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Using Report in SPSS 11.5, Part 1 of 2

By Patrick McLeod, Research and Statistical Support Services Consultant

With the decommissioning of the academic mainframe now a reality after many months of diligent planning, certain processes that used to run on the academic mainframe are now being transitioned to desktop processing. One of these processes is the running of faculty evaluations, a process that is being transitioned from a proprietary mainframe program to desktop processing using SPSS 11.5 for Windows. In the first part of a two-part article on using the functionality of the Report tool in SPSS 11.5 for processing faculty evaluations, we will discuss the basics of Report and how to set up a simple report using both the drop-down menus and syntax.

Since faculty evaluations are sensitive affairs, I will not be discussing this new SPSS-generated report in step-by-step detail. However, we will go through the report-generation process with a similar report using some similar methods. Since the faculty evaluations also contain sensitive data, all data used in these two articles is generic data found in the SPSS home directory, from a file called Employee Data.

From the Help menu, Syntax Guide, Base Syntax, in SPSS 11.5, a description of the Report tool:

REPORT produces case listings and summary statistics and gives you considerable control over the appearance of the output. REPORT calculates all the univariate statistics available in DESCRIPTIVES and the statistics and subpopulation means available in MEANS. In addition, REPORT calculates statistics not directly available in any other procedure, such as computations involving aggregated statistics. REPORT provides complete report format defaults but also lets you customize a variety of table elements, including column widths, titles, footnotes, and spacing. Because REPORT is so flexible and the output has so many components, it is often efficient to preview report output using a small number of cases until you find the format that best suits your needs.

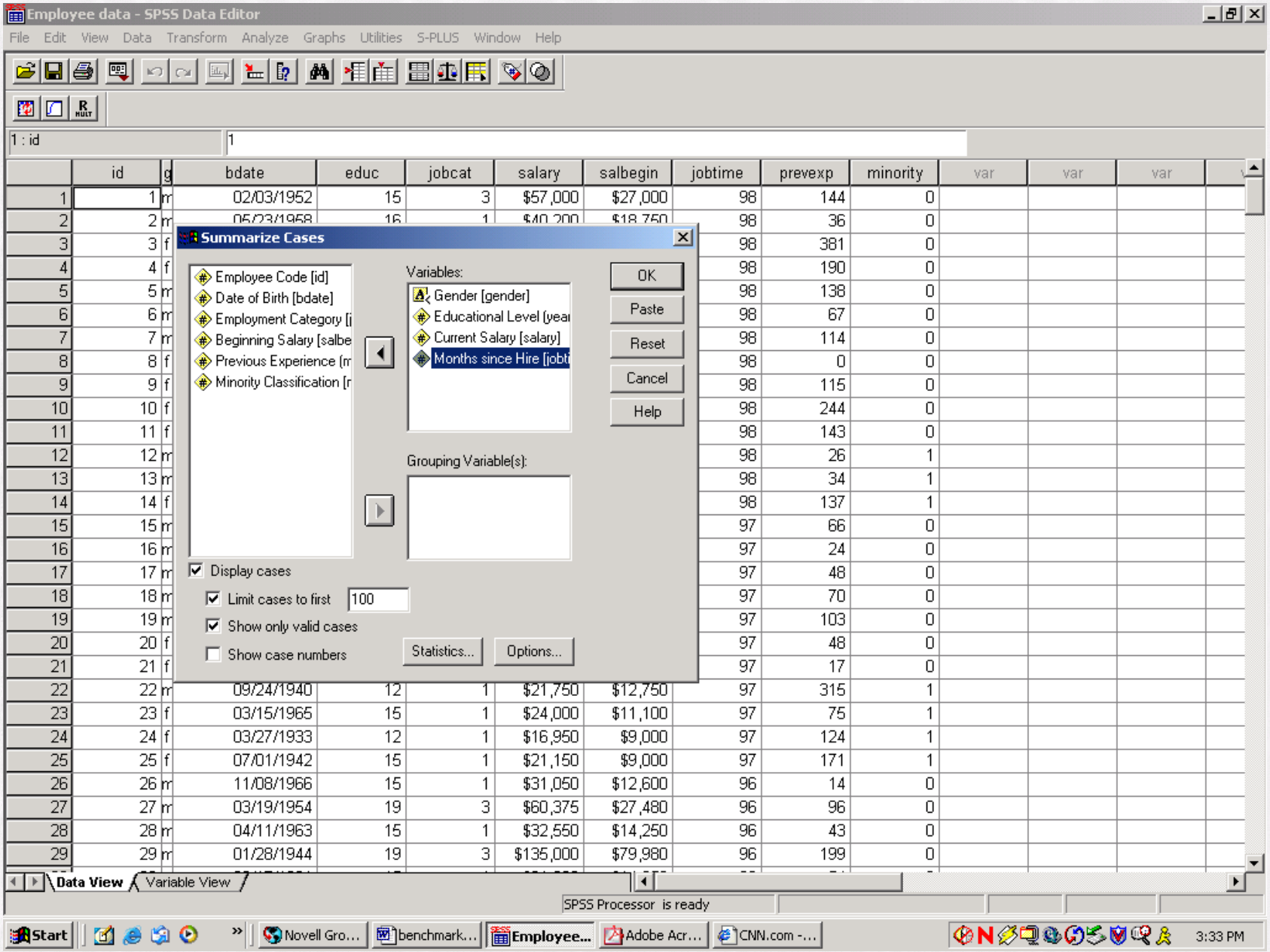
Report is a very extensible, quite powerful tool in SPSS 11.5 that is often overlooked by many in the university research community who are more focused on the other specific statistical analyses offered in SPSS. However, for the university administrative community, Report offers nearly unlimited potential for customized reports by administrative groups from their desktops instead of relying on the mainframe for such report generation.

Drop-Down Menus and Syntax

To begin utilizing the power of the Report tool in SPSS 11.5, we should begin the discussion with a brief digression about merits of drop-down menus (also known a the GUI, or Graphical User Interface) versus syntax. The widespread advent of drop-down menu functionality in statistical packages allows the user to point-and-click his or her way through the basic levels of most statistical functions in the most recent versions of SPSS, S-Plus, and Stata. While ease of use is a crucial function of any statistical package, most researchers will find that the “canned” nature of drop-down implemented models and tests are not sufficient for their research needs. Where the functionality of drop-down menus ends, the functionality of syntax begins. Syntax, or the programmable language of a

statistical package, allows the user to customize most or all of the functions of that statistical package to fit the needs of their research.

Happily SPSS 11.5 allows the user who isn't comfortable with syntax but needs the extensibility it offers a way out. In nearly every dialog box that opens up whenever a particular analysis is run in SPSS, there will be an option for "PASTE" located on the right-hand side of the dialog box. Here's an example (screenshot 1):



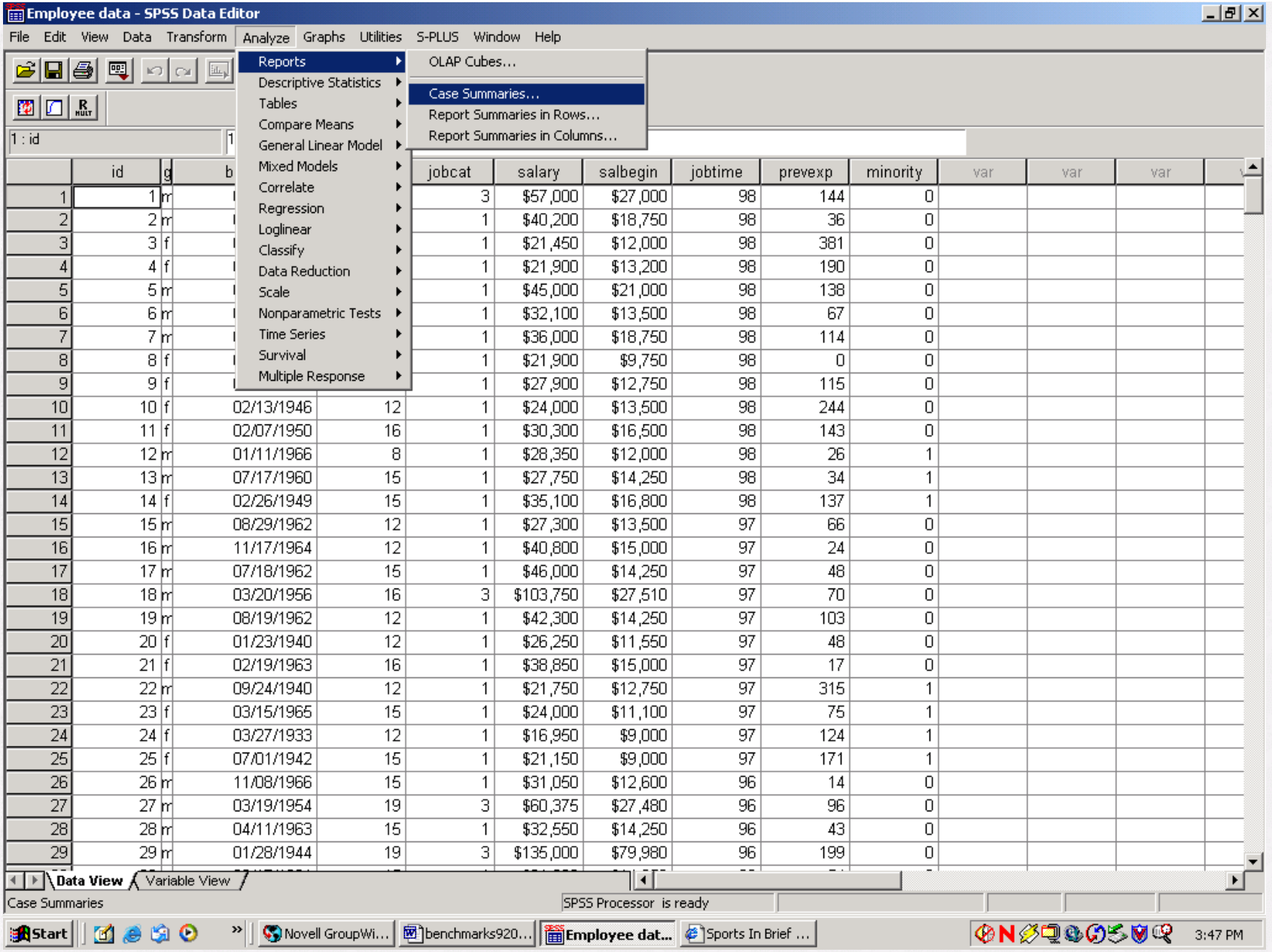
The button for "PASTE" is located immediately below the "OK" button. By clicking on "PASTE," SPSS will paste the appropriate syntax into a syntax editor window! The syntax will reflect all customizations that have been selected in the particular dialog box for a particular type of analysis. For example, in the

picture above, any customizations the user requested from SPSS under the “STATISTICS” and “OPTIONS” selections would be reflected in the syntax that SPSS will paste into the syntax editor. If you utilize this option, you will need to run your analysis from within the syntax editor.

A Simple Report

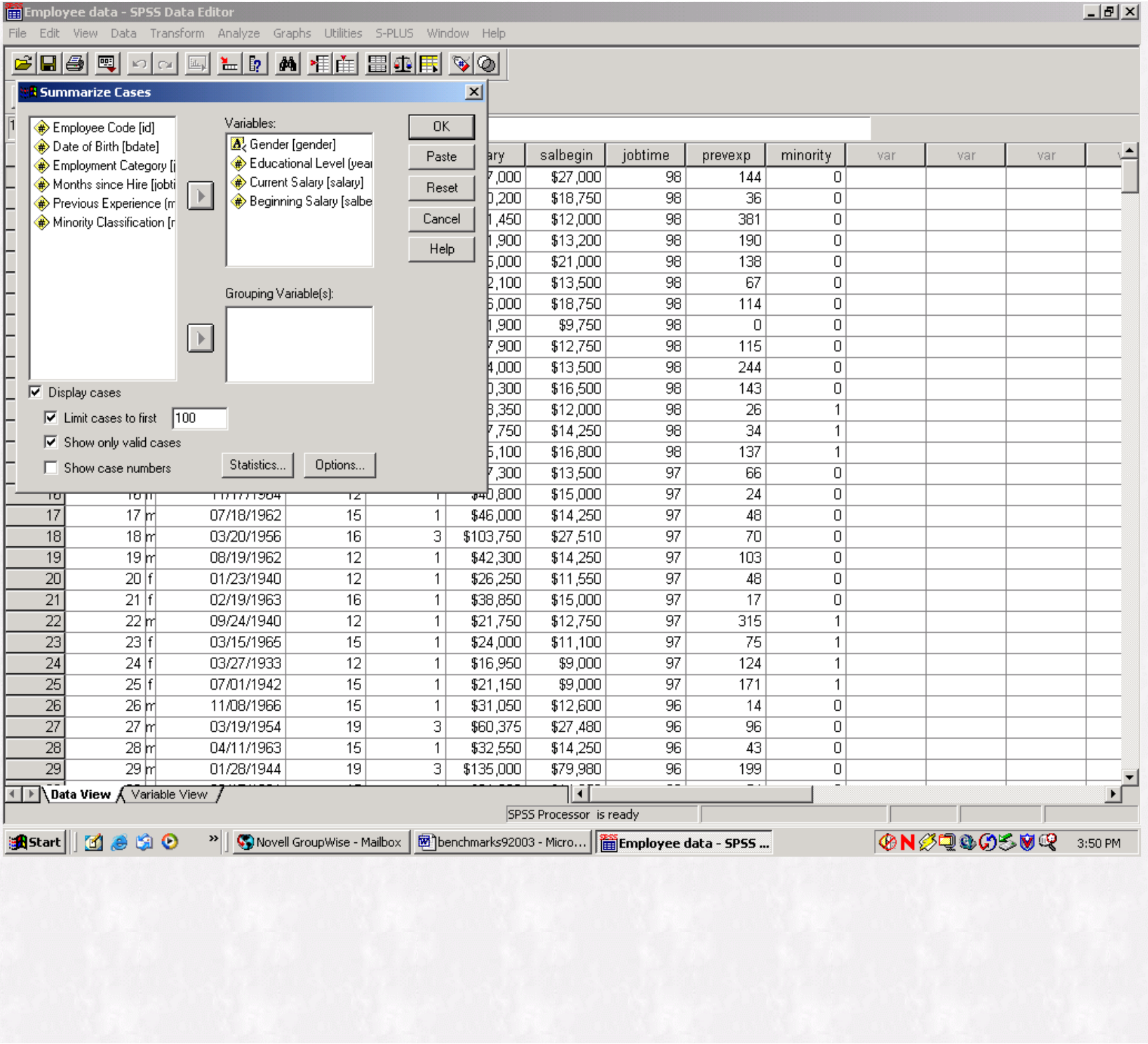
In this section we will look at a simple report generated from our example data. We will generate simple case summaries with mean and range statistics by using the combined power of the drop-down menu system and syntax.

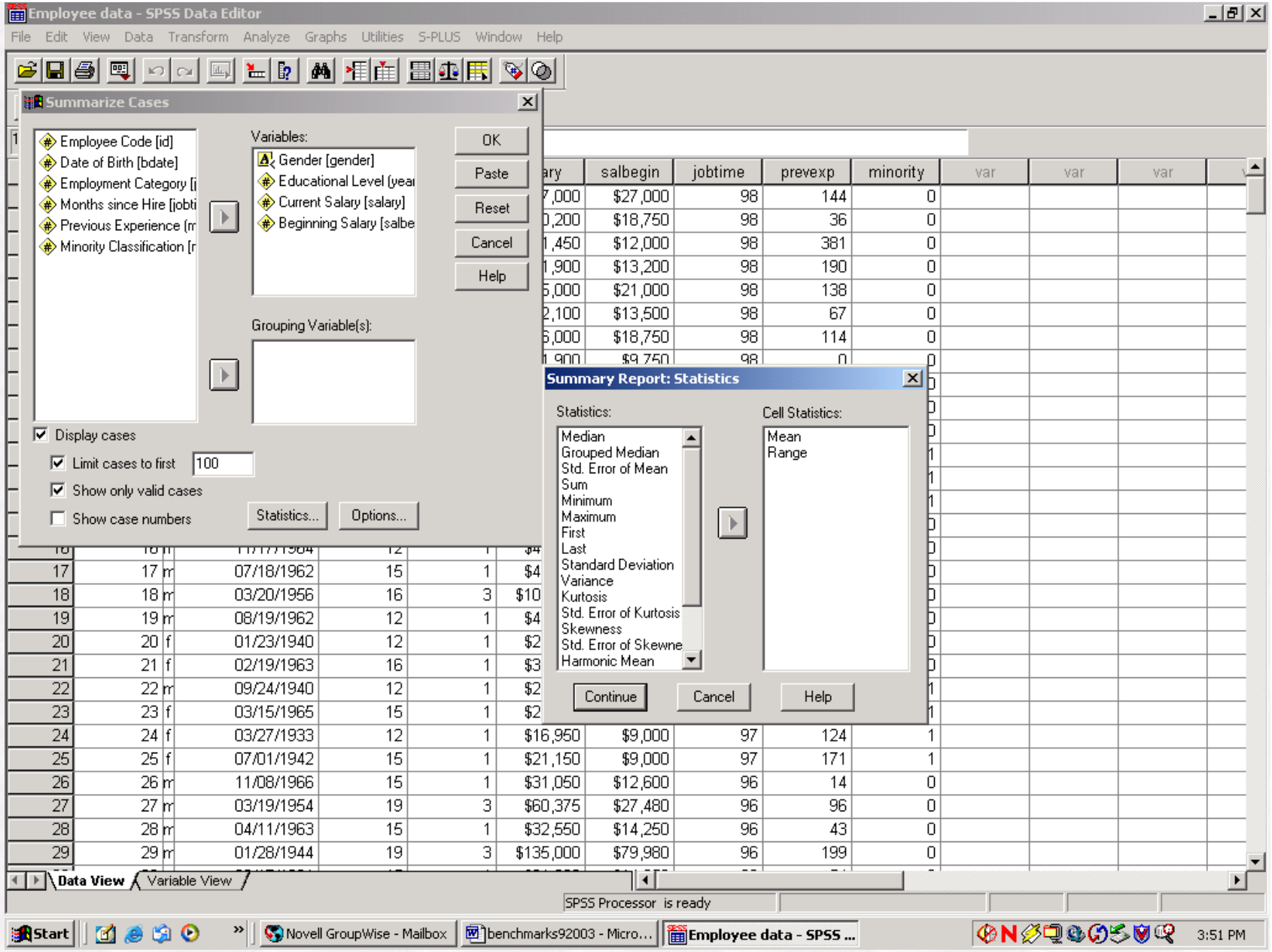
First, we click on Analyze, then Report, then across to Case Summaries (screenshot 2):



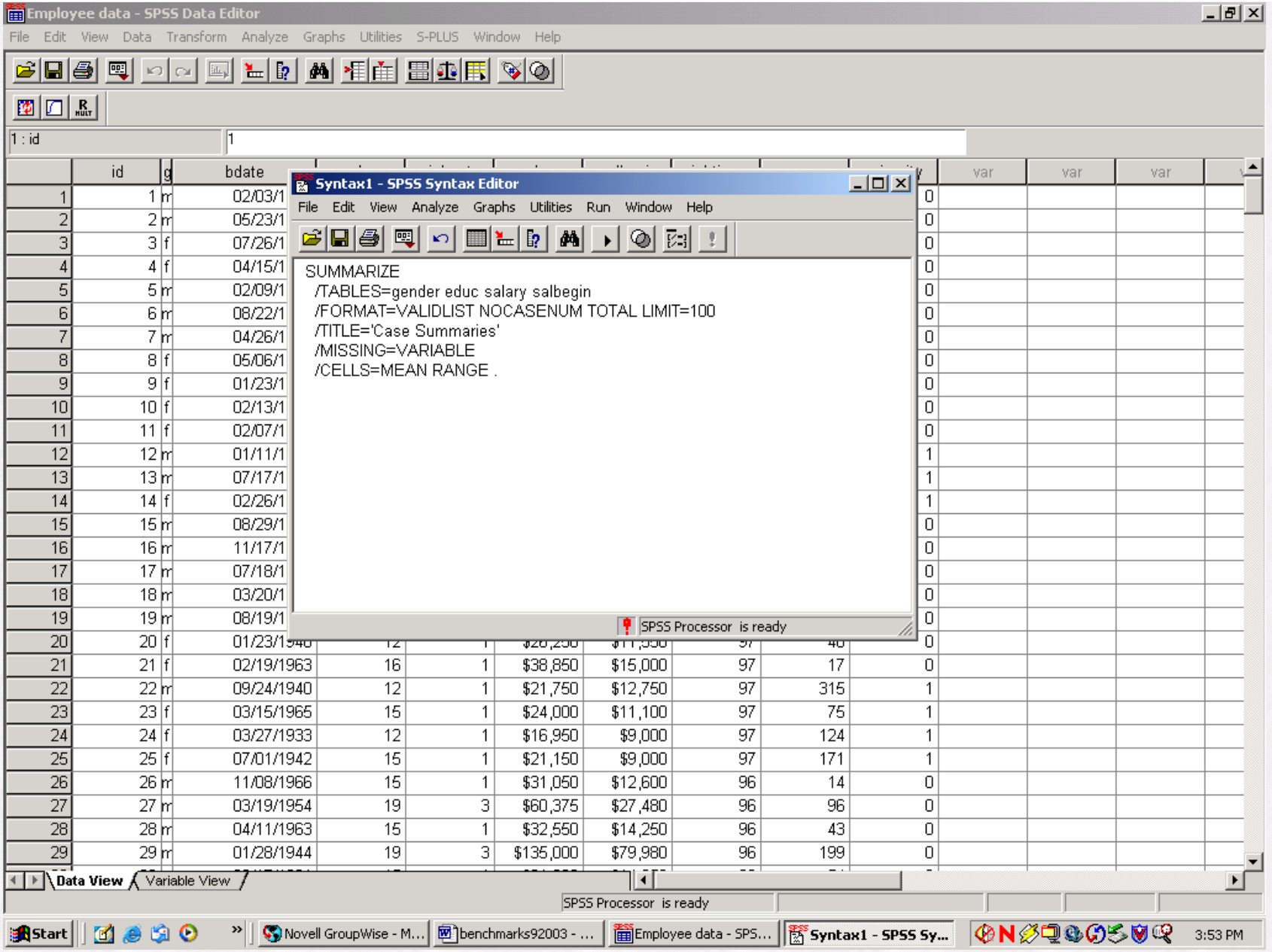
	id	g	b		jobcat	salary	salbegin	jobtime	prevexp	minority	var	var	var
1	1	m			3	$57,000	$27,000	98	144	0			
2	2	m			1	$40,200	$18,750	98	36	0			
3	3	f			1	$21,450	$12,000	98	381	0			
4	4	f			1	$21,900	$13,200	98	190	0			
5	5	m			1	$45,000	$21,000	98	138	0			
6	6	m			1	$32,100	$13,500	98	67	0			
7	7	m			1	$36,000	$18,750	98	114	0			
8	8	f			1	$21,900	$9,750	98	0	0			
9	9	f			1	$27,900	$12,750	98	115	0			
10	10	f	02/13/1946	12	1	$24,000	$13,500	98	244	0			
11	11	f	02/07/1950	16	1	$30,300	$16,500	98	143	0			
12	12	m	01/11/1966	8	1	$28,350	$12,000	98	26	1			
13	13	m	07/17/1960	15	1	$27,750	$14,250	98	34	1			
14	14	f	02/26/1949	15	1	$35,100	$16,800	98	137	1			
15	15	m	08/29/1962	12	1	$27,300	$13,500	97	66	0			
16	16	m	11/17/1964	12	1	$40,800	$15,000	97	24	0			
17	17	m	07/18/1962	15	1	$46,000	$14,250	97	48	0			
18	18	m	03/20/1956	16	3	$103,750	$27,510	97	70	0			
19	19	m	08/19/1962	12	1	$42,300	$14,250	97	103	0			
20	20	f	01/23/1940	12	1	$26,250	$11,550	97	48	0			
21	21	f	02/19/1963	16	1	$38,850	$15,000	97	17	0			
22	22	m	09/24/1940	12	1	$21,750	$12,750	97	315	1			
23	23	f	03/15/1965	15	1	$24,000	$11,100	97	75	1			
24	24	f	03/27/1933	12	1	$16,950	$9,000	97	124	1			
25	25	f	07/01/1942	15	1	$21,150	$9,000	97	171	1			
26	26	m	11/08/1966	15	1	$31,050	$12,600	96	14	0			
27	27	m	03/19/1954	19	3	$60,375	$27,480	96	96	0			
28	28	m	04/11/1963	15	1	$32,550	$14,250	96	43	0			
29	29	m	01/28/1944	19	3	$135,000	$79,980	96	199	0			

Next, we select our variables to be reported in our case summaries (screenshot 3) and the statistics (screenshot 4):

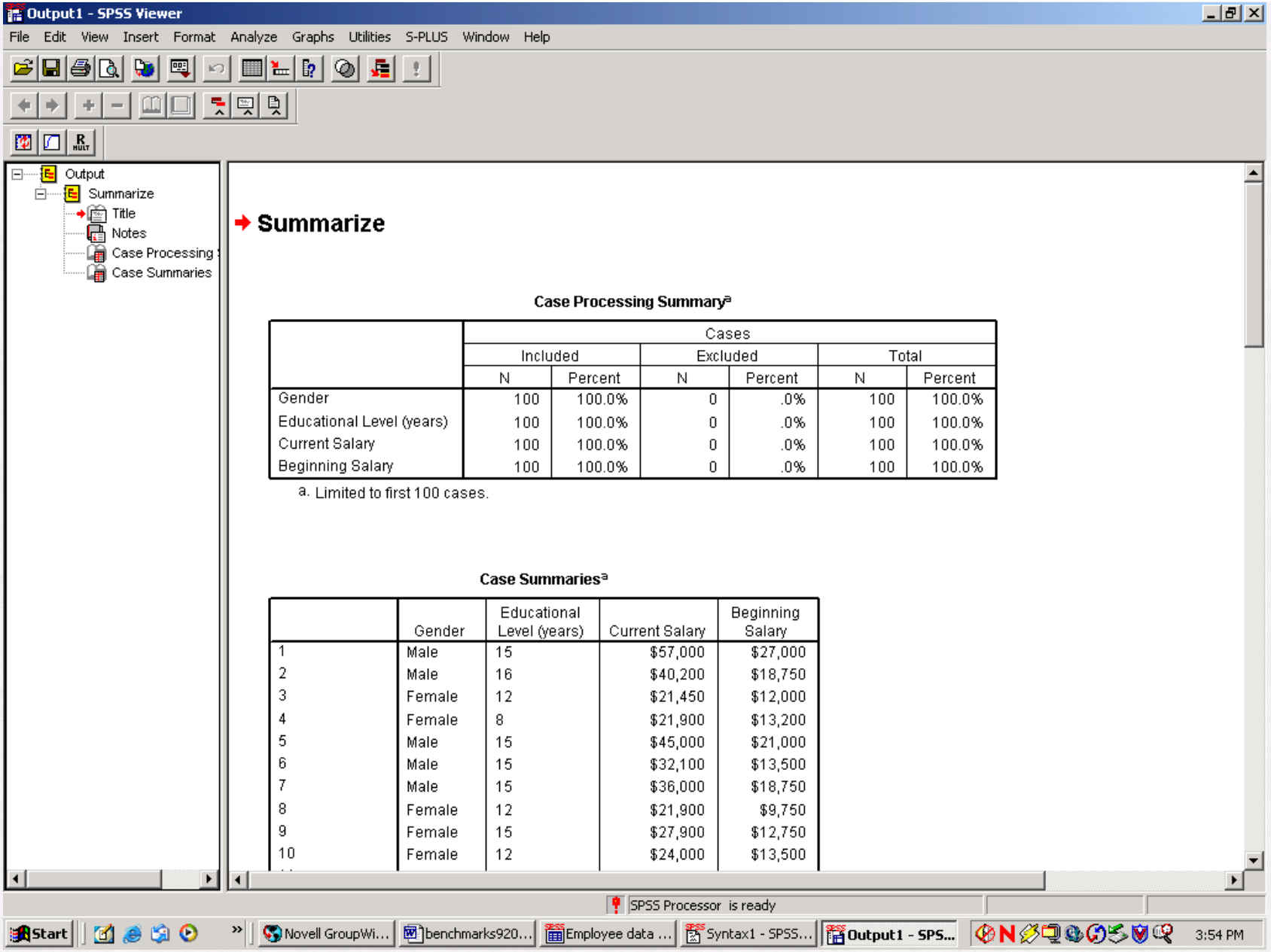

Employee data - SPSS Data Editor
File Edit View Data Transform Analyze Graphs Utilities S-PLUS Window Help
Summarize Cases
Employee Code [id]
Date of Birth [bdate]
Employment Category [j
Months since Hire [jobti
Previous Experience (m
Minority Classification [r
Variables:
Gender [gender]
Educational Level (yea
Current Salary [salary]
Beginning Salary [salbe
Grouping Variable(s):
OK
Paste
Reset
Cancel
Help
Display cases
Limit cases to first 100
Show only valid cases
Show case numbers
Statistics...
Options...
salbegin jobtime prevexp minority
Data View
Variable View
SPSS Processor is ready
Start
Novell GroupWise - Mailbox
benchmarks92003 - Micro...
Employee data - SPSS ...
3:50 PM



After we have selected the variables to be reported in the case summaries and the statistics, when then paste the syntax as discussed above:



After pasting, we highlight the syntax and run the routine, producing the following output:



In Part 2 of this article appearing next month in *Benchmarks* we will customize this report's layout and reported statistics using the syntax output from Part 1. Happy computing!