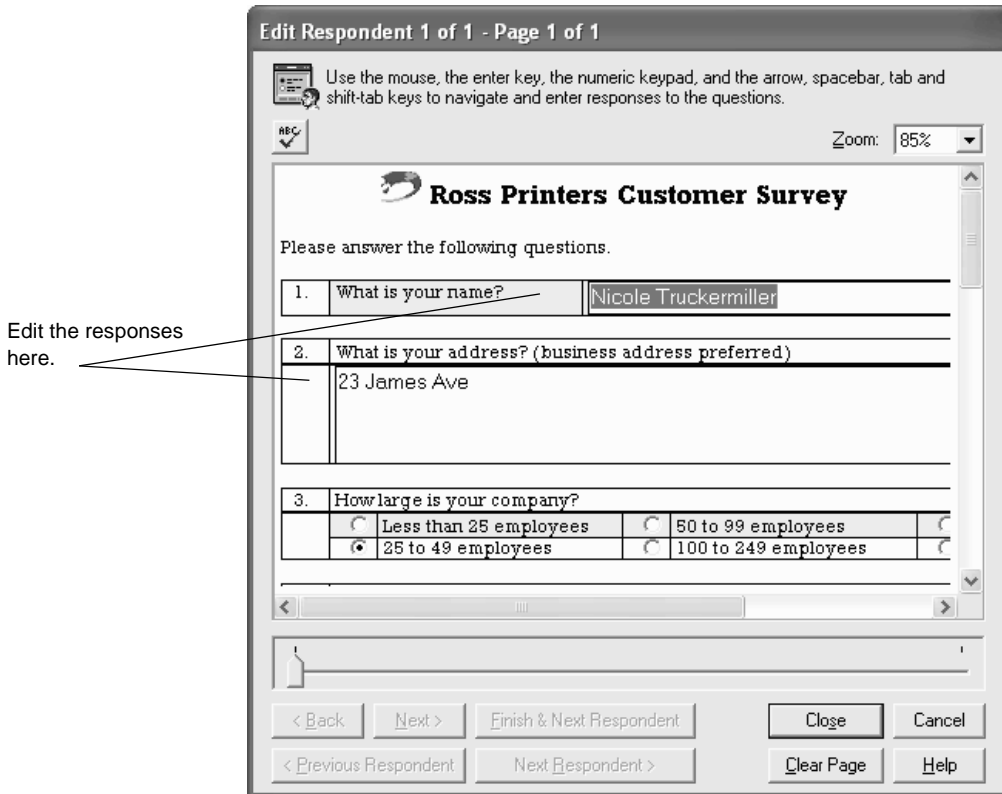
Figure 3 - 18: The Interviewer for editing existing records in the study's data set.

4 If you want, choose the magnification level you want to apply to the elements in the Interviewer.

When you choose 100%, Survey Crafter Professional displays each element normally. When you choose 50%, Survey Crafter Professional reduces the size of each element by one-half. When you choose 200%, Survey Crafter Professional doubles the size of each element.

5 If you want, resize the Interviewer window to better display your survey's questions.

To resize the Interviewer window, click on and drag any of the window's borders. You can also double-click on the Interviewer window's caption to have the window occupy the entire screen. Double-clicking on the Interviewer window's caption again returns the window to its previous size.

6   Using the slider control or the Next and Back buttons, go to the page that contains the questions for which you want to edit the responses.

For instructions on navigating the Interviewer and entering responses, see the section "Entering Respondents' Replies" on page 3 - 11.

7   Use the mouse or the Enter, Up Arrow, Down Arrow, Left Arrow, Right Arrow, Tab and Shift-Tab keys to move from one question or prompt to another. Enter the new responses to the questions.

8   If you want, go to another page by using the slider control or the Next and Back buttons. Then repeat step 7.

9   When you are done editing the record, click on either the Finish & Next Respondent button or the Close button.

If you click on the Finish & Next Respondent button, Survey Crafter Professional displays the first page of the survey with the answers from the next respondent record. Repeat steps 6 - 9.

If you click on the Close button, Survey Crafter Professional dismisses the Interviewer and makes the changes in the Data window.

10   If you want to recalculate values for the record's computed variables, choose the Update command from the Edit menu.

- **To edit a cell value by typing in a cell**

1   In the Data window, double click in the cell with the value you want to change.

2   Type the new value following the directions in Table 3 - 5.

Table 3 - 5:Typing values in cells in the Data window.

When entering this type of value	Type
Quantity	A number or NR for No Reply or NV for No Value

Table 3 - 5:Typing values in cells in the Data window. (Continued)

When entering this type of value	Type
Literal	Any character(s) or NV for No Value
Category	A name of one of the variable's categories or NR for No Reply or NV for No Value

3   Press the [ENTER] key.

4   To update the study's data set, choose Update from the Edit menu or click on the Update button on the toolbar.

Update button

Blanks appear as NV (No Value).

Calculating New Values

You can write an expression to calculate a value for a cell in the Data window. For example, if a record is missing a value for the variable *age*, you can write an expression to assign the record the mean of the values in *age*.

- **To calculate new values in data sets**

1   In the Data window, select the cell or range of cells containing the values you want to change.

The cells must all be in the same column.

> **Note** To select a range of adjacent cells, click on the first cell you want, and then hold down the [SHIFT] key while clicking on the last cell you want. To select nonadjacent cells, hold down the [CTRL] key while clicking on each cell you want.

2   From the Edit menu, choose Edit Values.

Expression Builder button

3   In the New Value Expression field, type the expression for calculating the value for the cell or range.

For help writing an expression, click on the Expression Builder button. Also see Chapter 7, "Expressions."
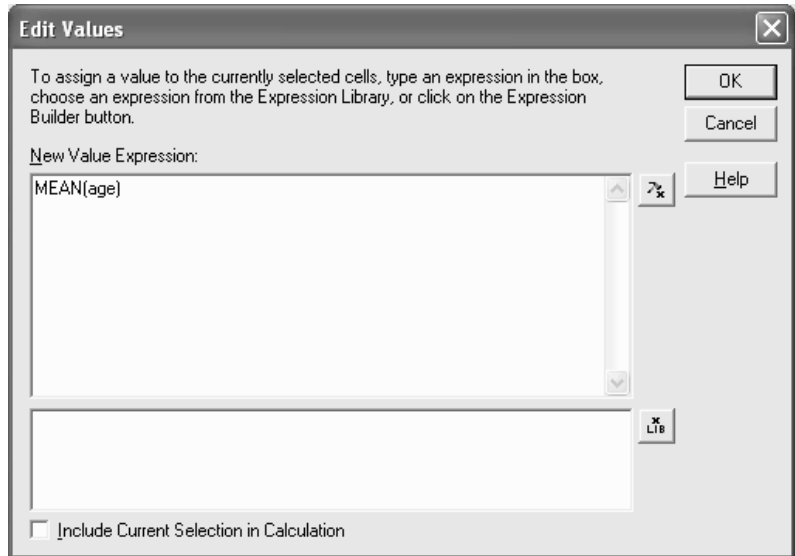
Figure 3 - 19: The Edit Values dialog box.

4   To include the values in the selected cells in the calculation, select the Include Current Selection in Calculation check box.

You probably want to leave this check box cleared especially if the selected cells contain erroneous values. Including erroneous values in the calculation could skew the results.

5   Click on the OK button.

6   To update the study's data set, choose Update from the Edit menu or click on the Update button on the toolbar.

Update button

Selecting New Values from Cells' Drop-down Lists

Each cell that belongs to an imported category or quantity variable in the Data window includes a drop-down list of values that you access by double clicking in the cell. The values in the drop-down list vary with the type of variable the cell belongs to as follows:

- for an imported category variable, the drop-down list contains the variable's categories plus NR and NV.

- for an imported quantity variable, the drop-down list contains NR and NV.

- **To select a cell value from the cell's drop-down list**

    1 In the Data window, double click in the cell whose value you want to change.

    2 From the cell's drop-down list, select the value you want.

The variable *gen_company size* is an imported category variable. Therefore the cell's drop-down list features the categories the variable accepts.
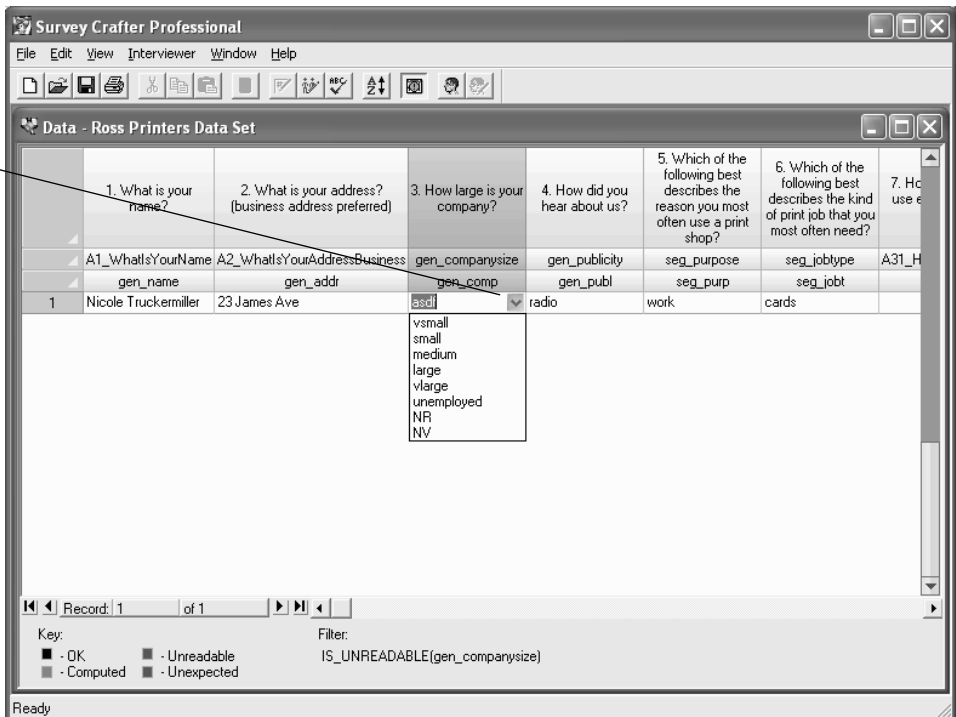
Figure 3 - 20: A cell's drop-down list in the Data window.

Update button

3 To update the study's data set, choose Update from the Edit menu or click on the Update button on the toolbar.

Finding and Replacing Values in the Data

To search the Data window for any combination of characters, numbers, words or phrases, choose Find/Replace from the Edit menu when the Data window is active.

You can also use the command to make changes but only to the data stored by the imported variables in the window. To wit: although you can use the Find/Replace command to search the data stored by a computed variable, you cannot use the command to make any changes to that data. In this case, you would modify the variable's definition instead.

- **To find or to find and replace values in the data**

    1 Select the Data tab of the Study window.

    2 Click on the Edit button on the tab.

    3 If you do not want to search all of the data in the Data window, highlight the columns, rows or values you want to search or change.

    4 From the Edit menu, choose Find/Replace.

    5 Follow the instructions on the screen.

Flagging Errors in Data Sets

Survey Crafter Professional uses color coding in the Data window to flag erroneous values in a study's data set. Red indicates an unreadable value and blue indicates an unexpected value. Black indicates an acceptable value for an imported variable. Gray indicates a value in a computed variable.

See Table 3 - 1 for more information on erroneous values and color coding in the Data window.

After you edit any values in the Data window or edit any variable's settings, have Survey Crafter Professional scan the data set again to check whether an edit results in an unexpected or unreadable value.

- **To flag errors in data sets**

    1 To display the study's data set, select the Study window's Data tab.

Then click on the Edit button on the tab.

2 To scan the data set for errors, choose Update from the Edit menu or click on the Update button on the toolbar.

Update button

Survey Crafter Professional applies color coding to variables' values. You can now edit any remaining erroneous values.

Checking Spelling in the Data

To check and correct the spelling of the responses to your surveys' open-end questions as well as the values contained in the study's other imported literal variables, choose Spelling from the Edit menu or click on the Check Spelling button on the toolbar when the Data window is active.

- **To check spelling in the data**

    1 Select the Data tab of the Study window.

    2 Click on the Edit button on the tab.

    3 If you do not want to check all of the literal values in the Data window, highlight the columns, rows or values you want to check.

    4 From the Edit menu, choose Spelling or click on the Check Spelling button on the toolbar.

Check Spelling button

    Follow the instructions on the screen.

Using the Interviewer to Check Spelling in the Data

You can also use the Interviewer to check and correct the spelling of the responses to your surveys' open-end questions.

- **To use the interviewer to check spelling in the data**

    1 In the Data window, select the records that contain the responses you want to check.

To select more than one respondent record, click on the row selector
of the first record you want to check and then either hold down the
[SHIFT] key to highlight adjacent records or hold down the [CTRL]
key to highlight nonadjacent records and then click on the row
selectors of the other records you want to check.

To select all of the respondent records in the Data window, click on
the top left corner of the spreadsheet.

2 Click on the Edit Respondent button on the toolbar.

Edit Respondent
button

Alternatively, you can click the right mouse button and choose Edit
Respondent from the pop-up menu.

3 If Survey Crafter Professional displays the Interviewer Options dialog
box, do the following:

Choose the surveys
to display in the
Interviewer.

Clear this check box
to prevent this dialog
box from appearing
each time you start
the Interivewer.

Figure 3 - 21:   The Surveys tab of the Interviewer Options dialog box.

• In the Surveys tab, choose the order of the surveys you want to
include in the Interviewer.

- In the Operation tab, choose how you want Survey Crafter Professional to display your survey's blocks in the Interviewer.

Choose how the Interviewer displays the survey blocks.

Clear this check box to prevent this dialog box from appearing each time you start the Interivewer.
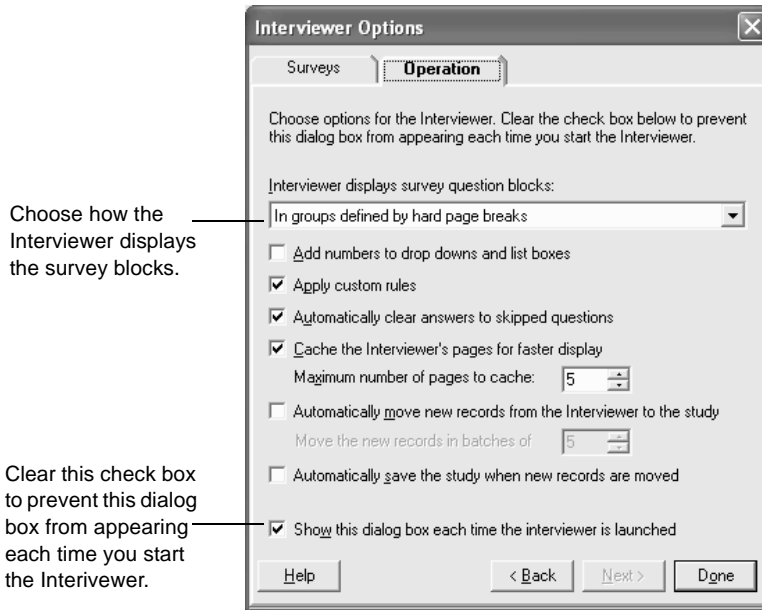
Figure 3 - 22:   The Operation tab of the Interviewer Options dialog box.

- In the Operation tab, if you want, click to select the *Cache the Interviewer's pages for faster display* check box and enter the number of pages to store in memory. If you select this check box, Survey Crafter Professional will store up to the number of pages you specify in memory, making the Interviewer display the pages faster.

- To prevent the Interviewer Options dialog box from displaying every time you start the Interviewer, clear the *Show whenever the interviewer is launched* check box at the bottom of the dialog box.

- Click on the Done button.

Survey Crafter Professional displays the Interviewer window.

Edit the responses here.

Figure 3 - 23:   The Interviewer for editing existing records in the study's data set.

4   If you want, choose the magnification level you want to apply to the elements in the Interviewer.

When you choose 100%, Survey Crafter Professional displays each element normally. When you choose 50%, Survey Crafter Professional reduces the size of each element by one-half. When you choose 200%, Survey Crafter Professional doubles the size of each element.

5   If you want, resize the Interviewer window to better display your survey's questions.

To resize the Interviewer window, click on and drag any of the window's borders. You can also double-click on the Interviewer window's caption to have the window occupy the entire screen. Double-clicking on the Interviewer window's caption again returns the window to its previous size.

6 Click on the Check Spelling button above and to the left of the survey in the Interviewer window.

Check Spelling button

The check begins with the current record on the current page and goes on until each of the remaining records on the page has been checked. It then goes on to the next page, beginning with the first record that has been loaded into the Interviewer and proceeding until each of the remaining records on the page has been checked. It continues in this way until all of the records on the remaining pages have been checked.

When Survey Crafter Professional encounters an unknown or misspelled word, it displays the Spelling Check dialog box. Follow the instructions on the screen.

You may press any key at any time or click on the Stop button on the Spelling Check dialog box to stop the operation.

Deleting a Record

Delete a record if, for example, its values are unreadable or you believe it contains many invalid or unreliable responses.

If you delete a record, you may need to update one or more of the study's analyses. See the section "Updating Tables" on page 4 - 78.

- **To delete a record**

    1 At the Data tab of the Study window, click on the Edit button on the tab.

    2 Select the record to delete.

    3 From the Edit menu, choose Delete or press the [DELETE] key.

    Survey Crafter Professional deletes the record from the study's data set.

Update button

4 To recalculate values in the study's computed variables, do one of the following:

- From the Edit menu, choose Update.

- Click on the Update button on the toolbar.

Purging All Deleted Records

Purge all deleted records if, for example, you want to reduce the overall size of the study file.

If you purge all deleted records, you may need to update one or more of the study's analyses. See the section "Updating Tables" on page 4 - 78.

- **To purge all deleted records**

    1 At the Data tab of the Study window, click on the Edit button on the tab.

    2 From the Edit menu, choose Purge All Deleted Records.

    Survey Crafter Professional permanently removes all deleted records from the study's data set.

    Survey Crafter Professional also automatically recalculates the values in the study's computed variables.

Weighting Data

The best way to work with weighted data in Survey Crafter Professional is to import a weighted data set. However, you can weight values in individual variables by creating a computed variable with the IF( ) function.

You can also have Survey Crafter Professional create a computed quantity variable for you by using the Category to Weights Variable Wizard.

Below are two examples of expressions for weighting data with the IF( ) function.

• Example 1: Using the IF( ) function to assign two weighting factors

Suppose you want to weight males' income (stored in the variable *income*) by three-quarters of the actual amounts and females' incomes by one-and-a-half times the actual amounts.

Use an expression like this: IF(gender = 'male', income*0.75, income*1.5).

This expression tests whether the value for a respondent in *gender* is equal to 'male'. If it is, the respondent's value in *income* is multiplied by 0.75. If the value in *gender* is not equal to 'male', the value in *income* is multiplied by 1.5.

• Example 2: Using the IF( ) function to assign more than two weighting factors

Suppose you want to weight incomes (stored in the variable *income*) based on three age groups. For respondents under age 25, you want to weight their incomes by half of the actual values. For respondents ages 25 to 50, you want to weight their incomes by one-and-a-half times the actual values. For respondents over 50, you want to weight their incomes by two times the actual values.

Use an expression like this: IF(age<25, income*0.5, IF(age>=25 AND age <=50, income*1.5, income*2)).

This expression tells Survey Crafter Professional to test first whether the respondent's value in the variable *age* is less than 25. If it is, the value in *income* is multiplied by 0.5. If the value in *age* is 25 or greater, Survey Crafter Professional next tests whether the value in *age* is between 25 and 50 inclusive. If it is, the value in *income* is multiplied by 1.5. If the value in *age* is greater than 50, the value in *income* is multiplied by 2.

To add a fourth weighting factor, replace the income*2 argument with another IF( ) function.

In the Primer

For more information on weighting data, see the section "Weighting Data for Analysis" in Chapter 5 of *Understanding Survey Research: A Primer for Success*.

- **To weight data**

    1   Select the variables tab of the Study dialog box, and then click on the New button.

    2   In the New Variable dialog box, choose Computed Variable under Custom Variable.

    3   In the Variable Information dialog box, do the following:

    - In the Name field, enter the name of the variable.

       For example, if you are weighting values in the variable *income*, call the computed variable *weighted_income*.

       The name of the variable must begin with a letter and may include up to 31 additional letters, digits, and underscore characters.

    - In the Code field, accept the default or enter a new code for the variable.

       Survey Crafter Professional automatically generates the variable code based on the text in the Name field.

       The variable code is used outside Survey Crafter Professional in exported data files.

    - In the Description field, enter a description of the values the variable stores.

    - Click on the OK button.

4   In the Variable dialog box, choose Quantity under Variable Type.

5   In the Quantity Expression field, write the expression using the `IF(` `)` function to weight the data.

For help writing an expression, click on the Expression Builder button. Also see Chapter 7, "Expressions."

6   Click on the OK button to close the Variable dialog box.

7   To calculate the weighted values, see the section "Updating Variables' Values" on page 6 - 68.

Exporting Data Sets

Sometimes you might want to mail a study's data set to a coworker or use a data set outside of Survey Crafter Professional. You can export a study's data set to a CSV (comma separated value) text file, a Micorosft® Excel® 97 workbook file or a HTML web page file.

Exporting a data set to a CSV text file involves selecting the file to write the data set to and confirming the variables to export. By default, Survey Crafter Professional exports only those variables that appear in the Data window. In addition, for category variables, you can export either category codes or category names.

When exporting a data set to a CSV text file, Survey Crafter Professional creates a CSV (comma separated value) text file and a data dictionary file. It stores both of these files in the same folder. The export file and the data dictionary file have the same name but the export file uses the .DAT extension and the data dictionary file uses the .DCT extension. For more on comma delimited files and data dictionary files, see Appendix A, "About Import Files and Data Dictionary Files."

Exporting a data set to a Microsoft® Excel® 97 workbook or to a HTML web page file only involves selecting the file to write the data set to.

> **Note** Microsoft® Excel® 97 worksheets do not support more than 255 columns.

- **To export data**

    1 Select the Data tab of the Study window. Then click on the Edit button on the tab.

    2 From the File menu, choose Export.

    3 In the Save Data File As dialog box, choose one of the following from the Save as type drop down:

    - ASCII Text File

    - Microsoft Excel 97 workbook

    - Web Page

4   Enter a name and location for the file you want to write the data set to.

If you chose ASCII Text File in step 3, use the .DAT, .TXT or .CSV extension with the filename.

If you chose Microsoft Excel 97 workbook in step 3, use the .XLS extension with the filename.

If you chose Web Page in step 3, use the .HTM or HTML extension with the filename.

5   Click on the OK button.

If you chose Microsoft Excel 97 workbook or Web Page in step 3, Survey Crafter Professional creates the export file.

If you chose ASCII Text File in step 3, continue with step 6.

6   In the Export Summary dialog box, click on the More button.

7   If you do not want to export one or more variables, select the variables in the Variables list and then click on the Deselect button.

The variables Survey Crafter Professional will not export appear in red.
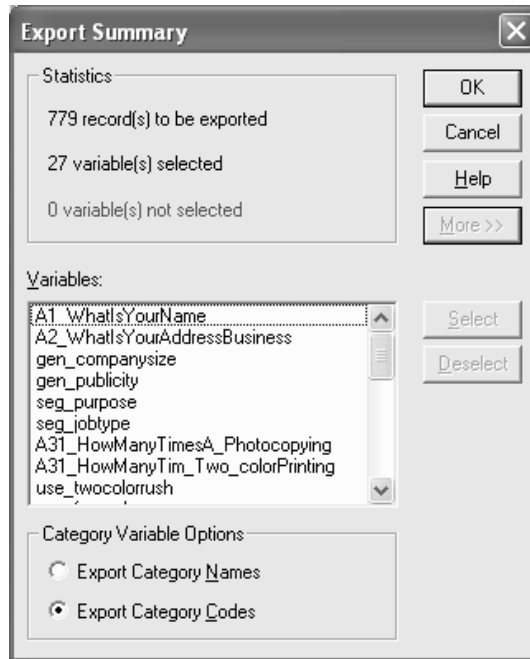
Figure 3 - 24: The Export Summary dialog box.

8 Under Category Variable Options, select an option for exporting data in category variables.

9 Click on the OK button.

Survey Crafter Professional creates the export file and its corresponding data dictionary file. The export file features one line for each record in the study's data set with values in each record separated by commas.

Changing the Data Window Display

You can customize the Data window display in the following ways:

- Changing the Number of Records Displayed in the Data Window

- Hiding and Showing Columns in the Data Window

- Rearranging Columns in the Data Window

- Changing Column Widths in the Data Window

- Sorting Respondent Records in the Data Window

Changing the Number of Records Displayed in the Data Window

To make the Data window display more manageable, you can view a subset of the records in a study's data set. You can also view all of the data set's records. By default, the Data window displays all of the records in a data set.

- **To display a subset of records in a study's data set**

   1   At the Data tab of the Study window, click on the Edit button on the tab.

   2   From the Edit menu, choose Edit Filter.

Expression Builder button

   3   In the Filter Expression field, write the expression for selecting records to display.

       The expression must evaluate to TRUE or FALSE for each respondent in the data set. Records of respondents for whom the expression is TRUE appear in the Data window.

For help writing an expression, click on the Expression Builder button. Also see Chapter 7, "Expressions."

Records of respondents for whom the variable *Age* stores a value greater than 45 will appear in the Data window.
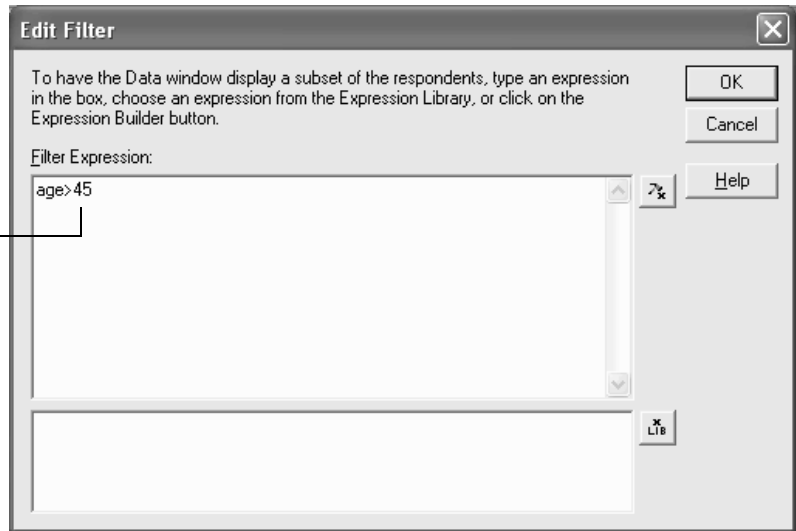
Figure 3 - 25: The Edit Filter dialog box.

4   Click on the OK button.

The expression appears in the Data window's Filter field.

5   To update the Data window display, choose Update from the Edit menu or click on the Update button on the toolbar.

Update button

- **To display all of the records in a study's data set**

    1   Make the Data window active by clicking in it or choosing Data from the Window menu.

    2   From the Edit menu, choose Clear Filter.

    Survey Crafter Professional deletes the expression in the Filter field and displays all of the data set's records.

Hiding and Showing Columns in the Data Window

You can hide and show the columns in the Data window. If you hide a column in the Data window, you can still use the corresponding variable in expressions. Hiding a column does not remove the corresponding variable from the study.

- **To hide columns in the Data window**

    1 Select the Data tab of the Study window, and then click on the Edit button on the tab.

    2 From the View menu, choose Show/Hide Variables.

    Alternatively, select one or more variables in the Data window (by clicking on one or more column selectors) and then choose Hide Selected Variables from the Edit menu.

A check mark indicates that the variable currently appears in the Data window.

	Show	Variable Name	Question/Description
1	☑	⬛ A1_WhatIsYourName	1. What is your name?
2	☑	⬛ A2_WhatIsYourAddressBusiness	2. What is your address? (business address pref
3	☑	c gen_companysize	3. How large is your company?
4	☑	c gen_publicity	4. How did you hear about us?
5	☑	c seg_purpose	5. Which of the following best describes the rea
6	☑	c seg_jobtype	6. Which of the following best describes the kind
7	☑	q A31_HowManyTimesA_Photocopying	7. How many times a month do you use each of
8	☑	q A31_HowManyTim_Two_colorPrinting	7. How many times a month do you use each of
9	☑	q use_twocolorrush	7. How many times a month do you use each of
10	☑	q use_fourcolor	7. How many times a month do you use each of
11	☑	q A31_HowMany_AfterHoursDrop_off	7. How many times a month do you use each of
12	☑	q A31_HowMany_SpecializedOrNonsta	7. How many times a month do you use each of
13	☑	q A30_HowSatisfi_OurTurnaroundTime	8. How satisfied are you with each of the followi
14	☑	q A30_HowSatisfied_TheQualityOfOur	8. How satisfied are you with each of the followi
15	☑	q A30_HowSatis_OurPick_upAndDelive	8. How satisfied are you with each of the followi
16	☑	q sat_hours	8. How satisfied are you with each of the followi

Show/Hide Variables

Use the buttons below to show, hide and arrange the variables in the Data window.

☐ Always list the variables in the order they appear in the survey(s).

OK | Cancel | Alpha | Survey | Help

Show | Hide | Up | Down | Top | Bottom | Locate

Figure 3 - 26: The Show/Hide Variables dialog box.

3   In the Show/Hide Variables dialog box, select the variables you want to remove from the Data window display.

> **Note** To select a range of adjacent variables, click on the first variable you want and then hold down the [SHIFT] key while clicking on the last variable you want. To select a range of nonadjacent variables, hold down the [CTRL] key while clicking on each variable you want.

4   Click on the Hide button.

The check mark next to each variable you selected disappears.

5   Click on the OK button.

Survey Crafter Professional removes the variables from the Data window.

- **To show columns in the Data window**

    1   Select the Data tab of the Study window, and then click on the Edit button on the tab.

    2   From the View menu, choose Show/Hide Variables.

    3   In the Show/Hide Variables dialog box, select the variables you want to return to the Data window display.

    > **Note** To select a range of adjacent variables, click on the first variable you want and then hold down the [SHIFT] key while clicking on the last variable you want. To select a range of nonadjacent variables, hold down the [CTRL] key while clicking on each variable you want.

    Check marks indicate variables currently appearing in the Data window.

    4   Click on the Show button.

    A check mark appears next to each variable you selected.

    5   Click on the OK button.

    Survey Crafter Professional returns the variables to the Data window.

Rearranging Columns in the Data Window

Rearrange columns in the Data window to change the order in which variables appear.

- **To rearrange columns in Data window**

    1   Select the Data tab of the Study window, and then click on the Edit button on the tab.

    2   From the View menu, choose Show/Hide Variables.

Top-to-bottom order in this list matches left-to-right order in the Data window.
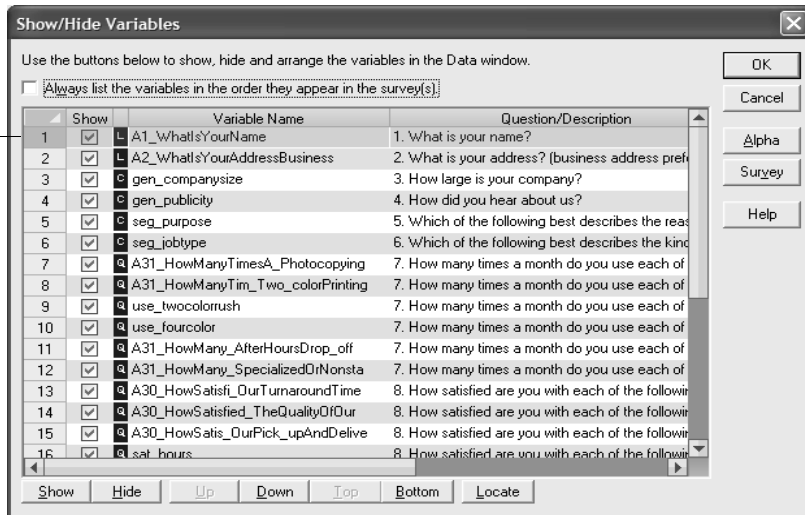
Figure 3 - 27:   The Show/Hide Variables dialog box.

3   In the Show/Hide Variables dialog box, do any of the following:

- Select *Always list the variables in the order they appear in the survey(s)* to have Survey Crafter Professional position the variables for you. Clear the check box to position the variables yourself.

• Highlight the variables you want to reposition in the Data window and click on the Up, Down, Top or Bottom buttons to move the highlighted variables. These buttons are not available if you have selected *Always list the variables in the order they appear in the survey(s)*.

> **Note** To select a range of adjacent variables, click on the first variable you want and then hold down the [SHIFT] key while clicking on the last variable you want. To select a range of nonadjacent variables, hold down the [CTRL] key while clicking on each variable you want.

• Click on the Alpha button to have Survey Crafter Professional change the order to show the variables in alphabetical order by variable name. This button is not available if you have selected *Always list the variables in the order they appear in the survey(s)*.

• Click on the Survey button to have Survey Crafter Professional change the order to show the variables in the order that they appear in your surveys. This button is not available if you have selected *Always list the variables in the order they appear in the survey(s)*.

Top-to-bottom order in the list corresponds to left-to-right order in the Data window.

4   Click on the OK button.

Survey Crafter Professional changes the order of columns in the Data window.

Changing Column Widths in the Data Window

Change column widths to show less or more of the variables' values in the Data window. Cell heights can also be changed in the Data window.

• **To change column widths in the Data window**

1   At the Data tab of the Study window, click on the Edit button on the tab.

2   Position the pointer on a column selector's border.

The pointer turns into the border symbol (a two-sided arrow).

3   Click and drag the border until the column has the width you want.

Sorting Respondent Records in the Data Window

You can sort respondent records in the Data window to show the records in a different order.

•   **To sort respondent records in the Data window**

1   At the Data tab of the Study window, click on the Edit button on the tab.

2   Click on the column selector that corresponds to the primary variable you want to use to sort the respondent records.

Survey Crafter Professional highlights the selected column.

3   If you want, press and hold the [CTRL] key and then click on the column selector that corresponds to the secondary variable you want to use to sort the respondent records.

Survey Crafter Professional highlights the selected column.

4   Choose Sort Respondents from the Edit menu.

Type the name of or select the primary variable used to sort the respondent records in the Data window.

Sort Respondents

Choose the variable(s) you want to use to sort the respondents. Click on the Select buttons to choose the variable(s) or enter the names of the variables directly in the boxes. Click on the Help button or press F1 for more information.

Primary Sort Variable:

    gen_companysize   Select...

    ⦿ Ascending Order   ○ Descending Order

Secondary Sort Variable (Optional):

                          Select...

    ⦿ Ascending Order   ○ Descending Order

    OK
    Cancel
    Help

Figure 3 - 28:   The Sort Respondents dialog box.

5   Choose the Ascending Order or Descending Order options for the primary and, if applicable, secondary variables.

6   Click on the OK button.

Survey Crafter Professional sorts the respondent records in the Data window.

4 **Analyses: Tables**

This chapter explains how to use wizards to build common types of analysis tables as well as how to build analysis tables yourself. It also explains how to format tabulated data for printing or using in a report or presentation and how to display a table's data as a chart. Chapter 5, "Analyses: Charts," explains how to format charts.

Read the section "Table Basics" first to learn key concepts about performing analyses and working with tables in Survey Crafter Professional.

Chapter Contents

Table Basics

Read the sections below to learn basic concepts about working with tables in Survey Crafter Professional. The sections include an overview of Survey Crafter Professional tables and instructions on selecting cells in tables.

- What is a Table?

- Selecting Cells in the Analysis Window

- Values in Table Cells

What is a Table?

A table shows the results of an analysis you perform on the study's data set. Figure 4 - 1 shows a table in an Analysis window.

Cick on the table selector to select the entire table.

Cick on the column selector to select the entire column.

Row heading

Cick on the row selector to select the entire row.

Figure 4 - 1:   A sample table in an Analysis window.

As the figure shows, table cells contain either numbers or text. The number or text in a cell is defined by an expression.

In the Primer

For a description of analyses common to market research studies, see the section "Analyzing Data" in Chapter 5 of *Understanding Survey Research: A Primer for Success*.

A table cell may contain a number, text or the value #Error, #Update, or #####.

#Error

#Error appears in a cell if Survey Crafter Professional could not evaluate the expression that defines the cell's value. Usually #Error appears if the cell's expression contains an error. #Error can also appear if your computer runs out of memory while evaluating the expression.

#Update

#Update appears in a cell if the cell's value needs to be recalculated. It appears if you have done any of the following:

• Entered a new expression for a cell

• Changed a cell's expression

• Changed a row, column or table filter used by a cell's expression

• Changed the expression for a computed variable used by a cell's expression

• Copied and pasted an expression to a cell having a different row, column or table filter

• Changed the portion of the study's data set a cell's expression uses

• Added or deleted a record in the study's data set

For instructions on recalculating a cell's value, see the section "Updating Tables" on page 4 - 78.

#####

This value appears when the table cell is not wide enough to display the value. If you resize the cell's column, the value will appear. See "Changing Dimensions of Table Cells" on page 4 - 72.

Selecting Cells in the Analysis Window

You need to select a cell before you can edit its value or format it. You can select one cell, ranges of cells, entire rows or columns, or an entire table.

- **To select a single cell**

   Click in the cell.

- **To select a range of adjacent cells**

   Do one of the following:

   • Click in a cell and drag the pointer across the range.

   • Click in the cell in the range's upper left corner. Then hold down the [SHIFT] key and click in the cell in the range's lower right corner.

- **To select multiple nonadjacent cells, rows, or columns**

   Select the first cell, row, or column you want. Then hold down the [CRTL] key while selecting each additional cell, row, or column you want.

- **To select an entire row or column**

   Do one of the following:

   • To select one row or column, click on its row selector or column selector.

   • To select multiple rows or columns, click and drag the pointer over several row or column selectors. Alternatively, click on the selector of the first row or column you want and then hold down the [SHIFT] key while clicking the selector for the last row or column you want.

- **To select an entire table**

   Cick on the table selector.

Values in Table Cells

Each cell in a table contains an expression that defines the value appearing in the cell. In the case of headings, notes, or table titles, the expression is only text like "Males" or "Mean age by preferred brand." In the case of calculated values, the expression involves one or more functions and variables. For example, the expression MEAN(age) displays the average value in the variable *age* in a table cell.

To enter or change a cell's expression, use the Edit Value dialog box shown in Figure 4 - 2. Access the Edit Value dialog box by doing any of the following:

• Double-clicking in a table cell

• Selecting a cell and then pressing the [ENTER] key

• Selecting a cell and then choosing the Edit Value command from the Edit menu

Enter the expression for a cell's value here.
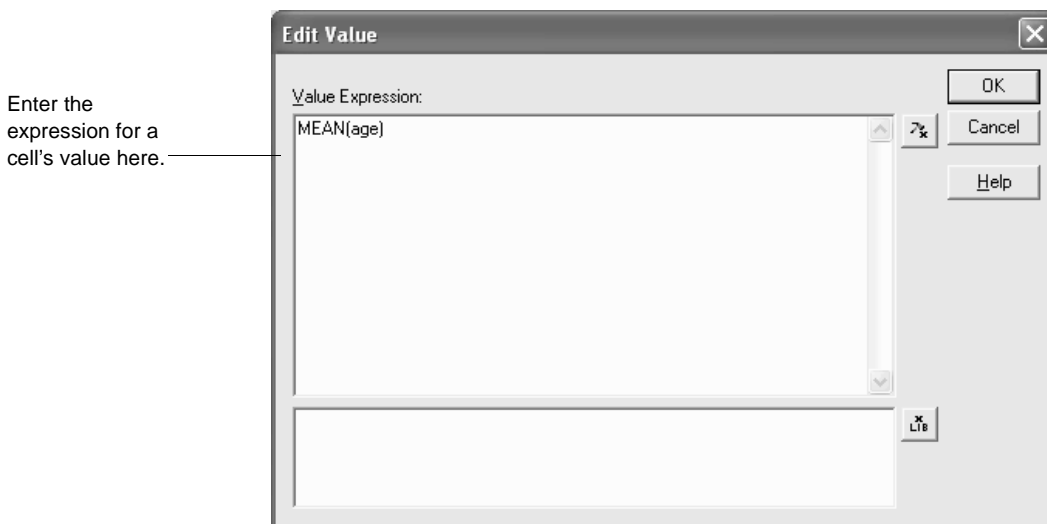
Figure 4 - 2:   The Edit Value dialog box.

A calculation in a table cell need not include all the respondents in the study's data set. You can specify which respondents are included in a cell's calculation. For example, a cell could show the mean age for only respondents who said they prefer the restaurant Marsha's Mex.

Survey Crafter Professional's Table Wizards

Survey Crafter Professional includes the following wizards to help you build tables common to survey research studies:

- Banner Table Wizard

- Counts and Frequencies Table Wizard

- Cross Tabulation Table Wizard

- Correlation Matrix Table Wizard

- Descriptive Statistics Table Wizard

- Individual Responses Table Wizard

- All-That-Apply Question Table Wizard

- Ranking Question Table Wizard

Each of these wizards is described below with an example. You can also create custom tables. For more on custom tables, see the section "Creating Custom Tables" on page 4 - 28.

Banner Table Wizard

Use the Banner table wizard to build an analysis table that shows counts and percentages for selected category variables and counts, percentages, means and standard deviations for selected quantity variables.

The answers to your survey's closed-end and all-that-apply questions are stored in imported category variables. The answers to your survey's rating, quantity, ranking and constant sum questions are stored in imported quantity variables. For more information, see the section "Survey Blocks" on page 2 - 6.

For example, suppose your survey asks the respondent to rate your customer service on a scale from 1 to 5. You could use the Banner table wizard to build an analysis table that shows the number and percentage of times each of the points on the 5-point scale were chosen. Since the answers to the rating question are stored in an imported quantity variable, you could also have the table show the average rating.

In addition to selecting the category and quantity variables to include in the table, you can also choose a variable to cross tabulate against the selected variables.

The analysis table in Figure 4 - 3 below was built by the Banner table wizard.

Question text and prompts (some text may be cropped)

Values for the whole sample

Values for different segments of the sample (values for school and personal not shown)

Variables included in the banner

Category variable

Quantity variable

Figure 4 - 3:   An analysis table built by the Banner table wizard.

The table shows counts and percentages for the category variable associated with the question "*5. Which of the following best describes the reason you most often use a print shop?*" followed by counts, percentages, means and standard deviations for the quantity variables associated with the questions "*Our turnaround time?*" and "*The quality of our finished print jobs?*".

Although the picture shows only one of the values, the table repeats these calculations for each value in the category variable associated with the question "*5. Which of the following best describes the reason you most often use a print shop?*".

Counts and Frequencies Table Wizard

Use the Counts and Frequencies table wizard to build an analysis table that shows counts and percentages for any set of variables.

For example, suppose your survey asks the respondent to choose his or her favorite restaurant from a list of fast food restaurants. You could use the Counts and Frequencies table wizard to build an analysis table that shows the number and percentage of times each restaurant was chosen as the favorite.

Another example, suppose your survey asks the respondent to enter a comma-separated list of words or phrases that describe how he or she feels about the food in your restaurant. You could have the Counts and Frequencies table wizard build an analysis table that shows the number and percentage of times each of up to 250 different words or phrases were mentioned.

You can also have the Counts and Frequencies table wizard build an analysis table that shows weighted counts and weighted percentages. To do this, you must select a quantity variable that will provide a weight value for each respondent in the data set. If you have not yet created a quantity variable to provide the weights, see "Creating a Quantity Variable for Weighting Respondents" on page 6 - 35.

In addition to selecting the variables to include in the table, you can also cross tabulate the selected variables against other variables and show the statistical significance of the relationship between the values of the other variables.

The analysis table in Figure 4 - 4 below was built by the Counts and Frequencies table wizard.

Category variable to subdivide the results
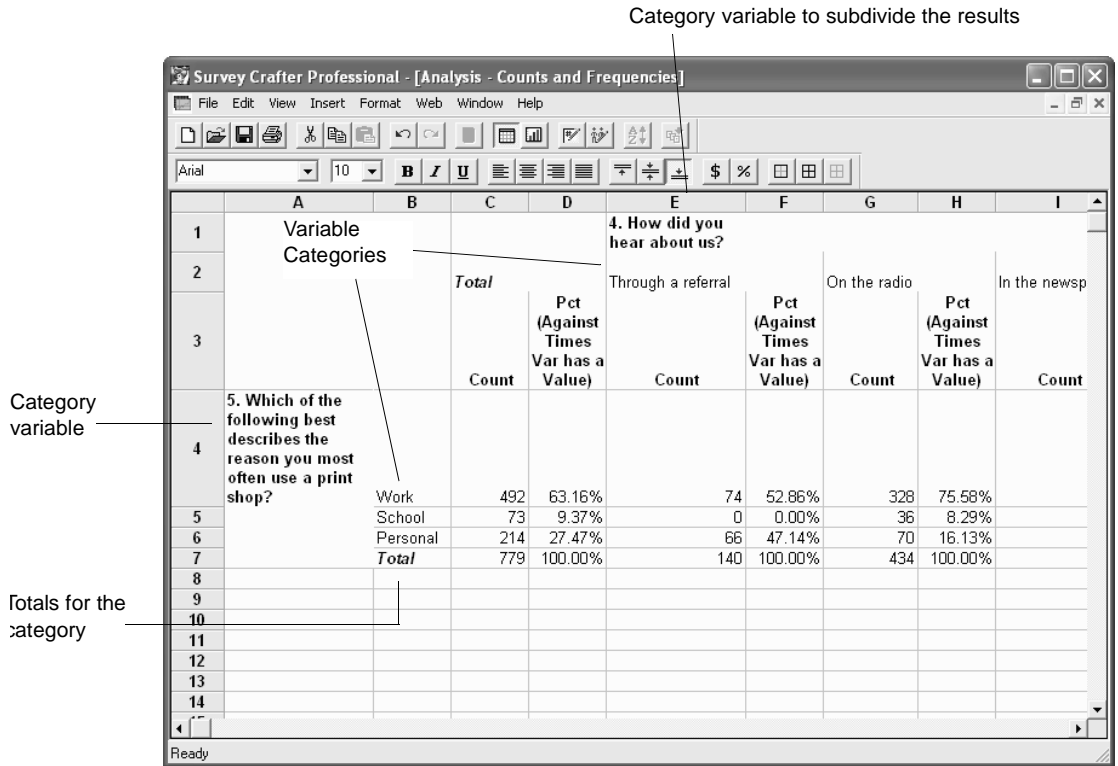
Figure 4 - 4:   An analysis table built by the Counts and Frequencies table wizard.

The table shows counts and percentages for the category variable associated with the question "*5. Which of the following best describes the reason you most often use a print shop?*". The table repeats these calculations for each value in the category variable associated with the question "*4. How did you hear about us?*".

Cross Tabulation Table Wizard

Use the Cross Tabulation table wizard to build an analysis table that shows all combinations of the values of two or more variables and the number and/or percentage of times each combination was chosen.

For example, suppose your survey asks for the respondent's marital status and favorite color. A cross tabulation could show all combinations of the answers to the two questions and the number and percentage of times each combination was chosen. You could use the table to find out how many respondents were both married and chose red.

If you want, you can have the wizard build a cross tabulation table with more than two variables. For example, suppose your survey asks for the respondent's age, gender and favorite restaurant. You could have the wizard build a cross tabulation that shows all combinations of age and gender against all of the restaurant choices.

If you have this wizard build a cross tabulation table with two variables and both are category variables, you can instruct the wizard to also show the statistical significance of the relationship between the two variables.

The analysis table in Figure 4 - 5 below was built by the Cross Tabulation table wizard.
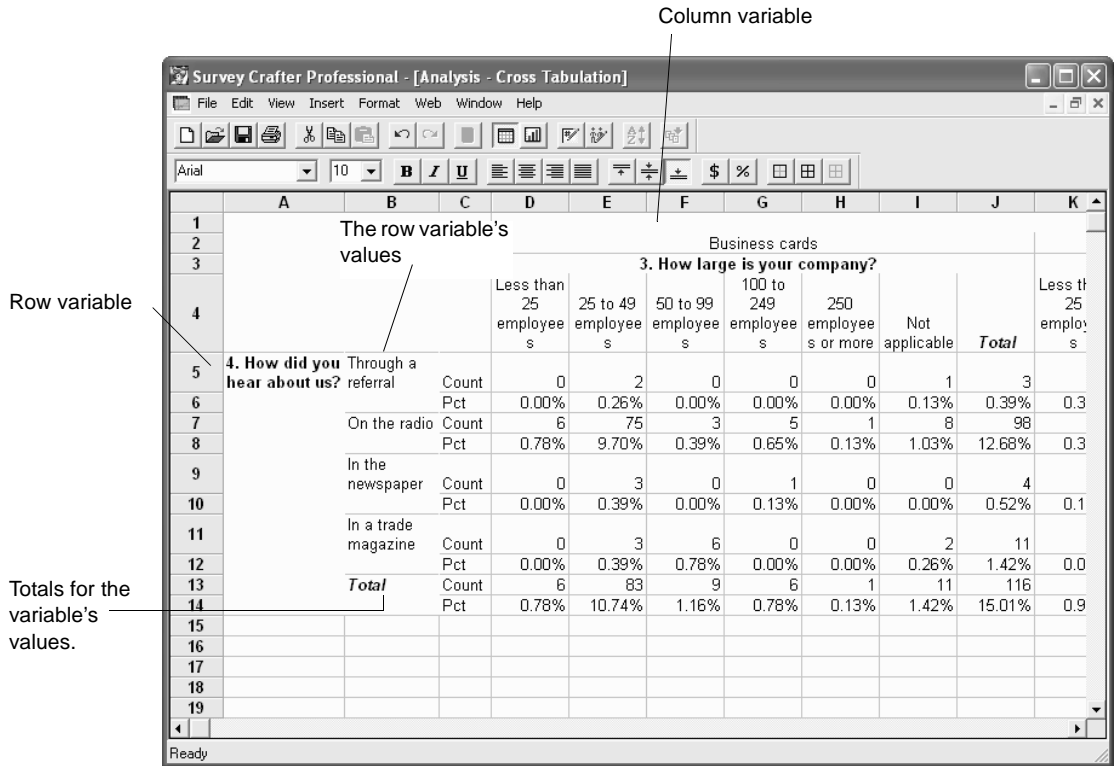
Figure 4 - 5:   An analysis table built by the Cross Tabulation table wizard.

The table shows all of the combinations of the answers to the questions "*4. How did you hear about us?*", "*6. Which of the following best describes the kind of print job that you most often need?*" and "*3. How large is your company?*" and the number and percentage of times each combination was chosen.

Correlation Matrix Table Wizard

Use the Correlation Matrix table wizard to build an analysis table that shows the correlation coefficients for any set of quantity variables.

You can also have the analysis table show the statistical significance of the correlations between the selected quantity variables.

The analysis table in Figure 4 - 6 below was built by the Correlation Matrix table wizard.
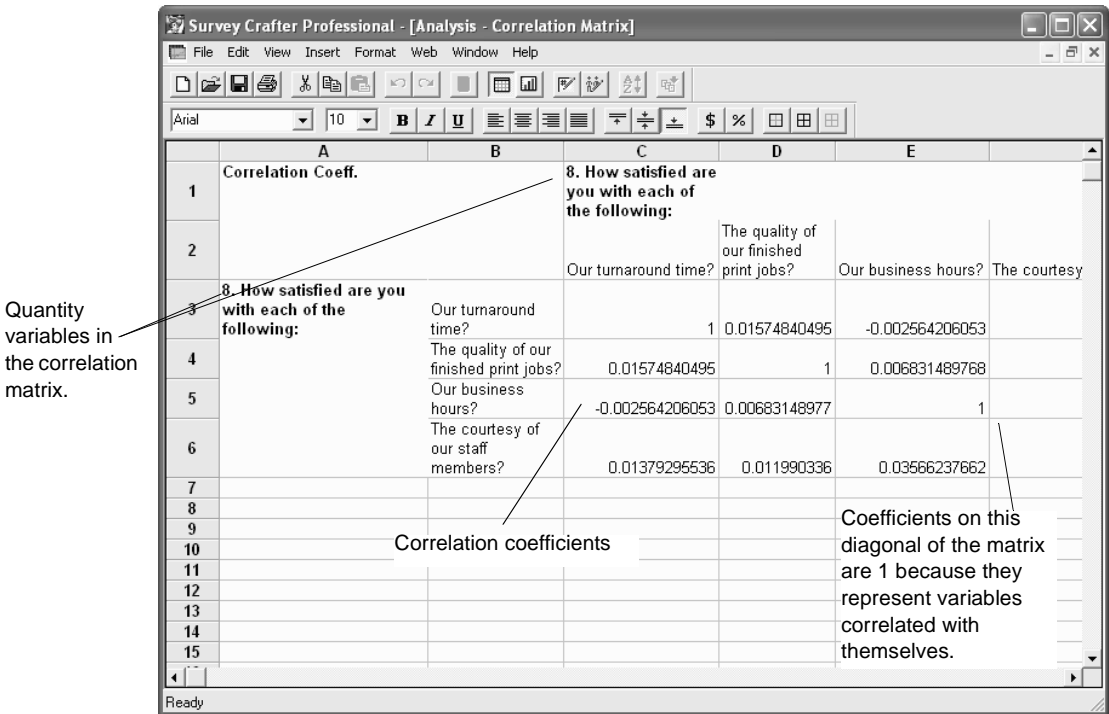
Figure 4 - 6:   An analysis table built by the Correlation Matrix table wizard.

The table shows the correlation coefficients for the quantity variables associated with the questions "*Our turnaround time?*", "*The quality of our finished print jobs?*", "*Our business hours?*", and "*The courtesy of our staff members?*".

Descriptive Statistics Table Wizard

Use the Descriptive Statistics table wizard to build an analysis table that shows statistics such as means, mean confidence intervals, medians, modes, minimums, maximums, standard deviations and variances for any set of quantity variables.

For example, suppose your survey asks the respondent to rate your customer service on a scale from 1 to 5 and to also indicate the reason why he or she visits your store. You could use the Descriptive Statistics table wizard to build an analysis table that shows the overall average customer service rating as well as the average customer service rating associated with each reason for visiting your store.

In addition to selecting the quantity variables to include in the table, you can also cross tabulate the selected variables against up to two other variables.

The analysis table in Figure 4 - 7 below was built by the Descriptive Statistics table wizard.

Quantity variables selected for the calculation

Questions with which the variables are associated
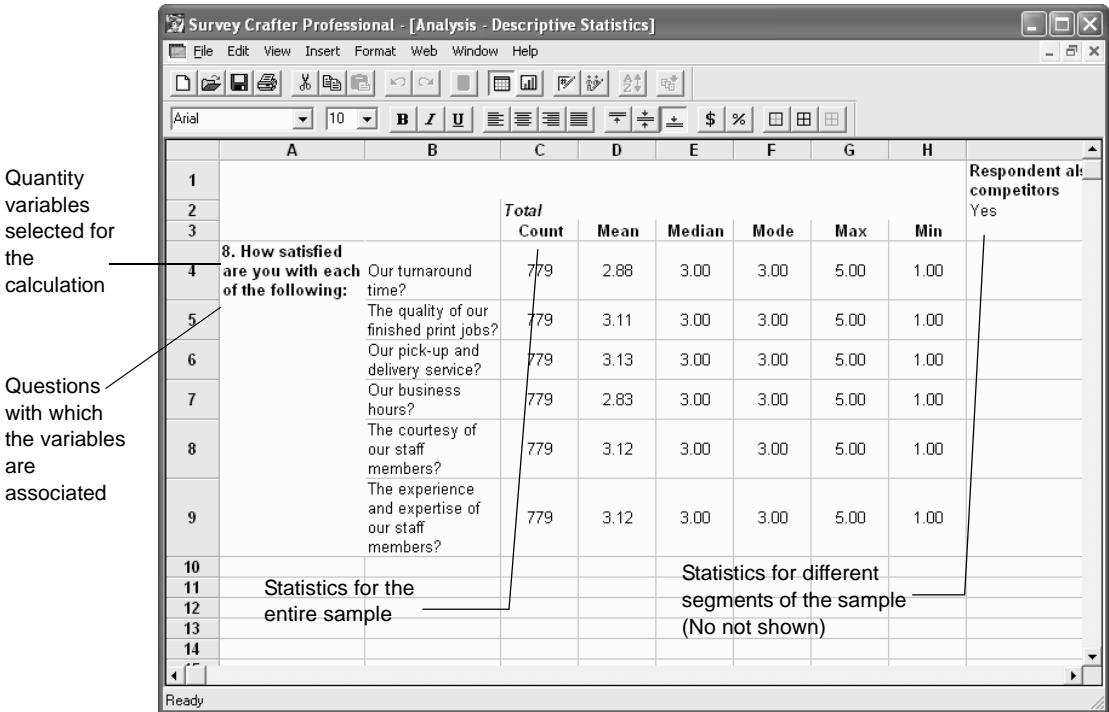
Figure 4 - 7:   An analysis table built by the Descriptive Statistics table wizard.

The table shows counts, means, medians, modes, maximums and minimums for the quantity variables associated with the questions "*Our turnaround time?*", "*The quality of our finished print jobs?*", "*Our pick-up and delivery service?*", "*Our business hours?*", "*The courtesy of our staff members?*", and "*The experience and expertise of our staff members?*".

Although the picture only shows one of the values, the table repeats these calculations for each value in the computed category variable having the description "*Respondent also uses our competitors*".

Individual Responses Table Wizard

Use the Individual Responses table wizard to build an analysis table that shows the actual responses stored by any set of variables.

For example, suppose your survey asks the respondent to rate your customer service and also to provide a comment to explain his or her rating. You could use the Individual Responses table wizard to build an analysis table that shows the comments of those respondents who gave your customer service a low rating.

The analysis table in Figure 4 - 8 below was built by the Individual Responses table wizard.

Figure 4 - 8:   An analysis table built by the Individual Responses table wizard.

The table shows the actual responses stored by the variables associated with the questions "*The courtesy of our staff members*" and "*11. Do you have any other comments or suggestions?*".

All-That-Apply Question Table Wizard

Use the All-That-Apply Question table wizard to build an analysis table that shows counts and percentages for the category variables associated with your survey's all-that-apply questions.

In addition to selecting the category variables to include in the table, you can also cross tabulate the selected variables against another variable.

For example, suppose your survey asks the respondent to select all of the brands of hand soap he or she has purchased in the past six months. Suppose also your survey asks for the respondent's gender. You could use the All-That-Apply Question table wizard to build an analysis table that shows the number and percentage of times each brand was selected. You could also have the table show the number and percentage of times each brand was selected for men and for women.

The analysis table in Figure 4 - 9 below was built by the All-That-Apply Question table wizard.

Figure 4 - 9:   An analysis table built by the All-That-Apply Question table wizard.

The table shows counts and percentages for the category variables associated with the question "9. Do you use any of the following print shops? (Check all that apply) ". The table repeats these calculations for each value of the variable associated with the question "6. Which of the following best describes the kind of print job that you most often need?".

Ranking Question Table Wizard

Use the Ranking Question table wizard to build an analysis table that shows counts and percentages for the quantity variables associated with your survey's ranking questions.

In addition to selecting the quantity variables to include in the table, you can also cross tabulate the selected variables against another variable.

For example, suppose your survey asks the respondent to rank in order of preference a list of fast food restaurants. Suppose also your survey asks the respondent to indicate to which age group he or she belongs. You could use the Ranking Question table wizard to build an analysis table that shows the number and percentage of times each restaurant was ranked first, second, and so on. You could also have the table show these calculations for each age group.

The analysis table in Figure 4 - 10 below was built by the Ranking Question table wizard.

Figure 4 - 10:   An analysis table built by the Ranking Question table wizard.

The table shows counts and percentages for the quantity variables associated with the question "12. Please indicate your order of preference of the following print shops". The table repeats these calculations for each value in the category variable associated with the question "3. How large is your company?".

Creating Tables by Using Wizards

Use the following instructions to have a wizard build an analysis table for you.

- **To create an analysis table by using a wizard**

  1 Select the Analyses tab of the Study window.

Click on the New button to create a new analysis table.
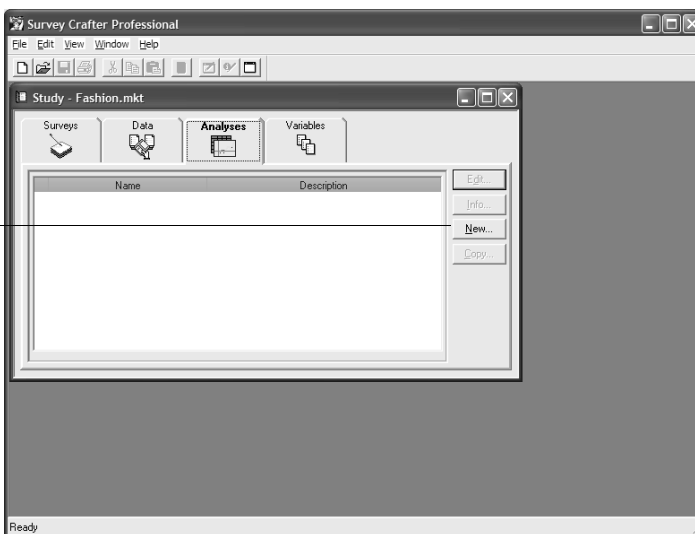
Figure 4 - 11:   The Analyses tab of the Study window.

  2 Click on the New button on the tab.

Survey Crafter Professional displays step 1 of the New Analysis dialog box.

Select this option to have a wizard build an analysis table for you.
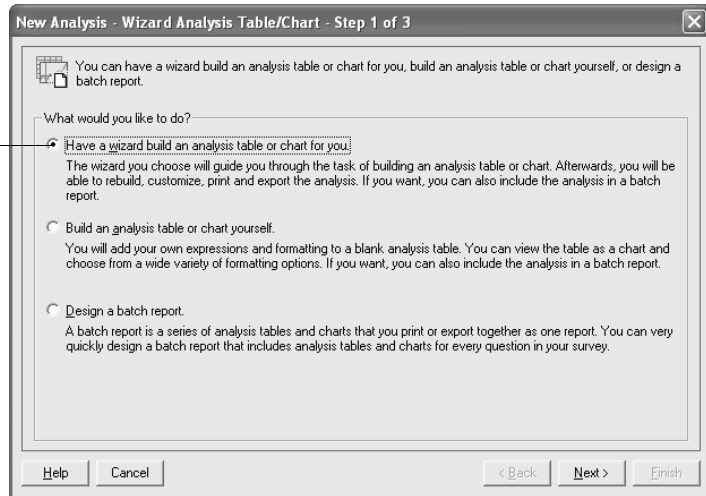
Figure 4 - 12:   Step 1 of the New Analysis dialog box.

3   Select *Have a wizard build an analysis table or chart for you*.

4   Click on the Next button.

Survey Crafter Professional displays step 2 of the New Analysis dialog box.

Click on the table wizard you want to use.
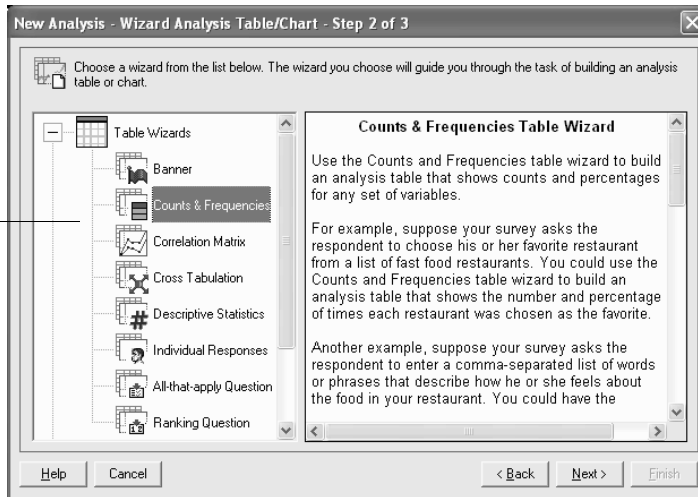
Figure 4 - 13:   Step 2 of the New Analysis dialog box.

5   Under *Table Wizards*, click to select the wizard you want to use.

A brief description of the selected wizard appears in the window on the right.

6   Click on the Next button.

Survey Crafter Professional displays step 3 of the New Analysis dialog box.

Enter a name and description for the analysis.
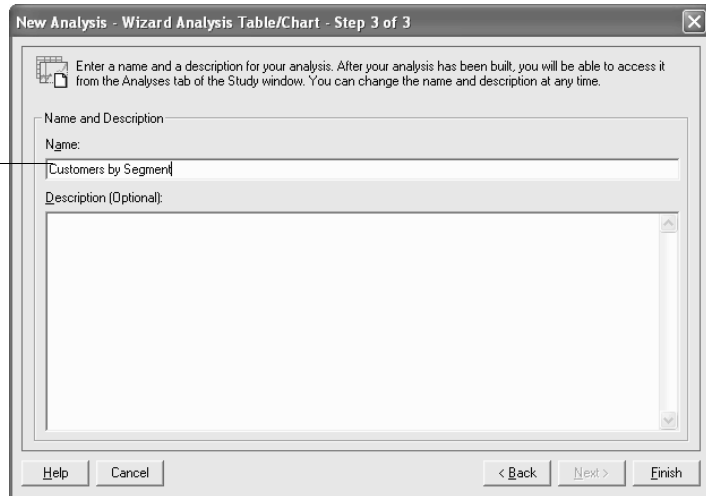
Figure 4 - 14:   Step 3 of the New Analysis dialog box.

7   Enter a name and description for the analysis.

The name must begin with a letter and may contain up to 49 additional letter, digit, or underscore characters.

Both the name and description will appear in the list of analyses in the Analyses tab of the Study window.

8   Click on the Finish button.

Survey Crafter Professional displays the wizard you selected in step 5.

Choose the variables you want to analyze.

Click on the Help button for descriptions of the wizards' options.
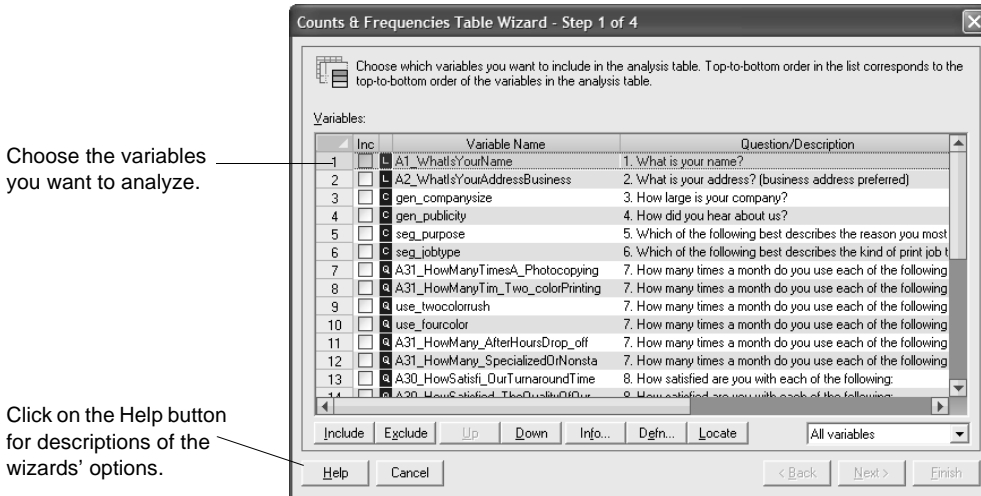
Figure 4 - 15:   Step 1 of the Counts and Frequencies table wizard.

9 Follow the instructions on the screen to complete the wizard.

For help on any of the wizard's options, click on the Help button on the wizard's dialog box.

10 Click on the Finish button.

Survey Crafter Professional builds a new analysis table according to the options you selected and displays the table in an Analysis window.

Figure 4 - 16: An analysis table built by the Counts and Frequencies table wizard.

If you want, you can now format the table. See the section "Formatting Tables" on page 4 - 53.

> **Tip** You can revisit the wizard at any time to change your selections or to just have the wizard build the analysis table again. To revisit the wizard, choose Analysis Wizard from the Edit menu when the Analysis window is active.

Creating Custom Tables

To create a custom table, you need to define the information to appear in each cell in the table. Table cells may contain expressions for calculating the cell's values or they may contain text such as column headings.

Creating a custom table involves creating the table, defining a table title and headings, and defining table cell values.

> **Tip** You can also create tables common to survey research studies by using wizards. For more information, see the section "Creating Tables by Using Wizards" on page 4 - 22.

Creating the Table

Follow the instructions below to create a new empty table.

• **To create the table**

1 Select the Analyses tab of the Study window.

Click on the New button to create a new analysis table.
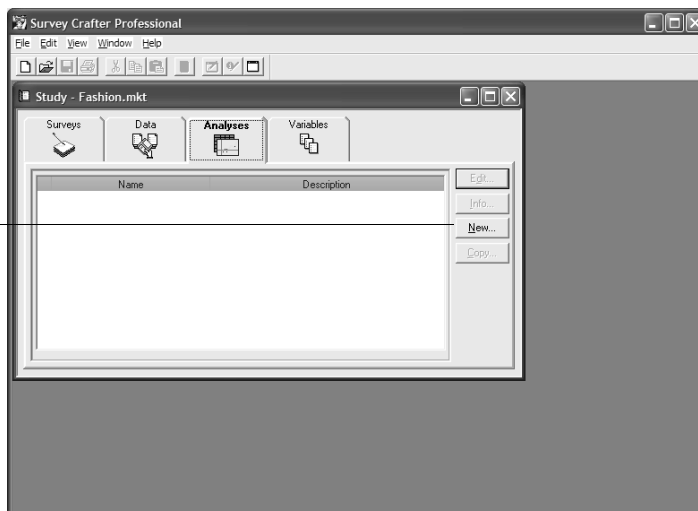
Figure 4 - 17:   The Analyses tab of the Study window.

2 Click on the New button on the tab.

Survey Crafter Professional displays step 1 of the New Analysis dialog box.

Select this option to build an analysis table yourself.
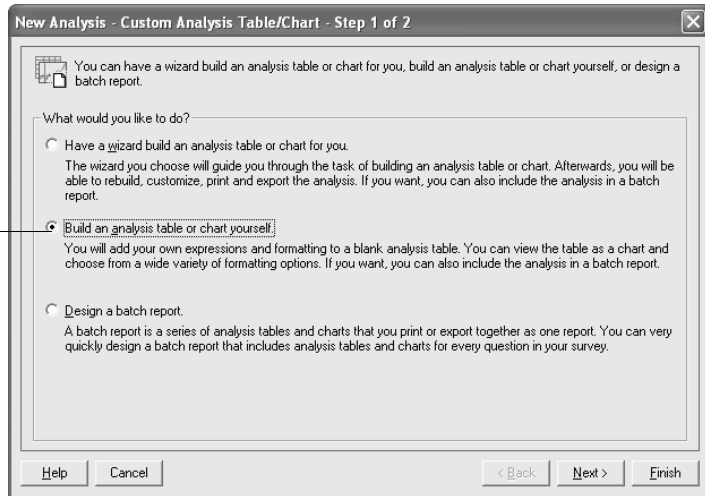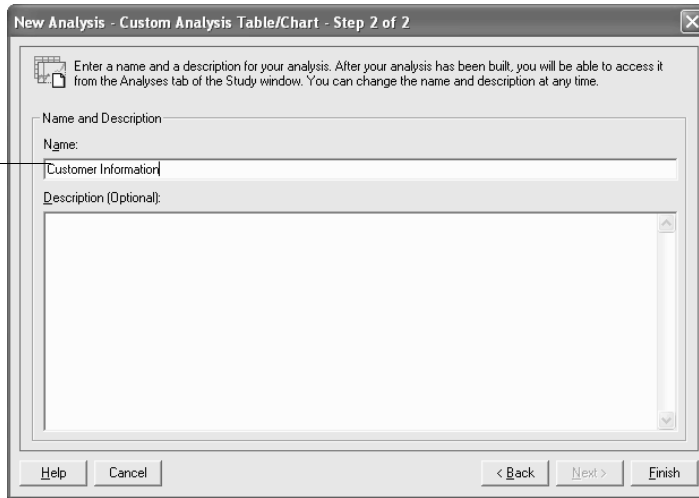
Figure 4 - 18:   Step 1 of the New Analysis dialog box.

3   Select *Build an analysis table or chart yourself*.

4   Click on the Next button.

Survey Crafter Professional displays step 2 of the New Analysis dialog box.

Enter a name and description for the analysis.

Figure 4 - 19:   Step 2 of the New Analysis dialog box.

5   Enter a name and description for the table.

The name must begin with a letter and may contain up to 49 additional letter, digit, or underscore characters.

Both the name and description will appear in the list of analyses in the Analyses tab of the Study window.

6   Click on the Finish button.

Survey Crafter Professional displays a new empty analysis table in an Analysis window.
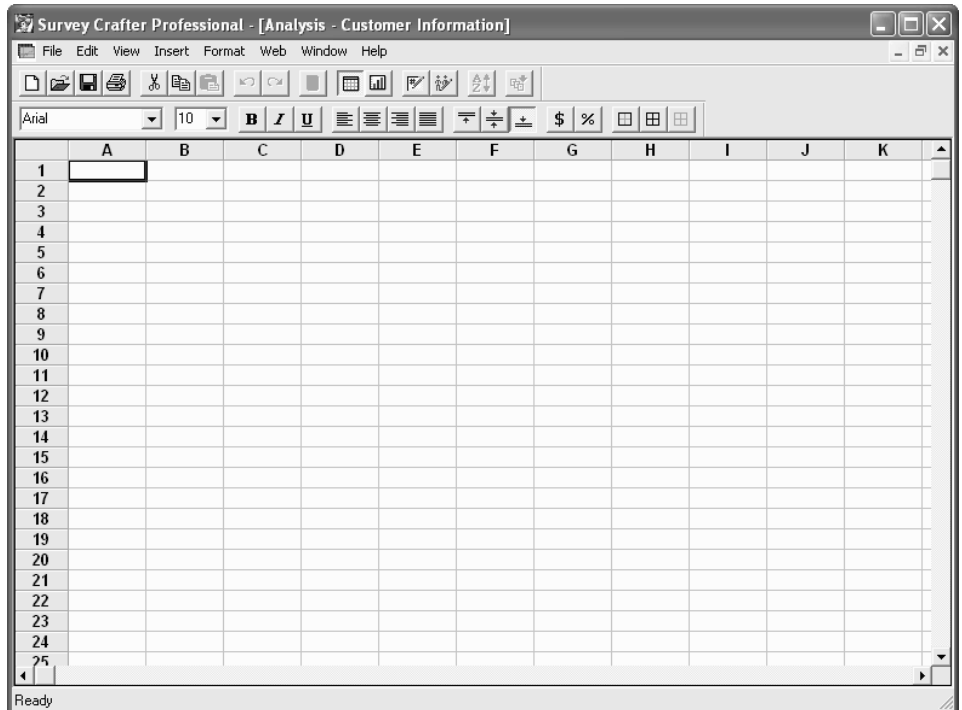
Figure 4 - 20: A new empty analysis table.

7 Go to the section "Defining a Table Title and Headings" below.

Defining a Table Title and Headings

A title and headings help viewers quickly understand the information a table shows. You can define both row and column headings for a table. Row headings fill the table's leftmost columns. Titles and column headings fill the table's topmost rows. You can reserve multiple columns and rows for row and column headings.

Defining a title and headings involves first specifying the region of the table in which they will appear and then entering their text. You need to define the region of the table in which they appear so that if you view the table as a chart, Survey Crafter Professional knows which cells to use as

chart labels and which cells to plot as data. Figure 4 - 21 illustrates these different regions of a table.
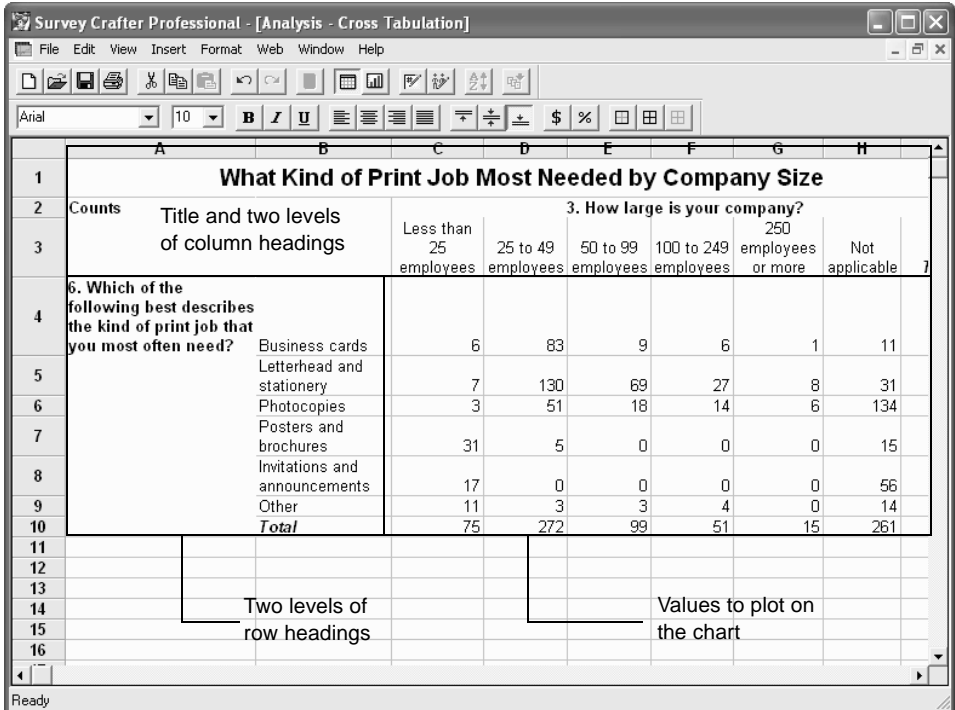
Figure 4 - 21:   Title and headings regions of a table.

- • **To define a table title and headings**

    1 From the View menu, choose Analysis Options.

    2 In the Number Of Columns field under Table Headings, type the number of columns to reserve for row headings.

    3 In the Number Of Rows field, type the number of rows to reserve for column headings. Include a row for the table title.

    For example, if you plan to have one row of column headings and a table title, enter 2.

These heading settings for the table in Figure 4 - 21 indicate that the table has two columns of row headings and three rows of column headings including the table title.
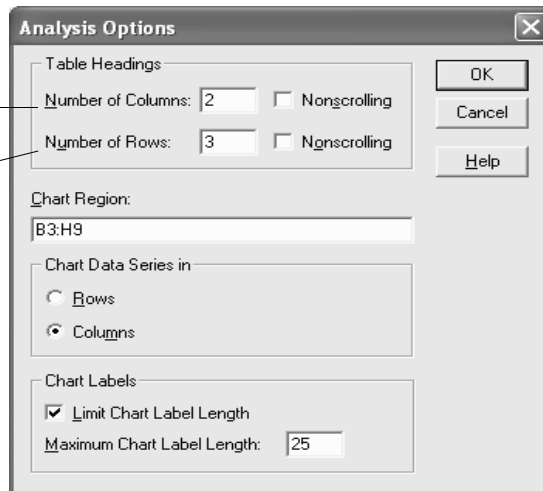
Figure 4 - 22:   The Analysis Options dialog box.

    4 If you want to keep row or column headings visible regardless of the table region in view, select one or both Nonscrolling check boxes.

    5 Click on the OK button to close the Analysis Options dialog box.

    6 To type title and heading text, do the following in the Analysis window for the title and each heading:

    - • Select a cell to contain the title or heading text.

    - • From the Edit menu, choose Edit Value.

- In the Value Expression field, type the title or heading text enclosed in double quotes. Then click on the OK button.
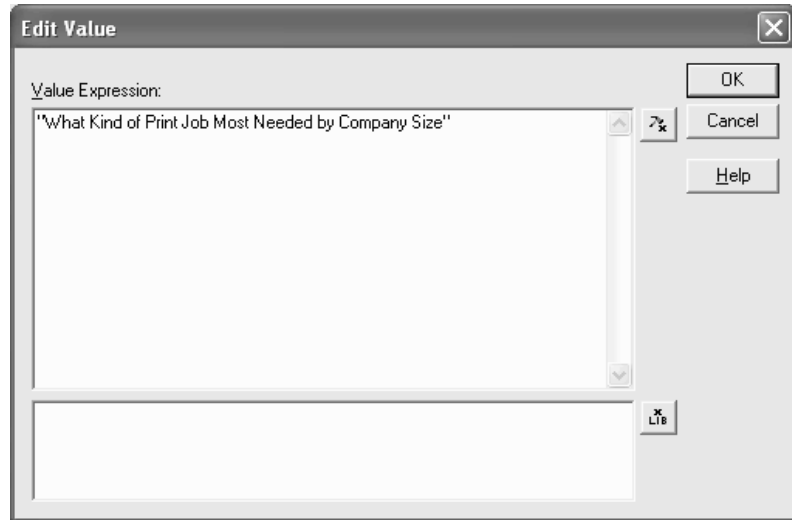
Figure 4 - 23: Title or heading text in the Edit Value dialog box.

7 Go to the section "Defining Table Cell Values" below.

Defining Table Cell Values

Once you have set up the table's framework of headings, you are ready to define the values that appear in the cells in the table's body. To define these values, write an expression in each table cell that evaluates to a single value or to multiple values.

For example, MEAN(age) is a valid expression for a table cell because it returns one number. STANDARDIZE(age) is also a valid expression because it returns a different number for each respondent.

Many of Survey Crafter Professional's functions let you specify a subset of respondents to include in the calculation. A short cut for defining subsets of respondents is to use row filters, column filters and table filters. For instructions on defining row, column and table filters, see the section "Specifying Row, Column and Table Filters" on page 4 - 41.

- **To define values to appear in table cells**

  1 Select the cell for which you want to define an expression.

  2 From the Edit menu, choose Edit Value or double-click in the cell.

  3 In the Value Expression field, enter the expression for calculating the cell's value.

  For help writing an expression, click on the Expression Builder button. Also see Chapter 7, "Expressions."

Expression Builder button
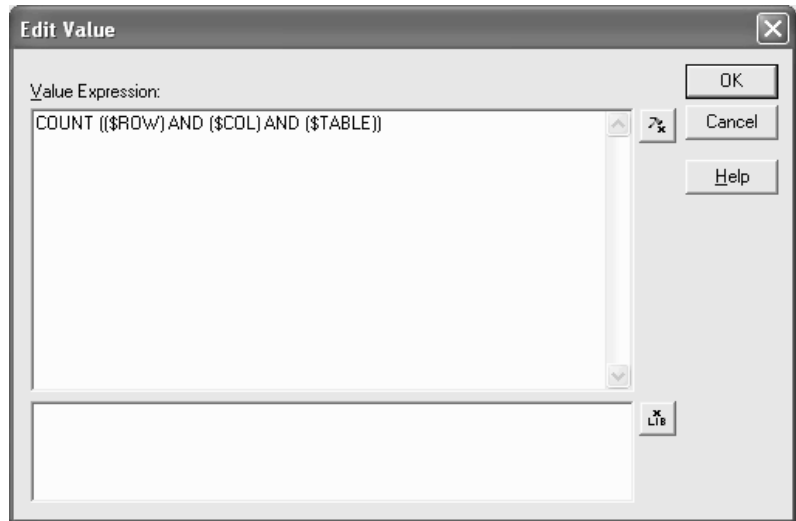
Figure 4 - 24:   An expression for a table cell's value in the Edit Value dialog box.

To include row, column and table filters in an expression, follow the syntax in Table 4 - 1 .

Table 4 - 1:   Syntax for row, column and table filters.

Filter type	Syntax in expression	Example
Row filter	$ROW	MEAN(age, $ROW)
Column filter	$COL	MEAN(age, $COL)
Table filter	$TABLE	MEAN(age, $TABLE)
All filters	Add the operator AND between the filters	MEAN(age, $ROW AND $COL AND $TABLE)

4   Click on the OK button.

5   Repeat steps 1 through 4 for each cell that will display a calculated value.

For instructions on copying a cell's expression to other cells, see the section "Copying Cell Properties to Other Table Cells" on page 4 - 51.

Update button

6   When each cell's expression is defined, do one of the following to calculate the cells' values:

- From the Edit menu, choose Update.

- Click on the Update button on the toolbar.

Opening Existing Tables

Open an existing table to view or edit its contents.

- **To open an existing table**

    1 Select the Analyses tab of the Study window.

    2 Select the table you want to view.

At the Analyses tab, select the table you want to view.
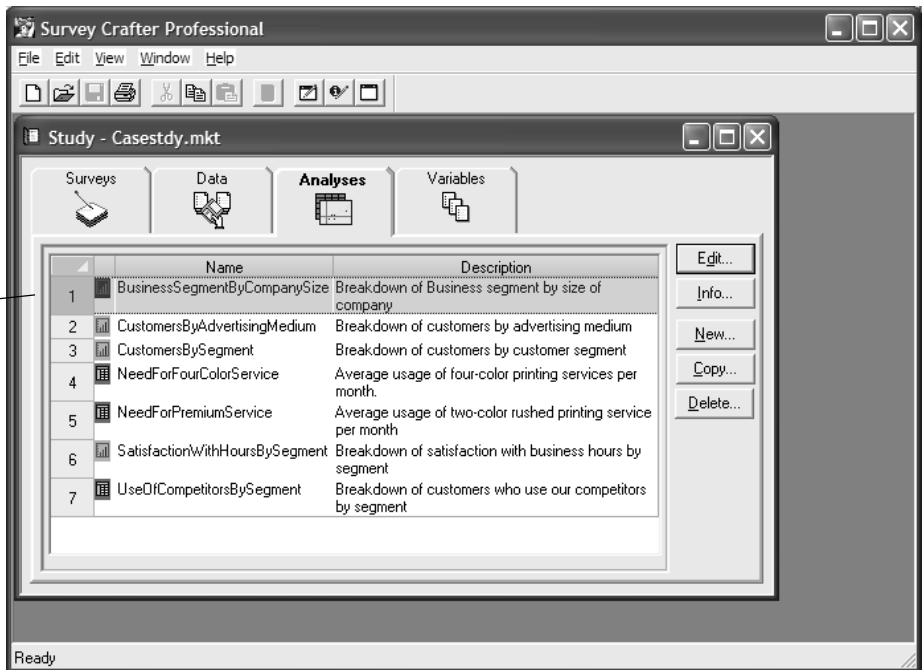
Figure 4 - 25: The Analyses tab of the Study window.

3 Click on the Edit button on the tab.

Survey Crafter Professional displays the table in an Analysis window.

> **Note** If a cell contains the message #Update, its value needs to be recalculated. Choose the Update command from the Edit menu.
>
> If a cell contains the message #Error, Survey Crafter Professional could not evaluate the cell's expression. To correct the error, double-click in the cell and edit the expression in the Value Expression field.

Copying Existing Tables

Copy an existing table to edit its contents without modifying the original table.

- **To copy an existing table**

    1   Select the Analyses tab of the Study window.

    2   Select the table you want to copy.

At the Analyses tab, select the table you want to copy.
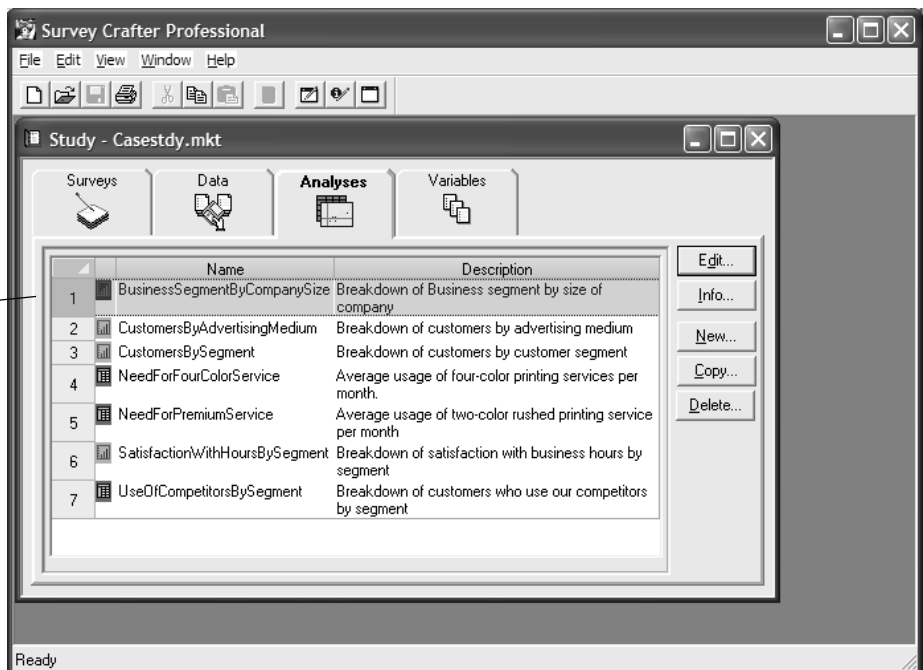
Figure 4 - 26:   The Analyses tab of the Study window.

   3   Click on the Copy button on the tab.

   The Analysis Information dialog box appears.

   4   In the Name field, enter a new name for the table.

   The name must begin with a letter and may contain up to 49 additional letter, digit, or underscore characters.

   5   In the Description field, enter a new description of the table.

Both the name and description will appear in the list of analyses in the Analyses tab of the Study window.

6   Click on the OK button.

Survey Crafter Professional displays the table in the Analysis window.

> **Note** If a cell contains the message #Update, its value needs to be recalculated. Choose the Update command from the Edit menu.
>
> If a cell contains the message #Error, Survey Crafter Professional could not evaluate the cell's expression. To correct the error, double-click in the cell and edit the expression in the Value Expression field.

Specifying Row, Column and Table Filters

The calculations in a table may include all respondents in the data set or only a subset. Row, column and table filters are short cuts for selecting subsets of respondents for calculations.

Row, colum and table filters are expressions that evaluate to TRUE or FALSE for each respondent in the data set. Respondents for whom the expression is TRUE are included in the calculation. For example, if "Females" is the label for a table's column, you could create a column filter such that the column's calculations included only female respondents.

Please read the section "About Row, Column and Table Filters" below to learn about how these filters can help you create tables.

About Row, Column and Table Filters

A row filter is an expression that determines those respondents to be included in the calculations in the row's cells—for example, respondents who own homes. A column filter is an expression that determines those respondents to be included in the calculations in the column's cells—for example, respondents under age 30. A table filter is an expression that determines those respondents to be included in the calculation in all cells—for example, respondents who made purchases in the last year.

After you define the filters by using the Edit Filters command, you can use the row, column and table filter syntax ($ROW, $COL and $TABLE, respectively) as the condition argument in functions. Using this syntax tells Survey Crafter Professional to apply the filters to the data set and to include in the calculation only those respondents passing through the filters.

The example below illustrates how using row, column and table filters simplifies the process of defining values to appear in table cells.

Using Row, Column and Table Filters: An Example

Chris collected data on respondents' preferred fast food restaurants by using a list of five choices: Burger World, King Taco, Broilin' Bill's, The Chicken Coop, and Marsha's Mex. Now Chris wants to create a table that shows the mean age of males and females who preferred each of the five restaurants. The empty table is shown in Figure 4 - 27.

Mean age by preferred restaurant		
Favorite restaurant	**Males**	**Females**
Burger World		
King Taco		
Broilin' Bill's		
The Chicken Coop		
Marsha's Mex		

Figure 4 - 27:   Row and column headings in a table that will show mean ages by favorite restaurant and gender.

Chris defined the two column filters as follows. The Males column should show information on only the males in the data set. Since the study data set stores information on respondents' genders in the category variable *gender*, the Males column should include all respondents for whom the variable *gender* contains the value 'male'.

To define this column filter, Chris selected the Males column in the Analysis window and then chose Edit Filters from the Edit menu. In the Column Filter field, Chris entered the expression shown in Figure 4 - 28.
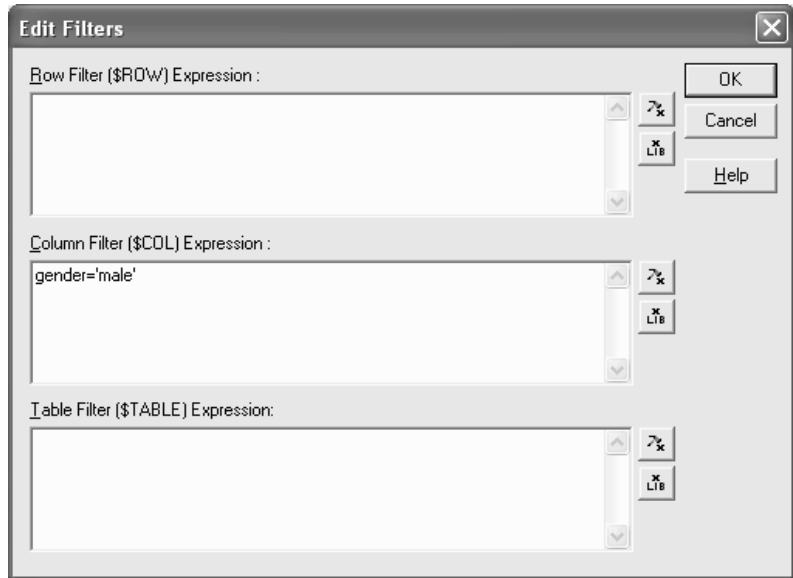
Figure 4 - 28: A column filter entered in the Edit Filters dialog box.

Similarly, the Females column filter is gender = 'female' or all respondents for whom *gender* contains the value 'female'.

Chris then defined the five row filters as follows. The row labeled The Chicken Coop should show information only on respondents who said The Chicken Coop is their favorite restaurant. Since the study data set stores information on respondents' favorite fast food restaurants in the category variable *fave_rest*, the row should include all respondents for whom the variable *fave_rest* contains the value 'chickencoop'.

('chickencoop' is the category name Chris assigned to The Chicken Coop.) Figure 4 - 29 shows the row filter in the Edit Filters dialog box.
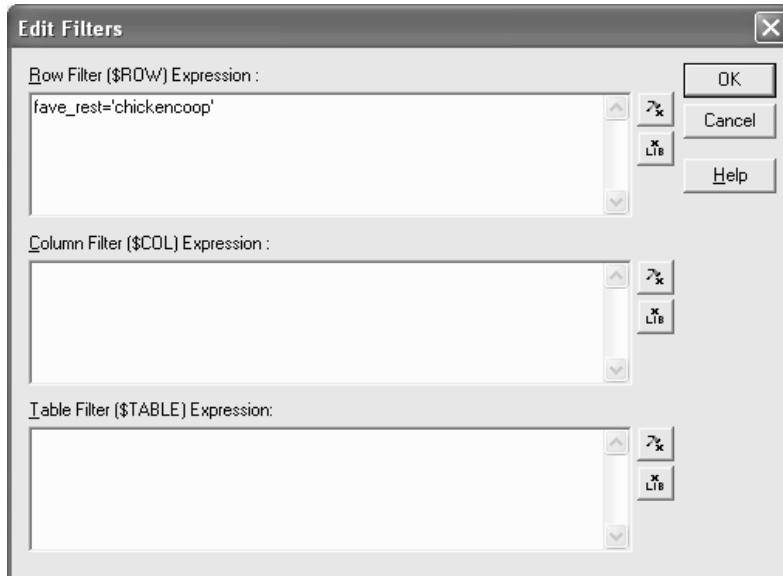
Figure 4 - 29:   A row filter entered in the Edit Filters dialog box.

Figure 4 - 30 shows these filters in the table. The filters for the other rows and columns are analogous.

The column filter is `gender = 'male'`, that is, all respondents in the data set who said they were male.

Mean age by preferred restaurant		
Favorite restaurant	**Males**	**Females**
Burger World		
King Taco		
Broilin' Bill's		
The Chicken Coop		
Marsha's Mex		

The row filter is `fave_rest = 'chickencoop'`, that is, all respondents who said The Chicken Coop is their favorite restaurant.

Figure 4 - 30:   Filters for the column Males and the row The Chicken Coop.

To calculate the mean age in the table cell Males:The Chicken Coop, Chris assigned the cell the expression `MEAN(age, $ROW AND $COL)` where `$ROW` and `$COL` are the syntax for the row filter and column filter.

Since Chris already defined the row and column filters, Survey Crafter Professional knows exactly which respondents to include in the mean calculation. Using the row and column filter syntax `$ROW` and `$COL` is equivalent to writing the expression as `MEAN(age, gender = 'male' AND fave_rest = 'chickencoop')`. This expression tells Survey Crafter Professional to calculate the average value in *age* for male respondents who said that The Chicken Coop is their favorite restaurant. Figure 4 - 31 shows the cell's expression.

Mean age by preferred restaurant		
Favorite restaurant	**Males**	**Females**
Burger World		
King Taco		
Broilin' Bill's		
The Chicken Coop	32.5	
Marsha's Mex		

The expression for this cell is `MEAN(age, $ROW AND $COL)`. Its equivalent is `MEAN(age, gender = 'male' AND fave_rest = 'chickencoop')`. The former takes advantage of the defined row and column filters.

Figure 4 - 31: The expression for the value to appear in the cell in the "Males" column and the "The Chicken Coop" row.

Three Ways Using Row, Column and Table Filters Save Time

Using row, column and table filters saves time in three ways:

- They let you avoid writing an expression for selecting respondents to include in every cell's calculation.

If you define a table filter or a filter for each row and column, you can then include the $TABLE, $ROW and $COL syntax in cells' expressions rather than writing a unique expression to select respondents for each cell. The larger the table, the more time using row, column and table filters saves. Furthermore, entering a unique expression to select respondents for each cell's calculation is both tedious and error-prone.

• If you decide you want to change the respondents included in a row or column's calculations, you only need to edit one expression.

Suppose Chris decided to calculate the mean age of male and female respondents according to data collected on their favorite types of vehicles instead of favorite fast food restaurants. Rather than editing the expression in all ten of the table's cells, Chris could just edit the table's five row filter expressions. For example, for the fourth row, Chris could change the row filter from `fave_rest = 'chickencoop'` to `fave_vehicle = 'convertible'`.

• Using row, column and table filters allows you to use the Paste and Paste Special commands to copy one cell's expression to other cells in the table.

In the example above, the expression for the cell Males:The Chicken Coop cell uses the generic syntax $ROW and $COL for row and column filters you defined. Chris can enter the expression as `MEAN(age, $ROW AND $COL)` for one cell and then copy and paste the expression to the other nine cells in the table. Survey Crafter Professional will calculate the same `MEAN (age, $ROW AND $COL)` expression for each cell, but because the cells all have different row and column filters, the value in each cell is different.

Row, Column and Table Filters are not Automatically Included in Calculations

Even if you define a row, column or table filter, Survey Crafter Professional does not automatically apply it to select respondents for a cell's calculation. You must enter the $ROW, $COL or $TABLE syntax in the expression. In addition, if you enter $ROW, $COL or $TABLE in an expression but did not define filters in the Edit Filters dialog box, Survey Crafter Professional includes all respondents in the calculation.

Because row, column and table filters are optional, you can override them and choose an entirely different set of respondents for a cell's expression. For example, Chris could show the mean age for the entire sample in a note below the body of the table by using the expression `MEAN(age)`, which does not use the column's filter. See Figure 4 - 32.

This column's filter is
`gender = 'male'.`

This cell is in a column with the filter `gender = 'male'`, but you can ignore the column's filter to show a value for a different set of respondents such as the entire sample.

Mean age by preferred restaurant		
Favorite restaurant	**Males**	**Females**
Burger World		
King Taco		
Broilin' Bill's		
The Chicken Coop		
Marsha's Mex		
Mean age of sample		

Figure 4 - 32:   Note text in a cell below the body of the table.

Defining Row, Column and Table Filters

The procedures below explain how to write expressions for row filters, column filters and table filters. Note that Survey Crafter Professional does not automatically limit its calculations to respondents that pass through a filter. You must include the filter syntax in the cell's expression. For information on including the filter syntax in a cell's expression, see the procedure in the section "Defining Table Cell Values" on page 4 - 34.

- **To specify a row filter**

  1   In the table in the Analysis window, select the row for which you

want to define a filter.

2 From the Edit menu, choose Edit Filters or click on the Edit Filters button on the toolbar.

Edit Filters button

3 In the Row Filter Expression field, type the expression that determines the subset of respondents to include in the row's calculations.

For help writing an expression, click on the Expression Builder button. Also see Chapter 7, "Expressions."

Respondents who said Burger World is their favorite restaurant pass through this row filter. (Information on favorite restaurants is stored in the variable *fave_rest*.)

Edit Filters

Row Filter ($ROW) Expression :

fave_rest='burgerworld'

OK

Cancel

Help

Column Filter ($COL) Expression :

Table Filter ($TABLE) Expression:
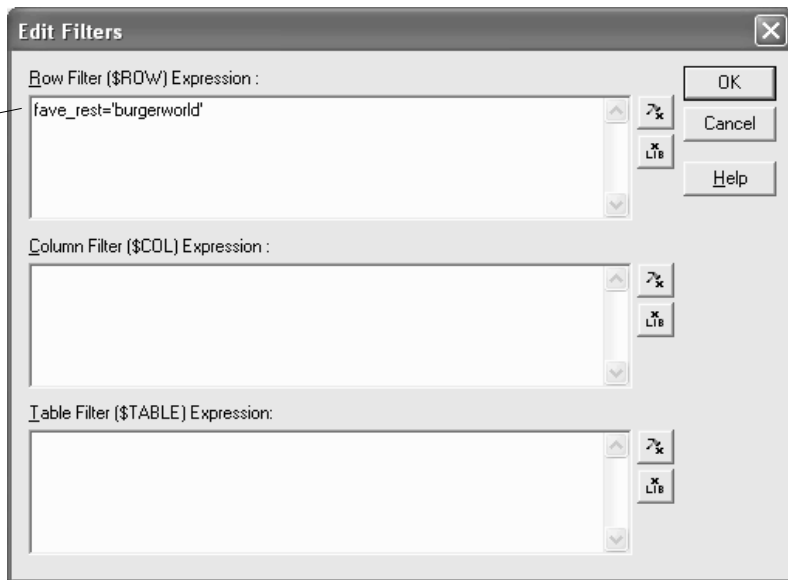
Figure 4 - 33:   Defining a row filter in the Edit Filters dialog box.

4 Click on the OK button.

- **To specify a column filter**

1 In the table in the Analysis window, select the column for which you want to define a filter.

2 From the Edit menu, choose Edit Filters.

3 In the Column Filter Expression field, type the expression that determines the subset of respondents to include in the column's calculations.

For help writing an expression, click on the Expression Builder button. Also see Chapter 7, "Expressions."

Male respondents pass through this column filter. (Information on genders is stored in the variable *gender*.)
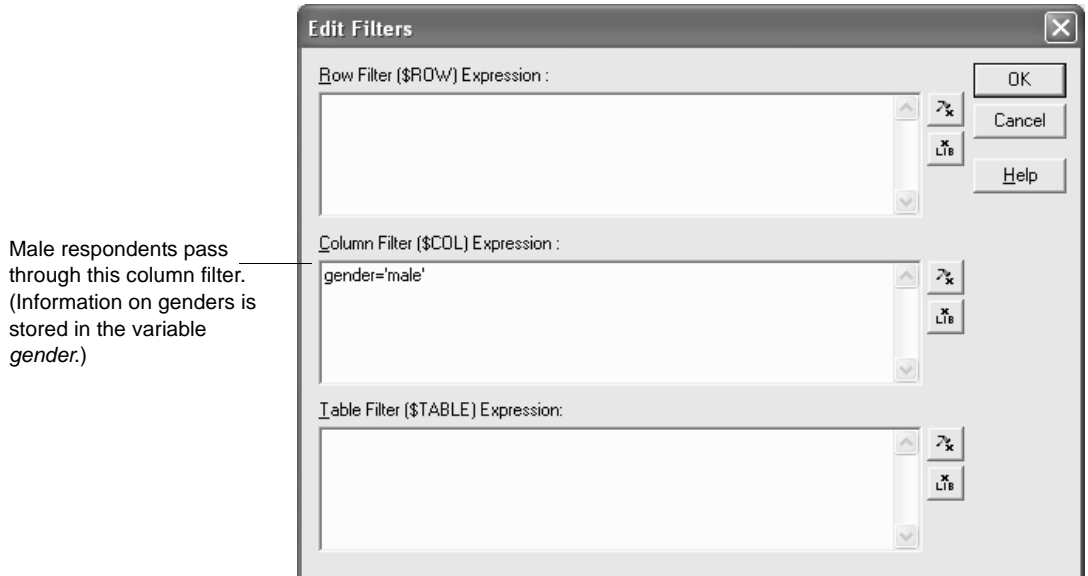
Figure 4 - 34: Defining a column filter in the Edit Filters dialog box.

4   Click on the OK button.

- **To specify a table filter**

  1   In the table in the Analysis window, select any cell.

  2   From the Edit menu, choose Edit Filters.

  3   In the Table Filter Expression field, type the expression that determines the subset of respondents to include in the table's calculations.

For help writing an expression, click on the Expression Builder
button. Also see Chapter 7, "Expressions."

Respondents over 18 and
under 21 pass through this
table filter. (Information on
age is stored in the variable
age.)
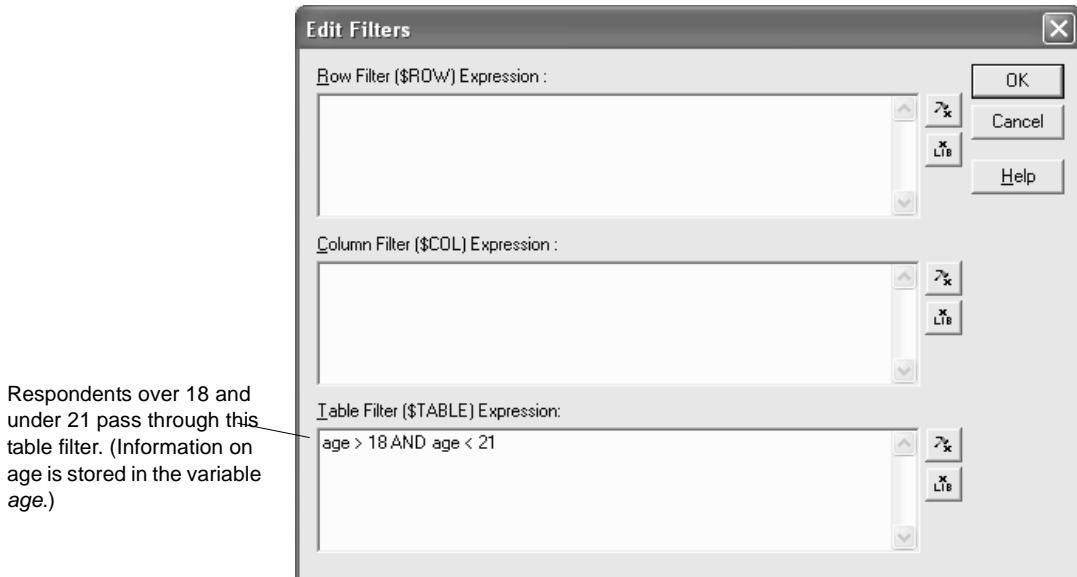
Figure 4 - 35:   Defining a column filter in the Edit Filters dialog box.

4   Click on the OK button.

Copying Cell Properties to Other Table Cells

If several cells in a table use the same expression, save time by copying and pasting the expression into the other cells that use it. Besides the expression, you can copy and paste the cell's formatting, row filter, and column filter.

If you paste a row or column filter, Survey Crafter Professional overwrites the host cells' row and column filters with the copied cells' filters. If you did not define row or column filters for the copied cells, the copied cells use the filters of the host cells.

- **To copy cell properties to other table cells**

   1 Select the cell or range with the properties you want to copy.

   2 From the Edit menu, choose Copy.

   3 Select the cell or range into which you want to paste the properties.

   4 From the Edit menu, choose Paste Special.

   5 In the Paste Special dialog box, select check boxes corresponding to the copied cell's properties that you want into paste to the selected cell or range.
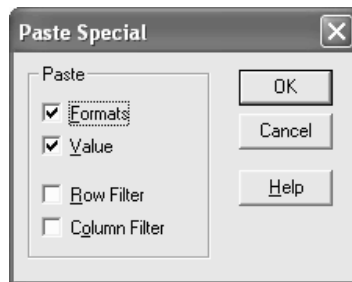
Figure 4 - 36:   The Paste Special dialog box.

   6 Click on the OK button.

   7 Do one of the following to calculate the values in the table's cells:

   • From the Edit menu, choose Update.

Update button

• Cick on the Update button on the toolbar.

> **Note** If the value #Error appears in the cell, Survey Crafter
> Professional could not evaluate the cell's expression. Double-
> click on the cell and edit the expression in the Value Expression
> field.

Formatting Tables

You can enhance the format of Survey Crafter Professional tables for use in a report or presentation. This section covers the following formatting procedures:

- Aligning Table Cell Values

- Centering a Cell's Contents across Other Cells

- Changing Fonts in Table Cells

- Applying and Removing Borders on Table Cells

- Applying and Removing Patterns on Table Cells

- Specifying Number Formats

- Making Row and Column Headings Nonscrolling

- Typing and Editing Text in Table Cells

Aligning Table Cell Values

You can control the horizontal and vertical position of text and values in table cells.

- **To align cell values**

    1 In the Analysis window, select the cells with the values to align.

    2 From the Format menu, choose Cells, and then select the Alignment tab.

3   In the Alignment tab, specify the horizontal and vertical positioning
        of cell values.

The General option left
justifies text and right
justifies numbers.
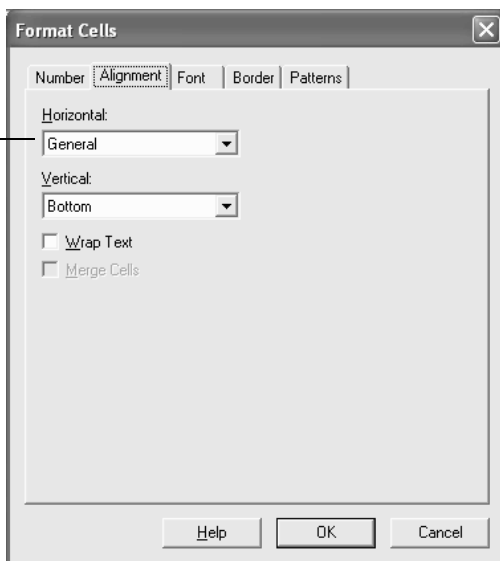
Figure 4 - 37:   The Alignment tab of the Format Cells dialog box.

4   To allow text to wrap to a new line if it exceeds the cell's width, select
        the Wrap Text check box.

5   Click on the OK button.

Centering a Cell's Contents across Other Cells

By centering a cell's contents across other cells, you can make a cell straddle other cells. For example, Figure 4 - 38 shows the table title centered over column headings.

The table title is centered across the cells A1 through F1.

Figure 4 - 38: One cell's contents centered across several cells.

- **To center a cell's contents across other cells**

    1 In the Analysis window, select the range of cells containing:

    - The text you want to center

• The cells within which you want to center the text

Cell A1 contains the text to center. Cells B1 through F1 are also selected because the text will be centered across the range of cells A1:F1.

Figure 4 - 39:   Selecting the cells across which you want to center text.

2   From the Format menu, choose Cells, and then click on the Alignment tab.

3   In the Alignment tab, select Center Across Cells from the Horizontal drop-down list.

4   Click on the OK button.

Survey Crafter Professional centers the text across the selected cells.

Changing Fonts in Table Cells

You can use the formatting toolbar buttons to control the font, font style and size of text and values in table cells. You can also use the Format Cells dialog box to control additional formatting options including the line effects and color of text and values in table cells.

- **To change fonts in table cells using the Format Cells dialog box**

    1   In the Analysis window, select the cells in which you want to change the font.

    2   From the Format menu, choose Cells, and then select the Font tab.

    3   Change any settings in the Font tab.

The Sample field shows the typography applied to selected characters.
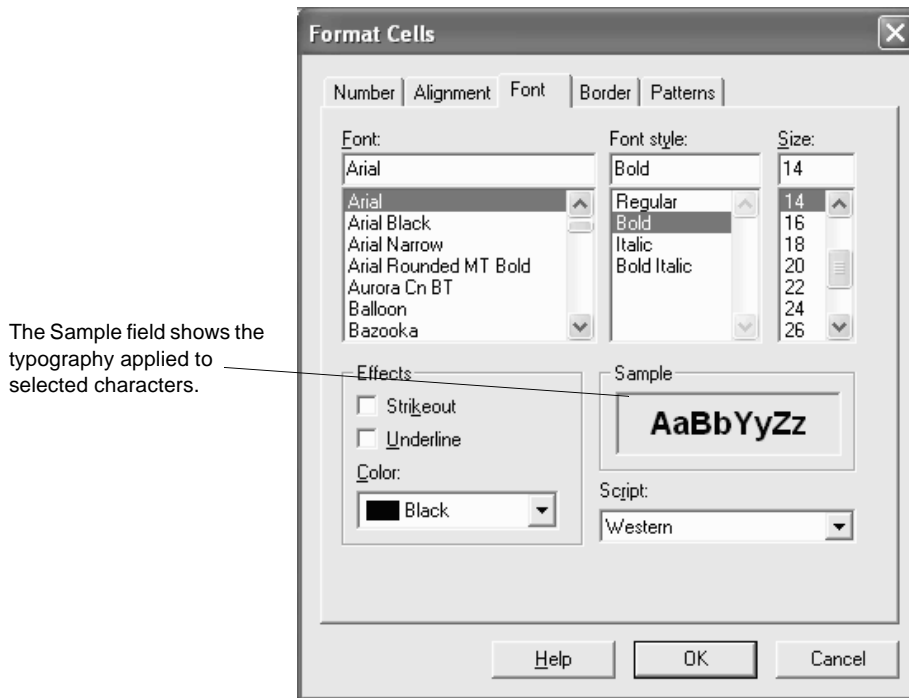
Figure 4 - 40:   The Font tab of the Format Cells dialog box.

    4   Click on the OK button.

Applying and Removing Borders on Table Cells

You can apply borders in a variety of styles and colors to table cells. You can remove borders from one or more sides of a table cell or range.

- **To apply borders to table cells**

    1   In the Analysis window, select the cell or cells to which you want

borders applied.

2 From the Format menu, choose Cells, and then select the Border tab.

3 From the Line Style palette, select a line style.

To apply a border to only the perimeter of the entire selection, click on the outline button.
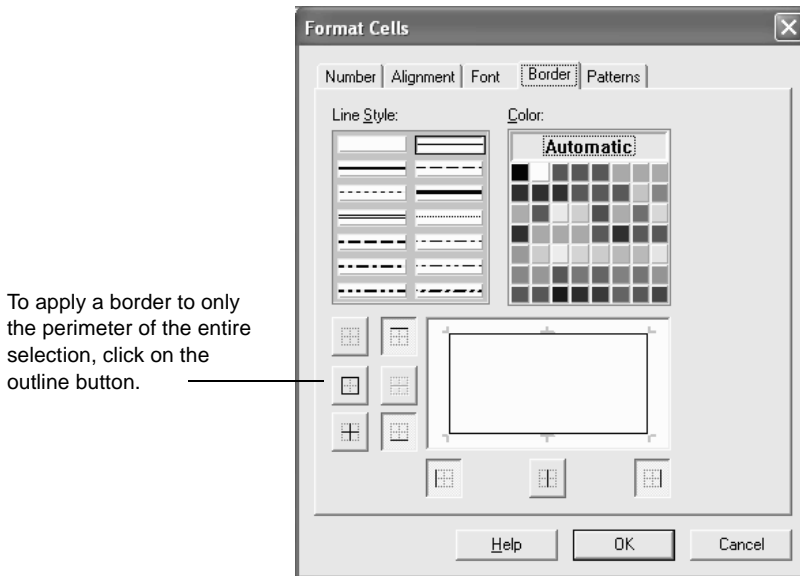
Figure 4 - 41:   The Border tab of the Format Cells dialog box.

4 From the Color palette, select a line color.

5 Select the buttons corresponding to the sides of the cells you want borders applied to.

6 Click on the OK button.

• **To remove borders from table cells**

1 In the Analysis window, select the cell or cells from which you want borders removed.

2 From the Format menu, choose Cells, and then select the Border tab.

3 Unselect the buttons corresponding to the sides of the cells you want borders removed from.

4 Click on the OK button.

Applying and Removing Patterns on Table Cells

You can apply patterns in a variety of colors and styles to table cells. You can also remove patterns from table cells.

• **To apply a pattern to table cells**

1 In the Analysis window, select the cell or cells to which you want a pattern applied.

2 From the Format menu, choose Cells, and then select the Patterns tab.

3 From the Fill Color palette, select a color for the pattern's fill color.

4 From the Pattern Color palette, select a color for the pattern's color.

5 From the Fill Pattern pallete, select a pattern style.

From the Fill Pattern palette, select a pattern for combining the foreground and background colors you chose.
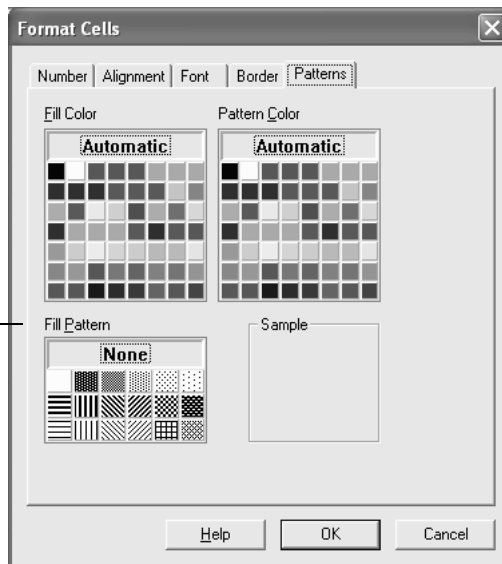
Figure 4 - 42:   The Patterns tab of the Format Cells dialog box.

6 Click on the OK button.

• **To remove a pattern from table cells**

1 Select the table cell or cells from which you want the pattern removed.

2 From the Format menu, choose Cells, and then select the Patterns tab.

3 From the Fill Pattern palette, select None.

4 Click on the OK button.

Specifying Number Formats

By applying number formats to table cells, you can control how numbers appear in the cells. For example, you can display percent symbols after numbers or show numbers in scientific notation. Number formats do not affect cells containing text.

You can apply number formats to cells even if they do not currently contain numbers. When Survey Crafter Professional calculates and displays numbers in the cells, it will use the number format you specified for the cells.

• **To specify number formats**

1 In the Analysis window, select the cells to which you want number formats applied.

2 From the Format menu, choose Cells, and then select the Number tab.

3 From the Category list, select a category of formats.

4 From the Type list, select a format to apply to the selected cells.

5 To customize the format, edit it in the field above the Type list.

Survey Crafter Professional saves the edited format as a new format in the selected category without overwriting the original.

For example, to display three decimal places instead of two, select the 0.00 format and then add a third zero.
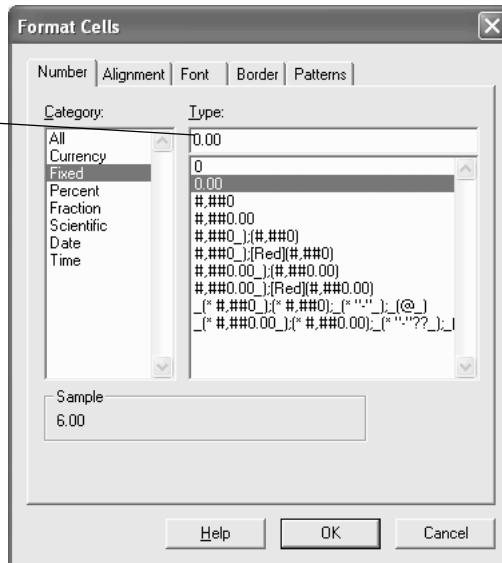
Figure 4 - 43: The Number tab of the Format Cells dialog box.

6   Click on the OK button.

Survey Crafter Professional applies the formatting to numbers in the selected cells.

Making Row and Column Headings Nonscrolling

Making row and column headings nonscrolling keeps them visible regardless of the table portion in view.

• **To make row and column headings nonscrolling**

    1   With the table visible in the Analysis window, choose Analysis Options from the View menu.

    2   Do one or both of the following in the Analysis Options dialog box:

       • To make row headings nonscrolling, select the Nonscrolling check box to the right of Number of Columns.

- • To make column headings nonscrolling, select the Nonscrolling check box to the right of Number of Rows.

3 Click on the OK button.

Typing and Editing Text in Table Cells

You can add or edit text in table cells. For example, you can enter a comment on a value appearing in the table as Figure 4 - 44 shows.

Note text in a table cell

Figure 4 - 44: Tables in the Analysis window may include cells showing text.

- • **To type text in a table cell**

1 In the Analysis window, select the cell in which you want to type text.

2 From the Edit menu, choose Edit Value.

3 In the Value Expression field, type the text you want to appear in the cell.

Enclose the text in double quotes.

Figure 4 - 45: Text for a table cell entered in the Edit Value dialog box.

4   Click on the OK button.

- **To edit text in a table cell**

    1   In the Analysis window, select the cell in which you want to type text.

    2   From the Edit menu, choose Edit Value.

    3   In the Value Expression field, edit the text.

    Enclose the text in double quotes.

    4   Click on the OK button.

Repositioning and Resizing Rows, Columns, and Table Cells

Survey Crafter Professional provides numerous ways to manipulate rows, columns, one cell, or a range of cells. This section covers the following procedures:

- Inserting Rows and Columns in a Table

- Inserting a Variable in a Table

- Inserting Cells in a Table

- Hiding and Showing a Table's Rows and Columns

- Changing Dimensions of Table Cells

- Copying, Cutting, and Pasting Table Cells

- Clearing and Deleting Table Cells

Inserting Rows and Columns in a Table

You can insert one or more rows and columns in a table. Survey Crafter Professional inserts rows above the selected row and inserts columns to the left of the selected column.

- **To insert a row in a table**

    1   In the Analysis window, select the row immediately below where you want to insert a row.

To insert multiple rows, click in a row and drag the pointer across the number of rows you want to insert.

For example, to insert a row between rows 1 and 2, select row 2.

Figure 4 - 46: Selecting a row before inserting a row.

2 From the Insert menu, choose Rows.

The inserted row has the default height.

> **Note** To change the default row height, from the Format menu, choose Row and then choose Height. Click on the Change Default button. Select the Custom option and enter a new height. Then click on the OK button. Then click on the OK button again. The new default height applies to subsequent rows you insert.

• **To insert a column in a table**

   1   In the Analysis window, select the column immediately to the right of where you want to insert a column.

   To insert multiple columns, click in a column and drag the pointer across the number of columns you want to insert.

For example, to insert a column between columns B and C, select column C.

Figure 4 - 47: Selecting a column before inserting a column.

   2   From the Insert menu, choose Columns.

   The inserted column has the default width.

> **Note** To change the default column width, from the Format menu, choose Column and then choose Width. Click on the Change Default button. In the Width field, enter a new width as the number of characters (from 0 and 120) you want to appear in the column. Then click on the OK button. Then click on the OK button again. The new default width applies to subsequent columns you insert.

Inserting a Variable in a Table

You can insert a category variable into a table's rows or columns by using the Variable command. When you insert a category variable, Survey Crafter Professional inserts a row or column for each category, sets up the row or column filter, and uses the variable's name and prompts as row or column headings.

When you insert a category variable, any NV and NR values in the variable are grouped in a category called "Missing."

• **To insert a variable in a table by using the Variable command**

   1 Open the table in which you want to insert a category variable.

   2 Select one of the following:

   • The row you want to insert the variable above

   • The column you want to insert the variable to the left of

Insert Variable button

   3 From the Insert menu, choose Variable or click on the Insert Variable button on the toolbar.

   4 Do one of the following:

   • In the Insert Variable dialog box's Name field, type the name of the category variable you want to insert.

• Scroll through the list of variables and select the variable to insert.
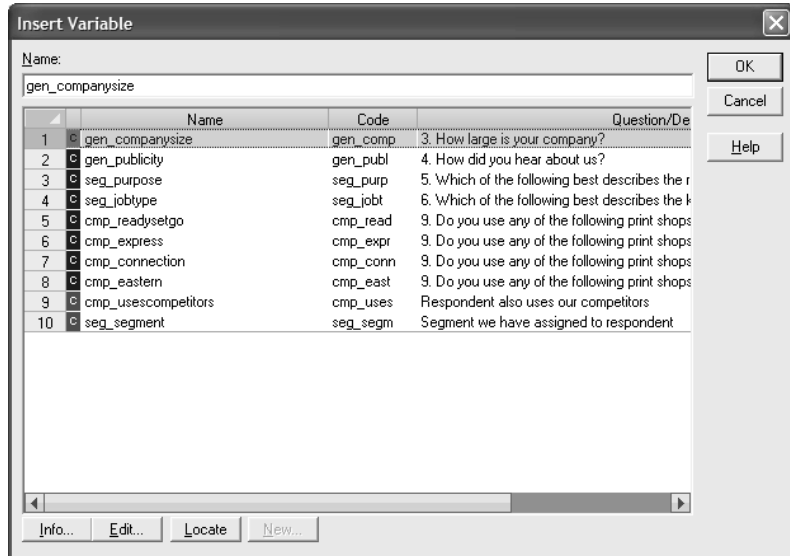
Figure 4 - 48:   The Insert Variable dialog box.

5   Click on the OK button.

To accommodate the inserted variable, Survey Crafter Professional shifts rows down or columns to the right. In Figure 4 - 49, the variable *cmp_readysetgo* was inserted in column C and the variable *gen_companysize* in row 3.

Survey Crafter Professional includes Missing categories in inserted variables to accommodate NR and NV values in the variables.

Figure 4 - 49:   "Missing" categories for inserted category variables.

Note When you insert a category variable in a table, Survey Crafter Professional expects to display two levels of headings, one for the variable name and one for the variable's prompts.

If you defined more than two levels of headings, Survey Crafter Professional populates only the bottom two levels (when inserting a variable in a column) or two rightmost levels (when inserting a variable in a row) with the variable's name and prompts. If you defined only one level of heading, Survey Crafter Professional displays only the variable's prompts. If you defined no levels of heading, Survey Crafter Professional does not display the variable's name or prompts.

For instructions on defining levels of headings, see "Defining a Table Title and Headings" on page 4 - 31.

Inserting Cells in a Table

You can insert a cell or range of cells in a table.

- **To insert cells in a table**

    1   In the Analysis window, select a cell or range of cells matching the size of the range to insert.

    2   From the Insert menu, choose Cells.

    3   In the Insert Cells dialog box, select the option for repositioning surrounding cells.

To insert as many rows or columns as you selected in step 1, select Entire Row or Entire Column.

If you selected a 2x3 region in step 1, selecting Entire Row inserts two rows and selecting Entire Column inserts three columns.
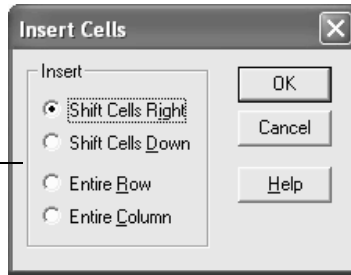
Figure 4 - 50:   The Insert Cells dialog box.

4   Click on the OK button.

Hiding and Showing a Table's Rows and Columns

You can customize the Analysis window display by hiding and showing a table's rows and columns. Hide a row or column to remove it from the Analysis window display. Hiding rows or columns does not delete their data. Show a row or column to return it to the Analysis window display.

• **To hide a table's rows or columns**

1   In the Analysis window, select the rows or columns you want to hide.

2   To hide rows, from the Format menu, choose Row and then choose Hide. To hide columns, from the Format menu, choose Column and then choose Hide.

Survey Crafter Professional removes the rows or columns from the Analysis window display.

• **To show a table's rows or columns**

1   In the Analysis window, click and drag the pointer over the rows or columns bordering the rows or columns you want to show.

For
example, to
show row 6,
select rows
5 and 7.

Figure 4 - 51:   Selecting the rows bordering a hidden row.

2   To show rows, from the Format menu, choose Row and then choose
Unhide. To show columns, from the Format menu, choose Column
and then choose Unhide.

Survey Crafter Professional returns the rows or columns to the
Analysis window display.

Changing Dimensions of Table Cells

You can define a column's width or a row's height or have Survey Crafter
Professional automatically size the row or column to fit the largest value
it contains.

Setting Cell Dimensions Yourself

You can change cell dimensions by dragging row or column borders or, for more precision, by using the Row Height and Column Width dialog boxes.

- **To change cell dimensions by dragging borders**

  1   In the Analysis window, position the pointer on the border between the selectors for the column or row you want to adjust.

  2   Resize the entire row or column by clicking and dragging the border.

- **To change row height by using a dialog box**

  1   In the Analysis window, select one or more rows.

  2   From the Format menu, choose Row and then choose Height.

  3   In the Format Row Height dialog box, do one of the following:

  - Select Custom and type the rows' new height in inches.

  - Select the Default Height check box to use the default row height.

If you want to enter a decimal value, type a 0 first.
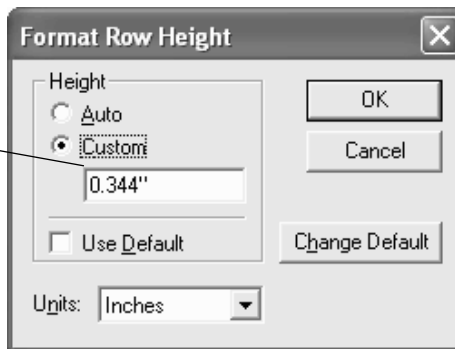
Figure 4 - 52:   The Format Row Height dialog box.

  4   Click on the OK button.

- **To change column width by using a dialog box**

  1   In the Analysis window, select one or more columns.

  2   From the Format menu, choose Column and then choose Width.

  3   In the Format Column Width dialog box, do one of the following:

- In the Width field, type the columns' new width. Enter the width as the number of characters (from 0 to 120) to appear in the column's cells.

- Select the Default Width check box to use the default column width.

If you want to enter a decimal value in either field, type a 0 first.
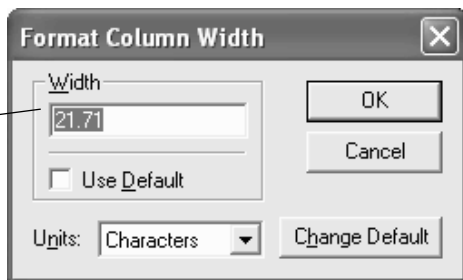
Figure 4 - 53:   The Format Column Width dialog box.

4   Click on the OK button.

Sizing Table Cells to Fit Values Automatically

Survey Crafter Professional can set a column's width to fit the column's widest value and a row's height to fit the row's tallest value.

- **To size table cells to fit values automatically**

    1   In the Analysis window, select a column or row.

    2   From the Format menu, choose Row and then choose Auto Size Selection or choose Column and then choose Auto Size Selection.

    Survey Crafter Professional resizes the column or row to accommodate the widest or tallest value.

Copying, Cutting, and Pasting Table Cells

Use the Copy and Cut commands from the Edit menu to transfer table cells to the clipboard. Survey Crafter Professional features several options for pasting cells in tables.

Copying and Cutting Table Cells

Follow the steps below to copy or cut table cells.

• **To copy table cells**

  1 In the Analysis window, select the cells you want to copy.

  2 From the Edit menu, choose Copy or click on the Copy button on the toolbar.

Copy button

• **To cut table cells**

  1 In the Analysis window, select the cells you want to cut.

  2 From the Edit menu, choose Cut or click on the Cut button on the toolbar.

Cut button

Pasting Table Cells

Use the Edit menu's Paste or Paste Special commands to transfer cells from the clipboard to a table.

The Paste command automatically pastes cells' formatting and expressions. The Paste Special command gives you the option of pasting one or both of these cell properties plus the selected cells' row filters and column filters.

• **To paste table cells**

  1 In the Analysis window, select the range of cells into which you want to paste the cells currently on the clipboard.

  The size of the range you select should be the same as or a multiple of the range of cells on the clipboard. For example, you can paste a 2x2 cell range into a 4x4 range but not into a 2x3 range.

  2 From the Edit menu, choose Paste or click on the Paste button on the toolbar.

Paste button

  3 To recalculate the cells' values, click on the Update button on the toolbar or choose the Edit menu's Update command.

  > **Note** If the value #Error appears in the cell, Survey Crafter Professional could not evaluate the cell's expression. Double-click on the cell and edit the expression in the Value Expression field.

- **To paste cells using the Paste Special command**

  1   In the Analysis window, select the range of cells into which you want to paste the cells currently on the clipboard.

  The size of the range you select should be the same as or a multiple of the range of cells on the clipboard. For example, you can paste a 2x2 cell range into a 4x4 range but not into a 2x3 range.

  2   From the Edit menu, choose Paste Special.

  3   In the Paste Special dialog box, select the check boxes corresponding to the cell attributes you want to paste into the selected range.

If you select the Row Filter or Column Filter check boxes, Survey Crafter Professional overwrites the host cells' filters with those of the cells on the clipboard.

Figure 4 - 54:   The Paste Special dialog box.

  4   Click on the OK button.

  5   Cick on the Update button on the toolbar to recalculate the cells' values.

> **Note** If the value #Error appears in the cell, Survey Crafter Professional could not evaluate the cell's expression. Double-click on the cell and edit the expression in the Value Expression field.

Clearing and Deleting Table Cells

Clear a cell if you want to remove selected cell properties but keep the cell in the table. Delete a cell if you want to remove the cell and all its properties.

- **To clear table cells**

  1   In the Analysis window, select the cells you want to clear.

2 From the Edit menu, choose Clear.

3 In the Clear dialog box, select the check boxes corresponding to the properties you want to remove from the selected cells.
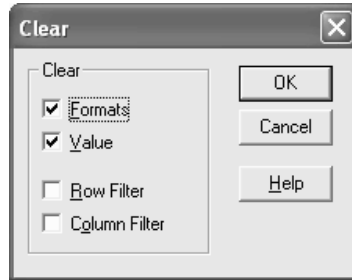
Figure 4 - 55: The Clear dialog box.

4 Click on the OK button.

- **To delete table cells**

    1 In the Analysis window, select the cells you want to delete.

    2 From the Edit menu, choose Delete.

    3 In the Delete dialog box, select an option for rearranging neighboring cells after the selected cells are deleted.

Choose Entire Row to delete the rows containing the selected cells. Choose Entire Column to delete the columns containing the selected cells.
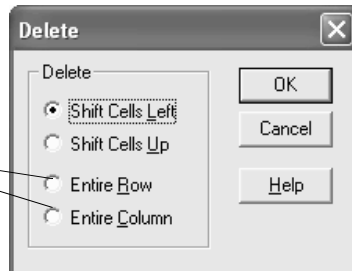
Figure 4 - 56: The Delete dialog box.

4 Click on the OK button.

Updating Tables

Update a table to calculate or recalculate the values in the table's cells. After you have done any of the following, #Update may appear in one or more of a table's cells, indicating that you need to update the table:

- Entered a new expression for a cell

- Changed a cell's expression

- Changed a row, column or table filter used by a cell's expression

- Changed the expression for a computed variable used by a cell's expression

- Copied and pasted an expression to a cell having a different row or column filter

- Changed the portion of the study's data set a cell's expression uses

- Added or deleted a record in the study's data set

- **To update a table**

  With the table open in the Analysis window, do one of the following:

- From the Edit menu, choose Update.

- Click on the Update button on the toolbar.

  Survey Crafter Professional recalculates the cells' values.

Update button

Displaying a Table's Data as a Chart

You can display an entire table or a portion of a table as a chart. You can then customize the chart's format.

- **To view the entire table as a chart**

    1 Open the table you want to view as a chart.

    2 From the View menu, choose Chart, or click on the Chart button on the toolbar.

Chart button

The chart appears in the Analysis window. For instructions on formatting the chart, see Chapter 5, "Analyses: Charts."

- **To view a portion of the table as a chart**

    1 Open the table you want to view as a chart.

    2 From the View menu, choose Analysis Options.

    3 In the Chart Region field, enter the range of cells to chart. Separate the range's upper left and lower right cells with a colon.

    For example, entering **B2:D5** plots data in columns B, C, and D and in rows 2, 3, 4, and 5.

    To view the entire table as a chart, delete the range appearing in the Chart Region field.

    4 Click on the OK button.

    5 From the View menu, choose Chart or click on the Chart button on the toolbar.

    The plotted data appears in the Analysis window.

> **Note** The range in the Chart Region field stays the same even if the charted values change position in the table. Suppose you enter a range in the Chart Region field and then change the position of the charted data (for example, you insert rows or cut and paste the charted data). To see the same chart as before, you need to enter the charted data's new range in the Chart Region field.

Sorting Table Cells

You can sort a selected range of cells in an analysis table. You can have the cells sorted vertically or horizontally, using up to 3 columns or rows to determine the sort order.

Sorting a Selected Range of Cells

- **To sort a selected range of cells**

1   At the Study window's Analyses tab, open the table you want to work on.

2   Using your mouse or the keyboard, select the range of cells you want to sort.

Your selection must include cells from the columns or rows you want to use to determine the sort order.

Sort Cells button

3   From the Edit menu, choose Sort Cells or click on the Sort Cells button on the toolbar.

Survey Crafter Professional displays the *Sort Cells* dialog box.

4   Click on *Top to bottom* to sort the cells vertically or *Left to right* to sort the cells horizontally.

5   Click on the drop down under *Sort by* to choose the primary column or row to use to determine the sort order.

If you have chosen *Top to bottom*, the drop down will list all of the columns that are contained in the selected range. If you have chosen *Left to right*, the drop down will list all of the rows that are contained in the selected range.

6   Choose either *ascending* or *descending* for the column or row.

7   If you want, click on the drop down under *Then by* to choose the next column or row to use to determine the sort order. Also choose either *ascending* or *descending* for the column or row.

The selected column or row will be used when the values of the primary column or row are equal.

8   If you want, click on the drop down under the second *Then by* to choose the final column or row to use to determine the sort order. Also choose either *ascending* or *descending* for the column or row.

The selected column or row will be used when the values of both the primary and secondary columns or rows are equal.

9   Click on the OK button.

Survey Crafter Professional will sort the selected range of cells according to the selections you made in the Sort Cells dialog box.

Exporting Tables

You can export an entire table or a selected range of cells to use in a report, presentation, or spreadsheet. You can export a table to other applications using the clipboard or you can export a table to a file.

Exporting a Table using the Clipboard

- **To export an entire table using the clipboard**

    1   At the Study window's Analyses tab, open the table you want to export.

    2   From the Edit menu, choose Copy All.

    Survey Crafter Professional copies the table's title, headings, and data to the clipboard in text, HTML, bitmap and metafile formats.

    3   Open the file you want to paste the table into.

    4   Paste the table into the file.

    If this file's application has a Paste Special command, you can use it to specify whether you want to paste the table as a metafile, which you can resize, unformatted text or HTML, which you can edit, or as a bitmap, which you cannot edit. If the application only has a Paste command, the table will appear in the file as unformatted text.

- **To export a range of cells using the clipboard**

    1   Open the table with the cells you want to export.

    2   Select the range of cells.

Copy button

    3   From the Edit menu, choose Copy or click on the Copy button on the toolbar.

    Survey Crafter Professional copies the region to the clipboard in text, HTML, bitmap and metafile formats.

    4   Open the file you want to paste the cells into.

    5   Paste the cells into the file.

If this file's application has a Paste Special command, you can use it to specify whether you want to paste the table as a metafile, which you can resize, unformatted text or HTML, which you can edit, or as a bitmap, which you cannot edit. If the application only has a Paste command, the table will appear in the file as unformatted text.

Exporting a Table to a File

To enhance a table's format or to publish the table in another format, you can also export a table to a file. You can export a table to the following types of files:

- Microsoft Excel 97 workbook (XLS) file

- HyperText Markup Language (HTM) file

- Text (Tab Delimited) file

- **To export an entire table to a file**

  1 At the Study window's Analyses tab, open the table you want to export.

  2 From the File menu, choose Export.

  Survey Crafter Professional displays the Save Analysis Table File As dialog box.

  > **Tip** If you want to export a table to an HTML file, you may want to review the web analysis HTML option settings in the Web Analysis Setup dialog box. Survey Crafter Professional uses these settings when it exports a table to an HTML file.

  3 From the files of Type drop-down list, select the type of file you want to save.

  4 From the Locations (Save in) drop-down list, choose the location to save the file.

  5 In the Folders list, select the folder in which you want to save the file.

  6 In the File name field, type the name of the file to save.

  7 Click on the Save button.

Charts and Drawing Objects on Tables

In addition to viewing a table as a chart, you can also insert charts and other drawing objects on a table. For example, you can use rectangles to highlight regions of your table and charts to further illustrate parts of your table. The following sections describe how to insert, format and remove charts and drawing objects on tables.

• Inserting Charts and Drawing Objects on Tables

• Formatting Charts and Drawing Objects on Tables

• Removing Charts and Drawing Objects on Tables

> **Note** Chapter 5, "Analyses: Charts," explains how to format charts.

Inserting Charts and Drawing Objects on Tables

You can insert multiple charts and drawing objects on tables. The following sections describe how to insert charts and drawing objects on tables.

> **Note** Charts and drawing objects on tables appear on printed tables but not on exported tables.

• Inserting Charts on Tables

• Inserting Arcs on Tables

• Inserting Lines on Tables

• Inserting Ovals on Tables

• Inserting Polygons on Tables

• Inserting Rectangles on Tables

Inserting Charts on Tables
You can insert multiple charts on a table.

- **To insert a chart on a table**

   1 Select a range of cells on the table to serve as the data source for the new chart.

   If you select a range of cells that contain heading rows and columns, Survey Crafter Professional automatically detects the heading rows and columns and makes them the default series and axes labels. You can override these labels later in the Chart wizard.

   If you select a range of cells that do not contain any heading rows or columns, you can still set the chart series and axes labels later in the Chart wizard.

   2 Choose the Chart command from the Insert menu.

   You can cancel this operation by choosing the Chart command again from the Insert menu.

   3 Click on an open area on the table, hold the left mouse button down and drag the mouse down and to the right to create a rectangle.

   4 Release the left mouse button.

   Survey Crafter Professional displays the Chart wizard dialog box.

   5 Follow the instructions on the Chart wizard dialog boxes, choosing the Next button at the end of each step and then the Finish button to insert the new chart on the table.

   You can resize the chart by dragging its borders. You can also move the chart by clicking on and dragging it. You can also change the chart by right clicking on it and choosing the Chart Designer or Chart Wizard commands from the pop-up menu.

Figure 4 - 57 shows a table with an inserted horizontal bar chart.

Inserted bar
chart
illustrates the
numbers in
the table.
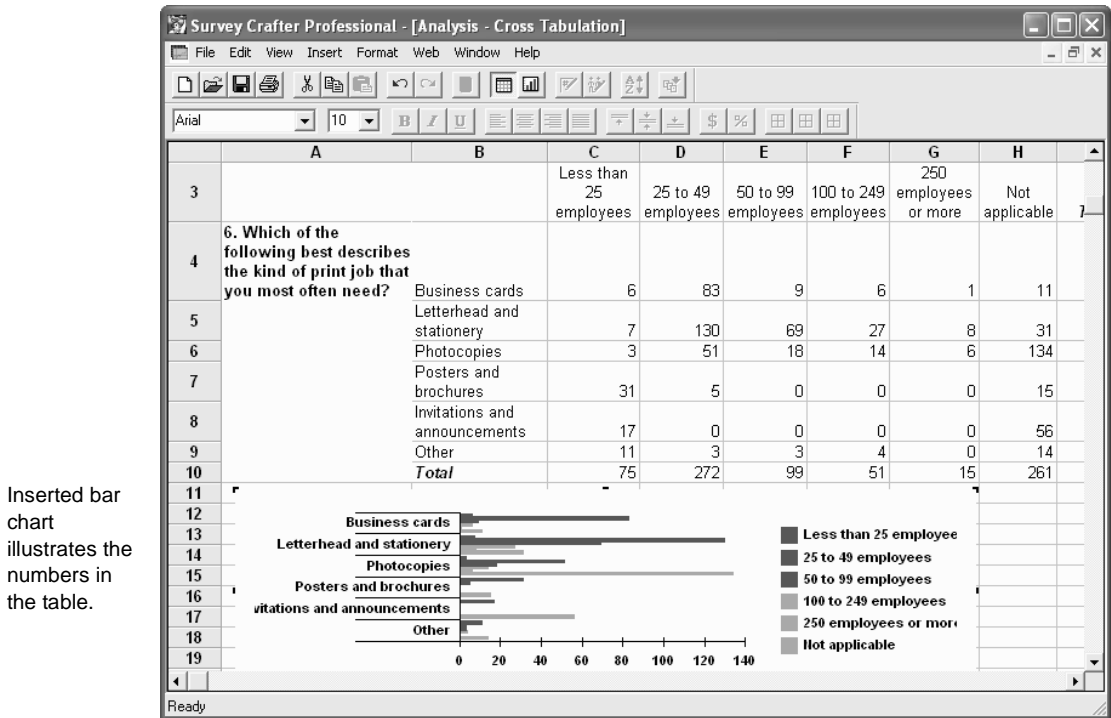
Figure 4 - 57:   Table with an inserted horizontal bar chart.

Inserting Arcs on Tables
Use arc drawing objects to help illustrate your tables.

- **To insert an arc drawing object on a table**

    1   Choose the Arc Drawing command from the Insert menu.

        You can cancel this operation by choosing the Arc Drawing command
        again from the Insert menu.

    2   Click on an open area on the table, hold the left mouse button down
        and drag the mouse down and to the right to create a rectangle.

    3   Release the left mouse button.

        Survey Crafter Professional draws an arc on the table.

You can resize the object by dragging its borders. You can also move the object by clicking on and dragging it. You can also change the object by clicking on it and choosing the Object command from the Format menu.

Inserting Lines on Tables

Use line drawing objects to help illustrate your tables.

- **To insert a line drawing object on a table**

  1 Choose the Line Drawing command from the Insert menu.

  You can cancel this operation by choosing the Line Drawing command again from the Insert menu.

  2 Click on an open area on the table, hold the left mouse button down and drag the mouse down and to the right to create a rectangle.

  3 Release the left mouse button.

  Survey Crafter Professional draws a line on the table.

  You can resize the object by dragging its points. You can also move the object by clicking on and dragging it. You can also change the object by clicking on it and choosing the Object command from the Format menu.

Inserting Ovals on Tables

Use oval drawing objects to help illustrate your tables.

- **To insert an oval drawing object on a table**

  1 Choose the Oval Drawing command from the Insert menu.

  You can cancel this operation by choosing the Oval Drawing command again from the Insert menu.

  2 Click on an open area on the table, hold the left mouse button down and drag the mouse down and to the right to create a rectangle.

  3 Release the left mouse button.

  Survey Crafter Professional draws an oval on the table.

You can resize the object by dragging its borders. You can also move the object by clicking on and dragging it. You can also change the object by clicking on it and choosing the Object command from the Format menu.

Inserting Polygons on Tables

Use polygon drawing objects to help illustrate your tables.

• **To insert a polygon drawing object on a table**

1   Choose the Polygon Drawing command from the Insert menu.

You can cancel this operation by choosing the Polygon Drawing command again from the Insert menu.

2   Click on an open area on the table, hold the left mouse button down and drag the mouse down and to the right to create a rectangle.

3   Release the left mouse button.

Survey Crafter Professional draws a polygon on the table.

You can resize the object by dragging its borders. You can also move the object by clicking on and dragging it. You can also change the object by clicking on it and choosing the Object command from the Format menu.

Inserting Rectangles on Tables

Use rectangle drawing objects to help illustrate your tables.

• **To insert a rectangle drawing object on a table**

1   Choose the Rectangle Drawing command from the Insert menu.

You can cancel this operation by choosing the Rectangle Drawing command again from the Insert menu.

2   Click on an open area on the table, hold the left mouse button down and drag the mouse down and to the right to create a rectangle.

3   Release the left mouse button.

Survey Crafter Professional draws a rectangle on the table.

You can resize the object by dragging its borders. You can also move the object by clicking on and dragging it. You can also change the object by clicking on it and choosing the Object command from the Format menu.

Formatting Charts and Drawing Objects on Tables

You can format the charts and drawing objects on tables. The following sections describe how to format charts and drawing objects on tables.

• Formatting Charts on Tables

• Formatting Drawing Objects on Tables

Formatting Charts on Tables

You can use the Chart Designer and Chart Wizard dialog boxes to format a chart in a table.

• **To format a chart on a table using the Chart Designer or the Chart Wizard dialog boxes**

   1 Select the chart.

   2 Right click on the chart.

   Survey Crafter Professional displays the chart pop up menu.

   3 Choose the Chart Designer or the Chart Wizard command from the chart pop up menu.

   4 Survey Crafter Professional displays the Chart Designer or the Chart Wizard dialog box.

   For help on any of the Chart Designer or Chart Wizard dialog box options, click on the Help button.

   Note Chapter 5, "Analyses: Charts," explains how to format charts.

Formatting Drawing Objects on Tables

You can format drawing objects on a table.

- **To format a drawing object on a table using the Format Object dialog box**

    1   Select the drawing object you want to format.

    2   Choose the Object command from the Format menu.

    Survey Crafter Professional displays the Format Object dialog box.

    For help on the Format Object dialog box options, click on the Help button.
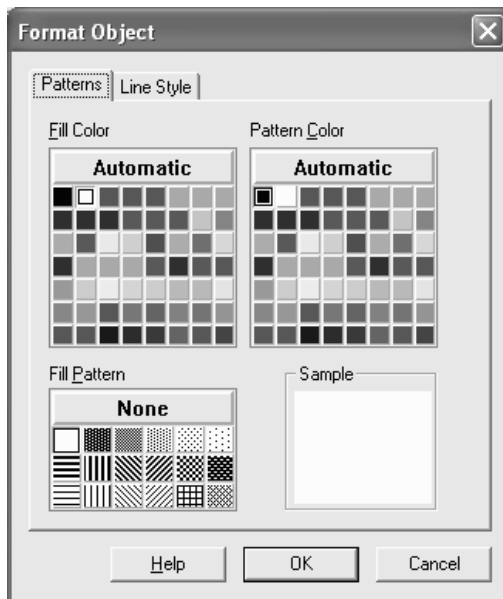
Figure 4 - 58:   The Patterns tab of the Format Object dialog box.

    3   Click on the OK button when you are finished changing formatting options.

Removing Charts and Drawing Objects on Tables

The following sections describe how to select all charts and drawing objects on tables and how to delete charts and drawing objects on tables.

- Selecting All Charts and Drawing Objects on Tables

• Removing Charts and Drawing Objects on Tables

Selecting All Charts and Drawing Objects on Tables

You can select all charts and drawing objects on a table.

• **To select all charts and drawing objects on a table**

   1   From the Edit menu, choose the Select All Objects command.

   Survey Crafter selects all objects in the table. If you want to remove all objects in a table, choose the Clear command from Edit menu.

Removing Charts and Drawing Objects on Tables

You can remove one or more charts or drawing objects in a table.

> **WARNING!** This operation cannot be undone.

• **To remove a chart or drawing object in a table**

   1   Select the object by clicking on it.

   You can select more than one object by holding the [SHIFT] key down and clicking on the next object in the table.

   2   From the Edit menu, choose the Clear command.

   Survey Crafter removes the selected object(s).

5 Analyses: Charts

In addition to presenting the results of analyses in a table, you can show results in a chart. Survey Crafter Professional supports a wide range of chart types including bar, line, area, and pie charts. It also gives you extensive control over charts' formats. You can, for example, stack data series in bar charts, add axis titles, and apply solid or patterned backdrops to charts.

This chapter explains how to create a chart from a table and how to format chart elements. Read the section "Chart Basics" first to learn about chart elements and different chart types.

Chapter Contents

Chart Basics

Before working with charts, read this section to learn about series and categories, the relationship between a chart and its table, terms for chart elements, and different ways to access the dialog boxes for formatting chart elements.

Charts' Series and Categories

The most basic components of a chart are series and categories, illustrated in Figure 5 - 1.
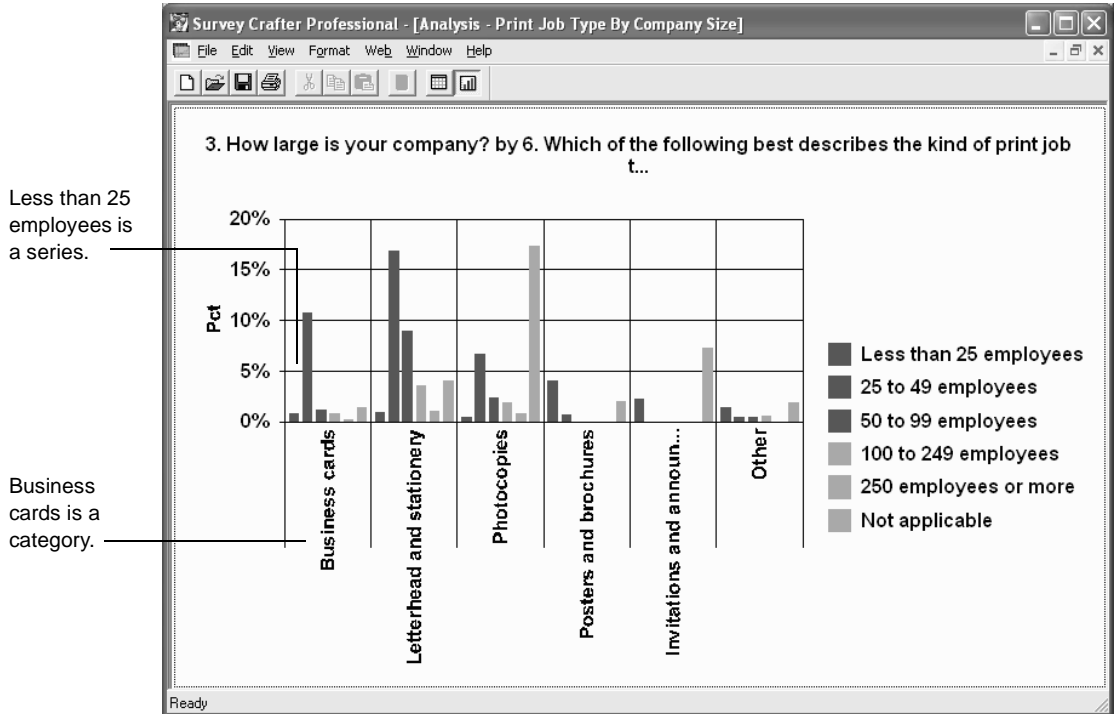
Figure 5 - 1:   Series and categories in a chart.

A series is a group of related data points (for example, all the points on a line in a line chart or all the bars of one color in a bar chart). A category is a collection of one data point from each series in a chart (for example, the data point representing the percentage of males who said The Chicken Coop is their favorite restaurant.)

The Relationship between an Analysis' Table and its Chart

A chart is a graphical representation of tabulated data, and every Survey Crafter Professional chart has a table associated with it. You can switch between viewing the data as either a chart or a table. Survey Crafter Professional uses a table's row headings as category labels and its column headings as series labels on the chart as Figure 5 - 2 shows.
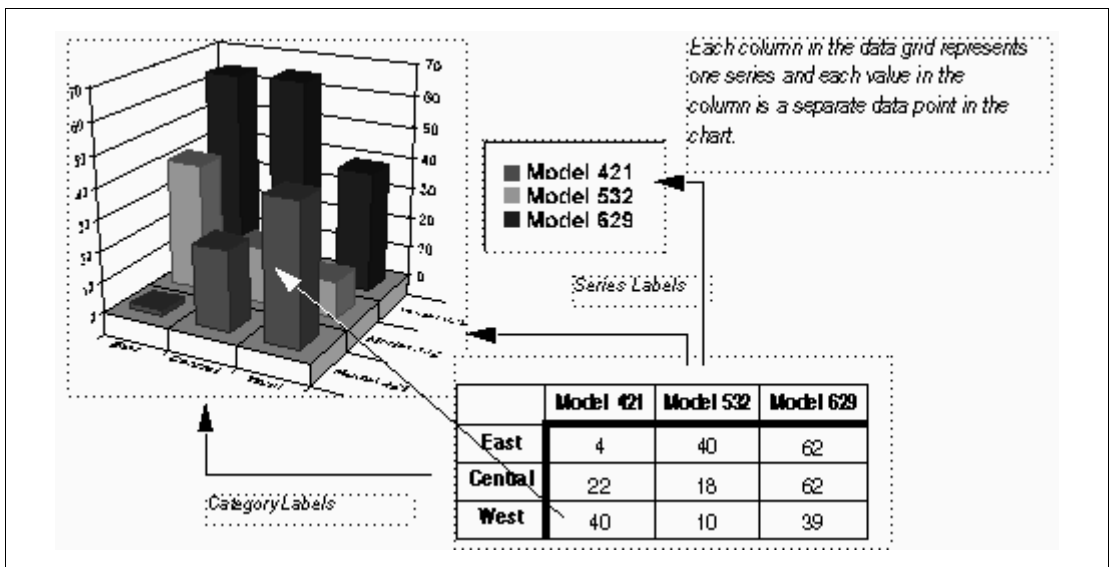
Figure 5 - 2:   The relationship between a table and a chart.

You can display values or data points using formats like lines, bars, markers, filled areas, bubbles, or pie sections. Data points are grouped into series that are identified by unique colors or patterns. In many chart types, one data point from each series is grouped together in a category along an axis.

Terms for Chart Elements

Figure 5 - 3 illustrates common 2D chart elements.
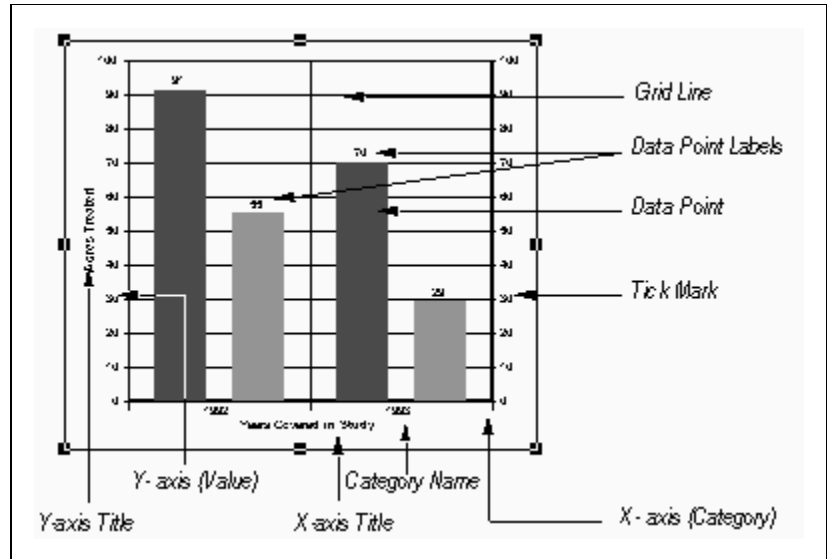
Figure 5 - 3:   Common 2D chart elements.

Figure 5 - 4 illustrates common 3D chart elements.
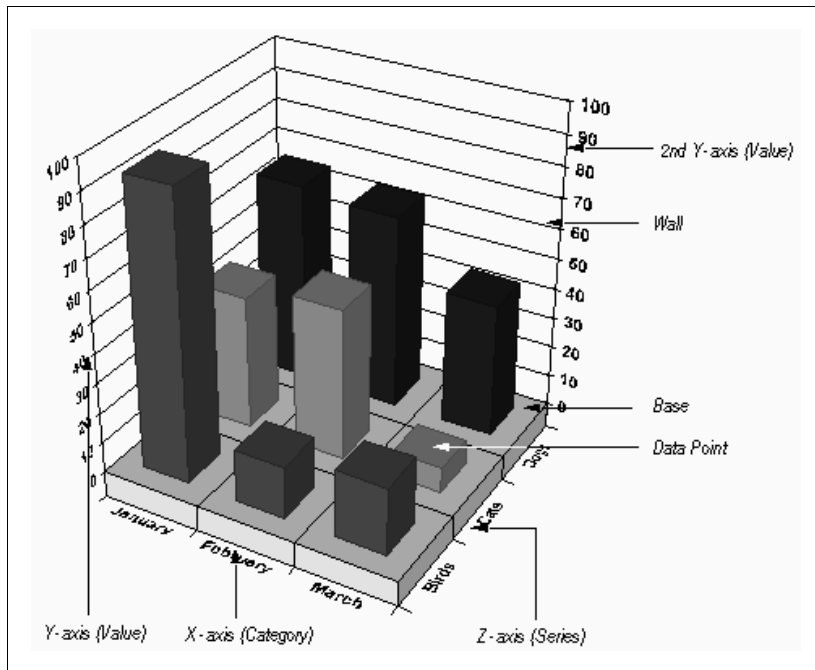
Figure 5 - 4:   Common 3D chart elements.

Chart Types and Required Table Configurations

Survey Crafter Professional supports the 14 types of charts listed below. Many of these charts can be displayed in two or three dimensions. Each chart type requires the data in its table to be configured a certain way, as this section explains. In most chart types, one column of data in the table corresponds to one series and one row corresponds to one category.

If the data is not properly configured for a given chart type and you try to view that chart type, Survey Crafter Professional displays the message "Not Enough Data" in the Analysis window.

Area Charts

Area charts emphasize the relative importance of values over a period of time. An area chart focuses on the magnitude of change rather than the rate of change.
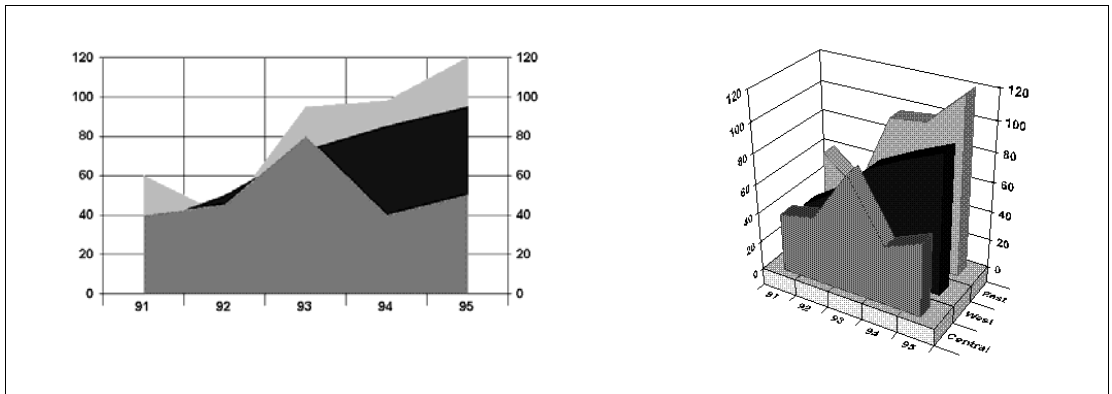
Figure 5 - 5:   A two-dimensional area chart (left) and a three-dimensional area chart.

Each filled area on the chart represents a series and is identified by a different color or pattern. Values are plotted on the vertical (Y) axis and categories are plotted on the horizontal (X) axis. You can also chart one or more series against the secondary Y axis instead of the primary axis.

An area chart's table requires at least one column containing two or more values.

Bar Charts

Bar charts compare one item to another or a number of items over a period of time. They are particularly effective at showing large changes from one category to another. Each 2D or 3D bar represents a value in the table. Bars representing a series are located at the same position in each category and have the same color and pattern.

In 2D charts, the vertical (Y) axis shows values and the horizontal (X) axis groups bars by category. On 3D charts, the vertical (Y) axis shows values, the horizontal (X) axis shows categories, and the depth (Z) axis shows series.
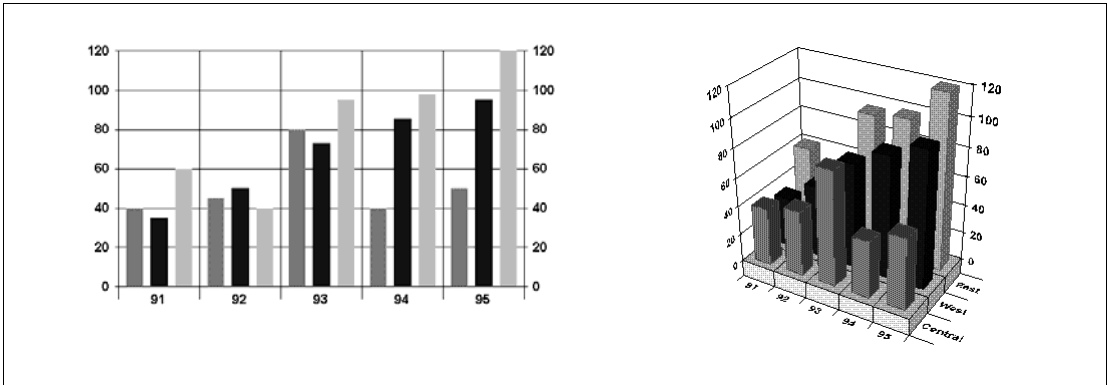
Figure 5 - 6:   A two-dimensional bar chart (left) and a three-dimensional bar chart.

A bar chart's table requires at least one column containing one or more values.

Clustered Bar Charts

Like 2D bar charts, clustered bar charts show categories on the X axis and values on the Y axis. However, clustered bar charts display all series, data points, and other chart elements in 3D.
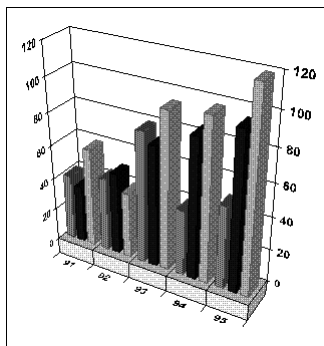
Figure 5 - 7:   A clustered bar chart.

A clustered bar chart's table requires at least one column containing one or more values.

Horizontal Bar Charts

Horizontal bar charts are similar to standard bar charts except that the categories are organized on a vertical (X) axis and the values are plotted on a horizontal (Y) axis.
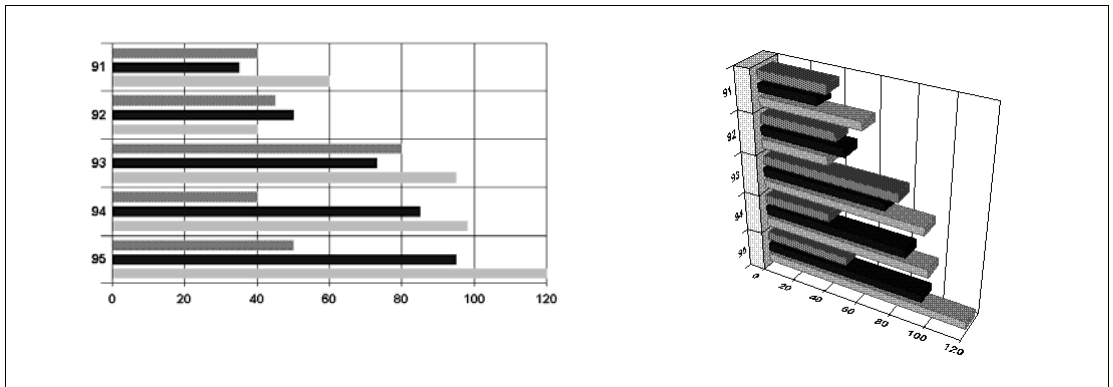
Figure 5 - 8:   A two-dimensional horizontal bar chart (left) and a three-dimensional horizontal bar chart.

A horizontal bar chart's table requires at least one column containing one or more values.

Bubble Charts

Use bubble charts to show a visual comparison using three coordinates.

All the coordinates in a bubble chart measure values. Therefore, the vertical (Y) axis and the horizontal (X) axis both show values. The column heading on the first column in each series identifies the series in the legend.
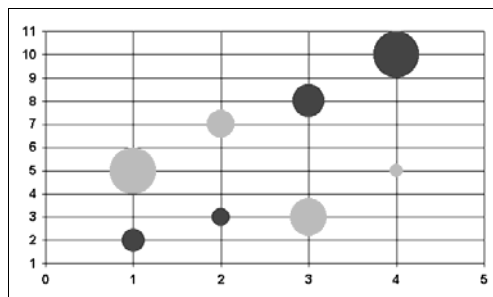
Figure 5 - 9:   A bubble chart.

A bubble chart's table requires three columns, with each row describing one bubble:

• The first column contains the X coordinate of the data point (or bubble).

• The second column contains the Y coordinate of the data point.

• The third column contains the diameter of the bubble.

Combination Charts

Use combination charts to highlight the differences between multiple series of data. You can use a different method to draw each data series. For example, show one series as a line and another as bars and a third as an area chart.
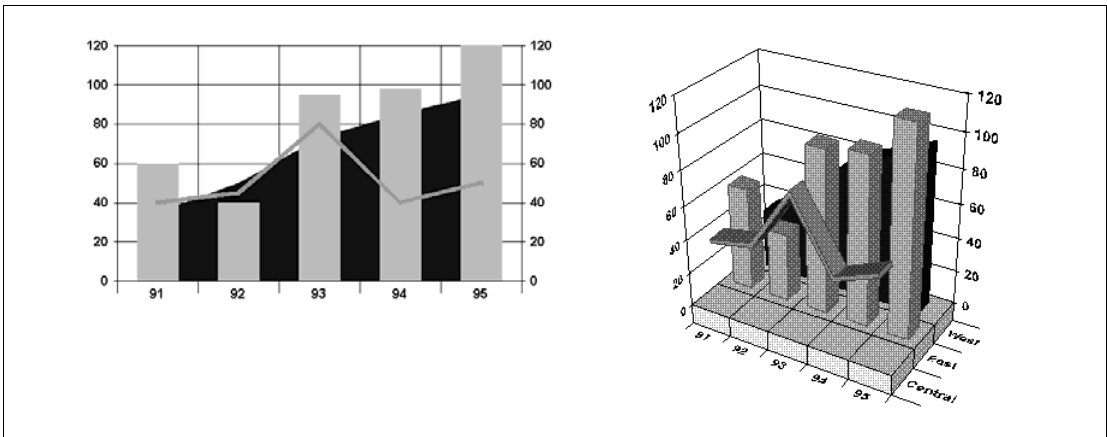
Figure 5 - 10: Combination charts in which series appear as a line, a set of bars, and an area.

A combination chart's table requires at least two columns containing one or more values.

Gantt Charts

Gantt charts display a range of bars that indicate the relative time required for a project's activities. The horizontal axis (Y) shows dates and the vertical axis (X) shows categories (activities).
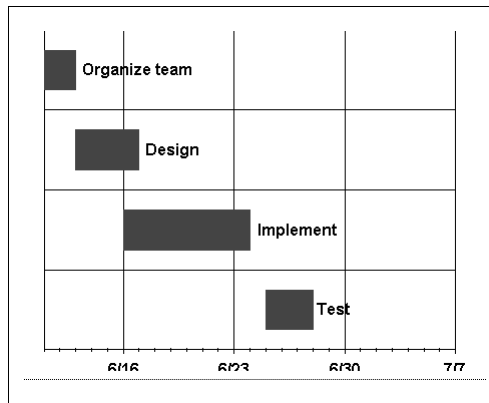
Figure 5 ‑ 11:   A gantt chart.

Each series in a gantt chart requires two columns of data in the chart's table:

• The first column contains the activity's start date.

  Dates must be entered as Julian dates (the number of days) counted from 1 January 1900. You can then apply a date format to the cells' values so that they appear as dates using a more conventional format like MM/DD/YY. For example, enter the Julian date 39295 for 1 August 2007. The Julian date 39300 corresponds to 6 August 2007.

• The second column contains the activity's duration.

Hi-lo Charts

Hi-lo charts are most commonly used to indicate changes in values like stock prices over a period of time. The vertical (Y) axis shows values and the horizontal (X) axis shows categories or dates.

Survey Crafter Professional supports a number of variations of the hi-lo chart. These variations include hi-lo-close, which indicates the highest, lowest, and last measurements on a given date; and open-hi-lo-close, which also shows the first value measurement on a given date.

The column heading on the first column in each series identifies the series in the legend.
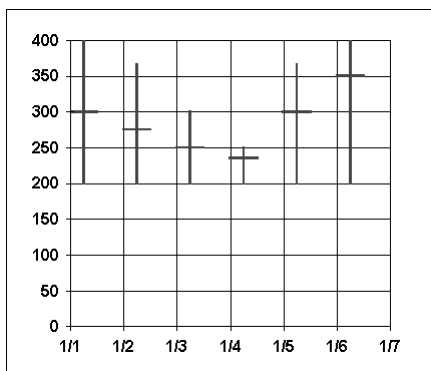
Figure 5 - 12:   A hi-lo-close chart with close markers crossing data points and dates appearing on the horizontal (X) axis.

The table for a hi-lo chart requires two columns for each series:

• The first column contains the series' high point.

• The second column contains the series' low point.

The table for a hi-lo-close chart requires three columns for each series:

• The first column contains the series' high point.

• The second column contains the series' low point.

• The third column contains the series' close point.

The table for an open-hi-lo-close chart requires four columns for each series:

• The first column contains the series' open point.

• The second column contains the series' high point.

• The third column contains the series' low point.

• The fourth column contains the series' close point.

> **Note** To include dates on the chart's horizontal (X) axis, enter the dates as the right column of the table. Dates must be entered as Julian dates (the number of days) counted from 1 January 1900. You can then apply a date format to the cells' values so that they appear as dates in a more conventional format like MM/DD/YY. For example, enter the Julian date 39295 for 1 August 2007. The Julian date 39300 corresponds to 6 August 2007.

Line Charts

Line charts show trends or changes in data over a period of time. These charts emphasize the rate of change rather than the amount of change.

In 2D line charts, the vertical (Y) axis shows values and the horizontal (X) axis shows categories. In 3D charts, the vertical (Y) axis shows values, the horizontal (X) axis shows categories, and the depth (Z) axis shows series.
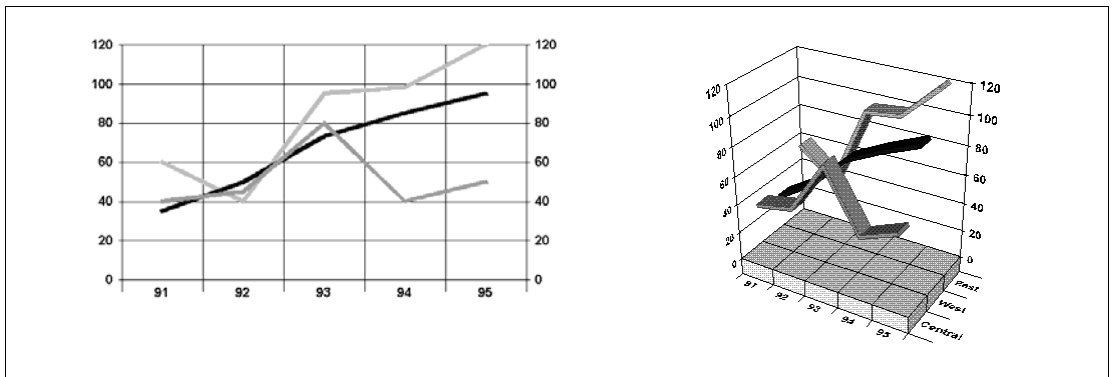
Figure 5 - 13:   A two-dimensional line chart (left) and a three-dimensional line chart.

A line chart's table requires at least one column containing two or more values.

Pie and Doughnut Charts

Pie charts and doughnut charts show the relationship of parts to the whole. Each pie or doughnut represents a category. Each section of the pie or doughnut represents a different series' value in that category. You can

separate or explode a section in a chart by clicking a section and dragging it away from the rest of the pie or doughnut.
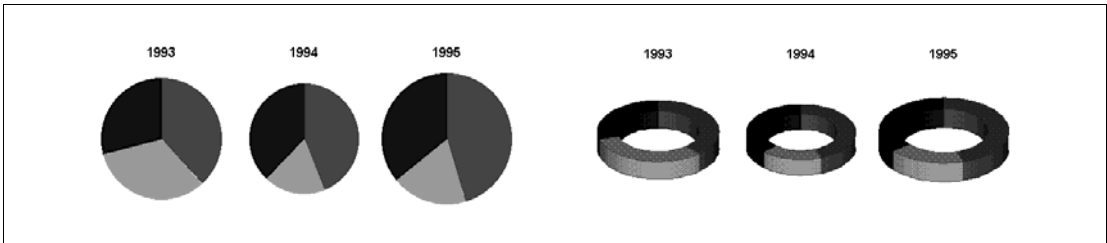
Figure 5 - 14:   A pie chart (left) and a doughnut chart.

Pie and doughnut charts' tables require at least one row containing two or more values.

Polar Charts

Polar charts show cyclical trends.

The column heading on the first column in each series identifies the series in the legend.
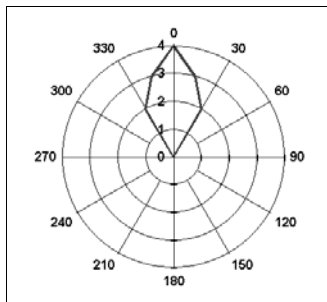
Figure 5 - 15:   A polar chart.

A polar chart's table requires two columns in the table for each series:

• The first column holds the angle on the perimeter of the chart.

• The second column contains the distance from the center of the chart.

Radar Charts

Radar charts show changes or frequencies of each series relative to a center point and to one another. Lines connect all the data markers in the same series. You can also fill the lines to create a radar area chart.
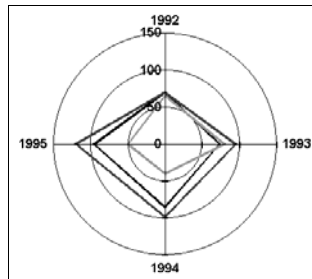
Figure 5 - 16:   A radar chart.

A radar chart's table requires one column containing at least one value.

Survey Crafter Professional divides the chart into as many equally spaced axes as there are data points. Each value represents the distance from the center of the radar chart on a different equally spaced axis.

Step Charts

Use step charts to compare items that do not show trends. Step charts display distinct points along the value (Y) axis, with vertical lines showing the difference between each point. The horizontal (X) axis shows categories.
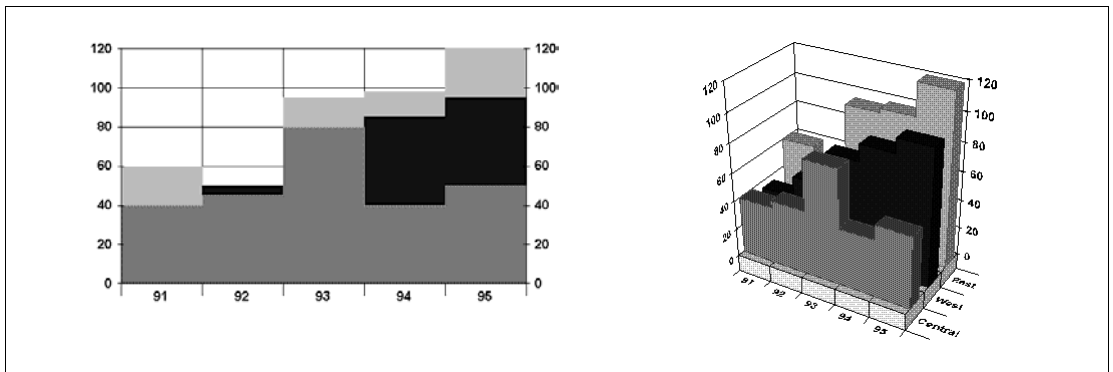
Figure 5 - 17:   A two-dimensional step chart (left) and a three-dimensional step chart.

A step chart's table requires at least one column with two or more values.

XY Charts

Use XY charts to plot two groups of numbers as one series of XY coordinates. An XY chart allows some series to have several data points with the same value (Y) axis coordinate.
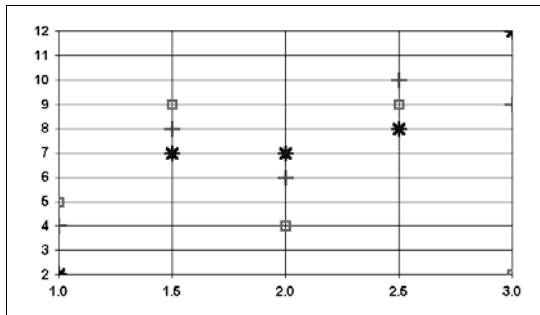
Figure 5 - 18: An XY chart.

An XY chart's table requires two columns for each series:

• The first column holds the X coordinate.

• The second column the Y coordinate.

The column heading on the first column in each series is used to identify the series in the legend. You can use markers or lines or both to draw the XY points.

Accessing Format Tabs for Formatting Chart Elements

To control the appearance of a chart element, change settings in the chart element's format tabs in the Chart Designer dialog box. For example, use the Title element's format tabs of the Chart Designer dialog box to change the look of a chart's title.

There are two methods for accessing a chart element's format tabs in the Chart Designer dialog box:

- Select the Chart Designer command from the Format menu and then select the chart element. For example, when you choose the Chart Designer command from the Format menu and then Title, the Title format tabs appear in the Chart Designer dialog box.

- Double-click on the chart element.

Both methods are explained below.

Accessing Format Tabs by Using the Chart Designer Dialog box

Table 5 - 1 lists the format tabs that appear in the Chart Designer dialog box for each chart element type.

Table 5 - 1:   Format tabs in the Chart Designer dialog box.

Chart element	Format tabs	Purpose
Chart	Type, Backdrop, Picture	Changes the chart type and formats the fill, frame, and shadow displayed in the chart backdrop.
Title	Location, Backdrop, Picture, Layout, Text, Font	Formats the title backdrop and font, edits the title text, and controls the display of the title and its location.
Footnote	Location, Backdrop, Picture, Layout, Text, Font	Formats the footnote backdrop and font, edits the footnote text, controls the display of the footnote and its location.
Legend	Location, Backdrop, Picture, Font	Formats the legend backdrop, changes the font used to display the legend text, and controls the legend location.
Plot	Position, 3D View, 3D Lighting, Base, Walls, Pie, Bubble, Contour, Elevation, Backdrop, Picture, Other	Controls the location of the plot, formats the plot backdrop, and sets chart type-specific options.
X Axis, Y Axis, 2nd Y Axis, Z Axis	Value Scale, Category Scale, Scale Type, Date Scale, Extra Intervals, Date Formats, Pens	Controls options for the X, Y, 2nd Y or Z axis. The selection of format tabs depends on the chart type. For example, for bar charts, formats the width and color of the axis, axis grid, and axis tick marks; and changes the axis scale.

Table 5 - 1:   Format tabs in the Chart Designer dialog box. (Continued)

Chart element	Format tabs	Purpose
Axis Title	Backdrop, Picture, Layout, Text, Font	Controls the appearance of the axis' title.
Axis Labels	Display, Format, Value Format, Percent Format, Backdrop, Picture, Layout, Font	Controls the appearance of the axis' labels.
Series	Series Type, Order	Controls the display of series; formats series appearance such as bar shape, line style, markers, and fill colors; sets series smoothing; and formats statistics lines and guidelines.
Individual Series	Options, Lines, Guidelines, Statistics	Controls the appearance of a series.
Datapoint	Fill, Markers, Picture	Controls the appearance of the data points of a series.
Individual Datapoint	Defaults, Fill, Markers, Picture	Controls the appearance of a data point of a series.
Datapoint Labels	Appearance, Format, Value Format, Percent Format, Backdrop, Picture, Layout, Font	Controls the appearance of the data point labels of a series.
Individual Datapoint Label	Defaults, Appearance, Format, Value Format, Percent Format, Backdrop, Picture, Layout, Text, Font	Controls the appearance of a data point label of a series.
Series Labels		Controls the series label locations and line styles, edits the label text, formats the label text and position, and formats the label backdrop.
Individual Series Labels	Style, Backdrop, Picture, Layout, Text, Font	Controls the appearance of a series label.

Accessing Format Tabs by Double-Clicking on Chart Elements

Table 5 - 2 provides information on accessing format tabs by double-clicking.

Table 5 - 2:   Format tabs appearing when you double-click on chart elements.

To format	Double-click	Format tabs displayed	Format tab selected
Chart backdrop	The chart but not on a specific chart element	Type, Backdrop, Picture	Type
Chart title	Anywhere in the title area	Location, Backdrop, Picture, Layout, Text, Font	Location
Footnote	Anywhere in the footnote area	Location, Backdrop, Picture, Layout, Text, Font	Location
Legend backdrop	The legend but not the legend text or keys	Location, Backdrop, Picture, Font	Location
Legend text	The legend text	Location, Backdrop, Picture, Font	Location
Series	A chart element in an unselected series or on the legend key identifying the series	Options, Lines, Guidelines, Statistics	Options
Series Label	The series label	Style, Backdrop, Picture, Layout, Text, Font	Style
Plot	The plot but not on a specific chart element	Position, 3D View, 3D Lighting, Base, Walls, Pie, Bubble, Contour, Elevation, Backdrop, Picture, Other	Position
Axis label	An axis label	Display, Format, Value Format, Percent Format, Backdrop, Picture, Layout, Font	Display

Table 5 - 2:　　Format tabs appearing when you double-click on chart elements. (Continued)

To format	Double-click	Format tabs displayed	Format tab selected
Axis line or tick marks	The line or tick marks on an axis	Value Scale, Category Scale, Scale Type, Date Scale, Extra Intervals, Date Formats, Pens	Value Scale or Category Scale
Axis title	The axis title text	Backdrop, Picture, Layout, Text, Font	Backdrop
Grid	Any grid line	Value Scale, Category Scale, Scale Type, Date Scale, Extra Intervals, Date Formats, Pens	Value Scale or Category Scale
2D wall and 3D wall or base	Any part of the base or wall other than a grid line	Position, 3D View, 3D Lighting, Base, Walls, Pie, Bubble, Contour, Elevation, Backdrop, Picture, Other	Position
Data point	A data point in a selected series or a data point in the same series as another selected data point	Defaults, Fill, Markers, Picture	Defaults
Data point label	The data point label	Defaults, Appearance, Format, Value Format, Percent Format, Backdrop, Picture, Layout, Text, Font	Defaults

Creating and Opening Charts

This section explains how to create new charts and open and copy existing charts.

Creating a Chart from a Table

Every chart starts as a table in the Analysis window. Once you create a table, you can chart the entire table or a portion of it, but different chart types require different table configurations. See the section "Chart Types and Required Table Configurations" on page 5 - 6.

When you chart a table's data, Survey Crafter Professional displays the table's column and row headings as series labels and category labels, respectively.

- **To chart an entire table**

    1   At the Analyses tab of the Study window, select the table to chart. Then click on the Edit button on the tab.

    2   From the View menu, choose Analysis Options.

    3   In the Number Of Columns field under Table Headings, enter the number of columns to reserve for row headings.

    Survey Crafter Professional plots the row headings as category labels on the chart.

    4   In the Number Of Rows field, enter the number of rows to reserve for column headings.

Survey Crafter Professional plots the column headings as series labels on the chart.

For example, if the table is like the one in Figure 4 - 1 and has two levels of row headings and two levels of column headings, enter values in the Analysis Options dialog box as shown.
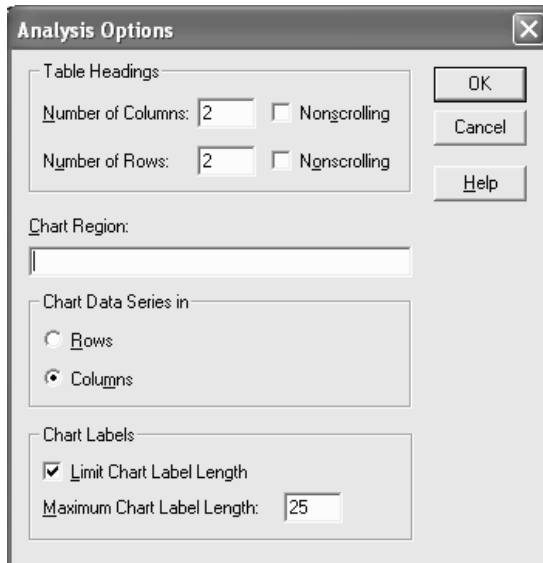
Figure 5 - 19:   The Analysis Options dialog box.

5   Click on the OK button.

Chart View button

6   From the View menu, choose Chart or click on the Chart View button on the toolbar.

The chart appears in the Analysis window.

You can now change the chart type and format the chart. See the sections "Selecting Basic Chart Types" on page 5 - 33 and "Formatting Common Chart Elements" on page 5 - 44.

- **To chart a portion of a table**

   1   At the Analyses tab of the Study window, select the table to chart. Then click on the Edit button on the tab.

   2   From the View menu, choose Analysis Options.

   3   In the Chart Region field, type the range of cells you want to chart.

   Separate the range's upper left and lower right cells with a colon. For example, to chart the values in cells A3 to E7, enter **A3:E7**.

4   Click on the OK button.

5   From the View menu, choose Chart or click on the Chart View button on the toolbar.

Chart View button

The chart appears in the Analysis window.

You can now change the chart type and format the chart. See the section "Selecting Basic Chart Types" on page 5 - 33 and "Formatting Common Chart Elements" on page 5 - 44.

Using Wizards to Create Charts

Survey Crafter Professional includes two analysis wizards to help you build popular types of charts. The Count or Percentage Chart Wizard builds a pie or bar chart from a variable. You can use this wizard to build charts like the pie chart in Figure 5 - 20. The chart shows counts for the values in the category variable *seg_jobtype*, which stores answers to the question "Which of the following best describes the kind of print job that you most often need?"

The Quantity Variable Chart Wizard builds a chart that shows one statistic for one or more quantity variables. You can use this wizard to build charts like the one in Figure 5 - 20. The bar chart shows means for

the quantity variables *sat_turnaround*, *sat_quality*, *sat_delivery*, *sat_hours, sat_courtesy,* and *sat_experience*.
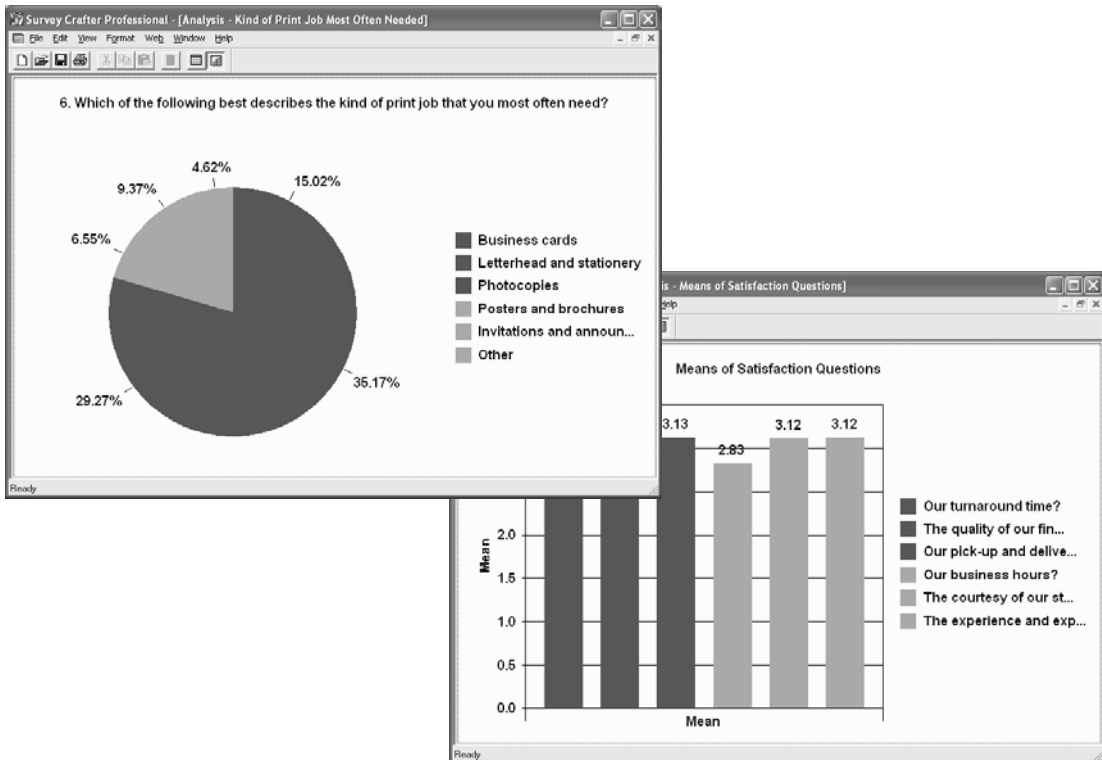
Figure 5 - 20:Charts built by the Count or Percentage Chart Wizard and the Quantity Variable Chart Wizard.

- **To use a wizard to create a chart**

    1 Select the Analyses tab of the Study window.

Click on the New button
to create a new
analysis chart.
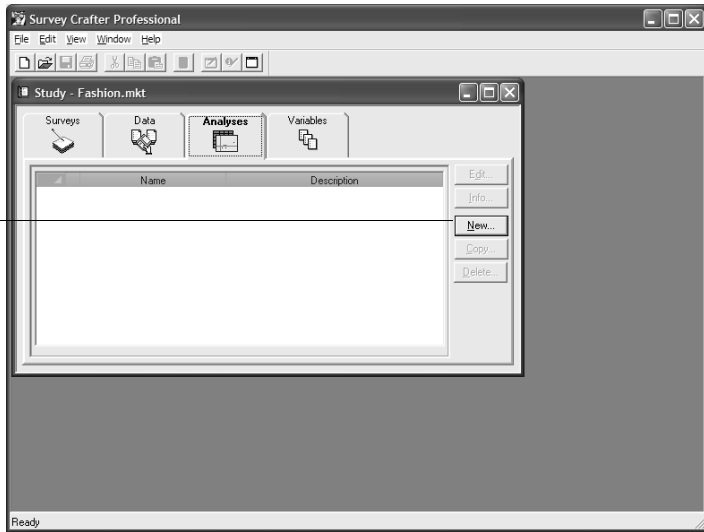
Figure 5 - 21:   The Analyses tab of the Study window.

2   Click on the New button on the tab.

Survey Crafter Professional displays step 1 of the New Analysis
dialog box.

Select this option to
have a wizard build an
analysis chart for you.
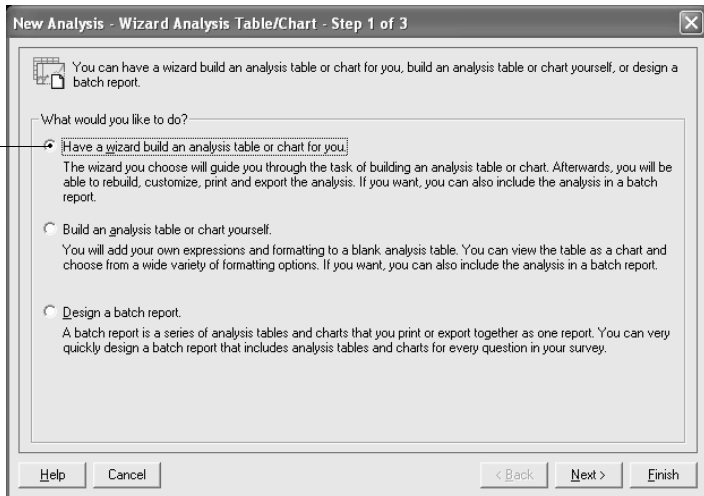
Figure 5 - 22:   Step 1 of the New Analysis dialog box.

3   Select *Have a wizard build an analysis table or chart for you*.

4   Click on the Next button.

Survey Crafter Professional displays step 2 of the New Analysis dialog box.

Click on the chart
wizard you want to use.
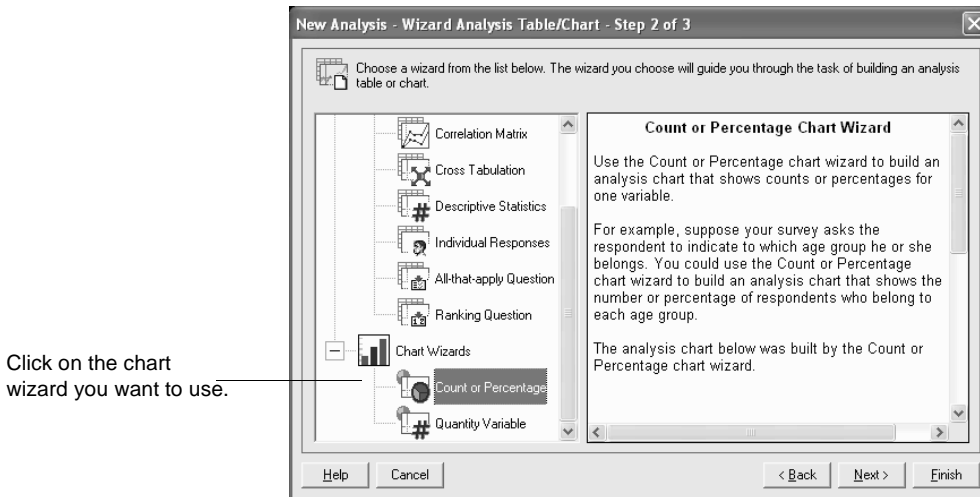
Figure 5 - 23:   Step 2 of the New Analysis dialog box.

5   Under *Chart Wizards*, click to select the wizard you want to use.

A brief description of the selected wizard appears in the window on the right.

6   Click on the Next button.

Survey Crafter Professional displays step 3 of the New Analysis dialog box.

Enter a name and description for the analysis.
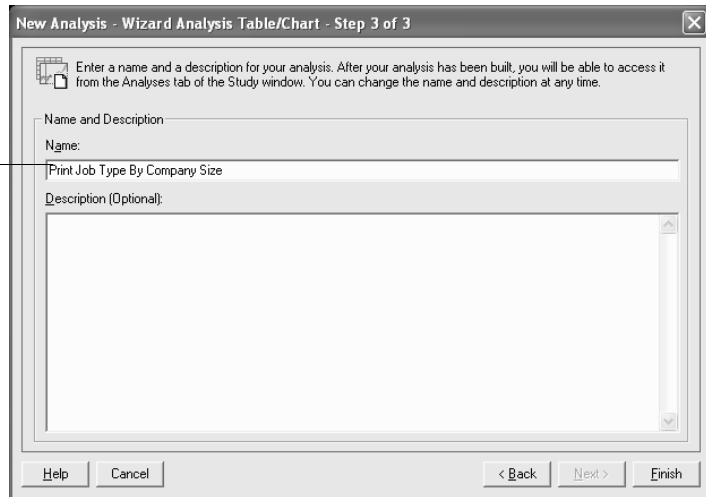
Figure 5 - 24:   Step 3 of the New Analysis dialog box.

7   Enter a name and description for the analysis.

The name must begin with a letter and may contain up to 49 additional letter, digit, or underscore characters.

Both the name and description will appear in the list of analyses in the Analyses tab of the Study window.

8   Click on the Finish button.

Survey Crafter Professional displays the wizard you selected in step 5.

Enter or choose the variable you want to analyze.

Click on the Help button for descriptions of the wizards' options.
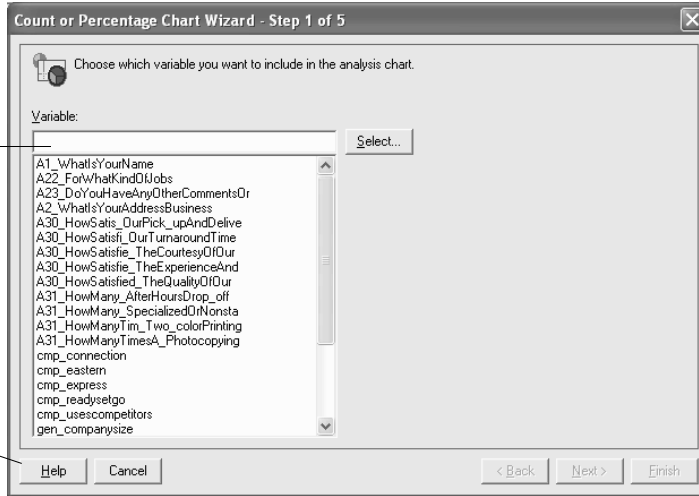
Figure 5 - 25:   Step 1 of the Count or Precentage chart wizard.

9   Follow the instructions on the screen to complete the wizard.

For help on any of the wizard's options, click on the Help button on the wizard's dialog box.

10   Click on the Finish button.

Survey Crafter Professional builds a new analysis chart according to the options you selected and displays the chart in an Analysis window.
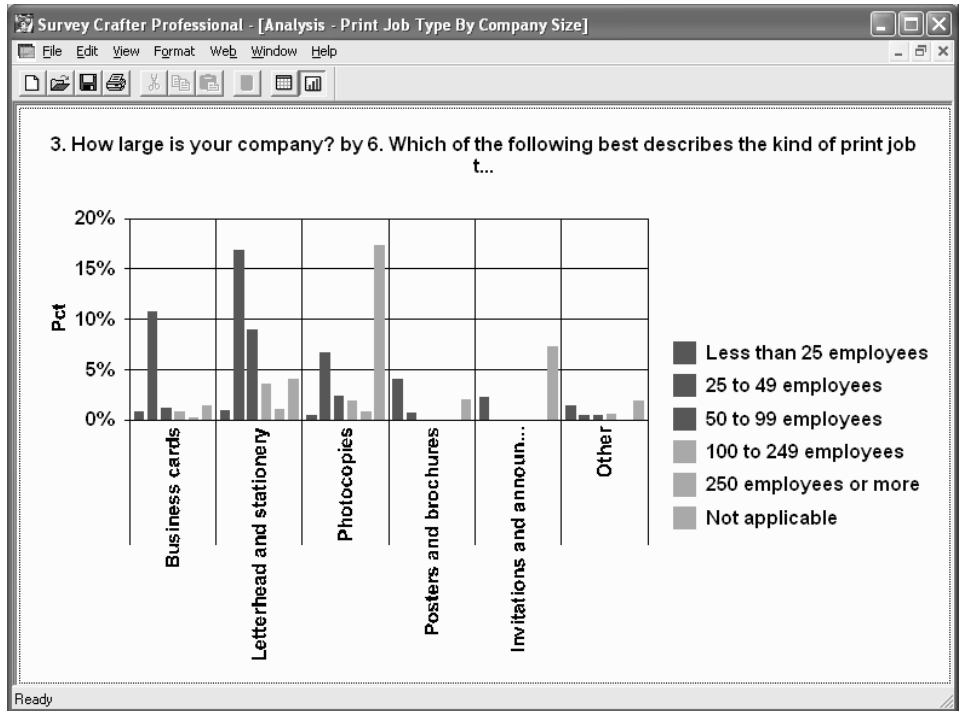
Figure 5 - 26:   An analysis chart built by the Count or Percentage chart wizard.

You can now format the chart.

> **Tip** You can revisit the wizard at any time to change your selections or to just have the wizard build the analysis chart again. To revisit the wizard, choose Analysis Wizard from the Edit menu when the Analysis window is active.

Opening a Chart

Follow the steps below to view an existing chart.

- **To open a chart**

    1   Select the Analyses tab of the Study window.

    2   Scroll through the list at the Analyses tab and select the chart you want to view.

    3   Click on the Edit button on the tab.

    Survey Crafter Professional displays the chart in an Analysis window.

    > **Note** If the message "The analysis must be updated" appears in the Analysis window, the table on which the chart is based has changed and its values need to be recalculated. To recalculate the table and update the chart, choose the Update command from the Edit menu.

Copying an Existing Chart

Follow the steps below to copy an existing chart.

- **To copy an existing chart**

    1   Select the Analyses tab of the Study window.

    2   Select the chart you want to copy.

    3   Click on the Copy button on the tab.

    The Analysis Information dialog box appears.

    4   In the Name field, enter a new name for the chart.

    The name must begin with a letter and may contain up to 49 additional letter, digit, or underscore characters.

    5   In the Description field, enter a new description of the chart.

    Both the name and description will appear in the list of analyses in the Analyses tab of the Study window.

    6   Click on the OK button.

Survey Crafter Professional displays the chart in an Analysis window.

Note If the message "The analysis must be updated" appears in the Analysis window, the table on which the chart is based has changed and its values need to be recalculated. To recalculate the table and update the chart, choose the Update command from the Edit menu.

Displaying a Chart's Data as a Table

You can quickly display the data in a chart as a table.

- **To display a chart's data as a table**

    1   At the Analyses tab of the Study window, select a chart. Then click on the Edit button on the tab.

    Survey Crafter Professional displays the chart in an Analysis window.

Table View button

    2   From the View menu, choose Table or click on the Table View button on the toolbar.

    Survey Crafter Professional displays the data as a table in the Analysis window.

Changing the Chart Type

You can try different chart types to determine which type best presents the data. For example, you can redraw a bar chart as a line chart to better illustrate a trend in the data.

The section explains how to switch between chart types. The more complex chart types (combination, radar, and hi-lo-close charts) require more involved procedures. These complex chart types are dealt with individually in this section.

> **Note** You can also use the Chart Wizard to quickly change the chart type. See the section "The Chart Wizard" on page 5 - 120 for instructions on how to start the Chart Wizard.

Selecting Basic Chart Types

Follow the steps below to switch to any chart type except combination, radar, or hi-lo-close charts. Instructions for switching to these three chart types appear later in the section.

- **To select the chart type**

    1 Double-click on the chart or choose Chart Designer from the Format menu and then select Chart from the list of chart elements.

    2 In the Chart Designer dialog box, select the Type tab.

    3 Select the 2D or 3D option to display 2D or 3D chart types in the Chart list.

    4 In the Chart list, select a chart type.

5   Click on the OK or Apply button to redraw the chart.

> **Note** The data in the chart's table may not be configured correctly for all chart types. If the chart type you requires more data than the table contains, Survey Crafter Professional displays the message "Not enough data" in the Analysis window when you click on the OK or Apply button. For information on chart types' table configurations, see the section "Chart Types and Required Table Configurations" on page 5 - 6.

Selecting Complex Chart Types

Chart types requiring more involved procedures are combination charts, radar charts, and hi-lo charts.

Selecting Combination Charts

Combination charts use a different type for each series. For example, you can show one series with bars and a second series with a line.

- **To select a combination chart**

    1   Double-click on the chart or choose Chart Designer from the Format menu and then select Chart from the list of chart elements.

    2   In the Chart Designer dialog box, select the Type tab.

    3   Select the 2D or 3D option to display a list of 2D or 3D chart types in the Chart list.

    4   In the Chart list, select Combination.

    5   Select the Series element. In the Series Type tab, in the Series list, select one of the chart's series.

    The Display As list shows the valid types for the selected series.

    6   In the Display As list, select the type you want to use for the selected series.

    7   Repeat steps 5 and 6 for each series in the combination chart.

    8   Click on the OK or Apply button to redraw the chart.

Selecting Radar Charts

If you select Radar as the chart type, indicate whether you want each series displayed as a line or filled area.

• **To change the variation of series in a radar chart**

1 Double-click on the chart or choose Chart Designer from the Format menu and then select Chart from the list of chart elements.

2 In the Chart Designer dialog box, select the Type tab.

3 Select the 2D option to display a list of 2D chart types.

4 In the Chart list, select Radar.

5 Select the Series element. In the Series Type tab, in the Series list, select a series.

6 In the Display As list, select Area or Line.

7 Repeat steps 5 and 6 for each series in the radar chart.

8 Click on the OK or Apply button to redraw the chart.

Selecting Hi-lo-close Charts

Besides high, low, and close data, hi-lo-close charts can also show dates. If you want the chart to show dates, enter the information in a column immediately to the right of the close data as Figure 5 - 27 shows.

Dates must be entered as Julian dates (the number of days) counted from 1 January 1900. You can then apply a date format to the cells' values so that they appear in more conventional date formats like MM/DD/YY. For example, enter the Julian date 39295 for 1 August 2007. The Julian date

39300 corresponds to 6 August 2007. See the sections "Scaling a Date Axis" on page 5 - 77 and "Specifying Number Formats" on page 4 - 60.

Dates appearing at the right of the hi-lo-close columns.

Figure 5 - 27:   A table configured for a hi-lo-close chart with dates.

- • **To select a hi-lo-close chart**

    1   Double-click on the chart or choose Chart Designer from the Format menu and then select Chart from the list of chart elements.

    2   In the Chart Designer dialog box, select the Type tab.

    3   Select the 2D option to display a list of 2D chart types.

    4   In the Chart list, select Hi Lo.

    5   Select the Series element. Select the Series Type tab.

    6   In the Series Type tab, in the Series list, select the first series that holds hi-lo-close information.

    7   In the Display As list, select one of the hi-lo-close variations.

The second and third columns in every series are indented to show that the series requires three columns of data to chart a hi-lo-close chart.

8 If the table contains a column of dates, select Series 4 and then choose Dates under Display As.

Survey Crafter Professional uses the values in this column to create a horizontal date axis for this chart.

To chart the table in Figure 5 - 27, indicate that Series 1, 2, and 3 hold the hi-lo-close data and that Series 4 holds dates.
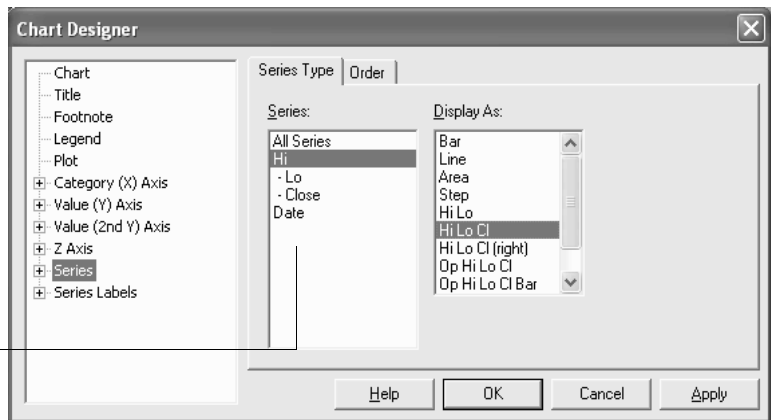
Figure 5 - 28: The Series Type tab of the Chart Designer dialog box for a hi-lo-close chart with dates.

9 Click on the OK or Apply button to redraw the chart.

> **Note** If you are viewing the hi-lo-close chart's table and then view the table's data as a chart, the chart may not redraw correctly. If the chart does not redraw correctly, repeat steps 1 through 9.

Selecting a Chart's Series

By default, Survey Crafter Professional uses a table's columns as series in a chart. Because each column is a different series, each column's data appears in a different color in the chart.
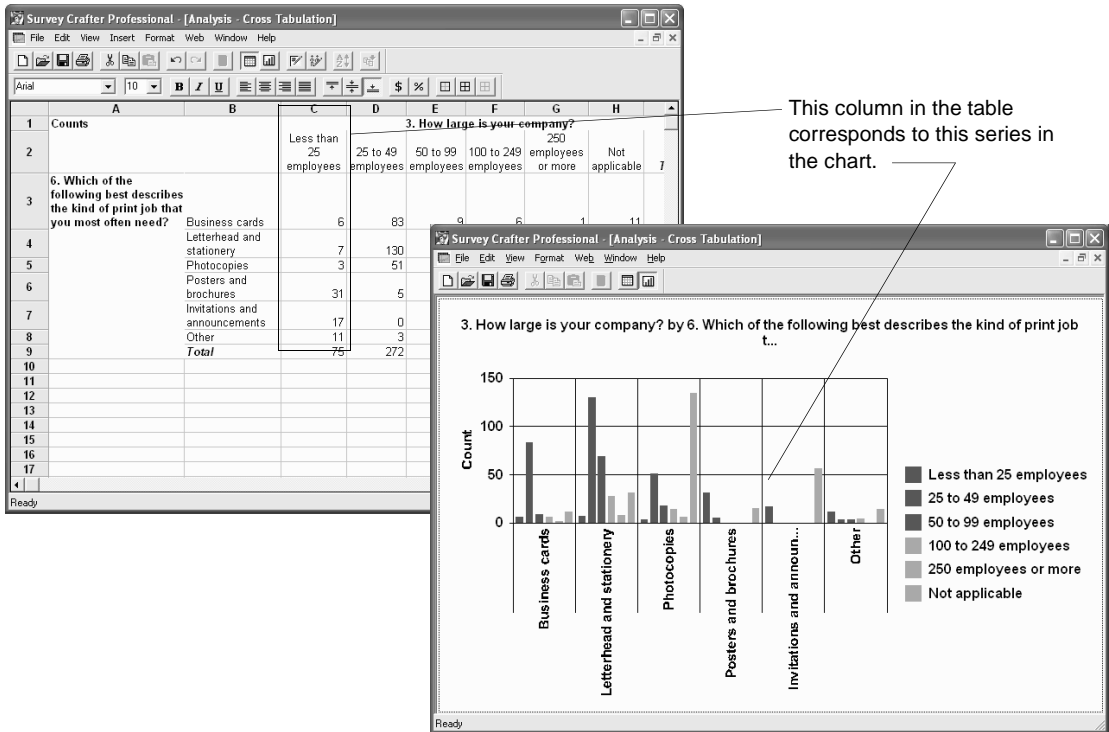
Figure 29:   A table column and its corresponding series in a chart.

Sometimes you create a table in which the data you want to use as series appears in the table's rows. Rather than switching the table's rows and columns to get the chart you want, you can have Survey Crafter Professional use the table's rows as series.

- **To select a chart's series**

   1   At the Analyses tab of the Study window, select the table or chart you want to change. Then click on the Edit button on the tab.

   2   From the View menu, choose Analysis Options.

3 Under Chart Data Series In, do one of the following:

• To use the data in the table's rows as series, select the Rows option.

• To use the data in the table's columns as series, select the Column option.

4 Click on the OK button.

Chart View button

If you are viewing the table, click on the Chart View button on the toolbar to see the chart.

Reordering and Stacking Series

You can change the order in which series appear in a chart and stack a bar chart's series.

Reordering Series in a Chart

Reordering series can be particularly useful if one series obscures the view of another series.

- **To reorder series in a chart**

    1   From the Format menu, choose Chart Designer and then select Series from the list of chart elements.

    2   In the Chart Designer dialog box, select the Order tab.

    3   Select a series in the Series Order list.

    4   Click on the Up button to move the series up or click on the Down button to move the series down in the drawing order.

    The first series in the Series Order list appears in the front of the chart.

    5   Click on the OK or Apply button to redraw the chart.

Stacking and Unstacking Series

Use the Order tab of the Chart Designer dialog box to stack and unstack a bar chart's series. Figure 5 - 30 shows the same chart with stacked and unstacked series. You need not stack all series in a chart.
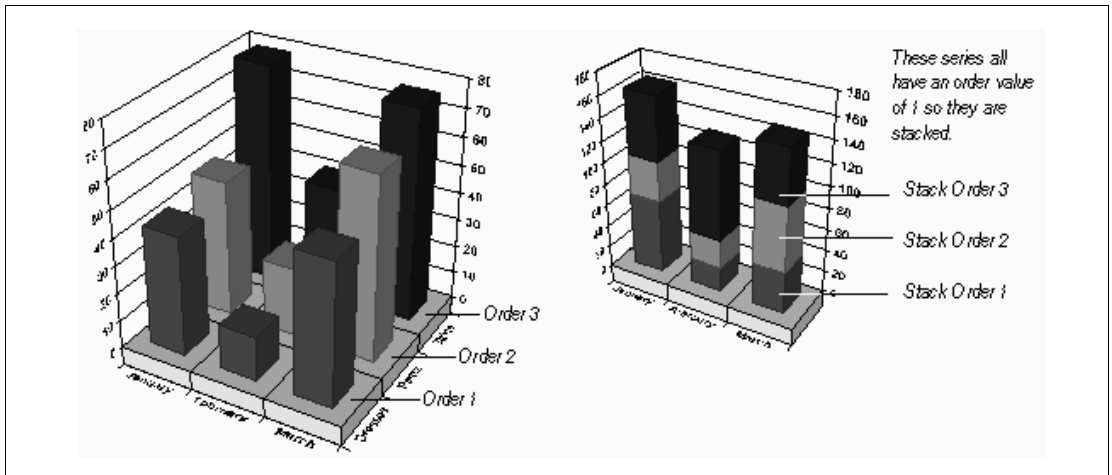
Figure 5 - 30:   Unstacked and stacked series.

- **To stack all series in a chart**

    1   From the Format menu, choose Chart Designer and then select Series from the list of chart elements.

    2   In the Chart Designer dialog box, select the Order tab.

    3   Select a series in the Series Order list.

    4   Click on the Stack button.

    In the Series Order list, the selected series appears stacked with the preceding series.

    5   Repeat steps 3 and 4 for each series in the chart.

    6   Click on the OK or Apply button to redraw the chart.

- **To stack selected series in a chart**

    1   From the Format menu, choose Chart Designer and then select Series from the list of chart elements.

2   In the Chart Designer dialog box, select the Order tab.

3   In the Series Order list, select a series.

4   Click on the Stack button.

   In the Series Order list, the selected series appears stacked with the preceding series.

5   To stack with the preceding series, select the text <Stack> and click on the Stack button again.

   The two stacked columns are now stacked with the preceding series. Top-to-bottom order in the Series Order list corresponds to top-to-bottom order in the chart.

6   Click on the OK or Apply button to redraw the chart.

•   **To unstack series**

1   From the Format menu, choose Chart Designer and then select Series from the list of chart elements.

2   In the Chart Designer dialog box, select the Order tab.

3   Do one of the following in the Series Order list:

   • To unstack one series, select the series.

   • To unstack all series, select the text <Stack>.

Select this text to unstack all series.
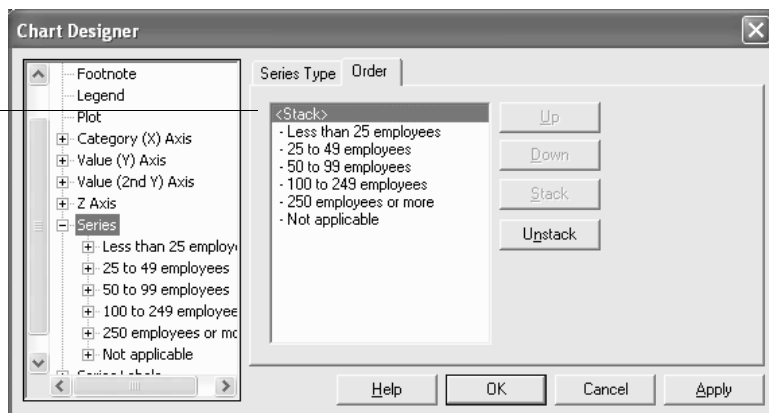
Figure 5 - 31:   The Order tab of the Chart Designer dialog box.

4 Click on the Unstack button.

5 Click on the OK or Apply button to redraw the chart.

Formatting Common Chart Elements

Besides plotted data, the most common chart elements are titles, legends, footnotes, and second Y axes as shown in Figure 5 - 32.
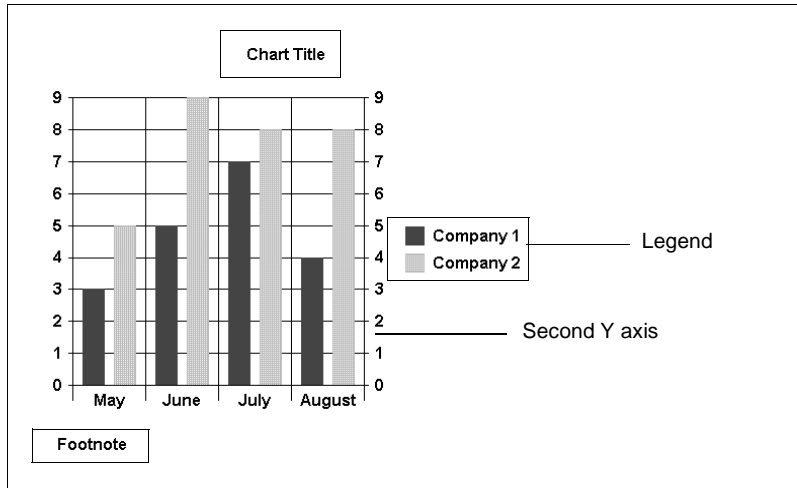
Figure 5 - 32:   Common chart elements.

This section contains the following procedures for formatting these common chart elements:

• Adding Titles, Legends, and Footnotes to a Chart

• Hiding and Showing a Title, Footnote, Legend, or Second Y Axis

• Positioning and Resizing Chart Titles, Legends, and Footnotes

• Editing and Formatting Chart Text

• Editing Chart Elements' Backdrops

• Resetting a Chart to Default Formats

Adding Titles, Legends, and Footnotes to a Chart

Follow the steps below to add a title, legend, or footnote to a chart.

- **To add a title to a chart**

    1 From the Format menu, choose Chart Designer and then select Title from the list of chart elements.

    2 In the Chart Designer dialog box, select the Location tab.

    3 Select the Visible check box to display the title.

    4 Select an option to specify the location of the title.

    5 Select the Text tab.

    6 In the Text field, type the title.

Type the chart title text in this field.
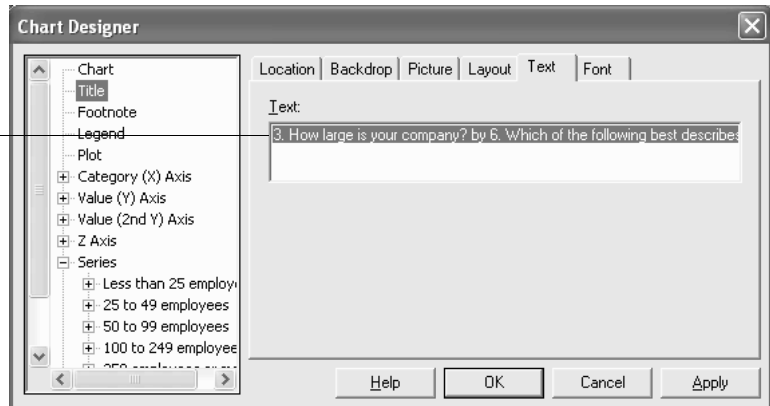
Figure 5 - 33: The Text tab of the Chart Designer dialog box.

    7 If you want the title text to appear on more than one line if necessary, select the Layout tab and then select the Word Wrap check box.

    8 Click on the OK or Apply button to redraw the chart.

- **To add a legend to a chart**

    1 From the Format menu, choose Chart Designer and then select Legend from the list of chart elements.

    2 In the Chart Designer dialog box, select the Location tab.

    3 Select the Visible check box to display the legend.

By default, Survey Crafter Professional uses series labels to identify each series in the legend.

Selecting the Visible check box enables the Location tab's other options.
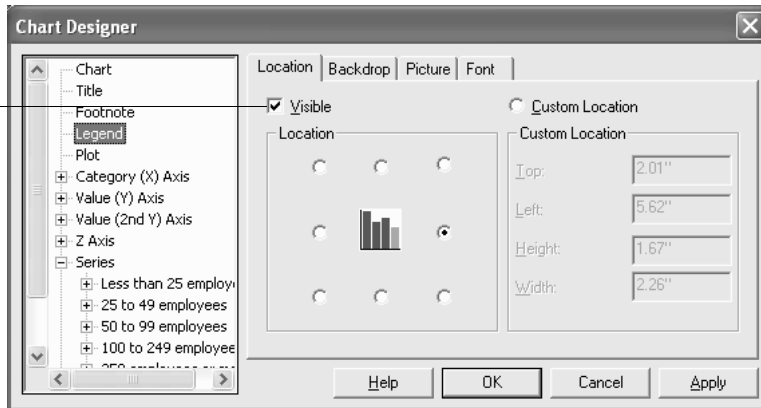
Figure 5 - 34:   The Location tab of the Chart Designer dialog box.

4   Select an option to specify the location of the legend.

5   Click on the OK or Apply button to redraw the chart.

- **To add a footnote to a chart**

    1   From the Format menu, choose Chart Designer and then select Footnote from the list of chart elements.

    2   In the Chart Designer dialog box, select the Location tab.

    3   Check the Visible check box to display the footnote.

    4   Select an option to specify the location of the footnote.

    5   Select the Text tab.

    6   In the Text field, type the footnote text.

    7   If you want the footnote text to appear on more than one line if necessary, select the Layout tab and then select the Word Wrap check box.

    8   Click on the OK or Apply button to redraw the chart.

Hiding and Showing a Title, Footnote, Legend, or Second Y Axis

Survey Crafter Professional lets you turn off and on the display of the chart's title, legend, footnote, and second Y axis. Hiding a chart element does not delete it; you can display it again at any time.

- **To hide a title, footnote, legend, or second Y axis**

    1   From the Format menu, choose Chart Designer and then select Title, Footnote, Legend or Value (2nd Y) from the list of chart elements.

    2   In the Title, Footnote or Legend format tabs, select the Location tab. In the Value (2nd Y) Axis format tabs, select the Value Scale tab.

    3   To hide a Title, Footnote or Legend, clear the Visible check box. To hide the 2nd Y Axis, clear the Show check box.

    4   Click on the OK or Apply button to redraw the chart.

- **To show a title, footnote, legend, or second Y axis**

    1   From the Format menu, choose Chart Designer and then select Title, Footnote, Legend or Value (2nd Y) Axis from the list of chart elements.

    2   In the Title, Footnote or Legend format tabs, select the Location tab. In the Value (2nd Y) Axis format tabs, select the Value Scale tab.

    3   To show a Title, Footnote or Legend, select the Visible check box. To show the 2nd Y Axis, select the Show check box.

    > **Note** If you have not created a title or footnote, checking the Visible check box displays default text.

    4   Click on the OK or Apply button to redraw the chart.

Positioning and Resizing Chart Titles, Legends, and Footnotes

You can position a chart title, legend, or footnote in a preset or custom location.

By default, Survey Crafter Professional operates in automatic layout mode. In this mode, Survey Crafter Professional resizes and repositions the existing chart elements to make room for the new chart elements you add.

In automatic layout, Survey Crafter Professional draws the chart plot, title, legend, and footnote within their individual areas of the chart. The size of text used for the title, legend, footnote, and the axis labels and titles determine the size of each of these areas. If you use very large fonts or long lines of text, Survey Crafter Professional may crop some chart elements and not display axis labels and titles.

Placing a Chart Title, Legend, or Footnote in a Preset Location

By default, when you add a title, legend, or footnote, Survey Crafter Professional puts the object in one of eight preset locations illustrated in Figure 5 - 35.
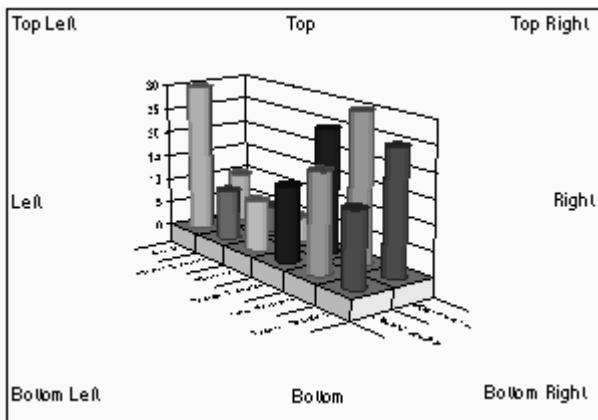
Figure 5 - 35:   Preset locations for chart titles, legends, and footnotes.

- **To place a chart title, legend, or footnote in a preset location**

  1   Double-click a chart element or choose Chart Designer from the Format menu and then select the chart element to format.

  2   In the Chart Designer dialog box, select the Location tab.

  3   Select one of the position options.

  4   Click on the OK or Apply button to redraw the chart.

Placing a Chart Title, Legend or Footnote in a Custom Location

You can override the automatic layout of chart elements by selecting and dragging chart elements on the screen or by changing settings in the Chart Designer dialog box.

Once you manually reposition a chart element, it is no longer in automatic layout mode. Therefore, Survey Crafter Professional no longer considers the chart element when allocating space for the remaining chart elements that still use automatic layout.

- **To place a chart title, legend, or footnote in a custom location manually**

    1   Select the title, footnote, plot or legend.

    Handles appear around the chart element.

    2   Click on the chart element and drag it to a new location.

- **To place a chart title, legend, or footnote in a custom location by using the Chart Designer dialog box**

    1   Double-click on the title, footnote, plot or legend.

    The Chart Designer dialog box appears with the chart element selected.

    2   In the Chart Designer dialog box, select the Location tab.

    3   Select the Custom Location option.

    4   Enter values in the Top and Left fields to describe the coordinates of the upper left corner of the chart element.

    5   Click on the OK or Apply button to redraw the chart.

Resizing Chart Titles, Legends, and Footnotes

You can override the automatic sizing of chart titles, legends, and footnotes by selecting and dragging the chart elements on the screen or by changing settings in the Chart Designer dialog box.

- **To resize chart titles, legends, or footnotes manually**

    1   Select the title, legend, or footnote.

Handles appear around the chart element.

2   Drag the handles to resize the chart element.

> **Note** You actually resize the bounding rectangle around the object,
> not the text itself. Based on the size you make the bounding
> rectangle, Survey Crafter Professional may have to resize or crop
> objects to fit the space.

- **To resize chart titles, legends, or footnotes by using the Chart Designer dialog box**

   1   Double-click on the title, footnote, plot or legend.

   The Chart Designer dialog box appears with the chart element
   selected.

   2   In the Chart Designer dialog box, select the Location tab.

   3   Select the Custom Location option.

   4   Enter values in the Height and Width fields to describe the chart
   element's height and width.

   5   Click on the OK or Apply button to redraw the chart.

Editing and Formatting Chart Text

You can edit and delete chart text, change its font, and control its
orientation and alignment within its text box.

Editing Chart Text

You can edit text in chart elements like chart titles, footnotes, axis titles,
series labels and data point labels.

- **To edit chart text**

   1   Double-click on the text you want to edit or choose Chart Designer
   from the Format menu and then select the chart element to format.

   2   In the Chart Designer dialog box, select the Text tab.

   3   Edit the text.

4   Click on the OK or Apply button to redraw the chart.

Deleting Chart Text

You can delete most chart text. For example, if a chart becomes cluttered with many data point labels, delete a few labels.

Deleting chart text is different from hiding chart elements. If you delete chart text, you must recreate it to display it on the chart again.

- **To delete chart text**

  1   Double-click on the text you want to delete or choose Chart Designer from the Format menu and then select the chart element to format.

  2   In the Chart Designer dialog box, select the Text tab.

  3   Delete the text in the Text field.

  4   Click on the OK or Apply button to redraw the chart.

Changing the Font of Chart Text

You can specify the font, style, size, color, and line effects used to display a text element on a chart. The tabs used to specify fonts options for chart titles, legends, footnotes, labels and axis titles are identical.

- **To change the font of chart text**

  1   Double-click on the text you want to format or choose Chart Designer from the Format menu and then select the chart element to format.

2   In the Chart Designer dialog box, select the Font tab.

The tabs for formatting fonts of legends, footnotes, labels, and axis titles are identical to this tab.
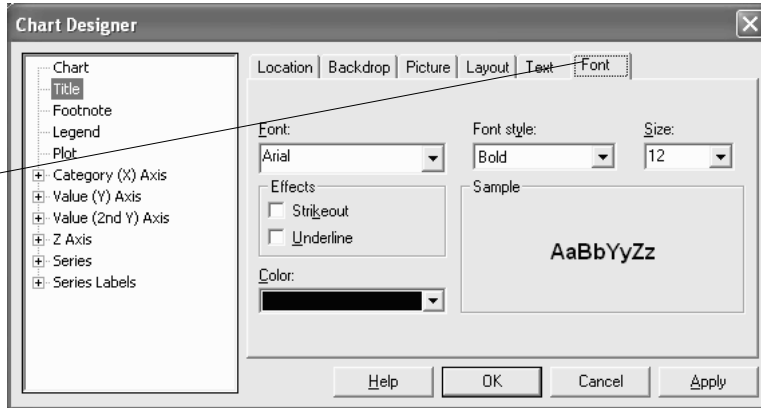
Figure 5 - 36:   The Font tab of the Chart Designer dialog box.

3   Change attributes of the text's font.

For help on the Font tab's options, click on the Help button.

4   Click on the OK or Apply button to redraw the chart.

Aligning and Orienting Chart Text

You can control the alignment and orientation of chart text like the axis title.

Alignment regulates the position of text within its text box on the chart. For example, you can center text at the top of its text box. You may need to enlarge the text box to view text using the horizontal and vertical alignment you select.

Orientation regulates the rotation of the text's characters. For example, you can display the text vertically instead of horizontally.

- **To align chart text**

   1   Double-click on the chart text you want to align or choose Chart Designer from the Format menu and then select the chart element to format.

   2   In the Chart Designer dialog box, select the Layout tab.

   3   Select the horizontal alignment option you want.

4   Select the vertical alignment option you want.

5   Click on the OK or Apply button to redraw the chart.

- **To orient chart text**

  1   Double-click on the chart text you want to orient or choose Chart Designer from the Format menu and then select the chart element to format.

  2   In the Chart Designer dialog box, select the Layout tab.

  3   Under Orientation, select the orientation option you want.
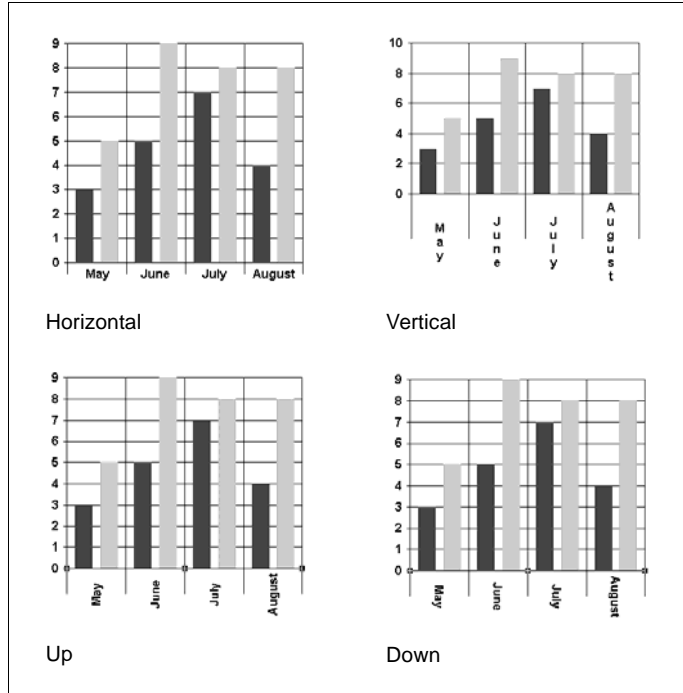
Figure 5 - 37:   Orientation options for chart text.

  4   Click on the OK or Apply button to redraw the chart.

Editing Chart Elements' Backdrops

The following sections describe how you can use backdrops to enhance a chart element's appearance.

• Drawing a Frame around a Chart Element

• Drawing a Solid or Patterned Backdrop for a Chart Element

• Drawing a Gradient Backdrop for a Chart Element

• Using a Graphic as a Backdrop for a Chart Element

To create any of these backdrop styles, use the Backdrop tab in the Chart Designer dialog box.

Backdrop tabs for other chart elements are identical to this one.
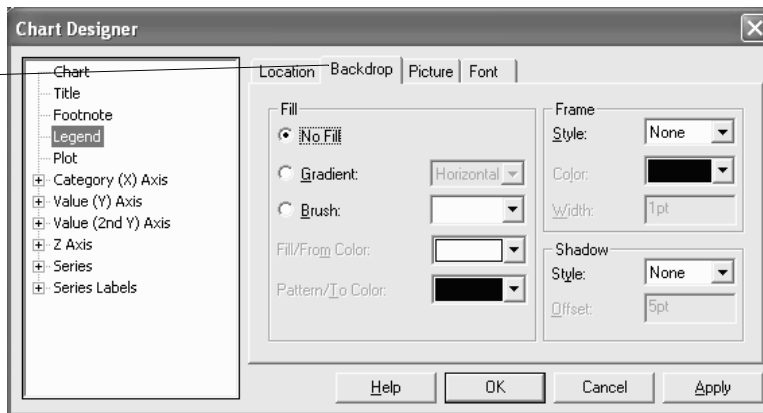
Figure 5 - 38:   The Backdrop tab of the Chart Designer dialog box.

Drawing a Frame around a Chart Element

You can draw a frame in a variety of styles and colors around any chart element except data points and series.
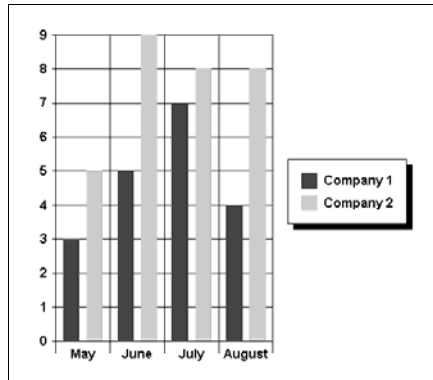
Figure 5 - 39: A chart with a shadowed frame drawn around the legend.

- **To draw a frame around a chart element**

    1   Double-click on the chart element you want to draw a frame around or choose Chart Designer from the Format menu and then select the chart element to format.

    2   In the Chart Designer dialog box, select the Backdrop tab.

    3   Under Frame, from the Style drop-down list, select a line style for the frame.

    4   From the Color drop-down list, select a color for the frame.

    5   In the Width field, enter a frame width in points.

    6   To apply a shadow to the frame, do the following:

    - Under Shadow, from the Style drop-down list, select a shadow style for the frame.

    - In the Offset field, enter the number of points the shadow should be offset from the frame's upper left corner.

    7   Click on the OK or Apply button to redraw the chart.

Drawing a Solid or Patterned Backdrop for a Chart Element

You can apply a solid or patterned backdrop to any chart element except a series or a data point. (Fills are applied to series and data points. See the sections "Filling and Outlining Series" on page 5 - 96 and "Formatting Data Points" on page 5 - 108.)

Figure 5 - 40 shows a chart with a patterned backdrop applied to its legend.
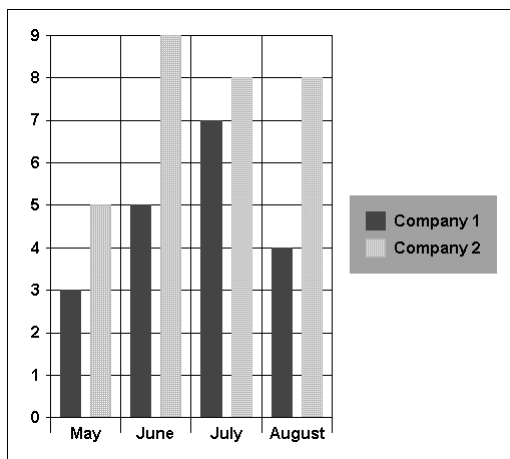
Figure 5 - 40:   A chart with a patterned backdrop applied to its legend.

- **To draw a solid backdrop for a chart element**

   1   Double-click on the chart element to which you want to apply a backdrop or choose Chart Designer from the Format menu and then select the chart element to format.

   2   In the Chart Designer dialog box, select the Backdrop tab.

   3   Select the Gradient option.

   4   From the Gradient drop-down list, select any design for blending the colors.

   5   From the Fill/From Color drop-down list, select the color for the chart element's backdrop.

   6   From the Pattern/To Color drop-down list, select the same color for the chart element's backdrop.

7 Click on the OK or Apply button to redraw the chart.

> **Note** To remove the backdrop, select the No Fill option and then click on the OK or Apply button.

- **To draw a patterned backdrop for a chart element**

  1 Double-click on the chart element to which you want to apply a backdrop or choose Chart Designer from the Format menu and then select the chart element to format.

  2 In the Chart Designer dialog box, select the Backdrop tab.

  3 Select the Brush option.

  4 From the Brush drop-down list, select a pattern style.

  5 From the Fill/From Color drop-down list, select the color for the chart element's backdrop.

  6 From the Pattern/To Color drop-down list, select the color for the chart element's backdrop.

  7 Click on the OK or Apply button to redraw the chart.

  > **Note** To remove the backdrop, select the No Fill option and then click on the OK or Apply button.

Drawing a Gradient Backdrop for a Chart Element

A gradient backdrop blends two colors to fill a backdrop. You can apply a gradient backdrop to any chart element except a data point or series. Figure 5 - 41 shows a chart with an oval gradient applied to the plot region.
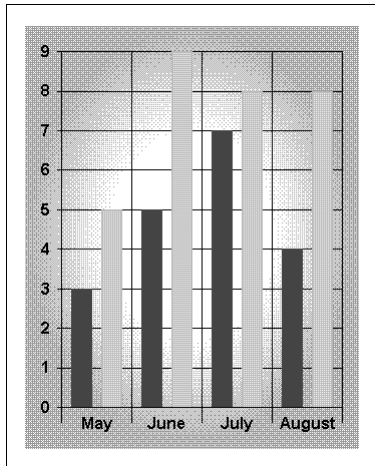
Figure 5 - 41:   A chart with an oval gradient applied to its plot region.

• **To draw a gradient backdrop for a chart element**

  1   Double-click on the chart element to which you want to apply a backdrop or choose Chart Designer from the Format menu and then select the chart element to format.

  2   In the Chart Designer dialog box, select the Backdrop tab.

  3   Select the Gradient option.

  4   From the Gradient drop-down list, select the design for blending the colors.

  5   From the Fill/From Color drop-down list, select the color to use as one of the following:

  • The top color in a horizontal gradient

  • The left color in a vertical gradient

  • The center color in a rectangle or oval gradient

6   From the Pattern/To Color drop-down list, select the color to use as one of the following:

- The bottom color in a horizontal gradient

- The right color in a vertical gradient

- The outer color in a rectangle or oval gradient

7   Click on the OK or Apply button to redraw the chart.

> **Note** To remove the backdrop, select the No Fill option and then click on the OK or Apply button.

Using a Graphic as a Backdrop for a Chart Element

You can use a bitmap, Windows metafile or JPEG bitmap as the backdrop for a chart element. Survey Crafter Professional provides three options for specifying the graphic and five options for fitting the graphic in the chart element. Figure 5 - 42 shows a graphic used as a plot's backdrop.
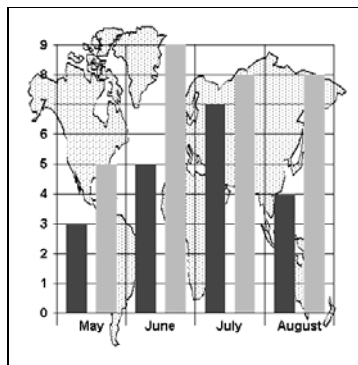
Figure 5 - 42: A chart with a graphic of a map used as the plot's backdrop.

- **To use a graphic as a backdrop for a chart element**

    1   Double-click on the chart element to which you want to apply a backdrop or choose Chart Designer from the Format menu and then select the chart element to format.

    2   In the Chart Designer dialog box, select the Picture tab.

    3   Do one of the following to specify the backdrop graphic:

- Type the path to the graphic in the File field.

- Click on the Browse button and select the graphic in the Open dialog box.

- If the graphic is on the clipboard, click on the Paste button.

4   Select an option to control how the graphic fills the chart element.

   For example, select Stretch To Fit to scale the graphic to the size of the backdrop regardless of the graphic's original proportions.

5   To save the graphic with the chart, select the Embed check box.

> **Tip** To save disk space, it is recommended that you do not embed graphics unless they will not be available in the same location later.

6   Click on the OK or Apply button to redraw the chart.

Resetting a Chart to Default Formats

If you reset a chart to its default formats, Survey Crafter Professional returns all chart options except the chart type to their default values.

- **To reset the chart to its default formats**

1   From the Format menu, choose Chart Designer and then select Chart from the list of chart elements.

2   In the Chart Designer dialog box, select the Type tab.

3   Click on the Reset Chart to Defaults button.

   Survey Crafter Professional restores the chart's default formats.

4   Click on the OK or Apply button to redraw the chart.

Formatting 3D Charts

3D charts have many unique formatting features. For example, you can rotate them and illuminate them from different directions.

Displaying a Chart in 3D

You can display most types of 2D charts as 3D charts.

• **To display a chart in 3D**

   1   From the Format menu, choose Chart Designer and then select Chart from the list of chart elements.

   2   In the Chart Designer dialog box, select the Type tab.

   3   Under Chart, choose the 3D option.

   4   Click on the OK or Apply button to redraw the chart.

Changing the 3D View

You can change the rotation, elevation, viewing distance, and proportions of a 3D chart by using the 3D View tab of the Chart Designer dialog box. You can also rotate and elevate a chart manually.

• **To change the 3D view by using the Chart Designer dialog box**

   1   From the Format menu, choose Chart Designer and then select Plot from the list of chart elements.

2   In the Chart Designer dialog box, select the 3D View tab.
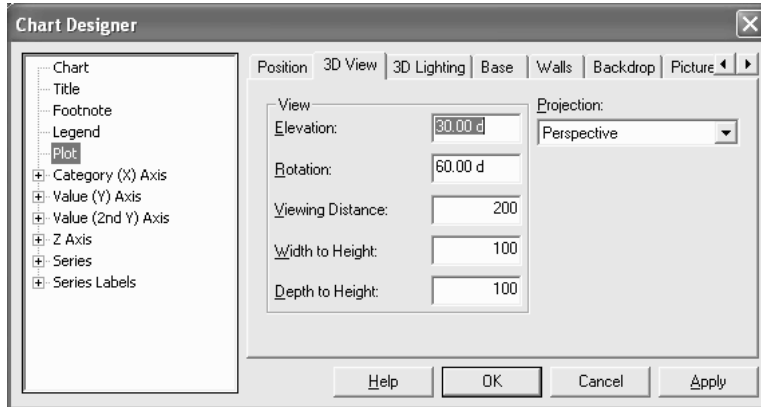
Figure 5 - 43:   The 3D View tab of the Chart Designer dialog box.

3   To change the relative height from which the chart is viewed, enter an angle from 0 to 90 degrees (or equivalents) in the Elevation field.

Entering 90 degrees means you look directly down on top of the chart. Entering 0 degrees means you look directly at the side of the chart.

4   To specify the angle the chart is turned to the viewer, enter an angle from 0 to 360 degrees (or the equivalent) in the Rotation field.

This field does not apply to doughnut charts or 3D pie charts.

5   To control how Survey Crafter Professional gives the chart its 3D look, select an option from the Projection drop-down list. Refer to Table 5 - 3 and Figure 5 - 44.

Table 5 - 3:   Projection options for 3D charts.

Projection option	**Description**
Oblique	Gives the chart depth but prevents the XY plane from changing when the chart is rotated or elevated.
Orthogonal	Does not apply perspective to the chart. Vertical lines remain vertical, making some charts easier to read.

Table 5 - 3:   Projection options for 3D charts. (Continued)

Projection option	Description
Perspective	Gives the most realistic 3D appearance. Objects farther away converge toward a vanishing point.
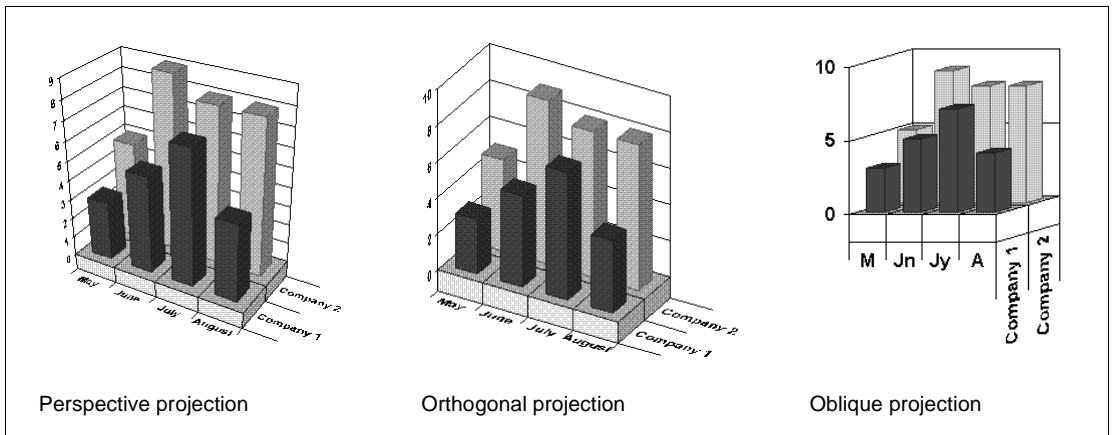
Figure 5 - 44:   Projections for three-dimensional charts.

6   To control the distance from which the chart is viewed, enter a positive value (between 50 and 1000) as a percentage of the chart's depth in the Viewing Distance field.

The larger the percentage you enter, the farther away the chart appears.

7   To control the chart's width and depth, enter a percentage (between 5 and 2000) of the chart's height in the Width To Height and Depth To Height fields.

The larger the percentages you enter, the wider and deeper the chart appears.

8   Click on the OK or Apply button to redraw the chart.

- **To rotate and elevate a chart manually**

1   Place the pointer anywhere in the chart region.

2   Press and hold the [CTRL] key.

The cursor changes to the rotation cursor.

3   Click and hold the left mouse button.

A dotted bounding box appears around the chart plot. Reference arrows appear at the corner where the first data point in the first series is drawn.
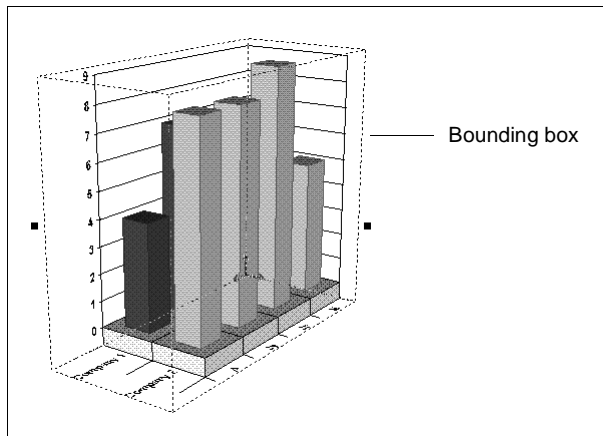
Figure 5 - 45:   Bounding box around a chart being rotated manually.

4   Move the rotation cursor (a four-sided arrow) up and down to change the chart elevation and right and left to change the chart rotation.

The bounding box shows the position of the chart plot as you move the mouse.

5   When the chart has the rotation and elevation you want, release the mouse button.

Survey Crafter Professional redraws the chart in the new position.

Lighting 3D Charts

Light falling on a 3D chart illuminates some areas brightly and places other areas in shadows. You can control how much and from what direction light strikes the chart.

• **To light a 3D chart**

1   From the Format menu, choose Chart Designer and then select Plot

from the list of chart elements.

2 In the Chart Designer dialog box, select the 3D Lighting tab.

3 Enter the percentage (from 0 to 100) of ambient light shining on the chart in the Ambient Light field.

Entering 100 illuminates all sides of the chart equally regardless of the single light sources you turn on. Entering 0 illuminates only the sides of the chart facing active light sources.

Ambient light 100%
No edge lights
No light sources

Ambient light 50%
No edge lights
No light sources
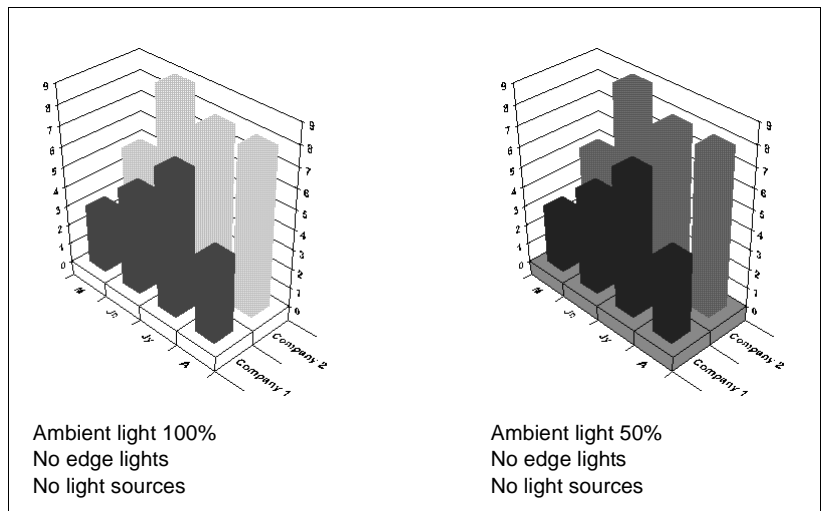
Figure 5 - 46:   The effects of ambient light on a chart's appearance.

4 To accent the edges of 3D objects, do the following:

- Select the Edge Intensity check box. To turn off edge accents, clear the check box.

- Enter a percentage (between 0 and 100) to specify the amount of lighting applied to objects' edges in the Edge Intensity field.

Entering 0 draws the edges as black lines. Entering 100 fully illuminates the objects' edges using the edge pen's color.

Ambient light 100%
Edge lights on at 0%
No light sources

Ambient light 100%
Edge lights on at 100%
No light sources
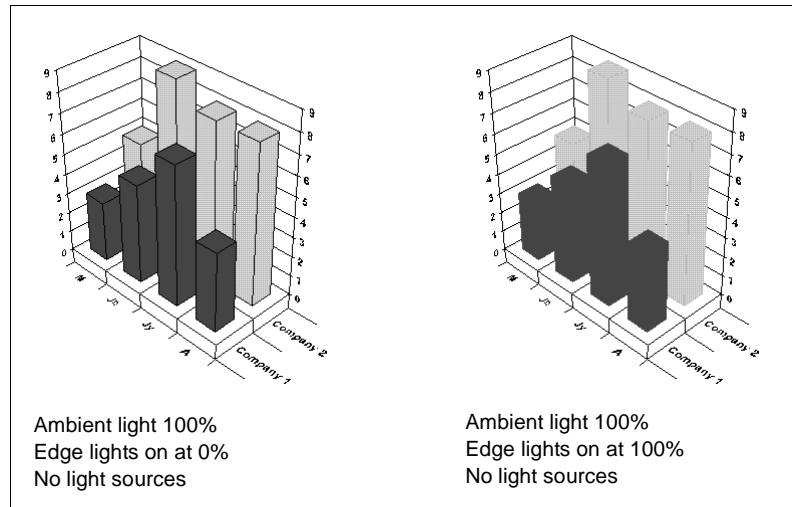
Figure 5 - 47:   The effects of edges lights on a chart's appearance.

5   To specify any single, preset light sources, enter percentages in fields under Light Source Intensities.

For example, to illuminate the chart from the upper left corner, enter 100 in the High Left field and 0 in the other eight fields. At 100 percent, chart surfaces perpendicular to the light source are fully illuminated.

6   Click on the OK or Apply button to redraw the chart.

Formatting Axes

Survey Crafter Professional provides several options for formatting a chart's axes including:

• Changing an Axis' Color and Thickness

• Adding and Removing Grid Lines

• Hiding and Showing an Axis' Scale

• Changing Axes' Intersection

• Scaling Axes

• Changing the Value (Y) Axis Type

• Adding and Removing Tick Marks on an Axis

• Creating an Axis Title

Before formatting a chart's axes, read the following section "Axis Terminology" to learn names for axes featured in different chart types.

Axis Terminology

There are three primary types of axes that can appear on a chart: a value axis, a category axis, and a date axis. Category axes have text labels identifying the category or series in the chart. Value axes display numbers as values or percentages. Date axes display a range of dates. Table 5 - 4 lists the types of axes on different chart types.

Table 5 - 4:   Names of axes in different chart types.

Chart type	X axis	Y axis	2nd Y axis	Z axis
2D Bar, 2D Line, 2D Area, 2D Step, 2D Combination	Category	Value	Value	N/A
3D Bar, 3D Line, 3D Area, 3D Step, 3D Combination	Category	Value	Value	Category
2D and 3D Horizontal Bar	Category	Value	N/A	N/A
2D and 3D Gantt	Category	Date	N/A	N/A
XY	Value	Value	N/A	N/A
Bubble	Value	Value	N/A	N/A
Hi-Lo	Date or Category	Value	Value	N/A
Polar	Angle	Value	N/A	N/A
Radar	Radar	Value	N/A	N/A

Changing an Axis' Color and Thickness

Changing an axis color and thickness also changes the color and thickness of any tick marks on the axis.

• **To change an axis' color and thickness**

1   Do one of the following:

• Double-click on the axis to format.

• From the Format menu, choose Chart Designer, and then select the axis element to format.

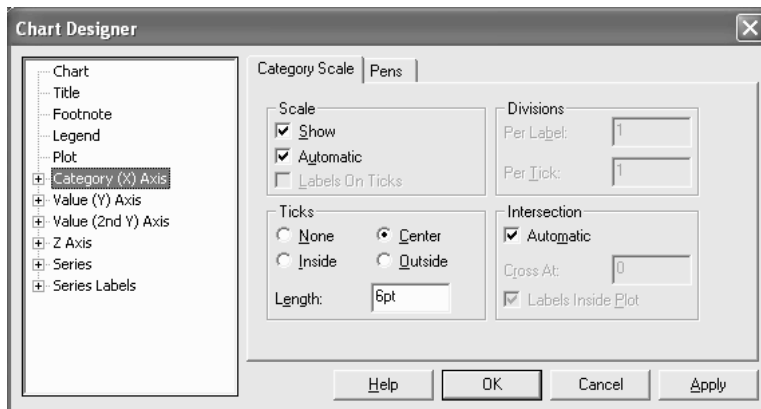**2** In the Chart Designer dialog box, select the Pens tab.
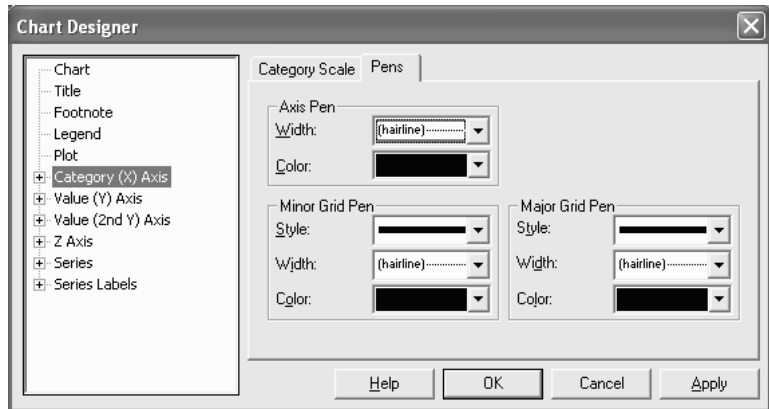
Figure 5 - 48:   The Pens tab of the Chart Designer dialog box.

3 To specify the thickness of the axis line, select an option from the Width drop-down list.

4 To specify the axis' color, select an option from the Color drop-down list.

5 Click on the OK or Apply button to redraw the chart.

Adding and Removing Grid Lines

You can use different formats to distinguish major and minor grid lines. You can remove major or minor grid lines at any time.
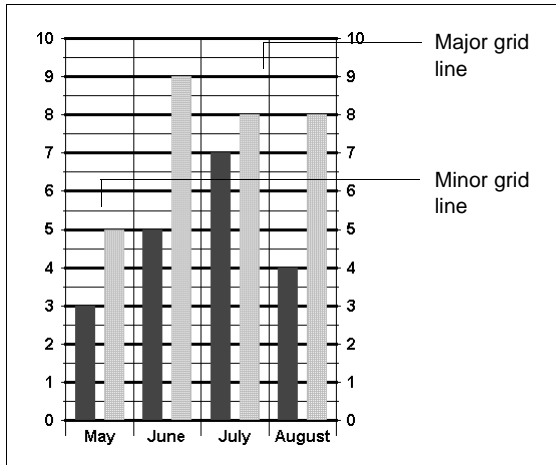
Figure 5 - 49:   Major and minor grid lines on a chart.

- **To add grid lines**

    1   Do one of the following:

    - Double-click on the axis you want to format.

    - From the Format menu, choose Chart Designer, and then select the axis element to format.

2 In the Chart Designer dialog box, select the Pens tab.
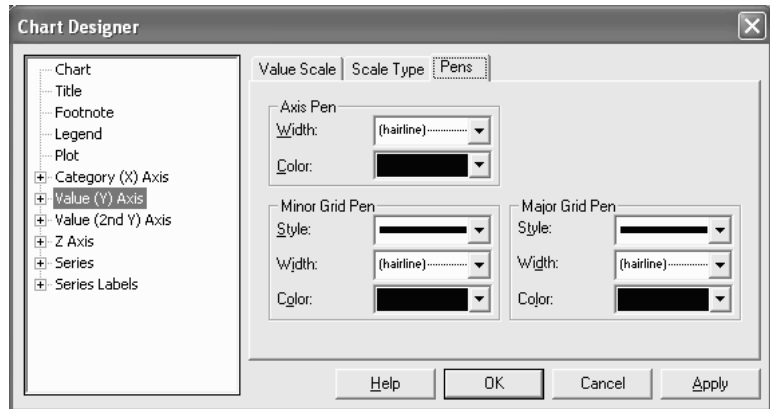
Figure 5 - 50: The Pens tab of the Chart Designer dialog box.

3 To format the minor grid lines, do the following under Minor Grid Pen:

- From the Style drop-down list, select a grid line style.

- From the Width drop-down list, select a grid line width.

- From the Color drop-down list, select a grid line color.

4 To format the major grid lines, do the following under Major Grid Pen:

- From the Style drop-down list, select a grid line style.

- From the Width drop-down list, select a grid line width.

- From the Color drop-down list, select a grid line color.

5 Click on the OK or Apply button to redraw the chart.

- **To remove grid lines**

  1 Do one of the following:

  - Double-click on the axis to format.

  - From the Format menu, choose Chart Designer, and then select the axis element to format.

  2 In the Chart Designer dialog box, select the Pens tab.

3 To remove minor grid lines, select NULL from the Style drop-down list under Minor Grid Pen.

4 To remove major grid lines, select NULL from the Style drop-down list under Major Grid Pen.

5 Click on the OK or Apply button to redraw the chart.

Hiding and Showing an Axis' Scale

You can hide or show any axis' scale (the numbers, dates, or categories appearing on an axis).

- **To hide an axis scale**

  1 Do one of the following:

  - Double-click on the axis to format.

  - From the Format menu, choose Chart Designer, and then select the axis element to format.

  2 In the Chart Designer dialog box, select the Value or Category Scale tab.

  3 Under Scale, clear the Show check box.

  4 Click on the OK or Apply button to redraw the chart.

- **To show an axis scale**

  1 Do one of the following:

  - Double-click on the axis to format.

  - From the Format menu, choose Chart Designer, and then select the axis element to format.

  2 In the Chart Designer dialog box, select the Value or Category Scale tab.

  3 Under Scale, select the Show check box.

  4 Click on the OK or Apply button to redraw the chart.

Changing Axes' Intersection

An axis may cross another axis at a location you define.

Here the Y axis intersects the X axis near the X axis' center rather than its left edge.
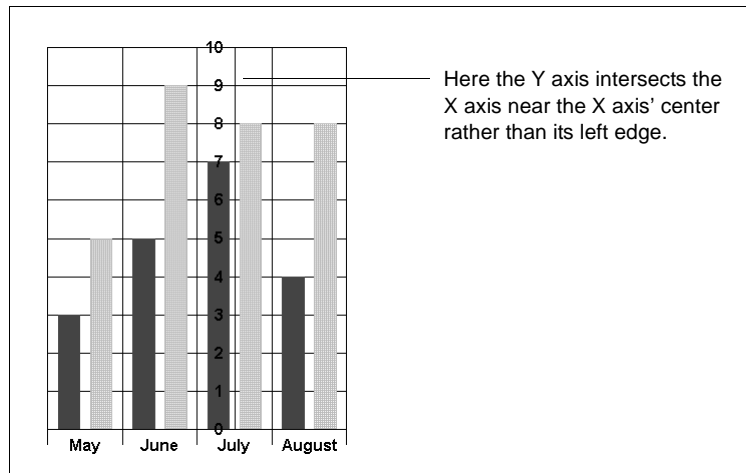
Figure 5 - 51:   One axis intersecting another in a non-standard position.

- **To change an axis' intersection**

   1   Do one of the following:

   - Double-click on the axis to format.

   - From the Format menu, choose Chart Designer, and then select the axis element to format.

   2   In the Chart Designer dialog box, select the Value or Category Scale tab.

   3   Under Intersection, clear the Automatic check box.

   4   In the Cross At field, enter the position where you want the selected axis to cross its intersecting axis.

   If the intersecting axis is a value axis (Y axis), enter the value where you want to place the selected axis. If the intersecting axis is a date or category axis (X or Z axis), enter the division number at which you want to place the selected axis.

   5   To move the axis labels with the axis, check the Labels Inside Plot check box.

Moving labels with their axis may obscure other chart elements.

6   Click on the OK or Apply button to redraw the chart.

> **Note** To return the selected axis to its default position, select the
> Automatic check box and then click on the OK or Apply button.

Scaling Axes

By default, Survey Crafter Professional automatically scales axes based
on the data in the chart. You can, however, override the automatic scaling
to set the number and range of labels appearing on an axis. For example,
you can specify that a value (Y) axis has a minimum value of 0, a
maximum value of 100, and shows divisions at 20, 40, 60, and 80.

Scaling a Category (X or Z) Axis

You can change the number of labels and tick marks appearing on
category (X or Z) axes. Reducing the number of labels and tick marks can
help a chart look less cluttered.

- **To scale a category (X or Z) axis**

    1   Do one of the following:

    - Double-click on the axis to format.

    - From the Format menu, choose Chart Designer, and then select the
      X Axis or Z Axis element.

2   In the Chart Designer dialog box, select the Category Scale tab.
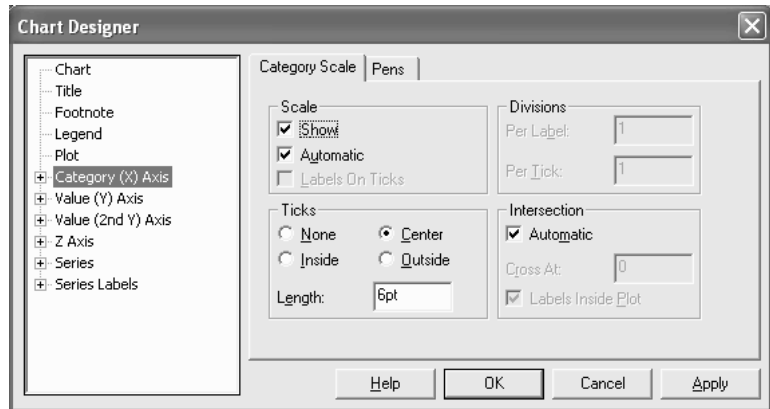
Figure 5 - 52:   The Category Scale tab of the Chart Designer dialog box.

3   Under Scale, clear the Automatic check box.

4   Under Divisions, enter the number of divisions you want between labels in the Per Label field.

     For example, a value of 1 labels every division. A value of 3 labels every third division.

5   Under Divisions, enter the number of tick marks to appear between labels in the Per Tick field.

     For example, a value of 1 places a tick at every division. A value of 3 places a tick at every third division.

6   If you are working with a 2D chart and want to center each label at a tick mark, select the Label On Ticks check box.

7   Click on the OK or Apply button to redraw the chart.

> **Note**   To have Survey Crafter Professional scale the axis based on the data being charted, select the Automatic check box and then click on the OK or Apply button.

Scaling a Value (Y) Axis

You can scale the value axis (Y axis) based on the data being charted or you can customize the axis. When customizing the axis, define the axis' minimum and maximum values and enter the number of major and minor divisions to appear on the axis. Axis labels appear at only major divisions.

- **To scale a value (Y) axis**

    1 Do one of the following:

    - Double-click on the axis to format.

    - From the Format menu, choose Chart Designer, and then select the Y Axis element.

    2 In the Chart Designer dialog box, select the Value Scale tab.
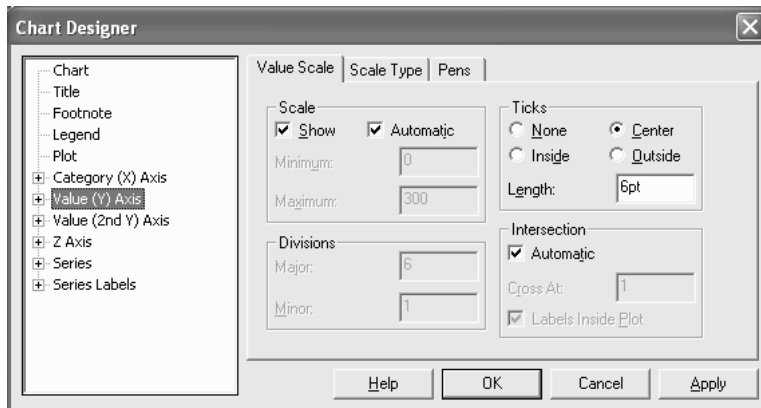
Figure 5 - 53:   The Value Scale tab of the Chart Designer dialog box.

    3 Under Scale, clear the Automatic check box.

    4 To define the axis' endpoints, enter the axis' minimum value in the Minimum field and its maximum value in the Maximum field.

    5 Under Divisions, enter the number of major divisions to appear on the axis in the Major field.

    6 Enter the number of minor divisions to appear on the axis in the Minor field.

7   Click on the OK or Apply button to redraw the chart.

> **Note** To have Survey Crafter Professional scale the axis based on the data being charted, select the Automatic check box and then click on the OK or Apply button.

Scaling a Date Axis

You can have Survey Crafter Professional scale the date axis based on the data being charted or you can customize the axis. When customizing the axis, define the axis' minimum and maximum dates, its major and minor date divisions, and formats to indicate new months and new years. Axis labels appear at only major date divisions.

- **To scale a date axis**

  1   Do one of the following:

  - Double-click on the axis to format.

  - From the Format menu, choose Chart Designer, and then select the axis element to format.

  2   In the Chart Designer dialog box, select the Date Scale tab.

  3   Under Scale, clear the Automatic check box.

  4   In the Minimum field, enter the start date for the chart. In the Maximum field, enter the end date for the chart.

  5   In both the Major Interval and Minor Interval fields, enter a number to specify how many intervals pass before a tick mark appears on the axis. Then select an interval type from each drop-down list.

  6   To avoid displaying dates that fall on weekends, select the Skip Weekends check box. Leave the box cleared if you want to display all dates regardless of the day of the week.

  7   Select the Date Formats tab.

  8   Define formats for axis labels as follows:

  - From the Major Format drop-down list, select a date format for the first level of axis labels.

- From the Extra Interval 1 drop-down list, select a format for the first extra interval.

- From the Extra Interval 2 drop-down list, select a format for the second extra interval.

9   Click on the OK or Apply button to redraw the chart.

> **Note** To have Survey Crafter Professional scale the axis based on the data being charted, select the Automatic check box and then click on the OK or Apply button.

Scaling a Polar Axis
You can format the radius axis on a polar chart just like any other value (Y) axis. Scaling the polar axis allows you to control the number of radial grid lines and labels that appear around the chart's perimeter.

- **To scale a polar axis**

    1   Do one of the following:

    - Double-click on the axis to format.

    - From the Format menu, choose Chart Designer, and then select the axis element to format.

    2   In the Chart Designer dialog box, select the Value Scale tab.

    3   Under Scale, clear the Automatic check box.

    4   Under Divisions, enter the number of major divisions for the chart in the Major field.

    For example, to divide the chart into quadrants, enter 4.

    5   Enter the number of minor divisions to appear between each major division in the Minor field.

    For example, to divide each quadrant into thirds, enter 3.

6   Click on the OK or Apply button to redraw the chart.

> **Note** To have Survey Crafter Professional scale the axis based on the data being charted, select the Automatic check box and then click on the OK or Apply button.

Changing the Value (Y) Axis Type

A chart's value (Y) axis may be one of three types: linear, logarithmic, or percent.

When choosing the logarithmic axis type, specify a base for the scale.

When choosing the percent axis type, specify what basis Survey Crafter Professional calculates percentages on. Indicate, for example, whether Survey Crafter Professional should treat as 100% the largest value in the series or the sum of all values in the series.

• **To change the value (Y) axis type**

   1   Do one of the following:

   • Double-click on the axis to format.

   • From the Format menu, choose Chart Designer, and then select the axis element to format.

   2   In the Chart Designer dialog box, select the Scale Type tab.

   3   Under Scale Type, select the new axis type.

   4   If you selected Logarithmic in step 3, enter the logarithm's base in the Log Base field.

   5   If you selected Percent in step 3, select the quantity Survey Crafter Professional should treat at 100% from the % Basis drop-down list.

   Indicate, for example, whether Survey Crafter Professional should treat the largest value in the series or the sum of all values in the series as 100%.

   Click on the Help button for a description of the % Basis options.

   6   Click on the OK or Apply button to redraw the chart.

Adding and Removing Tick Marks on an Axis

You can control the length and location of an axis' tick marks. Tick marks' color and thickness are the same as the axis' color and thickness.

- **To add tick marks to an axis**

   1   Do one of the following:

   - Double-click on the axis to format.

   - From the Format menu, choose Chart Designer, and then select the axis element to format.

   2   In the Chart Designer dialog box, select the Value or Category Scale tab.

Figure 5 - 54:   The Category Scale tab of the Chart Designer dialog box.

   3   Under Ticks, select where you want tick marks to appear on the axis.

   Select the Center option if you want tick marks to straddle the axis.

   4   In the Length field, enter the length of the tick marks in points.

   5   Click on the OK or Apply button to redraw the chart.

- **To remove tick marks from an axis**

  1   Do one of the following:

  - Double-click on the axis to format.

  - From the Format menu, choose Chart Designer, and then select the axis element to format.

  2   In the Chart Designer dialog box, select the Value or Category Scale tab.

  3   Under Ticks, select the None option.

  4   Click on the OK or Apply button to redraw the chart.

Creating an Axis Title

You can add a title to each axis. Axis titles provide additional information about the axis and help the viewer interpret the chart.

- **To create an axis title**

  1   Do one of the following:

  - Double-click on the axis you want to title.

  - From the Format menu, choose Chart Designer, expand the axis element to format, and then select Axis Title.

  2   In the Chart Designer dialog box, select the Text tab.

  3   Type the title text in the Text field.

Enter the axis title's text here.
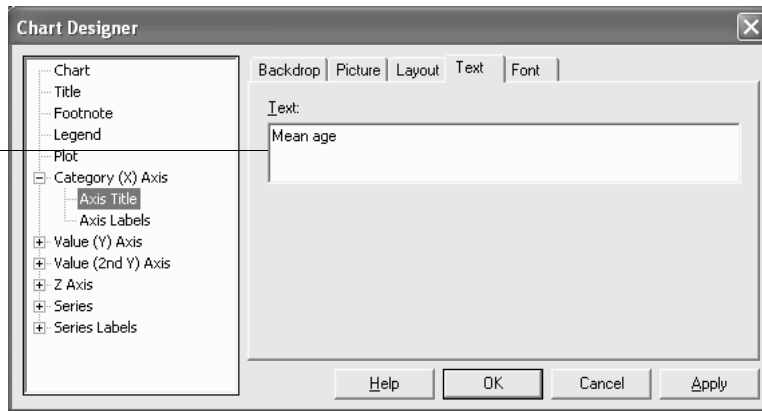
Figure 5 - 55:   The Text tab of the Chart Designer dialog box.

4   Select the Layout tab.

5   Align and orient the title text as follows:

• Under Alignment, select a horizontal alignment option.

• Under Alignment, select a vertical alignment option.

• Under Orientation, select an orientation option.

6   If you want the title text to appear on more than one line if necessary, select the Word Wrap check box.

7   Click on the OK or Apply button to redraw the chart.

For instructions on formatting the title, see the sections below.

• "Changing the Font of Chart Text" on page 5 - 51

• "Aligning and Orienting Chart Text" on page 5 - 52

• "Drawing a Frame around a Chart Element" on page 5 - 55

• "Drawing a Solid or Patterned Backdrop for a Chart Element" on page 5 - 56

• "Drawing a Gradient Backdrop for a Chart Element" on page 5 - 58

• "Using a Graphic as a Backdrop for a Chart Element" on page 5 - 59

Formatting Plots

A chart's plot consists of all the chart features except the title, legend, and footnote. Formatting changes you can make to a plot include positioning and sizing the plot, formatting the plot's base and walls, and adjusting spacing between bars in bar charts.

Positioning and Sizing a Plot

You can place a chart's plot in a custom location and specify its dimensions manually or by using the Chart Designer dialog box.

- **To place a plot in a custom position manually**

    1   Click on the chart plot to select it.

        Handles appear around the plot.

    2   Click and drag the plot to its new position.

- **To place a plot in a custom position by using the Chart Designer dialog box**

    1   Double-click on the chart plot or choose Chart Designer from the Format menu and then select Plot from the list of chart elements.

    2   In the Chart Designer dialog box, select the Position tab.

    3   Clear the Automatic Location check box.

    4   Under Custom Location, enter positions in the Top and Left fields.

    5   Click on the OK or Apply button to redraw the chart.

- **To size a plot manually**

    1   Click on the chart plot to select it.

        Handles appear around the plot.

    2   Click and drag a handle to resize the plot.

        Survey Crafter Professional redraws the plot when you release the mouse button.

- **To size a plot by using the Chart Designer dialog box**

    1   Double-click on the chart plot or choose Chart Designer from the Format menu and then select Plot from the list of chart elements.

    2   In the Chart Designer dialog box, select the Position tab.

    3   Clear the Automatic Location check box.

    4   Under Custom Location, enter the plot's height in the Height field.

    5   Enter the plot's width in the Width field.

    6   Click on the OK or Apply button to redraw the chart.

Formatting a Plot's Base and Walls

You can draw lines around and apply solid or patterned fills to plots' bases and walls. The figure below illustrates a plot's base and walls. Both 2D and 3D plots have walls but only 3D plots have bases.
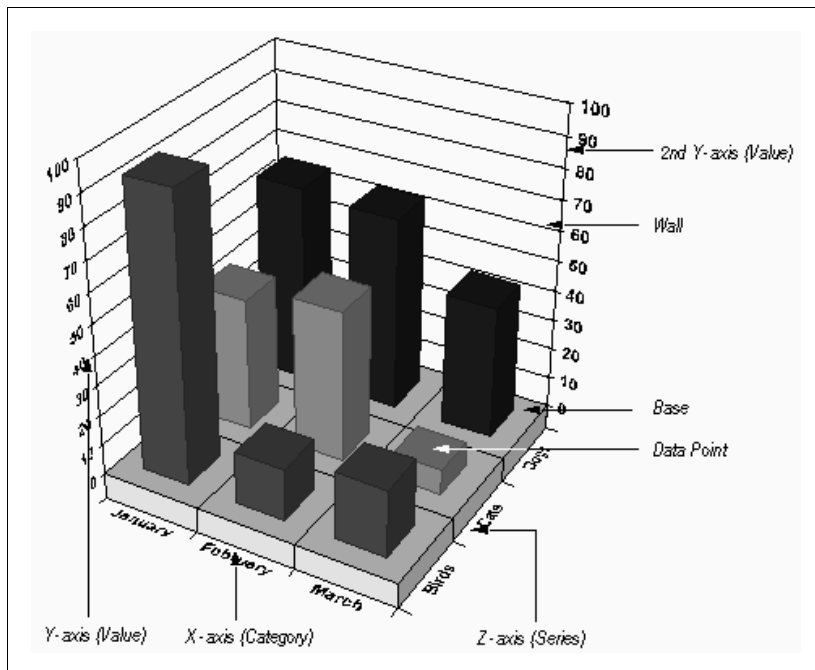
Figure 5 - 56:   A 3D plot's base and walls.

• **To format a 2D or 3D plot's walls**

  1 Double-click on the chart plot or choose Chart Designer from the Format menu and then select Plot from the list of chart elements.

  2 In the Chart Designer dialog box, select the Walls tab.

  3 Enter the wall thickness in points in the Wall Width field.
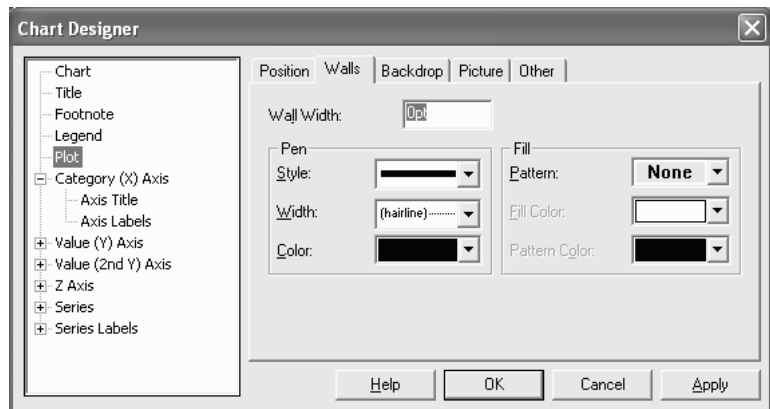
Figure 5 - 57: The Walls tab of the Chart Designer dialog box.

  4 To draw a line around the plot's walls, do the following under Pen:

• From the Style drop-down list, select a line style. To remove the walls' lines, select NULL.

• From the Width drop-down list, select a line width.

• From the Color drop-down list, select a line color.

  5 To apply a fill to the plot's walls, do the following under Fill:

• From the Pattern drop-down list, select a pattern for the fill. To apply a single color, choose Solid.

• From the Fill Color drop-down list, select the solid fill's color or the pattern's background color.

• From the Pattern Color drop-down list, select the pattern's foreground color.

  6 Click on the OK or Apply button to redraw the chart.

- **To format a 3D plot's base**

  1   Double-click on the chart plot or choose Chart Designer from the Format menu and then select Plot from the list of chart elements.

  2   In the Chart Designer dialog box, select the Base tab.

  3   Enter the base thickness in points in the Base Height field.

  4   To draw a line around the plot's base, do the following under Pen:

   • From the Style drop-down list, select a line style. To remove the base's lines, select NULL.

   • From the Width drop-down list, select a line width.

   • From the Color drop-down list, select a line color.

  5   To apply a fill to the plot's base, do the following under Fill:

   • From the Pattern drop-down list, select a pattern for the fill. To apply a single color, choose Solid.

   • From the Fill Color drop-down list, select the solid fill's color or the pattern's background color.

   • From the Pattern Color drop-down list, select the pattern's foreground color.

  6   Click on the OK or Apply button to redraw the chart.

Adjusting Bar Spacing

For 2D bar charts, you can change the distance between bars within a category (the bar gap ratio) and the space between categories of bars (the X gap ratio).

For 3D bar charts, you can control the space between series of bars on the Z axis (the Z gap ratio) and the space between individual bars on the X axis (also called the X gap ratio).
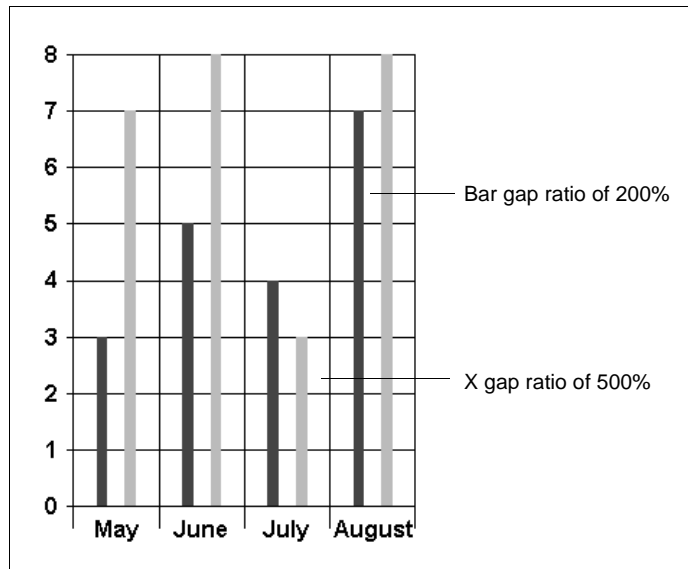
Figure 5 - 58:   Bar gap and X gap ratios in a 2D bar chart.

- **To adjust bar spacing in 2D bar charts**

  1   Double-click on the chart plot or choose Chart Designer from the Format menu and then select Plot from the list of chart elements.

  2   In the Chart Designer dialog box, select the Other tab.

  3   To adjust the space between bars within a category, under Bars, enter a value as a percentage of bar width in the Bar Gap Ratio field.

  A bar gap ratio of 50 places a space that is half as wide as a bar between each bar.

  4   To adjust the space between categories of bars, enter a value as a percentage of bar width in the X Gap Ratio field.

  An X gap ratio of 500 places a space that is five times as wide as a bar between each bar.

  5   Click on the OK or Apply button to redraw the chart.

- **To adjust bar spacing in 3D bar charts**

  1   Double-click on the chart plot or choose Chart Designer from the Format menu and then select Plot from the list of chart elements.

  2   In the Chart Designer dialog box, select the Other tab.

  3   To adjust the space between series of bars on the Z axis, enter a value as a percentage of bar width in the Z Gap Ratio field.

  A Z gap ratio of 300 places a gap that is three times as wide as a bar between series' bars.

  4   To adjust the space between bars on the X axis, enter a value as a percentage of bar width in the X Gap Ratio field.

  An X gap ratio of 500 places a space that is five times as wide as a bar between each bar.

  5   Click on the OK or Apply button to redraw the chart.

Formatting Pie, Doughnut, Radar, and Polar Charts

Survey Crafter Professional provides several options for formatting pie, doughnut, radar, and polar charts including:

- Controlling the Direction of Pie, Doughnut, Radar, and Polar Charts

- Ordering and Weighting Pie and Doughnut Charts

- Controlling a Doughnut or 3D Pie Chart's Height and Top Radius

- Changing a Doughnut Chart's Center Diameter

- Adjusting the Number of Sides in a Doughnut Charts

Controlling the Direction of Pie, Doughnut, Radar, and Polar Charts

You can draw these chart types in the clockwise or counterclockwise direction. You can also define the position at which Survey Crafter Professional begins plotting the chart's data.
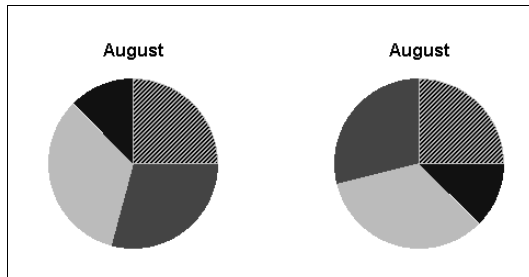
Figure 5 - 59: A pie chart drawn clockwise with a starting position of 0 degrees (left) and a pie chart drawn counterclockwise with a starting position of 0 degrees.

- **To control the direction of pie, doughnut, radar, and polar charts**

   1   Double-click on the chart plot or choose Chart Designer from the Format menu and then select Plot from the list of chart elements.

   2   In the Chart Designer dialog box, select the Other tab.

   3   To draw the chart in the clockwise direction, select the Clockwise check box. To draw the chart in the counterclockwise direction, clear the Clockwise check box.

   4   Set the position at which Survey Crafter Professional begins plotting the chart's data in the Starting Angle field.

   The value in the Starting Angle field appears in degrees, radians, or grads depending on the option selected from the Angle Units drop-down list.

   90 degrees sets the start position to 12 o'clock and 0 degrees sets the start position to 3 o'clock.

   5   If the chart is a radar or polar chart, enter the angle at which you want the scale to appear in the Scale Angle field.

   6   Click on the OK or Apply button to redraw the chart.

Ordering and Weighting Pie and Doughnut Charts

You can sort the sections of a pie or doughnut chart in ascending or descending order based on their size. If a chart shows more than one pie or doughnut, you can size each pie or doughnut relative to the others or to the first series in each pie or doughnut.

- **To order and weight sections of a pie or doughnut chart**

    1   Double-click on the chart plot or choose Chart Designer from the Format menu and the select Plot from the list of chart elements.

    2   In the Chart Designer dialog box, select the Pie tab.

    3   To define the basis for weighting pie or doughnut charts, choose one of the following:

      • The Area option to weight pies or doughnuts by their areas

      • The Diameter option to weight pies or doughnuts by their diameters

    4   To control the relative size of the chart's pies or doughnuts, select an option from the Basis drop-down list under Weighting. Refer to Table 5 - 5.

Table 5 - 5:   Weighting options.

Select	So that
None	All pies and doughnuts appear the same size.
Total	Survey Crafter Professional totals the slice values in each pie or doughnut and determines the size of each chart relative to the largest pie or doughnut.
Series	Survey Crafter Professional determines the size of each pie or doughnut according to the size of the value in each chart's first series. The larger the value in the first series, the larger the pie or doughnut.

    5   From the Sorting drop-down list, select an option for arranging the sections based on their sizes.

To draw the pie or doughnut in the order the data appears in the chart's table, select None.
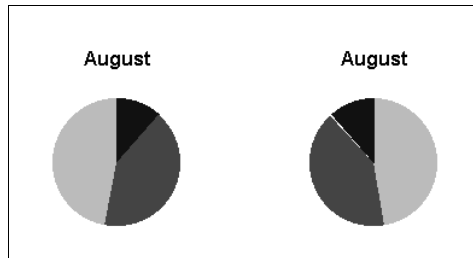
Figure 5 - 60: Pie charts sorted in ascending order (left) and descending order.

6   Click on the OK or Apply button to redraw the chart.

Controlling a Doughnut or 3D Pie Chart's Height and Top Radius

You can define a 3D pie or doughnut chart's height as a percentage of its bottom radius and its top radius as a percentage of its bottom radius.
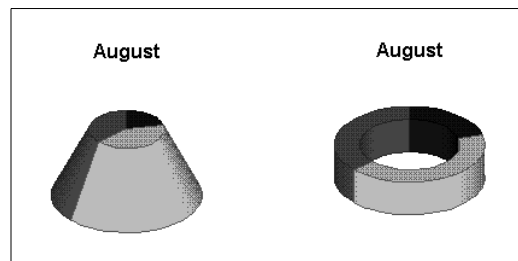
Figure 5 - 61: A pie chart with a top 50% as wide as its base (left) and a doughnut chart with a height equal to 50% of its bottom radius.

- **To control a 3D pie or doughnut chart's height and top radius**

  1   Double-click on the chart plot or choose Chart Designer from the Format menu and then select Plot from the list of chart elements.

  2   In the Chart Designer dialog box, select the Pie tab.

  3   To set a 3D pie or doughnut chart's height, enter a value between 0 and 100 in the Thickness Ratio field.

  For example, entering 100 makes the chart as tall as its bottom radius. Entering 33 makes the chart one-third as tall as its bottom radius.

4   To set a 3D pie or doughnut chart's top radius, enter a percentage (from 0 to 100) of the chart's bottom radius in the Top Radius Ratio field.

For example, entering 100 makes the chart's top and bottom radius the same. Entering 0 draws the chart as a cone.

5   Click on the OK or Apply button to redraw the chart.

Changing a Doughnut Chart's Center Diameter

You can define a doughnut chart's center diameter as a percentage of the entire doughnut's diameter.

• **To change a doughnut chart's center diameter**

1   Double-click on the chart plot or choose Chart Designer from the Format menu and then select Plot from the list of chart elements.

2   In the Chart Designer dialog box, select the Pie tab.

3   Under 3D, in the Interior Ratio field, enter the percentage (from 1 to 100) of the entire doughnut diameter used to display its center.

Entering 50 sets the center diameter equal to half the doughnut's diameter.

4   Click on the OK or Apply button to redraw the chart.

Adjusting the Number of Sides in a Doughnut Charts

The more sides you assign a doughnut chart, the rounder and smoother it appears. For example, assigning a doughnut chart 3 sides gives it a triangular cross section. Assigning it 360 sides gives it a circular cross section.
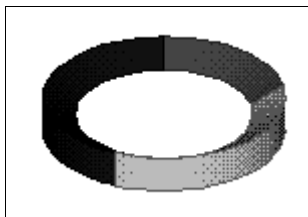
Figure 5 - 62:   A three-sided doughnut chart.

- **To adjust the number of a doughnut's sides**

    1 Double-click on the chart plot or choose Chart Designer from the Format menu and the select Plot from the list of chart elements.

    2 In the Chart Designer dialog box, select the Pie tab.

    3 Under 3D, in the Sides field, enter the number of sides (from 2 to 360) for the doughnut chart.

    Survey Crafter Professional assigns this number of sides to all doughnuts appearing in the chart.

    4 Click on the OK or Apply button to redraw the chart.

Formatting Series and Data Points

Survey Crafter Professional provides several options for formatting individual series and data points including:

• Hiding, Excluding, and Showing Series

• Filling and Outlining Series

• Setting Series Options

• Formatting Series Lines

• Formatting Series Markers

• Adding and Removing Guidelines on Series

• Displaying Series Statistics

• Formatting Data Points

Hiding, Excluding, and Showing Series

There are two ways to remove a series from a chart without editing the tabulated data appearing in the chart:

• Hiding a series (removes the series from the chart but still shows the space it occupied)

• Excluding a series (removes the series and the space it occupied from the chart)
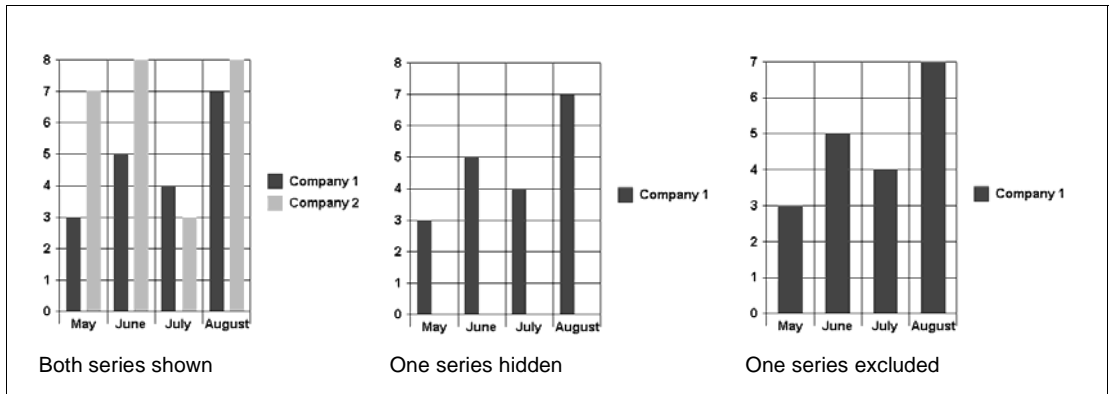
Figure 5 - 63:   Shown, hidden, and excluded series.

• **To hide or exclude a series**

   1   Do one of the following:

      • Double-click on the series you want to hide or exclude.

      • Choose Chart Designer from the Format menu and then select the series you want to hide or exclude.

   2   In the Chart Designer dialog box, select the Options tab.

   3   To hide the series, select the Hide Series check box. To exclude the series, select the Exclude Series check box.

   4   Click on the OK or Apply button to redraw the chart.

• **To show a series**

   1   Choose Chart Designer from the Format menu and then select the series you want to show.

   2   In the Chart Designer dialog box, select the Options tab.

   3   Clear the Hide Series or Exclude Series check box.

   4   Click on the OK or Apply button to redraw the chart.

Filling and Outlining Series

You can apply solid and patterned fills to series and, for 2D bars, display a
graphic inside the bars. You can also draw outlines around series
elements. Each procedure appears below.

Patterned fill applied to   Outlined series   A stacked graphic in
series   one series
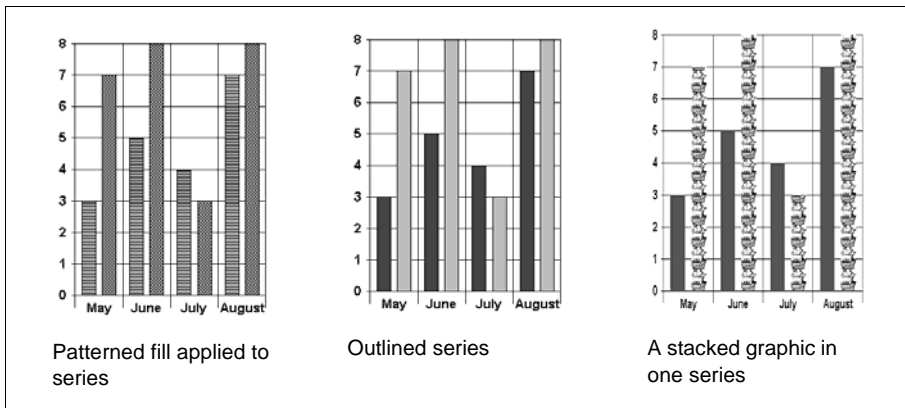
Figure 5 - 64:   Fills and outlines applied to series.

- **To apply a solid fill to a series**

    1   Do one of the following:

        • Double-click on the series you want to format.

        • Choose Chart Designer from the Format menu and then select the
          series you want to format.

    2   In the Chart Designer dialog box, expand the selected series and then
        select Datapoint.

    3   Select the Fill tab.

    4   From the Pattern drop-down list, select the solid pattern.

    5   From the Fill Color drop-down list, select the fill color.

    6   Click on the OK or Apply button to redraw the chart.

> **Note** To remove a fill from a series, select the None option from the
> Pattern drop-down list.

- **To apply a patterned fill to a series**

    1 Do one of the following:

     - Double-click on the series you want to format.

     - Choose Chart Designer from the Format menu and then select the series you want to format.

    2 In the Chart Designer dialog box, expand the selected series and then select Datapoint.

    3 Select the Fill tab.

    4 From the Pattern drop-down list, select the fill pattern.

    5 From the Fill Color drop-down list, select the pattern's background color.

    6 From the Pattern Color drop-down list, select the pattern's foreground color.

    7 Click on the OK or Apply button to redraw the chart.

    > **Note** To remove a fill from a series, select the None option from the Pattern drop-down list.

- **To insert a graphic inside 2D bars**

    1 Do one of the following:

     - Double-click on the series you want to format.

     - Choose Chart Designer from the Format menu and then select the series you want to format.

    2 In the Chart Designer dialog box, expand the selected series and then select Datapoint.

    3 Select the Picture tab.

    4 To select the graphic to insert, do one of the following:

     - Type the graphic's path in the File field.

     - Click on the Browse button and select the graphic in the Open dialog box.

     - If the graphic is on the clipboard, click on the Paste button.

5 Select the Tiled option to duplicate the graphic repeatedly to fill the bars or select the Stretch To Fit option to scale the graphic to fit the bars regardless of its original proportions.

6 To save the graphic with the chart, select the Embed check box.

To limit file size, it is recommended that you embed graphics only if they will not be available in the same location later.

7 Click on the OK or Apply button to redraw the chart.

> **Note** To remove a graphic from a series, click on the Clear button and then click on the OK or Apply button.

- **To outline a series**

1 Do one of the following:

- Double-click on the series you want to format.

- Choose Chart Designer from the Format menu and then select the series you want to format.

2 In the Chart Designer dialog box, expand the selected series and then select Datapoint.

3 Select the Fill tab.

4 Do the following under Edge:

- From the Style drop-down list, select the line style.

- From the Width drop-down list, select a line width.

- From the Color drop-down list, select a line color.

5 Click on the OK or Apply button to redraw the chart.

> **Note** To remove an outline from a series, select NULL from the Style drop-down list and then click on the OK or Apply button.

Setting Series Options

Series options affect how Survey Crafter Professional represents data in a series. You can change 3D bar styles, smooth series on line and area charts, define bubble diameters, and set gain and loss colors for hi-lo charts.

Changing 3D Bar Styles

You can give 3D bars any number of sides from 3 to 360. For example, to give the bars a triangular cross section, assign them 3 sides. Assigning 360 sides gives the bars circular cross sections. You can also make the bars' tops broader or narrower than their bases.
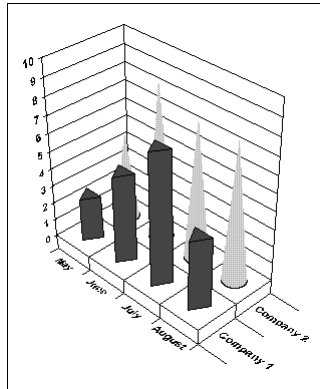
Figure 5 - 65:   Triangular and conical bars in a three-dimensional bar chart.

- **To change 3D bar styles**

    1 Do one of the following:

    - Double-click on a bar in the series.

    - Choose Chart Designer from the Format menu and then select the series you want to format.

    2 In the Chart Designer dialog box, select the Options tab.

    3 Under Bars, in the Sides field, enter the number of sides for the series' bars.

    4 In the Top Ratio field, enter a positive number to indicate the percentage of the bars' bottom dimensions used to draw the bars' top.

For example, entering 100 gives the bar the same top and bottom dimensions. Entering values greater than 100 makes the tops of the bars broader than their bases and entering values less than 100 makes their tops narrower than their bases.

5   Click on the OK or Apply button to redraw the chart.

Smoothing Series in Line and Area Charts

Smoothing a series makes the curve through its data points look less jagged. Choose from two mathematical formulas Survey Crafter Professional uses to smooth series.

- **To smooth a series in line and area charts**

  1   Do one of the following:

  - Double-click on the series you want to format.

  - Choose Chart Designer from the Format menu and then select the series you want to format.

  2   In the Chart Designer dialog box, select the Options tab.

  3   Select a smoothing function from the Function drop-down list.

  The CubicBSpline option results in a smoother curve than the QuadraticBSpline but the resulting curve tends to vary farther from the data points.

  4   In the Factor field, enter the number of points Survey Crafter Professional samples between data points.

  A higher number results in a smoother curve.

  5   Click on the OK or Apply button to redraw the chart.

Defining Bubble Diameters

To control the appearance of bubbles in a bubble chart, define the largest bubble's diameter.

- **To define bubble diameters**

  1   Double-click on the chart plot or choose Chart Designer from the Format menu and then select Plot from the list of chart elements.

2   In the Chart Designer dialog box, select the Bubble tab.

3   In the Largest Bubble Ratio field, enter the percentage (from 2 to 50) of the shortest chart axis to use as the largest bubble's diameter.

Survey Crafter Professional sizes the chart's other bubbles relative to the largest bubble.

4   Click on the OK or Apply button to redraw the chart.

Setting Gain and Loss Colors for Hi-lo-close Charts

You can use different colors to show gains and losses in hi-lo-close charts. For example, use red to indicate losses and black to indicate gains.

- **To set gain and loss colors for hi-lo-close charts**

    1   Do one of the following:

    - Double-click on the series you want to format.

    - Choose Chart Designer from the Format menu and then select the series you want to format.

    2   In the Chart Designer dialog box, select the Options tab.

    3   Under HiLo Close, from the Gain Color drop-down list, select the color to indicate gains.

    4   From the Loss Color drop-down list, select the color to indicate losses.

    5   Click on the OK or Apply button to redraw the chart.

Formatting Series Lines

You can use lines to connect data points in series appearing as lines in line, XY, radar, polar, and hi-lo charts.
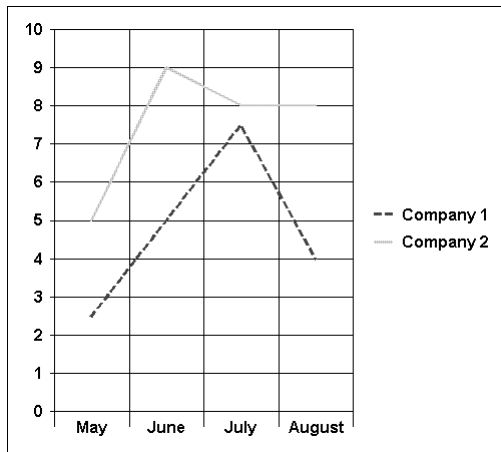
Figure 5 - 66: Different line styles for a charts' series.

- **To format series lines**

    1 Do one of the following:

    - Double-click on the series you want to format.

    - Choose Chart Designer from the Format menu and then select the series you want to format.

    2 In the Chart Designer dialog box, select the Lines tab.

    3 If you want to show lines, select the Show Series Lines check box. To hide lines, clear the check box.

    4 Format the series lines by doing the following:

    - From the Style drop-down list, select a line style.

    - From the Width drop-down list, select a line width.

    - From the Color drop-down list, select a line color.

    - From the Join drop-down list, select a method for joining line segments in the series.

• From the Caps drop-down list, select a method for displaying the ends of the lines.

5   Click on the OK or Apply button to redraw the chart.

Formatting Series Markers

Markers (for example, stars, hollow triangles, or filled circles) indicate the exact location of a data point in a series. You can show or hide markers and specify their format or have Survey Crafter Professional format them automatically.

All chart types except pies and doughnuts can display markers.
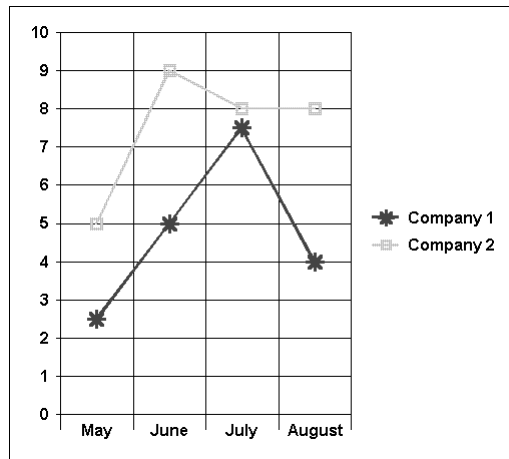
Figure 5 - 67:   Markers displayed on a chart's series.

• **To format series markers**

   1   Do one of the following:

   • Double-click on the series you want to format.

   • Choose Chart Designer from the Format menu and then select the series you want to format.

   2   In the Chart Designer dialog box, select the Options tab.

   3   To show markers on the series, select the Show Markers check box. To hide markers, clear the check box.

4   To have Survey Crafter Professional format the series' markers, select the Automatic Markers check box. Then go to step 8. To format the markers, clear the Automatic Markers check box and go to step 5.

5   Expand the selected series in the Chart Designer dialog box and then select Datapoint.

6   Select the Markers tab.

7   To format the marker, do the following:

- From the Style drop-down list, select a marker type.

- From the Color drop-down list, select a marker color.

- In the Size field, enter a marker size in points.

- From the Pen Width drop-down list, select the width of the marker's lines.

8   Click on the OK or Apply button to redraw the chart.

Adding and Removing Guidelines on Series

Guidelines are lines connecting data points in a series to one or more axes. They help viewers identify data points.

You can display guidelines only on area, step, bubble, and line charts.
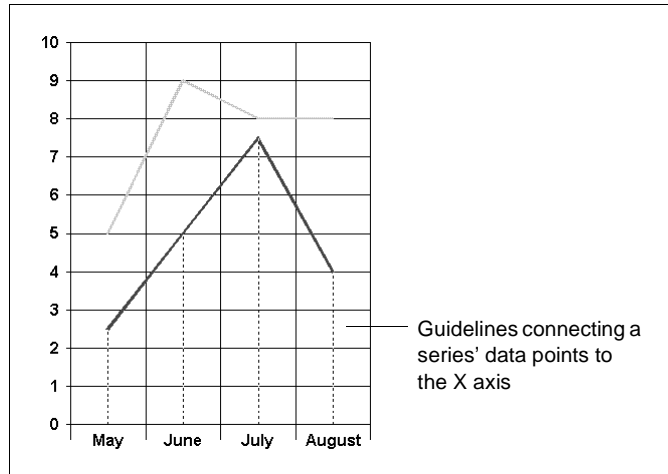
Figure 5 - 68:   Guidelines on a series.

- **To add guidelines to series**

    1   Do one of the following:

    - Double-click on the series you want to format.

    - Choose Chart Designer from the Format menu and then select the series you want to format.

    2   In the Chart Designer dialog box, select the Guidelines tab.
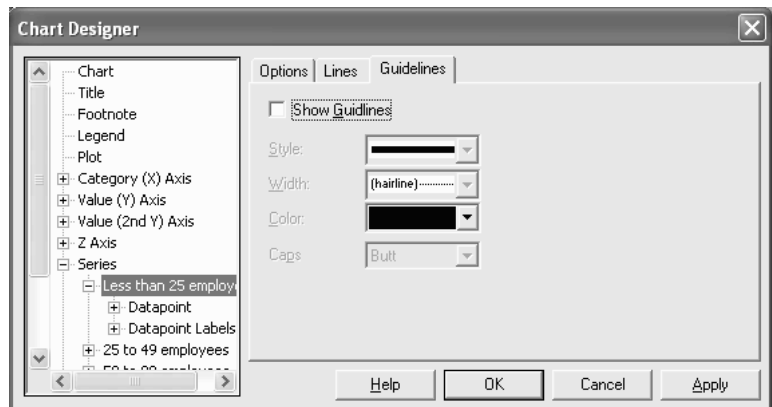
Figure 5 - 69:   The Guidelines tab of the Chart Designer dialog box.

3   Select the Show Guidelines check box.

4   To format the guidelines, do the following:

- From the Style drop-down list, select a line style.

- From the Width drop-down list, select a line width.

- From the Color drop-down list, select a line color.

- From the Caps drop-down list, select a style for the lines' ends.

5   Click on the OK or Apply button to redraw the chart.

- **To remove guidelines from a series**

   1   Do one of the following:

   - Double-click on the series you want to format.

   - Choose Chart Designer from the Format menu and then select the series you want to format.

   2   In the Chart Designer dialog box, select the Guidelines tab.

   3   Clear the Show Guidelines check box.

   4   Click on the OK or Apply button to redraw the chart.

Displaying Series Statistics

You can provide additional information about a series on the value (Y) axis by indicating its minimum, maximum, mean, standard deviation, and regression. Each statistic appears on the chart as a line intersecting a Y axis. You can use a different line style for each statistic.

You can display series statistics only on 2D line and XY charts.
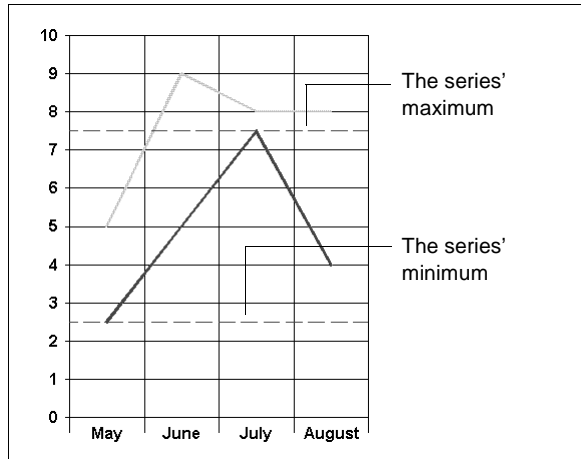
Figure 5 - 70:   Selected statistics displayed for a series.

- **To display series statistics**

    1 Do one of the following:

    - Double-click on the series you want to format.

    - Choose Chart Designer from the Format menu and then select the series you want to format.

    2 In the Chart Designer dialog box, select the Statistics tab.
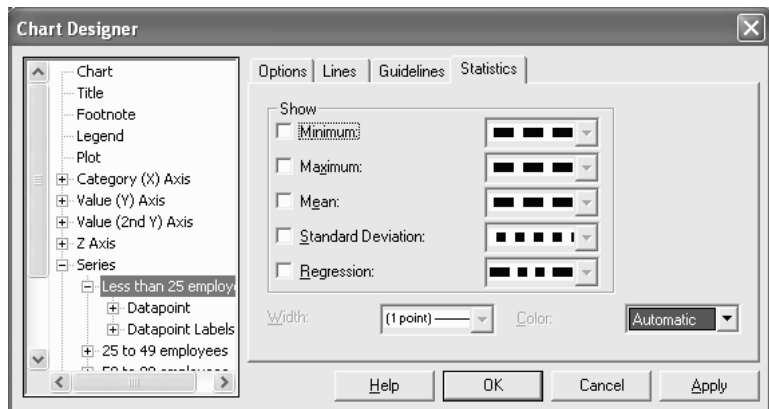
Figure 5 - 71:   The Statistics tab of the Chart Designer dialog box.

3   To show a statistic, do the following:

- Select the statistic's check box.

- From its Line Styles drop-down list, select the statistic's line style.

4   To format the statistics' lines, do the following:

- From the Width drop-down list, select the lines' width.

- From the Color drop-down list, select the lines' color.

  The same width and color applies to each of the chart's statistics lines.

5   Click on the OK or Apply button to redraw the chart.

Note To remove a statistic from the chart, clear the statistic's check box and then click on the OK or Apply button.

Formatting Data Points

To format individual data points, you can apply fills and display data point markers.

Applying Fills to Data Points

You can apply solid or patterned fills and outlines to individual data points unless the point is on a series drawn as a line. If a data point is a 2D bar, you can also display a graphic inside the bars.

Note To discard any custom fill settings you enter for a data point, select the Defaults tab, click on the Reset to Default Datapoint button, and then click on the OK or Apply button.

- **To apply a solid fill to a data point**

  1   Do one of the following:

  - Double-click on the data point to format.

  - From the Format menu, choose Chart Designer. Expand Series, the series that contains the data point and then Datapoint. Select the data point to format.

2   In the Chart Designer dialog box, select the Fill tab.
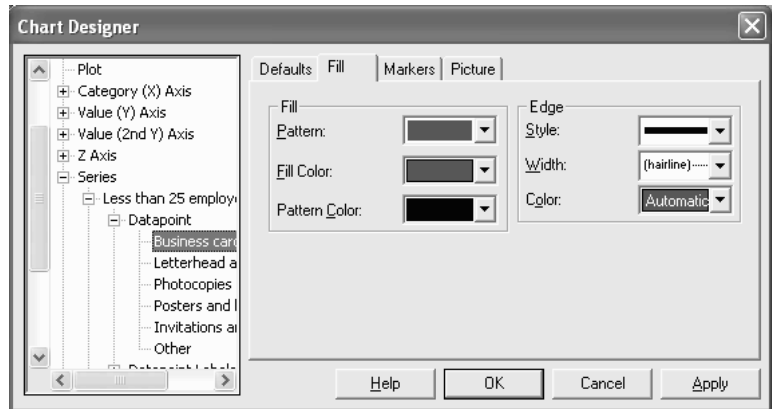
Figure 5 - 72:   The Fill tab of the Chart Designer dialog box.

3   From the Pattern drop-down list, select a solid pattern.

4   From the Fill Color drop-down list, select the fill color.

5   Click on the OK or Apply button to redraw the chart.

> **Note** To remove a fill from a data point, select the None option from the Pattern drop-down list.

- **To apply a patterned fill to a data point**

    1   Do one of the following:

    - Double-click on the data point to format.

    - From the Format menu, choose Chart Designer. Expand Series, the series that contains the data point and then Datapoint. Select the data point to format.

    2   In the Chart Designer dialog box, select the Fill tab.

    3   From the Pattern drop-down list, select the fill pattern.

    4   From the Fill Color drop-down list, select the pattern's background color.

    5   From the Pattern Color drop-down list, select the pattern's foreground color.

6   Click on the OK or Apply button to redraw the chart.

> **Note** To remove a fill from a data point, select the None option from
> the Pattern drop-down list.

•   **To outline a data point**

1   Do one of the following:

•   Double-click on the data point to format.

•   From the Format menu, choose Chart Designer. Expand Series, the
    series that contains the data point and then Datapoint. Select the
    data point to format.

2   In the Chart Designer dialog box, select the Fill tab.

3   Do one of the following under Edge:

•   From the Style drop-down list, select the line style. To remove an
    outline, select NULL.

•   From the Width drop-down list, select a line width.

•   From the Color drop-down list, select a line color.

4   Click on the OK or Apply button to redraw the chart.

•   **To insert a graphic inside a 2D bar**

1   Do one of the following:

•   Double-click on the data point to format.

•   From the Format menu, choose Chart Designer. Expand Series, the
    series that contains the data point and then Datapoint. Select the
    data point to format.

2   In the Chart Designer dialog box, select the Picture tab.

3   To select the graphic to insert, do one of the following:

•   Type the graphic's path in the File field.

•   Click on the Browse button and select the graphic in the Open
    dialog box.

•   If the graphic is on the clipboard, click on the Paste button.

4   Select the Tiled option to duplicate the graphic repeatedly to fill the bar or select the Stretch To Fit option to scale the graphic to fit the bar regardless of the graphic's original proportions.

5   To save the graphic with the chart, select the Embed check box.

To limit file size, it is recommended that you embed graphics only if they will not be available in the same location later.

6   Click on the OK or Apply button to redraw the chart.

> **Note**   To remove a graphic from a data point, click on the Clear button and then click on the OK or Apply button.

Adding and Removing Data Point Markers

Markers indicate the location of a data point within a series. You can show or hide individual data point's markers and format each marker differently.

•   **To add and format a data point marker**

    1   Do one of the following:

       • Double-click on the data point to format.

       • From the Format menu, choose Chart Designer. Expand Series, the series that contains the data point and then Datapoint. Select the data point to format.

2   In the Chart Designer dialog box, select the Markers tab.
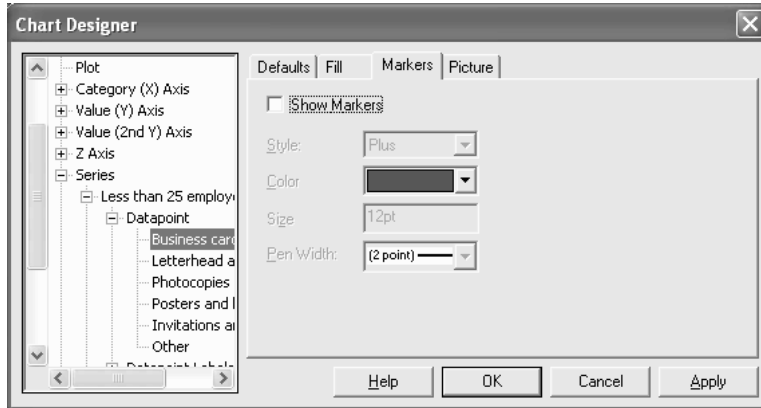
Figure 5 - 73:   The Markers tab of the Chart Designer dialog box.

3   Select the Show Markers check box.

4   To format the marker, do the following:

- From the Style drop-down list, select a marker style.

- From the Color drop-down list, select a marker color.

- In the Size field, enter the marker size in points.

- From the Pen Width drop-down list, select the width of the marker's lines.

5   Click on the OK or Apply button to redraw the chart.

> **Note** To discard any custom marker settings you entered, select the Defaults tab, click on the Reset to Default Datapoint button, and then click on the OK or Apply button.

- **To remove a data point marker**

    1   Complete steps 1 and 2 above.

    2   Clear the Show Markers check box.

    3   Click on the OK or Apply button to redraw the chart.

Formatting Labels

The sections below explain how to create and format series and data point labels and how to format axis labels.

Creating and Positioning Series Labels and Data Point Labels

By default, Survey Crafter Professional uses the column headings of the table you are plotting as series labels. However, if the table has no column headings, you can create series labels on the chart. Data point labels provide additional information about or draw attention to a data point.

Creating Series Labels

An alternative to the legend, series labels identify some or all series on a line, area, step, XY, or radar chart. For example, if you charted monthly revenue for two companies, suitable series labels might be "Company 1" and "Company 2."
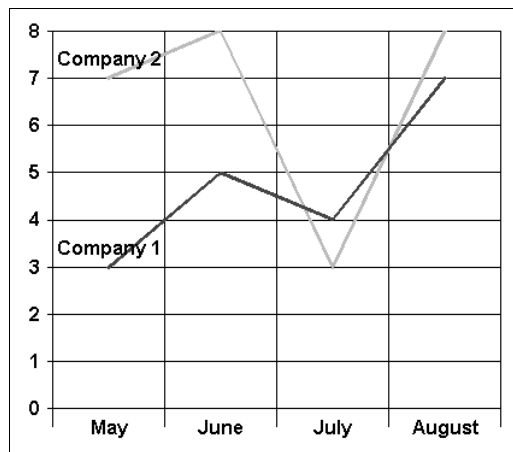
Figure 5 - 74:   A chart using series labels instead of a legend.

- **To create series labels**

   1   From the Format menu, choose Chart Designer and then expand Series Labels.

2 Select the series for which you want to create a label.

3 Select the Style tab.

4 Do the following:

- Under Text Location, select where to place the series label.

- Under Label Line Style, select a line style to connect the label to its series.

5 Select the Text tab.

6 In the Text field, type the label's text.

7 Click on the OK or Apply button to redraw the chart.

Creating Data Point Labels

Data point labels provide additional information about or draw attention to a data point. For example, suppose a chart shows monthly revenue for the year. To emphasize the month with the highest revenue, add a label like "Highest monthly revenue" to the data point.
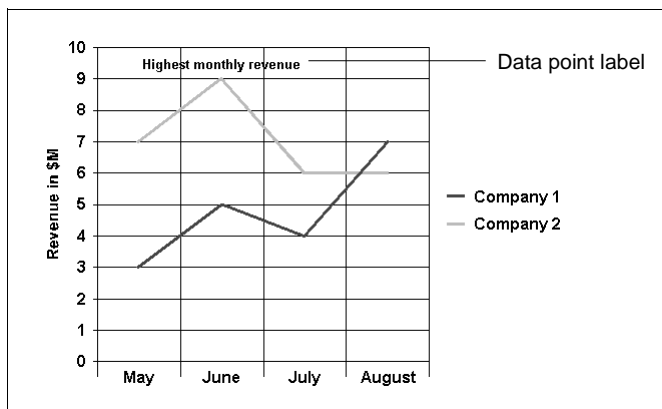
Figure 5 - 75:   A label applied one data point in a series.

You can use data point labels generated by Survey Crafter Professional or create your own labels.

- **To create a data point label**

1 From the Format menu, choose Chart Designer and then expand Series.

2   Expand the series that contains the data points for which you want to create a label and then select Datapoint Labels.

3   Select the Appearance tab.

4   Under Text Location, select an option for positioning the label around the data points.

5   Under Label Line Style, select a style for the line to connect the label and its data point.

6   If you want to use automatic labels, select the Automatic option under Datapoint Label and then select the check boxes corresponding to the labels you want.

      For example, to use the data point's value as its label, select the Value check box.

7   If you want to create a custom label, expand Datapoint Labels in the Chart Designer dialog box and select the data point for which you want to create a custom label. Then select the Text tab and enter the label text in the Text field. Perform this step for each data point for which you want to create a custom label.

8   Click on the OK or Apply button to redraw the chart.

Positioning Data Point and Series Labels

Position data point and series labels by clicking and dragging.

- **To position data point and series labels**

Click on the label and drag it to its new location.

Formatting and Positioning Axis Labels

Axis labels mark values, categories, or dates on axes as Figure 5 - 76 illustrates.

Formatting an Axis Label

Formatting an axis label is similar to formatting any other chart element. You can change the font, size, orientation, and alignment of axis label text, create a backdrop for the label, and assign a format code to the text.
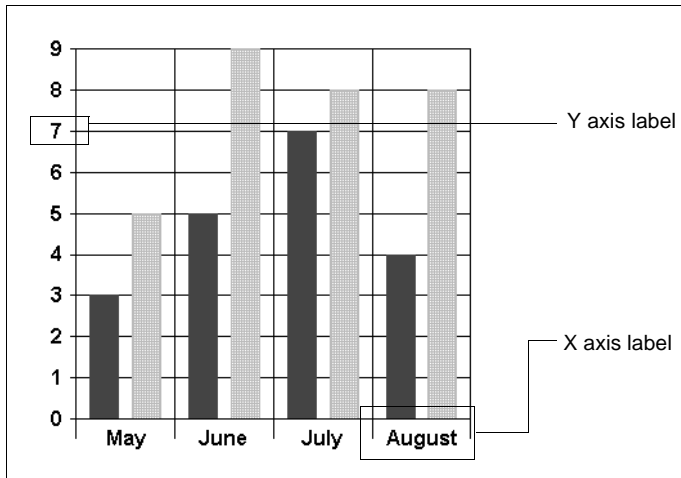
Figure 5 - 76:   Y and X axis labels.

- **To format axis labels**

  For help on formatting axis labels, see one of the sections below.

  - "Changing the Font of Chart Text" on page 5 - 51

  - "Aligning and Orienting Chart Text" on page 5 - 52

  - "Drawing a Frame around a Chart Element" on page 5 - 55

  - "Drawing a Solid or Patterned Backdrop for a Chart Element" on page 5 - 56

  - "Drawing a Gradient Backdrop for a Chart Element" on page 5 - 58

  - "Using a Graphic as a Backdrop for a Chart Element" on page 5 - 59

  - "Specifying Label Formats" on page 5 - 118

Positioning Axis Labels

You can align and orient axis labels or let Survey Crafter Professional position them automatically to optimize chart layout.

If the chart is 3D, you can use the Standing option to position axis labels upright, making them more legible when the chart's angle of elevation is low. The Standing option applies only to labels on an X or Z axis on most charts and the Y axis on horizontal bar charts.
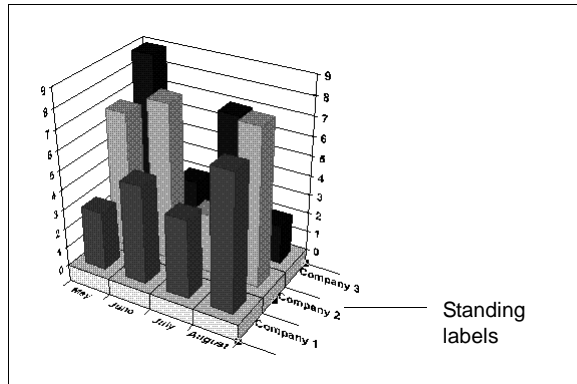
Figure 5 - 77:   Standing labels on a 3D bar chart.

- **To position axis labels**

  1   Double-click on the axis labels to position, or choose Chart Designer from the Format menu, and then expand the axis that contains the labels to position.

  2   Select Axis Labels.

  3   Select the Display tab.

  4   To stand axis labels up, select the Standing Labels check box (if available). To return labels to their default lying position, clear this check box.

  5   To have Survey Crafter Professional automatically align and orient the labels, select the Automatic Rotation check box and go to step 9. To align and orient the labels, clear the Automatic Rotation check box and go to step 6.

  6   Select the Layout tab.

  7   To align the labels, do the following:

  - Under Alignment, select a horizontal alignment option.

  - Under Alignment, select a vertical alignment option.

8   To orient the labels, select an option under Orientation.

9   Click on the OK or Apply button to redraw the chart.

Specifying Label Formats

You can control the format of axis and data point labels. For example, you can show the data point label "-10,000" as "-10,000" in the color red or in scientific notation as "-1.00E+04".

The label format you define for an axis applies to every other label on the axis. A label format you define for a data point applies only to that data point label rather than every label in the series.
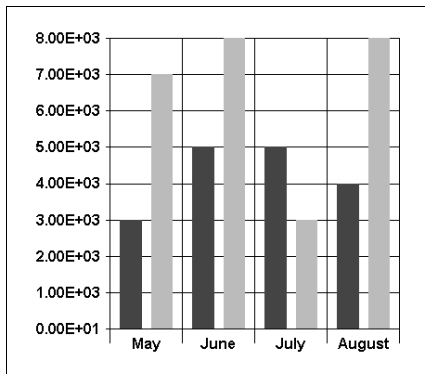
Figure 5 - 78:   Y axis labels shown in scientific notation format.

• **To specify label formats**

1   Double-click on the axis label or the data point label you want to format.

The Chart Designer dialog box appears.

2   Select a tab in the Chart Designer dialog box as follows:

   • If you selected an axis label, select the Format tab.

   • If you selected a data point label showing a percentage, select the Percent Format tab.

   • If you selected any other data point label, select the Value Format tab.

3   In the Category list, select a category of label formats.

     For example, to show the value in scientific notation, select Scientific.

4   Select a label type in the Format Codes list.

     For descriptions of the label types, click on the Help button.

5   To edit the code, make changes to the label type in the Code field.

     For example, if you chose the scientific code 0.00E+00, you could add another decimal place to the label by typing **0.000E+00**.

The Percent Format and Value Format tabs look similar to this one.

Edit the code in this field.
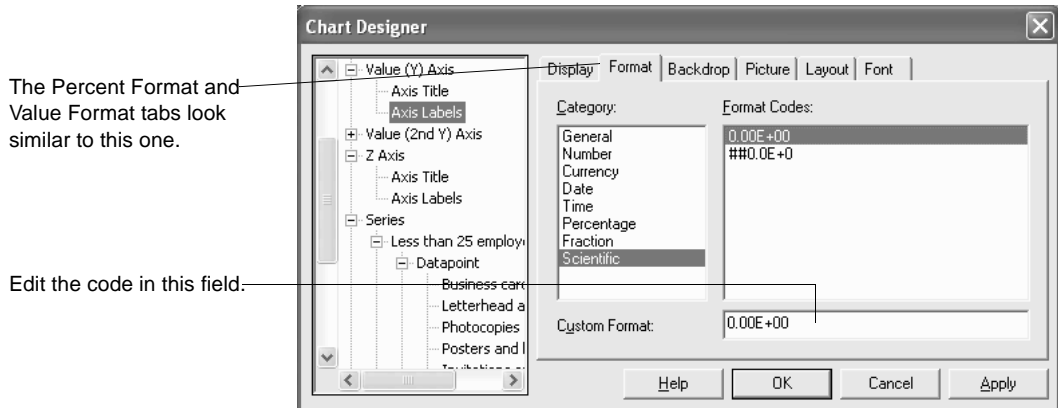
Figure 5 - 79:   The Format tab of the Chart Designer dialog box.

6   Click on the OK or Apply button to redraw the chart.

The Chart Wizard

The Chart Wizard provides a fast and easy way to select the most frequently used chart formatting options. Use the Chart Wizard to quickly format a new or existing chart.

Starting the Chart Wizard

You can start the Chart Wizard from the Format menu or by right clicking on the chart.

- **To start the Chart Wizard from the Format menu**

    1 At the Analyses tab of the Study window, select the chart you want to change. Then click on the Edit button on the tab.

    2 If you are viewing the table, click on the Chart View button on the toolbar to see the chart.

    3 From the Format menu, choose Chart Wizard.

    Survey Crafter Professional displays the Chart Wizard dialog box.

Select 2D to view a gallery of 2D charts. Select 3D to view a gallery of 3D charts.

Choose Next to go to the next step of the Chart Wizard.
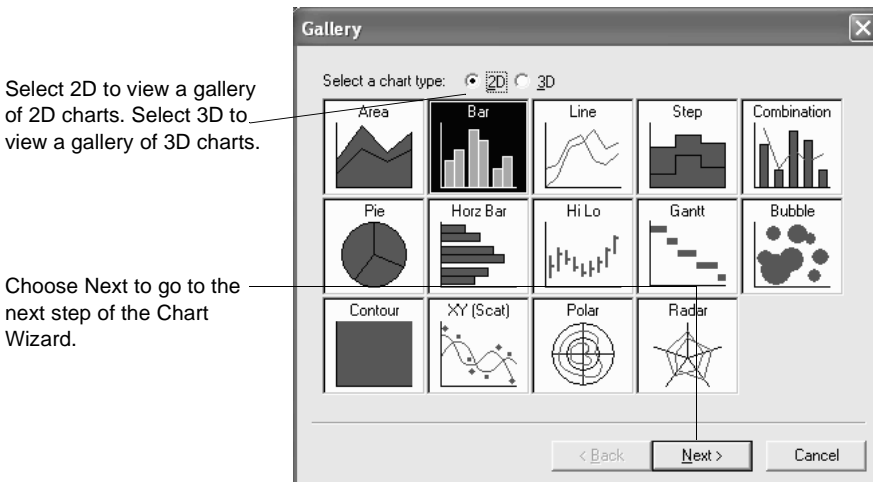
Figure 5 - 80:   The Gallery step of the Chart Wizard dialog box.

    4 Follow the instructions on the Chart Wizard dialog box.

For help on the Chart Wizard dialog box, press the [F1] key.

- **To start the Chart Wizard by right clicking on the chart**

    1   At the Analyses tab of the Study window, select the chart you want to change. Then click on the Edit button on the tab.

    2   If you are viewing the table, click on the Chart View button on the toolbar to see the chart.

    3   Right click on the chart.

    Survey Crafter Professional displays the chart pop up menu.

    4   Choose Wizard from the pop up menu.

    Survey Crafter Professional displays the Chart Wizard dialog box

    5   Follow the instructions on the Chart Wizard dialog box.

    For help on the Chart Wizard dialog box, press the [F1] key.

Exporting Charts

You can export a chart for use in a report or presentation. For example, export a chart and paste it into the word processor document containing the report you are writing. You can also export a chart to a file.

Exporting a Chart by using the Clipboard

You can export a chart to another program like a presentation software package or a word processor.

• **To export a chart by using the clipboard**

  1 Select the Analyses tab of the Study window.

  2 Select the chart you want to export. Then click on the Edit button on the tab.

    The chart appears in an Analysis window.

  3 From the Edit menu, choose Copy All.

    Survey Crafter Professional copies the entire chart to the clipboard.

  4 Open the document you want to paste the chart into.

  5 Paste the chart into the document.

    If you choose to paste the chart using the Windows metafile format, you can edit the chart's format by using the host file's application. For example, you can change the colors of bars in a chart or edit axis labels.

Exporting a Chart to a File

To enhance a chart's format or to publish the chart in another format, you can also export a chart to a file. You can export a chart to the following types of files:

• HyperText Markup Language (HTML) file

• JPEG File Interchange Format (JPG) file

- Windows Bitmap (BMP) file

- Windows Metafile Format (WMF) file

- **To export a chart to a file**

  1 At the Study window's Analyses tab, open the chart you want to export.

  2 From the File menu, choose Export.

  Survey Crafter Professional displays the Save Analysis Chart File As dialog box.

  > **Note** If you want to export a chart to an HTML file, you may want to review the web analysis HTML option settings in the Web Analysis Setup dialog box. Survey Crafter Professional uses these settings when it exports a chart to an HTML file.

  3 From the files of Type drop-down list, select the type of file you want to save.

  4 From the Locations (Save in) drop-down list, choose the location to save the file.

  5 In the Folders list, select the folder in which you want to save the file.

  6 In the File name field, type the name of the file to save.

  7 Click on the Save button.

  Survey Crafter Professional creates the file.

Updating Charts

Every chart is based on a table. If the values in the table on which a chart is based need to be recalculated (for example, if you changed the expression defining a table cell's value), Survey Crafter Professional displays a message "The analysis must be updated" when you attempt to view the chart.

- **To update a chart**

Update button

If the message "The analysis must be updated" appears in the Analysis window when you attempt to view a chart, do one of the following:

- From the Edit menu, choose Update.

- Click on the Update button on the toolbar.

  Survey Crafter Professional recalculates the table's values and redraws the chart using the new values.

6 **Variables**

A Survey Crafter Professional study may contain both imported or computed variables. Imported variables store data like survey responses that are collected outside of Survey Crafter Professional. You usually create most of a study's imported variables when writing a survey, as Chapter 2, "Surveys," explains. However, you may need to create imported variables outside the survey to import data not associated with a survey question. Computed variables store the results of calculations performed in Survey Crafter Professional.

This chapter explains how to create imported variables, how to create computed variables, and how to edit variables. Read the section "Variable Basics" first to learn key concepts about Survey Crafter Professional variables.

Chapter Contents

Variable Basics

Variables store responses to survey questions and the results of calculations. A variable represents a group of related data. For example, you might use the variable *age* to store respondents' ages. Variables also provide the means to tell Survey Crafter Professional which data to include in an analysis. For example, to calculate the average value in *age*, use the expression `MEAN(age)`.

Types of Variables

Survey Crafter Professional's variables have two primary distinguishing characteristics. As Figure 6 - 1 shows, each variable either is an imported or computed variable and either a category, quantity, or literal variable. Thus, for example, a variable can be said to be an imported quantity variable or a computed category variable. Each of these characteristics is explained below.
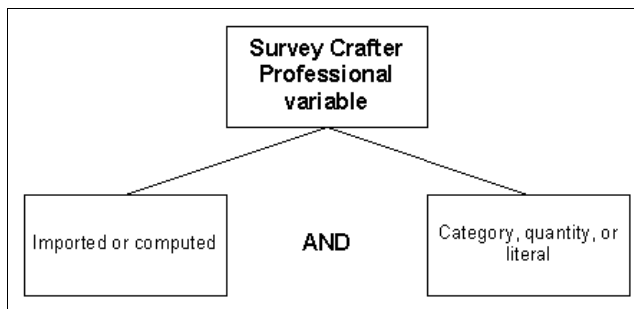
Figure 6 - 1:   Characteristics of Survey Crafter Professional variables.

Imported and Computed Variables

Imported variables usually store data collected by administering a survey created in Survey Crafter Professional or another program (for example, responses you entered into a study using the Interviewer, responses your web survey collected or responses a market research supplier collected). They can also store data calculated by other analysis software and imported into Survey Crafter Professional. You can analyze the responses stored in imported variables or use them to create computed variables.

Computed variables store values calculated within Survey Crafter Professional. Survey Crafter Professional calculates computed variables' values by performing one or more operations on imported variables or other computed variables. For example, you could subtract one imported variable from another and store the difference in a computed variable.

Category, Quantity, and Literal Variables

Each imported or computed variable may be one of three types:

• Category variable

A category variable stores the name matched with a prompt in a closed-end or all-that-apply question's list of choices. For example, a category variable might store 'yes' or 'no'.

If you view an import file returned by your web survey or by a market research supplier, you will notice that the values in category variables are integers. These integers, called codes, are used by the market research supplier and correspond to category names. For example, the codes for the category names "yes" and "no" might be 1 and 0, respectively. Survey Crafter Professional automatically converts the codes to the category names so that when you view the data set in the Data window, you see more informative category names instead of codes.

Category variables can also store names for groups you divide respondents into. For example, you might assign respondents to the High, Middle, or Low category based on values they reported for their income.

• Quantity variable

A quantity variable stores numbers. Quantity variables often store responses to questions like "What is your age?" or "Rate our customer service on a scale of 1 to 5." They can also store numbers calculated by expressions you write.

• Literal variable

A literal variable stores text. Most often, literal variables store answers to open-end questions.

In the Primer

For more background on variables, see the section "Understanding Variables and Scales" in Chapter 4 of *Understanding Survey Research: A Primer for Success*.

Reasons for Creating Computed Variables

When writing a survey, you often cannot ask respondents directly for every piece of data you want. To do so would probably make the survey too complex or too long. However, given a well-designed survey, you can use data respondents supply to infer or calculate data you did not explicitly ask for.

Computed variables store values Survey Crafter Professional calculates by evaluating expressions you write involving one or more imported or computed variables. For information on expressions, see Chapter 7, "Expressions."

To learn more about reasons to create a computed variable, read the examples below.

Example: Creating a Category Variable from a Quantity Variable

Your survey asks each respondent his or her age and stores it in the imported quantity variable *age*. You hypothesize that respondents in three broad age brackets have different customer service needs. To test your hypothesis, you need to assign each respondent to one of the three age brackets.

To divide the respondents among the three brackets, create a computed category variable called *agegroup* with three categories: Young, Middle Age, and Old. Then assign each respondent to one of the three categories

based on his or her age. You can then use this computed category variable for cross tabulations and other analyses category variables support.
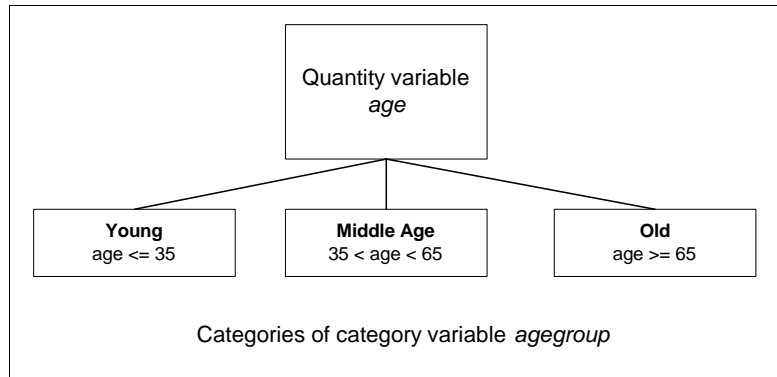
Figure 6 - 2: Creating a computed category variable from an imported quantity variable.

Example: Reducing the Number of Categories in a Category Variable

You ask respondents to choose the car they drive from a list of 25 cars manufactured in the US, Japan, and Germany. The responses are stored in an imported category variable with 25 categories called *car_driv*. You want to analyze the cars by manufacturing country and need to create these categories: US cars, Japanese cars, and German cars.

To reduce the number of categories from 25 to 3, create a computed category variable that uses an expression to assign each of the 25 cars to the country that manufactures it.
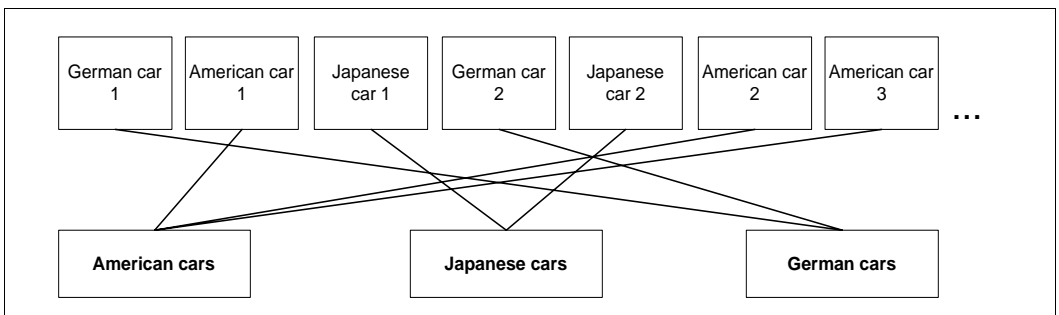
Figure 6 - 3: Reducing the number of categories in a category variable.

Example: Creating a Quantity Variable from a Category Variable

You ask respondents to specify their annual income by choosing from a list of ranges: $0 - $20,000, $20,001 - $40,000, and so on. The result is stored in an imported category variable called *income*. You want to estimate the mean income for the sample but cannot use *income* to calculate the mean because it is a category variable. Calculating a mean requires a quantity variable.

To create a computed quantity variable from *income*, write an expression that assigns a quantity to each income category. The expression might assign the quantity $10,000 to the category $0 - $20,000 and $30,000 to the category $20,001 - $40,000. Using the computed quantity variable, you can estimate the average income for the sample.
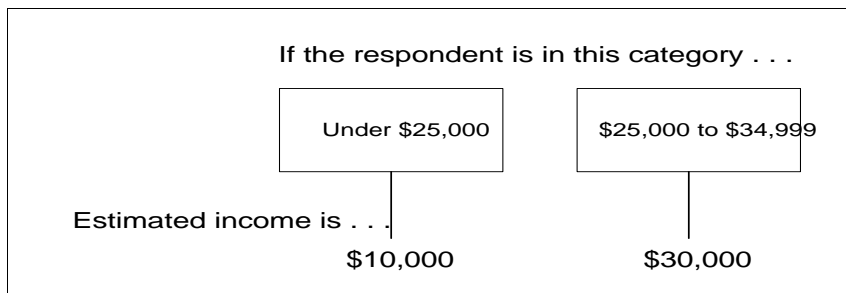
Figure 6 - 4:   Creating a quantity variable from a category variable.

Example: Creating a Quantity Variable for Weighting Respondents

You ask respondents to rate a service you provide on a scale of 1 to 5. Survey Crafter Professional stores their responses in an imported quantity variable called *RateService*. You also ask respondents for their gender. You want to estimate the mean service rating for your target population. However, your target population consists of 40% males and 60% females and your sample has 60% males and 40% females. The mean calculation of *RateService* may not represent your target population.

Use the Category to Weights Variable Wizard to create a computed quantity variable called *GenderWeights* based on the definition of the *Gender* variable. In the wizard, assign 40% to the male category and 60% to the female category.

You can use the *GenderWeights* variable to calculate the weighted mean of the *RateService* variable. You can also use the *GenderWeights* variable in analysis wizards that support weighted calculations like the Descriptive Statistics wizard, the Counts and Frequencies wizard or the All-that-apply Question wizard.

Reasons for Creating Imported Variables

Imported variables store data coming into Survey Crafter Professional from outside sources. They primarily store data collected by administering a survey written with Survey Crafter Professional, but they can also store data calculated by other analysis software and imported into Survey Crafter Professional.

There are several other cases for which you might want to create imported variables:

- You want to capture additional information about a respondent in your web survey. For example, you want to capture a respondent's user name or IP address or the date and time the survey was completed.

- While administering the survey, the market research supplier creates a variable you did not include in the survey.

- A survey was written without Survey Crafter Professional and you want to use Survey Crafter Professional to analyze the survey data set.

- You created and populated variables in another statistical analysis software package and want to import the variables into Survey Crafter Professional for further analysis.

Variable Templates

A variable template is a group of predefined settings for specifying the values imported variables accept. Survey Crafter Professional provides several standard templates available for all studies, and you can define new templates to use within a study. Survey Crafter Professional supplies a different default template for each variable type.

Variable Names

Each Survey Crafter Professional variable has two names: the name you assign it (called the name) and the name Survey Crafter Professional generates for the variable (called the code).

You assign a name to a variable in the Variable Information dialog box, which appears when you click on the Info button on the Variables tab of the Study window. The name must begin with a letter and may contain up to 31 additional letter, digit, or underscore characters.

Survey Crafter Professional truncates the variable name to create the code.
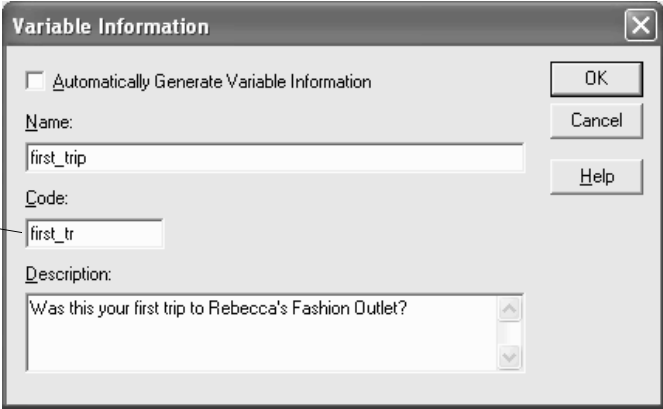
Figure 6 - 5:   The Variable Information dialog box.

Web surveys and market research suppliers use variables' codes. Because market reserarch suppliers' computer systems can usually handle variables with only eight or fewer characters in their names, Survey Crafter Professional limits the code to eight characters.

While web surveys and vendors use the code—that is, the name for the variable while it is being used outside Survey Crafter Professional—you use the potentially longer and more descriptive name while working in Survey Crafter Professional.

Creating Imported Variables

You will probably create most of a study's imported variables when writing a survey. However, you may need to create additional imported variables to store data from other analysis packages or to store data in variables the market research supplier creates. For instructions on creating variables while writing survey questions, see the section "Inserting Survey Blocks" on page 2 - 67.

Creating an Imported Category Variable

To create an imported category variable, define the variable's categories in the Variable Definition dialog box. By default, Survey Crafter Professional assigns every imported category variable the category NR. The NR (No Reply) category is assigned to a respondent if he or she was asked a question but refused to answer it.

When creating an imported variable, you can base it on a template. Templates store predefined settings for the values a variable accepts. See "Variable Templates" on page 6 - 7 for more information.

- **To create an imported category variable**

   1   Select the Variables tab of the Study window. Then click on the New button on the tab.

   Tip Alternatively, you can right-click anywhere inside the Variables tab of the Survey Designer window's Survey Explorer toolbar or right-click on any column in the Data window and choose New Variable from the pop-up menu.

Survey Crafter Professional displays the New Variable dialog box.
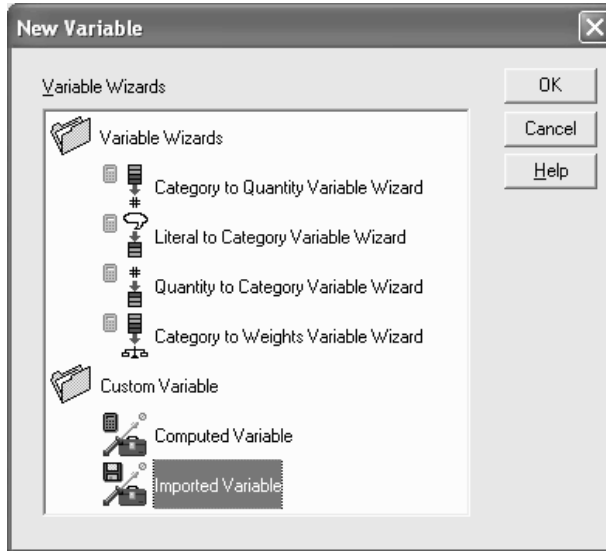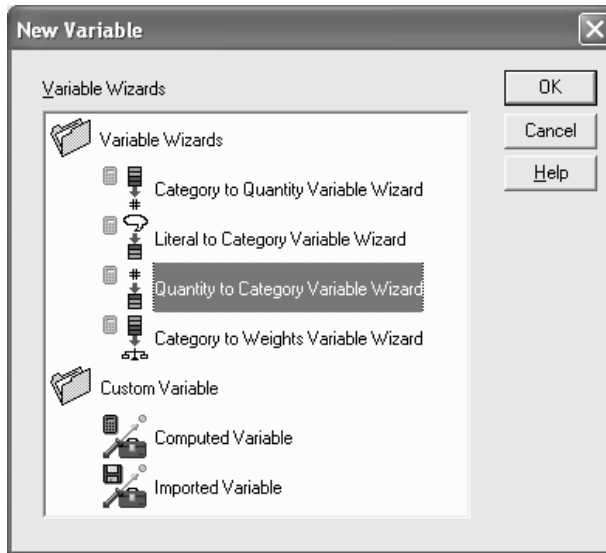

Figure 6 - 6: The New Variable dialog box.

2 In the New Variable dialog box, select Imported Variable under Custom Variable.

3 Click on the OK button.

Survey Crafter Professional displays the Variable Information dialog box.
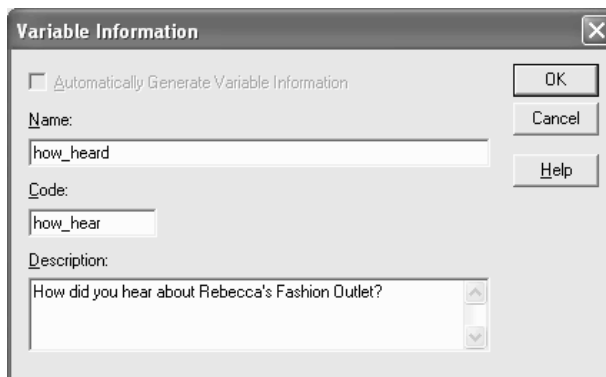
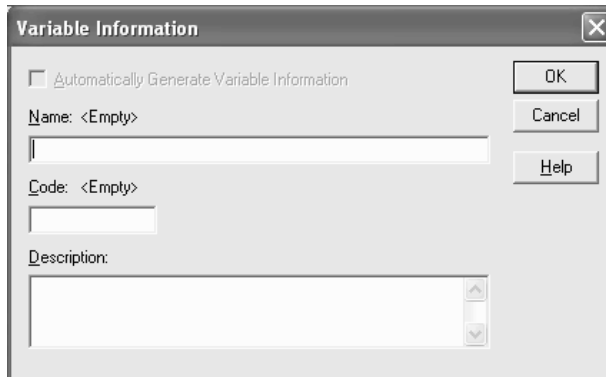Figure 6 - 7: The Variable Information dialog box.

4   In the Variable Information dialog box, enter the following:

- In the Name field, enter a name for the variable.

  The name of the variable must begin with a letter and may include up to 31 additional letters, digits, and underscore characters.

- In the Code field, accept the default or enter a new code for the variable.

  Survey Crafter Professional automatically generates the variable code based on the text in the Name field.

  The variable code is used outside Survey Crafter Professional in exported data files.

- In the Description field, enter a summary of the information the variable contains.

- Click on the OK button.

Survey Crafter Professional displays the Variable Definition dialog box.

Figure 6 - 8:   The Variable Definition dialog box for imported category variables.

5   In the Variable Definition dialog box, select Category under Variable Type.

6   Accept the default template or select a new template from the Based on Template drop-down list.

If you want to add categories to the variable, go to step 7. If you want to use the variable's current settings, go to step 11.

7   Click on the Insert button to add a category.

Survey Crafter Professional displays the Category Definition dialog box.
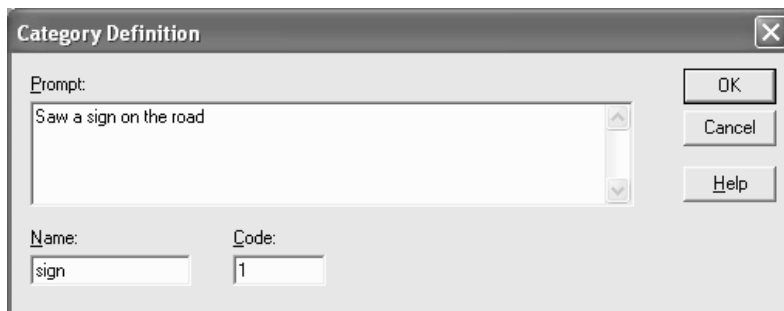
Figure 6 - 9:   The Category Definition dialog box for imported category variables.

8   In the Category Definition dialog box, do the following:

• In the Prompt field, type the category's description.

   The description appears as a choice in the survey if you associate the variable with a survey question. The description also appears in wizard-generated analyses.

• In the Name field, type the category's name. Accept the default or enter a new category name.

   The name must begin with a letter and may contain up to 14 additional letter, digit, or underscore characters. Use this name when referring to the category in expressions.

• In the Code field, type the category's code. Accept the default or enter a new integer between -9996 and 9996.

• Click on the OK button to close the Category Definition dialog box.

9   To add another category, repeat steps 7 and 8.

10 To save the variable's settings as a different template, type the new name in the Based on Template field.

11 Click on the OK button to close the Variable Definition dialog box.

Creating an Imported Quantity Variable

Imported quantity variables store numbers. For example, they store responses to questions like "What is your age?" and "Rate our customer service in the following areas using a scale from 1 to 5."

When creating an imported variable, you can base it on a variable template. Templates store predefined settings for values a variable accepts. See the section "Variable Templates" on page 6 - 7 for more information.

Optionally, you can define scale points for the imported quantity variable.

- **To create an imported quantity variable**

    1 Select the Variables tab of the Study window. Then click on the New button on the tab.

> **Tip** Alternatively, you can right-click anywhere inside the Variables tab of the Survey Designer window's Survey Explorer toolbar or right-click on any column in the Data window and choose New Variable from the pop-up menu.

Survey Crafter Professional displays the New Variable dialog box.
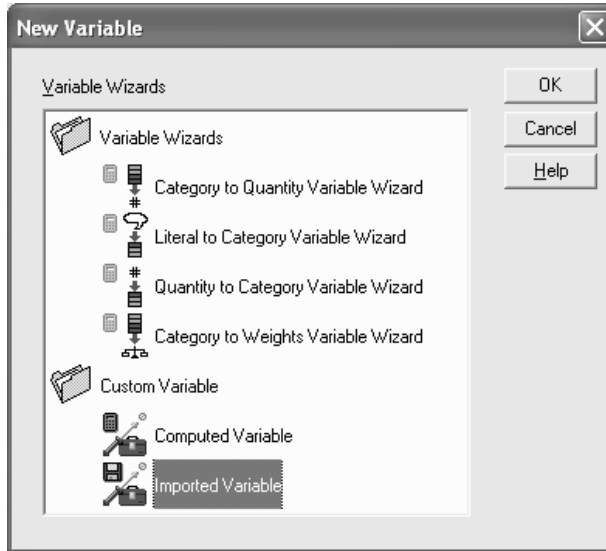
Figure 6 - 10:The New Variable dialog box.

2   In the New Variable dialog box, select Imported Variable under Custom Variable.

3   Click on the OK button.

Survey Crafter Professional displays the Variable Information dialog box.
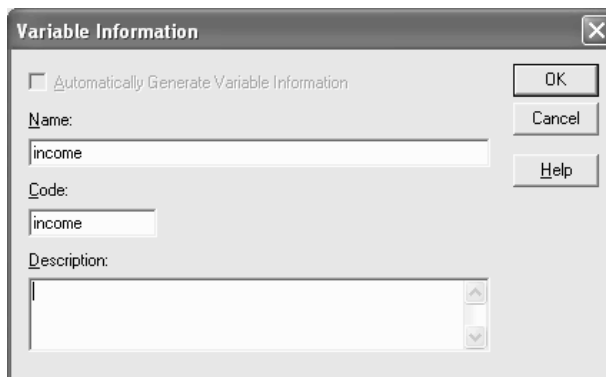
Figure 6 - 11:The Variable Information dialog box.

4 In the Variable Information dialog box, do the following:

- In the Name field, enter a name for the variable.

  The name of the variable must begin with a letter and may include up to 31 additional letters, digits, and underscore characters.

- In the Code field, accept the default or enter a new code for the variable.

  Survey Crafter Professional automatically generates the variable code based on the text in the Name field.

  The variable code is used outside Survey Crafter Professional in exported data files.

- In the Description field, enter a summary of the information the variable contains.

- Click on the OK button.

Survey Crafter Professional displays the Variable Definition dialog box.

Figure 6 - 12: The Variable Definition dialog box for imported quantity variables.

5 Under Variable Type in the Variable Definition dialog box, select Quantity.

6   Accept the default template or select another template from the Based on Template drop-down list.

If you want to change the variable's settings, go to step 7. If not, go to step 12.

7   To define the range of acceptable values for the variable, type the minimum value in the Minimum field and the maximum value in the Maximum field.

For example, if you are surveying teenagers and asking them their age, enter a minimum of 13 and a maximum of 19.

To associate scale points with the quantity variable, enter the scale's low point (for example, 1) in the Minimum field and the scale's high point (for example, 5) in the Maximum field. For help defining scale point labels, see the task "To add a scale point" below.

8   In the Decimal Places field, enter the number of decimal places (maximum of ten) the variable stores.

To limit the variable's values to integers, use the default of 0.

9   In the Units field, type the units for the response.

For example, if the respondents report income in US dollars, type **$US**.

10   If you want, select the *Only include values from ___ to ___ in statistical calculations* check box to have Survey Crafter Professional's analysis wizards only include a range of values for the statistical calculations. Then enter numbers between the variable's minimum and maximum values.

11   To save the variable settings under as a different template, type the new template's name in the Based on Template field.

12   Click on the OK button to close the Variable Definition dialog box.

•   **To add a scale point**

1   In the Variable Definition dialog box, click on the Scale button.

Survey Crafter Professional displays the Scale dialog box.

2   In the Scale dialog box, click on the Add button.

Survey Crafter Professional displays the Scale Definition dialog box.

Figure 6 - 13:   The Scale Definition dialog box.

3   In the Value field, type the scale point's number as an integer.

4   In the Label field, type text explaining what the value means.

For example, type **Very Satisfied**.

5   Click on the OK button to close the Scale Definition dialog box.

The scale point appears in the Scale dialog box.

6   To add another scale point, repeat steps 2 through 5.

Survey Crafter Professional sorts the scale points in ascending order when you close the Scale dialog box.

7   Click on the OK button to close the Scale dialog box.

•   **To delete a scale point**

1   In the Variable Definition dialog box, click on the Scale button.

Survey Crafter Professional displays the Scale dialog box.

2   Select the scale point you want to delete.

3   Click on the Delete button.

4   Click on the OK button to close the Scale dialog box.

Creating an Imported Literal Variable

Follow the steps below to create an imported literal variable.

- **To create an imported literal variable**

    1   Select the Variables tab of the Study window. Then click on the New
    button on the tab.

    Tip Alternatively, you can right-click anywhere inside the Variables tab
    of the Survey Designer window's Survey Explorer toolbar or right-click
    on any column in the Data window and choose New Variable from the
    pop-up menu.

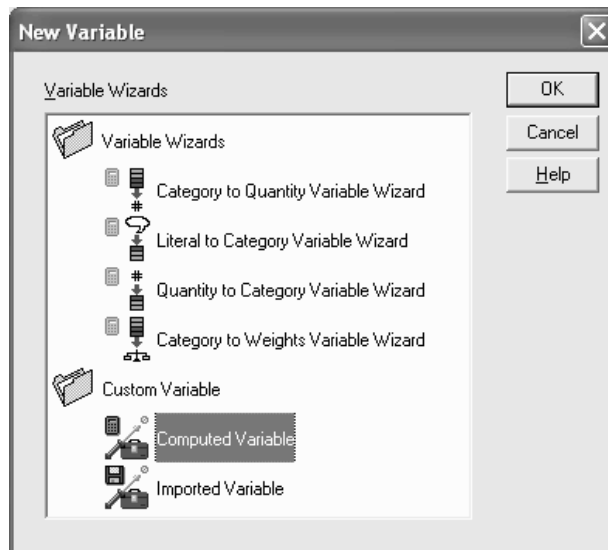   Survey Crafter Professional displays the New Variable dialog box.
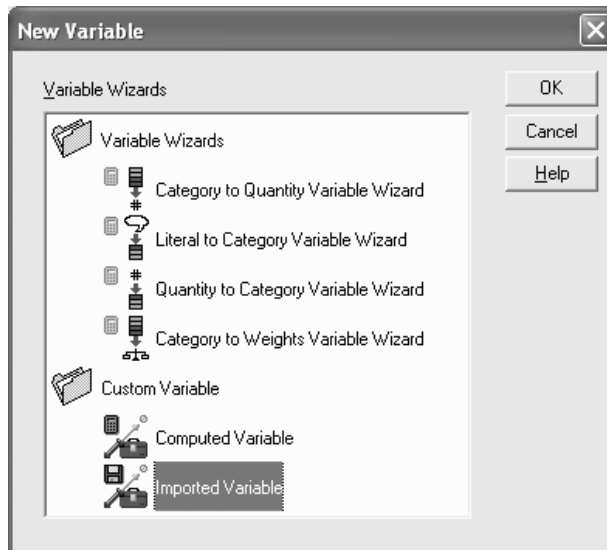
Figure 6 - 14:The New Variable dialog box.

    2   In the New Variable dialog box, select Imported Variable under
    Custom Variable.

    3   Click on the OK button.

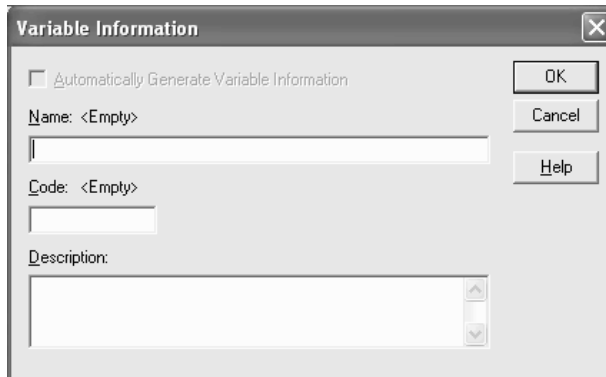Survey Crafter Professional displays the Variable Information dialog box.
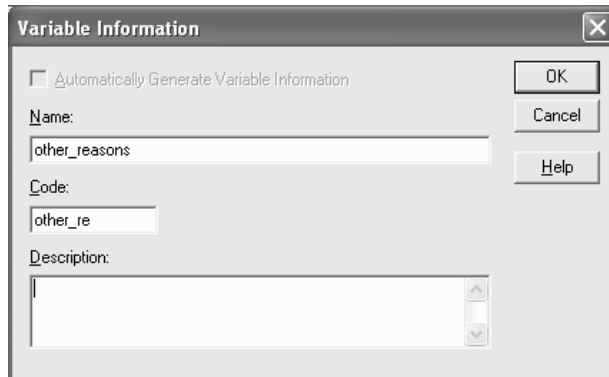
Figure 6 - 15:The Variable Information dialog box.

4   In the Variable Information dialog box, enter the following:

• In the Name field, enter a name for the variable.

The name of the variable must begin with a letter and may include up to 31 additional letters, digits, and underscore characters.

• In the Code field, accept the default or enter a new code for the variable.

Survey Crafter Professional automatically generates the variable code based on the text in the Name field.

The variable code is used outside Survey Crafter Professional in exported data files.

• In the Description, enter a summary of the information the variable contains.

• Click on the OK button.

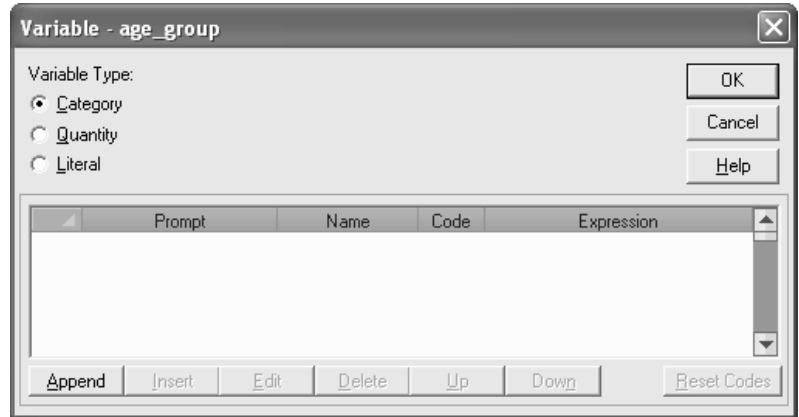Survey Crafter Professional displays the Variable Definition dialog box.
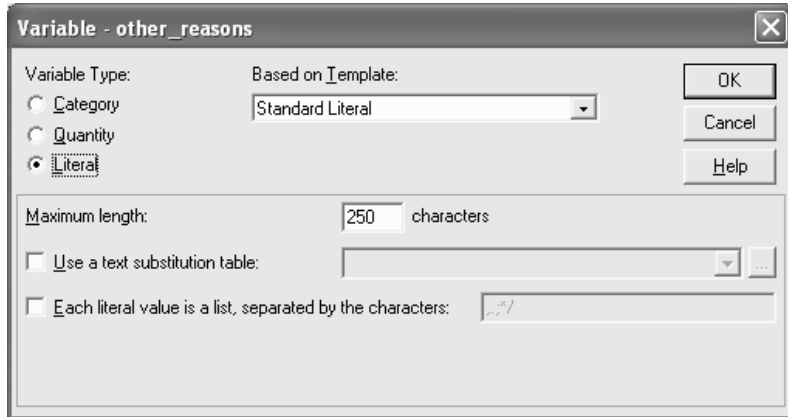
Figure 6 - 16:   The Variable Definition dialog box for imported literal variables.

5   In the Variable Definition dialog box, select Literal under Variable Type.

6   To define the maximum acceptable length for the variable, type a number in the Maximum length field.

7   If you want, click on the *Use a text substitution table* check box and choose a text substitution table from the drop down.

Note A text substitution table is a two-column table that contains one or more textual mappings. Each textual mapping consists of value to search for and the value's replacement text. When you associate a text substitution table with a literal variable, Survey Crafter Professional's analysis wizards use the table's textual mappings to automatically substitute the literal variable's values in the headings of the resulting analysis tables and charts.

To create a new text substitution table or modify an existing text substitution table, click on the button to the right of the drop down. Survey Crafter Professional displays the Text Substitution Table Library dialog box.

8   If you want, click on the *Each literal value is a list, separated by the characters* check box to have Survey Crafter Professional's analysis wizards analyze the the literal values as lists of items. If you select this check box, enter the characters you want to use to separate the items in the lists.

9   Click on the OK button.

Creating Computed Variables

Create a computed variable by performing calculations on imported variables or other computed variables.

Using a Wizard to Create a Computed Variable

Survey Crafter Professional features four wizards to create computed variables by performing four common types of variable conversions:

- Converting a Category Variable to a Quantity Variable

- Converting a Quantity Variable to a Category Variable

- Converting a Literal Variable to a Category Variable

- Creating a Quantity Variable for Weighting Respondents

Converting a Category Variable to a Quantity Variable

Suppose you ask respondents to specify their annual income by choosing from a list of ranges: Under $25,000; $25,000 - $34,999; and so on. Their responses are stored in an imported category variable called *income*. Later you want to estimate the mean income for the sample. However, you cannot calculate the mean of *income* because it is a category variable. Calculating a mean requires a quantity variable.

You can use the Category to Quantity Variable Wizard to convert the categories in *income* to quantities stored in a variable called *computed_income*. You might associate categories with quantities as

shown in Figure 6 - 17. Then by finding the mean of *computed_income*, you can estimate the average income for the sample.
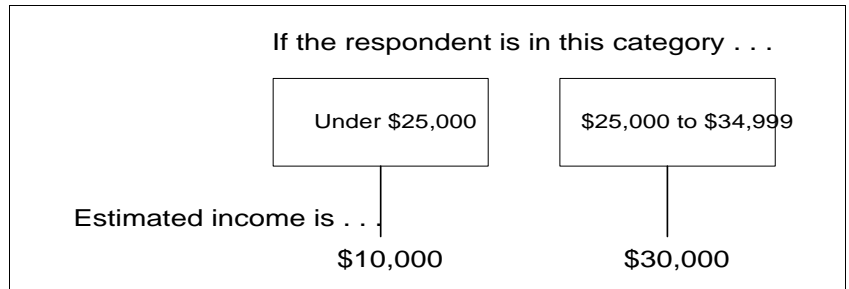
Figure 6 - 17:Assigning a numeric value to each category in a category variable.

• **To use a wizard to convert a category variable to a quantity variable**

1   Select the Variables tab of the Study window. Then click on the New button on the tab.

> **Tip** Alternatively, you can right-click anywhere inside the Variables tab of the Survey Designer window's Survey Explorer toolbar or right-click on any column in the Data window and choose New Variable from the pop-up menu.

Survey Crafter Professional displays the New Variable dialog box.
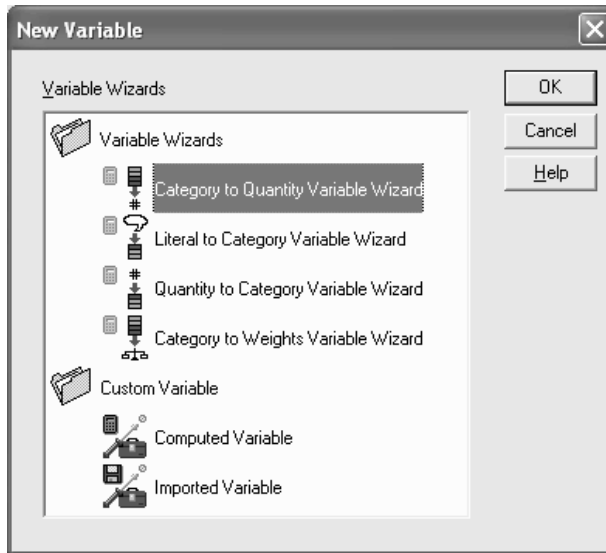
Figure 6 - 18:The New Variable dialog box.

2   In the New Variable dialog box, select Category to Quantity Variable
Wizard under Variable Wizards.

3   Click on the OK button.

Survey Crafter Professional displays the Category to Quantity Variable Wizard dialog box.
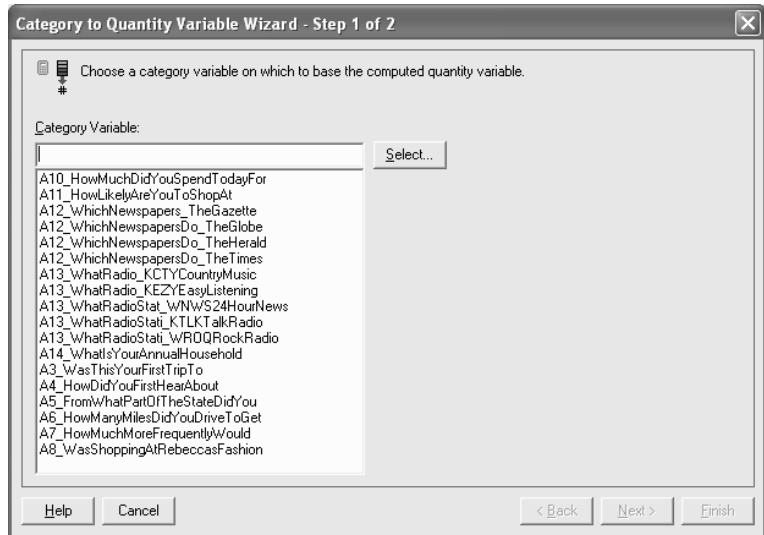
Figure 6 - 19: Step 1 of the Category to Quantity Variable Wizard.

4   Follow the directions on the screen to complete the wizard and click on the Finish button to create the variable.

For information on any of the wizard's options, click on the Help button on the wizard's dialog box.

After you click on the Finish button, the Variable Information dialog box appears.
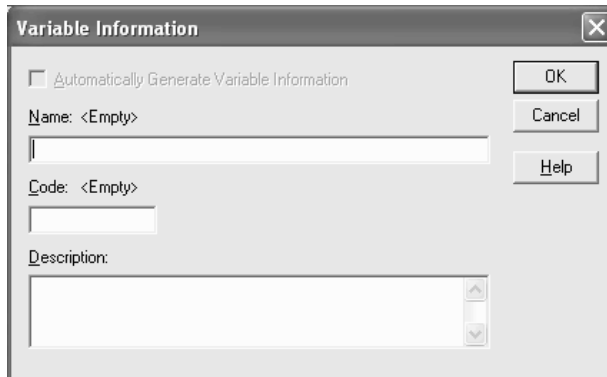
Figure 6 - 20:The Variable Information dialog box.

5   In the Name field, enter a name for the variable.

The name of the variable must begin with a letter and may include up to 31 additional letters, digits, and underscore characters.

6   In the Code field, accept the default or enter a new code for the variable.

Survey Crafter Professional automatically generates the variable code based on the text in the Name field.

The variable code is used outside Survey Crafter Professional in exported data files.

7   In the Description field, enter a description for the variable.

8   Click on the OK button.

Survey Crafter Professional displays the Variable Definition dialog box.

9   Review the definition of the variable and click on the OK button.

Survey Crafter Professional adds the variable to the Variables tab of the Study window.

Converting a Quantity Variable to a Category Variable

Suppose you ask respondents to rate your customer service using a scale from 1 to 10. Their responses are stored in an imported quantity variable called *RateCustomerService*. Later you want to count the frequency of responses for groups of the numbers on the scale. One way of doing this is by writing expressions in cells of an analysis table (ex. COUNT(*RateCustomerService*>=1 AND *RateCustomerService*<=2), COUNT(*RateCustomerService*>=3 AND *RateCustomerService*<=4*),* etc.).

Alternatively, you can use the Quantity to Category Variable Wizard to convert the numbers in *RateCustomerService* to categories stored in a variable called *RateCustomerService_Cats* and then modify the category definitions. You can then use *RateCustomerService_Cats* in analysis wizards such as the Category Variable Chart Wizard or the Cross Tabulation Wizard to count the frequency of responses for each number on the scale.

- **To use a wizard to convert a quantity variable to a category variable**

  1   Select the Variables tab of the Study window. Then click on the New button on the tab.

  > **Tip** Alternatively, you can right-click anywhere inside the Variables tab of the Survey Designer window's Survey Explorer toolbar or right-click on any column in the Data window and choose New Variable from the pop-up menu.

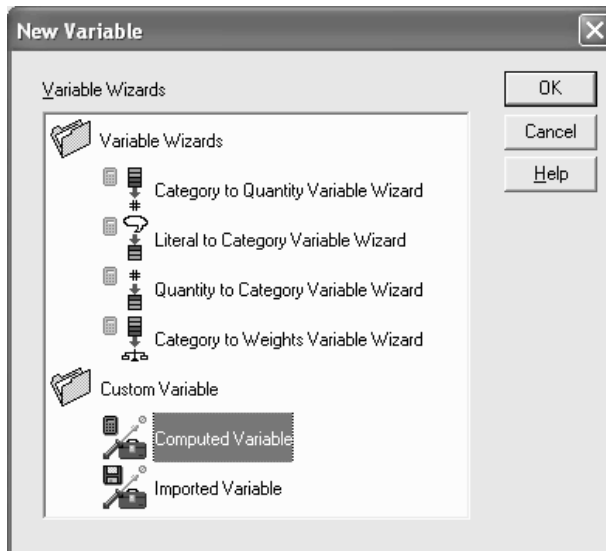Survey Crafter Professional displays the New Variable dialog box.

Figure 6 - 21:The New Variable dialog box.

2 In the New Variable dialog box, select Quantity to Category Variable Wizard under Variable Wizards.

3 Click on the OK button.

Survey Crafter Professional displays the Quantity to Category Variable Wizard dialog box.
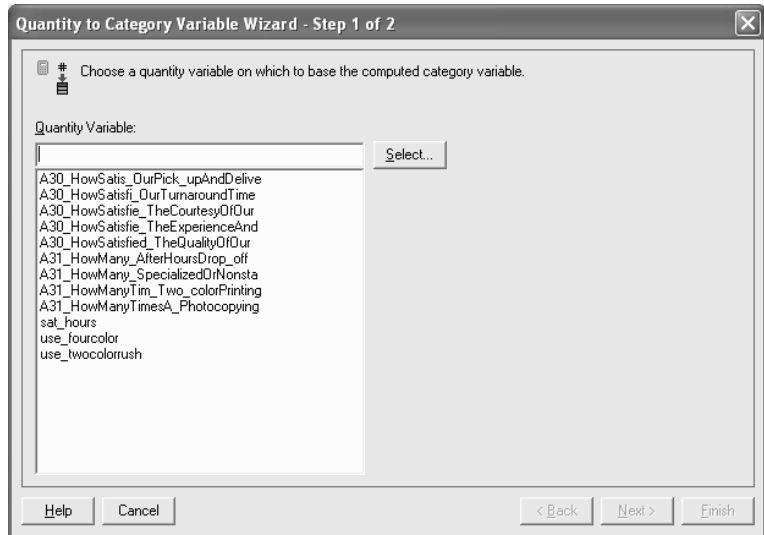
Figure 6 - 22: Step 1 of the Quantity to Category Variable Wizard.

4   Follow the directions on the screen to complete the wizard and click on the Finish button to create the variable.

For information on any of the wizard's options, click on the Help button on the wizard's dialog box.

After you click on the Finish button, the Variable Information dialog box appears.

Figure 6 - 23:The Variable Information dialog box.

5 In the Name field, enter a name for the variable.

The name of the variable must begin with a letter and may include up to 31 additional letters, digits, and underscore characters.

6 In the Code field, accept the default or enter a new code for the variable.

Survey Crafter Professional automatically generates the variable code based on the text in the Name field.

The variable code is used outside Survey Crafter Professional in exported data files.

7 In the Description field, enter a description for the variable.

8 Click on the OK button.

Survey Crafter Professional displays the Variable Definition dialog box.

9 Review the definition of the variable and click on the OK button.

Survey Crafter Professional adds the variable to the Variables tab of the Study window.

Converting a Literal Variable to a Category Variable

Literal variables store responses to open-end questions like "What is your zip code?" One of the most popular ways to analyze responses to open-end questions is to count the different responses to the question. For example, you might want to know how many respondents live in the zip code 14802.

Use the Literal to Category Variable Wizard to create a computed category variable *zip_code_cats* based on the responses stored in the literal variable *zip_code*. For example, the wizard creates the category '14802' from the literal response "14802". Then you can use the variable *zip_code_cats* in cross tabulations and banners to count the number of respondents in different zip codes.

- **To use a wizard to convert a literal variable to a category variable**

  1 Select the Variables tab of the Study window. Then click on the New button on the tab.

> **Tip** Alternatively, you can right-click anywhere inside the Variables tab of the Survey Designer window's Survey Explorer toolbar or right-click on any column in the Data window and choose New Variable from the pop-up menu.

Survey Crafter Professional displays the New Variable dialog box.
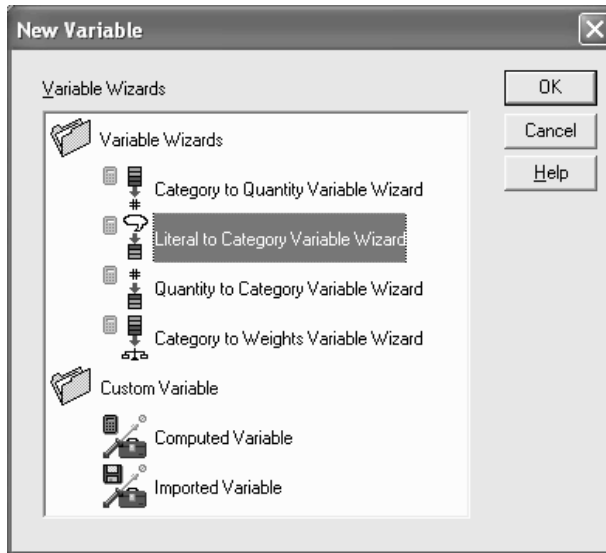
Figure 6 - 24:The New Variable dialog box.

2 In the New Variable dialog box, select Literal to Category Variable Wizard under Variable Wizards.

3 Click on the OK button.

Survey Crafter Professional displays the Literal to Category Variable Wizard dialog box.

Figure 6 - 25: Step 1 of the Literal to Category Variable Wizard.

4   Follow the directions on the screen to complete the wizard and click on the Finish button to create the variable.

For information on any of the wizard's options, click on the Help button on the wizard's dialog box.

After you click on the Finish button, the Variable Information dialog box appears.
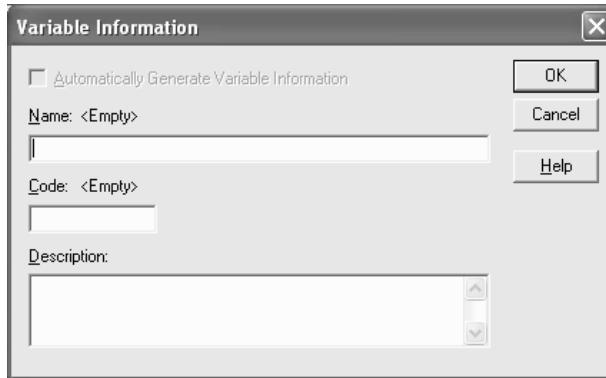
Figure 6 - 26:The Variable Information dialog box.

5   In the Name field, enter a name for the variable.

The name of the variable must begin with a letter and may include up to 31 additional letters, digits, and underscore characters.

6   In the Code field, accept the default or enter a new code for the variable.

Survey Crafter Professional automatically generates the variable code based on the text in the Name field.

The variable code is used outside Survey Crafter Professional in exported data files.

7   In the Description field, enter a description for the variable.

8   Click on the OK button.

Survey Crafter Professional displays the Variable Definition dialog box.

9   Review the definition of the variable and click on the OK button.

Survey Crafter Professional adds the variable to the Variables tab of the Study window.

Creating a Quantity Variable for Weighting Respondents

Suppose you ask respondents to rate a service you provide on a scale of 1 to 5. Survey Crafter Professional stores their responses in an imported quantity variable called *RateService*. You also ask respondents for their gender. Later you want to estimate the mean service rating for your target population. However, your target population consists of 40% males and 60% females and your sample has 60% males and 40% females. The mean calculation of *RateService* may not represent your target population.

Use the Category to Weights Variable Wizard to create a computed quantity variable called *GenderWeights* based on the definition of the *Gender* variable. In the wizard, assign 40% to the male category and 60% to the female category.

You can use the *GenderWeights* variable to calculate the weighted mean of the *RateService* variable. You can also use the *GenderWeights* variable in analysis wizards that support weighted calculations like the Descriptive Statistics wizard, the Counts and Frequencies wizard or the All-that-apply Question wizard.

• **To use a wizard to create a quantity variable for weighting respondents**

1 Select the Variables tab of the Study window. Then click on the New button on the tab.

> **Tip** Alternatively, you can right-click anywhere inside the Variables tab of the Survey Designer window's Survey Explorer toolbar or right-click on any column in the Data window and choose New Variable from the pop-up menu.

Survey Crafter Professional displays the New Variable dialog box.
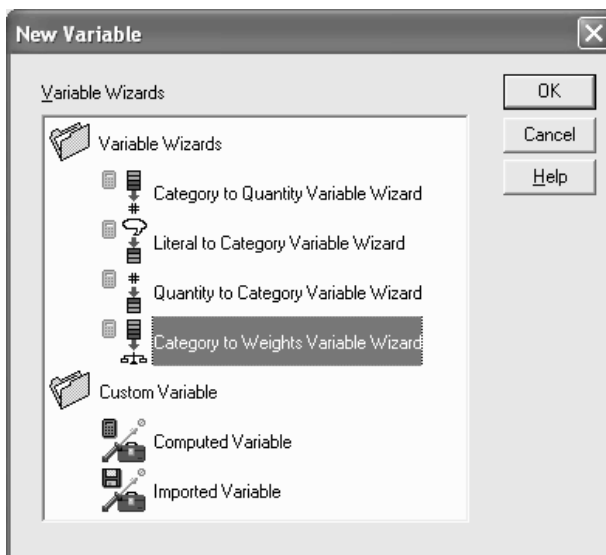
Figure 6 - 27:The New Variable dialog box.

2 In the New Variable dialog box, select Category to Weights Variable
Wizard under Variable Wizards.

3 Click on the OK button.

Survey Crafter Professional displays the Category to Weights Variable Wizard dialog box.
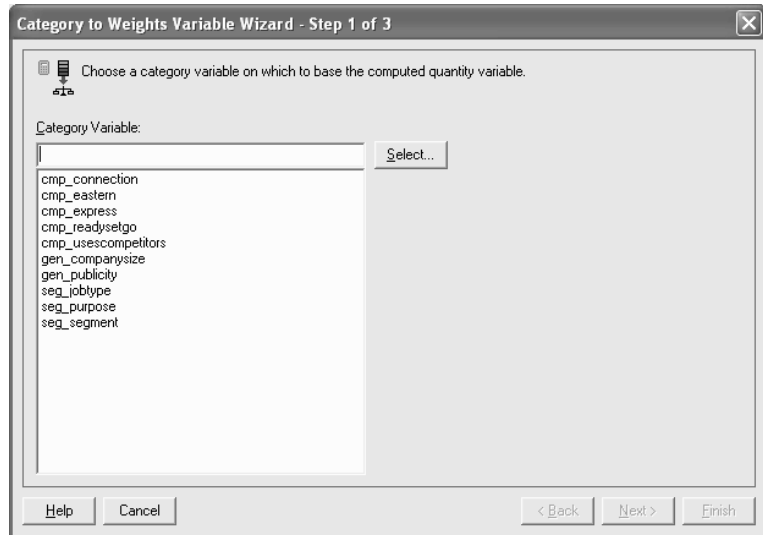
Figure 6 - 28:Step 1 of the Category to Weights Variable Wizard.

4 Follow the directions on the screen to complete the wizard and click on the Finish button to create the variable.

For information on any of the wizard's options, click on the Help button on the wizard's dialog box.

After you click on the Finish button, the Variable Information dialog box appears.
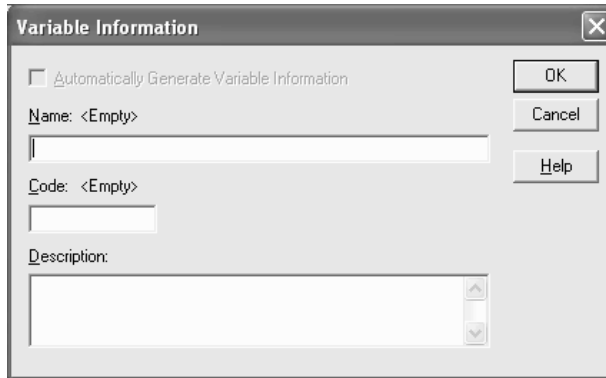
Figure 6 - 29: The Variable Information dialog box.

5   In the Name field, enter a name for the variable.

The name of the variable must begin with a letter and may include up to 31 additional letters, digits, and underscore characters.

6   In the Code field, accept the default or enter a new code for the variable.

Survey Crafter Professional automatically generates the variable code based on the text in the Name field.

The variable code is used outside Survey Crafter Professional in exported data files.

7   In the Description field, enter a description for the variable.

8   Click on the OK button.

Survey Crafter Professional displays the Variable Definition dialog box.

9   Review the definition of the variable and click on the OK button.

Survey Crafter Professional adds the variable to the Variables tab of the Study window.

Creating a Custom Computed Category Variable

Use a computed category variable to group respondents based on values in another variable. For example, assign respondents to age categories based on the values in the quantity variable *age*.

- **To create a custom computed category variable**

    1 Select the Variables tab of the Study window. Then click on the New button on the tab.

    Tip Alternatively, you can right-click anywhere inside the Variables tab of the Survey Designer window's Survey Explorer toolbar or right-click on any column in the Data window and choose New Variable from the pop-up menu.

    Survey Crafter Professional displays the New Variable dialog box.

Figure 6 - 30:The New Variable dialog box.

    2 In the New Variable dialog box, select Computed Variable under Custom Variable.

    3 Click on the OK button.

Survey Crafter Professional displays the Variable Information dialog box.

Figure 6 - 31:The Variable Information dialog box.

4   In the Variable Information dialog box, do the following:

• In the Name field, enter a name for the variable.

The name of the variable must begin with a letter and may include up to 31 additional letters, digits, and underscore characters.

• In the Code field, accept the default or enter a new code for the variable.

Survey Crafter Professional automatically generates the variable code based on the text in the Name field.

The variable code is used outside Survey Crafter Professional in exported data files.

• In the Description field, enter a summary of the information the variable contains.

• Click on the OK button.

Survey Crafter Professional displays the Variable Definition dialog box.

Figure 6 - 32:   The Variable Definition dialog box for computed category variables.

5   In the Variable Definition dialog box, select Category under Variable Type.

6   Click on the Append button.

Survey Crafter Professional displays the Category Definition dialog box.

Figure 6 - 33:   The Category Definition dialog box for computed category variables.

7   In the Category Definition dialog box, do the following:

- In the Prompt field, type the category's description.

- In the Condition Expression field, enter the expression that determines which respondents belong to the category.

  For help writing the expression, click on the Expression Builder button. Also see Chapter 7, "Expressions."

- In the Name field, type the category's name. Accept the default or enter a new category name.

  The category name must begin with a letter and may contain up to 14 additional letter, digit, or underscore characters. Use this name to include the category in expressions.

- In the Code field, type the category's code. Accept the default or enter a new integer between -9996 and 9996.

- Click on the OK button.

8   Repeat steps 6 and 7 for each category you want to add.

9   Click on the OK button to close the Variable Definition dialog box.

Survey Crafter Professional adds the variable to the study but does not yet calculate its values. For help on calculating the variable's values, see the section "Updating Variables' Values" on page 6 - 68.

Creating a Custom Computed Quantity Variable

Computed quantity variables store numbers calculated by Survey Crafter Professional. Creating a computed quantity variable involves writing an expression that Survey Crafter Professional uses to calculate the variable's values.

- • **To create a custom computed quantity variable**

    1 Select the Variables tab of the Study window. Then click on the New
        button on the tab.

> **Tip** Alternatively, you can right-click anywhere inside the Variables tab
> of the Survey Designer window's Survey Explorer toolbar or right-click
> on any column in the Data window and choose New Variable from the
> pop-up menu.

Survey Crafter Professional displays the New Variable dialog box.
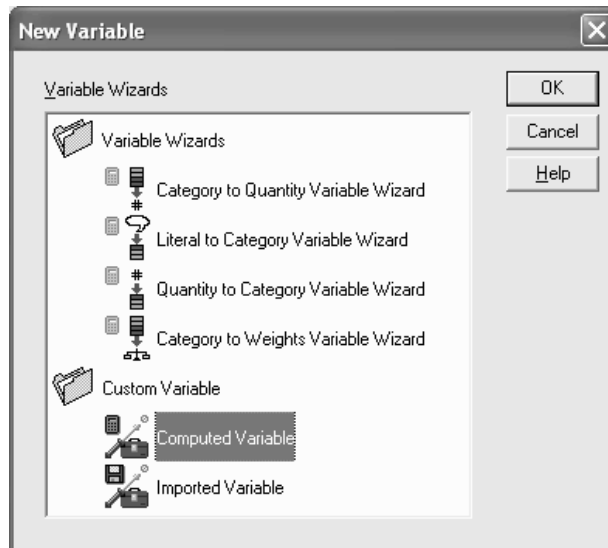
Figure 6 - 34:The New Variable dialog box.

    2 In the New Variable dialog box, select Computed Variable under
        Custom Variable.

    3 Click on the OK button.

Survey Crafter Professional displays the Variable Information dialog box.
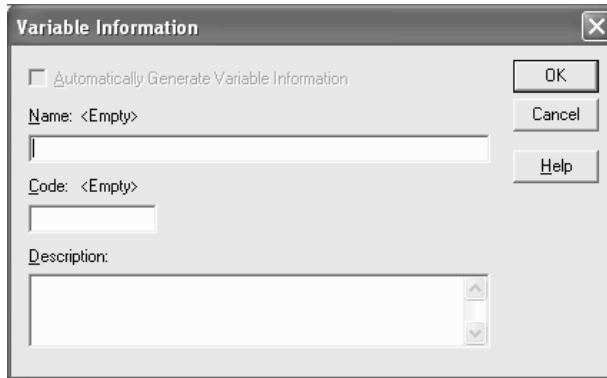
Figure 6 - 35:The Variable Information dialog box.

4   In the Variable Information dialog box, do the following:

• In the Name field, enter a name for the variable.

The name of the variable must begin with a letter and may include up to 31 additional letters, digits, and underscore characters.

• In the Code field, accept the default or enter a new code for the variable.

Survey Crafter Professional automatically generates the variable code based on the text in the Name field.

The variable code is used outside Survey Crafter Professional in exported data files.

• In the Description field, enter a summary of the information the variable contains.

• Click on the OK button.

Survey Crafter Professional displays the Variable Definition dialog box.

This expression defines the values in the computed quantity variable *family_income* as the sum of the values in the variables *income* and *spouse_income*.
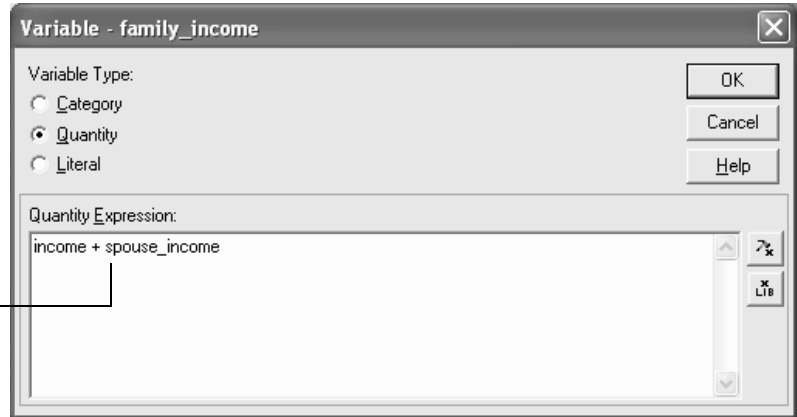
Figure 6 - 36:   The Variable Definition dialog box for computed quantity variables.

5   In the Variable Definition dialog box, select Quantity under Variable Type.

6   In the Quantity Expression field, type the expression that calculates the variable's values.

Expression Builder button

For help writing an expression, click on the Expression Builder button. Also see Chapter 7, "Expressions."

7   Click on the OK button to close the Variable Definition dialog box.

Survey Crafter Professional adds the variable to the study but does not yet calculate its values. For help on calculating the variable's values, see the section "Updating Variables' Values" on page 6 - 68.

Creating a Computed Literal Variable

Computed literal variables store text calculated by Survey Crafter Professional. Creating a computed literal variable involves writing an expression that Survey Crafter Professional uses to calculate the variable's values.

Literal variables store values up to 32,767 characters long. If a value is longer than 32,767 characters, Survey Crafter Professional stores up to and including the 32,767th character.

- **To create a computed literal variable**

    1 Select the Variables tab of the Study window. Then click on the New button on the tab.

    Tip Alternatively, you can right-click anywhere inside the Variables tab of the Survey Designer window's Survey Explorer toolbar or right-click on any column in the Data window and choose New Variable from the pop-up menu.

    Survey Crafter Professional displays the New Variable dialog box.

Figure 6 - 37:The New Variable dialog box.

    2 In the New Variable dialog box, select Computed Variable under Custom Variable.

    3 Click on the OK button.

Survey Crafter Professional displays the Variable Information dialog box.
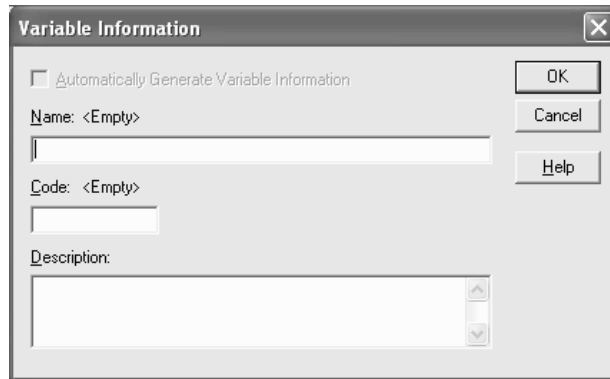
Figure 6 - 38:The Variable Information dialog box.

4 In the Variable Information dialog box, do the following:

• In the Name field, enter a name for the variable.

The name of the variable must begin with a letter and may include up to 31 additional letters, digits, and underscore characters.

• In the Code field, accept the default or enter a new code for the variable.

Survey Crafter Professional automatically generates the variable code based on the text in the Name field.

The variable code is used outside Survey Crafter Professional in exported data files.

• In the Description field, enter a summary of the information the variable contains.

• Click on the OK button.

Survey Crafter Professional displays the Variable Definition dialog box.

This expression concatenates three variables to produce a respondent's full name.

Figure 6 - 39:   The Variable Definition dialog box for computed literal variables.

5   In the Variable Definition dialog box, select Literal under Variable Type.

Expression Builder button

6   In the Literal Expression field, type the expression that calculates the variable's values.

For help writing an expression, click on the Expression Builder button. Also see Chapter 7, "Expressions."

7 If you want, click on the *Use a text substitution table* check box and choose a text substitution table from the drop down.

> **Note** A text substitution table is a two-column table that contains one or more textual mappings. Each textual mapping consists of value to search for and the value's replacement text. When you associate a text substitution table with a literal variable, Survey Crafter Professional's analysis wizards use the table's textual mappings to automatically substitute the literal variable's values in the headings of the resulting analysis tables and charts.

To create a new text substitution table or modify an existing text substitution table, click on the button to the right of the drop down. Survey Crafter Professional displays the Text Substitution Table Library dialog box.

8 If you want, click on the *Each literal value is a list, separated by the characters* check box to have Survey Crafter Professional's analysis wizards analyze the the literal values as lists of items. If you select this check box, enter the characters you want to use to separate the items in the lists.

9 Click on the OK button to close the Variable Definition dialog box.

Survey Crafter Professional adds the variable to the study but does not yet calculate its values. For help on calculating the variable's values, see the section "Updating Variables' Values" on page 6 - 68.

Editing Variables—All Types

There are several changes you can make to variables of any type. These changes include:

- Renaming a Variable
- Changing a Variable's Description
- Deleting a Variable
- Changing a Variable's Template (for imported variables only)
- Rewriting a Variable's Expression (for computed variables only)

The next three sections of this chapter explain changes unique to category, quantity and literal variables.

Renaming a Variable

Survey Crafter Professional does not allow you to change a variable's name if the variable is used in an expression for calculating a computed variable's values or if the variable is used in an expression in an analysis table or chart. For example, if a computed variable's expression is age + 3, you cannot rename the variable *age*.

- **To rename a variable**

    1 Select the Variables tab of the Study window.

    > **Tip** Alternatively, you can right-click on the variable in the Variables tab of the Survey Designer window's Survey Explorer toolbar or right-click on the variable's column in the Data window and choose Variable Information from the pop-up menu.

    2 Select the variable you want to rename.

    3 Do one of the following:

    - From the Edit menu, choose Variable Info.

• Click on the Info button on the Variables tab.

Survey Crafter Professional displays the Variable Information dialog box.

4   In the Name field, type the new name for the variable.

Survey Crafter Professional generates a value in the Code field based on the name you enter.

5   Click on the OK button.

Changing a Variable's Description

You can change a variable's description at any time.

• **To change a variable's description**

1   Select the Variables tab of the Study window.

> **Tip** Alternatively, you can right-click on the variable in the Variables tab of the Survey Designer window's Survey Explorer toolbar or right-click on the variable's column in the Data window and choose Variable Information from the pop-up menu.

2   Select the variable with the description you want to change.

3   Do one of the following:

• From the Edit menu, choose Variable Information.

• Click on the Info button on the Variables tab.

Survey Crafter Professional displays the Variable Information dialog box.

4   In the Description field, type the variable's new description.

5   Click on the OK button.

Deleting a Variable

Survey Crafter Professional will not allow you to delete a variable if the variable is associated with a survey question, if the variable is used in an expression for calculating a computed variable's values, or if the variable is used in an expression in an analysis table or chart. For example, if a computed variable's expression is `age + 3`, you cannot delete the variable *age*.

• **To delete a variable**

   1   Select the Variables tab of the Study window.

   > **Tip** Alternatively, you can right-click on the variable's column in the Data window and choose Delete Selected Variables from the pop-up menu.

   2   From the Variables list, select the variable you want to delete.

   3   Do one of the following:

   • From the Edit menu, choose Delete.

   • Press the [Delete] key.

   4   Click on the Yes button in the system message that appears.

   Survey Crafter Professional deletes the variable if it is not associated with a survey block, used in a computed variable's expression or used in an expression in an analysis table or chart.

Changing a Variable's Template (for imported variables only)

To redefine an imported variable's settings quickly, choose a new template in the Variable Definition dialog box. After you choose a new template, you can edit its settings if necessary.

Survey Crafter Professional does not allow you to change the template of a category variable that currently uses the All-that-apply template and is associated with an all-that-apply question in a survey. Survey Crafter

Professional also does not allow you to change the template of a quantity variable that currently uses the Ranking or Constant Sum template and is associated with a ranking or constant sum question in a survey.

- **To change the variable's template**

  1   Select the Variables tab of the Study window.

  > **Tip** Alternatively, you can right-click on the variable in the Variables tab of the Survey Designer window's Survey Explorer toolbar or right-click on the variable's column in the Data window and choose Variable Definition from the pop-up menu.

  2   Select the variable with the template you want to change. Then click on the Edit button on the tab.

  Survey Crafter Professional displays the Variable Definition dialog box.

  3   In the Based on Template field, select the new template to apply to the variable.

  4   Change the template's settings if necessary.

  For example, add a new category to a category variable or change the range of values a quantity variable stores.

  5   If you want to save the template settings under a different name, type the new name in the Based on Template field.

  6   Click on the OK button.

Rewriting a Variable's Expression (for computed variables only)

You can edit the expressions used to calculate computed variables' values.

After rewriting a computed variable's expression, you need to recalculate its values. For instructions on recalculating computed variables' values, see the section "Updating Variables' Values" on page 6 - 68.

- **To rewrite a category variable's expression**

    1 Select the Variables tab of the Study window.

    > **Tip** Alternatively, you can double-click on the variable's column heading in the Data window or right-click on the variable's column in the Data window and choose Variable Definition from the pop-up menu.

    2 Select the variable with the expression you want to rewrite. Then click on the Edit button on the tab.

    Survey Crafter Professional displays the Variable Definition dialog box.

    3 In the Variable Definition dialog box, select the expression to edit.

    4 Click on the Edit button.

    Survey Crafter Professional displays the Category Definition dialog box.

    5 In the Category Definition dialog box, edit the expression in the Condition Expression field.

    For help rewriting the expression, click on the Expression Builder button. Also see Chapter 7, "Expressions."

    6 Click on the OK button to close the Category Definition dialog box.

    7 Click on the OK button to close the Variable Definition dialog box.

- **To rewrite a quantity or literal variable's expression**

    1 Select the Variables tab of the Study window.

    > **Tip** Alternatively, you can double-click on the variable's column heading in the Data window or right-click on the variable's column in the Data window and choose Variable Definition from the pop-up menu.

    2 Select the variable with the expression you want to rewrite. Then click on the Edit button on the tab.

    Survey Crafter Professional displays the Variable Definition dialog box.

Expression Builder button

3   Edit the expression in the Quantity Expression or Literal Expression field.

For help rewriting the expression, click on the Expression Builder button. Also see Chapter 7, "Expressions."

4   Click on the OK button to close the Variable Definition dialog box.

Editing Category Variables

Changes you can make to category variables include the following:

- Adding a Category

- Editing a Category

- Deleting a Category

- Rearranging Categories

> **Note** Survey Crafter Professional does not allow you to edit a category variable that uses the All-that-apply template and is currently associated with an all-that-apply question in a survey.

Adding a Category

You can add a category above or below any category in the Variable Definition dialog box except the NR category. You can only add categories above the NR category.

After adding a category to a computed category variable, you need to recalculate the variable's values. See the section "Updating Variables' Values" on page 6 - 68.

- **To add a category**

    1   Select the Variables tab of the Study window.

> **Tip** Alternatively, you can right-click on the variable in the Variables tab of the Survey Designer window's Survey Explorer toolbar or right-click on the variable's column in the Data window and choose Variable Definition from the pop-up menu.

2   Select the variable to which you want to add a category. Then click on the Edit button on the tab.

Survey Crafter Professional displays the Variable Definition dialog box.

Click on the Append button to add a category below or the Insert button to add a category above the selected category.

Variable - how_heard				

Variable Type:
○ Category   Based on Template: advertising   OK
○ Quantity   Cancel
○ Literal   Help

	Prompt	Name	Code
1	Saw a sign on the road	sign	1
2	Read an ad in the newspaper	newspaper	2
3	Heard an ad on the radio	radio	3
4	Word of mouth from a friend or family member	mouth	4
5	Received our mailing	mail	5

Append   Insert   Edit   Delete   Up   Down   Reset Codes
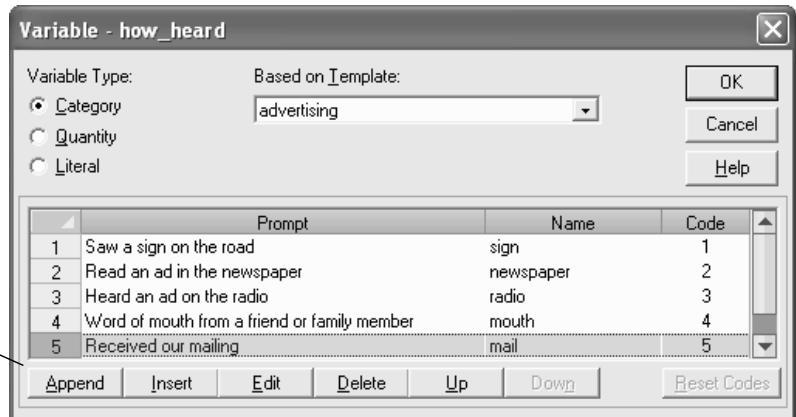
Figure 6 - 40:   Using the Append and Insert buttons to add categories.

3   From the list on the bottom of the Variable Definition dialog box, select a category.

4   Click on the Append or Insert button.

Survey Crafter Professional displays the Category Definition dialog box.

5   In the Category Definition dialog box, enter the following:

• In the Prompt field, type the category's description.

The description appears as a choice on the survey if the variable is an imported variable and you associate it with a survey question.

Expression Builder button

• In the Condition Expression field (if the variable is a computed variable), type the category's expression.

For help writing an expression, click on the Expression Builder button. Also see Chapter 7, "Expressions."

• In the Name field, type the category's name. Accept the default or enter a new category name.

The category name must begin with a letter and may contain up to 14 additional letter, digit, or underscore characters. Use this name to refer to the category in expressions.

• In the Code field, type the category's code. Accept the default or enter a new integer between -9996 and 9996.

6 Click on the OK button to close the Category Definition dialog box.

The category appears in the Variable Definition dialog box.

7 If the variable is an imported variable and you want to save the settings as a different template, type the new name in the Based on Template field.

For more information on variable templates, see the section "Variable Templates" on page 6 - 7.

8 Click on the OK button.

Editing a Category

You can change a category's name, prompt, and code. If the category belongs to a computed variable, you can also change its expression.

After editing a category in a computed category variable, you need to recalculate the variable's values. See the section "Updating Variables' Values" on page 6 - 68.

• **To edit a category**

1 Select the Variables tab of the Study window.

> **Tip** Alternatively, you can right-click on the variable in the Variables tab of the Survey Designer window's Survey Explorer toolbar or right-click on the variable's column in the Data window and choose Variable Definition from the pop-up menu.

2 From the Variables list, select the variable containing the category you want to edit. Then click on the Edit button on the tab.

Survey Crafter Professional displays the Variable Definition dialog box.

3 From the list on the bottom of the Variable Definition dialog box, select the category you want to redefine.

4 Click on the Edit button.

Survey Crafter Professional displays the Category Definition dialog box.

5 In the Category Definition dialog box, enter the following:

• In the Prompt field, type the category's description.

If the variable is an imported variable and you associate it with a question block, the text in the Prompt field appears in the survey as a possible response.

Expression Builder button

- In the Condition Expression field (if the variable is a computed variable), type the category's expression.

  For help writing an expression, click on the Expression Builder button. Also see Chapter 7, "Expressions."

- In the Name field, type the category's name.

  The category name must begin with a letter and may contain up to 14 additional letter, digit, or underscore characters. Use this name to refer to the category in expressions.

- In the Code field, type the category's code. Accept the default or enter a new integer between -9996 and 9996.

6 Click on the OK button to close the Category Definition dialog box.

7 Select another category to redefine or click on the OK button.

Deleting a Category

Follow the steps below to delete a category from a category variable.

After deleting a category from a computed category variable, you need to recalculate its values. See the section "Updating Variables' Values" on page 6 - 68.

- **To delete a category from a variable**

  1 Select the Variables tab of the Study window.

  Tip Alternatively, you can right-click on the variable in the Variables tab of the Survey Designer window's Survey Explorer toolbar or right-click on the variable's column in the Data window and choose Variable Definition from the pop-up menu.

2   Select the variable from which you want to delete a category. Then click on the Edit button on the tab.

Survey Crafter Professional displays the Variable Definition dialog box.

3   From the list on the bottom of the Variable Definition dialog box, select the category you want to delete.

4   Click on the Delete button.

5   Click on the OK button.

Rearranging Categories

You can sort a variable's categories into any order. The only category you cannot move is the NR (No Reply) category.

For imported variables, the order of the categories in the Variable Definition dialog box matches how they appear on a survey.

For computed variables, the order of the categories in the Variable Definition dialog box determines how Survey Crafter Professional assigns respondents using a fall-through approach. Using this approach, Survey Crafter Professional evaluates the list of expressions from top to bottom and assigns respondents to the category containing the first expression that evaluates to TRUE.

- **To rearrange a variable's categories**

    1   Select the Variables tab of the Study window.

    > **Tip** Alternatively, you can right-click on the variable in the Variables tab of the Survey Designer window's Survey Explorer toolbar or right-click on the variable's column in the Data window and choose Variable Definition from the pop-up menu.

2   Select the variable whose categories you want to rearrange. Then
click on the Edit button on the tab.

Survey Crafter Professional displays the Variable Definition dialog
box.

Use these
buttons to
rearrange
categories.

Figure 6 - 41:   Rearranging a category variable's categories.

3   From the list on the bottom of the Variable Definition dialog box,
select a category to move.

4   To move the category up one row, click on the Up button. To move
the category down one row, click on the Down button.

5   Click on the OK button.

Editing Quantity Variables

The changes explained in this section apply only to imported quantity variables. All changes you can make to computed quantity variables are covered in the section "Editing Variables—All Types" on page 6 - 50.

Edits to imported quantity variables include the following:

- Redefining Units

- Editing Scale Points

- Redefining Ranges and Decimal Places

Note Survey Crafter Professional does not allow you to edit a quantity variable that uses the Ranking or Constant Sum template and is currently associated with a ranking or constant sum question in a survey.

Redefining Units

Follow the steps below to change the units associated with an imported quantity variables' values.

- **To redefine units**

    1   Select the Variables tab of the Study window.

    Tip Alternatively, you can right-click on the variable in the Variables tab of the Survey Designer window's Survey Explorer toolbar or right-click on the variable's column in the Data window and choose Variable Definition from the pop-up menu.

    2   Select the quantity variable you want to edit. Then click on the Edit button on the tab.

    Survey Crafter Professional displays the Variable Definition dialog box.

    3   In the Units field, type the new unit you want to associate with the variable's values. Use up to 32 characters.

4   Click on the OK button.

Editing Scale Points

You can change the values and labels on an imported quantity variable's scale.

•   **To edit scale points**

1   Select the Variables tab of the Study window.

> **Tip** Alternatively, you can right-click on the variable in the Variables tab of the Survey Designer window's Survey Explorer toolbar or right-click on the variable's column in the Data window and choose Variable Definition from the pop-up menu.

2   Select the quantity variable with the scale you want to edit. Then click on the Edit button on the tab.

Survey Crafter Professional displays the Variable Definition dialog box.

3 Click on the Scale button.

Survey Crafter Professional displays the Scale dialog box.

Scale points associated with the selected quantity variable.

Figure 6 - 42: The Scale dialog box.

4 In the Scale dialog box, select the scale point you want to edit.

5 Click on the Edit button.

Survey Crafter Professional displays the Scale Definition dialog box.

6 In the Scale Definition dialog box, do one or both of the following:

- To reposition the point on the scale, type a new integer in the Value field.

- To change the point's label, type new text in the Label field.

7 Click on the OK button to close the Scale Definition dialog box.

8 Click on the OK button to close the Scale dialog box.

9 Click on the OK button to close the Variable Definition dialog box.

Redefining Ranges and Decimal Places

You can change the maximum and minimum values and the number of decimal places an imported quantity variable accepts.

- **To redefine ranges and decimal places**

    1   Select the Variables tab of the Study window.

    > **Tip** Alternatively, you can right-click on the variable in the Variables tab of the Survey Designer window's Survey Explorer toolbar or right-click on the variable's column in the Data window and choose Variable Definition from the pop-up menu.

    2   Select the quantity variable you want to edit. Then click on the Edit button on the tab.

    Survey Crafter Professional displays the Variable Definition dialog box.

    3   To change the range of values the variable accepts, edit the values in the Minimum and Maximum fields.

    The variable's minimum must be greater than -2,100,000,000 and its maximum must be less than 2,100,000,000.

    4   To change the number of decimal places the variable accepts, edit the value in the Decimal Places. Enter a maximum of ten.

    Enter 0 if you want Survey Crafter Professional to accept only integers for the variable's values.

    5   Click on the OK button.

Editing Literal Variables

The changes explained in this section apply only to imported literal variables. All changes you can make to computed literal variables are covered in the section "Editing Variables—All Types" on page 6 - 50.

Edits to imported literal variables include the following:

• Redefining the Maximum Length

Redefining the Maximum Length

Follow the steps below to change the maximum length associated with an imported literal variables' values.

• **To redefine the maximum length**

   1   Select the Variables tab of the Study window.

> **Tip** Alternatively, you can right-click on the variable in the Variables tab of the Survey Designer window's Survey Explorer toolbar or right-click on the variable's column in the Data window and choose Variable Definition from the pop-up menu.

   2   Select the literal variable you want to edit. Then click on the Edit button on the tab.

   Survey Crafter Professional displays the Variable Definition dialog box.

   3   In the Maximum length field, type the new maximum length you want to associate with the variable's values.

   4   Click on the OK button.

Updating Variables' Values

After you write or edit an expression for a computed variable and close the Variable Definition dialog box, Survey Crafter Professional fills the variable's column in the Data window with the value NV (No Value). It does this because Survey Crafter Professional does not automatically calculate the variable's values.

Because Survey Crafter Professional does not calculate the values automatically, you can create several computed variables and then calculate their values all at once. The Study or Data window must be the active window for the recalculation to work.

Note Survey Crafter Professional automatically updates a variable's values when other computed variables or analysis tables or charts that use the variable are updated. For example, if you create a new computed variable, use the new computed variable in an expression in an analysis table and then update the analysis table, Survey Crafter Professional will automatically updates the new computed variable before it updates the analysis table.

• **To update a variable's values**

   1   If the Data window is open, click on it to make it the active window. If it is not open, select the Study window's Data tab, and then click on the Edit button on the tab.

   The study's data set appears in the Data window. The Data window includes a column for the new computed variable.

The computed variable's column contains the value NV if you have not yet had Survey Crafter Professional calculate its values.

Figure 6 - 43:   An uncalculated computed variable's values displayed in the Data window.

   2   From the Edit menu, choose Update or click on the Update button on the toolbar.

Update button

   Survey Crafter Professional calculates the values for the computed variable.

7 **Expressions**

Expressions are formulae that you write for Survey Crafter Professional to perform calculations and tests. This chapter begins with an overview of expressions and their components. It then explains how to write expressions and lists the operators and functions Survey Crafter Professional supports. It concludes with examples of expressions.

Chapter Contents

About Expressions

An expression is a combination of operators, functions, variables, and values used to represent a single value or a set of values, with one for each respondent in the data set. As Table 7 - 1 shows, expressions are fundamental to your work in many areas of Survey Crafter Professional.

Read the sections below for an overview of expressions and their parts. For instructions on writing expressions, see the section "Writing Expressions" on page 7 - 6.

Table 7 - 1:   Using expressions in Survey Crafter Professional.

Use expressions in	To
Custom Opening and Closing Web Survey Rules	Have your web surveys automatically open or close.
Custom Branching and Skipping Rules	Automatically take respondents from one question block or page to another question block or page
Custom Validation Rules	Show respondents your own error and warning messages
Custom Assignment Rules	Automatically assign values to imported variables as respondents take your survey.
Custom Web Cookie Rules	Have Survey Crafter Professional send and receive cookies to and from a respondent's browser as the respondent takes your web survey.
Custom Data Cleaning Rules	Mark values in the Data window unexpected
Computed value survey fields	Display calculated values in your survey when your survey is on the Web or in the built-in Interviewer.
Computed variables	Calculate a new variable's values from existing variables
Values in the Data window	Calculate new values for the selected cells in the study's data set
Data window filters	Filter the records visible in the Data window
Analysis table cells	Calculate the values appearing in the cells

Table 7 - 1:   Using expressions in Survey Crafter Professional. (Continued)

Use expressions in	To
Row, column and table filters	Limit the records included in an analysis table cell's calculation
Batch report filters	Limit the records included in the analysis tables and charts in a batch report
Batch report condition expressions	Conditially include analysis tables and charts in a batch report

Parts of an Expression

An expression can include one or more values, variables, functions, and operators alone or in combination. You define the values and variables and select the functions and operators from those Survey Crafter Professional provides.

Table 7 - 2:   Parts of a Survey Crafter Professional expression.

Element	Examples	Description
Value	"Blue", 32, -1.4e-5, TRUE	Represents a constant that Survey Crafter Professional uses exactly as written
Variable	*age*, *height*	Refers to a variable in the study's data set
Function	MEAN(age), MODE(age)	Returns a value by performing a calculation on its arguments
Operator	<, >=, +	Indicates an operation to be performed on one or more terms

Figure 7 - 1 shows an example of an expression and its parts.
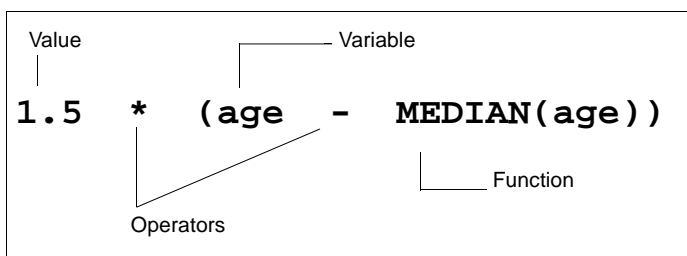
Figure 7 - 1:   An example expression and its parts.

The terms of an expression an operator acts on are called operands. In the expression above:

- 1.5 and (age – MEDIAN(age)) are operands of the * (multiplication) operator

- age and MEDIAN(age) are operands of the - (subtraction) operator

- 1.5 is a value (a number)

- age is a variable in the study's data set

- MEDIAN( ) is a function that calculates the median of its argument, here the variable *age*

Types of Values Expressions Return

Some expressions return a single value while others return a different value for each respondent (or each record) in the data set.

The expression MEAN(age) calculates a single value like 32.5, the average of the values in the quantity variable *age*.

The expression age + 3 returns a different value for each respondent, adding 3 to the value in *age* for each. For example, if one respondent has the value 25 stored in *age*, the expression returns 28 for that respondent. If another respondent has the value 53 stored in age, the expression returns 56 for that respondent.

If an expression returns a different value for each respondent, you can store that set of values in a variable unless the expression returns TRUE or FALSE. (TRUE and FALSE, logical values that result from testing conditions, cannot be stored in variables.) For example, you could write the expression age + 3 and store the resulting numbers in the quantity variable *age_plus*. You could then calculate the average value in *age_plus* by using the expression MEAN(age_plus).

Alternatively, you do not have to store the values an expression returns in a variable. For example, you could use the expression age + 3 as the argument in the MEAN( ) function by entering MEAN(age + 3). In this case, Survey Crafter Professional adds 3 to each value in *age* and then finds the mean of the sums, but the sums themselves are not stored in the variable.

Writing Expressions

This section discusses rules for entering values, variables, functions, and operators in expressions. It also discuss nesting expressions and Survey Crafter Professional's rules for matching the values expressions return. For an overview of expressions' parts, see the section "About Expressions" on page 7 - 2.

Expression elements are not case sensitive. For example, Survey Crafter Professional considers the variables *Age*, *AGE*, and *agE* equivalent to *age*, the literal value *"Applesauce"* equivalent to "APPLESAUCE" and the function mean(age) equivalent to MEAN(age).

Entering Values

You can enter five types of values in an expression: literals, numbers, categories, logical values, and missing values (NR and NV).

Literals

A literal value may be any string of characters. Enclose the string in double quotes. For example, "My name is Larry".

If the string contains the double quote character, use back-to-back double quotes for each instance of the character. For example, to use the literal value Dick "Night Train" Lane in an expression, enter "Dick ""Night Train"" Lane".

Survey Crafter Professional treats literal constants as text only. For example, Survey Crafter Professional considers "2" different from 2. You can use 2 in arithmetic but not "2".

Numbers

You can enter any real numbers including counting numbers (1, 2, 3), negative numbers (-1, -2, -3), decimal fractions (1.001, -3.1415), and numbers expressed in scientific notation (3.14e-3). Numbers do not require any punctuation to distinguish them from the expression's other terms.

Categories

Enclose the name of a category in single quotes. For example, 'student' and 'full_time'. Do not use the category's code. A category name must begin with a letter and may be followed with up to 14 letter, digit, or underscore characters.

Logical Values

Logical values indicate whether a condition has been met. For example, a logical value indicates whether a respondent is over the age of 35. The two possible logical values are TRUE and FALSE. Either the respondent is over the age of 35 or he is not. Enter the logical values as TRUE and FALSE.

Missing Values (NR and NV)

To enter either NR (No Reply) or NV (No Value) in an expression, enter the letters NR or NV. Do not use any quotes or other punctuation around the letters. For example, gender = NR is a valid expression.

Entering Variables

To enter a variable, type the variable's name. Variable names must begin with a letter and may be followed with up to 31 letter, digit, or underscore characters. Examples of valid variable names are *age* and *has_a_car*.

The Expression Builder can help you enter variables. See "Using the Expression Builder" on page 7 - 10.

Entering Functions

Type the function name and enclose its arguments in parentheses. For example, MEAN(age). Separate the function's arguments with commas. For example, MODE(age, gender = 'male').

A function's arguments may be expressions themselves. See the section "Nesting Expressions" below for more information.

The Expression Builder and Function Wizard can help you enter functions. See "Using the Expression Builder" on page 7 - 10.

Entering Operators

For unary operators (operators acting on one term), type the operator before its operand. For example, -age negates the values in the quantity variable *age*. For binary operators (operators acting on two terms), type the operator between its operands. For example, in the expression 1.5 * age, the * operator multiplies the number 1.5 by each of the values in the quantity variable *age*.

The Expression Builder can help you enter operators. See "Using the Expression Builder" on page 7 - 10.

Nesting Expressions

You can write (nest) an expression within an expression. For example, a function's arguments may be expressions themselves. Enclose each nested expression in parentheses.

In the expression MEAN(age + spouse_age), the nested expression is age + spouse_age. In the expression
(4 + MEAN(age)) > spouse_age, the nested expression is
4 + MEAN(age).

Matching Types

Although the syntax of the expression 1.5 * ('student' + age) is correct, the expression is invalid because the + (addition) operator must add two numbers. (Here age is a variable storing numbers but 'student' is a category name.) To ensure that expressions are meaningful, Survey Crafter Professional checks each expression using a set of type rules. If the expression does not follow the type rules, Survey Crafter Professional displays an error message.

Several tasks in Survey Crafter Professional require you to write an expression that returns a specific type of value. For example, when editing the value in a Data window cell that belongs to a quantity variable, you must assign the cell an expression that returns a number (for example, MEAN(age) or 5). The cell will not accept a category name like 'Student' or a literal value like "Reduce parking fees".

To check whether the type of value or set of values returned matches the type required, Survey Crafter Professional uses the following rules:

• Exact matches are always allowed.

  For example, Survey Crafter Professional accepts a number where a number is required.

• Any type of value or variable may be tested for equivalence with the values NR (No Reply) and NV (No Value).

• An expression returning a single value of type *x* may be used where a value of type *x* is required for each respondent in the data set. In this case, Survey Crafter Professional assigns the same value to all respondents in the data set.

  Suppose you are creating a computed variable by using an expression that returns the number 3. To populate the variable, Survey Crafter Professional needs a value for every respondent in the data set, so it assigns the number 3 to all respondents.

• An expression returning a value for each respondent in the data set is not allowed where a single value is required.

  Suppose you are editing a cell belonging to the quantity variable *age* in the Data window. This cell stores one number. Therefore, you can use the expression MEAN(age) to calculate the cell's value because it returns one number. However, you cannot use an expression like age + 3 because it returns a number for each respondent in the data set.

Using the Expression Builder

The Expression Builder helps you write expressions by providing resources that you can drag and drop into your expressions such as functions, your study's variables, values from your study's data set and expressions from the Expression Library.

The caption of the Expression Builder dialog box lists the return types expected of your expression. For example, the expression you are writing may be required to return either TRUE or FALSE.

Build your expression in the box. When you double-click on a variable name or function in the box, Survey Crafter Professional automatically selects the variable or function in the lists.

Click on a button or drag or double-click on a function, operator, variable or value in one of the lists to insert the item in the box.
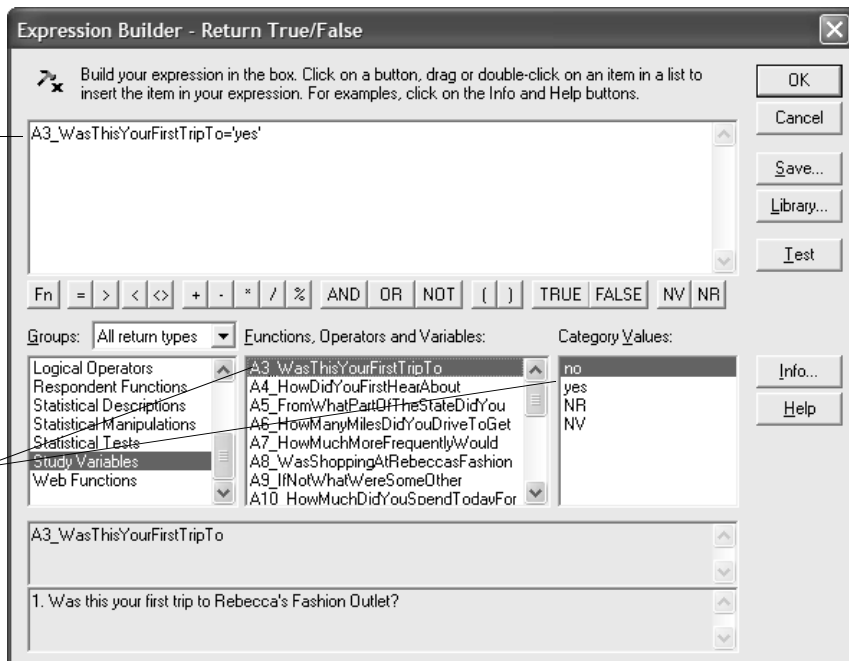
Figure 7 - 2:   The Expression Builder dialog box.

To write an expression, type in the box or click on a button or drag or double-click on an operator, function, variable or value in one of the lists to insert the item in the box. For more information about and examples for an operator or function, click on the operator or function in the list and then click on the Info button.

For guidance on inserting a function, move the cursor to where you want to insert the function in the box and click on the Fn button to start the Function Wizard.

When you double-click on a variable name or function in the box, Survey Crafter Professional automatically selects the variable or function in the lists.

Table 7 - 3 contains descriptions of the resources the Expression Builder provides.

Table 7 - 3:   Expression Builder Resources

Resource	Description
Function Wizard (Fn) Button	Inserts an expression built by the Function Wizard in the box.
Expression Element Buttons (=, >, <, <>, +, -, *, /, AND, OR, NOT, (,), TRUE, FALSE, NV, NR)	Inserts the expression element in the box.
Expression Group List	Lists all of the available expression groups for the currently selected return type.
Functions, Operators or Variables List	Lists the functions, operators or variables that belong to the currently selected expression group. Drag or double-click on an item in the list to insert the item in the box. For examples, click on an item in the list and then click on the Info button.
Values List	Lists the values that belong to the currently selected item in the Functions, Operators or Variables list. Drag or double-click on a value in the list to insert the value in the box.
Save Button	Saves your expression to your study's Expression Library.
Library Button	Inserts an expression from your study's Expression Library in the box.

Table 7 - 3:   Expression Builder Resources

Resource	Description
Test Button	Has Survey Crafter Professional test your expression for syntax errors and then verify that your expression returns one of the types listed in the caption of the Expression Builder dialog box.
	Survey Crafter Professional displays an error message if your expression contains a syntax error or returns an unlisted type.
Info Button	Displays information about the currently selected function, operator, variable or value.

Operators and Functions Supported by Variable Types

Some functions and operators may be used only by specific variable types. For example:

- You can calculate the mean of values stored in a quantity variable but not of values stored in a category variable.

- You can use the + (addition) operator to add two quantities or two literals but not two categories.

Table 7 - 4 lists the operators and functions supported by different variable types.

The "Condition" row lists operators and functions that involve testing a condition (a statement that evaluates to TRUE or FALSE) for any variable type. For example, you can use the COUNT( ) function to determine the number of respondents with the value 'male' in the category variable *gender* or the number of respondents with values less than 50,000 in the quantity variable *income*.

Table 7 - 4:   Operators and functions supported by different variable types.

Variable type	Operators	Functions
All variables	=, <>	CURRENT_VALUE, IF, IS_MISSING,, IS_UNEXPECTED, IS_UNREADABLE, IS_VALID, OCCURS, RECORDNUM, RECORDS, RECORD_VALUE, SORTED_RECORDNUM, SORTED_RECORDS, SORTED_UNIQUE_RECORDS, SORTORDER, SORTORDER2, UNIQUE_RECORDS
Category variables	=, <>	XTAB_SIGNIFICANCE

Table 7 - 4:   Operators and functions supported by different variable types.

Variable type	Operators	Functions
Quantity variables	*, /, +, - (for subtraction), - (for negation), %, =, <>, <=, >=, <, >	ABS, CEIL, CONFIDENCE_MEAN, CORRELATION, CORRELATION_SIGNIFICANCE, FLOOR, MAX, MEAN, MEANS_SIGNIFICANCE, MEDIAN, MIN, MODE, NORMALIZE, POWER, RAND, RANK, RANK_PERCENT, ROUND, STANDARDIZE, STDEV, SUM, TTEST, VARIANCE
Literal variables	+, =, <>, <=, >=, <, >	CONCAT, CONTAINS, CONTAINS_RE, FORMAT_LOCALTIME, FORMAT_TIME, FORMAT_UTCTIME, INDEX, INDEX_RE, LEFT, LENGTH, LIST_CONTAINS, LIST_ELEMENT, LIST_INDEX, LIST_RANDOMIZE, LIST_REMOVE, LIST_REVERSE, LIST_ROTATE, LIST_SIZE, LIT_TO_QTY, MIDSTR, QTY_TO_LIT, REPLACE, REPLACE_RE, RIGHT, STRIP, SUBSTR, SUBSTR_RE, TOLOWER, TOUPPER, WEB_COLUMN_VALUE, WEBSERVER_ENV
Condition	AND, NOT, OR	CONFIDENCE_PERCENTAGE, COUNT, IS_FALSE_OR_NV, IS_TRUE_NOT_NV, IS_TRUE_OR_NV, PERCENTAGE, PERCENTAGES_SIGNIFICANCE, RATIO

For more on Survey Crafter Professional's operators and functions, see the sections "About Survey Crafter Professional's Operators" on page 7 - 15 and "About Survey Crafter Professional's Functions" on page 7 - 18.

About Survey Crafter Professional's Operators

This section lists the operators Survey Crafter Professional includes and explains the order in which Survey Crafter Professional evaluates them.

You can read about each operator's syntax and see examples of the operator in expressions in the *Survey Crafter Professional Online Help System*. From the Help menu, choose Search for Help on. In the Search dialog box, enter the operator as the keyword. In the help topics' syntax descriptions, bold face type indicates a required operand and normal type indicates an optional operand.

Operator Reference

Survey Crafter Professional includes sets of arithmetic, comparison, and logical operators for use in expressions. Operators are either unary or binary.

Unary operators act on only one term in an expression. For example, the - (negation) operator negates one quantity. Binary operators act on two terms in an expression. For example, the + (addition) operator adds two quantities or two literals.

For information on the order in which Survey Crafter Professional evaluates operators, see the section "Operator Precedence" below.

Arithmetic Operators

Arithmetic operators are either unary or binary.

Table 7 - 5:   Survey Crafter Professional's arithmetic operators.

Operator	Meaning	Unary or binary?
*	Multiplication	Binary
/	Division	Binary
+	Addition	Binary
-	Subtraction	Binary
-	Negation	Unary

Table 7 - 5:   Survey Crafter Professional's arithmetic operators. (Continued)

Operator	Meaning	Unary or binary?
%	Modulo	Binary

Comparison Operators

All comparison operators are binary.

Table 7 - 6:   Survey Crafter Professional's comparison operators.

Operator	Meaning
=	Equal to
<>	Not equal to
<=	Less than or equal to
>=	Greater than or equal to
<	Less than
>	Greater than

Logical Operators

Logical operators are either unary or binary.

Table 7 - 7:   Survey Crafter Professional's logical operators.

Operator	Meaning	Unary or binary?
AND	Conjunction	Binary
OR	Union (inclusive "or")	Binary
NOT	Logical negation	Unary

Literal Operators

Literal operators are either unary or binary.

Table 7 - 8:   Survey Crafter Professional's literal operators.

Operator	Meaning	Unary or binary?
+	Concatenation	Binary

Operator Precedence

When an expression includes several operators, Survey Crafter Professional evaluates the operators in a predetermined order. This order is called operator precedence. However, you can use parentheses to override the order of precedence and force Survey Crafter Professional to evaluate some parts of an expression before others. Survey Crafter Professional always performs operations within parentheses before those outside. Inside parentheses, Survey Crafter Professional follows normal operator precedence.

Table 7 - 9 lists operators in order of precedence from top to bottom. Operators in the same row of the table have equal precedence. Survey Crafter Professional evaluates operators having equal precedence in the order they occur from left to right in the expression.

Table 7 - 9:   Precedence of Survey Crafter Professional operators.

Operators in order of precedence (from top to bottom)
Logical negation (NOT), arithmetic negation (-)
Multiplication, division and modulo (* , /, %)
Addition and subtraction (+ , -)
Less than, greater than, less than or equal to, greater than or equal to (< , > , <= , >=)
Equals, not equals (= , <>)
Logical conjunction, logical union (AND , OR)

About Survey Crafter Professional's Functions

This section describes the functions Survey Crafter Professional includes.

You can read about each function's syntax and see examples of the function in expressions in the *Survey Crafter Professional Online Help System*. From the Help menu, choose Search for Help on. In the Search dialog box, enter the function as the keyword. In the help topics' syntax descriptions, bold face type indicates a required argument and normal type indicates an optional argument.

Arithmetic Functions

Survey Crafter Professional includes the arithmetic functions shown in Table 7 - 10.

Table 7 - 10:   Survey Crafter Professional's arithmetic functions.

Function	Description
ABS	Returns the absolute value of a quantity.
CEIL	Returns the smallest whole number greater than or equal to the quantity value.
COUNT	Returns the number of respondents meeting a condition.
FLOOR	Returns the largest whole number less than or equal to the quantity value.
PERCENTAGE	Returns the percentage of respondents meeting a condition.
POWER	Returns one quantity value raised to the power of another quantity value.
RAND	Returns a pseudorandom number between 0 and the quantity.
RATIO	Returns the proportion of respondents meeting a condition.
ROUND	Returns the quantity rounded according to the precision.

Table 7 - 10:   Survey Crafter Professional's arithmetic functions. (Continued)

Function	Description
SUM	Returns the sum of quantity values for respondents meeting a condition.

Logical Functions

Survey Crafter Professional includes the logical functions shown in Table 7 - 11.

Table 7 - 11:   Survey Crafter Professional's logical functions.

Function	Description
IF	Returns one value if a condition is TRUE and another if it is FALSE.
IS_FALSE_OR_NV	Returns TRUE if the condition is either FALSE or NV.
IS_MISSING	Returns TRUE if the value is missing (the value is NR or NV. Otherwise returns FALSE.
IS_TRUE_NOT_NV	Returns TRUE if the condition is TRUE. Returns FALSE if the condition is either FALSE or NV.
IS_TRUE_OR_NV	Returns TRUE if the condition is either TRUE or NV.
IS_UNEXPECTED	Returns TRUE if the value is unexpected. Otherwise returns FALSE.
IS_UNREADABLE	Returns TRUE if the value is unreadable. Otherwise returns FALSE.
IS_VALID	Returns TRUE if the value is valid (the value is not NR or NV). Otherwise returns FALSE.

Statistical Manipulations

Survey Crafter Professional includes the functions in Table 7 - 12 for normalizing and standardizing values in quantity variables.

Table 7 - 12:   Survey Crafter Professional's statistical manipulation functions.

Function	Description
NORMALIZE	Normalizes the values in a quantity variable about their mean.
STANDARDIZE	Standardizes the values in a quantity variable about their mean.

Statistical Descriptions

Survey Crafter Professional includes the functions in Table 7 - 13 for calculating statistics on values in quantity variables.

Table 7 - 13:   Survey Crafter Professional's statistical description functions.

Function	Description
CORRELATION	Returns the Pearson correlation coefficient for two quantity variables.
MAX	Returns the maximum value in a quantity variable.
MEAN	Returns the arithmetic mean of a quantity variable.
MEDIAN	Returns the median of a quantity variable.
MIN	Returns the minimum value in a quantity variable.
MODE	Returns the mode of a quantity variable.
RANK	Returns the rank of a number against the values of a quantity variable.
RANK_PERCENT	Returns the percentage of numbers in a quantity variable that are either less than or greater than a given number.
STDEV	Returns the standard deviation of a quantity variable.

Table 7 - 13:   Survey Crafter Professional's statistical description functions. (Continued)

Function	Description
VARIANCE	Returns the variance of a quantity variable.

Statistical Tests

Survey Crafter Professional includes the functions in Table 7 - 14 for calculating confidence intervals and testing for statistical significance.

Table 7 - 14:   Survey Crafter Professional's statistical test functions.

Function	Description
CONFIDENCE_MEAN	Returns the confidence interval for the mean of a quantity variable.
CONFIDENCE_PERCENTAGE	Returns the confidence interval for the percentage of records meeting a condition.
CORRELATION_SIGNIFICANCE	Returns the results of a Pearson correlation t-test.
MEANS_SIGNIFICANCE	Returns the results of a 2 mean, 2-sample, unequal variance t-test.
PERCENTAGE_SIGNIFICANCE	Returns the results of a 2 percentage, 2 sample t-test.
TTEST	Returns the results of a 2-mean, 2-sample, equal variance t-test, a 2-mean, 2-sample, unequal variance t-test or a paired sample t-test.
XTAB_SIGNIFICANCE	Returns the results from a chi-square test for two category variables.

Literal Functions

Survey Crafter Professional includes the literal functions shown in Table 7 - 15.

Table 7 - 15:   Survey Crafter Professional's literal functions.

Function	Description
CONCAT	Returns the concatenation of two literal variables or values.
CONTAINS	Returns TRUE if the pattern is contained in the literal variable or value.
CONTAINS_RE	Returns TRUE if the regular expression pattern is contained in the literal variable or value.
INDEX	Returns the one-based offset of the first occurrence of the pattern in the literal variable or value. If the pattern is not found, returns 0.
INDEX_RE	Returns the one-based offset of the first occurrence of the regular expression pattern in the literal variable or value. If the pattern is not found, returns 0.
LEFT	Returns a specified number of characters from the left side of a literal variable or value.
LENGTH	Returns the length of the literal variable or value.
LIST_CONTAINS	Returns TRUE when all of list1's elements are in list2. Otherwise, returns FALSE.
LIST_ELEMENT	Returns the specified element from a list of elements.
LIST_INDEX	Returns the one-based offset of the first occurrence of the element in the list. If the element is not found in the list, returns 0.
LIST_RANDOMIZE	Returns the result of randomly reordering all or part of a list.
LIST_REMOVE	Returns the result of removing the elements in list1 from list2.
LIST_REVERSE	Returns the result of reversing all or part of a list.

Table 7 - 15:   Survey Crafter Professional's literal functions. (Continued)

Function	Description
LIST_ROTATE	Returns the result of rotating all or part of a list.
LIST_SIZE	Returns the number of elements in a list.
LIT_TO_QTY	Converts literal values to quantity values.
MIDSTR	Returns a specified number of characters from the middle of a literal variable or value.
QTY_TO_LIT	Converts quantity values to literal values.
REPLACE	Returns the result of replacing all occurrences of the pattern in the literal.
REPLACE_RE	Returns the result of replacing all occurrences of the regular expression pattern in the literal.
RIGHT	Returns a specified number of characters from the right side of a literal variable or value.
STRIP	Returns the literal variable or value with spaces removed from the beginning and the end.
SUBSTR	Returns the first sub-string in the literal variable or value that matches the pattern.
SUBSTR_RE	Returns the first sub-string in the literal variable or value that matches the pattern.
TOLOWER	Returns the literal variable or value with all lower case letters.
TOUPPER	Returns the literal variable or value with all upper case letters.

Respondent Functions

Survey Crafter Professional includes the respondent functions shown in Table 7 - 16.

Table 7 - 16:   Survey Crafter Professional's respondent functions.

Function	Description
CURRENT_VALUE	Returns a variable's value for the current respondent.
OCCURS	Returns a number for each value of a given variable showing the number of times the value occurs.
RECORDNUM	Returns the record numbers for all respondents in the dataset that meet a specified condition.
RECORDS	Returns the response values of one variable for all respondents in the dataset that meet a specified condition.
RECORD_VALUE	Returns a variable's value at a specified record.
SORTED_RECORDNUM	Returns the record numbers for all respondents in the dataset that meet a specified condition. Uses a quantity variable to determine the order of the returned record numbers.
SORTED_RECORDS	Returns the response values of one variable for all respondents in the dataset that meet a specified condition. Uses a quantity variable to determine the order of the returned response values.
SORTED_UNIQUE_RECORDS	Returns the **unique** response values of one variable for all respondents in the dataset that meet a specified condition. Uses a quantity variable to determine the order of the returned response values.
SORTORDER	Returns the sort order of each respondent in the dataset. Uses one variable to determine the sort order.

Table 7 - 16:   Survey Crafter Professional's respondent functions. (Continued)

Function	Description
SORTORDER2	Returns the sort order of each respondent in the dataset. Uses two variables to determine the sort order.
UNIQUE_RECORDS	Returns the **unique** response values of one variable for all respondents in the dataset that meet a specified condition.

Date / Time Functions

Survey Crafter Professional includes the date / time functions shown in Table 7 - 17.

Table 7 - 17:   Survey Crafter Professional's date / time functions.

Function	Description
FORMAT_LOCALTIME	Returns the current local date and time formatted as a literal value.
FORMAT_TIME	Returns the date and time formatted as a literal value.
FORMAT_UTCTIME	Returns the current date and time in Coordinated Universal Time (UTC) as a literal value.
LOCALTIME_PART	Returns the specified part from the current local date and time as a quantity value.
UTCTIME_PART	Returns the specified part from the current date and time in Coordinated Universal Time (UTC) as a quantity value.

Web Server Functions

Survey Crafter Professional includes the web server functions shown in Table 7 - 18.

Table 7 - 18:   Survey Crafter Professional's web server functions.

Function	Description
WEB_COLUMN_VALUE	Returns the current value of the specified column from the web survey's data file (web only).
WEBSERVER_ENV	Returns the value of the web server environment variable (web only).

Examples of Expressions

Expressions help you get your work done in many areas of a study. This section includes examples of expressions for each of the following areas of a study:

- Custom Opening and Closing Web Survey Rules

- Custom Branching and Skipping Rules

- Custom Validation Rules

- Custom Assignment Rules

- Custom Web Cookie Rules

- Custom Data Cleaning Rules

- Computed Value Survey Fields

- Computed Variables

- New Data Set Values

- Values in Table Cells

- Row, Column and Table Filters

- Filtering Records in the Data Window

- Batch Report Filters

- Batch Report Conditions

Custom Opening and Closing Web Survey Rules

Custom opening and closing web survey rules allow you to configure your web surveys to open or close at specified dates and times or alternatively when the expressions you write for them evaluate to TRUE.

A condition expression for a custom opening or closing web survey rule must evaluate to either TRUE or FALSE. Depending upon the other settings of a closing web survey rule, for example, respondents for whom the rule's expression evaluates to TRUE are either shown a message or taken to a page on the Internet or your Intranet, or both.

Table 7 - 19 shows examples of condition expressions for custom opening and closing web survey rules. Please note that the variables and their values referenced in the expressions below are not likely to exist in your studies.

Table 7 - 19:   Examples of expressions for custom opening and closing web survey rules.

Expression	Description
`FORMAT_UTCTIME(1,1)>="2021/03/30 08:00"`	This condition expression evaluates to TRUE when the current date and time in Coordinated Universal Time (UTC) is on or after 8AM, March 30, 2021. Note that for opening and closing web survey rules, it is strongly recommended that you not use the function FORMAT_LOCALTIME. The reason is the date and time returned by FORMAT_LOCALTIME will be in the time zone of either the respondent's browser or the server that is hosting your web survey, each of which may be different from yours.
`FORMAT_UTCTIME(1,1)>="2021/03/30 15:00" AND FORMAT_UTCTIME(1,1)<="2021/03/31 23:59"`	This condition expression evaluates to TRUE when the current date and time in Coordinated Universal Time (UTC) is on or after 3PM, March 30 and on or before 11:59PM, March 31. If you were to use this expression in an open web survey rule, the survey would open at 3PM, March 30 UTC and then close at 12AM, March 31 UTC. If you were to use this expression in a close web survey rule, the survey would close at 3PM, March 30 UTC and then reopen at 12AM, March 31 UTC.
`COUNT (A3_WhatIsYourAge = '20_29') >= 10`	If you were to use an expression like this in a close web survey rule, the survey would close for all respondents when there are already 10 respondents in the survey's data file who said they are older than 19 and younger than 30. Note that even if you have a question in your survey that asks for the respondent's age, the variable and value referenced in your expression would be different.
`COUNT (IS_VALID(A99_Last)) >= 1000`	If you were to replace *A99_Last* in the example with a variable from your survey that is associated with the last question that requires an answer and use the modified expression in a close web survey rule, the survey would close for all respondents when the survey's data file has 1000 records that have valid answers to the question.

Custom Branching and Skipping Rules

Custom branching and skipping rules allow you to configure your survey to automatically take respondents from one question block or page to another question block or page, when the expressions you write evaluate to TRUE.

A condition expression for a custom branching and skipping rule must evaluate to either TRUE or FALSE for every respondent in the study's data set. Depending upon the rule, respondents for whom the expression evaluates to TRUE are taken from one question block or page to another question block or page.

Table 7 - 20 shows examples of condition expressions for custom branching and skipping rules. Please note that the variables referenced in the expressions below are not likely to exist in your studies.

Table 7 - 20:   Examples of expressions for custom branching and skipping rules.

Expression	Description
`A1_WhatIsYourGender = 'Male'`	This condition expression returns TRUE when a respondent chooses *Male* when answering the question "What is your gender?"
`A2_HowSatisfiedAreYouWith > 3`	This condition expression returns TRUE when a respondent chooses *4* or greater to the rating question "How satisfied are you with our service? (Use a scale from 1 to 5)".
`COUNT (A3_WhatIsYourAge = '20_29') >= 10`	This condition expression returns TRUE when there are already 10 respondents who said they were older than 19 but younger than 30.
`COUNT (A3_WhatIsYourAge = CURRENT_VALUE (A3_WhatIsYourAge)) >= 10`	This condition expression returns TRUE when there are already 10 or more respondents who chose the age range the current respondent has chosen.

Custom Validation Rules

Custom validation rules allow you to configure your survey to have Survey Crafter Professional show your own warning and error messages to respondents, when the expressions you write evaluate to TRUE.

A condition expression for a custom validation rule must evaluate to either TRUE or FALSE for every respondent in the study's data set. Depending upon the rule, respondents for whom the expression evaluates to TRUE are either shown a warning or an error message.

Table 7 - 21 shows examples of condition expressions for custom validation rules. Please note that the variables referenced in the expressions below are not likely to exist in your studies.

Table 7 - 21:   Examples of expressions for custom validation rules.

Expression	Description
`A1_WhatCityAreYouFrom = 'Other' AND NOT VALID(A1_OtherSpecify)`	This condition expression returns TRUE when a respondent chooses *Other* when answering the closed-end question "What city are you from" but does not specify what *Other* means.
`(A2_WhatColorsDoYouSee_Red = 'Yes' OR A2_WhatColorsDoYouSee_Blue = 'Yes' OR A2_WhatColorsDoYouSee_Green = 'Yes') AND A2_WhatColorsDoYouSee_None = 'Yes'`	This condition expression returns TRUE when a respondent chooses *None* as well as *Red*, *Blue*, or *Green* when answering the all-that-apply question "What Colors do you see in the picture above?"
`(IF(A3_WhatAreYour2Favorite_Burger='Yes',1,0) + IF(A3_WhatAreYour2Favorite_KingTaco='Yes',1,0) + IF(A3_WhatAreYour2Favorite_Marshas='Yes',1,0) + IF(A3_WhatAreYour2Favorite_Broilin='Yes',1,0)) <> 2`	This condition expression returns TRUE when a respondent does not choose 2 restaurants when answering the all-that-apply question "What are your 2 favorite restaurants?"
`NOT(CONTAINS_RE(A4_WhatIsYourEmailAddress,"^[a-zA-Z0-9._%-]+@[a-zA-Z0-9.-]+\.[a-zA-Z][a-zA-Z][a-zA-Z]?[a-zA-Z]?$"))`	This condition expression returns TRUE when a respondent does not enter a valid email address to the open-end question "What is your email address?"

Table 7 - 21:   Examples of expressions for custom validation rules. (Continued)

Expression	Description
`NOT(CONTAINS_RE(A5_WhatIs TodaysDate,"^[0-9][0- 9][0-9][0-9]/(0?[1- 9]|1[0-2])/(0?[1-9]|[1- 2][0-9]|3[0-1])$"))`	This condition expression returns TRUE when a respondent does not enter a date in YYYY/MM/DD format to the open-end question "What is today's date?"
`NOT(CONTAINS_RE(A6_WhatIs TodaysDate,"^(0?[1- 9]|1[0-2])/(0?[1-9]|[1- 2][0-9]|3[0-1])/([0-9][0- 9]|[0-9][0-9][0-9][0- 9])$"))`	This condition expression returns TRUE when a respondent does not enter a date in MM/DD/YY or MM/DD/YYYY format to the open-end question "What is today's date?"
`NOT(CONTAINS_RE(A6_WhatIs TodaysDate,"^(0?[1-9]|[1- 2][0-9]|3[0-1])/(0?[1- 9]|1[0-2])/([0-9][0- 9]|[0-9][0-9][0-9][0- 9])$"))`	This condition expression returns TRUE when a respondent does not enter a date in DD/MM/YY or DD/MM/YYYY format to the open-end question "What is today's date?"
`NOT(CONTAINS_RE(A7_WhatIs TheCurrentTime,"^([1- 9]|1[0-2]):[0-5][0-9][ ]?(am|AM|pm|PM)$"))`	This condition expression returns TRUE when a respondent does not enter a time in HH:MM am/pm format to the open-end question "What is the current time?"
`NOT(CONTAINS_RE(A8_WhatIs TheCurrentTime,"^([0- 9]|1[0-9]|2[0-3]):[0- 5][0-9]$"))`	This condition expression returns TRUE when a respondent does not enter a time in HH:MM military time format to the open-end question "What is the current time?"

Custom Assignment Rules

Custom assignment rules allow you to configure your surveys to have Survey Crafter Professional automatically assign values to imported variables as the respondent takes your survey.

An assignment expression for a custom assignment rule must evaluate to a value of the same type as the selected imported variable. A condition expression for a custom assignment rule must always evaluate to either TRUE or FALSE for every respondent in the study's data set.

Table 7 - 24 shows examples of both assignment and condition expressions for custom assignment rules. Please note that the variables referenced in the expressions below are not likely to exist in your studies.

Table 7 - 22:   Examples of expressions for custom assignment rules.

Expression	Description
FORMAT_LOCALTIME(1,3)	This assignment expression returns the current date and time as a literal value in YYYY/MM/DD HH:MM:SS format.
	The custom assignment rule's variable must be an imported literal variable.
LOCALTIME_PART(0)	This assignment expression returns the current year as a quantity value.
	The custom assignment rule's variable must be an imported quantity variable.
StartTime=NV	This condition expression returns TRUE when the variable StartTime has no value.
	If the custom assignment rule's variable is StartTime, this condition expression has Survey Crafter Professional assign StartTime only once.
WEBSERVER_ENV("REMOTE_ADDR")	This assignment expression returns the IP address of the respondent as a literal value in AAA.BBB.CCC.DDD format when your survey is on the Web.
	The custom assignment rule's variable must be an imported literal variable.
	This expression always returns NV when evaluated by the Survey Crafter Professional desktop application.
WEBSERVER_ENV("REMOTE_USER")	This assignment expression returns the respondent's logged in user name as a literal value when your survey is on the Web.
	The respondent's logged in user name is usually available only when both the respondent and web server are on the same Intranet.
	The custom assignment rule's variable must be an imported literal variable.
	This expression always returns NV when evaluated by the Survey Crafter Professional desktop application.

Table 7 - 22:   Examples of expressions for custom assignment rules. (Continued)

Expression	Description
`WEBSERVER_ENV("HTTP_USER_ AGENT")`	This assignment expression returns information about the respondent's browser as a literal value when your survey is on the Web.
	The custom assignment rule's variable must be an imported literal variable.
	This expression always returns NV when evaluated by the Survey Crafter Professional desktop application.
`WEB_COLUMN_VALUE("_#")`	This assignment expression returns the current respondent's unique identification number in your survey's data file when the survey is on the Web.
	The custom assignment rule's variable must be an imported literal variable.
	This expression always returns NV when evaluated by the Survey Crafter Professional desktop application.
`WEB_COLUMN_VALUE("_$")`	This assignment expression returns the number of times the current respondent has completed your survey when the survey is on the Web.
	If your survey has been configured to save the respondent's answers as the respondent proceeds from one page to the next, until the respondent has completed the survey, the column will contain a floating point number (ex. 0.2) with the number to the right of the decimal point indicating the last page saved. Otherwise, the column will contain 0.
	The custom assignment rule's variable must be an imported literal variable.
	This expression always returns NV when evaluated by the Survey Crafter Professional desktop application.
`A1_WhatIsYourGender = 'Male'`	This condition expression returns TRUE when a respondent chooses Male when answering the question "What is your gender?"
`A1_WhatIsYourGender <> 'Female' AND A3_WhatIsYourAge = '20_29'`	This condition expression returns TRUE when a respondent does not choose Female when answering the question "What is your gender" but does choose 20-29 when answering the question "What is your age?"

Custom Web Cookie Rules

Custom web cookie rules have Survey Crafter Professional send and receive cookies to and from a respondent's browser as the respondent takes your web survey. These rules make use of expressions to calculate a cookie's value and if the option is selected, to also determine when the calculation should be done and the cookie sent.

Expressions used by these rules to calculate a cookie's value must evaluate to a literal or quantiy value. Expressions used to determine when to calculate and send the cookie must evaluate to either TRUE or FALSE.

Table 7 - 24 shows examples of expressions that could be used in a custom web cookie rule.

Table 7 - 23:   Examples of expressions for custom assignment rules.

Expression	Description
`QTY_TO_LIT(RAND(9999))+". "+QTY_TO_LIT(UTCTIME_PART (7))+"."+WEBSERVER_ENV("R EMOTE_ADDR")+"."+QTY_TO_L IT(RAND(9999))`	This expression evaluates to a literal value composed of a series of digits separated by periods. The periods separate a randomly generated number, the number of seconds and microseconds since January 1, 1970, the respondent's IP address and another randomly generated number.
	You can use this expression in a *Set/Get Web Cookie* rule to assign the resulting unique value to a cookie before it's sent to the respondent's browser. Sending a cookie with a unique value to a respondent's browser makes it possible for Survey Crafter Professional to identify the respondent if the respondent were to return to the survey.
`QTY_TO_LIT(RAND(9999))+". "+REPLACE_RE(FORMAT_UTCTI ME(1,3),"[ / :]","")+"."+WEBSERVER_ENV ("REMOTE_ADDR")+"."+QTY_T O_LIT(RAND(9999))`	This expression evaluates to a literal value composed of a series of digits separated by periods. The periods separate a randomly generated number, only the digits of the current date and time in Universal Coordinated Time (UTC), the respondent's IP address and another randomly generated number.
	You can use this expression in a *Set/Get Web Cookie* rule to assign the resulting unique value to a cookie before it's sent to the respondent's browser. Sending a cookie with a unique value to a respondent's browser makes it possible for Survey Crafter Professional to identify the respondent if the respondent were to return to the survey.

Table 7 - 23:   Examples of expressions for custom assignment rules. (Continued)

Expression	Description
```LIT_TO_QTY(QTY_TO_LIT(ROUND(RAND(10))+10)+IF(LENGTH(QTY_TO_LIT(ROUND(UTCTIME_PART(7))))>8,RIGHT(QTY_TO_LIT(ROUND(UTCTIME_PART(7))),8),QTY_TO_LIT(ROUND(UTCTIME_PART(7))))+"."+QTY_TO_LIT(ROUND(RAND(899999))+100000))```	This expression evaluates to a large quantity value with a precision of 6 digits. The number is composed of 2 randomly generated digits, followed by the number of seconds since January 1, 1970 in Universal Coordinated Time (UTC), the decimal point, and 6 randomly generated digits. You can use this expression in a *Set/Get Web Cookie* rule to assign the resulting unique value to a cookie before it's sent to the respondent's browser. Sending a cookie with a unique value to a respondent's browser makes it possible for Survey Crafter Professional to identify the respondent if the respondent were to return to the survey.

Custom Data Cleaning Rules

Custom data cleaning rules allow you to have Survey Crafter Professional color response values in the Data window when the expressions you write for the rules evaluate to TRUE.

A condition expression for a custom data cleaning rule must evaluate to either TRUE or FALSE for every respondent in the study's data set. Response values in the Data window are colored blue when the expression evaluates to TRUE.

Table 7 - 24 shows examples of condition expressions for custom data cleaning rules. Please note that the variables referenced in the expressions below are not likely to exist in your studies.

Table 7 - 24:   Examples of expressions for custom data cleaning rules.

Expression	Description
```OCCURS(A1_RecordNumber) > 1```	This condition expression returns TRUE when the same answer to the "Record Number" question appears more than once in the study's data set. If the rule's associated imported variable is *A1_RecordNumber*, all instances of the duplicate answer are colored blue in the Data window.

Table 7 - 24:   Examples of expressions for custom data cleaning rules. (Continued)

Expression	Description
`A2_HowSatisfiedAreYouWith = 5 AND A3_OverallSatisfaction = 1`	This condition expression returns TRUE when a respondent chooses a 5 when answering the rating question "How satisfied are you with our service" and 1 when answering the rating question "Overall Satisfaction".
`A3_Divide1150By30 <> 35`	This condition expression returns TRUE when a respondent does not enter *35* when answering the quantity question "Divide 1150 by 30". If the rule's associated imported variable is *A3_Divide1150By30*, all instances of the incorrect answer are colored blue in the Data window.

Computed Value Survey Fields

Computed value survey fields allow you to have Survey Crafter Professional display calculated values in your survey when your survey is on the Web or in the built-in Interviewer.

An expression for a computed value survey field must evaluate to a category, quantity or literal value.

Table 7 - 24 shows examples of expressions for computed value survey fields. Please note that the variables referenced in the expressions below are not likely to exist in your studies.

Table 7 - 25:   Examples of expressions for computed value survey fields.

Expression	Description
`FORMAT_LOCALTIME(1,3)`	This expression returns the current date and time as a literal value in YYYY/MM/DD HH:MM:SS format.
`LOCALTIME_PART(0)`	This assignment expression returns the current year as a quantity value.

Table 7 - 25:   Examples of expressions for computed value survey fields. (Continued)

Expression	Description
RANK (CURRENT_VALUE (A1_Score), A1_Score)	When your survey is on the Web, this expression returns the ranking of the current respondent's score, stored in the variable A1_Score, against the scores already entered by other respondents.
	Here, the lower the score, the higher the ranking. For example, this expression would return a ranking of 2 for a score of 10, compared against other scores of 5, 15, 25 and 50.
RANK (CURRENT_VALUE (A1_Score), A1_Score, TRUE, 1)	When your survey is on the Web, this expression returns the ranking of the current respondent's score, stored in the variable A1_Score, against the scores already entered by other respondents.
	Here, the higher the score, the higher the ranking. For example, this expression would return a ranking of 2 for a score of 30, compared against other scores of 5, 15, 25 and 50.
RANK_PERCENT (CURRENT_VALUE (A1_Score), A1_Score)	When your survey is on the Web, this expression returns the percentage of numbers in A1_Score already entered by other respondents that are less than the current respondent's number.
	Here, the higher the score, the higher the percentage. For example, this expression would return 60% for a score of 30 compared against other scores of 5, 15, 25 and 50.
WEBSERVER_ENV("REMOTE_ADDR")	This expression returns the IP address of the respondent as a literal value in AAA.BBB.CCC.DDD format when your survey is on the Web.
	This expression always returns NV when evaluated by Survey Crafter Professional's built-in Interviewer.
WEBSERVER_ENV("REMOTE_USER")	This expression returns the respondent's logged in user name as a literal value when your survey is on the Web.
	The respondent's logged in user name is usually available only when both the respondent and web server are on the same Intranet.
	This expression always returns NV when evaluated by Survey Crafter Professional's built-in Interviewer.

Table 7 - 25:   Examples of expressions for computed value survey fields. (Continued)

Expression	Description
`LEFT(A1_WhatIsYourName,30 )`	This expression returns as a literal value at most 30 characters of the respondent's name as it was entered for the question What is your name?
`A1_YourIncome + A2_SpouseIncome`	This expression returns as a quantity value the sum of the answers to two income questions. If either of the two questions has not been answered, this expression returns NV.
`IF (IS_VALID (A1_YourIncome), A1_YourIncome, 0) + IF (IS_VALID (A2_SpouseIncome), A2_SpouseIncome, 0)`	This expression returns as a quantity value the sum of the answers to two income questions. This expression never returns NV. Instead, it assumes an income of 0 when a question has not been answered.

Computed Variables

Survey Crafter Professional automatically calculates the values stored in computed variables using the expressions you write. Expressions for computed variables return a value for each respondent in the study's data set.

Computed Category Variables

Table 7 - 26 shows several examples of expressions used to calculate the values stored in computed category variables. Please note that the variables referenced in the expressions below are not likely to exist in your studies.

Table 7 - 26:   Examples of expressions for computed category variables.

Expressions	Description
• age < 25 • age >= 25 AND age <= 50 • age > 50	These three expressions assign each respondent to one of three categories based on the value in the quantity variable *age*: • Respondents who are under age 25 • Respondents who are between the ages of 25 and 50 inclusive • Respondents who are over age 50
• sport = 'tennis' OR sport = 'squash' • sport = 'sailing' OR sport = 'rowing' OR sport = 'swimming' • sport = 'running' OR sport = 'biking'	These three expressions create three categories of respondents based on their favorite sport: • Respondents who prefer sports played with rackets • Respondents who prefer water sports • Respondents who prefer road sports
• gender = 'male' AND OwnCar = 'yes' • gender = 'male' AND OwnCar = 'no' • gender = 'female' AND OwnCar = 'yes' • gender = 'female' AND OwnCar = 'no'	These four expressions group respondents into four categories: • Male respondents who own cars • Male respondents who do not own cars • Female respondents who own cars • Female respondents who do not own cars

Computed Quantity Variables

Table 7 - 27 shows several examples of expressions used to calculate the values stored in computed quantity variables. Please note that the variables referenced in the expressions below are not likely to exist in your studies.

Table 7 - 27: Example expressions for computed quantity variables.

Expression	Description
`OwnInc + SpouseInc`	This expression adds each respondent's income and his or her spouse's income. The computed quantity variable stores these sums.
`NORMALIZE(age)`	This expression normalizes the values in the quantity variable *age*. The computed quantity variable stores the normalized values.
`OCCURS(age)`	This expression returns a number for each value in the quantity variable *age* showing the number of times the value occurs. The computed quantity variable stores these counts. If you want, you can use the computed quantity variable to sort records in the dataset by *age* popularity.
`LIT_TO_QTY (LIST_ELEMENT (date, 3, "/")+2000`	This expression extracts the 3rd element of each value of the *date* literal variable, converts the extracted values to quantities and then adds 2000. Suppose the study's dataset contains three respondents with the values "12/15/03", "1/1/04" and "1/12/04" in the literal variable *date*. The computed quantity variable stores the values 2003, 2004 and 2004.

Computed Literal Variables

Table 7 - 28 shows several examples of expressions used to calculate the values stored in computed literal variables.

Table 7 - 28: Example expressions for computed literal variables.

Expression	Description
`STRIP(FirstName + IF(LENGTH(MiddleName)>0 , " " + MiddleName, "") + " " + LastName)`	This expression concatenates each respondent's first, middle and last name. The computed literal variable stores the full names.

Table 7 - 28:   Example expressions for computed literal variables.

Expression	Description
`REPLACE_RE(USState, "[Mm][Aa][Ss]+[a-z,A-Z]* ", "MA")`	This expression replaces all occurrences of "Massachusetts", "Mass", and other spellings of the state with "MA". The computed literal variable stores the new values.

New Data Set Values

Table 7 - 29 shows several examples of expressions used to calculate new values for a study's data set. The type of the expression's result must match the variable type to which you want to assign the result. For example, a number can be assigned only to a quantity variable.

Table 7 - 29:   Example expressions for values in Data window cells.

Expression	Variable type selected in the Data window	Description
`0`	Quantity	This expression assigns the value 0 to all cells selected in the variable's column.
`NV`	Any	This expression assigns the value NV (No Value) to all cells selected in the variable's column.
`MEAN(age)`	Quantity	This expression assigns the mean of the quantity variable *age* to all cells selected in the variable's column.

Values in Table Cells

Table 7 - 30 shows several examples of expressions used to calculate values appearing in a table's cells. Please note that the variables referenced in the expressions below are not likely to exist in your studies.

Table 7 - 30:　Examples expressions for table cell values.

Expression	Description
MODE(age)	This expression calculates the mode of the values in the quantity variable *age* for all respondents in the study's data set.
MEAN(age, $ROW AND $COL AND $TABLE)	This expression calculates the mean of the quantity variable *age* for those respondents passing through the cell's row filter, column filter and table filter.
COUNT(age = 35)	This expression calculates the number of respondents for whom the quantity variable *age* stores the value 35.
RECORDS(comments, age = 35, 100)	This expression returns the first 100 responses stored in the *comments* literal variable for those respondents for whom the *age* variable equals 35.

Row, Column and Table Filters

Row, column and table filters are powerful short cuts for defining respondents to include in table cells' calculations. A row filter is an expression that determines those respondents to be included in the calculations in the row's cells. A column filter is an expression that determines those respondents to be included in the calculations in the column's cells. A table filter is an expression that determines those respondents to be included in the calculations in all cells. For a detailed example of using row and column filters, see the section "About Row, Column and Table Filters" on page 4 - 41.

Row, column and table filter expressions must evaluate to either TRUE or FALSE for every respondent in the study's data set. Respondents for whom the expression is TRUE pass through the row, column or table filter and are included in the calculation.

Table 7 - 31 shows examples of expressions for row, column and table filters. Please note that the variables referenced in the expressions below are not likely to exist in your studies.

Table 7 - 31:   Examples of expressions for row, column and table filters.

Expression	Description
For a row filter, `income < 40000`	This expression includes in the row only those respondents who reported their income to be under $40,000.
For a column filter, `married = 'Yes'`	This expression includes in the column only those respondents who are married.
For a table filter, `income < 40000 AND married = 'Yes'`	This expression includes in all cells only respondents whose income is less than $40,000 and who are married.

Filtering Records in the Data Window

Because study data sets can contain large numbers of records, you may want to view only a subset of the records in the Data window. You can write an expression to limit or filter the records appearing in the Data window. This expression is called a filter expression because it filters the records to display.

The filter expression must evaluate to either TRUE or FALSE for every respondent in the study's data set. Records of respondents for whom the expression is TRUE appear in the Data window.

Table 7 - 32 shows several examples of filter expressions for limiting records appearing in the Data window. Please note that the variables referenced in the expressions below are not likely to exist in your studies.

Table 7 - 32:   Examples of expressions for limiting records appearing in the Data window.

Expression	Description
`age > 50`	This expression displays only records of respondents who are over age 50.
`gender = 'female'`	This expression displays only records of female respondents.

Table 7 - 32:   Examples of expressions for limiting records appearing in the Data window. (Continued)

Expression	Description
`age > 50 AND gender = 'female'`	This expression displays only records of female respondents who are over age 50.

Batch Report Filters

Survey Crafter Professional supports three types of batch report filters: *Simple Condition Expression*, *Repeat Condition Expressions*, and *Repeat Variable Values*.

Creating a batch report filter of type *Simple Condition Expression* requires that you write an expression that evaluates to either TRUE or FALSE for each respondent in your study's data set. When you add a batch report filter of this type to a batch report, when printing or exporting the report, Survey Crafter Professional uses your expression to limit the report's calculations to a subset of the respondent records in your study's data set.

Creating a batch report filter of type *Repeat Condition Expressions* requires that you write one or more expressions that evaluate to either TRUE or FALSE for each respondent in your study's data set. When you add a batch report filter of this type to a batch report, when printing or exporting the report, Survey Crafter Professional uses the expressions one at a time to limit the report's calculations to a subset of the respondent records in your study's data set.

The table below shows several examples of expressions for batch report filters. Please note that the variables referenced in the expressions below are not likely to exist in your studies.

Table 7 - 33:   Examples of expressions for batch report filters.

Expression	Description
`age = '18to20' OR age = '21-30'`	This expression has Survey Crafter Professional limit the records used in the report's calculations to respondents who said their ages are between 18 and 30.

Table 7 - 33:   Examples of expressions for batch report filters. (Continued)

Expression	Description
`gender = 'male'`	This expression has Survey Crafter Professional limit the records used in the report's calculations to respondents who said they are male.
`(age = '18to20' OR age = '21-30') AND gender = 'male'`	This expression has Survey Crafter Professional limit the records used in the report's calculations to respondents who said their ages are between 18 and 30 and that they are male.

Batch Report Conditions

You can configure a batch report design item to have Survey Crafter Professional include the item's analysis tables and charts only when the result of evaluating an expression is TRUE.

The table below shows several examples of condition expressions for batch report design item. Please note that the variables referenced in the expressions below are not likely to exist in your studies.

Table 7 - 34:   Examples of expressions for batch report conditions.

Expression	Description
`COUNT (age = '18to20' OR age = '21-30') > 0`	This expression has Survey Crafter Professional include the batch report design item's analysis tables and charts only when there are respondents in your study's data set who said their ages are between 18 and 30.
`COUNT (gender = 'male') > 0`	This expression has Survey Crafter Professional include the batch report design item's analysis tables and charts only when there are respondents in your study's data set who said they are male.
`COUNT (children >= 1) > 0`	This expression has Survey Crafter Professional include the batch report design item's analysis tables and charts only when there are respondents in your study's data set who said they have one or more children.
`COUNT ($FILTER) > 0`	This expression has Survey Crafter Professional include a batch report design item's analysis table or chart when there are one or more respondents in your study's data set who pass through the table or chart's filter.

Table 7 - 34:   Examples of expressions for batch report conditions. (Continued)

Expression	Description
COUNT (($FILTER) AND children >= 1) > 0	This expression has Survey Crafter Professional include a batch report design item's analysis table or chart when there are one or more respondents in your study's data set who both pass through the table or chart's filter and said they have one or more children.

8 **Batch Reports**

A batch report is a series of analysis tables and charts that you print or export together as one report. You can very quickly design a batch report that includes analysis tables and charts for every question in your survey.

This chapter explains how to create and use batch reports. Read the section "Batch Report Basics" first to learn how to work with batch reports in Survey Crafter Professional.

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- Creating and Opening Batch Reports 8 - 15
- Designing Batch Reports 8 - 24
- Printing and Exporting Batch Reports 8 - 61
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Batch Report Basics

The following sections introduce features and concepts that will help you as you design batch reports in Survey Crafter Professional.

• About Batch Reports

• The Batch Report Designer Window

About Batch Reports

A batch report allows you to print and export in one report groups of Survey Crafter Professional tables and charts that analyze the responses to your survey. In addition to including temporary tables that Survey Crafter Professional automatically builds when the report is printed or exported, a batch report can also include tables and charts that are already in your study.

Note For information about building and adding analysis tables and charts in your study, see "Analyses: Tables" on page 4 - 1 and "Analyses: Charts" on page 5 - 1.

What is a Batch Report?

A batch report is a specification for printing and exporting Survey Crafter Professional analysis tables and charts.

List of design items.

Number of tables/ charts specified by each design item.

Type of each design item.

Description of each design item.

Use these buttons to manage the list of design items.
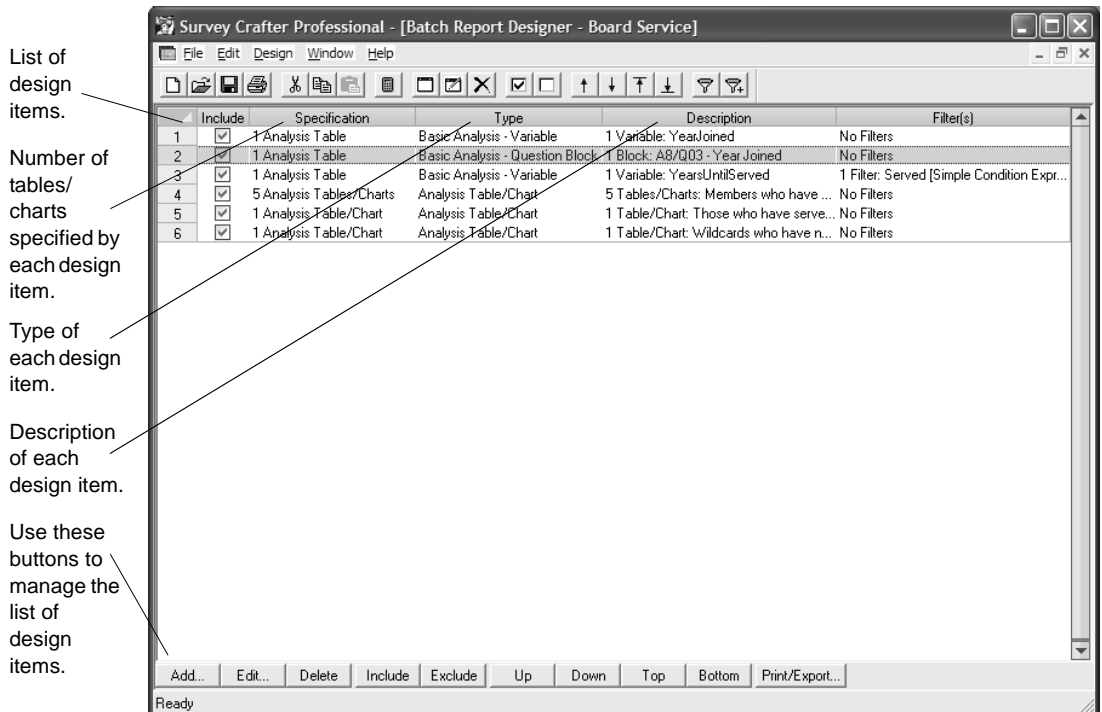
Figure 8 - 1:   A batch report in a Batch Report Designer window.

A batch report consists of a list of design items, each of which specifies a group of tables and charts to print and export. Batch reports are stored in your study and listed in the Analyses tab of the Study window.

What is a Batch Report Design Item?

A batch report design item is a component of a batch report. Each batch report design item specifies a group of Survey Crafter Professional analysis tables and charts to print and export.

Choose the type of design item you want to add to the batch report.
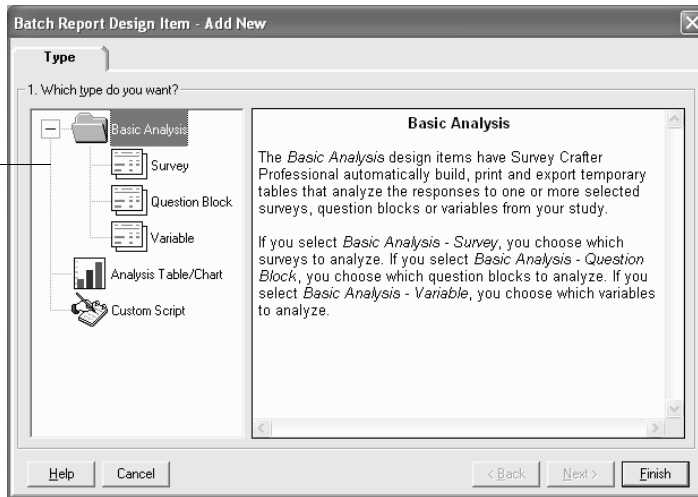
Figure 8 - 2:   The Type tab of the Batch Report Design Item dialog box.

There are five types of batch report design items:

1)Basic Analysis - Survey

Basic Analysis - Survey design items are useful for quickly analyzing the responses to all of the questions in your survey.

A *Basic Analysis - Survey* item can have Survey Crafter Professional automatically build, print and export temporary tables that analyze all of the questions in one or more selected surveys from your study. You

choose which surveys as well as which types of questions you want to analyze.

Follow the instructions on the remaining tabs to configure the design item.

On this tab, choose which surveys you want to analyze.

On this tab, choose which types of questions you want to analyze.
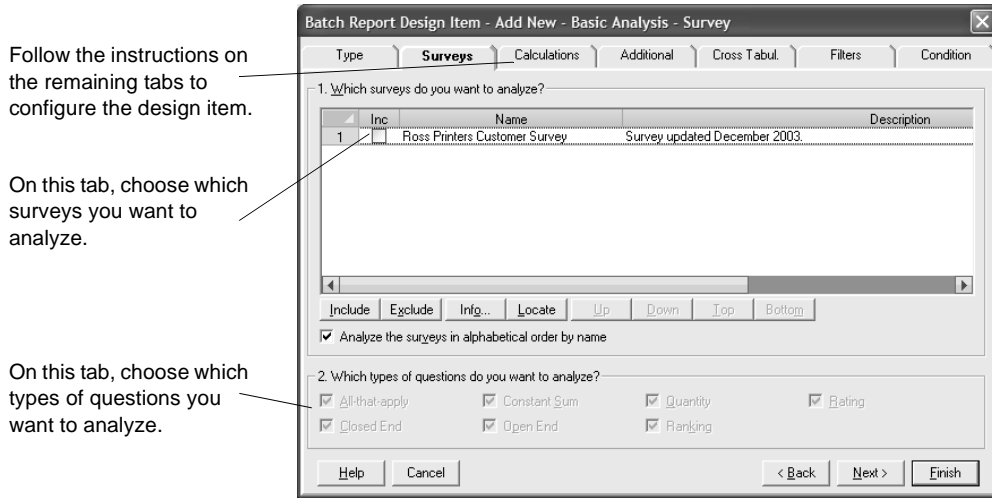
Figure 8 - 3:   Configuring a *Basic Analysis - Survey* batch report design item.

You can configure a *Basic Analysis - Survey* design item to include count and percentage calculations for all-that-apply, closed-end and open-end questions and count, percentage, mean, mean confidence interval, median, mode, minimum, maximum, standard deviation, variance and valid number calculations for constant sum, quantity, ranking and rating questions.

2) Basic Analysis - Question Block

A *Basic Analysis - Question Block* design item has Survey Crafter Professional automatically build, print and export temporary tables that analyze the responses to one or more selected question blocks from

your study's surveys. You choose which question blocks you want to analyze.

Follow the instructions on the remaining tabs to configure the design item.

On this tab, choose which question blocks you want to analyze.

Figure 8 - 4:   Configuring a *Basic Analysis - Question Block* batch report design item.

You can configure a *Basic Analysis - Question Block* design item to include count and percentage calculations for all-that-apply, closed-end and open-end questions and count, percentage, mean, mean confidence interval, median, mode, minimum, maximum, standard deviation, variance and valid number calculations for constant sum, quantity, ranking and rating questions.

3)Basic Analysis - Variable

A *Basic Analysis - Variable* design item has Survey Crafter Professional automatically build, print and export temporary tables that analyze the values in one or more selected variables from your study. You choose which variables you want to analyze.

Follow the instructions on the remaining tabs to configure the design item.

On this tab, choose which variables you want to analyze.
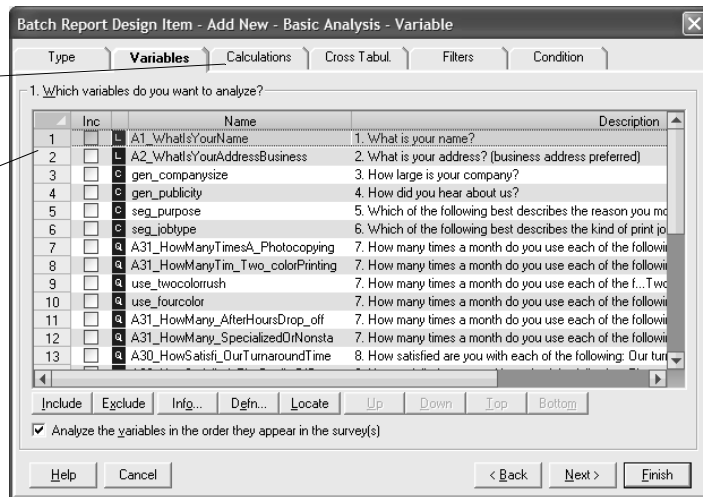
Figure 8 - 5:   Configuring a *Basic Analysis - Variable* batch report design item.

You can configure a *Basic Analysis - Variable* design item to include count and percentage calculations for category and literal variables and count, percentage, mean, mean confidence interval, median, mode, minimum, maximum, standard deviation, variance and valid number calculations for quantity variables.

4)Analysis Table/Chart

An *Analysis Table/Chart* design item allows you to have Survey Crafter Professional print and export analysis tables and charts that are already in your study.

> **Note** For information about building and adding analysis tables and charts in your study, see "Analyses: Tables" on page 4 - 1 and "Analyses: Charts" on page 5 - 1.

Follow the instructions on the remaining tabs to configure the design item.

On this tab, choose which analysis tables and charts you want to include.
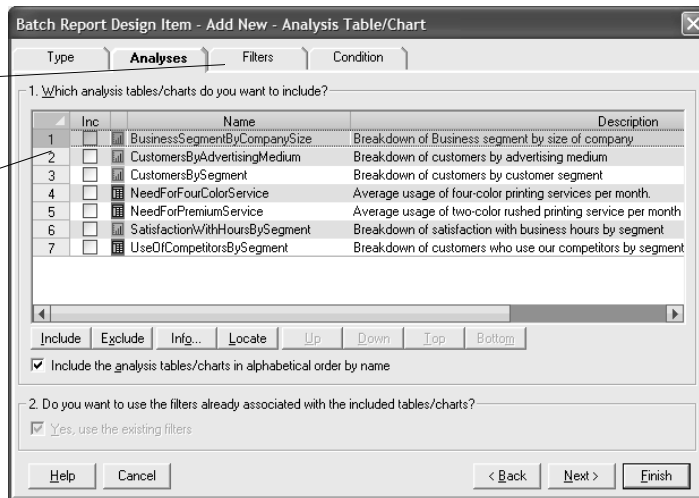
Figure 8 - 6:   Configuring an *Analysis Table/Chart* batch report design item.

If you want, you can add a batch report filter to the item to have Survey Crafter Professional apply a series of table filters to the analysis tables and charts and automatically print and export the different results.

> **Note** For more information on batch report filters, see "What is a Batch Report Filter?" on page 8 - 10.

5)Custom Script

A *Custom Script* design item allows you to use an automation procedures file to build, print and export analysis tables and charts.

If Survey Crafter technical support has provided you with an automation procedures script file, click on this button to load the file into the design item.
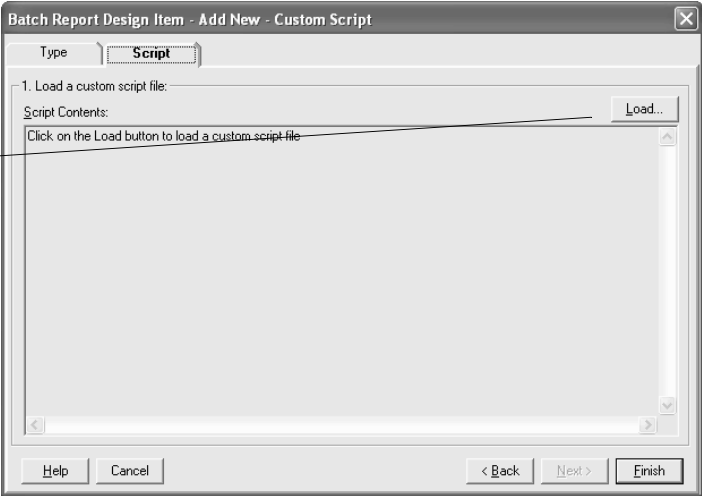
Figure 8 - 7:   Configuring a *Custom Script* batch report design item.

Automation procedure files are provided by Survey Crafter technical support.

What is a Batch Report Filter?

Batch report filters are useful for limiting a batch report's calculations to a subset of the respondent records in your study's data set. They are also useful for automatically repeating a batch report's calculations, each time limiting the calculations to a different subset of the respondent records.

Click on the Add button to add a batch report filter to the design item.
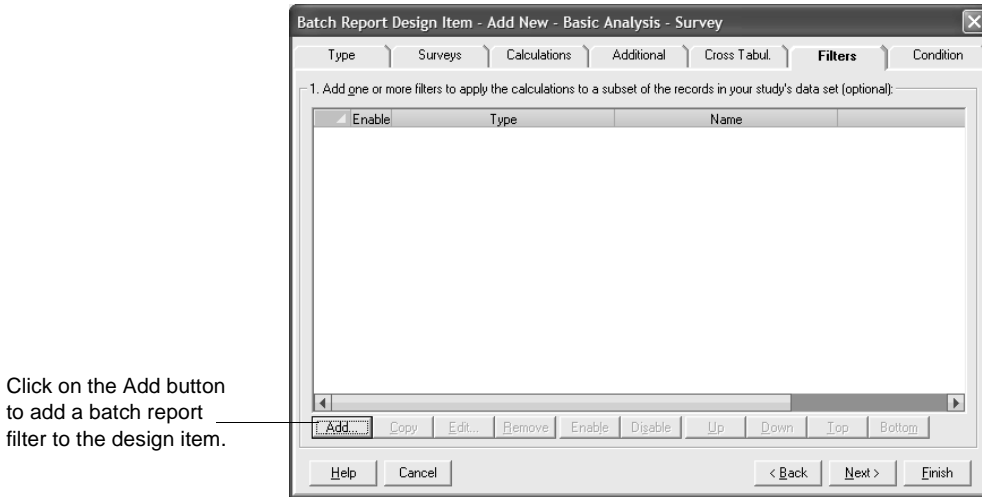
Figure 8 - 8:   The Filters tab of the Batch Report Design Item dialog box.

There are three types of batch report filters:

1)Simple Condition Expression

Simple Condition Expression filters contain one expression that evaluates to either TRUE or FALSE for each respondent in your study's data set.

Choose *Simple Condition Expression* for a filter that uses one expression.

Enter a name and description for the filter.

Enter an expression that evaluates to either TRUE or FALSE for each respondent in your study's data set.

If you want, enter text to add to the end of the title of the table or chart the filter is being applied to.
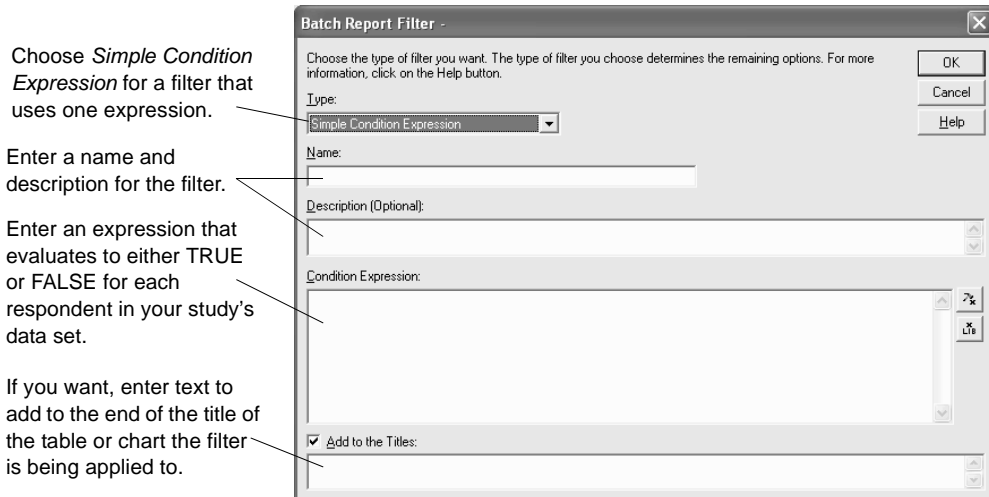
Figure 8 - 9:   Configuring a *Simple Condition Expression* batch report filter.

Let's say you create a batch report filter of this type, enter an expression and add the filter to a batch report design item. When it prints or exports the item's analysis tables and charts, Survey Crafter Professional uses the filter's expression to limit the calculations to a subset of the respondent records in your study's data set.

2)Repeat Condition Expressions

Repeat Condition Expressions filters contain one or more expressions that each evaluate to either TRUE or FALSE for each respondent in your study's data set.

Choose *Repeat Condition Expressions* for a filter that uses one or more expressions.

Enter a name and description for the filter.

Click on the Add button to add a new expression to the list.

Figure 8 - 10:   Configuring a *Repeat Condition Expressions* batch report filter.

Let's say you create a batch report filter of this type, enter a few expressions and add the filter to a batch report design item. When it prints or exports the item's analysis tables and charts, Survey Crafter Professional automatically repeats the calculations using each of the filter's expressions to limit the calculations to a different subset of the respondent records in your study's data set.

3)Repeat Variable Values

Repeat Variable Values filters contain a list of one or more variables that are used to build expressions that each evaluate to either TRUE or FALSE for each respondent in your study's data set.

Choose *Repeat Variable Values* for a filter that uses one or more variables.

Enter a name and description for the filter.

Click on the Add button to add a variable to the list.
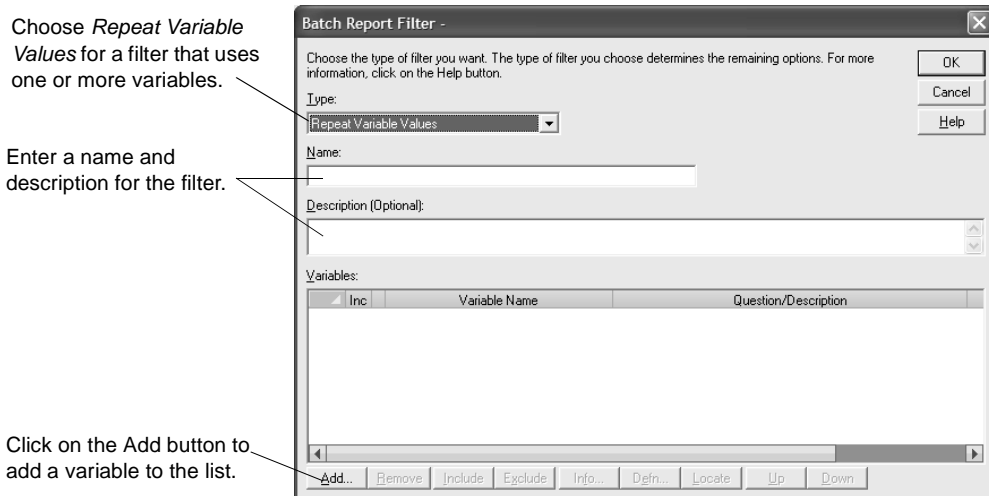
Figure 8 - 11:   Configuring a *Repeat Variable Values* batch report filter.

Let's say you create a batch report filter of this type, choose one variable and add the filter to a batch report design item. When it prints or exports the item's analysis tables and charts, Survey Crafter Professional builds an expression for each of the variable's unique values and repeats the calculations using each of the expressions to limit the calculations to a different subset of the respondent records in your study's data set.

The Batch Report Designer Window

Use the Batch Report Designer window to design, print and export a batch report.

Click on the Print button on the toolbar to print and/or export the batch report.

The list of batch report design items.

Click on the Add button to add another batch report design item to the list.
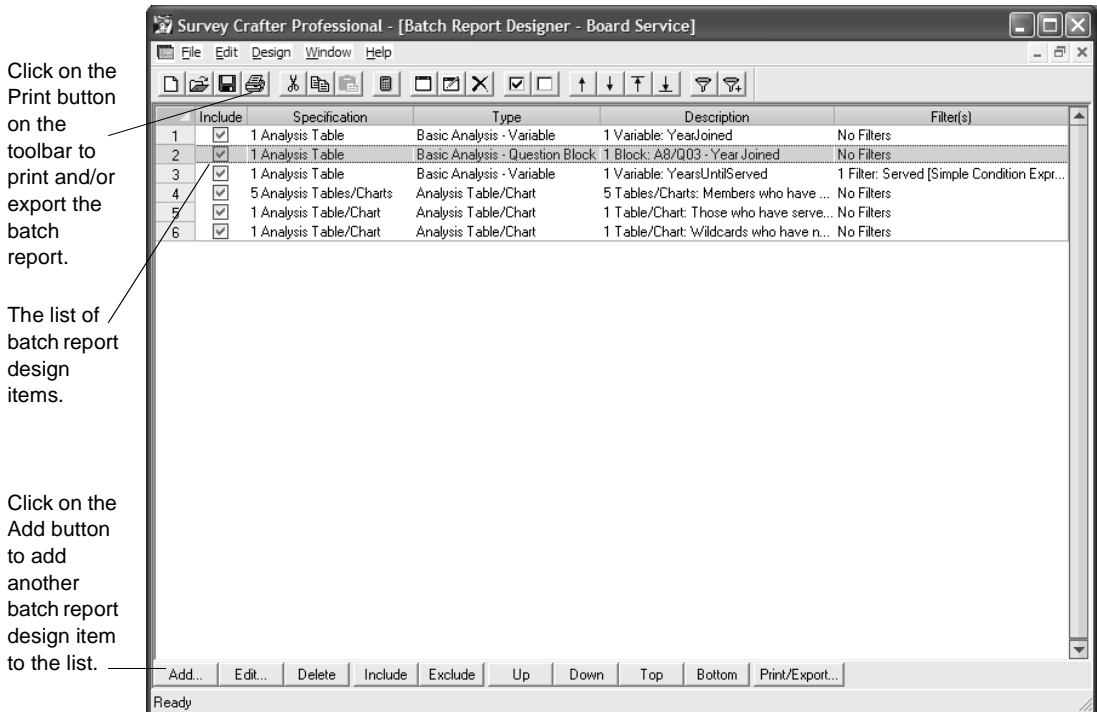
Figure 8 - 12:   A batch report in a Batch Report Designer window.

A batch report consists of a list of design items, each of which specifies a group of Survey Crafter Professional analysis tables and charts to print and export. The Batch Report Designer window displays the list, allowing you to make changes to as well as print and export the report.

Creating and Opening Batch Reports

There are two different ways of creating a batch report in Survey Crafter Professional.

This section provides step-by-step instructions for creating a batch report as well as for opening an existing batch report.

• Using the New Analysis Dialog Box to Create a Batch Report

• Creating a New Batch Report By Copying

• Opening a Batch Report

Using the New Analysis Dialog Box to Create a Batch Report

Follow the steps below to create a new batch report.

• **To create a new batch report**

   1   Select the Analyses tab of the Study window.

Click on the New button to create a new batch report.
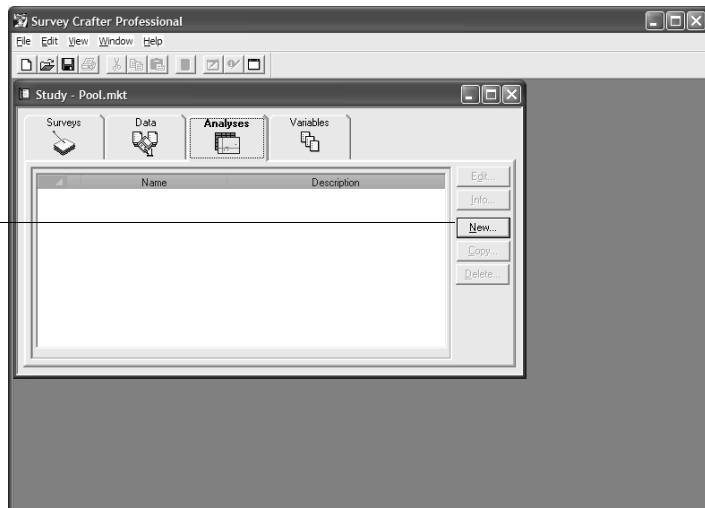
Figure 8 - 13:   The Analyses tab of the Study window.

   2   Click on the New button on the tab.

Survey Crafter Professional displays step 1 of the New Analysis dialog box.

Select this option to design a new batch report.
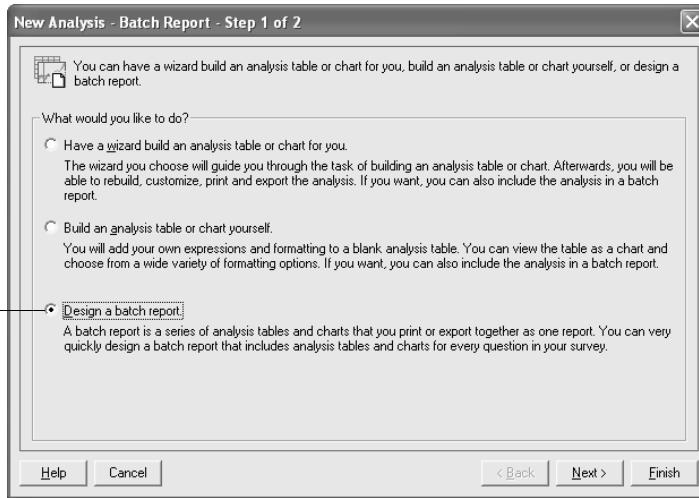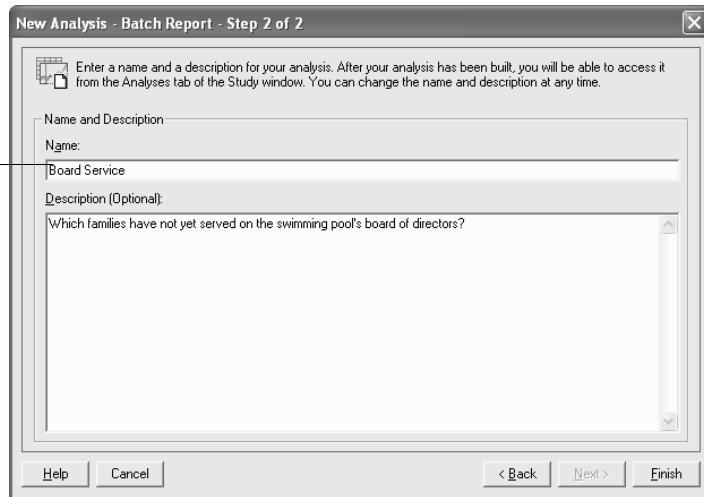
Figure 8 - 14:   Step 1 of the New Analysis dialog box.

3   Select *Design a Batch Report.*

4   Click on the Next button.

Survey Crafter Professional displays step 2 of the New Analysis dialog box.

Enter a name and description for the batch report.

Figure 8 - 15:   Step 2 of the New Analysis dialog box.

5   Enter a name and description for the batch report.

The name must begin with a letter and may contain up to 49 additional letter, digit, or underscore characters.

Both the name and description will appear in the list of analyses in the Analyses tab of the Study window.

6   Click on the Finish button.

Survey Crafter Professional displays the Batch Report Design Item
dialog box.

Choose the type of
design item you want to
add to the batch report.
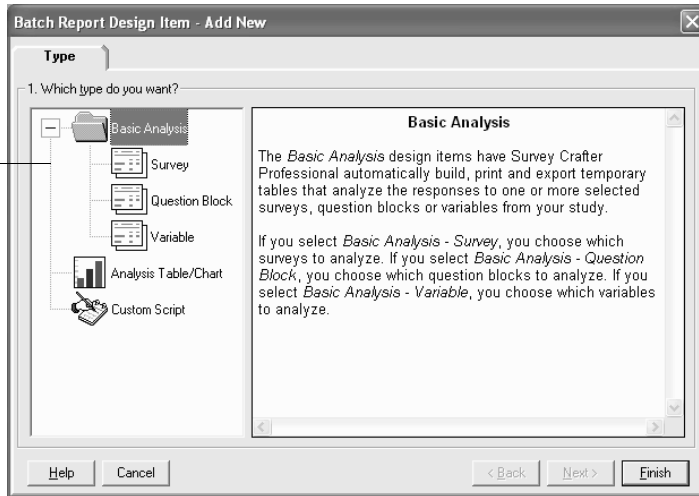
Figure 8 - 16:   The Batch Report Design Item dialog box.

7   Follow the instructions on the screen to configure a new batch report
design item for the batch report.

For help on any of the options, click on the Help button on the dialog
box.

8   Click on the Finish button.

Survey Crafter Professional adds the design item to the new batch report in the Batch Report Designer window.
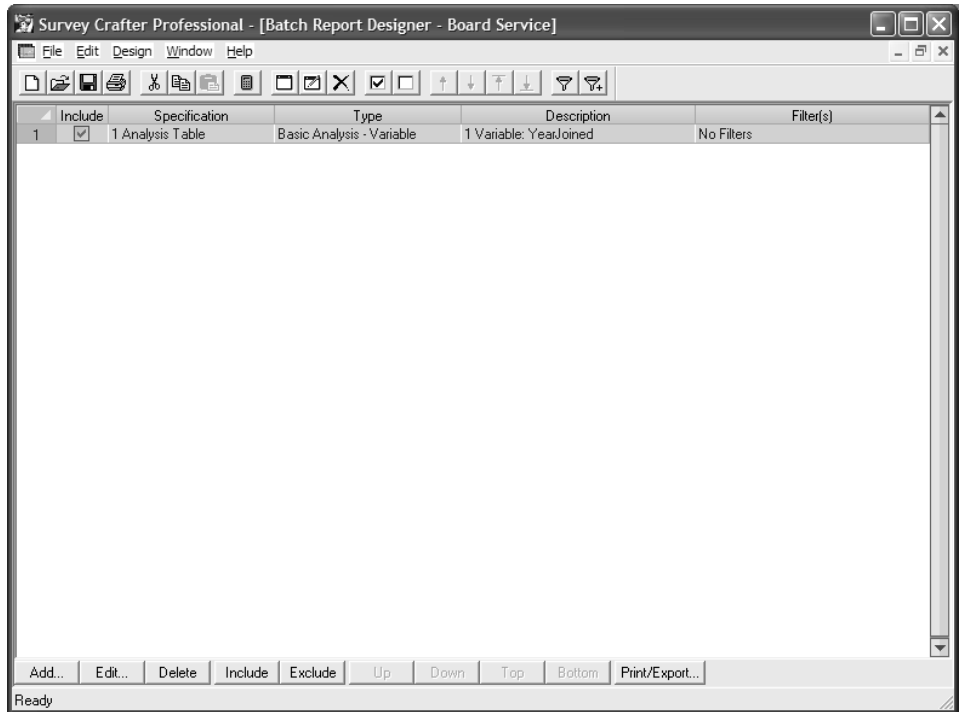
Figure 8 - 17:   The Batch Report Designer window.

If you want, you can add more design items to the batch report.

> **Note** For information about designing your batch report, see "Designing Batch Reports" on page 8 - 24. For information about printing and exporting your batch report, see "Printing and Exporting Batch Reports" on page 8 - 61.

Creating a New Batch Report By Copying

You can create a new batch report by copying an existing one.

Follow the steps below to copy an existing batch report.

- **To copy an existing batch report**

    1   Select the Analyses tab of the Study window.

Click on the Copy button to copy the highlighted batch report.
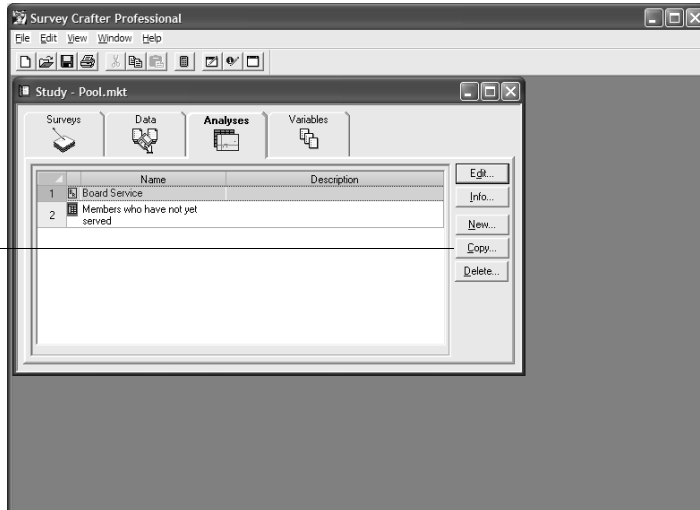
Figure 8 - 18:   The Analyses tab of the Study window.

2   Select the batch report you want to copy.

3   Click on the Copy button on the tab.

Survey Crafter Professional displays the Batch Report Information dialog box.

Enter a new name for the batch report.
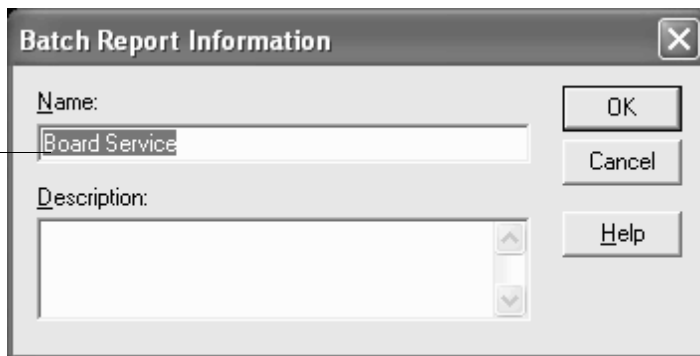
Figure 8 - 19:   The Batch Report Information dialog box.

4   Enter a new name for the batch report.

The name must not have already been given to any other batch report, analysis table or chart.

The name must begin with a letter and may contain up to 49 additional letter, digit, or underscore characters.

5 Enter a new description for the batch report.

Both the name and description will appear in the list of analyses in the Analyses tab of the Study window.

6 Click on the OK button.

Survey Crafter Professional displays the new copy of the batch report in a Batch Report Designer window.
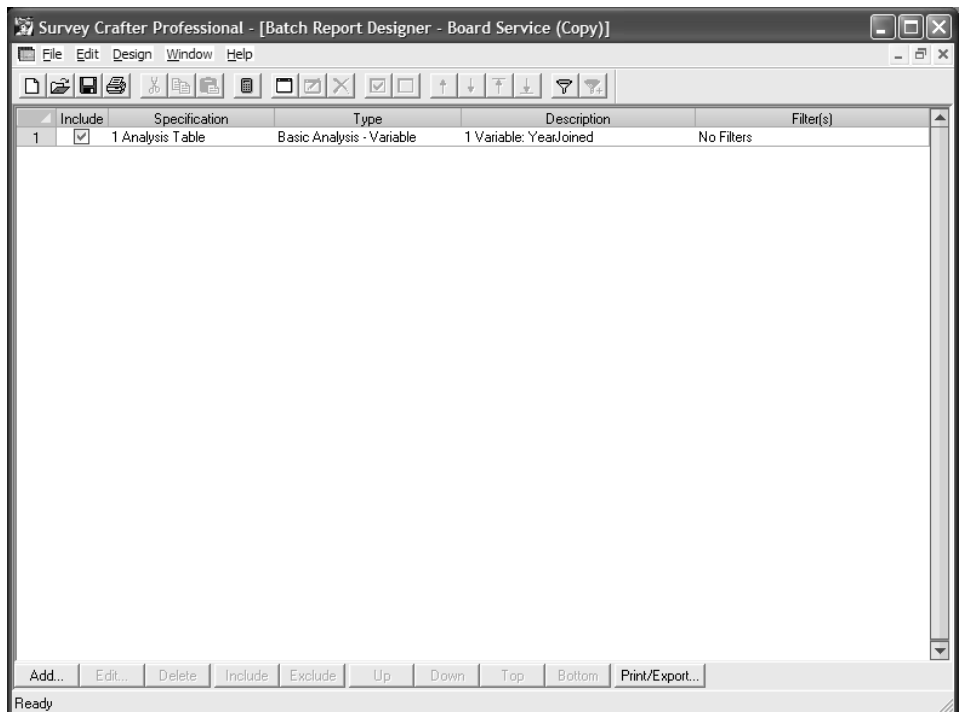
Figure 8 - 20:   The Batch Report Designer window.

If you want, you can make changes to the batch report.

> **Note** For information about designing your batch report, see "Designing Batch Reports" on page 8 - 24. For information about printing and exporting your batch report, see "Printing and Exporting Batch Reports" on page 8 - 61.

Opening a Batch Report

Follow the steps below to open an existing batch report.

- **To open an existing batch report**

    1   Select the Analyses tab of the Study window.

Click on the Edit button to open the highlighted batch report.
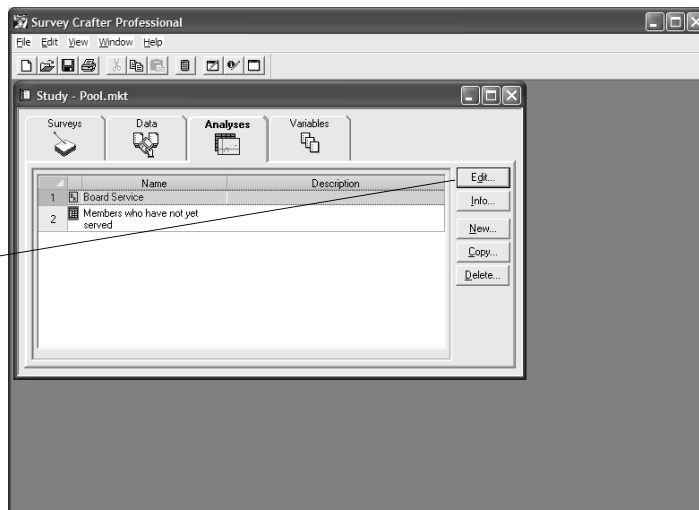
Figure 8 - 21:   The Analyses tab of the Study window.

2   Select the batch report you want to open.

3   Click on the Edit button on the tab.

Alternatively, you can double-click on the batch report you want to open.

Survey Crafter Professional displays the batch report in a new Batch Report Designer window.
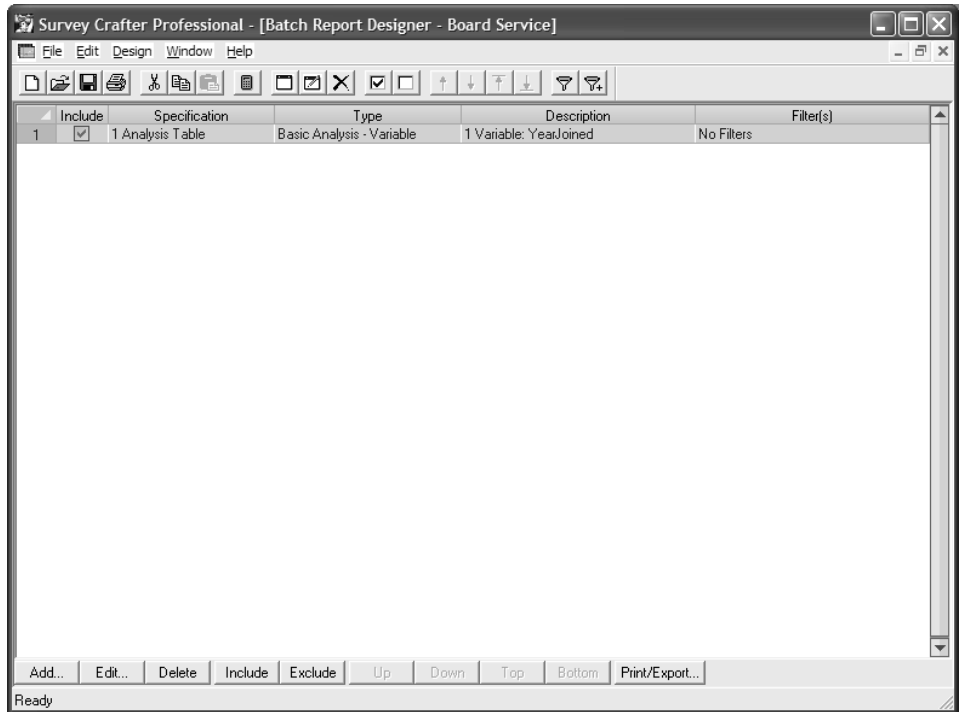
Figure 8 - 22:   The Batch Report Designer window.

Designing Batch Reports

Designing a batch report consists of adding, modifying, moving and deleting batch report design items.

This section provides step-by-step instructions for doing the following.

- Adding Items to a Batch Report

- Modifying Items in a Batch Report

- Deleting Items From a Batch Report

- Copying and Pasting Items in a Batch Report

- Moving Items in a Batch Report

- Including and Excluding Items in a Batch Report

- Adding Filters to Items in a Batch Report

- Dragging and Dropping Items in a Batch Report

Adding Items to a Batch Report

Follow the steps below to add a batch report design item to a batch report.

- **To add an item to a batch report**

  1   Open an existing batch report or create a new one.

  Note To open an existing batch report, see "Opening a Batch Report" on page 8 - 22. To create a new batch report, see "Using the New Analysis Dialog Box to Create a Batch Report" on page 8 - 15 or "Creating a New Batch Report By Copying" on page 8 - 19.

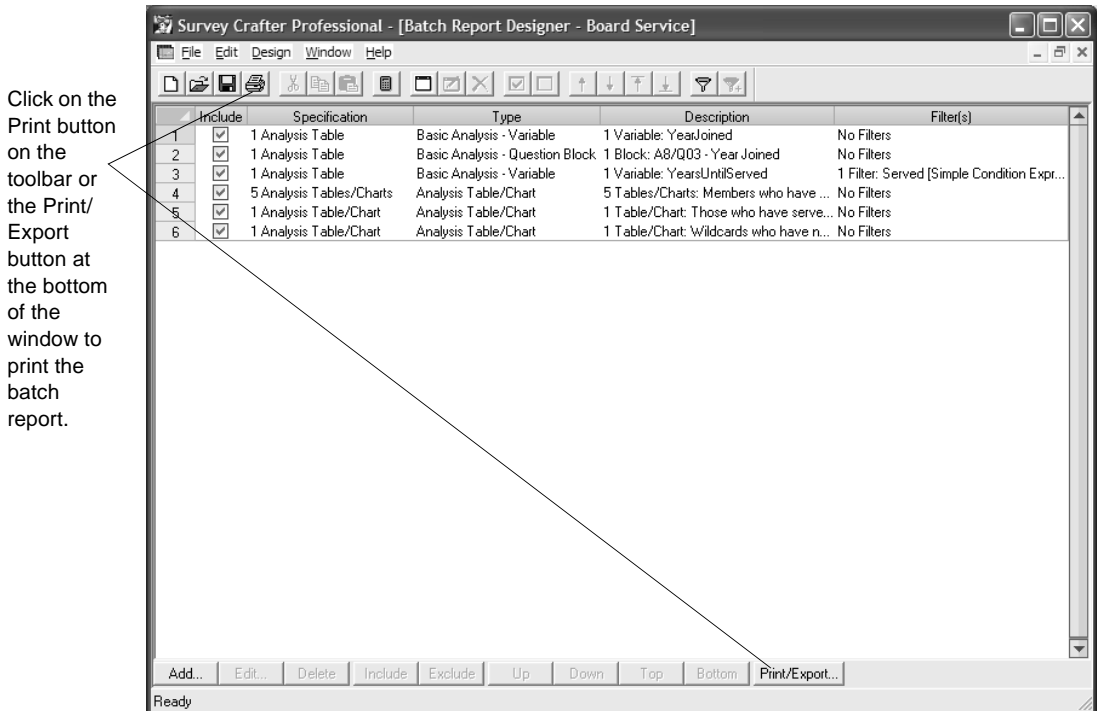Survey Crafter Professional displays the batch report in the Batch Report Designer window.

Click on the Add button to add another batch report design item to the list.
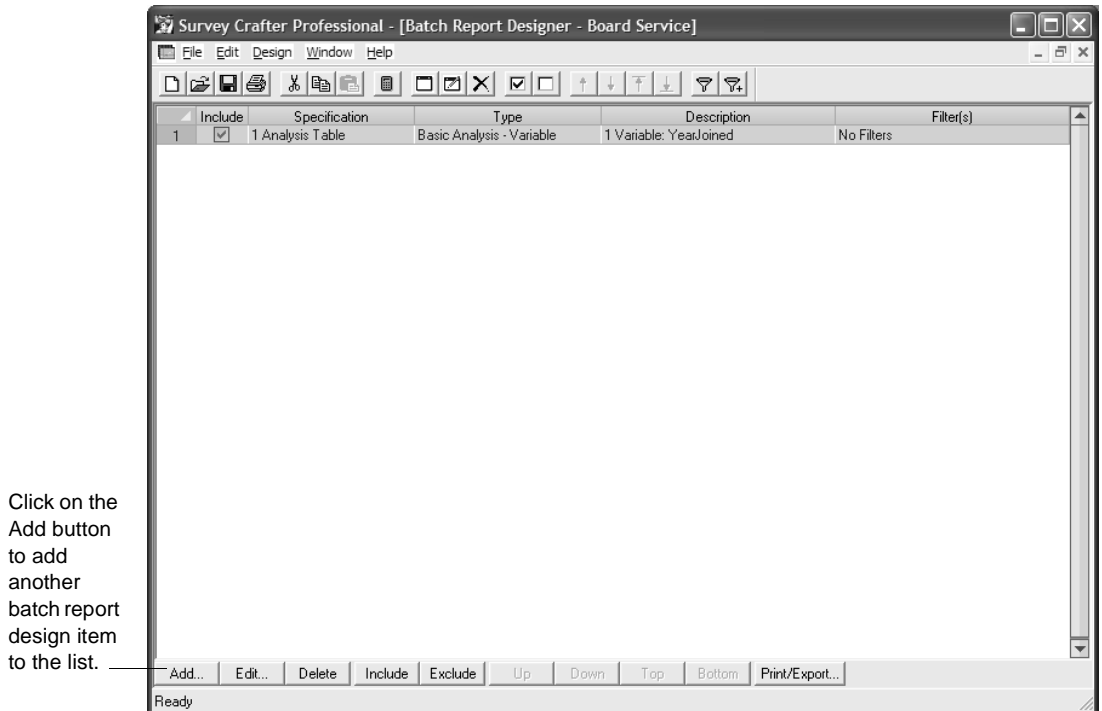
Figure 8 - 23:   The Batch Report Designer window.

2   In the Batch Report Designer window, click on the *Add* button at the bottom left corner of the window.

> **Tip** Alternatively, click on the Design menu and then on *Add New Item* or click on the *Add New Item* button on the toolbar. When there are one or more items in the batch report, you can also right-click on an item and choose *Add New Item* from the pop-up menu.

Survey Crafter Professional displays the Batch Report Design Item dialog box.

Choose the type of
batch report design
item you want.
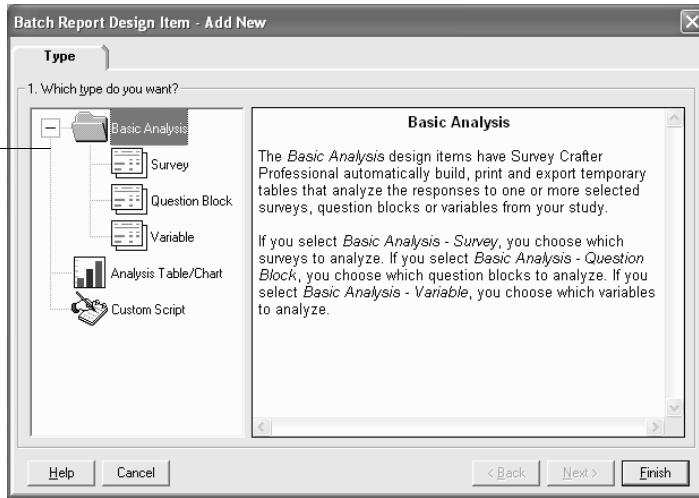
Figure 8 - 24: The Type tab of the Batch Report Design Item dialog box.

3 Use the Batch Report Design Item dialog box to configure the new item.

For help on any of the options, click on the Help button on the dialog box.

4 Click on the Finish button on the dialog box.

Survey Crafter Professional adds the new item to the batch report in the Batch Report Designer window.
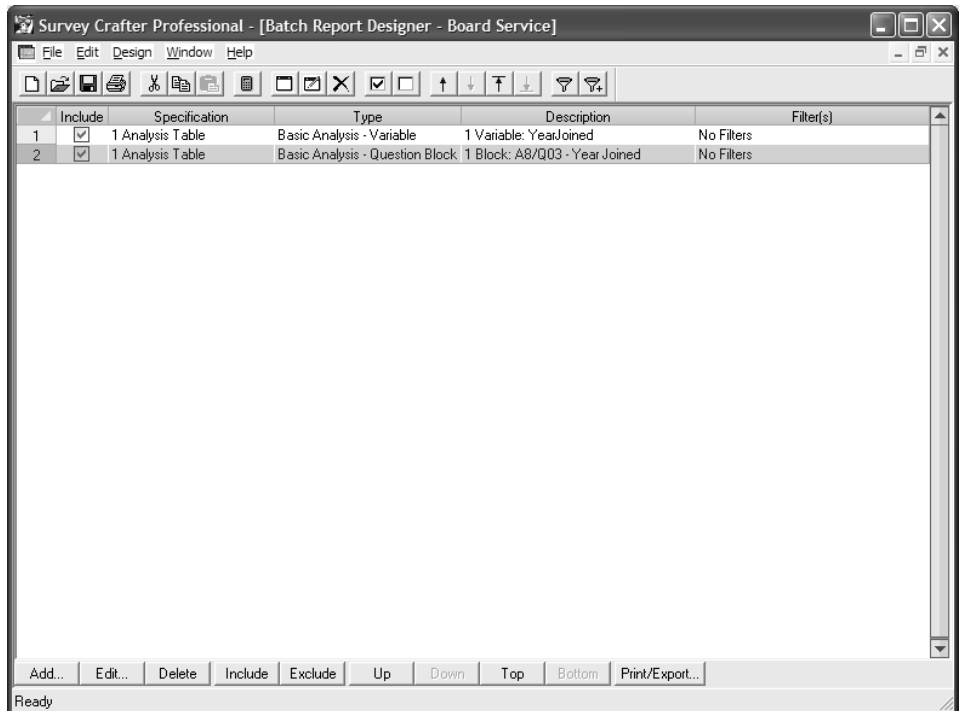
Figure 8 - 25:   The Batch Report Designer window.

Modifying Items in a Batch Report

Follow the steps below to modify a batch report design item in a batch report.

• **To modify an item in a batch report**

1   Open the batch report you want to modify.

Note To open an existing batch report, see "Opening a Batch Report" on page 8 - 22.

Survey Crafter Professional displays the batch report in the Batch Report Designer window.


Click on the Edit button to modify the highlighted item.
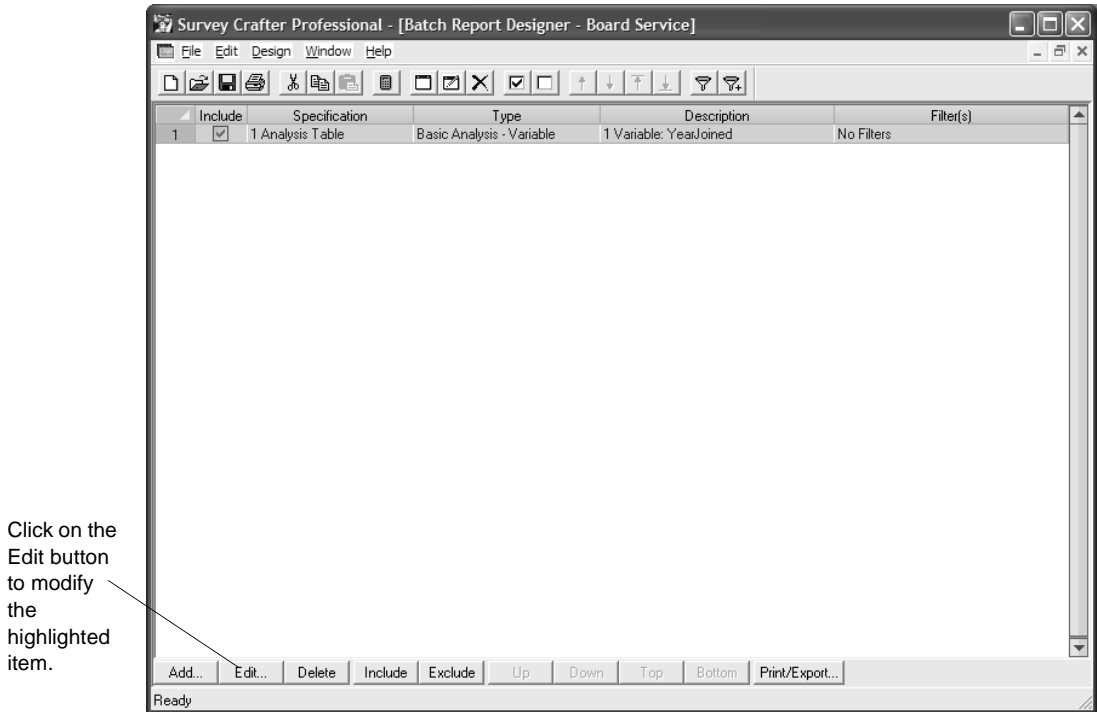
Figure 8 - 26:   The Batch Report Designer window.

2   In the Batch Report Designer window, click to select the item you want to modify.

3   Click on the Edit button at the bottom of the window.

Tip Alternatively, double-click on the item, click on the Design menu and then on Edit Item, click on the Edit Item button on the toolbar or right-click on the item and choose Edit Item from the pop-up menu.

Survey Crafter Professional displays the Batch Report Design Item dialog box.

Use the dialog box to modify the item.
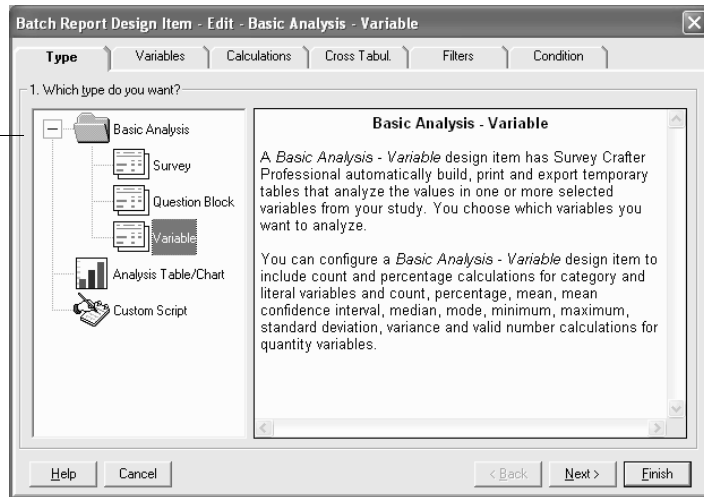
Figure 8 - 27:   The Type tab of the Batch Report Design Item dialog box.

4   Use the Batch Report Design Item dialog box to modify the item.

For help on any of the options, click on the Help button on the dialog box.

5   Click on the Finish button on the dialog box.

Survey Crafter Professional redisplays the item in the Batch Report Designer window.
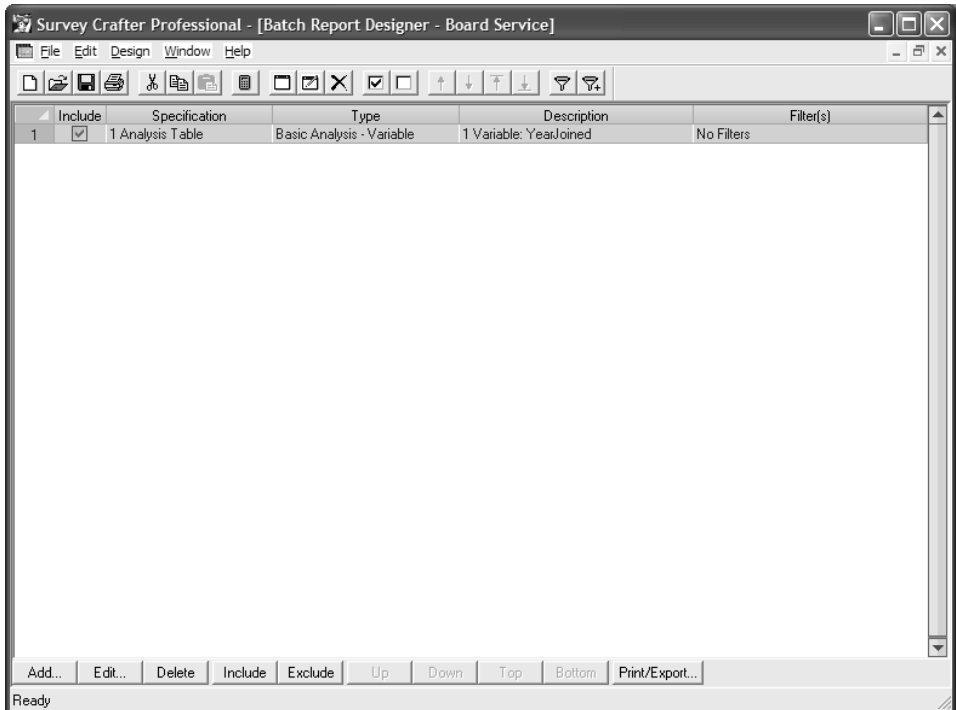
Figure 8 - 28:   The Batch Report Designer window.

Deleting Items From a Batch Report

You can delete any number of batch report design items at any time.

Follow the steps below to delete one or more batch report design items from a batch report.

- **To delete one or more items from a batch report**

   1   Open the batch report you want to modify.

   Note To open an existing batch report, see "Opening a Batch Report" on page 8 - 22.

Survey Crafter Professional displays the batch report in the Batch Report Designer window.

Click on the Delete button to delete the highlighted items.
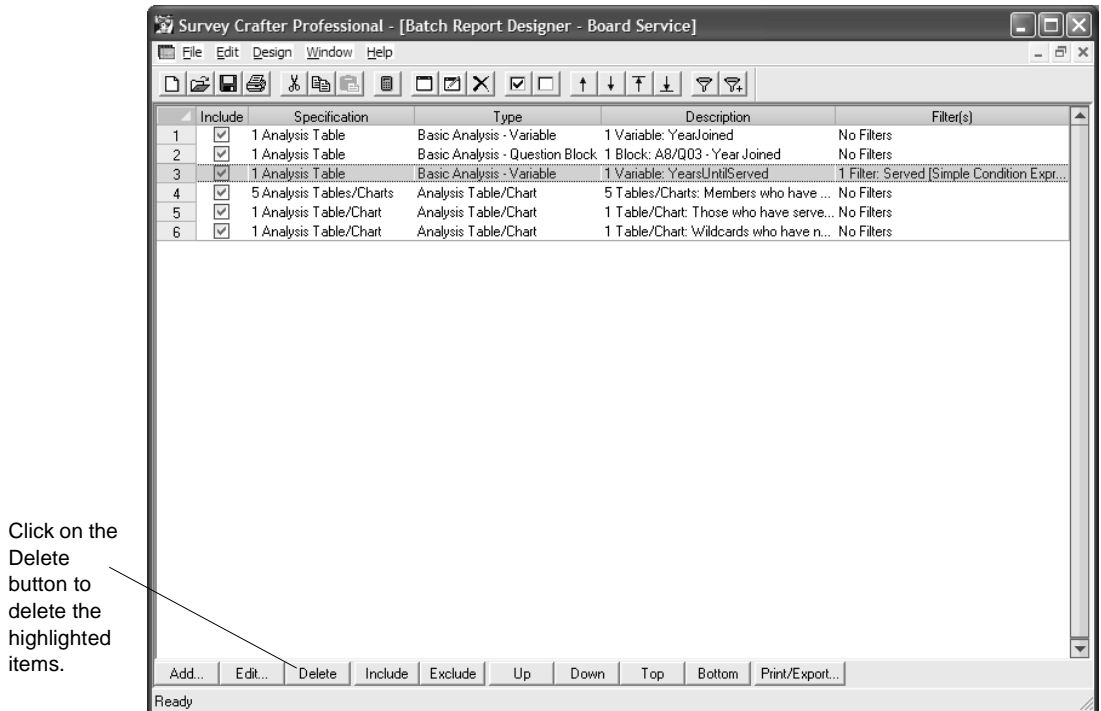
Figure 8 - 29: The Batch Report Designer window.

2 In the Batch Report Designer window, highlight the items you want to delete.

3 Click on the Delete button at the bottom of the window.

> **Tip** Alternatively, press the [DEL] key, click on the Edit menu and then on Delete, click on the Delete Item(s) button on the toolbar or right-click on the items and choose Delete Item(s) from the pop-up menu.

4 Click on the Yes button.

Survey Crafter Professional deletes the highlighted items from the batch report in the Batch Report Designer window.
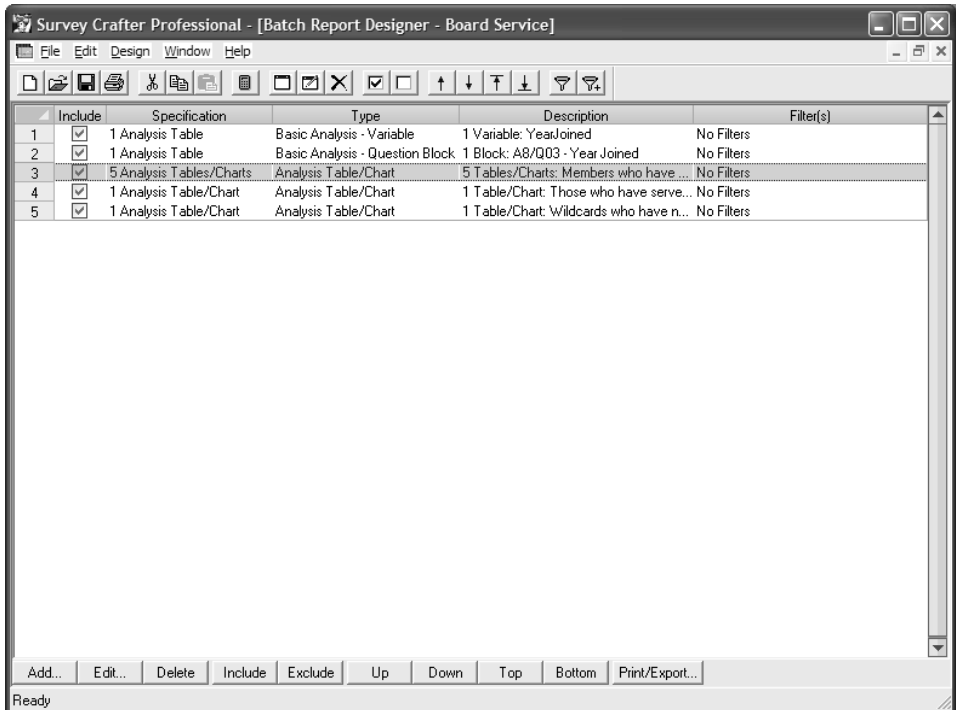
Figure 8 - 30:   The Batch Report Designer window.

Copying and Pasting Items in a Batch Report

You can copy and paste batch report design items within a batch report or from one batch report into another.

Follow the steps below to copy and paste batch report design items.

• **To copy and paste items within a batch report**

   1   Open the batch report you want to modify.

> **Note** To open an existing batch report, see "Opening a Batch Report" on page 8 - 22.

Survey Crafter Professional displays the batch report in the Batch Report Designer window.

Highlight the items you want to copy.
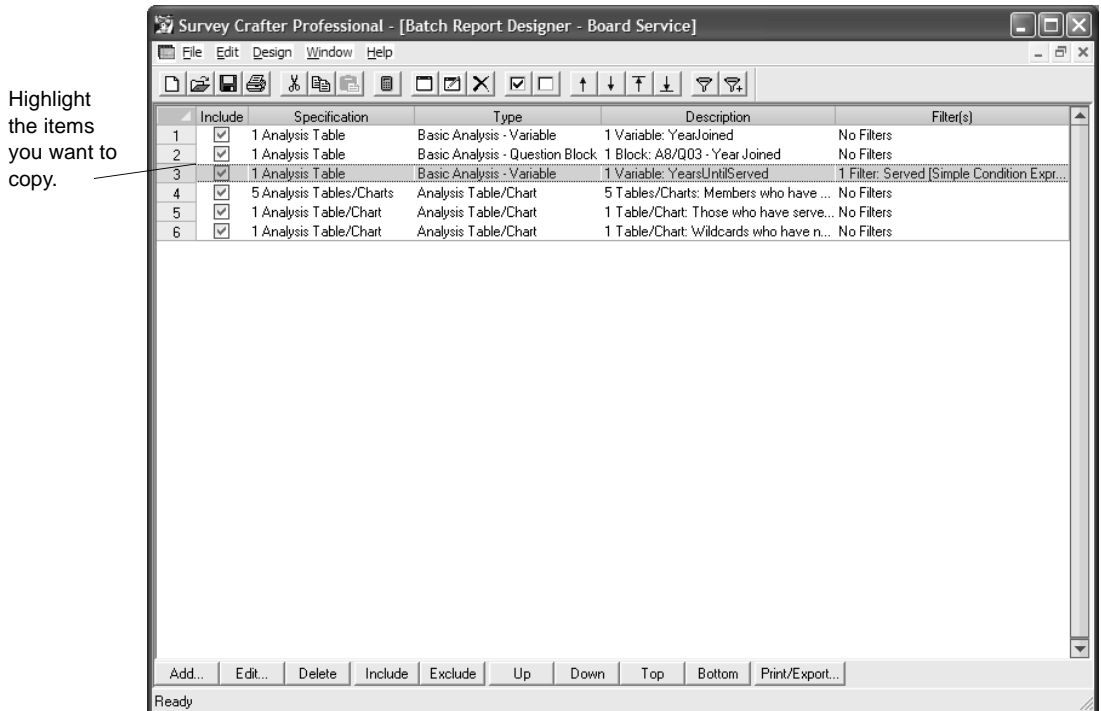
Figure 8 - 31:   The Batch Report Designer window.

2   In the Batch Report Designer window, highlight the items you want to copy.

3   Click on the Edit menu and then on Copy.

> **Tip** Alternatively, press [CTRL-C] or right-click on the items and choose Copy Item(s) from the pop-up menu.

Survey Crafter Professional copies the highlighted items to the clipboard.

4   In the Batch Report Designer window, click on the item after which you want to add the copies.

5   Click on the Edit menu and then on Paste.

Tip Alternatively, press [CTRL-V] or right-click on the item and choose Paste Item(s) from the pop-up menu.

Survey Crafter Professional adds the items from the clipboard to the batch report in the Batch Report Designer window.
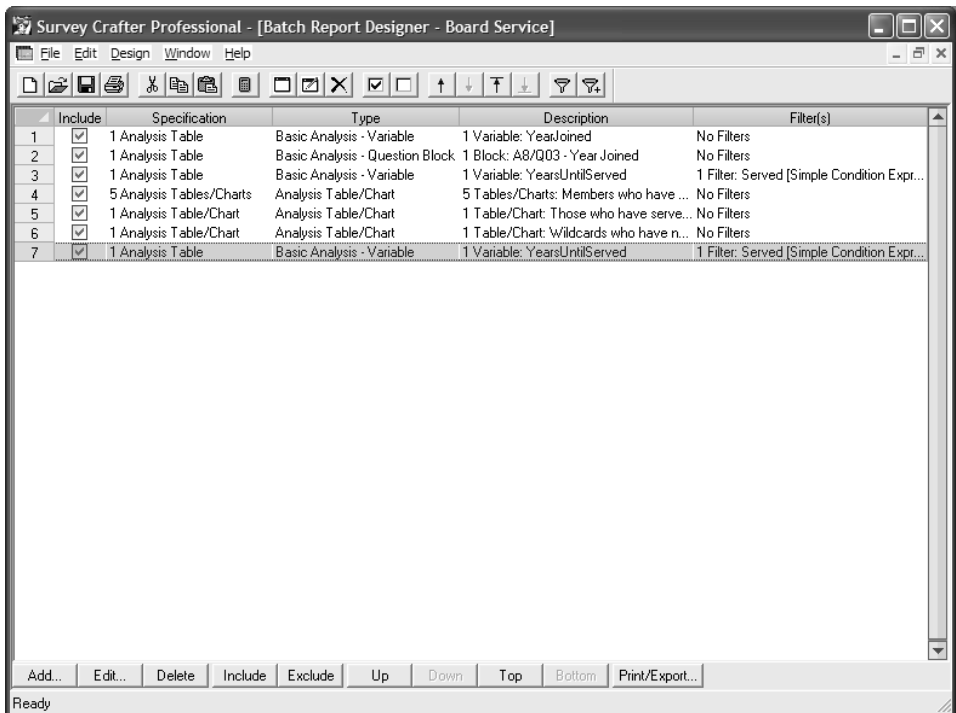
Figure 8 - 32:   The Batch Report Designer window.

- **To copy and paste items from one batch report into another**

    1   Open the batch report from which you want to copy items.

Note To open an existing batch report, see "Opening a Batch Report" on page 8 - 22.

Survey Crafter Professional displays the batch report in the Batch Report Designer window.

Highlight the items you want to copy.
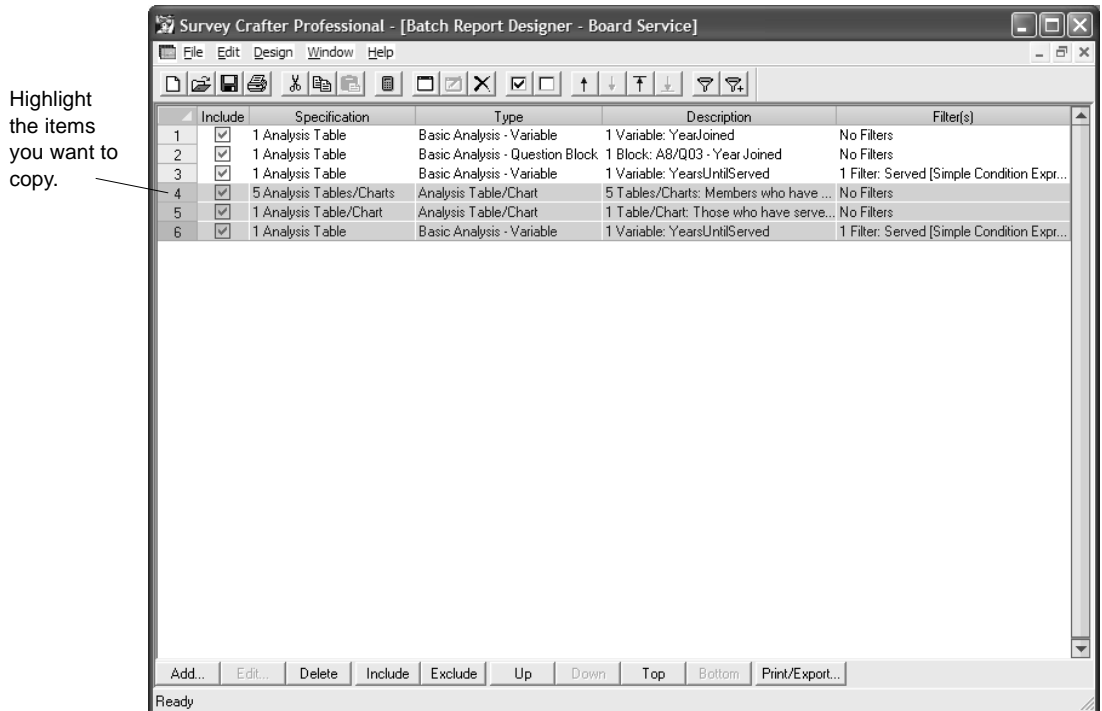
Figure 8 - 33:   The Batch Report Designer window.

2   In the Batch Report Designer window, highlight the items you want to copy.

3   Click on the Edit menu and then on Copy.

Tip Alternatively, press [CTRL-C] or right-click on the items and choose Copy Item(s) from the pop-up menu.

Survey Crafter Professional copies the highlighted items to the clipboard.

4   Open the batch report to which you want to add the items from the clipboard.

Tip If you cannot see the Study window, click on the Window menu and then on *Study - <name of study file>*. Then click on the Analyses tab and open an existing batch report or create a new one.

5   In the Batch Report Designer window, click on the item after which you want to add the copies.

6   Click on the Edit menu and then on Paste.

Tip Alternatively, press [CTRL-V] or right-click on the item and choose Paste Item(s) from the pop-up menu.

Survey Crafter Professional adds the items from the clipboard to the batch report in the Batch Report Designer window.
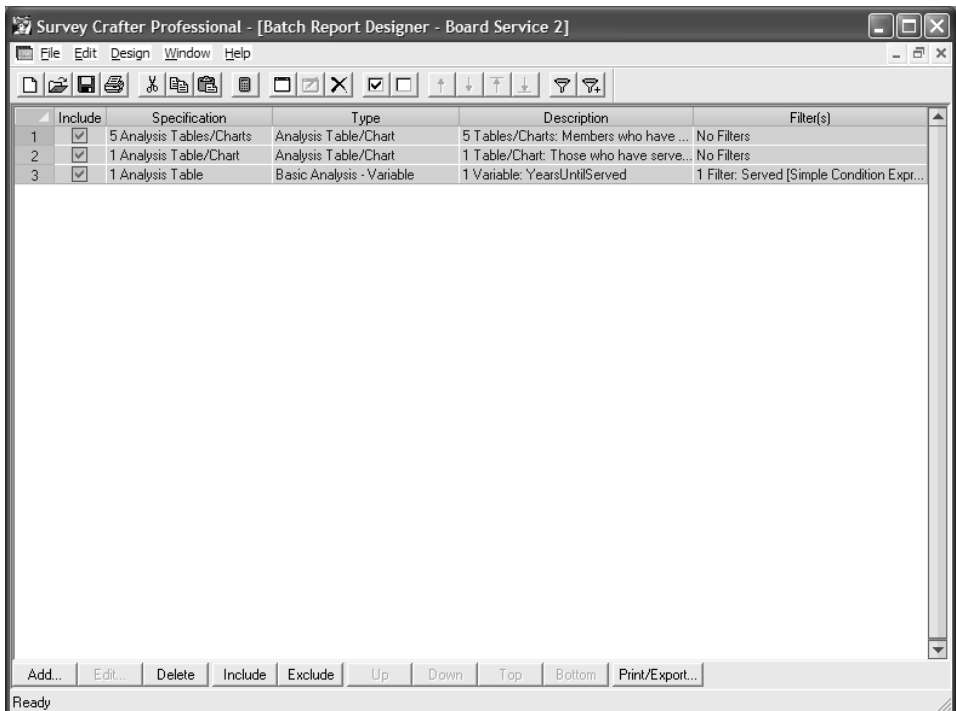
Figure 8 - 34:   The Batch Report Designer window.

Moving Items in a Batch Report

Survey Crafter Professional prints and exports batch report design items in the order the items are listed in the Batch Report Designer window.

Follow the steps below to move items within a batch report or from one batch report into another.

• **To move items within a batch report (method 1)**

1   Open the batch report you want to modify.

> **Note** To open an existing batch report, see "Opening a Batch Report" on page 8 - 22.

Survey Crafter Professional displays the batch report in the Batch Report Designer window.

Highlight
the items
you want to
move.

Use these
buttons to
move the
highlighted
items up,
down, to the
top or to the
bottom of
the list.
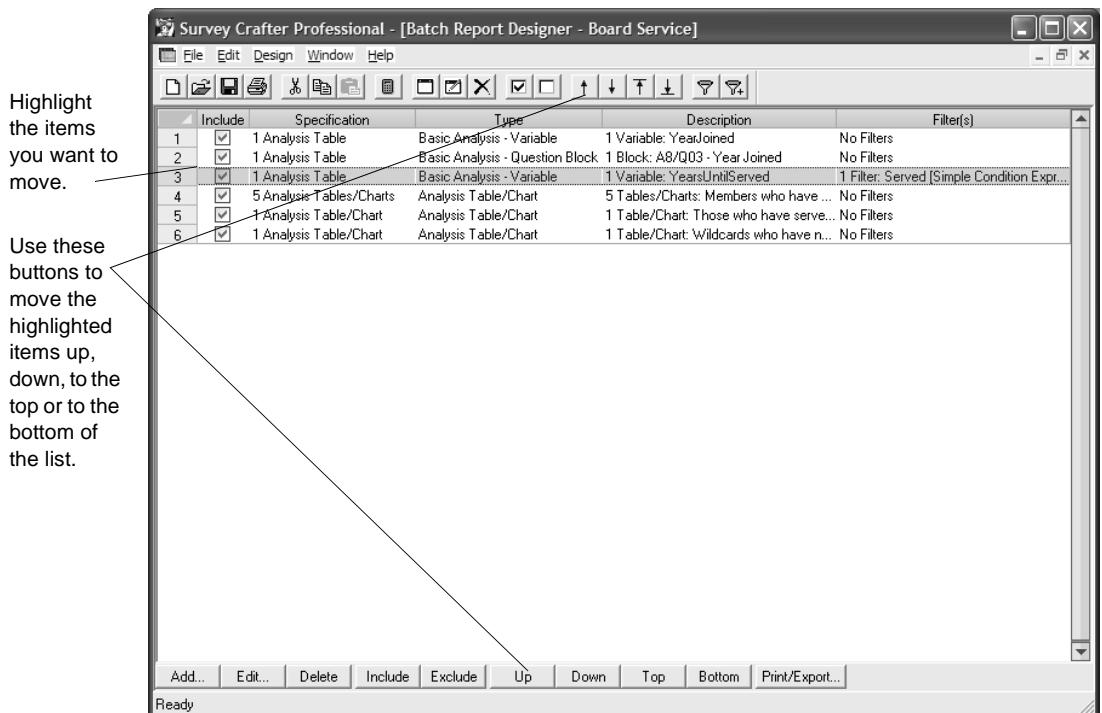
Figure 8 - 35:   The Batch Report Designer window.

2   In the Batch Report Designer window, highlight the items you want to move.

3   Click on the Up, Down, Top or Bottom buttons at the bottom of the window.

> **Tip** Alternatively, right-click on the highlighted items and choose Move Item(s) Up, Move Item(s) Down, Move Item(s) to Top, or Move Item(s) to Bottom from the pop-up menu.

Survey Crafter Professional moves the highlighted items.
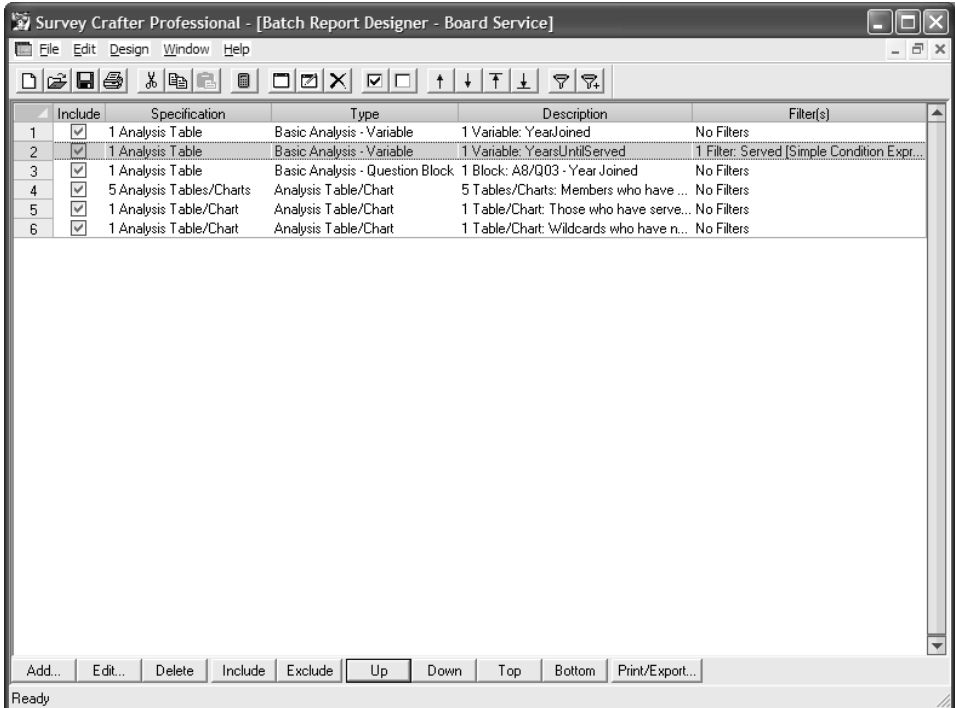
Figure 8 - 36:   The Batch Report Designer window.

- **To move items within a batch report (method 2)**

  1   Open the batch report you want to modify.

> **Note** To open an existing batch report, see "Opening a Batch Report" on page 8 - 22.

Survey Crafter Professional displays the batch report in the Batch
Report Designer window.

Highlight
the items
you want to
move.
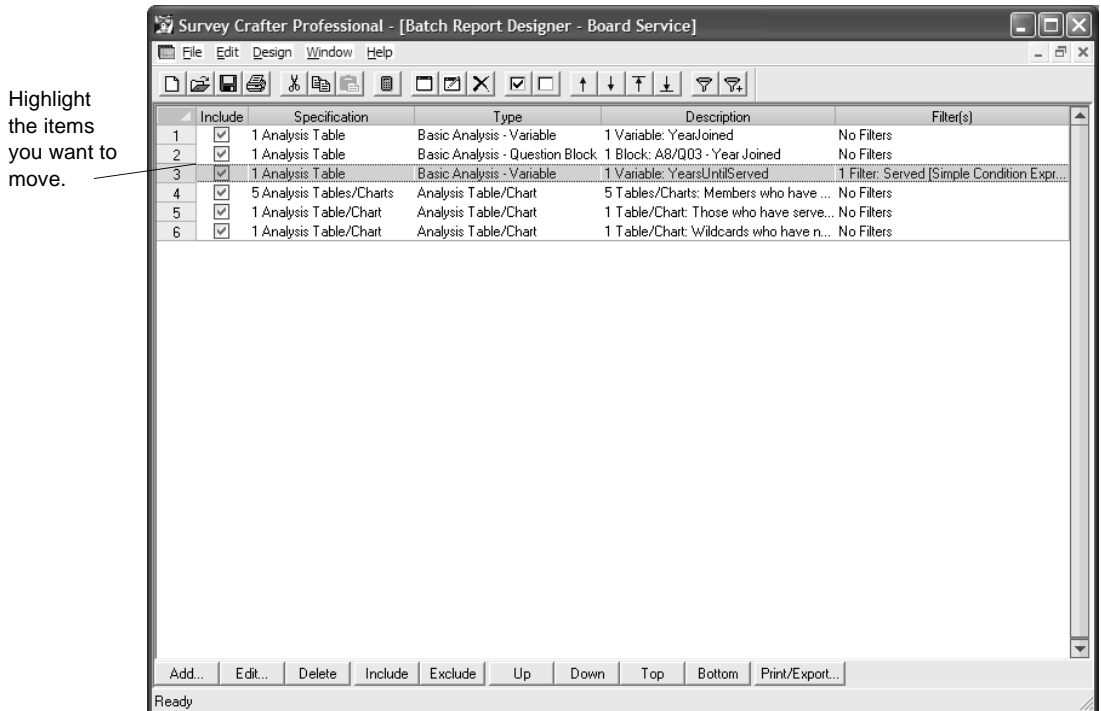
Figure 8 - 37: The Batch Report Designer window.

   2   In the Batch Report Designer window, highlight the items you want to
move.

   3   Click on the Edit menu and then on Cut.

> **Tip** Alternatively, press [CTRL-X] or right-click on the items and
> choose Cut Item(s) from the pop-up menu.

Survey Crafter Professional copies the highlighted items to the
clipboard and then deletes the items.

   4   In the Batch Report Designer window, click on the item after which
you want to add the copies.

5   Click on the Edit menu and then on Paste.

Tip Alternatively, press [CTRL-V] or right-click on the item and choose
Paste Item(s) from the pop-up menu.

Survey Crafter Professional adds the items from the clipboard to the
batch report in the Batch Report Designer window.
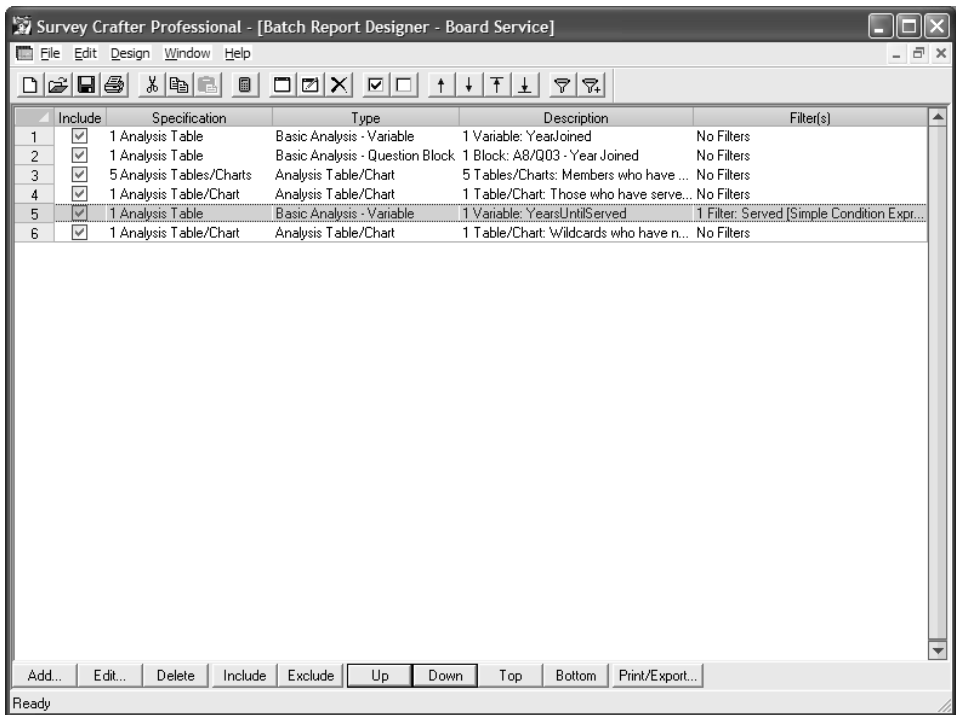
Figure 8 - 38: The Batch Report Designer window.

- **To move items from one batch report into another**

    1   Open the batch report that has the items you want to move.

Note To open an existing batch report, see "Opening a Batch Report" on
page 8 - 22.

Survey Crafter Professional displays the batch report in the Batch Report Designer window.

Highlight the items you want to move.
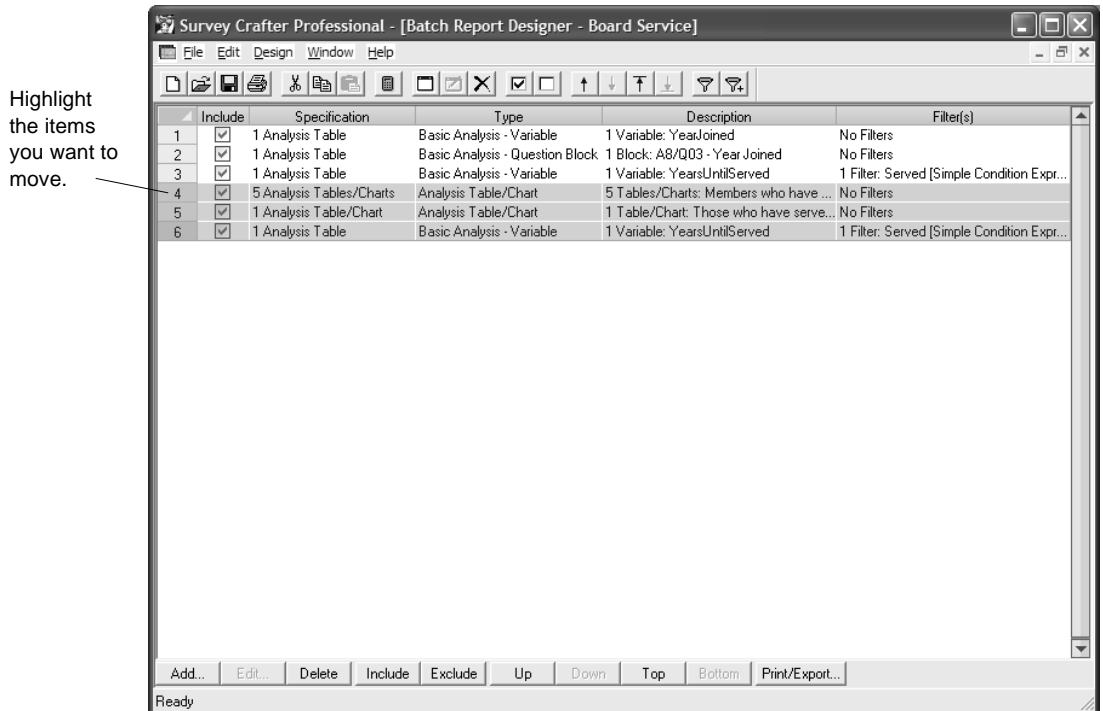
Figure 8 - 39:   The Batch Report Designer window.

2   In the Batch Report Designer window, highlight the items you want to move.

3   Click on the Edit menu and then on Cut.

> **Tip** Alternatively, press [CTRL-X] or right-click on the items and choose Cut Item(s) from the pop-up menu.

Survey Crafter Professional copies the highlighted items to the clipboard and then deletes the items.

4 Open the batch report to which you want to add the items from the clipboard.

> **Tip** If you cannot see the Study window, click on the Window menu and then on *Study - <name of study file>*. Then click on the Analyses tab and open an existing batch report or create a new one.

5 In the Batch Report Designer window, click on the item after which you want to add the items.

6 Click on the Edit menu and then on Paste.

> **Tip** Alternatively, press [CTRL-V] or right-click on the item and choose Paste Item(s) from the pop-up menu.

Survey Crafter Professional adds the items from the clipboard to the batch report in the Batch Report Designer window.
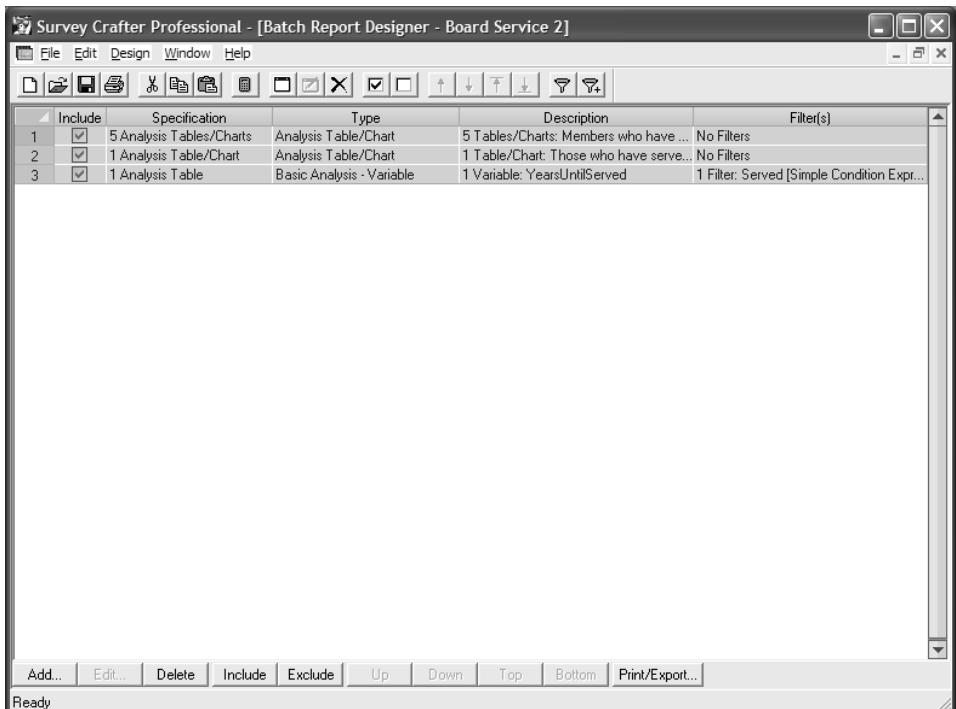
Figure 8 - 40: The Batch Report Designer window.

Including and Excluding Items in a Batch Report

Survey Crafter Professional prints and exports only those batch report design items that are marked included.

Follow the steps below to include and exclude items in a batch report.

- **To include or exclude items in a batch report**

    1   Open the batch report you want to modify.

    Note To open an existing batch report, see "Opening a Batch Report" on page 8 - 22.

    Survey Crafter Professional displays the batch report in the Batch Report Designer window.

Highlight the items you want to include or exclude.

You can click on the check boxes in the *Include* column to include or exclude an item.

You can also use these buttons to include or exclude the highlighted items.
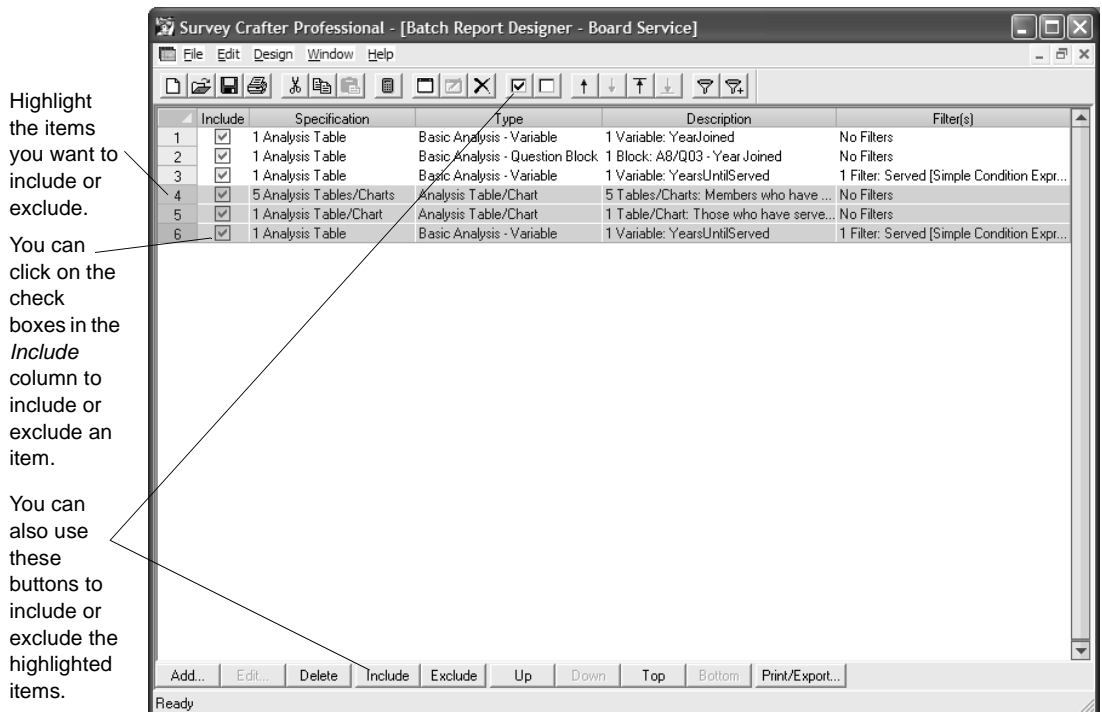
Figure 8 - 41:   The Batch Report Designer window.

> **2** In the Batch Report Designer window, highlight the items you want to include or exclude.

> **3** Click on the Include or Exclude button at the bottom of the window.

Tip Alternatively, right-click on the highlighted items and choose Include Item(s) or Exclude Item(s) from the pop-up menu.

You can also click on a check box in the Include column to include or exclude an item.

Survey Crafter Professional includes or excludes the highlighted items.
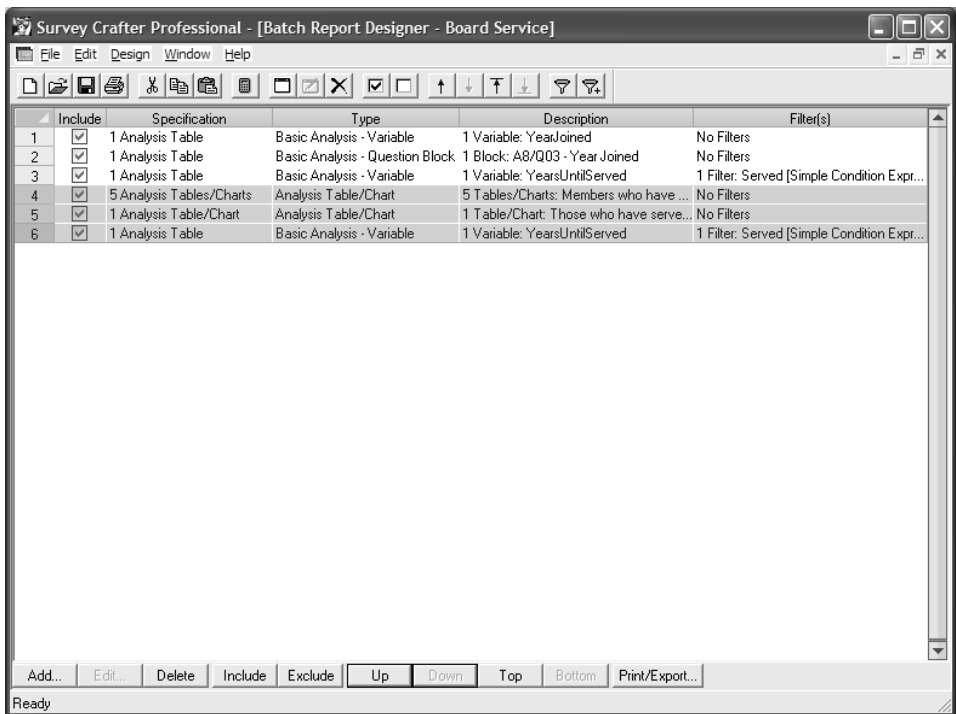
Figure 8 - 42:   The Batch Report Designer window.

Adding Filters to Items in a Batch Report

Follow the steps below to add one or more batch report filters to one or more batch report design items in a batch report.

> **Tip** If you would like to add one or more batch report filters to all of a batch report's items, consider adding the filters when you print and/or export the report. For step-by-step instructions on adding filters when you print and/or export a batch report, see "To add one or more batch report filters when printing and/or exporting the batch report" on page 8 - 51.
>
> For more information about printing and exporting batch reports, see "Printing and Exporting Batch Reports" on page 8 - 61

• **To add one or more batch report filters to one item in a batch report**

    1   Open the batch report you want to modify.

> **Note** To open an existing batch report, see "Opening a Batch Report" on page 8 - 22.

Survey Crafter Professional displays the batch report in the Batch
Report Designer window.

Double-
click on the
item to
which you
want to add
batch report
filters.

You can
also click on
the *Edit
Item* button
on the
toolbar.
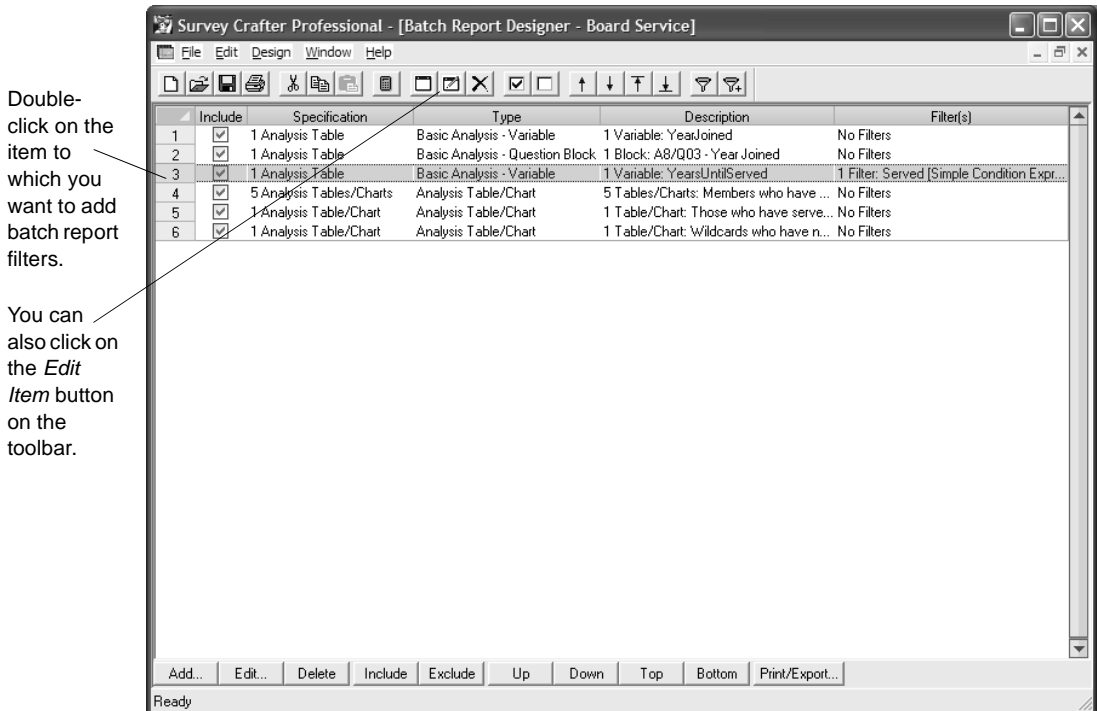
Figure 8 - 43:   The Batch Report Designer window.

2   In the Batch Report Designer window, double-click on the item to
which you want to add batch report filters.

Tip Alternatively, click on the item and then click on the Edit button at
the bottom of the window, click on the item and then click on the Edit
Item button on the toolbar or right-click on the item and choose Edit
Item from the pop-up menu.

Survey Crafter Professional displays the Batch Report Design Item dialog box.

Click on the Filters tab.
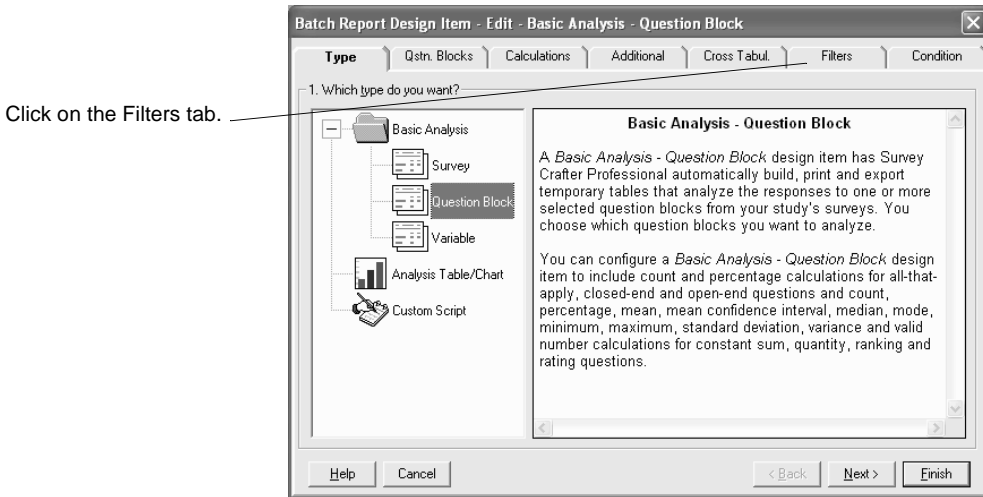
Figure 8 - 44:   The Type tab of the Batch Report Design Item dialog box.

3   Click on the Filters tab of the Batch Report Design Item dialog box.

Survey Crafter Professional displays the Filters tab of the Batch Report Design Item dialog box.

List of batch report filters to apply to the calculations.

Click on the Add button to add one or more batch report filters to the list.
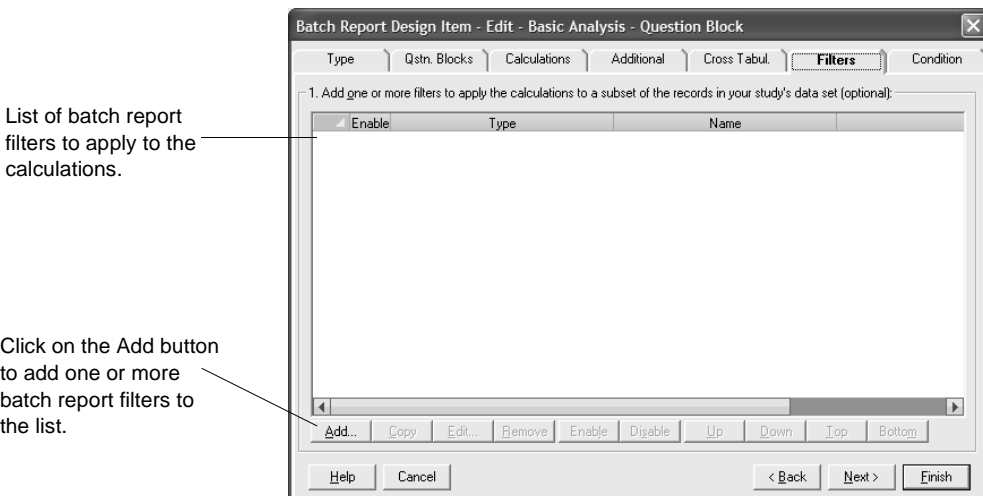
Figure 8 - 45:   The Filters tab of the Batch Report Design Item dialog box.

4   Click on the Add button at the bottom left corner of the tab.

Survey Crafter Professional displays the Batch Report Filter Library dialog box.

Highlight the batch report filters you want to add to the design item.

Click on the New or Copy button to add a new batch report filter to the library.
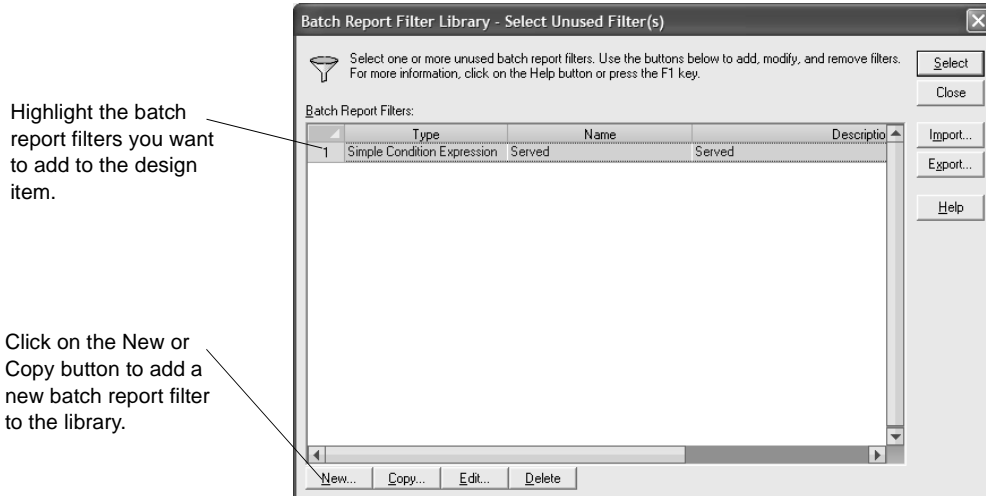
Figure 8 - 46:   The Batch Report Filter Library dialog box.

The only filters listed in the dialog box are those not already associated with the item.

5   Highlight the batch report filters you want to add to the item and click on the Select button.

Survey Crafter Professional adds the filters to the item.

List of batch report filters to apply to the calculations.

Use these buttons to manage the list of filters.
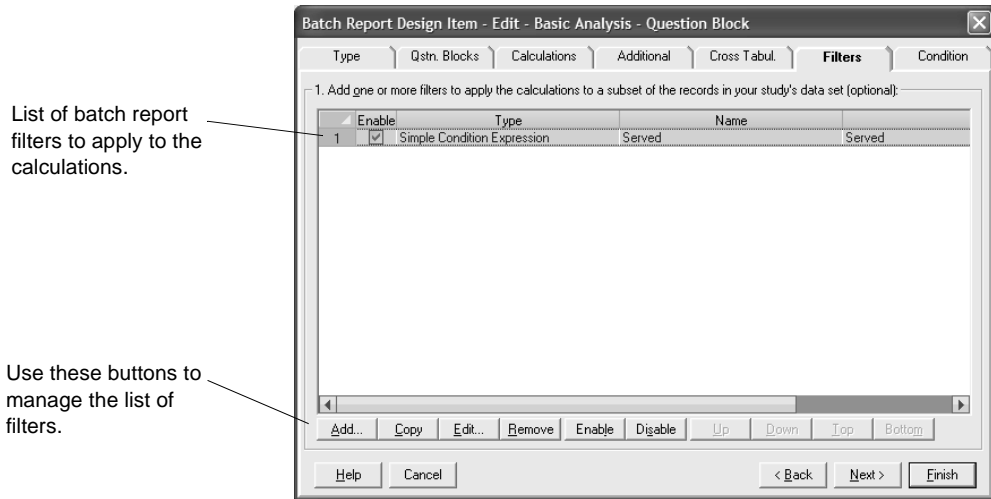
Figure 8 - 47: The Filters tab of the Batch Report Design Item dialog box.

6 Click on the Finish button.

• **To add one or more batch report filters to more than one item in a batch report**

1 Open the batch report you want to modify.

Note To open an existing batch report, see "Opening a Batch Report" on page 8 - 22.

Survey Crafter Professional displays the batch report in the Batch Report Designer window.

Highlight the items to which you want to add batch report filters.

The *Add Filters to Items* button on the toolbar.
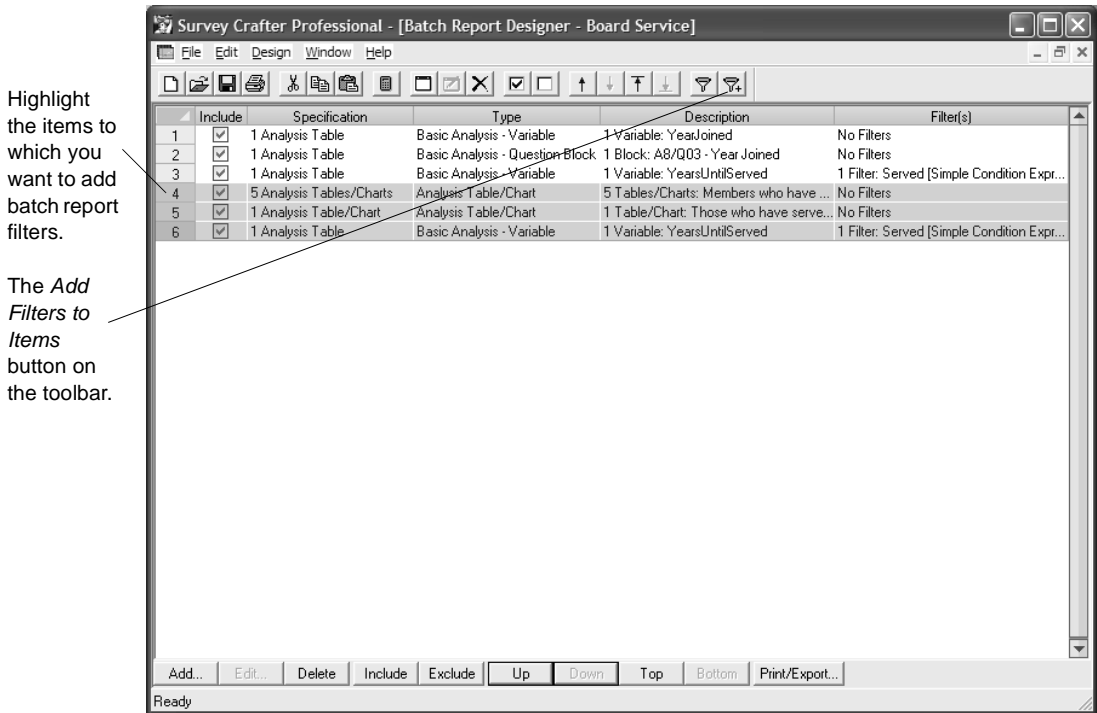
Figure 8 - 48:   The Batch Report Designer window.

2   In the Batch Report Designer window, highlight the items to which you want to add batch report filters.

3   Right-click on the highlighted items and choose Add Filters to Item(s) from the pop-up menu.

Tip Alternatively, click on the Add Filters to Item(s) button on the toolbar.

Survey Crafter Professional displays the Batch Report Filter Library dialog box.

Highlight the batch report filters you want to add to the design items.

Click on the New or Copy button to add a new batch report filter to the library.
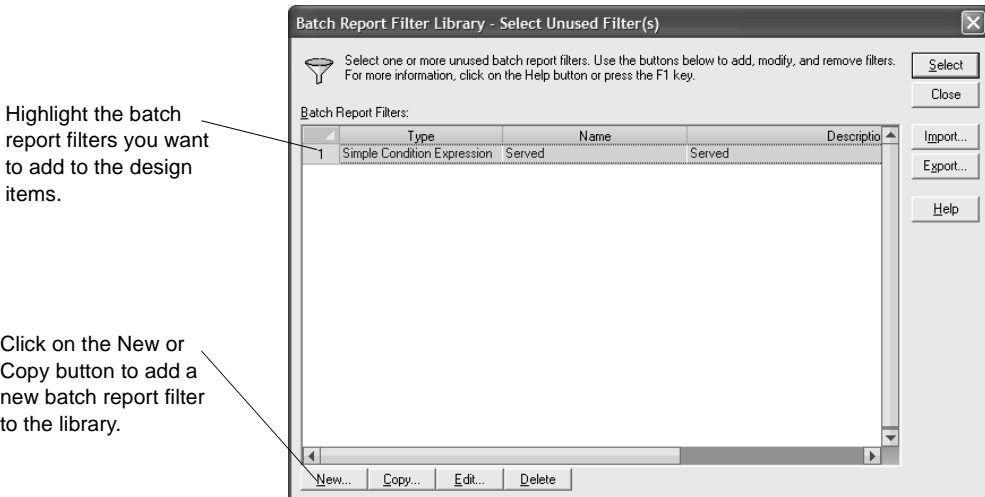
Figure 8 - 49:   The Batch Report Filter Library dialog box.

The only filters listed in the dialog box are those not already associated with any of the highlighted items in the Batch Report Designer window.

4   Highlight the batch report filters you want to add to the items and click on the Select button.

Survey Crafter Professional adds the filters to the highlighted items in the Batch Report Designer window.

- **To add one or more batch report filters when printing and/or exporting the batch report**

   1   Open the batch report you want to modify.

   Note To open an existing batch report, see "Opening a Batch Report" on page 8 - 22.

Survey Crafter Professional displays the batch report in the Batch
Report Designer window.

Click on the
Print button
on the
toolbar or
the Print/
Export
button at
the bottom
of the
window to
print and
export the
batch
report.
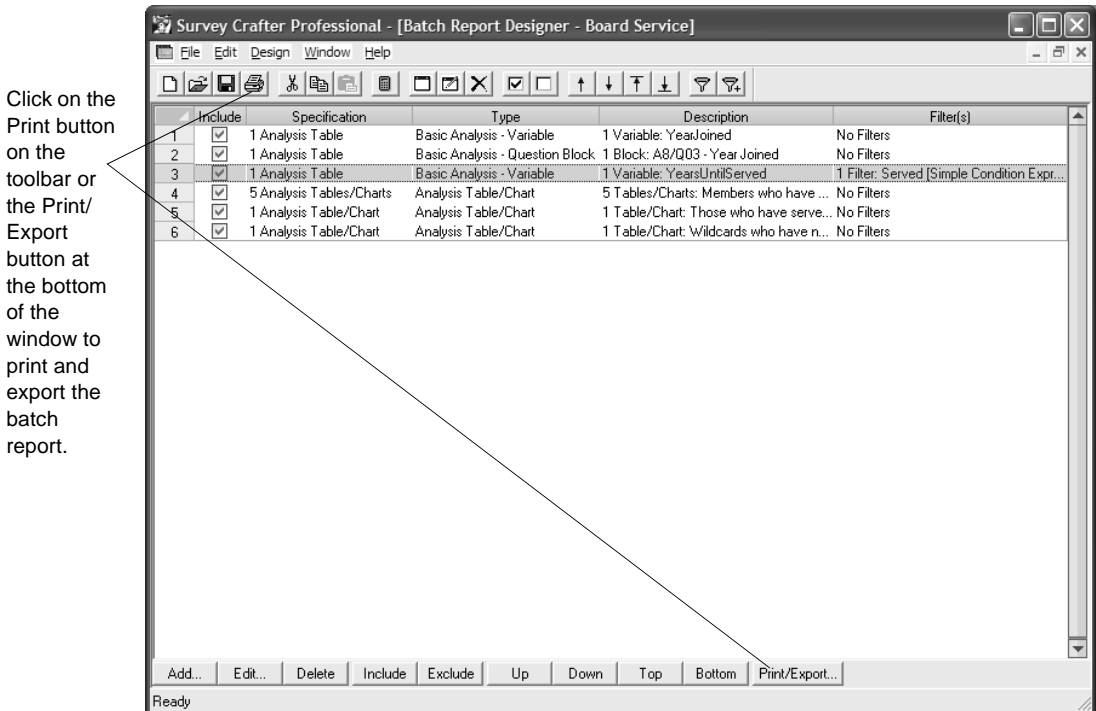
Figure 8 - 50:   The Batch Report Designer window.

2   In the Batch Report Designer window, click on the Print/Export
button at the bottom of the window.

Tip Alternatively, click on the File menu and then on Print/Export, click
on the Print button on the toolbar, or right-click on any item in the
window and choose Print/Export from the pop-up menu.

Survey Crafter Professional displays the Batch Report Print/Export dialog box.

Configure the batch report for printing and/ or exporting.
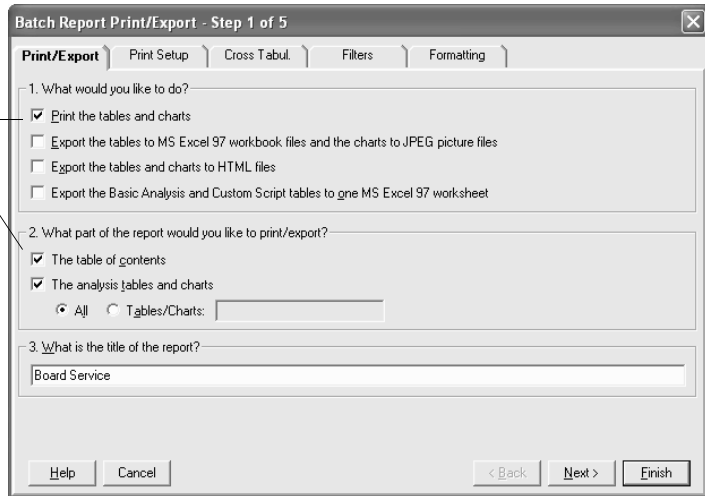
Figure 8 - 51:   The Print/Export tab of the Batch Report Print/Export dialog box.

3   Use the Batch Report Print/Export dialog box to configure the batch report for printing and/or exporting.

For help on any of the options, click on the Help button on the dialog box.

4   Click on the Filters tab of the dialog box.

Survey Crafter Professional displays the Filters tab of the Batch Report Print/Export dialog box.

List of batch report filters to apply to all of the calculations.

Click on the Add button to add one or more batch report filters to the list.
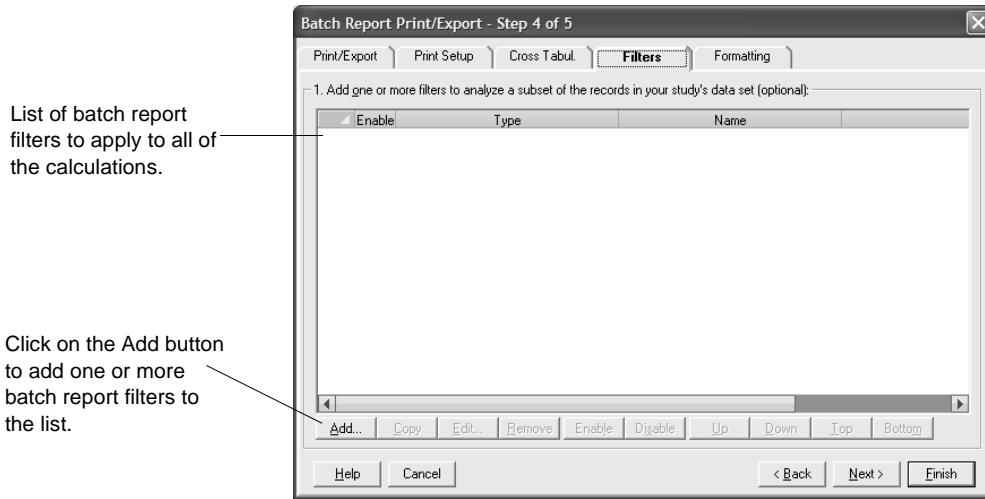
Figure 8 - 52:   The Filters tab of the Batch Report Print/Export dialog box.

5 Click on the Add button at the bottom left corner of the tab.

Survey Crafter Professional displays the Batch Report Filter Library dialog box.

Highlight the batch report filters you want to add to the batch report.

Click on the New or Copy button to add a new batch report filter to the library.
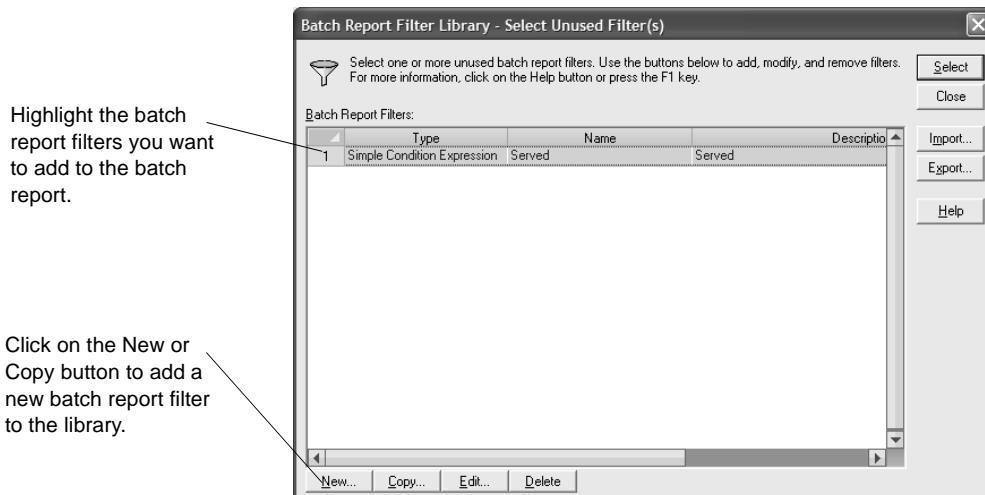
Figure 8 - 53:   The Batch Report Filter Library dialog box.

6 Highlight the batch report filters you want to add to the batch report and click on the Select button.

Survey Crafter Professional adds the filters to the batch report.

List of batch report
filters to apply to the
calculations.

Use these buttons to
manage the list of
filters.
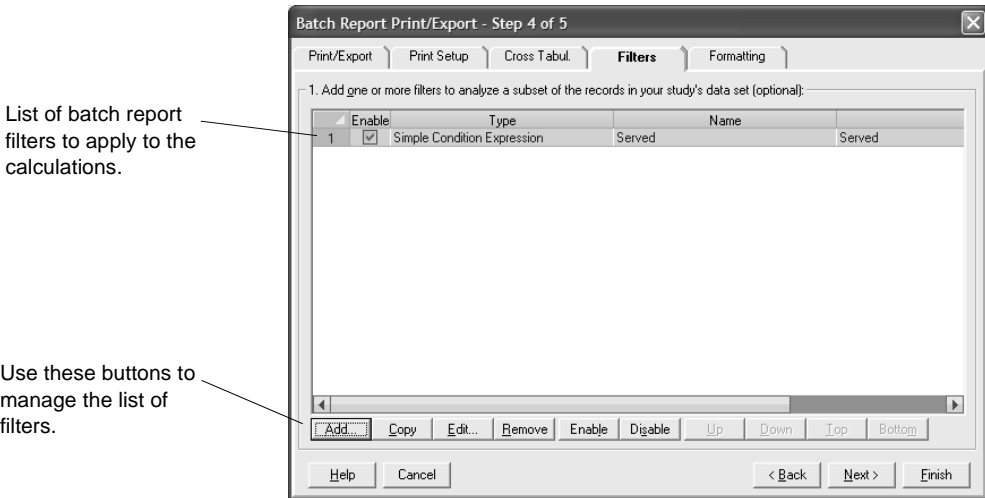
Figure 8 - 54:   The Filters tab of the Batch Report Print/Export dialog box.

7 When you are ready to print and/or export the batch report, click on the Finish button.

Survey Crafter Professional prints and/or exports the batch report.

Dragging and Dropping Items in a Batch Report

You can drag and drop batch report design items within a batch report or from one batch report into another.

Follow the steps below to drag and drop a batch report design item.

• **To drag and drop an item within a batch report**

1 Open the batch report you want to modify.

Note To open an existing batch report, see "Opening a Batch Report" on page 8 - 22.

Survey Crafter Professional displays the batch report in the Batch Report Designer window.

Press and hold the [ALT] key down and then press and hold the left mouse button down.
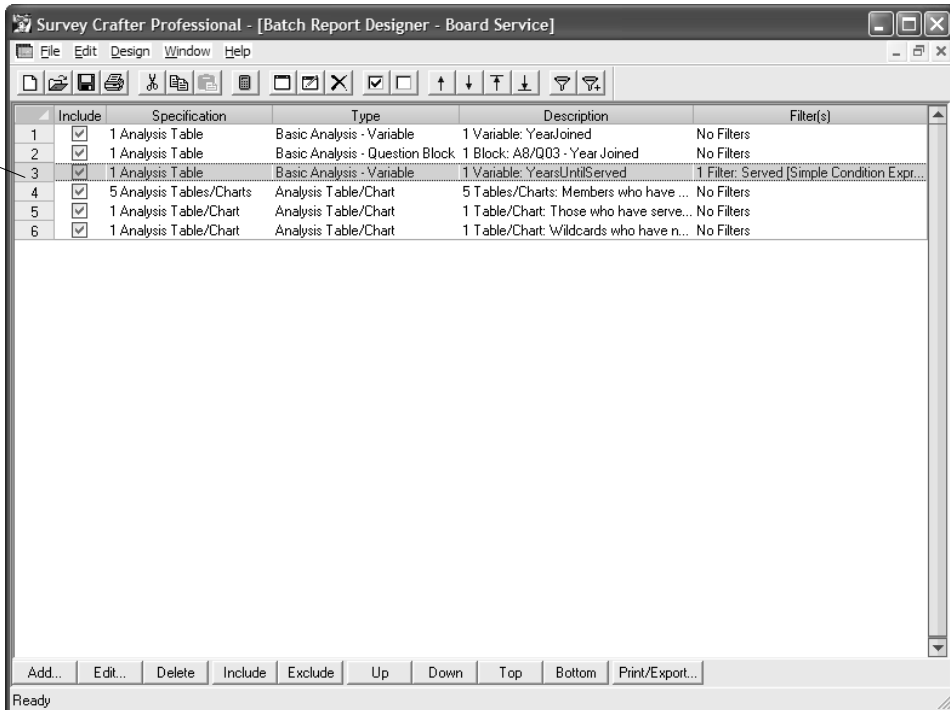
Figure 8 - 55:   The Batch Report Designer window.

2   In the Batch Report Designer window, move the mouse pointer over the item you want to move or copy.

3   Press and hold the [ALT] key down and then press and hold the left mouse button down.

4   While holding the left mouse button down, move the mouse pointer over the batch report design item after which you want to move or copy the original item.

5   Release the [ALT] key.

6   If you want to copy the item, while holding the left mouse button down, press and hold the [CTRL] key down.

7   Release the left mouse button.

If you are holding the [CTRL] key down, Survey Crafter Professional adds a copy of the original item after the item the mouse pointer is over. Otherwise, Survey Crafter Professional moves the original item after the item the mouse pointer is over.

The design item was moved to the end of the list.
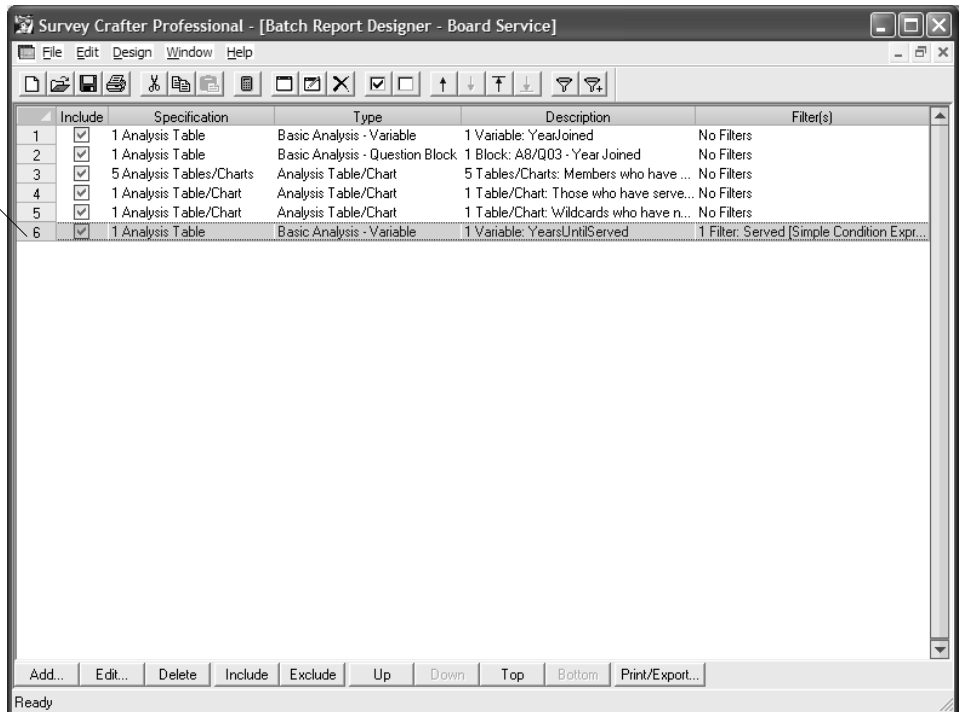
Figure 8 - 56: The Batch Report Designer window.

8   If you are holding it down, release the [CTRL] key.

- **To drag and drop an item from one batch report into another**

    1   Open a first batch report.

Note To open an existing batch report, see "Opening a Batch Report" on page 8 - 22.

Survey Crafter Professional displays the batch report in the Batch
Report Designer window.

If the Batch
Report
Designer
window is
maximized,
click on the
middle
button
below the
top right
corner of
the main
window.
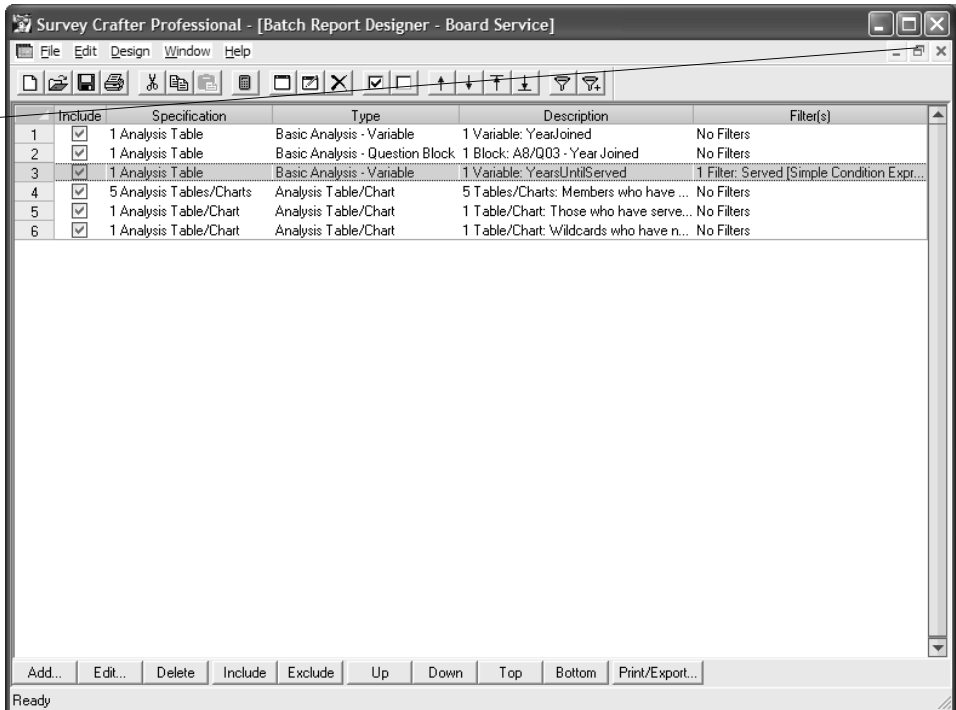
Figure 8 - 57:   The Batch Report Designer window.

2   If the Batch Report Designer window is maximized, click on the
        middle button below the top right corner of Survey Crafter
        Professional's main window.

3   Open a second batch report.

Survey Crafter Professional displays the batch report in the Batch
Report Designer window.

Resize and
arrange the
two Batch
Report
Designer
windows so
you can see
parts of
both
windows at
the same
time.
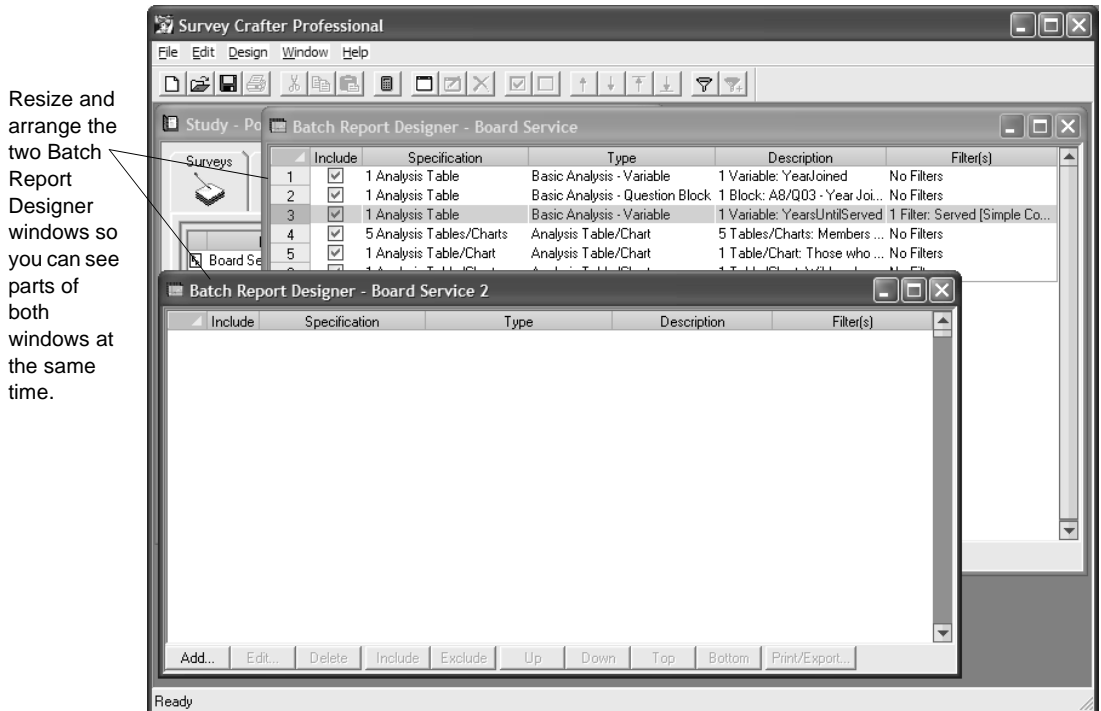
Figure 8 - 58:   Two Batch Report Designer windows.

4   Resize and arrange the two Batch Report Designer windows so you
can see parts of both windows at the same time.

5   In the Batch Report Designer window for the first batch report, move
the mouse pointer over the item you want to copy.

Note You cannot move a batch report design item from one batch report
to another by dragging and dropping. To move a design item from one
batch report to another, use the cut and paste feature. For step-by-step
instructions, see "Moving Items in a Batch Report" on page 8 - 37.

6   Press and hold the [ALT] key and then press and hold the left mouse
button down.

7   While holding the left mouse button down, move the mouse pointer over the list inside the second Batch Report Designer window.

8   Release the [ALT] key.

9   Release the left mouse button.

Survey Crafter Professional adds a copy of the item to the second batch report.

The design item was copied to the second batch report.
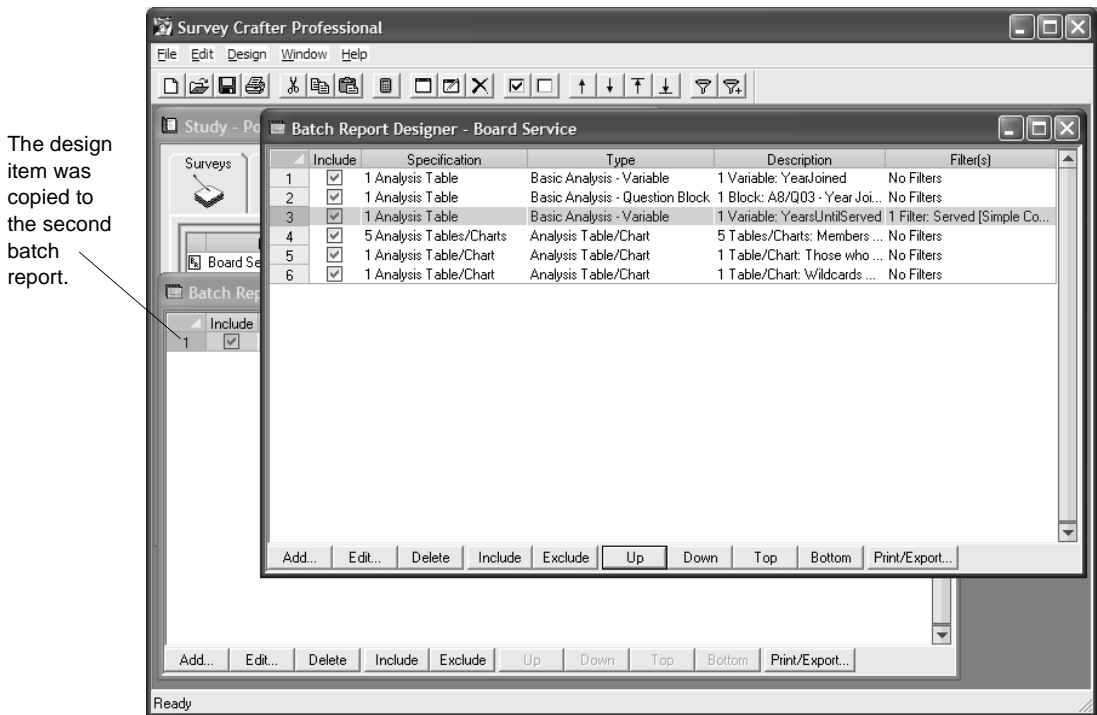
Figure 8 - 59:   Two Batch Report Designer windows.

Printing and Exporting Batch Reports

Once you have added at least one design item to your batch report, you can print and/or export the report.

This section provides step-by-step instructions for doing the following.

- Printing a Batch Report

- Exporting a Batch Report to MS Excel Workbook Files

- Exporting a Batch Report to HTML Files

Printing a Batch Report

Follow the steps below to print a batch report.

- **To print a batch report**

    1   Open the batch report you want to print.

    Note To open an existing batch report, see "Opening a Batch Report" on page 8 - 22.

Survey Crafter Professional displays the batch report in the Batch Report Designer window.

Click on the Print button on the toolbar or the Print/ Export button at the bottom of the window to print the batch report.

Figure 8 - 60: The Batch Report Designer window.

2 In the Batch Report Designer window, click on the Print/Export button on the bottom of the window.

Tip Alternatively, click on the Print button on the toolbar, click on the File menu and then on Print/Export, or right-click on a batch report design item and choose Print/Export from the pop-up menu.

Survey Crafter Professional displays the Batch Report Print/Export dialog box.

Select the *Print the tables and charts* check box.

Select the *The table of contents* and/or *The analysis tables and charts* check boxes.

Enter a title for the report.
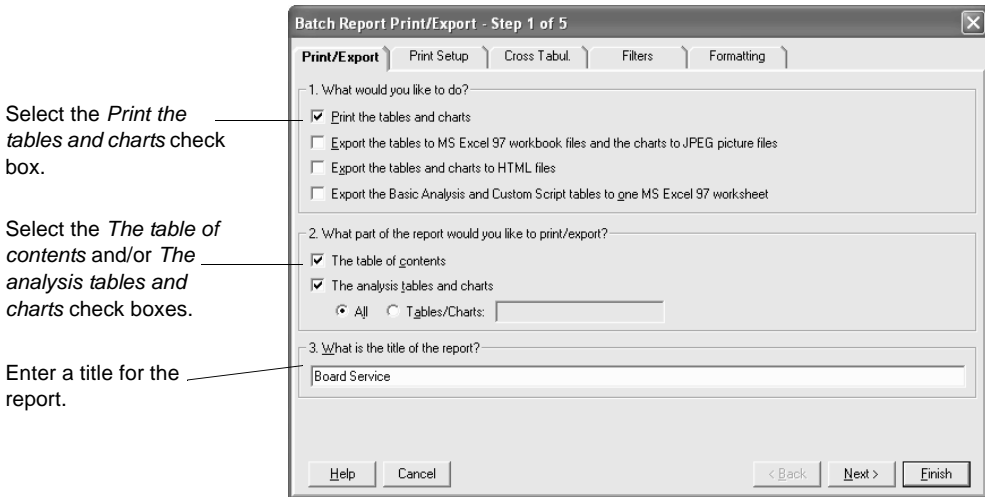
Figure 8 - 61: The Print/Export tab of the Batch Report Print/Export dialog box.

3 In the Print/Export tab of the dialog box, select the *Print the tables and charts* check box.

> **Tip** You can print and export your batch report at the same time.

4 To print the report's table of contents, select *The table of contents*. To print the report's analysis tables and charts, select *The analysis tables and charts*.

> **Tip** If you do not want Survey Crafter Professional to print all of the analysis tables and charts specified by the report, select *Tables/Charts*. Then enter the numbers of the analysis tables and charts you want the program to print. For example, to have Survey Crafter Professional print analyses 1, 2 and 5 through 8, enter 1,2,5-8.

5 Enter a title for the report.

The title will appear at the top of the printed page, worksheet and HTML page.

6 Use the other tabs to configure the batch report for printing.

Click on the Help button at the bottom of the dialog box for information about the current tab.

7   When you are ready to print the batch report, click on the Finish button.

Survey Crafter Professional prints the batch report.

Exporting a Batch Report to MS Excel Workbook Files

Follow the steps below to export a batch report to MS Excel workbook files.

- **To export a batch report to MS Excel workbook files**

    1   Open the batch report you want to export.

    Note To open an existing batch report, see "Opening a Batch Report" on page 8 - 22.

Survey Crafter Professional displays the batch report in the Batch Report Designer window.
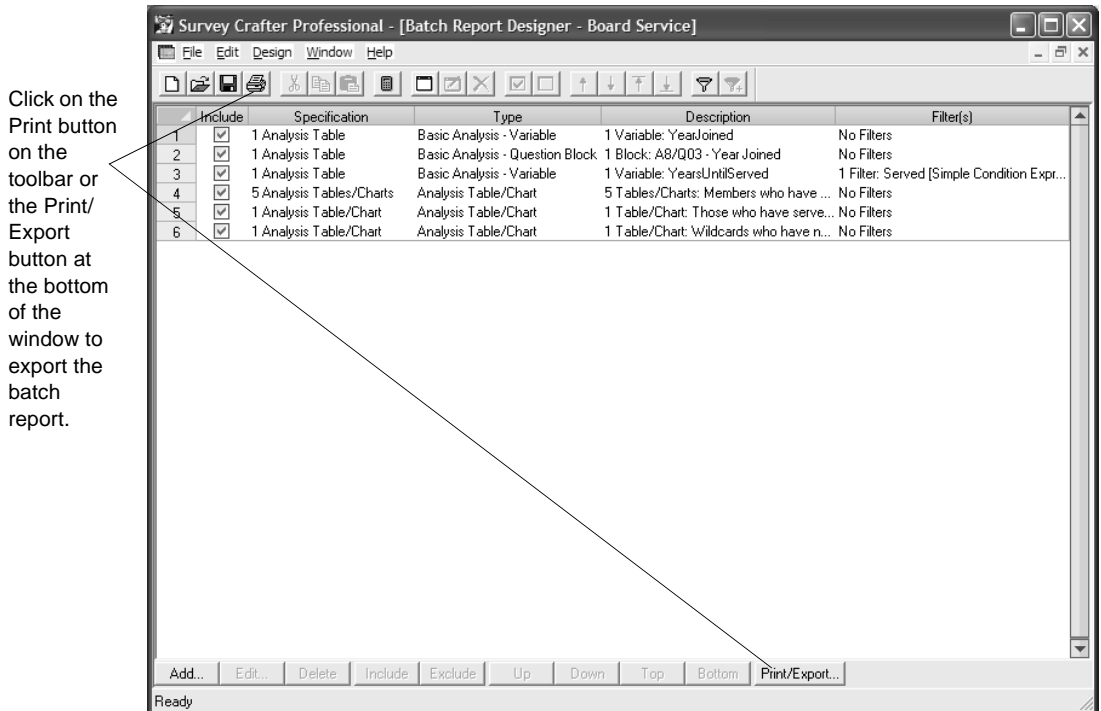
Figure 8 - 62: The Batch Report Designer window.

2 In the Batch Report Designer window, click on the Print/Export button on the bottom of the window.

Tip Alternatively, click on the Print button on the toolbar, click on the File menu and then on Print/Export, or right-click on a batch report design item and choose Print/Export from the pop-up menu.

Survey Crafter Professional displays the Batch Report Print/Export dialog box.

Select the *Export the tables to MS Excel 97 workbook files and the charts to JPEG picture files* check box.

Select the *The table of contents* and/or *The analysis tables and charts* check boxes.

Enter a title for the report.

Figure 8 - 63:   The Print/Export tab of the Batch Report Print/Export dialog box.

3 In the Print/Export tab of the dialog box, select the *Export the tables to MS Excel 97 workbook files and the charts to JPEG picture files* check box.

If you want, select the *Export the Basic Analysis and Custom Script tables to one MS Excel 97 worksheet* check box.

Tip You can print and export your batch report at the same time.

4 To export the report's table of contents, select *The table of contents*. To export the report's analysis tables and charts, select *The analysis tables and charts*.

Tip If you do not want Survey Crafter Professional to export all of the analysis tables and charts specified by the report, select *Tables/Charts*. Then enter the numbers of the analysis tables and charts you want the program to export. For example, to have Survey Crafter Professional export analyses 1, 2 and 5 through 8, enter 1,2,5-8.

5 Enter a title for the report.

The title will appear at the top of the printed page, worksheet and HTML page.

6 Use the on other tabs to configure the batch report for exporting.

Click on the Help button at the bottom of the dialog box for information about the current tab.

7 When you are ready to export the batch report, click on the Finish button.

Survey Crafter Professional exports the batch report.

Exporting a Batch Report to HTML Files

Follow the steps below to export a batch report to HTML files.

• **To export a batch report to HTML files**

1 Open the batch report you want to export.

Note To open an existing batch report, see "Opening a Batch Report" on page 8 - 22.

Survey Crafter Professional displays the batch report in the Batch Report Designer window.

Click on the Print button on the toolbar or the Print/Export button at the bottom of the window to export the batch report.
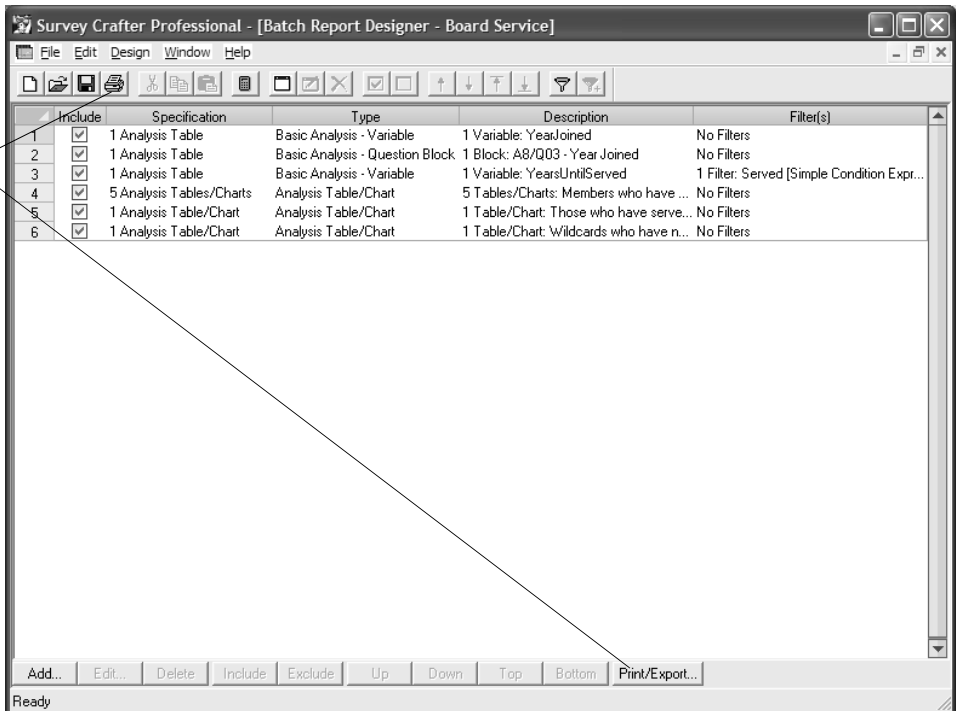
Figure 8 - 64:   The Batch Report Designer window.

2   In the Batch Report Designer window, click on the Print/Export button on the bottom of the window.

Tip Alternatively, click on the Print button on the toolbar, click on the File menu and then on Print/Export, or right-click on a batch report design item and choose Print/Export from the pop-up menu.

Survey Crafter Professional displays the Batch Report Print/Export dialog box.

Select the *Export the tables and charts to HTML files* check box.

Select the *The table of contents* and/or *The analysis tables and charts* check boxes.

Enter a title for the report.
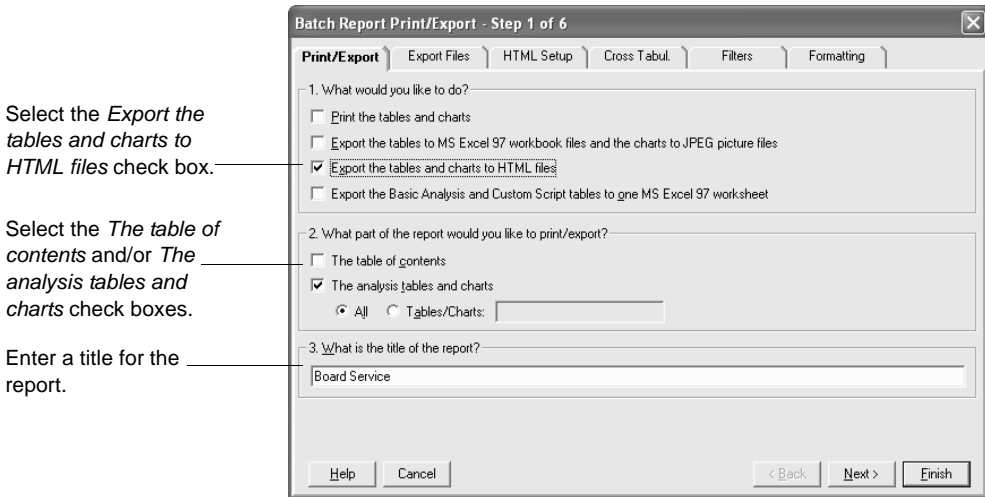
Figure 8 - 65:   The Print/Export tab of the Batch Report Print/Export dialog box.

3   In the Print/Export tab of the dialog box, select the *Export the tables and charts to HTML files* check box.

Tip You can print and export your batch report at the same time.

4   To export the report's table of contents, select *The table of contents*. To export the report's analysis tables and charts, select *The analysis tables and charts*.

Tip If you do not want Survey Crafter Professional to export all of the analysis tables and charts specified by the report, select *Tables/Charts*. Then enter the numbers of the analysis tables and charts you want the program to export. For example, to have Survey Crafter Professional export analyses 1, 2 and 5 through 8, enter 1,2,5-8.

5   Enter a title for the report.

The title will appear at the top of the printed page, worksheet and HTML page.

6   Use the other tabs to configure the batch report for exporting.

Click on the Help button at the bottom of the dialog box for information about the current tab.

7 When you are ready to export the batch report, click on the Finish button.

Survey Crafter Professional exports the batch report.

Deleting Batch Reports

Follow the steps below to delete a batch report.

- **To delete a batch report**

    1 In the Analyses tab of the Study window, click on the batch report you want to delete.

To delete a batch report, click on the report and then press the [DEL] key.
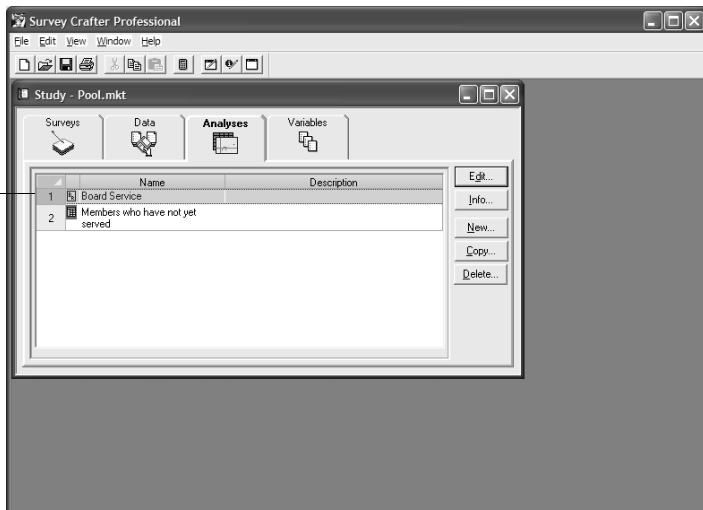
Figure 8 - 66: The Analyses tab of the Study window.

2 Press the [DEL] key.

Note Alternatively, click on the Edit menu and then on Delete.

Survey Crafter Professional asks if you are sure you want to delete the batch report.
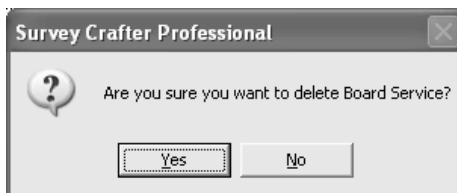
Figure 8 - 67: Are you sure you want to delete the batch report?

3   Click on the Yes button.

Survey Crafter Professional removes the batch report from your
study.

A Appendix

About Import Files and Data Dictionary Files

If you administer your survey on the Web or contract a market research supplier to interview respondents for you, you will download a file or the supplier will return a file containing responses to the survey. You need to import the data in this file into the Survey Crafter Professional study. In some cases, two files are required for importing data: the import file (the data file containing the survey responses) and the data dictionary file (a file that Survey Crafter Professional uses to interpret the import file).

Note You do not need to create a data dictionary file if you are importing data from a file used by a Survey Crafter Professional web survey. Data files used by Survey Crafter Professional web surveys are in the default CSV (comma separated value) format.

This appendix provides an overview of import files and data dictionary files and explains how they work together during the data import process outlined in the section "Importing Data Sets" on page 3 - 21. This appendix also explains how to create import files and data dictionary files.

The Relationship between Import Files and Data Dictionary Files

If you administered your survey on the Web or a market research supplier interviewed respondents for you (or if you collected the responses yourself and compiled them in a file rather than using the Interviewer to enter them directly into a study), you need to import the responses into the study. The file containing the responses is called the import file.

The import file is a matrix containing rows of responses to survey questions. Each respondent's record accounts for one or more rows in the import file. Each record commonly occupies one line in the import file.

Each record is divided into different values. Each value represents the respondent's reply to a different question in the survey. Each value in a record is stored in a different imported variable created in the Survey Crafter Professional study. Figure A - 1 illustrates the relationship between an import file's values and a study's imported variables.


```
Import file

. . .0, 2, 24, 8
. . .1, 3, 35, 2
. . .0, 1, 47, 3
```

This row is one record in the import file.

Imported variables in a Survey Crafter Professional study

. . .
age
rating
. . .

47, the respondent's age, is one value in the record. This value matches with the study's imported quantity variable *age*. The variable *age* stores this value from each record.
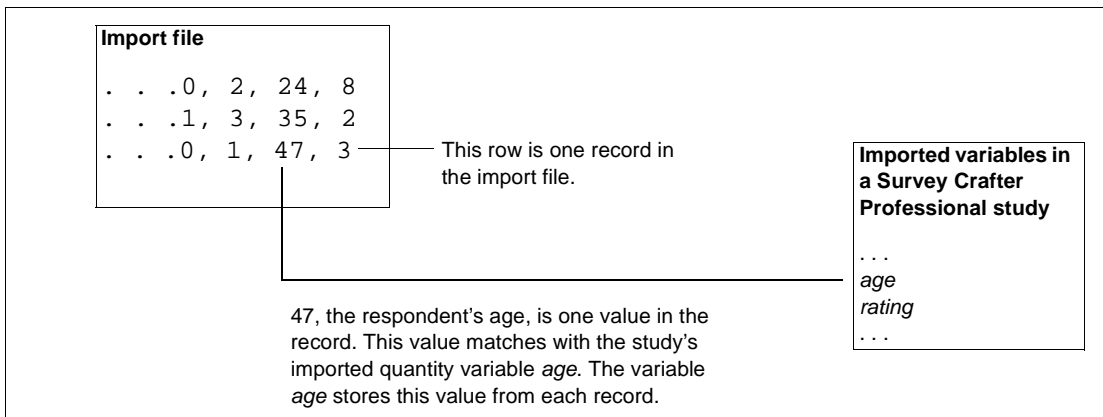
Figure A - 1:   The relationship between an import file's fields and a study's imported variables.

Survey Crafter Professional uses a data dictionary file to understand how to read an import file and copy its values to the proper imported variables in the study. Unless the import file is in the default CSV (comma separated value) format, you cannot import data into Survey Crafter Professional without a data dictionary file.

> **Note** The Survey Crafter Professional default CSV (comma separated value) format has a first line that lists variables' codes, separated by the comma character, and one additional row for each respondent containing response values separated by the comma character.

If the data you import is returned by a Survey Crafter Professional web survey, you do not need to create the data dictionary file. Survey Crafter Professional web surveys use the default CSV (comma separated value) format.

If the data you import is returned by a market research supplier, the supplier should provide the data dictionary file. If you want, you can add a block called *Notes to the Market Research Supplier* from the *Instructions* group of Survey Crafter Professional's Question Library to your survey. The block explains the data dictionary file's parameters.

However, if you created the import file yourself or want to import data from a source other than a market research supplier and the import file is not in the default CSV (comma separated value) format, you need to create the data dictionary file.

Overview of Import Files

Files you import into Survey Crafter Professional must be text (ASCII) files. ASCII (American Standard Code for Information Interchange) is an internationally accepted code for data files. ASCII files consist of numbers, letters, and other symbols. For example, numbers appear as characters like 1, 2, and 3 and letters appear as characters like A, B, and C.

Although ASCII is a standard code, ASCII files have no standard structure. For example, ASCII files may have fixed or delimited formats. In fixed format files, a variable's value starts in the same column in every record. In delimited files, a variable's value may start in a different column in each record, and each value is separated (delimited) by a character such as a comma. Figure A - 2 shows a fixed format import file.

Each variable's value (here, the respondent's age) begins in the same column in each record.

The import file contains eight records with each record occupying one line in the import file.

```
0 basketball          60 4
1 knitting            50 3
1 skateboarding       24 2
0 computer program 45 5
0 soccer              35 2
1 calligraphy         57 10
0 writing             42 4
1 painting            38 4
```

Figure A - 2:　A sample fixed format ASCII file.

Figure A - 3 shows a sample free format ASCII file that is in the default CSV (comma separated value) format.

Each value (here, the respondent's age) may begin in a different column in each record.

The import file contains eight records with each record occupying one line in the import file.

This file's first line, which lists variables' codes, is explained in the section "Creating an Import File" below.

```
gender, hobby, age, rating
0,basketball,60,4
1,knitting,50,3
1,skateboarding,24,2
0,computer program,45,5
0,soccer,35,2
1,calligraphy,57,10
0,writing,42,4
1,painting,38,4
```

Note that commas separate each value in a record.

Figure A - 3:　A sample free format ASCII file that is in the the default CSV (comma separated value) format.

Because ASCII files have no standard structure, Survey Crafter Professional must learn the structure of the import file by reading the data dictionary file.

Creating an Import File

When you interview respondents yourself, you will probably want to enter their responses directly into the study by using Survey Crafter Professional's Interviewer. For more information on using the Interviewer, see the section "Entering Respondents' Replies" on page 3 - 11. You can, however, compile the results of the interview in an import file.

If you interview respondents on the Web, you do not need to create an import file yourself because Survey Crafter Professional automatically generates an empty import file in the default CSV (comma separated value) format when you publish the survey.

Creating an import file involves creating a record for each respondent. Use a text editor like Microsoft Notepad or a spreadsheet program like Microsoft Excel to create the import file.

You can create a fixed format or delimited import file. However, to keep the process of creating an import file simple, it is recommended that you create a comma delimited file with one record in each row like the one in Figure A - 3.

Keep the following in mind when creating a comma delimited import file:

• If you asked a respondent a question but he or she refused to reply, enter the code for NR (No Reply) unless the variable is a literal variable. Because literal variables have no code for NR, enter text that indicates the respondent would not answer the question. For example, enter **Did not answer**.

- If the response is simply missing (for example, the respondent was never asked the question), enter a period or a space surrounded by commas. Survey Crafter Professional converts the period or space to the value NV (No Value) when you import the data.

- For category variables, enter the category's code and not the category's name. For example, enter 1 not 'Male'.

- If you need to enter a comma in a literal value, surround the response with a character (typically double quotes) unless you are using Microsoft Excel to create the import file. For example, to enter **Smith, Nancy** as a response, type **"Smith, Nancy"**. If you are using Excel, do not surround the response in quotes because Excel, by default, adds quotes around values that contain a comma.

  In the corresponding data dictionary file, be sure to indicate the character you used to surround these literal values by defining the `Text Qualifier` parameter (see Table A - 3).

- **To create a free format comma separated import file**

  1 Open a text editor or spreadsheet program.

  2 In the first line of the import file, type the variable codes (which Survey Crafter Professional generates from the variable names you enter) across the top of the import file.

  Survey Crafter Professional uses these codes to match values in the import file with imported variables in the study. For a list of variable codes, see the Variables tab of the Study window.

  If you are using a text editor, separate each code with a comma as Figure A - 4 shows. If you are using a spreadsheet program, enter one code in each cell.

  If records will occupy more than one row in the import file, enter codes for the variables in each row on different lines. For example, if *age* appears as the first variable of the second row in a record, enter it

as first variable on the second line of the import file, as shown in
Figure A - 4.

One row per record

```
gender,hobby,age,rating
(actual responses start here)
```

Two rows per record

```
gender,hobby
age,rating
(actual responses start here
with two rows for each record)
```

Figure A - 4:   Line(s) showing variable codes for variables in an import file.

3   On the line immediately below the list of variables, type the responses
from the first person.

If you are using a text editor, separate responses to questions with a
comma. If you are using a spreadsheet, enter each response in a
different cell in the same row.

4   After entering all the person's responses, press [RETURN] to start a
new record for another respondent or click in the first cell in the next
row.

5   Enter the responses for the next person.

Figure A - 5 shows examples of partially completed import files.

One row per record

```
gender,hobby,age,rating
0,basketball,60,4
1,knitting,50,3
1,skateboarding,24,2
0,computer program,45,5
....
```

Two rows per record

```
gender,hobby
age,rating
0,basketball
60,4
1,knitting
50,3
1,skateboarding
24,2
0,computer program
45,5
....
```

Figure A - 5:   Partially completed import files with one row per record (left) and two rows per record.

6   Repeat steps 3 through 5 until you have created a record for each respondent.

7   To save the file, do one of the following:

- If you are using a text editor, save the file as text (ASCII).

- If you are using a spreadsheet program, save the file as comma delimited.

    For example, if you are using Microsoft Excel, select CSV (comma separated value) from the Save File as Type drop-down list.

    In either case, save the file using a .CSV filename extension. When you import data, Survey Crafter Professional displays files with .CSV, .TXT and .DAT extensions in the Open Import File dialog box.

Overview of Data Dictionary Files

Survey Crafter Professional uses data dictionary files to read values from an import file into a study. A data dictionary file may have up to two parts to it depending on whether the file is fixed format or delimited.

The first part, called the Options section, describes general characteristics of the import file. The Options section is required for both fixed format and delimited import files.

The second part, called the Variables section, describes the variables in the import file and matches them with imported variables in the study. The Variables section is required for fixed format files; delimited files, however, do not use the Variables section in the data dictionary file because the import files themselves contain this matching information in their first line(s) as shown in Figure A - 4.

The sections below describe parameters for the file's two sections and compare examples of data dictionary files for fixed and delimited import files.

Options Section

The data dictionary file's first line must read [Options]. This line is then followed by the Options section's parameters, which may appear in any order. The Options section in data dictionary files for fixed and delimited import files use different parameters.

Table A - 1 lists Options section parameters in data dictionary files for fixed format import files.

Table A - 1:   Options section parameters in data dictionary files for fixed format import files.

Parameter	Possible value(s)	Required?
Format=	fixed Indicates that the import file is fixed format	Yes.
Cards=	1, 2, 3,...an integer Indicates the number of rows (sometimes called cards) each record occupies	No. If you do not define this parameter, Survey Crafter Professional uses 1 by default.

Table A - 2 lists Options section parameters in data dictionary files for delimited import files.

Table A - 2:   Options section parameters in data dictionary files for delimited import files.

Parameter	Possible values	Required?
Format=	delimited Indicates that the import file is delimited	Yes.
Cards=	1, 2, 3,...an integer Indicates the number of rows (sometimes called cards) each record occupies	No. If you do not define this parameter, Survey Crafter Professional uses 1 by default.
Delimiter=	The character that separates values in the import file's records. In most cases, you enter the actual character. However, if tabs separate characters, enter \t as the delimiter or if spaces separate characters enter \s.	No. If you do not define this parameter, Survey Crafter Professional uses the , (comma) by default.
Text Qualifier=	The character that should surround values containing the delimiter character. Typically the single quote or double quote character surround these values.	No. If you do not define this parameter, Survey Crafter Professional uses " (double quote) by default.

Regardless of the import file type, you must specify the Format parameter. Other parameters are optional, however. If you do not define the other parameters, Survey Crafter Professional uses their defaults.

Variables Section

The first line of the Variables section must read [Variables]. The required variable information follows this line.

The Variables section contains one line for each variable in the import file. Each line has the format code = offset, length, card number. Table A - 3 describes these parameters. The parameters must appear in that order.

Note that only data dictionary files for fixed format import files require a Variables section; data dictionary files for delimited import files do not. (Because a delimited import file contains sufficient information about the file's variables, Survey Crafter Professional does not use a Variables section in the file's data dictionary.) Compare the sample data dictionary files in Figure A - 6 and Figure A - 7.

Table A - 3:   Variables section parameters for fixed format import files.

Parameter	Possible value(s)	Required?
code	The variable code Survey Crafter Professional assigned the variable. This code is a maximum of eight characters. You can see a variable's code at the Variables tab of the Study window or by displaying the survey and then choosing the Survey Options command from the View menu and selecting the Show Variable Names / Codes check box.	Yes
offset	1, 2, 3,...an integer. Indicates the column in which the variable's values begin.	Yes
length	1, 2, 3,...an integer. Indicates the number of columns the variable's values occupy.	Yes
card number	1, 2, 3,...an integer. Indicates the row of the record containing the variable.	Only if the Cards parameter in the Options section is greater than 1

An equals sign (=) must appear between the `code` and `offset` parameters. Commas must separate the `offset`, `length`, and `card number` parameters. Any number of white spaces may come before or after the equals sign or commas.

Examples of Data Dictionary Files

Figure A - 6 shows the data dictionary file for the fixed format import file in Figure A - 2. Note that in the data dictionary file on the right in Figure A - 6, the `Cards` and `card number` parameters have been omitted because they use the default values.

	All parameters listed	Default parameters not listed
	`[Options]`	`[Options]`
Options section	`Format=fixed` `Cards=1`	`Format=fixed`
	`[Variables]`	`[Variables]` `gender=1, 1`

Variables section	`gender=1, 1, 1`
	`hobby=2, 16, 1`
	`age=18, 3, 1`
	`rating=21, 2, 1`
		`hobby=2, 16`
		`age=18, 3`
		`rating=21, 2`

Figure A - 6:   Data dictionary file for the fixed format import file in Table A - 2.

This data dictionary file indicates, for example, that the variable *hobby* starts in column 2 and occupies 16 columns.

Figure A - 7 shows the data dictionary file for the delimited import file in Figure A - 3. Because the data dictionary file is for a delimited import file, it does not include a Variables section. Note that in the data dictionary file on the right in Figure A - 7, the parameters `Delimiter`,

`Text Qualifier`, and `Cards` have been omitted because they use default values.

Because this data dictionary file is for a delimited import file, it does not include a Variables section. ————

All parameters listed

```
[Options]
Format=delimited
Delimiter=,
Text Qualifier="
Cards=1
```

Default parameters not listed

```
[Options]
Format=delimited
```

Figure A - 7:   Data dictionary file for the free format import file shown in Figure A - 3.

Suppose the fixed format import file in Figure A - 2 had records that occupied two rows. The resulting import and data dictionary files are shown in Figure A - 8.

Import file

```
0 basketball
60 4
1 knitting
50 3
1 skateboarding
24 2
0 computer program
45 5
0 soccer
35 2
1 calligraphy
57 10
0 writing
42 4
1 painting
38 4
```

Each record occupies two rows. ————

Data dictionary file

```
[Options]
Format=fixed
Cards=2

[Variables]
gender=1,1,1
hobby=2,16,1
age=1,3,2
rating=4,2,2
```

This number indicates that the variable appears in the first row of a record.

This number indicates that the variable appears in the second row of a record.

Figure A - 8:   A fixed format import file with two rows per record (left) and its corresponding data dictionary file.

Creating a Data Dictionary File

If you are importing data from a Survey Crafter Professional web survey, you do not need to create a data dictionary file. If you are importing data from a market research supplier, the supplier should provide the data dictionary file for you. If you created the import file yourself and the import file is not in the default CSV (comma separated value) format, you need to create a data dictionary file to import the data into Survey Crafter Professional.

To create a dictionary file, use a Microsoft Windows text editor that lets you create a text (ASCII) file. For example, use Microsoft Notepad or Microsoft Word and save the file as text (ASCII).

It is recommended that the data dictionary file have the same name as the import file and use the .DCT extension. It is also recommended that you store the data dictionary file in the same directory as the import file because Survey Crafter Professional looks for the data dictionary file in that directory by default. For example, if the import file is C:\CUSTPROJ\DATA\SURVRES.CSV, the data dictionary file should be C:\CUSTPROJ\DATA\SURVRES.DCT for the import process to operate most efficiently.

The information in the data dictionary file is case insensitive and you can include spaces before and after the equals signs in parameter definitions. For example, both `text Qualifier=`, and `TEXT quaLIFIer = `, are acceptable.

- **To create a data dictionary file**

    1   Open the text editor you want to use to write the data dictionary file.

    2   Type **[Options]** as the first line of the data dictionary file.

        Include the brackets around the word "Options."

    3   Type the Options section.

        See Table A - 1 or Table A - 2 for a description of the section's parameters and their possible values.

        Each parameter must appear on a different line.

    4   Is the data dictionary file for a fixed format or delimited import file?

- If it is for a fixed format import file, go to step 5.

- If it is for a delimited import file, go to step 8.

5 Press [RETURN] to add a blank line after the Options section.

6 Type **[Variables]** on the next line.

Include the brackets around the word "Variables."

7 Type the Variables section.

See Table A - 3 for a description of this section's parameters.

8 Save the file as a text (ASCII) file and assign it the .DCT extension.

> **Warning** If you are using a text editor that does not automatically save a document as text (ASCII), make sure to choose Text Only or Text Files from the Save File As Type drop-down list in the Save As dialog box. Only typing the .DCT extension after the file name does not automatically save the file as text (ASCII).

B Appendix
Setting Startup Preferences

Survey Crafter Professional displays several dialog boxes when you start the application:

- The Welcome dialog box, which gives you a choice of creating a new study or opening an existing study

- The Tip of the Day dialog box, which displays a tip for using Survey Crafter Professional or performing survey research

By editing Survey Crafter Professional's preferences, you can control which of these screens and dialog boxes appear when you start Survey Crafter Professional.

By default, Survey Crafter Professional displays all four tabs of the Study window, allowing the creation and modification of surveys, data, analyses and variables. However, you can instruct Survey Crafter Professional to hide up to three of these tabs to prevent access to some of these features.

Setting Startup Preferences

Turning off the Welcome Screen and Tips

By default, the Welcome screen and the Tip of the Day dialog box automatically appear when you start Survey Crafter Professional. You can turn off both of these features.

• **To turn off the Welcome screen and tips**

   1   Open any study.

   2   From the Edit menu, choose Preferences.

   3   To turn off the Welcome screen, clear the Show Welcome Dialog at Startup check box.

        If you want the Welcome screen to appear again, select this check box.

   4   To turn off the Tip of the Day, clear the Show Tips at Startup check box.

        If you want the Tip of the Day to appear again, select this check box.
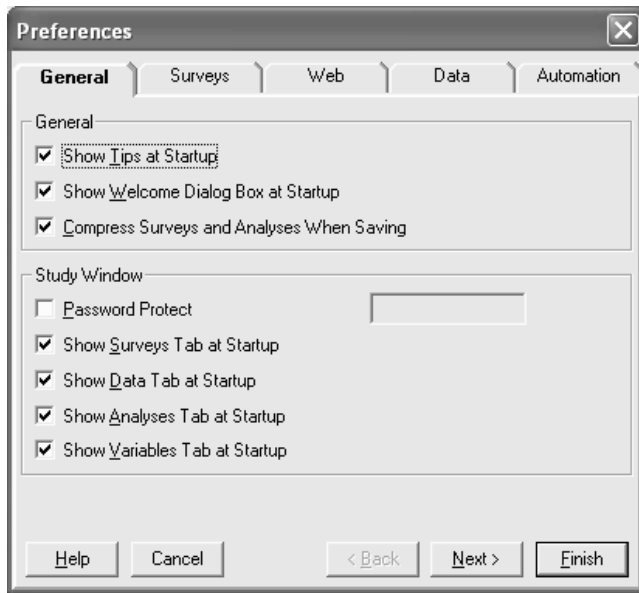
Figure B - 1:   The General tab of the Preferences dialog box.

5   Click on the Finish button.

Showing and Hiding Study Window Tabs

By default, all four tabs of the Study window are displayed: Surveys, Data, Analyses and Variables. You can instruct Survey Crafter Professional to hide up to three of the Study window's tabs to prevent access to the features the tabs provide.

- **To show and hide Study window tabs**

    1   Open any study.

    2   From the Edit menu, choose Preferences.

    3   In the General tab of the Preferences dialog box, select or clear the check boxes that correspond to the Study window tabs you want to show or hide.

If the check boxes are disabled, you must first type the password in the password box. Once the password has been entered, Survey Crafter Professional enables the check boxes.

4   To password-protect the Study window settings, select the Password Protect check box and type a password in the password box.

Write down the password, noting the upper and lower case letters and digits.
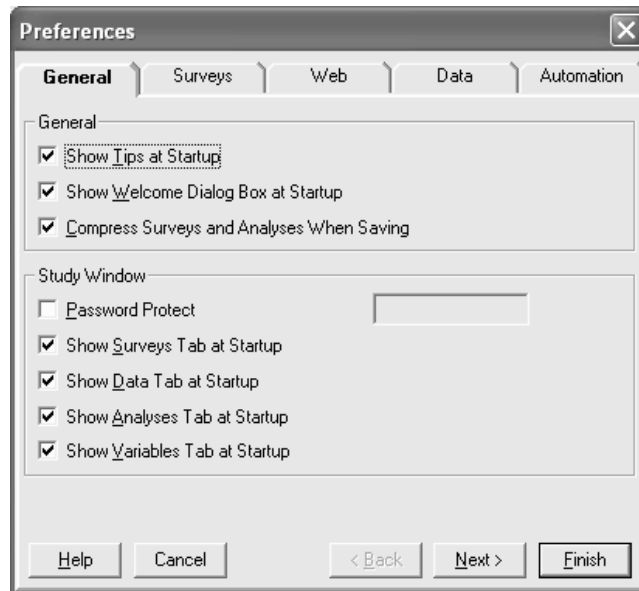
Figure B - 2:   The General tab of the Preferences dialog box.

5   Click on the Finish button.

6   You must close and restart Survey Crafter Professional to see the changes.

C Appendix Glossary

ASCII

The format Survey Crafter Professional requires for import files. ASCII stands for American Standard Code for Information Interchange.

You can include notes to market research suppliers with your survey. These notes explain that the import files suppliers return must be in ASCII format.

ASP (Active Server Pages)

Active Server Pages is a scripting environment principally for Microsoft Internet Information Server (IIS) in which you can combine HTML, scripts and reusable ActiveX server components to create dynamic web pages.

a priori segmentation

Dividing respondents into mutually exclusive groups prior to analyzing the groups. Respondents are often divided based on a characteristic like age or a combination of characteristics like age and income.

absolute frequency

The number of respondents meeting criteria you specify. For example, of the people surveyed, 549 said they read the *Times* every day. Also called counts.

all-that-apply question

A question that asks the respondent to check one or more prompts from a predefined list of prompts. For example, "Which of the following restaurants have you visited? Burger World, King Taco, Broilin' Bill's, The Chicken Coop, Marsha's Mex."

| **all-that-apply question block** | In a survey, a question and two or more associated variables for storing replies to the question. All-that-apply questions (questions for which respondents select one or more answers) use all-that-apply question blocks. |

| **all-that-apply question wizard** | An analysis wizard especially tailored for all-that-apply question blocks. The All-that-Apply Question wizard shows statistics for each prompt in an all-that-apply question block. |

| **analytical plan** | The document that outlines the analyses planned for a survey research project. |

| **argument** | A term a function uses to perform a calculation. For example, the function POWER( ), which raises one number to the power of another, takes two arguments: the number to use as the base and the number to use as the base's exponent. Some functions have one or more optional arguments. |

banner

A banner shows counts and percentages for selected category variables and counts, percentages, means and standard deviations for selected quantity variables. A banner can also show the cross tabulation of the selected variables against another variable.

For example, the banner below shows the number of responses, the mean, and the standard deviation for the quantity variables *age*, *height*, and *weight*.

	Count	Mean	Std. Dev.
age	573	43.7	12.4
height	600	5.75	1.9
weight	550	146	40.7

batch report

A batch report is a specification for printing and exporting Survey Crafter Professional analysis tables and charts. A batch report consists of a list of items, each of which specifies a group of

tables and charts to print and export. You can very quickly design a batch report that includes tables and charts that analyze the responses to every question in your survey. Batch reports are stored in your study and listed in the Analyses tab of the Study window.

batch report design item

A batch report design item is a component of a batch report. Each batch report design item specifies a group of Survey Crafter Professional analysis tables and charts to print and export. There are five types of batch report design items: *Basic Analysis - Survey*, *Basic Analysis - Question Block*, *Basic Analysis - Variable*, *Analysis Table/Chart*, and *Custom Script*. *Basic Analysis* items are useful for quickly analyzing the responses to your survey.

batch report designer window

A batch report consists of a list of items, each of which specifies a group of Survey Crafter Professional analysis tables and charts to print and export. The batch report Designer window displays the list, allowing you to make changes to as well as print and export the report.

batch report filter

Add a batch report filter to a batch report when you want to limit the calculations to a subset of the respondent records in your study's data set. You can also configure a batch report filter to have Survey Crafter Professional repeat the calculations, each time using a different subset of the respondent records and automatically print and export the different results. There are three types of batch report filters: *Simple Condition Expression*, *Repeat Condition Expressions*, and *Repeat Variable Values*.

binary operator

An operator that acts on two terms in an expression. For example, the + (addition) operator adds two quantities.

block

A block in the Survey Designer window is a special table that can contain one or more survey questions, or just text or pictures. A block that contains one or more survey questions is called a

question block. A block that contains no questions is called an instructions-only block. Typically, instructions-only blocks contain instructions, pictures, section headings or other text.

block layout

A block layout represents a particular organization and presentation of the components of a survey block. A block layout dictates how the text, question, prompt and other components of a block are arranged. For example, one block layout may display a closed-end question's prompts in a single column below the question whereas another may display the prompts in a single row to the right of the question.

A block layout can also dictate the type and location of the block's controls. For example, when the Survey Designer window is in Web Layout or Interviewer Layout mode, many of the block layouts designed for 1 closed-end question employ radio button controls while others employ a single-selection list box control.

Most block layouts are designed to work with one or more of just one type of question. However, there are several block layouts that are designed to work with more than one type of question. For example, there is a block layout that combines multiple closed-end questions with one ranking question.

block style

A block style is a set of predefined formatting options that you can apply to a survey block. You can create your own block styles or edit existing ones. A block style controls the borders, shading and background colors of the cells of a survey block.

branching

A technique used to direct interviewers or respondents to different places in a survey based on the response to a question. For example, you might want respondents to skip a question about a particular fast food restaurant if they have never been to that restaurant.

browser

A software application used to view websites. Common browsers include Firefox, Microsoft® Internet Explorer®, Safari, Google Chrome and Opera.

category (on a chart)   A collection of one data point from each series in a chart. For most chart types, a category corresponds to one row of numbers in the chart's data table.

category variable   A variable that stores a response selected from a predefined list of choices. The list of choices is a nominal scale. Each possible response is assigned an arbitrary code that market research suppliers use. For example, the response "Yes" could have the code 1 and "No" could have the code 0.

chart   A graphical display of an analysis' results. Survey Crafter Professional supports several chart types including line, bar, and pie charts.

chi-square test   A test to determine whether the relationship between two category variables is statistically significant.

cleaning data   The process of editing unreadable and unexpected values in a study's data set before analyzing the data.

closed-end question   A question that requires the respondent to pick at most one prompt from a list of predefined prompts. Also called a forced choice or multiple-choice question. For example, "Which of the following restaurants is your favorite? Burger World, King Taco, Broilin' Bill's, The Chicken Coop, Marsha's Mex."

code (for a category)   The arbitrary number associated with a response to a closed-end or all-that-apply question. For example, for the question "What is your gender?" the response "Male" may be assigned the code 0 and "Female" the code 1.

Although you do not use codes within Survey Crafter Professional, category variables include them and Survey Crafter Professional exports them for use by market research suppliers and other software programs.

code (for a variable's name)

A variable code is a shortened name (up to eight characters long) that is only used when referencing a variable outside Survey Crafter Professional.

For example, variable codes are used in web survey HTML and data files since these files exist outside Survey Crafter Professional. Variable codes are also used when importing and exporting respondent data.

The reason for the shortened name is to conserve space in external data files. Also, market research suppliers typically limit variable identifiers to eight characters..

column filter

The expression you write to determine which respondents to include in a column's calculations in the Analysis window. The expression must evaluate to TRUE or FALSE. Respondents for whom the expression is TRUE pass through the filter and are included in the column.

For example, the column filter `gender = 'female'` includes only respondents who have the value 'female' stored in the category variable *gender*.

column percentage

In cross tabulations, the number of respondents in a table cell divided by the total number of respondents in that cell's column. Also called column frequency.

computed variable

A variable storing values Survey Crafter Professional calculates from values in imported variables or other computed variables. For example, if the imported variable *income* stores a respondent's income and *spouse_income* stores the respondent's spouse's income, the computed variable *family_income* could store the sum of the values in these two variables.

computer aided personal interviewing (CAPI)

An in-person interviewing method in which the interviewer enters the answers to survey questions into a computer as the respondent says them. Because CAPI surveys are programmed into a computer, they can support complicated skip logic.

computer aided telephone interviewing (CATI)

A telephone interviewing technique in which interviewers enter answers to survey questions into a computer as the respondent says them. Because CATI surveys are programmed into a computer, they can support complicated skip logic.

confidence interval

The range within which the population's mean or percentage is expected to lie. The upper and lower bounds of the interval are calculated from sample information and a confidence level.

For example, if the 95% confidence interval for the mean of variable x is 0.7 to 1.5, there is a 95% chance that the mean of x for the population should lie between 0.7 and 1.5.

confidence level

A measure of how confident you can be in a test's results. Confidence intervals are used when testing for statistical significance and when determining confidence intervals.

For example, suppose the confidence level for the mean of variable x is calculated from sample data as 0.7 to 1.5 at a 95% confidence level. Then, 95% of the time the mean of x for the population should lie between 0.7 and 1.5. In other words, you can be 95% confident that the population's mean lies between 0.7 and 1.5.

constant sum question

A question that respondents reply to by assigning points to a series of items. The points they assign across items add up to a total you decide. For example: "Divide 100 points among the following three fast food restaurants according to how likely you are to visit them (the more points, the more likely you are to visit): Burger World, Marsha's Mex, Broilin' Bill's."

constant sum question block

A survey block that contains one constant sum question and quantity variables for storing replies to the question.

correlation   A statistical technique for measuring the degree to which two quantity variables are related. For example, a correlation could measure whether units sold and the amount spent on marketing are related.

A correlation results in a correlation coefficient between 1 and -1 inclusive. 1 indicates a perfect positive correlation—an increase in one variable corresponds to an exact increase in the other variable. For example, when $x more is spent on marketing, *y* more units are sold. -1 indicates a perfect negative correlation—an increase in one variable corresponds to an exact decrease in the other variable. For example, when the price is increased by $x, *y* fewer units are sold.

There is not necessarily a causal relationship between correlated variables, that is, an increase in one variable does not necessarily cause an increase or decrease in the other. The variables are just related.

correlation coefficient   A statistic that describes the relationship between two quantity variables storing interval-scaled data (for example, ratings of satisfaction and durability) or ratio-scaled data (for example, age).

Values can range from 1 to -1. 1 indicates a perfect positive correlation--an increase in one variable corresponds to an exact increase in the other variable. For example, when $x more is spent on marketing, y more units are sold.

-1 indicates a perfect negative correlation--an increase in one variable corresponds to an exact decrease in the other variable. For example, when price is increased by $x , y fewer units are sold.

The degree to which the variables are related is given by the magnitude of the coefficient. A coefficient of 0.8 indicates that the relationship is more prevalent than if the coefficient was 0.2.

There is not necessarily a causal relationship between correlated variables, that is, an increase in one variable does not necessarily cause an increase or decrease in the other. The variables are just related.

correlation matrix	A table showing the correlation coefficients for a set of quantity variables. In the correlation matrix below, note that each cell on the diagonal running from upper-left to lower-right contains the value 1 because it represents the variable correlated with itself.

	income	*age*	*num_children*	*spouse_income*
income	1	0.62	-0.14	0.2
age	0.62	1	0.5	0.3
num_children	-0.14	0.5	1	0.45
spouse_income	0.2	0.3	0.45	1

count	The number of respondents meeting criteria you specify. For example, of the people surveyed, 549 said they read the *Times* everyday. Also called absolute frequencies.
counts and frequencies	A counts and frequencies table shows count and percentage calculations for each value of one or more selected variables. The variables you select for a counts and frequencies table can be of any type.
	For example, suppose your survey has a question that asks the respondent to choose the newspaper he or she reads the most from a list of newspapers. A counts and frequencies table could show the number of people who mostly read the *Gazette* as well as the number of people who mostly read the *Times*.
cross tabulation	A cross tabulation shows all combinations of the values of two or more variables and the number and/or percentage of times each combination was chosen.

For example, suppose your survey contains a question that asks for the respondent's gender and the newspaper that he or she reads the most. The cross tabulation below shows the number of respondents belonging to categories in the *gender* and *newspaper* variables. According to this cross tabulation, 250 males mostly read the *Gazette*.

| | Gender | | |
Newspaper	Male	Female	Total
Daily World	700 respondents	465 respondents	1165 respondents
Gazette	250	100	350
Times	310	790	1100
Tribune	460	215	675
Total	1720	1570	3200

data cleaning

The process of editing unreadable and unexpected values in a study's data set before analyzing the data.

data dictionary file

An ASCII text file describing the structure of an import file. Survey Crafter Professional uses the data dictionary file to match variables in an import file to a study's imported variables. In some cases, an import file needs a data dictionary file. An import file used by a Survey Crafter Professional web survey does not need a data dictionary file.

If a data dictionary file is needed, to make the import process most efficient, the data dictionary file should have the same name as its import file and be located in the same directory. Data dictionary files typically use the .DCT extension.

delimiter

The character used to separate variables or records in an import or export file. Common delimiters are commas or tabs.

descriptive statistics   Statistics on the values in quantity variables including the following: counts, means, mean confidence intervals, medians, modes, maximums, minimums, standard deviations, and variances.

dictionary variable   A variable in an import file. A dictionary variable's name should be the same as the code of its corresponding imported variable in a study.

download   To get a file from the Web by copying it from a web server to your computer.

exclusive prompt   An exclusive prompt is a prompt that a respondent is allowed to choose only when she has chosen no other prompt.

Since a respondent may pick at most one prompt in a closed-end or rating question, all prompts in closed-end and rating questions are exclusive. Since by default a respondent may choose more than one prompt in an all-that-apply question, all prompts in an all-that-apply question are not exclusive.

However, you can mark the last one or more prompts in an all-that-apply question exclusive. For example, if the prompts for your all-that-apply question include "None of the above" and "Refused", you could list the two prompts at the end and then mark them exclusive.

export file   The file to which Survey Crafter Professional writes the study's data set. Create an export file to use the study's data set in another application or to transfer it to another user.

expression   An expression is a combination of functions, operators, variables, and/or values that evaluates to one value or a different value for each respondent in a study's data set. For example, the expression

```
COUNT(gender='male' AND newspaper='BostonGlobe')
```

evaluates to the number of males in the study's data set who read the Boston Globe.

You can also use an expression to include a subset of the respondents in the study's data set. For example, the expression

```
(satisfaction='VerySatisfied' OR
satisfaction='Satisfied')
```

evaluates to TRUE for each respondent who said she is either very satisfied or satisfied and FALSE for each respondent who said she is neither very satisfied nor satisfied.

Expression Builder   A dialog box that helps you write expressions by providing resources that you can drag and drop into your expressions such as functions, your study's variables, values from your study's data set and expressions from the Expression Library.

Expression Library   A place where you can store and retrieve your study's expressions. To copy an expression to another study, name the expression and save it to your study's Expression Library, export your study's Expression Library to a text file and then import the text file into the other study's Expression Library.

field   Another name for a variable's values in an import file. Survey Crafter Professional matches fields to a study's imported variables when you import data from an import file into a study.

field delimiter   A character used to separate values in an import file. Common field delimiters are tabs or commas.

field width   The number of columns allotted to a variable's value in an import file.

forced choice question

A question that requires the respondent to choose a response from a list of pre-defined answers. Also called a closed-end question. For example, "Which of the following restaurants is your favorite? Burger World, King Taco, Broilin' Bill's, The Chicken Coop, Marsha's Mex."

formatting of table cells

The number format, alignment, font, borders, and patterns specified for a table cell and its value.

frequency

The number of people who respond a certain way to a survey question. Can be expressed as a count (543 respondents read the *Times* daily) or a percentage (59% of respondents read the *Times* daily).

Counts are also called absolute frequencies. Percentages are also called relative frequencies.

function

A command that tells Survey Crafter Professional to perform a calculation. For example, the function MEAN( ) calculates the average value in a quantity variable. Functions are often included in expressions that define computed variables or values in table cells.

Function Wizard

A dialog box that guides you through the process of inserting a function or operator in an expression.

gap analysis

A type of cross tabulation that illustrates the difference between two category variables' values. The two variables usually store data on customers' need for an attribute like customer service and

their satisfaction with that attribute in a product they currently use.

Gaps exist in the low need/ high satisfaction and high need/low satisfaction quadrants.

	Low Satisfaction	High Satisfaction
High Need	22%	16%
Low Need	42%	20%

The gap exists when customers are underserved (for example, customers who have a high need for customer service but low satisfaction with it) or overserved (customers who have a low need for customer service but high satisfaction with it). The gap analysis above suggests that 22% of the sample is underserved and 20% is overserved.

group   In the Question Library, a collection of similar questions.

HTML   Hypertext Markup Language. The standard language used to describe a web page's structure and content. Browsers read HTML and convert it to the web page users see in their browser's window.

heading   A label appearing with a table's row or column in the Analysis window. For example, a column containing information on male respondents might have the heading "Males."

hypothesis   An assertion about a sample that can be tested (for example, whether customers' satisfaction with a soda is influenced more by its price than its flavor).

hypothesis test
A statistical test for determining whether a hypothesis about an observed difference between a sample value and a hypothetical value or another sample value is due to chance. If the difference is not due to chance, the difference is termed "statistically significant."

import file
A file containing data to import into Survey Crafter Professional. The file typically comes from a web survey or a market research supplier although you also can create an import file.

imported variable
A variable storing data you import into the study from a web survey data file or enter using the built-in Interviewer. Typically imported variables store responses to survey questions. An imported variable's values can be analyzed directly or used to create computed variables for further analysis.

individual responses wizard
A wizard that builds analysis tables that show actual responses stored by selected variables.

instructions-only block
A block that contains no questions is called an instructions-only block. Typically, instructions-only blocks contain instructions, pictures, section headings or other text. Survey Crafter Professional does not create and maintain any imported variables for an instructions-only block.

interval scale
A scale whose points are equally spaced but whose values are arbitrarily defined. For example, the Celsius scale is an interval scale. The difference between 20 and 25 degrees Celsius is the same as the difference between 200 and 205 degrees Celsius and 100 degrees Celsius has arbitrarily been defined as the boiling point of water.

Equal spacing of scale points allows for calculating frequencies, percentiles, means, standard deviations, correlations and for performing more advanced techniques like cluster analysis.

interviewer layout   Use the Survey Designer window's Interviewer Layout mode to tailor your survey for the built-in Interviewer. When in Interviewer Layout mode, the Survey Designer window offers question block layouts that are compatible with the Interviewer. For example, you can choose a question block layout that uses drop-down, single selection or multiple selection list box controls.

intranet   A company-wide internet. Only employees of the company have access to this network.

label   The identification tag you associate with a block of a Survey Crafter Professional survey. You can use labels in skip logic to indicate the next part of the survey respondents or interviewers should go to based on the answer to a previous question. Unlike question numbers, labels do not change if you add, delete, or rearrange questions.

language package   A language package is a named collection of translations of built-in messages, headings and labels. Every Survey Crafter Professional survey is assigned a language package. The language package provides the words on the survey's navigation buttons as well as in the survey's informational headings and built-in error and warning messages. You can customize existing language packages and/or create your own. Survey Crafter Professional ships with standard U.S. English, British English, French, Spanish, German and Dutch language packages.

link or hyperlink   On a web page, text or graphics users can click on to initiate an action. Links often appear as underlined text. Commonly they take the user to another web page.

literal variable   A variable storing text. Most often, literal variables store answers to open-end questions like "What is your name?"

market research supplier	A firm that interviews respondents and compiles data using the survey you write. Also called a survey vendor.
maximum length	The maximum acceptable length for a literal variable. Values stored in literal variables may be up to 32,767 characters long. If a value is more than 32,767 characters long, Survey Crafter Professional stores only the first 32,767 characters.
maximum value	The largest value in a quantity variable. Marks the upper end of a quantity variable's range.
mean	The average value in a quantity variable. For example, if the quantity variable *carsown* stores the values 1, 1, 2, 3, 2, its mean is 1.8.
median	The value exactly in the middle of a quantity variable's values when they are ranked lowest to highest. For example, if the quantity variable *carsown* stores the values 1, 1, 2, 2, and 3, its median is 2.
minimum value	The smallest value in a quantity variable. Marks the lower end of a quantity variable's range.
missing value	Survey Crafter Professional considers a value missing when it is equal to NR (No reply) or NV (No value). A variable takes on one of these missing values when its associated survey question is either not asked (NV) or not answered (NR).
mode	The most frequently occurring value in a quantity variable. For example, if the quantity variable *carsown* stores the values 1, 1, 1, 2, 2, 3, and 4, its mode is 1.

name (in the Question Library)	A string of text associated with a question in the Question Library. You can use the name to help find a question. For example, the question "How old are you?" might have the name "age".
No Reply (NR)	If a respondent's record contains this value for a variable, it means that the respondent was asked the question associated with the variable but refused to answer it.
	Survey Crafter Professional ignores NR values when performing calculations but you can test whether a variable contains any NR values.
	Imported category variables feature a category called NR by default. Imported quantity variables feature a no reply value market research suppliers use that Survey Crafter Professional converts to NR when you import the data set. Imported literal variables do not have a no reply value: If a respondent declines to answer a question that uses a literal variable, the market research supplier should enter a value like "Declined to answer" or "No answer".
No Value (NV)	If a respondent's record contains this value for a variable, it means that no value was available for the variable. For example, the respondent was not asked the question associated with the variable or simply left the question blank.
	Survey Crafter Professional ignores NV values when performing calculations but you can test to check whether a variable contains any NV values.
	Survey Crafter Professional also assigns the value NV to computed variables before their values are calculated.
nominal scale	A scale on which numbers or codes are arbitrarily assigned to responses solely for identification purposes. For example, answers to question "Do you own a VCR?" may be coded as follows: 0 for "Yes" and 1 for "No". Values in category variables use nominal scales.

Because the number or code assigned to a response has no inherent meaning, nominal scales are useful only for calculating frequencies.

normalized values
Values calculated by subtracting a quantity variable's mean from each of its values and dividing each difference by the variable's standard deviation. Normalize values when you want to compare quantity variables with different means and variances.

open-end question
A question that respondents answer in their own words rather than by selecting an answer from a list of choices or stating a number. For example, "What is your name?"

operand
A term on which an operator acts in an expression. In the following expression, the quantity variables *salary* and *bonus* are operands of the + (addition) operator: `salary + bonus`

ordinal scale
A scale on which the numbers assigned to a choice have meaning relative to each other but the differences between scale values have no absolute meaning. Ordinal scales are used for rankings.

For example, suppose a respondent ranks three products based on quality. It is clear that the respondent thinks the top-ranked product has the highest quality. It is not clear, however, how much higher the respondent thinks the top-ranked product's quality is than the second-ranked product's.

Ordinal scales allow for calculating frequencies, medians, percentiles, and other order statistics.

percentage
The proportion of respondents who meet a criterion you specify. For example, 59% of respondents said they read the *Times* daily. Also called relative frequency.

primary block

A primary block is a block that serves as the primary source of information for its associated imported variables. Survey Crafter Professional uses primary blocks in the Survey Designer window to set the properties of the blocks' associated variables.

A newly inserted question block is by default a primary block. However, if you copy a block from one Survey Designer window and paste it inside another Survey Designer window from the stame study, the pasted block is by default a secondary block. A secondary block's associated variables are the same as those associated with the original primary block in the other Survey Designer window.

Secondary blocks are useful when you want to administer your survey in more than one language or you want to create another variation of your survey. Changes made to question and prompt text in a secondary block are not reflected in the block's associated variables.

To show when the cursor is inside a primary block, Survey Crafter Professional displays a blue rectangle around the block. To show when the cursor is inside a secondary block, Survey Crafter Professional displays a green rectangle around the block.

Identifiers for secondary blocks in the Blocks tab of the Survey Explorer toolbar are colored green.

You can click inside a secondary block and then click on Primary Block from the Block menu to convert the block to a primary block.

print layout

Use the Survey Designer window's Print Layout mode to tailor your survey for printing. When in Print Layout mode, the Survey Designer window offers question block layouts that are compatible with printed surveys.

For example, you can choose a question block layout that has respondents circle the prompts. When in Print Layout mode, the Survey Designer window also offers page size and orientation options and automatic pagination. The Survey Designer window must be in Print Layout mode for you to print your survey.

profile	A list of descriptive statistics for category or quantity variables. A profile often shows the number of responses stored in variables, means and standard deviations for quantity variables, and counts or percentages for category variables. Also called a banner.
prompt	For a closed-end, all-that-apply or rating question, a prompt is one of the possible answers to the question. For a ranking or constant sum question, a prompt is one of the items to be ranked or assigned a value.
	For example, the closed-end question "Which of the following fast food restaurants is your favorite? Burger World, Marsha's Mex, Broilin' Bill's." has 3 prompts.
quantity question	A question a respondent answers with a number. For example, "What is your age?"
quantity variable	A variable storing numbers. Quantity variables store ordinally, intervally, or ratio scaled data. Often they store responses to quantity questions like "What is your age?" or rating questions like "Rate our customer service on a scale of 1 to 5." They can also store values calculated from responses to questions like the normalized values of respondents' ages.
question block	A block that contains one or more survey questions is called a question block.
	When you use a question block for a survey question, Survey Crafter Professional automatically creates and maintains the necessary imported variables in the study's database to store the responses to the question. These variables are called imported because they store data coming from outside Survey Crafter Professional.
	A question block may be a primary block or a secondary block.

randomize	Rearranging questions or listed choices for each respondent. Randomizing is done to minimize any bias resulting from presenting the questions or choices in the same order every time.
range	A quantity variable's minimum and maximum values. For example, if the quantity variable *carsown* stores the values 1, 2, 1, 3, 4, 2, 1, its range is 1 to 4.
ranking question	Respondents reply to a ranking question by ordering a list of items according to some criterion. For example, "Please rank the following three fast food restaurants according to how likely you are to visit them (1 is most likely to visit, 3 least likely): Burger World, Marsha's Mex, Broilin' Bill's."
ranking question block	A survey block containing a ranking question and two or more quantity variables for storing replies to the question.
ranking question wizard	An analysis wizard especially tailored for analyzing ranking questions. The Ranking Question wizard shows statistics for each item in a ranking question.
rating question	A question respondents reply to by picking a point on a scale. For example, "Please rate the importance you place on customer service at fast food restaurants on a scale of 1 to 5. (1 = Not at all important, 5 = Extremely important.)"
rating question block	A survey block containing one or more rating questions and the associated quantity variables for storing replies to the questions.
ratio scale	A scale on which the ratio between values is meaningful because 0 represents the absence of an attribute. For example, $100 is twice as much as $50 and $0 is the absence of money.

A ratio scale allows for the same calculations as all other scale types (nominal, ordinal, and interval) plus other more specialized calculations.

record

A row in the study's data set. A record contains one respondent's replies to the survey's questions and associated computed values. You can view records in the Data window.

record delimiter

The character used to separate one respondent's replies (one record) from another respondent's in an import file. The record delimiter is typically a carriage return.

regression

A technique for estimating the change in the dependent variable (the Y axis on a chart) that is brought about by changes in the independent variable(s) (the X axis on a chart).

regular expression

A regular expression is a literal value that follows a set of rules. Survey Crafter Professional uses regular expressions to search literal values. Use the rules described below to construct a regular expression.

- Any character that is not a special character matches itself. For example, "abc" matches "abc".

- A backslash (\) followed by a special character matches the special character itself. For example, "\+" matches "+".

- Special characters are plus (+), asterisk (*), question mark (?), period (.), left bracket ([), right bracket (]), caret (^), dollar sign ($), left and right parentheses (()) and the vertical line (|).

- Parentheses (()) group parts of an expression into sub-expressions. For example, "(abc)+" matches "abc" and "abcabc".

- A vertical bar (|) allows a choice between sub-expressions. For example, "02143|02144|02146" matches "02143", "02144" and "02146". Another example, "mon(ey|ies)" matches "money" and "monies".

- A period (.) matches any character except the newline character. For example, ".ed" matches "bed" and "fed".

- A character or a set of characters enclosed in brackets ([]) is a one-character expression that matches any of the characters in the set. For example, "[abc]" matches "a", "b", and "c". Use a dash (-) to indicate a range. For example, "[a-zA-Z]" matches any lower or upper case letter. Another example, "[0-9][0-9][0-9][0-9]/(0[0-9]|1[0-2])/(0[1-9]|[1-2][0-9]|3[0-1])" matches "2010/05/27" but not "2010/13/27" or "2010/12/32".

- If the first character enclosed in brackets ([]) is a carot (^), then the characters that follow may not occur in the searched string. For example, "[^abc]" matches "d" but not "a", "b" or "c".

- A character or set of characters that is followed by an asterisk (*) may occur zero or more times in the searched string. For example, "[A-Z]*" matches zero or more upper-case letters.

- A character or set of characters that is followed by a plus (+) may occur one or more times in the searched string. For example, "[a-z]+" matches one or more lower-case letters.

- A character or set of characters that is followed by a question mark (?) may occur zero or one time in the searched string. For example, "[a-zA-Z]?" matches zero or one lower or upper case letter.

- If the first character of the expression or sub-expression is the caret (^), then the matched string must be at the beginning of the string being searched. For example, "^the" matches "the answer is" but not "and the answer is".

- If the last character of the expression or sub-expression is the dollar sign ($), then the matched string must be at the end of the string being searched. For example "is$" matches "the answer is" but not "the answer is 10". Another example, "^[0-9][0-9][0-9][0-9]/(0[0-9]|1[0-2])/(0[1-9]|[1-2][0-9]|3[0-1])$" matches "2010/05/27" but not "before 2010/05/27" or "2010/05/27 or after".

relative frequency   The proportion of respondents who meet criteria you specify. For example, 59% of respondents said they read the *Times* daily. Also called percentage.

research plan   The document outlining the survey research project including its scope and objectives, hypotheses, and schedule. Also called the white paper.

row filter   The expression you write that determines which respondents to include in the calculations in a row's cells in the Analysis window. The expression must evaluate to TRUE or FALSE. Respondents for whom the expression is TRUE pass through the filter and are included in the row.

For example, the row filter `gender = 'male' AND age > 25` includes only respondents who have the value 'male' stored in the category variable *gender* and values greater than 25 stored in the quantity variable *age*.

row percentage   The number of respondents in a table cell divided by the total number of respondents in that cell's row. Also called row frequency.

sample size   The total number of respondents in the sample.

scale   The measurement system that determines how a respondent replies to a survey question and what the reply means. Different kinds of scales allow for different analyses with the data they collect.

There are four kinds of scales: nominal, ordinal, interval, and ratio. Category variables store responses on nominal scales. Quantity variables store responses on ordinal, interval, and ratio scales.

scale point	A value on a scale. For example, 5 on a scale of 1 to 5. A scale point often has a label associated with it to explain what the value means. For example, 5 could mean "Very satisfied" and 1 could mean "Very dissatisfied".
screening question	A question asked at the beginning of a survey to test whether the respondent is appropriate for the survey. For example, in a survey targeting people interested in buying a house, a screening question might be "Do you plan to buy a house in the next five years?"
script	A program that resides on a web server and processes completed surveys.
search engine	A program that finds web pages containing keywords users enter.
secondary block	A secondary block is a block that has been copied from another Survey Designer window. When you copy a primary or a secondary block from one Survey Designer window and paste it inside another Survey Designer window, the pasted block is by default a secondary block. A secondary block's associated variables are the same as those associated with the original primary block in the other Survey Designer window.

Secondary blocks are useful when you want to administer your survey in more than one language or you want to create another variation of your survey. Changes made to question and prompt text in a secondary block are not reflected in the block's associated variables.

To show when the cursor is inside a secondary block, Survey Crafter Professional displays a green rectangle around the block. To show when the cursor is inside a primary block, Survey Crafter Professional displays a blue rectangle around the block.

You can click inside a secondary block and then click on Primary Block from the Block menu to convert the block to a primary block. |

segmentation   A method of dividing the sample into mutually exclusive groups. For example, a sample could be divided into respondents with annual incomes over $50,000 and respondents with annual incomes less than or equal to $50,000. Comparisons are often then made between segments.

series   A group of data points. For most chart types, a series corresponds to one column of numbers in the chart's data table.

skip logic   Instructions telling the respondent or interviewer to go to a different part of the survey or to stop the survey based on an answer to a question. Also called branching.

standard deviation   A statistic that measures the spread of data around a quantity variable's mean. All else held equal, a small standard deviation implies a low spread or strong central tendency and suggests the mean represents the data well. A large standard deviation implies high spread or weak central tendency in the data and suggests that the mean represents data poorly.

                           The standard deviation is the square root of the variance.

standard group   A group that came preloaded in the Question Library. You cannot delete or rename a standard group.

standard question   A question that came preloaded in the Question Library. You cannot delete or move a standard question.

standard template   A set of predefined variable settings available to all Survey Crafter Professional studies. You can use templates to define imported variables quickly. You cannot overwrite a standard template's settings.

---

standardized values   Values calculated by subtracting a quantity variable's mean from each of the variable's values. Standardize values when you want to compare values in quantity variables with different means.

statistical significance   Occurs when the difference between two measurements is large enough not to have occurred by chance. A difference is statistically significant only if the result of a significance test is greater than or equal to the significance level you choose for the test. Statisticians typically use significance levels of 0.95 and social scientists typically use 0.90.

study   A study is a Survey Crafter Professional project file. A study is comprised of some or all of the following: one or more surveys, one data set, multiple variables, and multiple analyses.

study window   The Survey Crafter Professional window that organizes the components of a study into the following four tabs: Surveys, Data, Analyses, and Variables.

survey   A document containing questions to ask respondents.

survey designer window   The Survey Designer window is where you enter and format your survey. It has many features that you can use to arrange and format the titles, instructions, pictures and questions that make up your survey.

survey field   Insert a survey field at a location in your survey where you want to display the answer to a previous question or the result of evaluating an expression. You can insert any number of survey fields almost anywhere in your survey. Survey fields function only when your survey is on the Web or in the built-in Interviewer.

Please note that if you do not want JavaScript in your web survey's HTML files, you can configure your survey to have only Survey Crafter Professional's web survey script update your

survey fields. If you configure your web survey this way, in order for a survey field to function properly, you will need to insert the field on a page that follows the page that contains the question block(s) with which the variable(s) referenced by the field are associated. Inserting the field on a following page gives the web survey script the opportunity to replace the field with the value to display before the respondent's browser shows the page to the respondent.

For example, let's say your web survey has an open-end question that asks for the respondent's first name. If you want to display the respondent's answer to the question elsewhere in the survey but do not want JavaScript in your web survey's HTML files, you would need to insert the survey field(s) on page(s) that follow the one that has the question.

Another example, let's say your web survey has a question that asks the respondent to rate your customer service. If it is okay for your web survey's HTML files to use JavaScript, you can insert the survey field(s) that would display the answer to the question anywhere on the same page and/or on any page(s) that follow.

survey vendor

A firm that interviews respondents using the survey you write and compiles the replies. Also called a market research supplier.

table filter

A table filter is an expression you write that determines which respondents to include in an analysis table's calculations. The expression must evaluate to either TRUE or FALSE for each respondent in the data set. Respondents for whom the expression evaluates to TRUE pass through the filter and are included in the table's calculations.

For example, the expression

```
(EmploymentStatus = 'Part Time' AND income >
40000)
```

includes only respondents who have the value 'Part Time' stored in the category variable EmploymentStatus and values greater than 40,000 stored in the quantity variable income.

tails for significance tests

Use a two-tailed test when you want to test whether a value or the difference between values is equal to 0. Use a one-tailed test if you want to test whether a value or the difference between two values is not equal to 0.

target

A target in the Survey Designer window is a named location that you can use as a destination for a hyperlink. Use a target as a hyperlink's destination when you want your respondents to click on a hyperlink to jump to another location in your survey.

Before you can insert a hyperlink for jumping to another location in your survey, you need to insert a target in your survey.

template

A group of predefined settings for creating an imported variable. Using a template saves you from entering settings for variables with common response scales. For example, if a survey contains many yes/no questions, use the Yes/No template when creating variables to store responses to these questions.

You can create your own templates or use the standard templates Survey Crafter Professional includes.

text substitution table

A text substitution table is a two-column table that contains one or more textual mappings. Each textual mapping consists of an answer to search for and the answer's replacement text. When you associate a text substitution table with an open-end question, Survey Crafter Professional's analysis wizards use the table's textual mappings to automatically substitute the answers to the open-end question in the headings of the resulting analysis tables and charts.

Suppose your survey has an open-end question that asks the respondent to characterize his or her experience at a fast food restaurant. Suppose also you decide to simplify data entry by translating the respondents' answers to this question into codes and enter the codes instead of the respondents' words. You can create a text substitution table that contains textual mappings between the codes and the words and associate the table with the open-end question. When you use Survey Crafter Professional's

analysis wizards to analyze the answers to the open-end question, the analysis wizards automatically substitute the codes with their corresponding words, making the resulting analysis tables and charts easier to read.

t-test

A test used to determine whether a correlation between two quantity variables or the difference between two means or percentages is statistically significant.

unary operator

An operator that acts on only one term in an expression. For example, the - (negation) operator negates one quantity.

uniform resource locator (URL)

Universal Resource Locator. Standard notation for a site's location on the Web. For example, http://www.mycompany.com.

unexpected value

A value lying outside the range of acceptable values for an imported quantity variable or a value that does not follow the rules of an all-that-apply, ranking or constant sum question. Even if a value is unexpected, Survey Crafter Professional can use it in calculations.

unreadable value

A value Survey Crafter Professional cannot interpret. There are two cases in which values can be unreadable:

• A quantity variable receives a non-numeric value

• A category variable receives a code outside the range of acceptable codes

upload

To post a file on the Web by copying it from your computer to a web server.

user-defined group

A group you added to the Question Library. You can change a user-defined group's name and delete it from the Question Library.

user-defined question	A question you added to the Question Library. You can change a user-defined question's group and delete it from the Question Library.
user-defined template	A set of editable variable settings you define. Use templates to define imported variables quickly. A user-defined template is available only to the study in which you created it. Unlike a standard template, a user-defined template's settings can be overwritten.
variable	Storage sites for values entered or imported into a Survey Crafter Professional study or computed within the study. Survey Crafter Professional has three types of variables: category, literal, and quantity.
variable name	Each variable in a Survey Crafter Professional study must have a name that uniquely identifies it. Variable names are used in the Survey Crafter Professional expression language.
	For example, if your study contains a variable named Gender, then the expression COUNT(Gender='male') would return the count of male respondents.
	If a variable name is used in an expression, Survey Crafter Professional does not allow you to change the name.
variance	A statistic that measures the central tendency or amount of spread in interval or ratio scaled data. All else held equal, a small variance implies a low spread in the data and suggests the mean is a good representation of the data. A large variance implies a large spread in the data and suggests the mean is a poor representation of the data.
	The variance is the square of the standard deviation.
web layout	Use the Survey Designer window's Web Layout mode to tailor your survey for the World Wide Web. When in Web Layout mode, the Survey Designer window offers question block layouts

that are compatible with web surveys. For example, you can choose a question block layout that uses drop-down, single selection or multiple selection list box controls. The Survey Designer window must be in Web Layout mode for you to configure, preview and publish your survey for the World Wide Web.

web server   A program that displays a web page when a user's browser requests it. Also the computer containing this program and the script for processing survey data.

webmaster   The person responsible for maintaining a website.

weighting   Multiplying survey responses by factors prior to analysis. Weighting is done to correct for oversampling and to ensure that the sample represents the survey's target population.

white paper   The document outlining the survey research project including its objectives, hypotheses, and schedule. Also called the research plan.

wizard   A series of dialog boxes designed to take you step-by-step through a task.

Survey Crafter Professional features the following wizards for creating tables common to survey research projects:

- All-That-Apply Question wizard

- Banner wizard

- Correlation Matrix wizard

- Counts and Frequencies wizard

- Cross Tabulation wizard

- Descriptive Statistics wizard

- Individual Responses wizard

• Ranking Question Wizard

Survey Crafter Professional features the following wizards for creating charts common to survey research projects:

• Count or Percentage Chart wizard

• Quantity Variable Chart wizard

Survey Crafter Professional also features an Expression Builder for building expressions.

Finally, Survey Crafter Professional features the following wizards for creating computed variables:

• Category to Quantity Variable wizard

• Category to Weights Variable wizard

• Literal to Category Variable wizard

• Quantity to Category Variable wizard

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