

Block 2: Analysing one variable

Nominal and ordinal variables

2.1.2.3 Questions and data for nominal and ordinal variables [23 November 2010]

This time we're going to use the actual data from a real survey.

Exemplar: [British Social Attitudes](#) (1986 survey)

File: [bsa86.txt](#) (raw data from the 1986 British Social Attitudes survey)

Research questions: What is the distribution of marital status? (Q.113.b) [nominal]

What is the distribution of satisfaction-dissatisfaction with the way the National Health Service runs nowadays? (Q.58) [ordinal]

Task: Locate questions and data locations for marital status and satisfaction with the way the NHS runs

A bit of repetition won't hurt you and it's good for reinforcing what you've already learned, so we're going to do this from scratch on the raw data. Below is a facsimile extract from the top of of page 43 of version B<sup>1</sup> of the interviewer-administered<sup>2</sup> questionnaire.

- 43B -

SECTION NINE

		Col./ Code	Skip to																																																							
113.a)	<p>ASK ALL</p> <p>Finally, a few questions about you and your household. Including yourself, how many people live here regularly as members of this household? INTERVIEWER: CHECK INTERVIEWER MANUAL FOR DEFINITION OF HOUSEHOLD IF NECESSARY.</p> <p style="text-align: right;">WRITE IN: <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/></p>	CARD 15	(1505-7)																																																							
b)	<p>And can I just check your own marital status? At present are you ... READ OUT ...</p> <p style="text-align: right;">... married, living as married, separated or divorced, widowed, or - not married?</p>	(1508-9)	(1510)																																																							
		1																																																								
		2																																																								
		3																																																								
		4																																																								
		5																																																								
114.	<p>Now I'd like to ask for a few details about each person in your household. Starting with yourself, what was your age last birthday? WORK DOWN COLUMNS OF GRID FOR EACH HOUSEHOLD MEMBER.</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;"></th> <th style="width: 10%;">Resp- ondent</th> <th style="width: 10%;">2</th> <th style="width: 10%;">3</th> <th style="width: 10%;">4</th> <th style="width: 10%;">5</th> <th style="width: 10%;">6</th> <th style="width: 10%;">7</th> <th style="width: 10%;">8</th> <th style="width: 10%;">9</th> <th style="width: 10%;">10</th> </tr> </thead> <tbody> <tr> <td></td> <td>1511</td> <td>1515</td> <td>1520</td> <td>1525</td> <td>1530</td> <td>1535</td> <td>1540</td> <td>1545</td> <td>1550</td> <td>1555</td> </tr> <tr> <td>a) Sex:</td> <td>Male</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> </tr> <tr> <td></td> <td>Female</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>b) Age last birthday:</td> <td>1512-3</td> <td>1516-7</td> <td>1521-2</td> <td>1526-7</td> <td>1531-2</td> <td>1536-7</td> <td>1541-2</td> <td>1546-7</td> <td>1551-2</td> <td>1556-7</td> </tr> </tbody> </table>		Resp- ondent	2	3	4	5	6	7	8	9	10		1511	1515	1520	1525	1530	1535	1540	1545	1550	1555	a) Sex:	Male	1	1	1	1	1	1	1	1	1		Female	2	2	2	2	2	2	2	2	2	b) Age last birthday:	1512-3	1516-7	1521-2	1526-7	1531-2	1536-7	1541-2	1546-7	1551-2	1556-7		
	Resp- ondent	2	3	4	5	6	7	8	9	10																																																
	1511	1515	1520	1525	1530	1535	1540	1545	1550	1555																																																
a) Sex:	Male	1	1	1	1	1	1	1	1	1																																																
	Female	2	2	2	2	2	2	2	2	2																																																
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<sup>1</sup> The core questionnaire was administered to 3100 respondents, but there were two different sets of topics in separate versions of the questionnaire (A and B) and so the page and question numbers differ, but the question text and data locations for each version of the core questionnaire are the same.

<sup>2</sup> In addition to the interviewer administered questionnaire, respondents also filled in a self-completion questionnaire to be collected later or returned by post.

Question 113.b (Marital status of respondent) is **precoded**.

b)	And can I just check your own marital status? At present are you ... <u>READ OUT</u> ...	(1510)
	... married,	1
	living as married,	2
	separated or divorced,	3
	widowed,	4
	or - not married?	5

... and the interviewer will circle the appropriate code from 1 to 5 in the right hand column, numbered (1510).

	(1510)
... married,	1
living as married,	2
separated or divorced,	3
widowed,	4
or - not married?	5

Question 58 is again precoded, but this time uses a showcard (**CARD K**):

58.	<u>CARD K</u> All in all, how satisfied or dissatisfied would you say you are with the way in which the National Health Service runs nowadays? Choose a phrase from this card.	(541)
	Very satisfied	1
	Quite satisfied	2
	Neither satisfied nor dissatisfied	3
	Quite dissatisfied	4
	Very dissatisfied	5

Again the interviewer will circle one of the codes 1 to 5 in the right hand column numbered (541)

### How do the responses to these questions get into the computer?

Have another look at the questionnaire extract on the first page.

In the top right hand corner of page 43B you can see the text **CARD 15** under **Col/Code** and the numbers (1506-7) in the right hand column. These mean that the 2-digit number **15** will be punched in columns 6 and 7 of card (record) 15 for each interview.

Col./Code	Skip to
CARD 15	(1506-7)

The code for **marital status** will be punched in column 10 of card 15 (see the number **1510** in smaller type in the margin and above the response codes 1 - 5.)

	(1510)
... married,	1
living as married,	2
separated or divorced,	3
widowed,	4
or - not married?	5

The 3- and 4-digit numbers in the margin are a **template** for where the data are to be punched. The first pair of digits indicates the **record** (card) number and the second pair the **field** (of one or more columns numbered from 01 to 80) where the data for each of the above questions will be punched. In this survey there are 23 data cards (records) for each respondent. Each card has 80 columns.

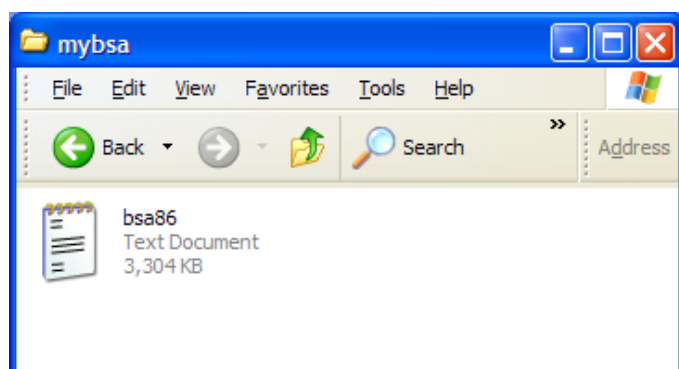
Where do you think the data are for the National Health Service question. (See top of page 2 above: Q.58 with **541** in the margin.)

### Before we start:

At 3.4 mb, the raw data file used in the next exercise is far too large to go on floppy **a:** and will need to be kept in a folder on your computer, burned to a CD or stored on a remote server. If you don't have SPSS on your own computer, you should still be able to follow this and other tutorials even if you can't replicate the exercises.

You need to copy [BSA86.txt](#) to a location in your computer where it can be found by SPSS. Without a lot of additional facilities not included in the basic version, SPSS cannot easily be made to read files from internet addresses. You will therefore need to download and save files from this site. It's not so much a problem with files on your own computer or on a CD, but only when you need to read files from this or other sites. The files only need to be read in once: thereafter you and I can work directly on our own computers.

The best solution is to open a new folder **mybsa** in your desktop, download the raw data file<sup>3</sup> [BSA86.txt](#) from this site and save it in folder **mybsa**.



The full pathway name will be '**C:\Documents and Settings\Owner\Desktop\mybsa\bsa86.txt**' which is quite long, but it's the best solution. When you need it for SPSS you only have to type it in once. You can copy and paste it from here, but if you copy it into your SPSS syntax file, you may need to delete and retype the primes (apostrophes) as SPSS sometimes interprets them as "smart" quotes and this results in an error message.

Like I said, a bit of repetition won't hurt you and it's good for reinforcing what you've already learned, so we're going to do this from scratch on the raw data. If you haven't already downloaded the raw data file [bsa86.txt](#) from this site and saved it in folder **mybsa** on your desktop, **do it now!**

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<sup>3</sup> Data initially supplied direct to the author in 1987 by the BSA team at SCPR. For full details and conditions for access to the data, see <http://www.data-archive.ac.uk/findingData/snDescription.asp?sn=2315>

External data file 'C:\Documents and Settings\Owner\Desktop\mybsa\bsa86.txt' contains the raw data for 3,100 respondents and there are 23 records per case.

With the questionnaire as user-documentation, read in the data for satisfaction with the way the National Health Service runs (Q.58)

58.	<u>CARD K</u> All in all, how satisfied or dissatisfied would you say you are with the way in which the National Health Service runs nowadays? Choose a phrase from this card.	(541)
	Very satisfied	1
	Quite satisfied	2
	Neither satisfied nor dissatisfied	3
	Quite dissatisfied	4
	Very dissatisfied	5

... and marital status of the respondent (Q113b).

b)	And can I just check your own marital status? At present are you ... <u>READ OUT</u> ...	(1510)
	... married,	1
	living as married,	2
	separated or divorced,	3
	widowed,	4
	or - not married?	5

According to the annotated questionnaire in the full user manual, codes 8 (D/K = "Don't know") and 9 (N/A = "Not answered") have been defined as **missing** for both variables.

Q.58:

58	<u>ALL</u> <u>CARD K</u> All in all, how satisfied or dissatisfied would you say you are with the way in which the National Health Service runs nowadays? Choose a phrase from this card.	(541)
	Very satisfied	1
	Quite satisfied	2
	Neither satisfied nor dissatisfied	3
	Quite dissatisfied	4
	Very dissatisfied	5

*One case only  
8 = D/K  
9 = N/A*

Q.113b

b)	And can I just check your own marital status? At present are you <u>READ OUT</u> .	(1510)
	married,	1
	living as married,	2
	separated or divorced,	3
	widowed,	4
	or - not married?	5

*one case only  
8 = D/K  
9 = N/A*

Use the **positional** convention for variable names. Again, it helps to prepare a table with your variable names and locations: the question number and text can also be used later as variable labels

Question		Variable	Record	Start	End
Q58	Satisfaction with way NHS runs	v541	5	41	41
Q113b	Marital status of respondent	v1510	15	10	10

Before going to the next session, and based on the earlier exercise using the pre-course questionnaire [1.3.3.7 [SPSS for real - my first saved file](#) ] try completing the partial syntax yourself for each of the following commands:

**TITLE            DATA LIST            EXECUTE**

Use the full pathway name '**C:\Documents and Settings\Owner\Desktop\mybsa\bsa86.txt**' as the external file and **positional** variable names.

```
ti _____ ' _____ ' .
da ____ li ____
    fi _____ ' _____ '
    re _____
        / 5 v _____
        / 15 v _____ .
ex _____ .
```

**End of session:**

**Next session: 2.1.2.4 Reading in data for nominal and ordinal variables**

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