2.1.2.7 Frequencies for nominal and ordinal variables [23 November 2010]

Previous session: **2.1.2.6 Checking your file contents**

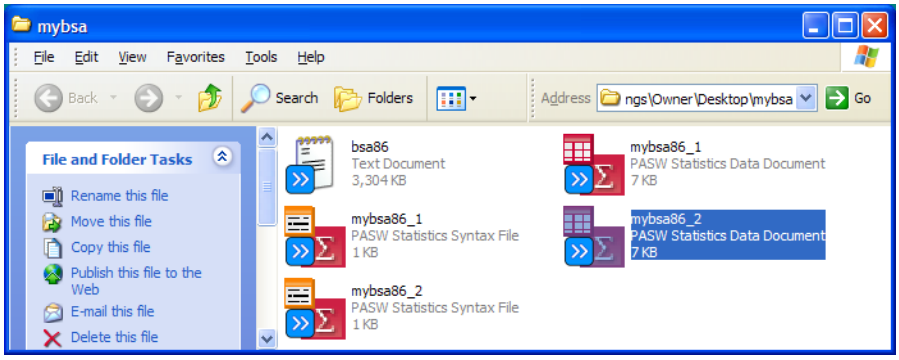
Exemplar: British Social Attitudes

File: **mybsa86_2.sav** (British Social Attitudes 1986, 2nd saved file)

Research questions: What is the distribution of marital status of respondent?
What is the distribution of satisfaction with the way the NHS runs?

SPSS commands used: **FREQUENCIES**[1]

Go to your folder **mybsa**

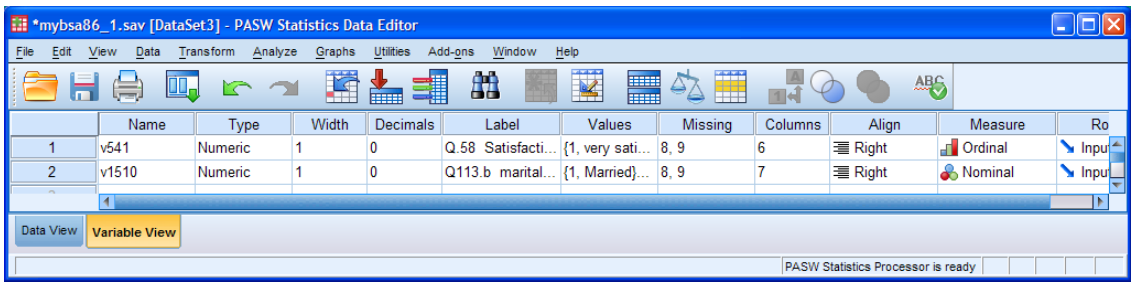


. . . and double-click on **mybsa86_2.sav** (the file you saved last session).

The output file will display the syntax automatically generated by SPSS. [If you don't have the file, download it from the link above and save it in folder **mybsa**.] The output file will display the syntax automatically generated by SPSS:

```
GET
  FILE='C:\Documents and Settings\Owner\Desktop\mybsa\mybsa86_2.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.
```

. . . the data editor will open:

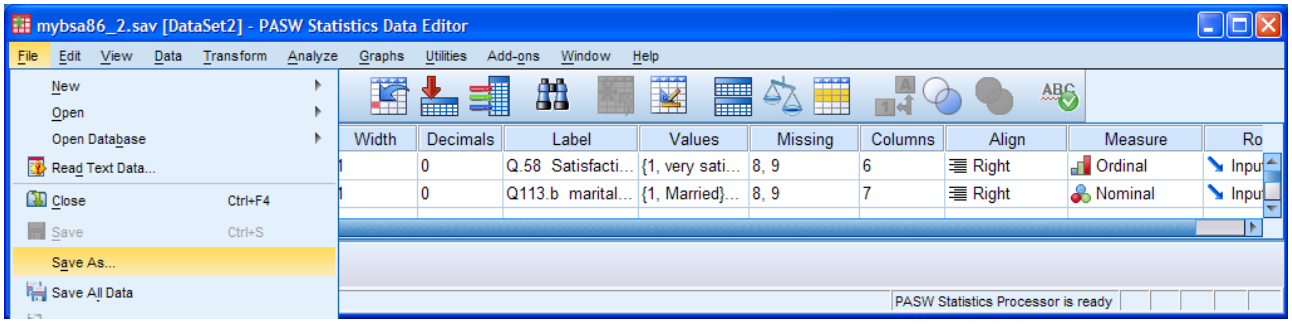


---

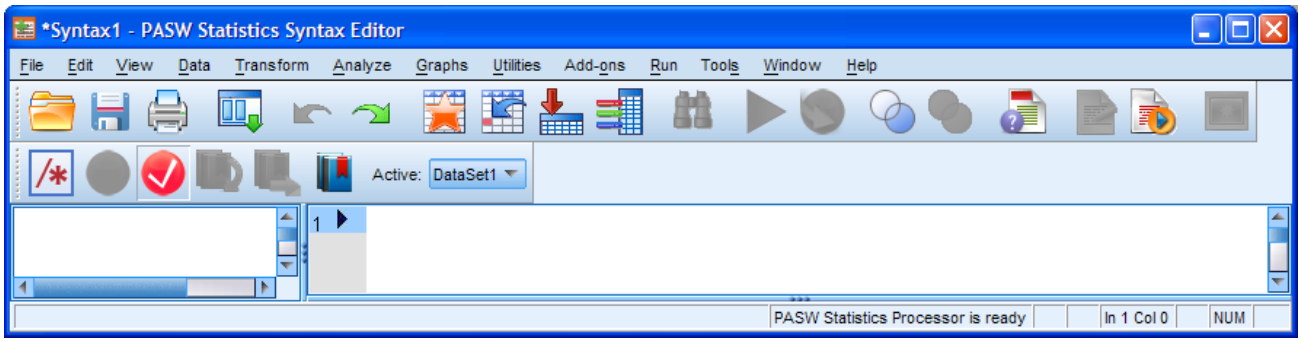
[1] **General format:**

FREQUENCIES <varlist>
/STATISTICS <statistics list>
/ <graphics options>
/ <other options>

In Variable View click on File > New > Syntax :

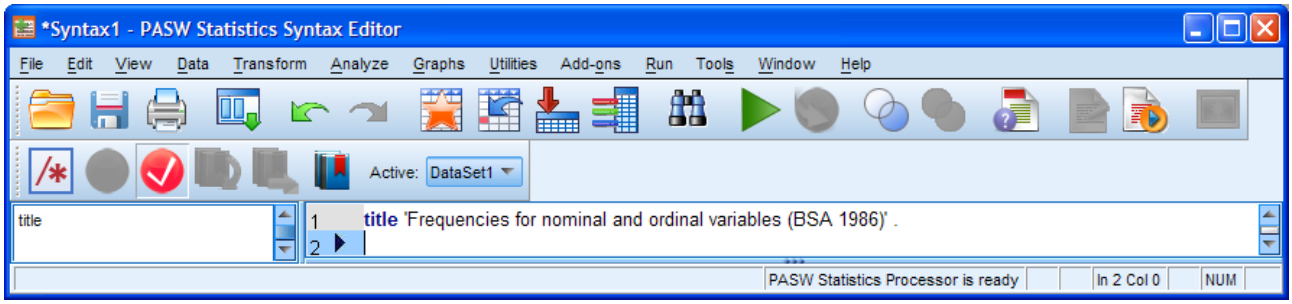


. . . to open a new syntax editor:



Give your job a **TITLE**:

title 'Frequencies for nominal and ordinal variables (BSA 1986)' .



Your syntax is repeated in the output viewer:

```
title 'Frequencies for nominal and ordinal variables (BSA 1986)' .
```

>> Frequencies for nominal and ordinal variables (BSA 1986)

To answer the research questions we were set, we should now write two separate **FREQUENCIES** commands:

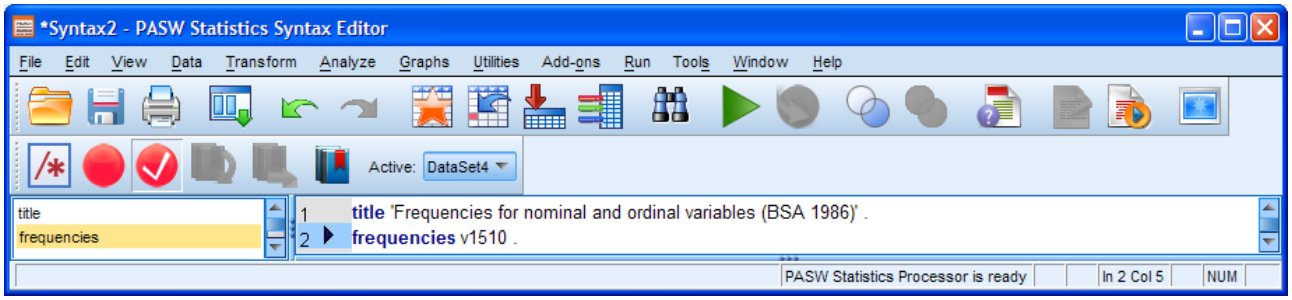
1: to tabulate the nominal level variable **v1510 (**Marital status of respondent)

2: to tabulate the ordinal level variable **V541** (Satisfaction with the way the NHS runs) together with a **BARCHART**. Do them one at a time.

Try to do this yourself, one frequency count at a time, without peeping at the next page!

Now type your first **frequencies** command:

frequencies v1510 .



Click the green ► to get:

Statistics

v1510 Q113.b marital status of respondent

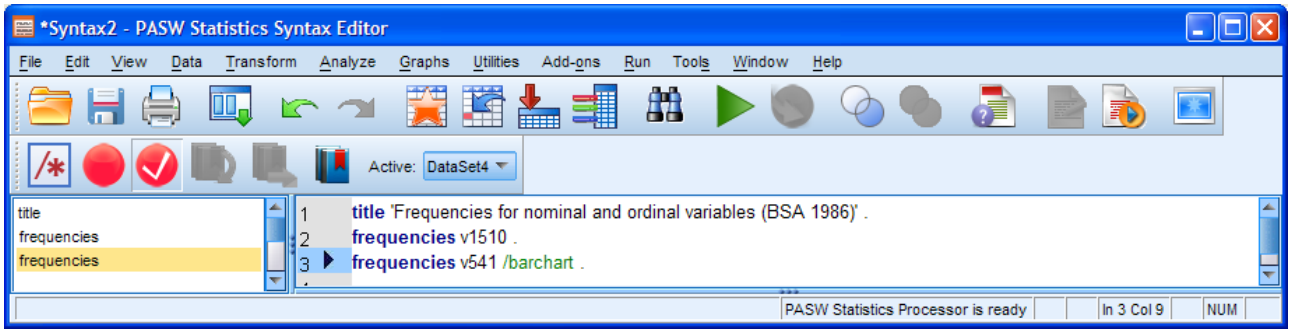
N	Valid	3090
	Missing	10

v1510 Q113.b marital status of respondent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Married	2059	66.4	66.6	66.6
	Living as married	81	2.6	2.6	69.3
	Separated or divorced	164	5.3	5.3	74.6
	Widowed	284	9.2	9.2	83.8
	Not married	502	16.2	16.2	100.0
	Total	3090	99.7	100.0	
Missing	9	10	.3		
Total		3100	100.0		

Now type in your second **frequencies** command:

frequencies v541 /barchart .



SPSS colour-codes the **sub-command** in **green**. If the syntax is incomplete, or you have made errors, part or all of the command will be displayed in **red**. If you spell a variable name wrong, you won't find out until you run the job and get an error message!

Once you are happy with the syntax click on the green ► to run the job and get:

Statistics

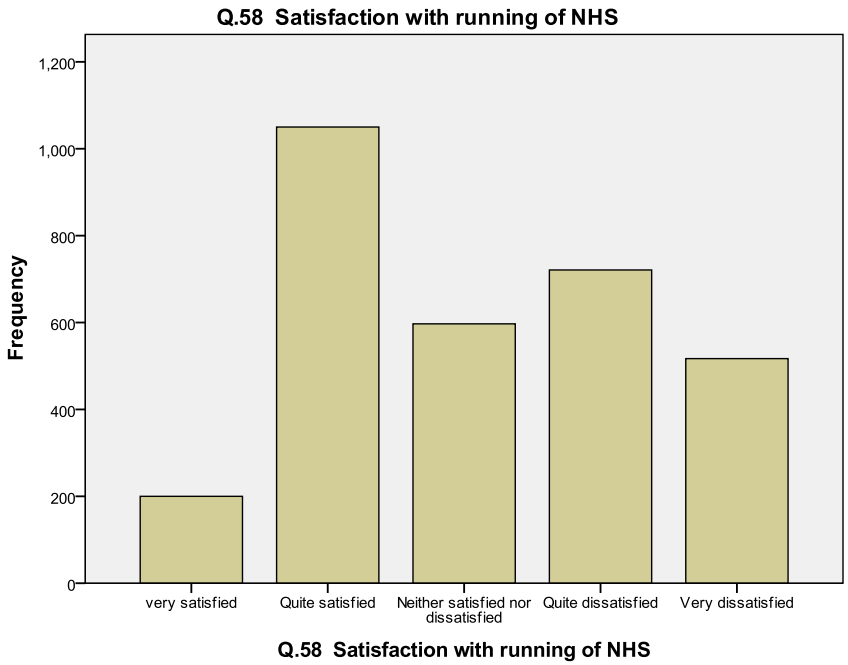
v541 Q.58 Satisfaction with running of NHS

N	Valid	3085
	Missing	15

v541 Q.58 Satisfaction with running of NHS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very satisfied	200	6.5	6.5	6.5
	Quite satisfied	1050	33.9	34.0	40.5
	Neither satisfied nor dissatisfied	597	19.3	19.4	59.9
	Quite dissatisfied	721	23.3	23.4	83.2
	Very dissatisfied	517	16.7	16.8	100.0
	Total	3085	99.5	100.0	
Missing	8	11	.4		
	9	4	.1		
	Total	15	.5		
Total		3100	100.0		

(Table adjusted by dragging column between labels and Frequency to the right.)

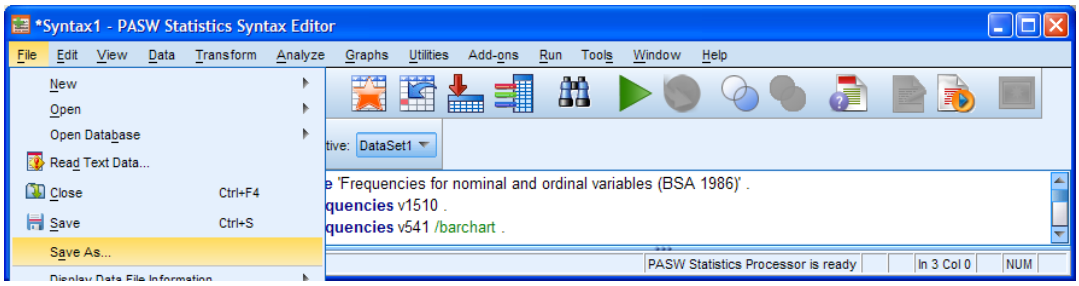


If you have made a mistake, SPSS will send you one or more error messages, but it's sometimes difficult to work out what actually caused the error. Go back to the syntax file, find and correct any errors and run the job again, and again.... ! Even if it worked, do it again anyway.

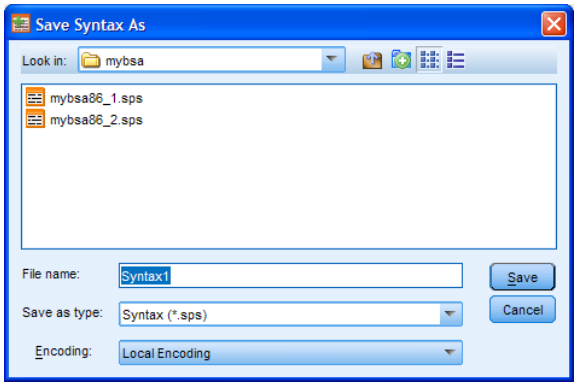
The reason we asked for a barchart is that we do not know the underlying metric for satisfaction and therefore where the value points are on the underlying scale or how wide the bars should be. The bars must not touch (as they would in a histogram). Strictly speaking, many statistics should not be used with ordinal variables (but in practice we often do!).

Before you finish this session, it's always good practice to keep copies of your syntax files, even though this one is quite short. Later you will possibly have much larger syntax files for your own research and you will need to keep track of these. It's best to use names which bear some resemblance to the operations executed (eg **freq1.sps**, **freq2.sps** etc.), so for now let's save it as **mybsa86_freq1.sps**.

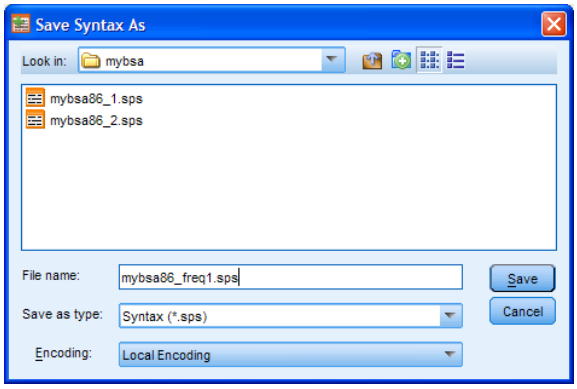
Go back to the syntax editor and click on File > Save As ...



There already two ***.sps** files in the folder:

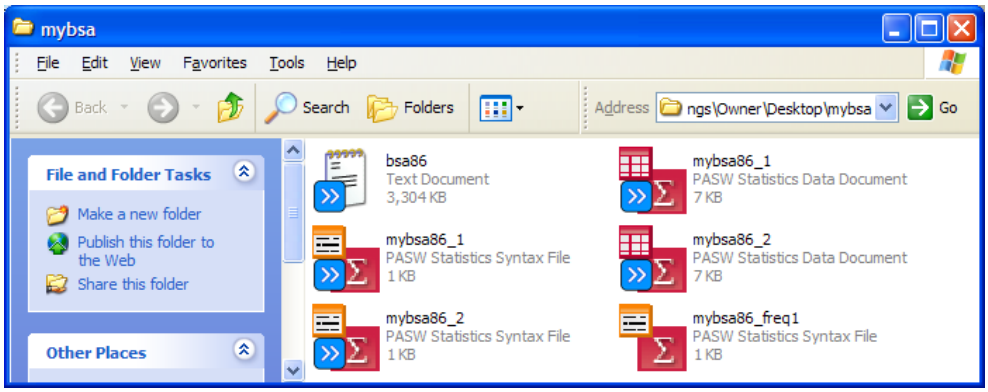


Change Syntax1 to mybsa86_freq1.sps:

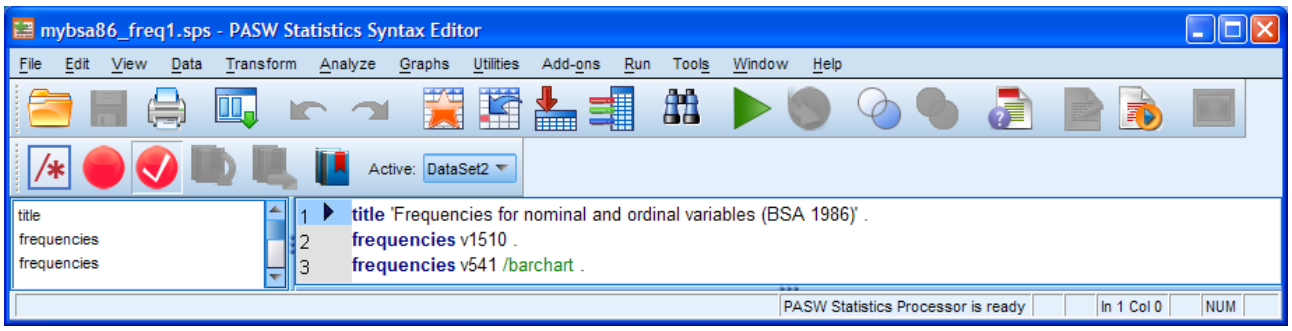


Make sure Syntax (*.sps) is displayed in the Save as type: box and click on Save

Folder **myclass** will now contain the new syntax file **mybsa86_freq1.sps**:



. . . and the header on the syntax editor will change from *Syntax1 to mybsa86_freq1.sps



End of session.

Homework: Repeat exercises 2.1.2.3 to 2.1.2.7 on the 1989 British Social Attitudes survey, but **do the housekeeping first** to tidy up your files and folders.

The data for the 1989 wave are on bsa89.txt but our **mybsa** folder is starting to get a bit cluttered and we need to do a bit of housekeeping first, so now go to:

Next session: 2.1.2.8 Housekeeping

Next SPSS session: 2.1.2.9 [bsa89] Homework

[Back to Block 2 menu]