Notes on the teaching data set for British Social Attitudes 2004 (UK Data Services SN 6096,)

As used in Marsh & Elliott, "Exploring Data" (2008)

John Hall (**Draft only**: 11 Feb 2014)

SPSS saved file **bsa2004_teach.sav** is a subset of 49 variables from the main survey. It is one of five data sets used in the book and you need to be a registered user to access it. However, you do not need the actual file to be able to follow and understand these notes.

Extract from userguide:

Exploring Data 2nd edition: The Teaching Datasets

The five datasets documented here contain much more information than was used in the text or the exercises of the second edition of 'Exploring Data'. It is hoped that they will provide interesting material for you to explore using the SPSS package. The data has been taken from several different sources and all the datasets are available in machine-readable form for teaching purposes from the ESRC Data Archive at the University of Essex. Brief documentation about the variables in each dataset is provided here but fuller information about the studies from which the data has been extracted are given in the chapter in which the dataset is first used and on the website for the book http://polity.co.uk/exploringdata . Readers are referred to the original sources for the complete documentation of the data.

Many of the datasets that are available to researchers from the ESRC Data Archive contain literally hundreds, and sometimes thousands, of variables. This can make them unwieldy and daunting for students and junior researchers to use. The datasets documented here have therefore been specifically designed for students in that they include only a small subset of the original variables. However there has been no sub-setting of the total number of cases in the datasets so the results obtained from analysing them will be the same as results obtained when analysing the full datasets available from the archive.

List of teaching datasets

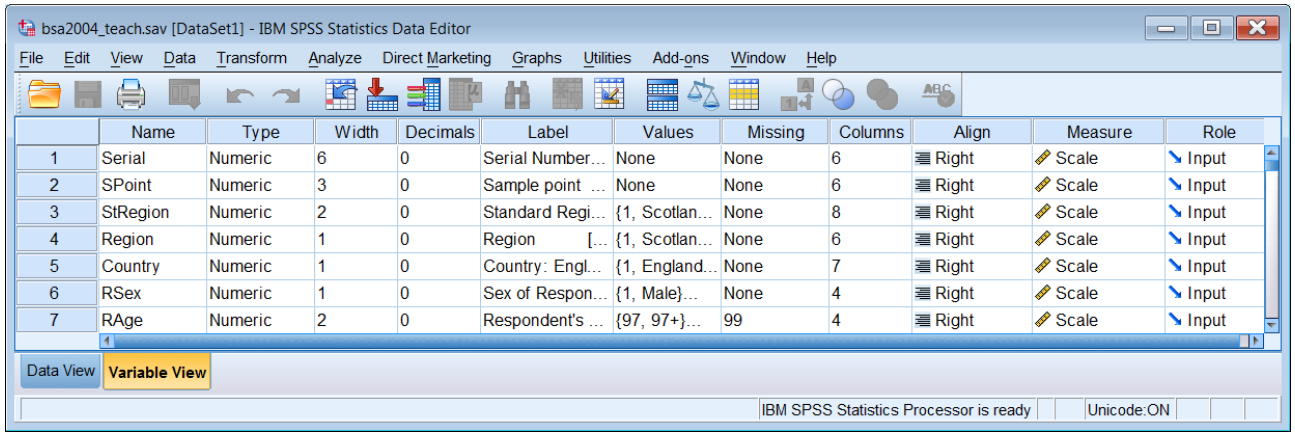
GHS05_ind_teach.sav	**17 variables**	**page 2**	**Chapter 1, 2, 7**
NCDS_ExpData_teach.sav	**32 variables**	**page 7**	**Chapter 3, 8, 9, 13**
YCS11_teach.sav	**10 variables**	**page 19**	**Chapter 6**
WorldBank_2000_Teach.sav	**13 variables**	**page 22**	**Chapter 10**
BSA2004_Teach.sav	**49 variables**	**page 24**	**Chapter 12**

Summary of datasets used in each of the chapters of the book	
Chapter 1	GHS05_ind_teach.sav
Chapter 2	GHS05_ind_teach.sav
Chapter 3	NCDS_ExpData_teach.sav
Chapter 4	No SPSS exercises
Chapter 5	No SPSS exercises
Chapter 6	YCS11_teach.sav
Chapter 7	GHS05_ind_teach.sav
Chapter 8	NCDS_ExpData_teach.sav
Chapter 9	NCDS_ExpData_teach.sav
Chapter 10	WorldBank_2000_Teach.sav
Chapter 11	No SPSS exercises
Chapter 12	BSA2004_Teach.sav
Chapter 13	NCDS_ExpData_teach.sav

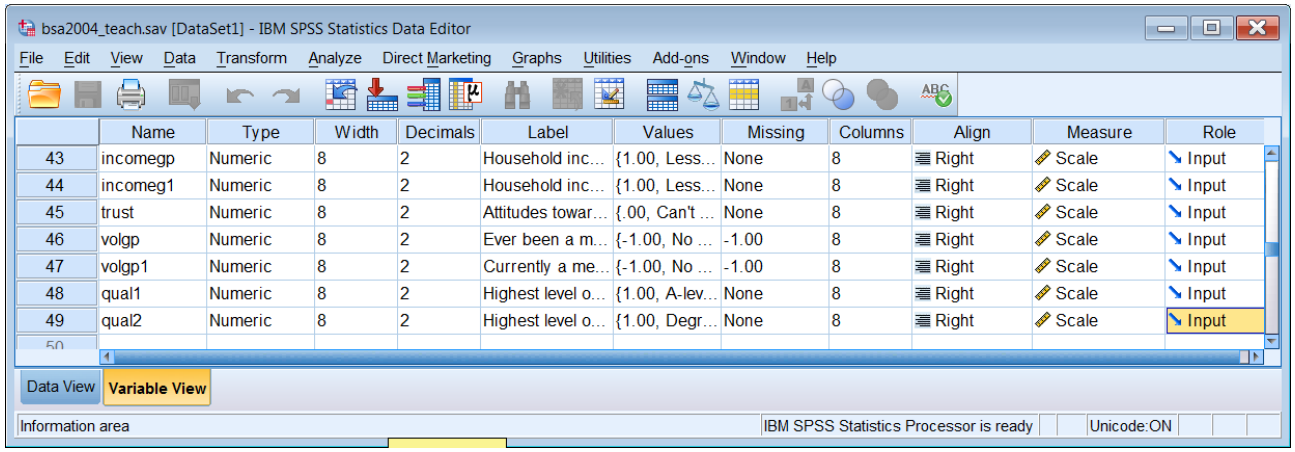
Data from the British Social Attitudes survey are only used in chapter 12 and then only for modelling. There is only one 3-way tabulation: the rest are proportions for modelling. The onlu tabulations (for YCS11) are in chapter 6 and only produced with GUI, not syntax (p 123 and figs 6.5, 6.6).

File: **bsa2004_teach.sav** (UKDS SN 6096, 77 kb)

On opening (in Variable View):

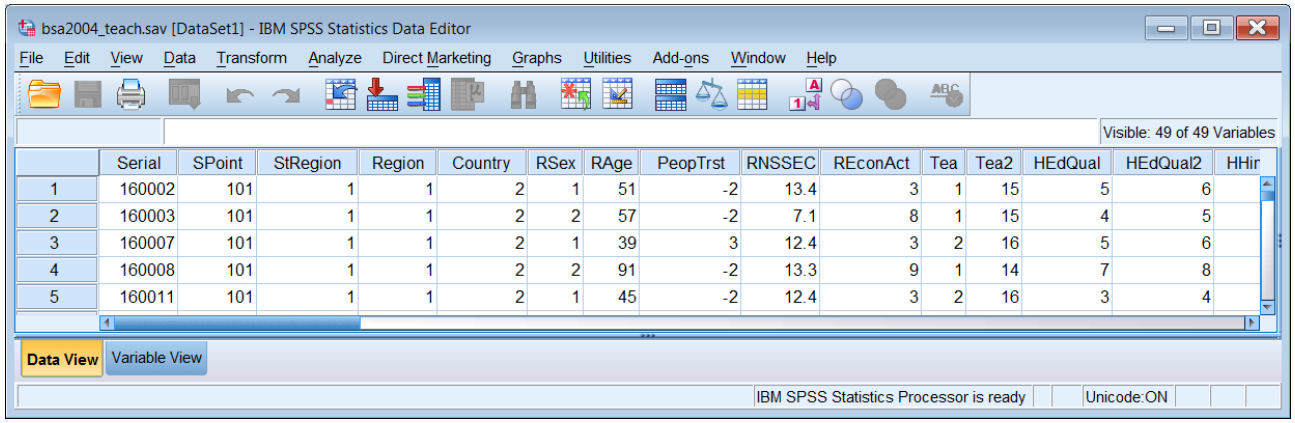


Scroll to end, or Ctrl + End:

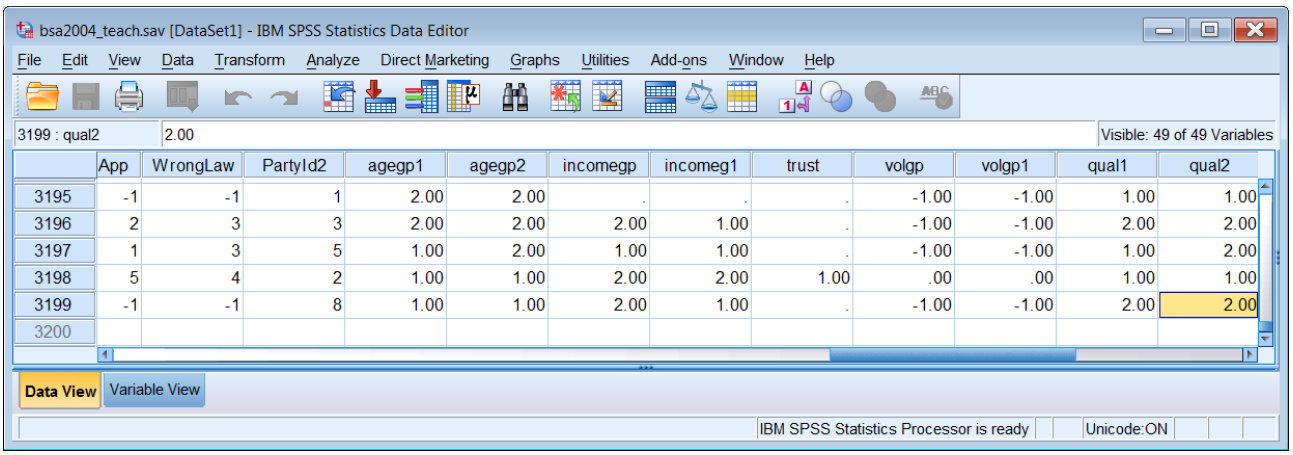


There are 49 variables in the file.

Switch to Data View:

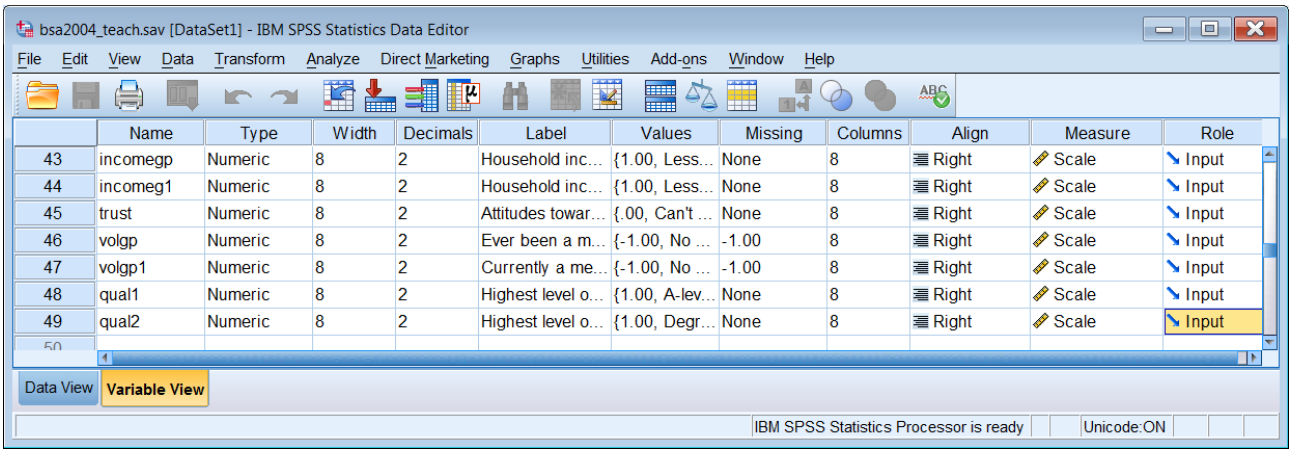


Scroll to end, or use Ctrl + End:

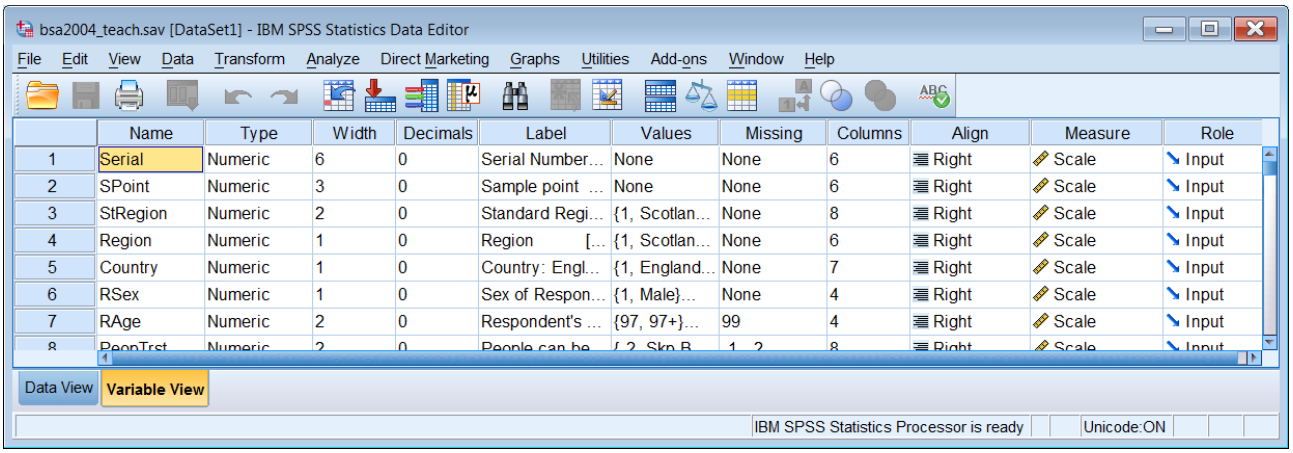


There are 3199 cases in the file.

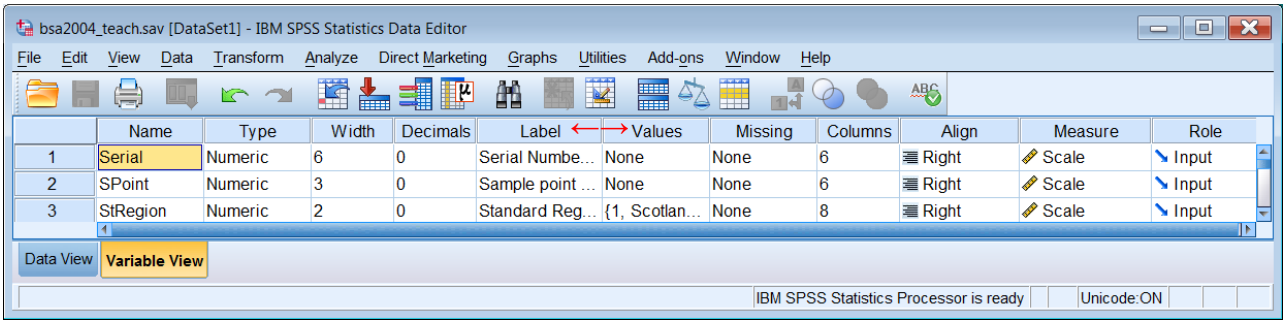
Back to Variable View:



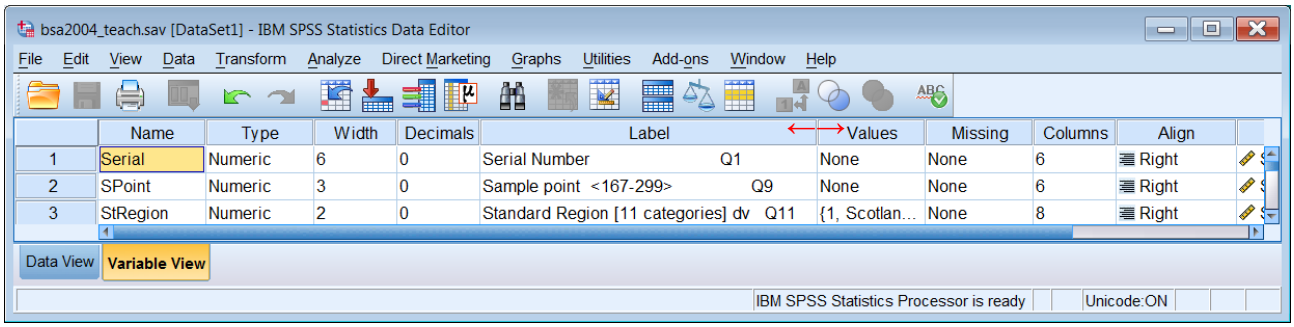
Scroll back to top, or use Ctrl + Home:



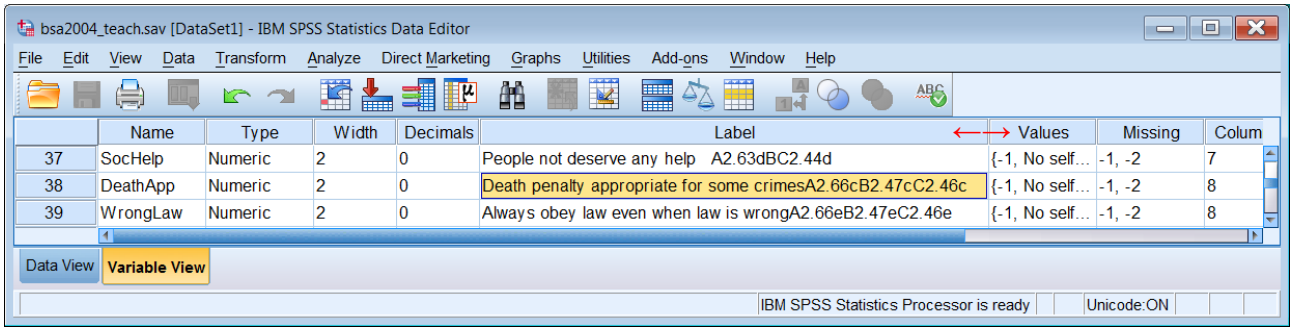
You can't see the variable or value labels properly, so you need to widen the **Label** column by placing the cursor over the right hand column separator (as with adjusting the page margins in Word, a double-headed arrow ←→ will appear when the cursor is correctly placed: to make it easier to see I've coloured it red in the figures below ←→):



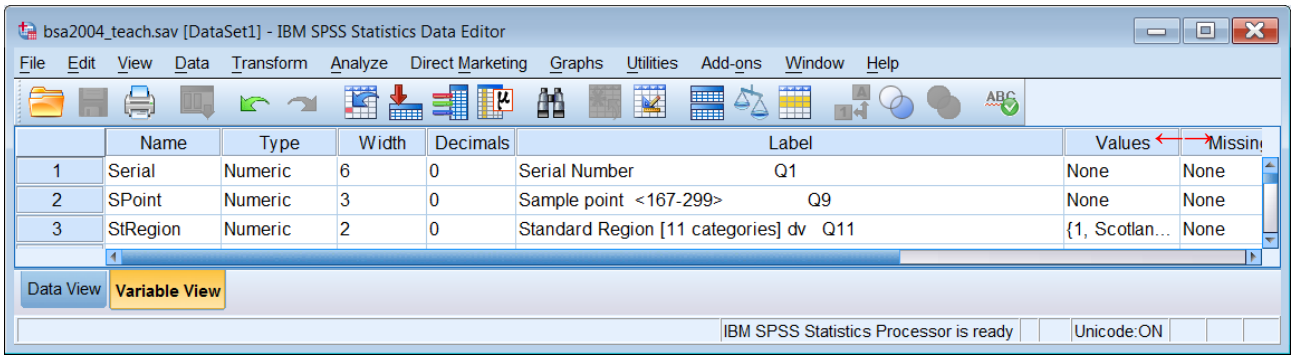
. . and dragging it to the right until you can see the full label:



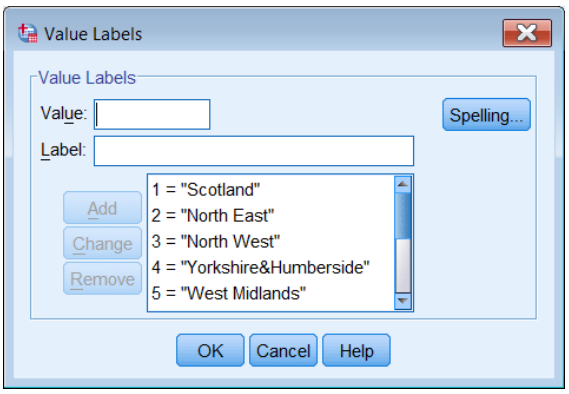
Scroll down the file to find the longest label: if you can't see it in full, widen the column a bit more until you can:

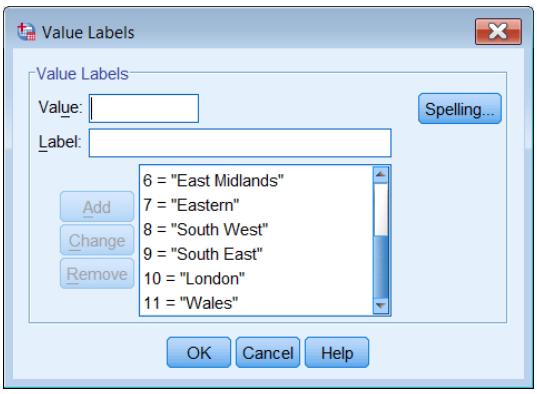


Now do the same for the **Values** column. Only the first value label is displayed for each variable, enclosed in { } followed by three dots . . .:

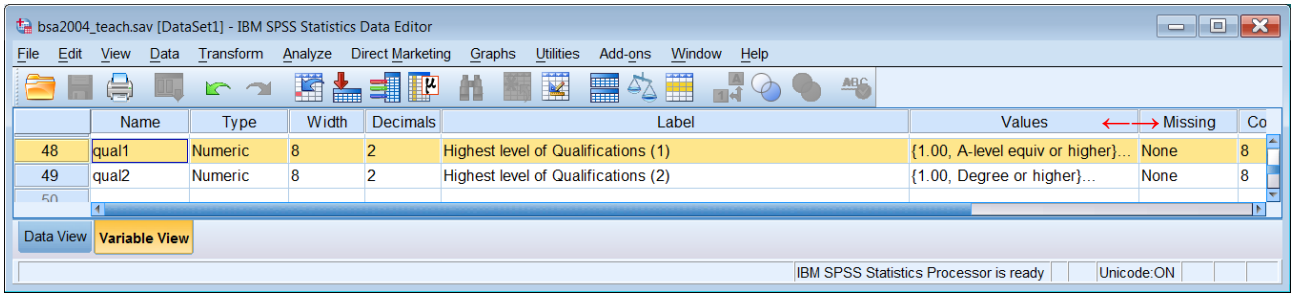


If you want to see all the labels for a particular variable, click on the three dots, then on the blue box:

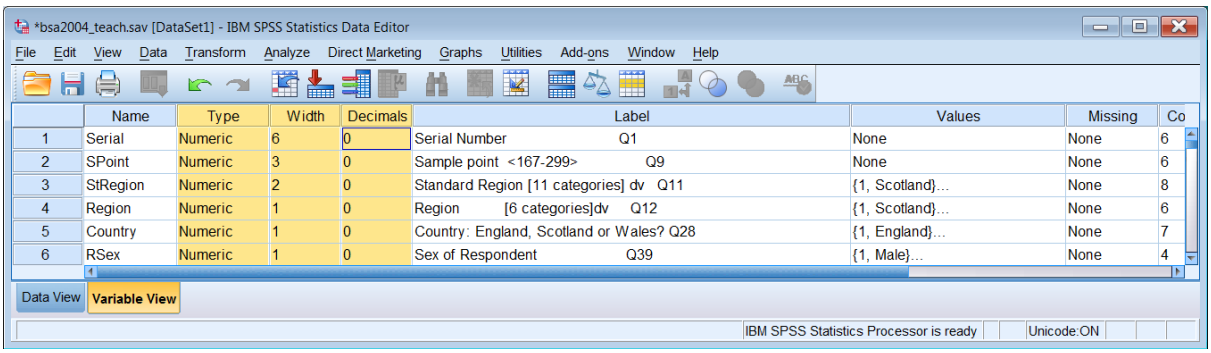




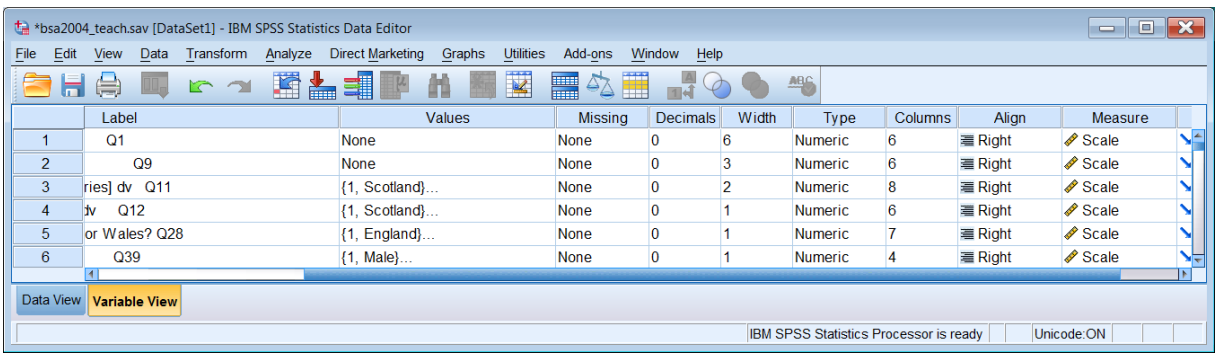
In the **Data Editor**, scroll down to find the longest value label [for variable **qual1**] and widen the **Value** column to accommodate the full label:



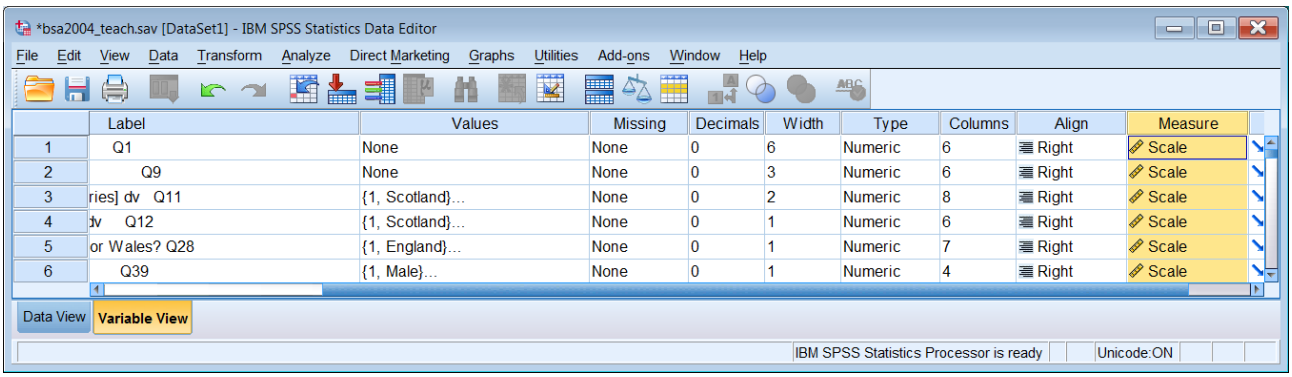
The remaining columns have now been pushed out of the **Data Editor** window, but you don't need most of them at this stage. The only ones that matter for now are the **Missing** and **Measure** columns. You don't really need **Type**, **Width** or **Decimals**, so you can move them out of the way by dragging them across to the right of the **Data Editor**. Highlight all three by holding the left mouse button down over **Type** and dragging it across the the **Width** and **Decimals** column headings:



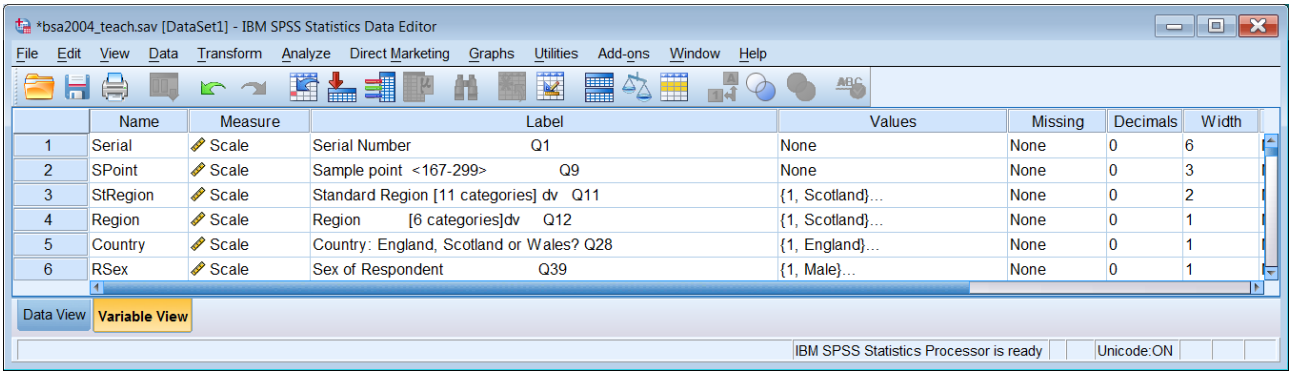
Hold the left mouse button down over any of the headers and drag them across to a position after **Missing** (a thin red vertical line will indicate the position reached):



Now click on **Measure**:



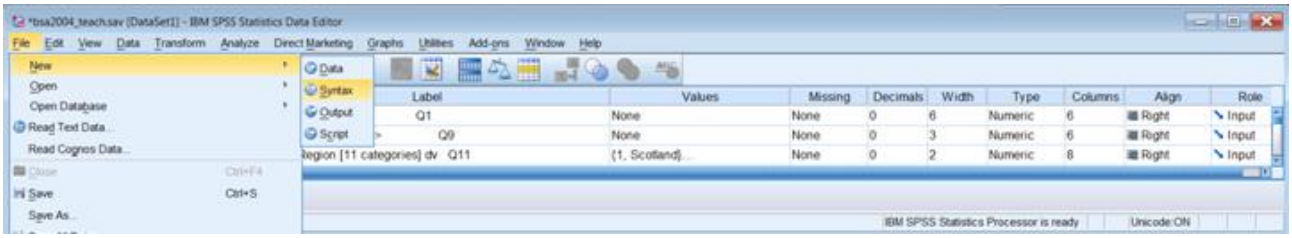
Hold the left mouse button down over **Measure** and drag the column to the left, to a position between **Name** and **Label**:

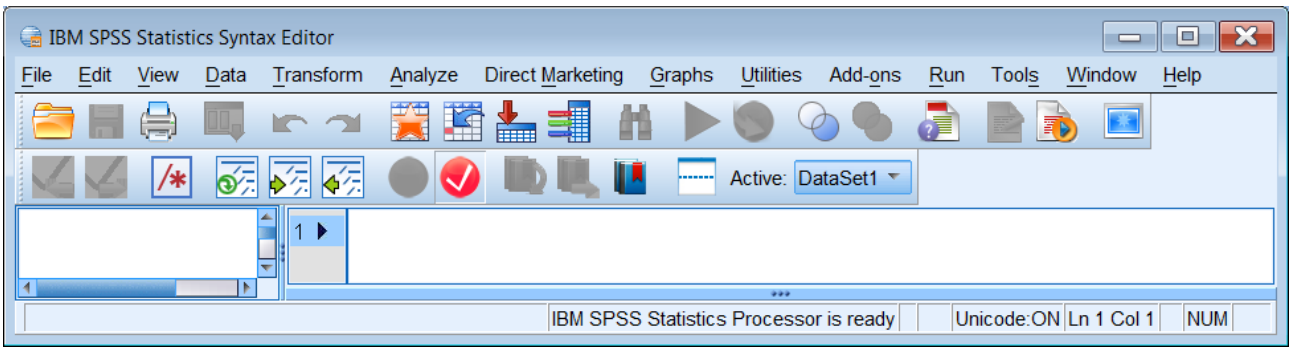


The file is now easier to navigate and use, but you have not finished yet!

You still need to make some initial checks on the file contents, especially the measurement levels and missing values. A quick check on names and labels can be done with:

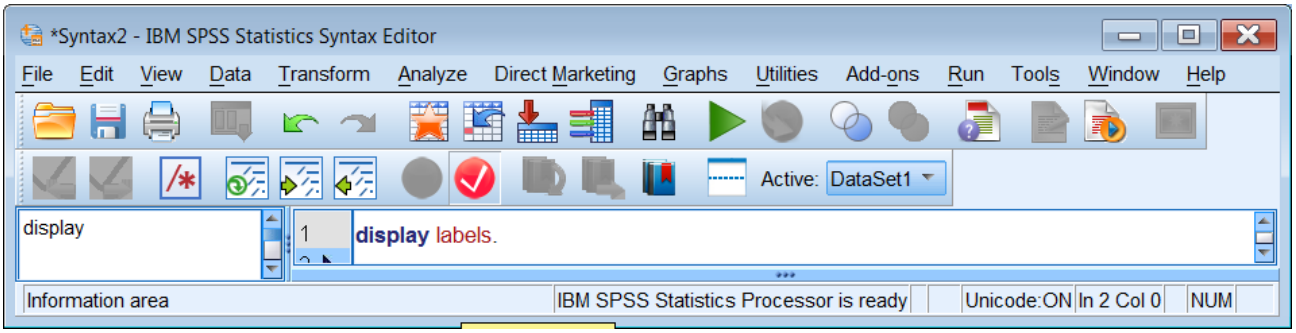
File > New > Syntax





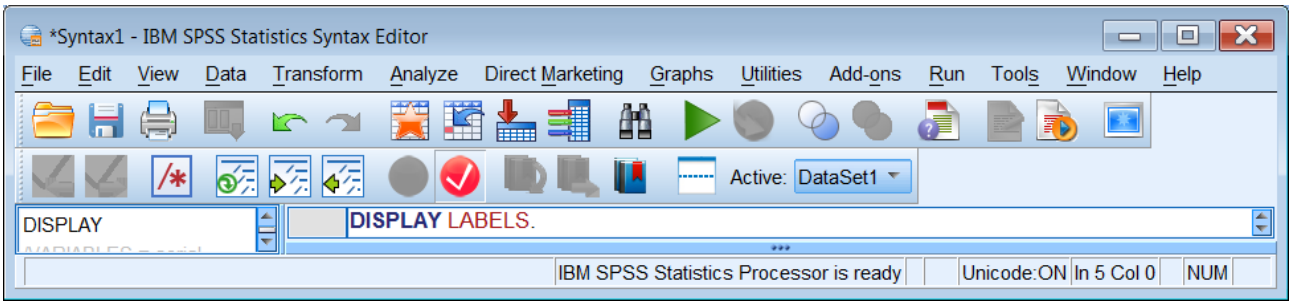
Type in:

display labels. [Don't forget the full stop!]



[**NB:** the display command is not available via the GUI]

If you use the SPSS prompts, it will look like this:



Press the green triangle ▶ or Ctrl+**R** to execute the command: SPSS displays a long narrow table:

Variable Labels

Variable	Position	Label
Serial	1	Serial Number Q1
SPoint	2	Sample point <167-299> Q9
StRegion	3	Standard Region [11 categories] dv Q11
Region	4	Region [6 categories]dv Q12

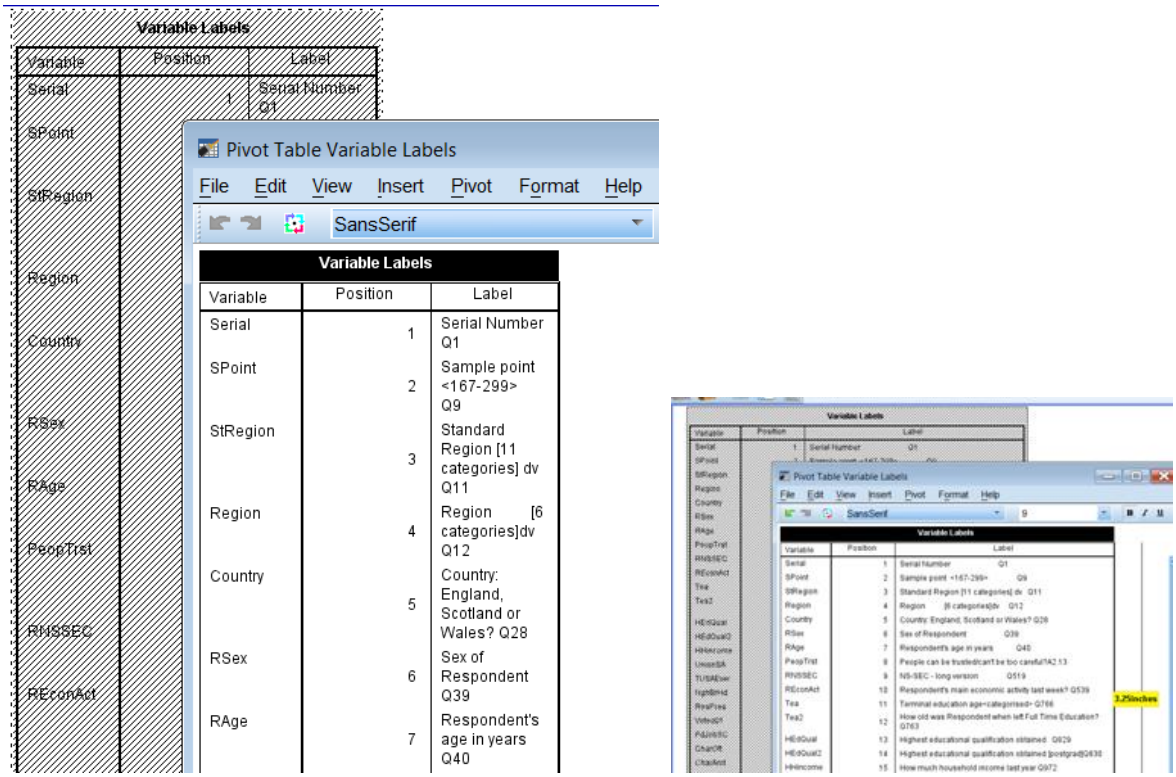
~ ~ ~ ~

qual1	48	Highest level of Qualifications (1)
qual2	49	Highest level of Qualifications (2)

Variables in the working file

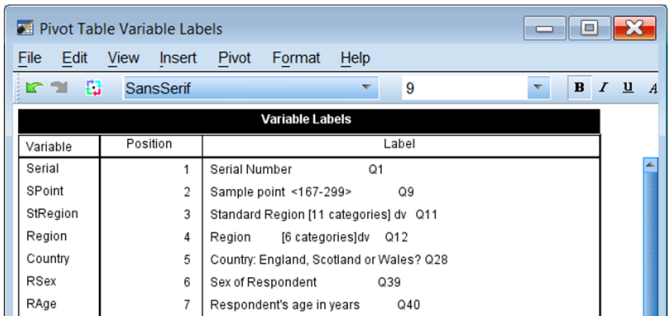
. . . which then needs to be widened via Pivot Tables.

In the **Viewer**, double click on the table:

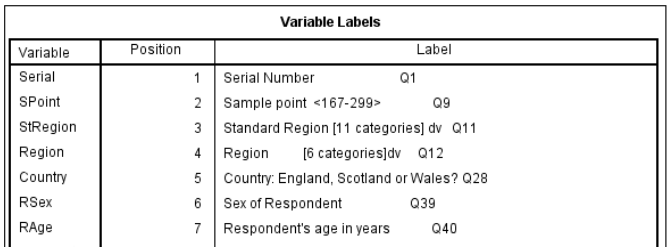


and drag the right margin out far enough to get the labels on a single line.

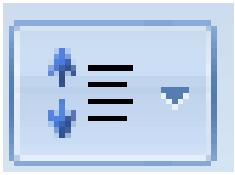
Closing the pivot table window . . .

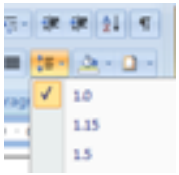


reformats the table:



Right click > **Copy** can then be used to copy the table and paste it into Word with Ctrl + **V**. Even then the table is double-spaced, so when copied into Word it needs resetting to single space:

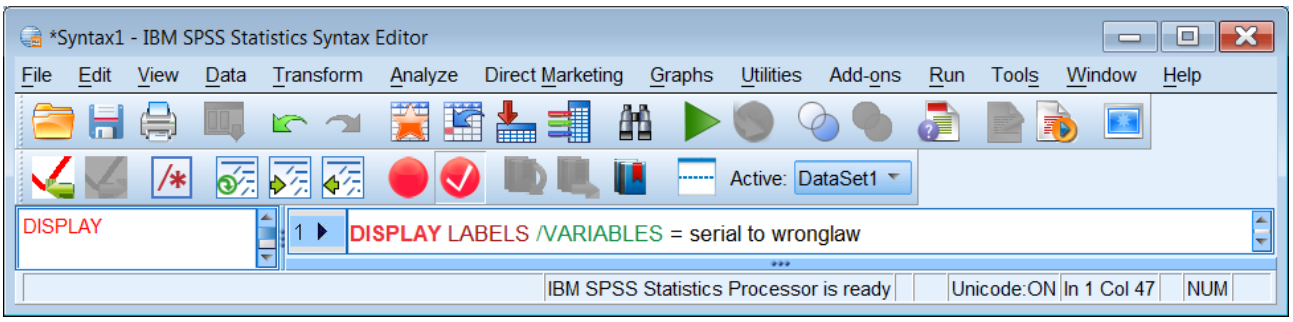




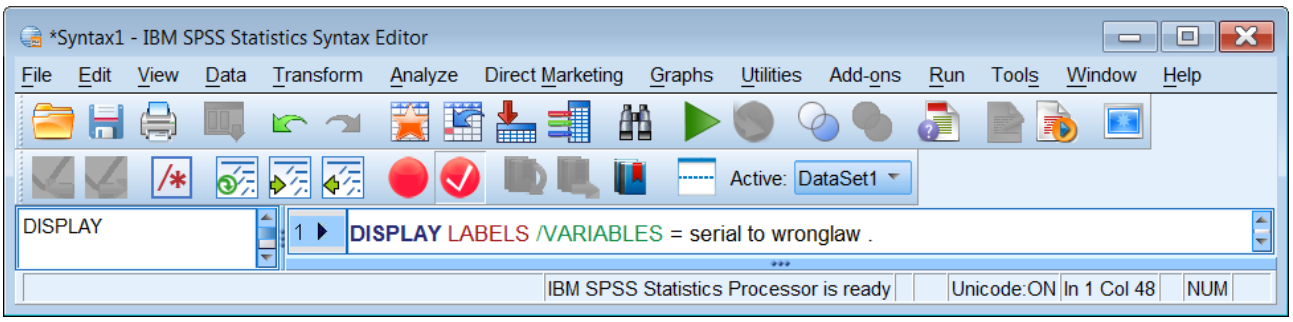
Variable	Position	Label
Serial	1	Serial Number Q1
SPoint	2	Sample point <167-299> Q9
StRegion	3	Standard Region [11 categories] dv Q11
Region	4	Region [6 categories]dv Q12
Country	5	Country: England, Scotland or Wales? Q28
RSex	6	Sex of Respondent Q39
RAge	7	Respondent's age in years Q40
PeopTrst	8	People can be trusted/can't be too careful?A2.13
RNSSEC	9	NS-SEC - long version Q519
REconAct	10	Respondent's main economic activity last week? Q539
Tea	11	Terminal education age<categorised> Q766
Tea2	12	How old was Respondent when left Full Time Education?Q763
HEdQual	13	Highest educational qualification obtained Q829
HEdQual2	14	Highest educational qualification obtained [postgrad]Q830
HHincome	15	How much household income last year Q972
UnionSA	16	Is Respondent a member of a Trade Union/S.A.?Q604
TUSAEver	17	Has Respondent ever been a member of a TU/SA Q605
NghBrHd	18	How long Respondent lived in neighbourhood? Q632
ResPres	19	Respondent live in city/suburbs or country? Q697
Voted01	20	Did Respondent vote 2nd June 2001 in G.E.? Q834
PdJobSC	21	Respondent currently in paid work?A2.48B2.22C2.23
CharOft	22	Respondent give money to charity how often? B619
CharAmt	23	Respondent gives how much to charity per yearB620
PolitSC	24	How interested Respondent in politics? A2.10
GovRight	25	Trust people in government to do what is rightA2.11a
GovSelf	26	Politicians for what get out of itA2.11b
DemoNow	27	How well GB democracy work today? A2.25a
GrpMemb1	28	Respondent would/did join a political party?A2.6a
GrpMemb2	29	Respondent would/did join TU,profession association?A2.6b
GrpMemb3	30	Respondent would/did join church, religious associationA2.6c
GrpMemb4	31	Respondent would/did join sports/cultural groupA2.6d
GrpMemb5	32	Respondent would/did join voluntary associationA2.6e
IncDiffs	33	Income differences GB to large?A2.39aB2.13a
IncDiff	34	Government should reduce income differences.?A2.39bB2.13b
IDCards	35	Every adult should have an ID card? A2.61d
MoreWelf	36	Government should spend > on poor A2.63bBC2.44b
SocHelp	37	People not deserve any help A2.63dBC2.44d
DeathApp	38	Death penalty appropriate for some crimesA2.66cB2.47cC2.46c
WrongLaw	39	Always obey law even when law is wrongA2.66eB2.47eC2.46e
PartyId2	40	Party political identification (compressed) dvQ211
agegp1	41	Age grouped (1)
agegp2	42	Age grouped (2)
incomegp	43	Household income last year grouped
incomeg1	44	Household income last year grouped
trust	45	Attitudes towards trusting people
volgp	46	Ever been a member of a voluntary group?
volgp1	47	Currently a member of a voluntary group?
qual1	48	Highest level of Qualifications (1)
qual2	49	Highest level of Qualifications (2)

Variables in the working file

The variables are actually in two groups. The original variables are **serial** to **wronglaw**: the variables **partyid2** to **qual2** are derived. You can display groups of labels if you specify which variables you want.

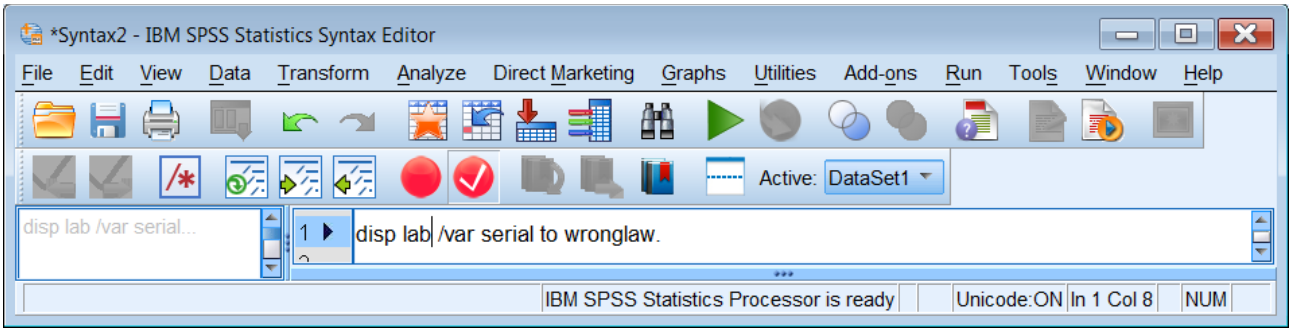


[**NB: DISPLAY** stays red until you add the full stop]

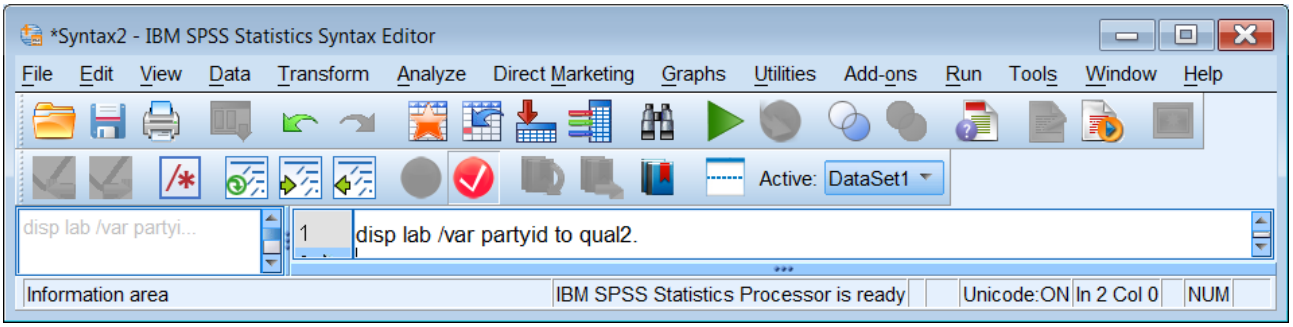


. . or you can use abbreviated syntax for

Original variables only:



Derived variables only



. . and press the green triangle ▶ or Ctrl+**R** to execute the command(s):

Original variables only:

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CharAmt	23	Respondent gives how much to charity per yearB620
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MoreWelf	36	Government should spend > on poor A2.63bBC2.44b
SocHelp	37	People not deserve any help A2.63dBC2.44d
DeathApp	38	Death penalty appropriate for some crimesA2.66cB2.47cC2.46c
WrongLaw	39	Always obey law even when law is wrongA2.66eB2.47eC2.46e

Variables in the working file

Derived variables only:

Variable Labels

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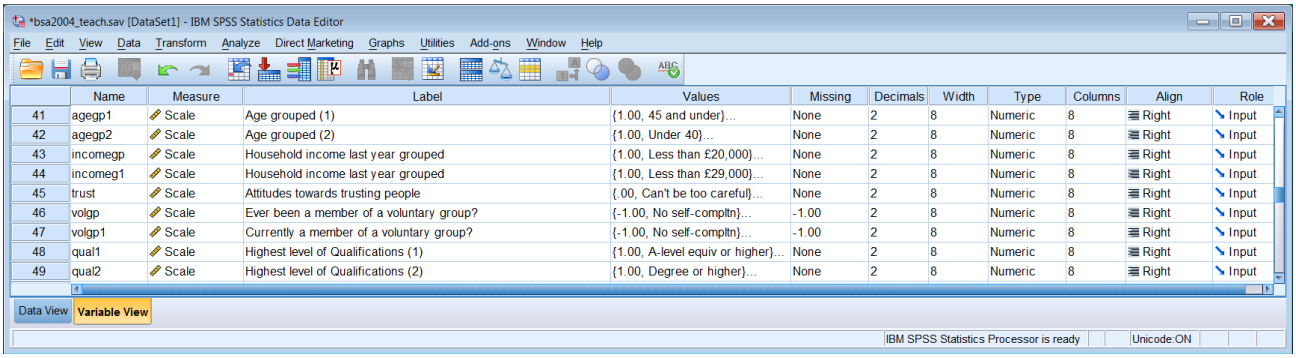
PartyId2	40	Party political identification (compressed) dvQ211
agegp1	41	Age grouped (1)
agegp2	42	Age grouped (2)
incomegp	43	Household income last year grouped
incomeg1	44	Household income last year grouped
trust	45	Attitudes towards trusting people
volgp	46	Ever been a member of a voluntary group?
volgp1	47	Currently a member of a voluntary group?
qual1	48	Highest level of Qualifications (1)
qual2	49	Highest level of Qualifications (2)

Variables in the working file

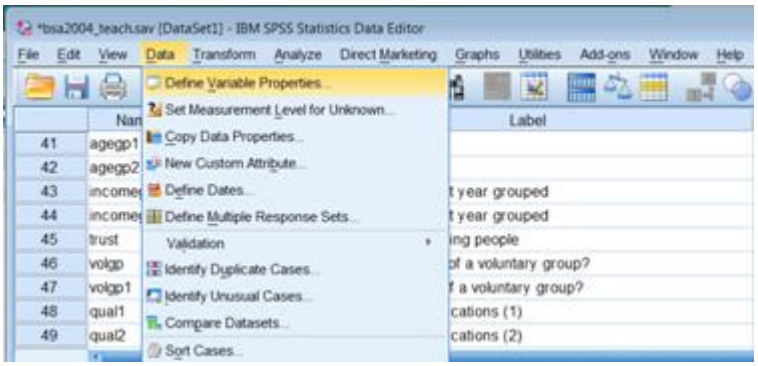
There's still a bit of tidying up needed.

Go back to Variable View and scroll down to the derived variables on rows 41 to 49:

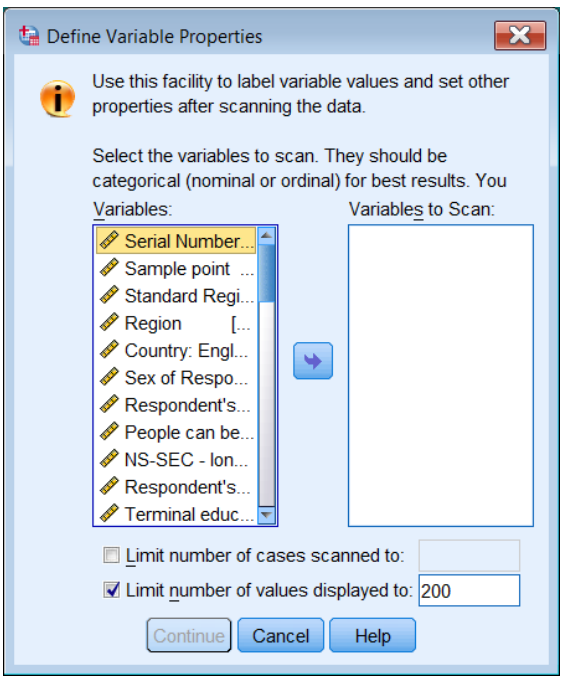


If you look at the **Decimals** column you will see that all these variables have 2 decimal places. In fact they are integers and should have no decimals. You can check by running frequency counts and also by going down the list clicking on the cells in the **Values** column and then on the blue boxes. A quicker way is to use:

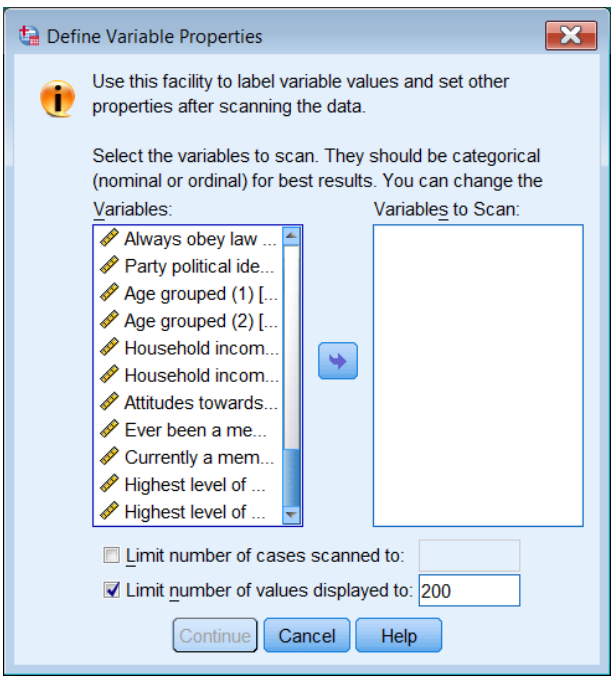
Data > Define Variable Properties (DVP)



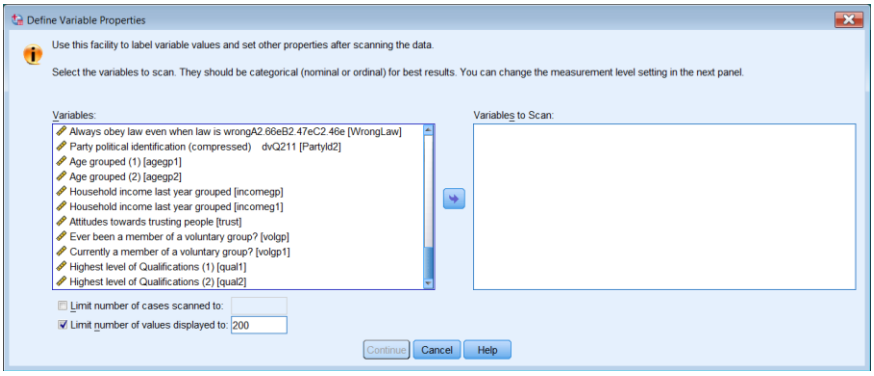
Beginning of file:



End of file:

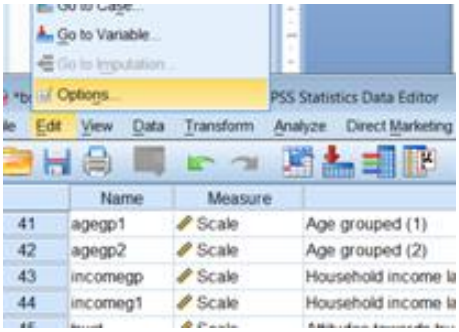


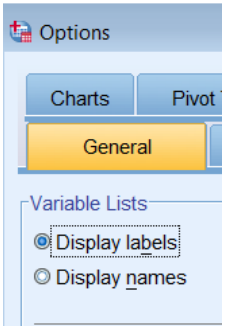
1st problem: The display is set to labels, not names. You can't see the question numbers. You can stretch the window to see them:

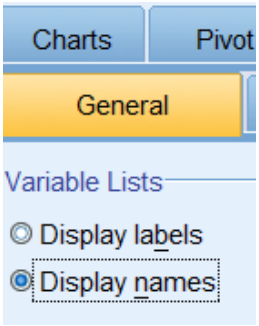


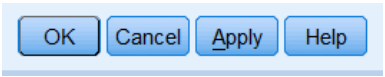
. . or change the settings to Names with:

Edit > Options



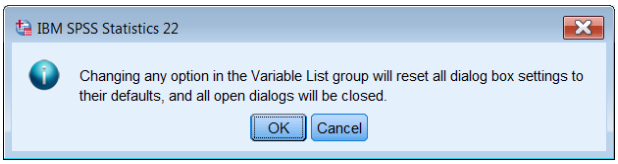




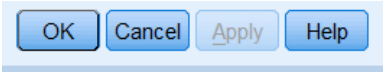


Click on Apply

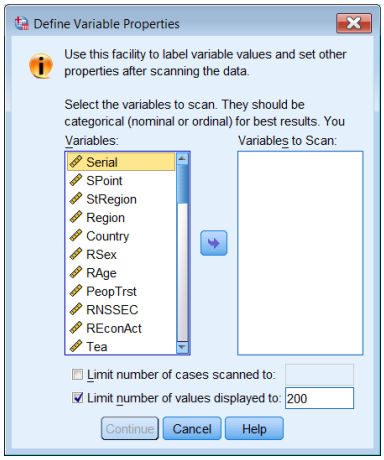
You may get a message:
Click on OK

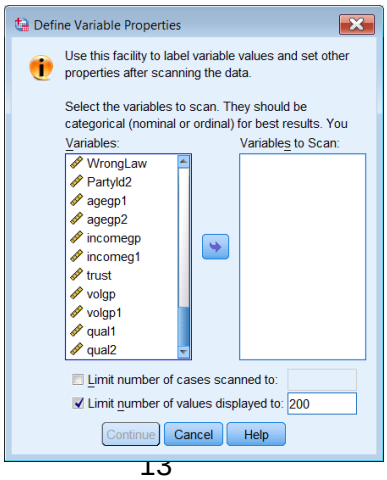


then OK again

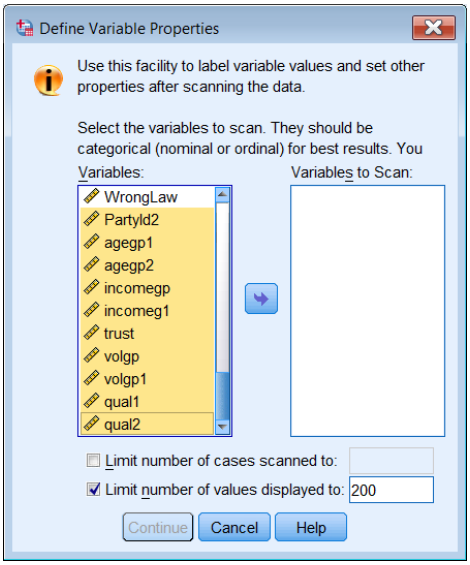


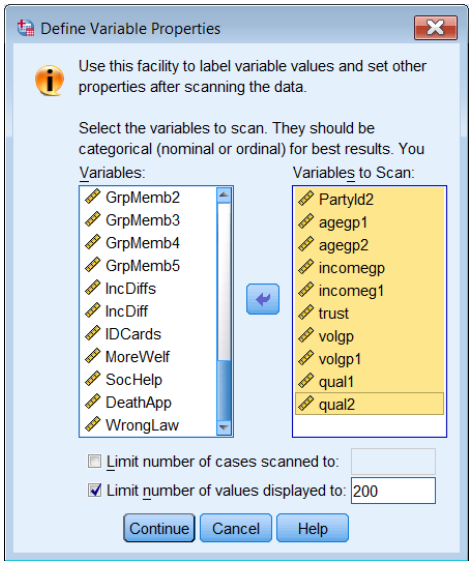
DVP now displays names instead of labels:



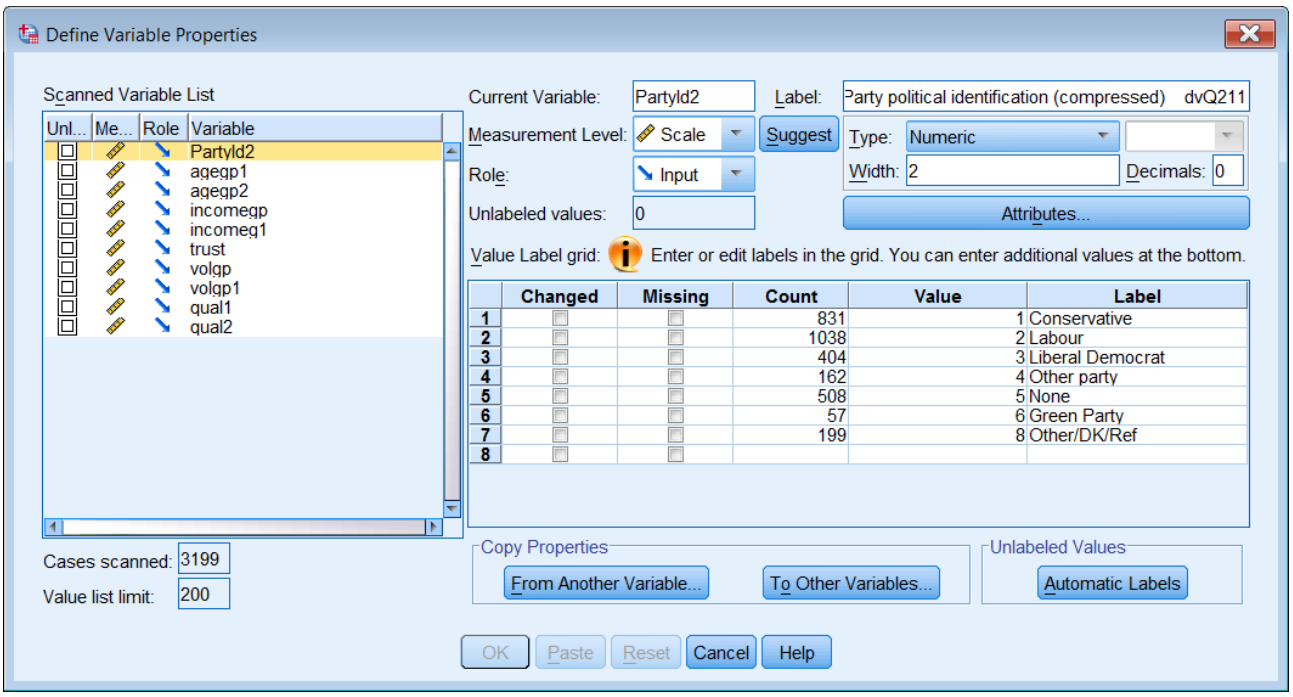


To check the properties of the derived variables, highlight the first one, **Partyid2** then Shift click on the last one **qual2** and click on the blue arrow  to transfer them to the right pane:





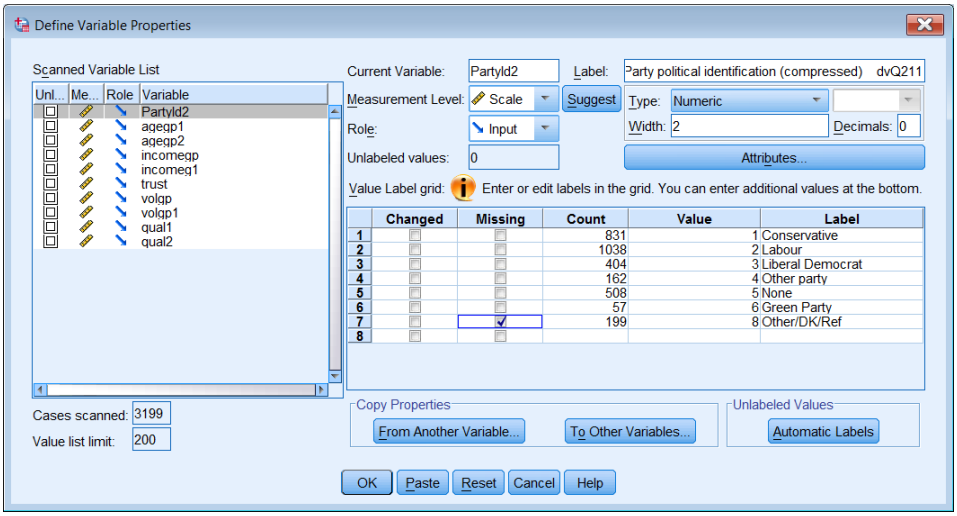
Click on Continue to get the following display:



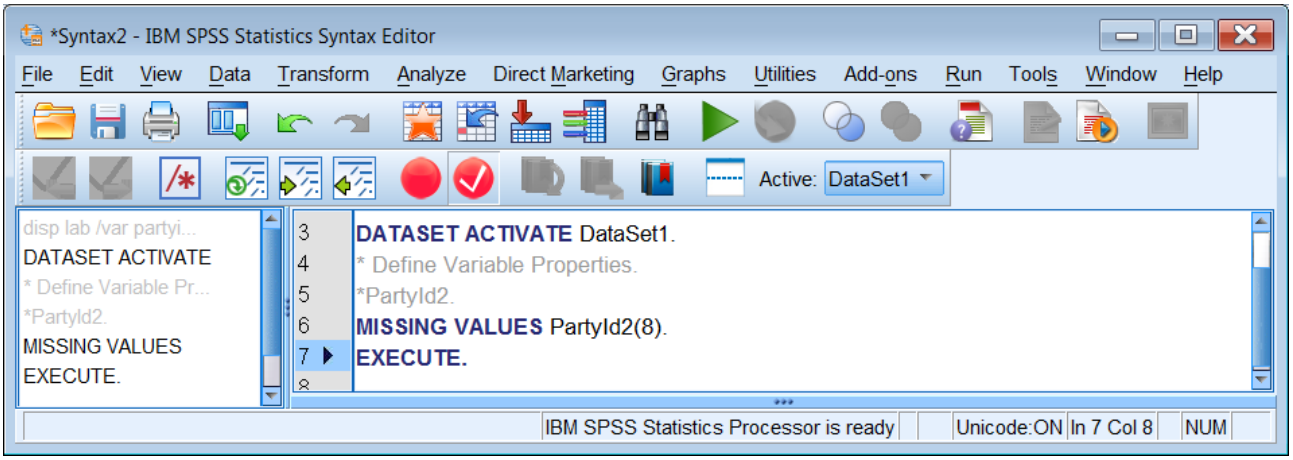
If you click on any variable in the left pane all its properties will be displayed. From this you can see that **partyid2** has 0 decimals (correct) but that value **8** (= Other/DK/Ref) has not been declared as missing (the box is not checked under **Missing**). Variables **volgp** and **volgp1** have value **-1** (= No self-compltn) which has already been declared missing (the box is checked under **Missing**):

	Changed	Missing	Count	Value	Label
1	☐	☑	2346	-1.00	No self-compltn
2	☐	☐	541	.00	No
3	☐	☐	312	1.00	Yes
4	☐	☐			

For all variables from **agegp1** to **qual2** the values have 2 decimals, but they are integers resulting from a data transformation (RECODE . . INTO . .) and need to be changed to 0. These can be changed inside the Data Editor, but there will be no audit trail of what you have done. You can change the properties of any or all variables inside the DVP window: if you do this the Paste button (grayed out above) will become active (Paste) and you can use it to save the syntax generated by SPSS for any changes made. For **partyid2**, if you check the **Missing** box:

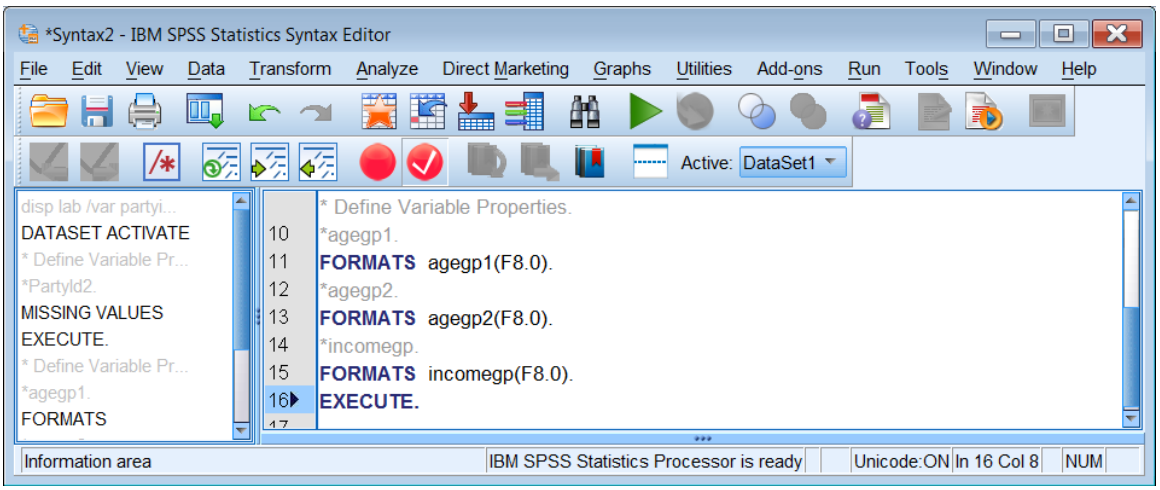


and click on Paste the following syntax will appear in the active **Syntax Editor**:

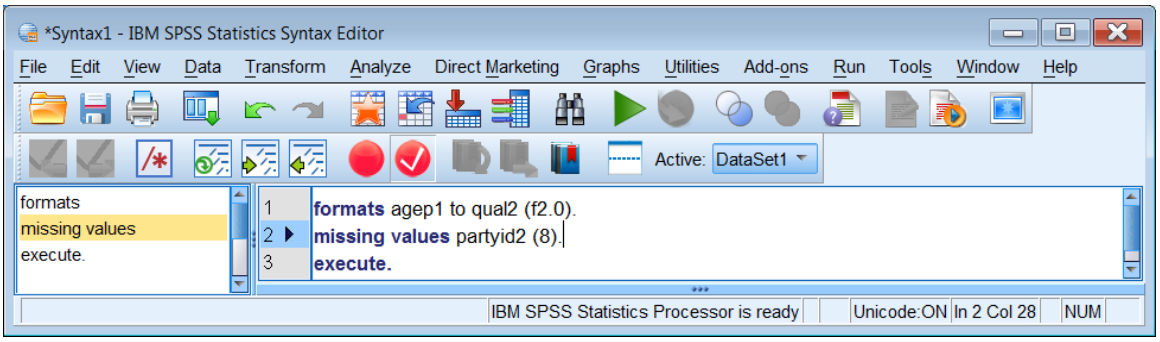


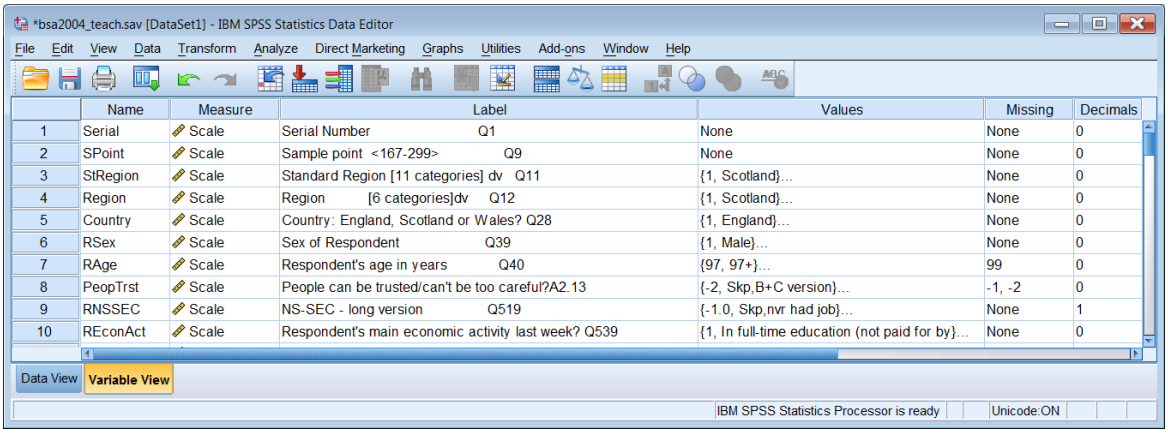
Using the DVP to change all the decimals from 2 to 0 one by one is time-consuming and produces a separate syntax command for each change.

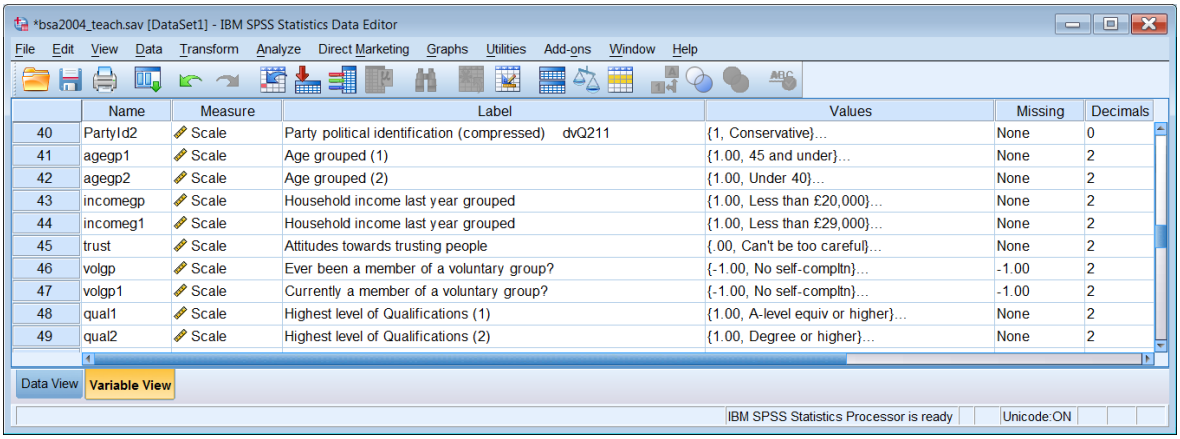
```
* Define Variable Properties.
*agegp1.
FORMATS  agegp1(F8.0).
*agegp2.
FORMATS  agegp2(F8.0).
*incomegp.
FORMATS  incomegp(F8.0).
*incomeg1.
FORMATS  incomeg1(F8.0).
*trust.
FORMATS  trust(F8.0).
*volgp.
FORMATS  volgp(F8.0).
*volgp1.
FORMATS  volgp1(F8.0).
*qual1.
FORMATS  qual1(F8.0).
*qual2.
FORMATS  qual2(F8.0).
EXECUTE.
```

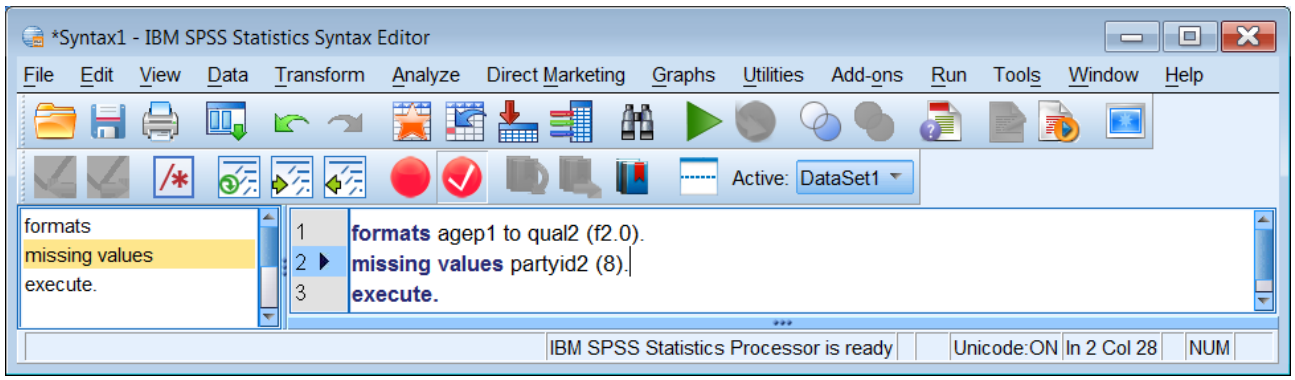


An alternative is to use the **FORMATS** and **MISSING VALUES** commands:

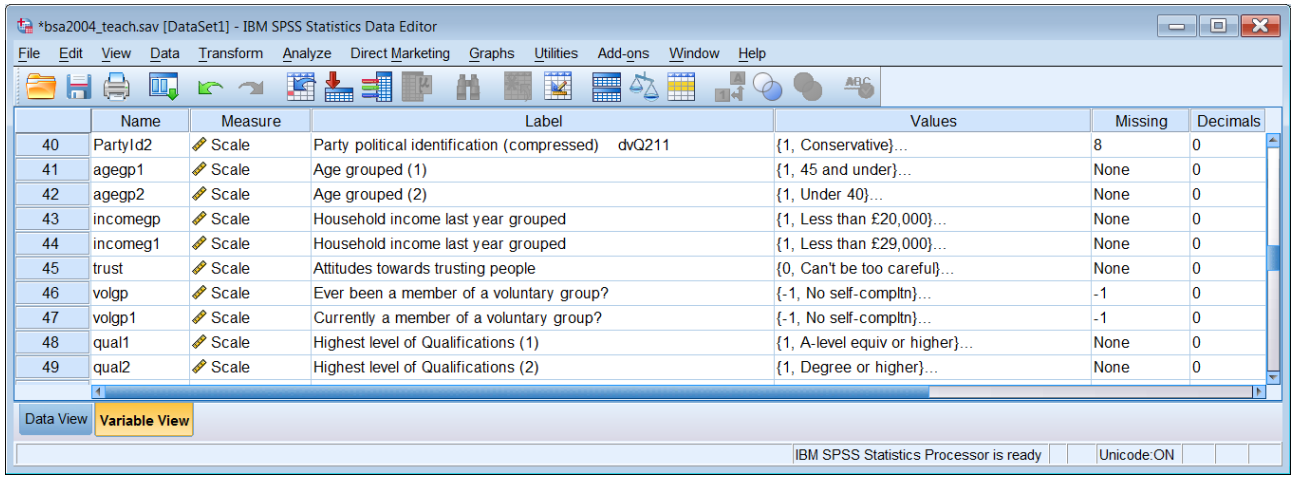






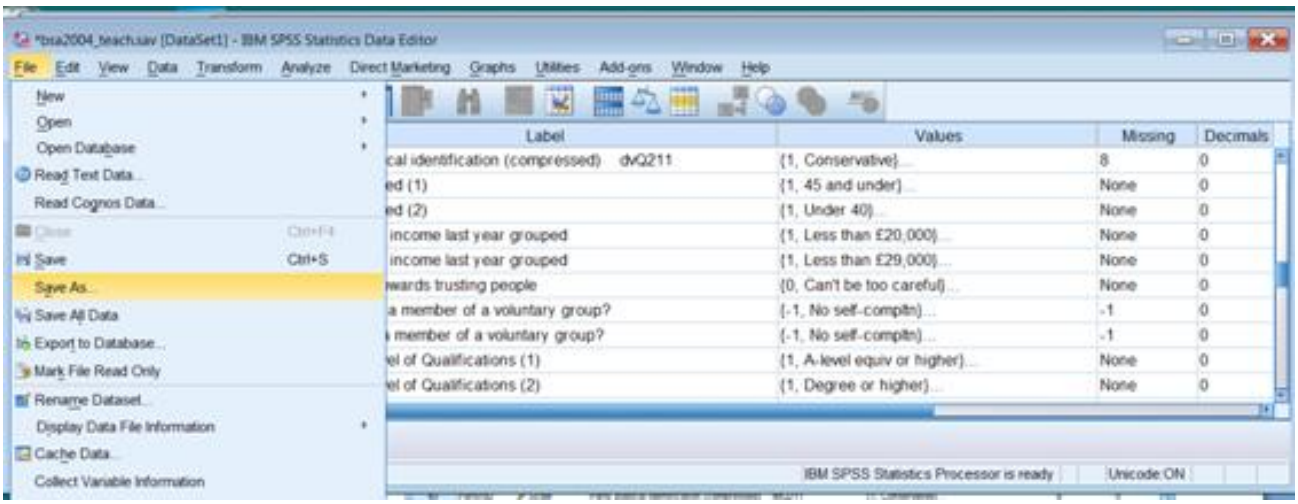


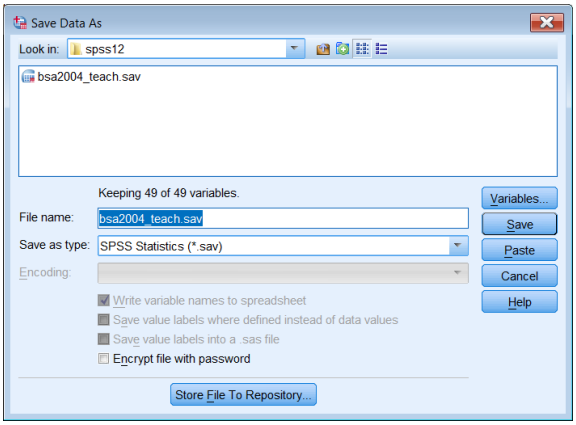
Run > All

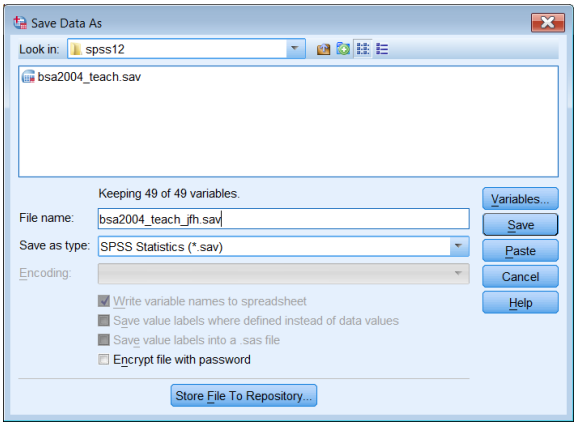


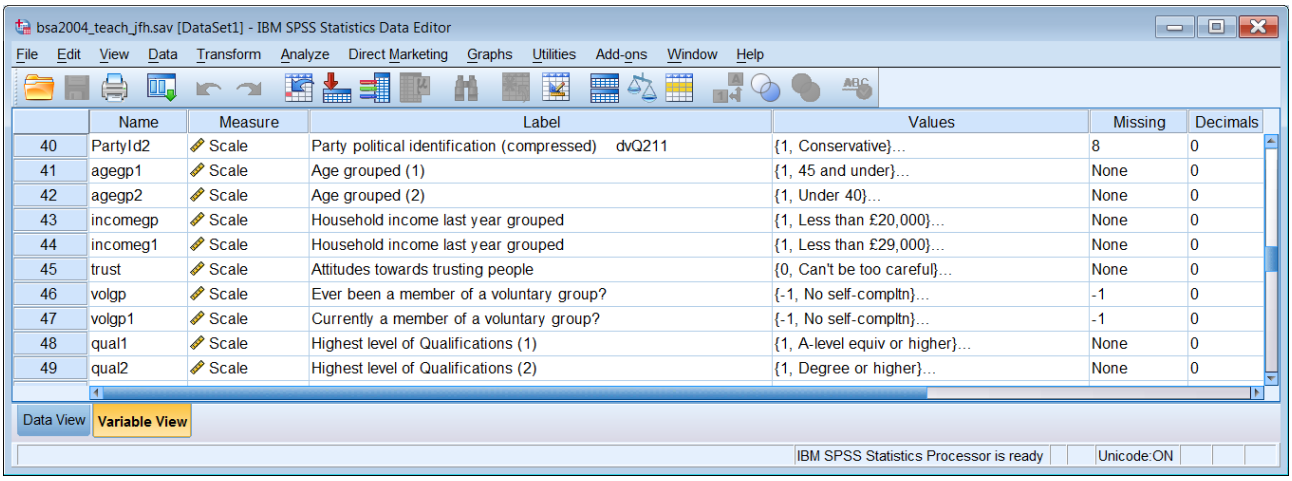
Now save your work! [I've been naughty: should have worked on a copy, not the original]

File > Save As







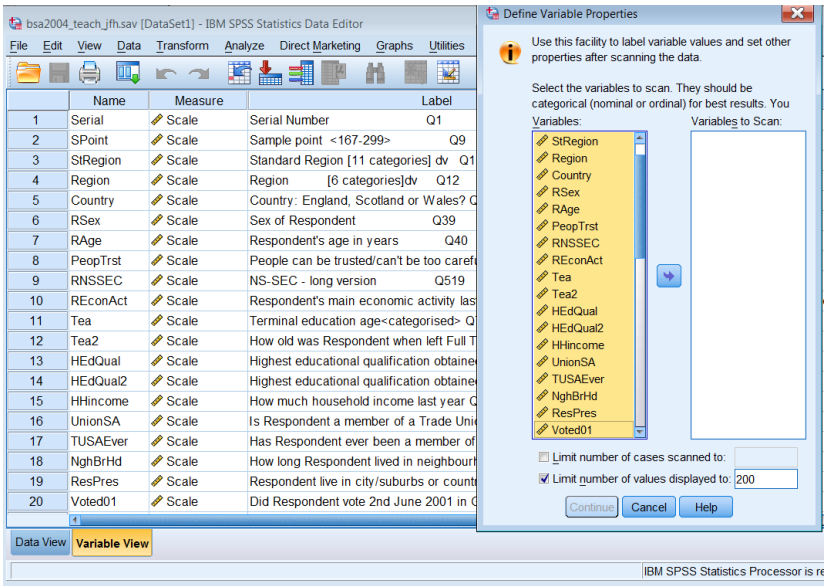


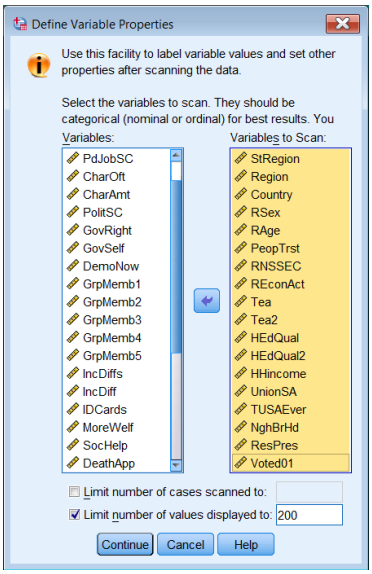
	Name	Measure	Label	Values	Missing	Decimals
40	PartyId2	Scale	Party political identification (compressed) dvQ211	{1, Conservative}...	8	0
41	agegp1	Scale	Age grouped (1)	{1, 45 and under}...	None	0
42	agegp2	Scale	Age grouped (2)	{1, Under 40}...	None	0
43	incomegp	Scale	Household income last year grouped	{1, Less than £20,000}...	None	0
44	incomeg1	Scale	Household income last year grouped	{1, Less than £29,000}...	None	0
45	trust	Scale	Attitudes towards trusting people	{0, Can't be too careful}...	None	0
46	volgp	Scale	Ever been a member of a voluntary group?	{-1, No self-compltn}...	-1	0
47	volgp1	Scale	Currently a member of a voluntary group?	{-1, No self-compltn}...	-1	0
48	qual1	Scale	Highest level of Qualifications (1)	{1, A-level equiv or higher}...	None	0
49	qual2	Scale	Highest level of Qualifications (2)	{1, Degree or higher}...	None	0

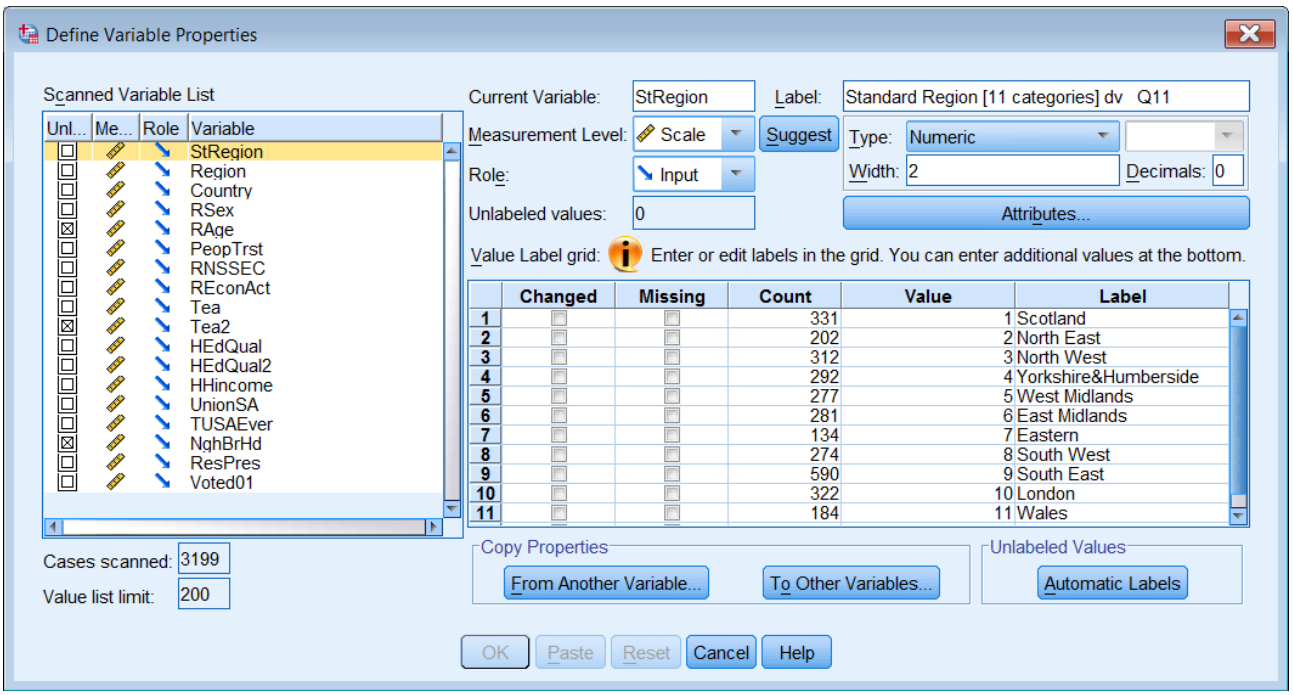
The original file is kept, and from now on you are working on your new version.

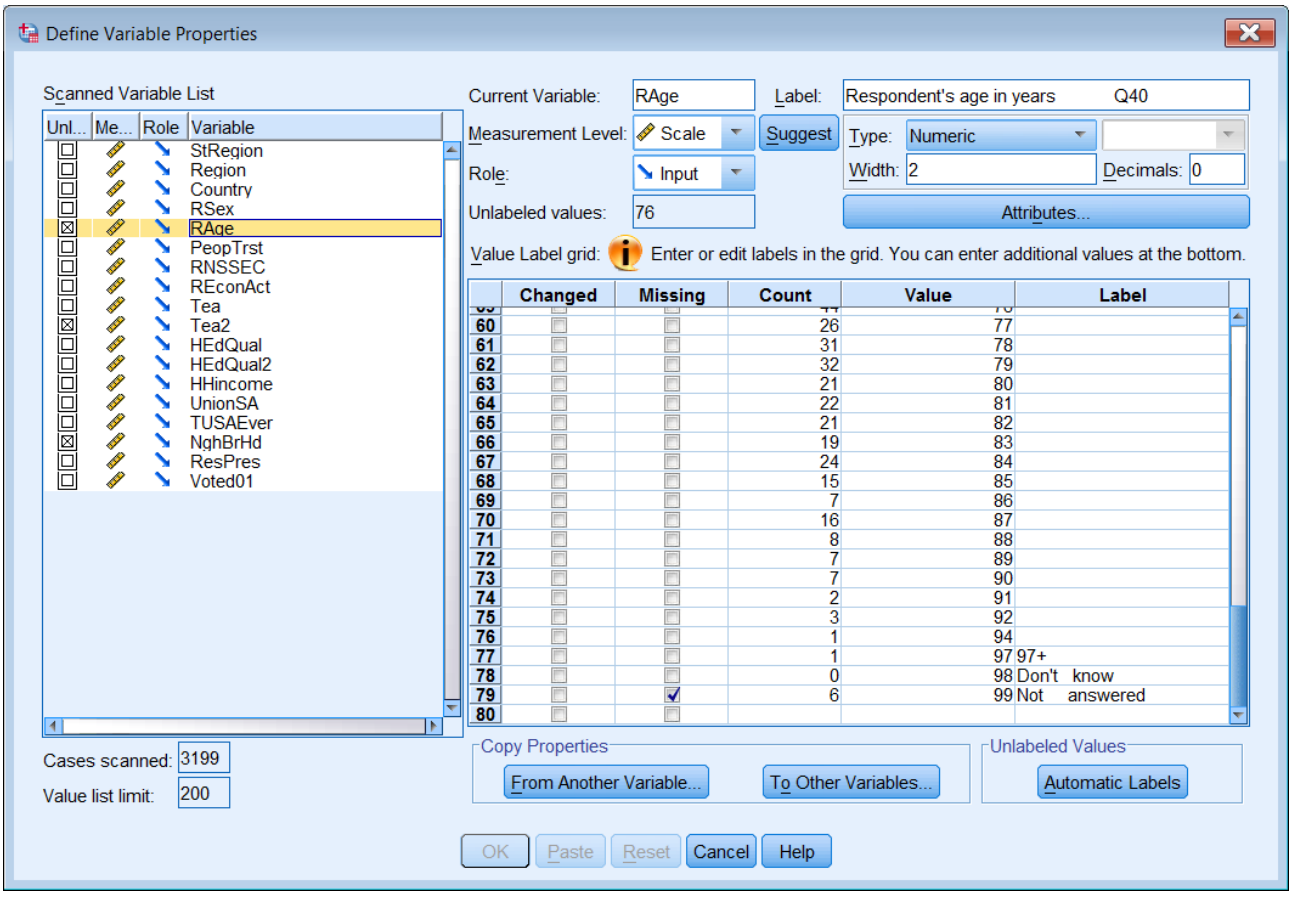
Final checks:

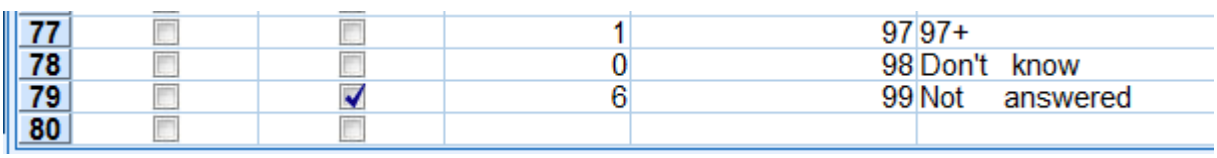
Data > Define Variable Properties (DVP: 20 variables at a time, except **Serial** and **SPoint**)






Define Variable Properties
Scanned Variable List
Unl... Me... Role Variable
StRegion
Region
Country
RSex
RAge
PeopTrst
RNSSEC
REconAct
Tea
Tea2
HEdQual
HEdQual2
HHincome
UnionSA
TUSAEver
NghBrHd
ResPres
Voted01
Cases scanned: 3199
Value list limit: 200
Current Variable: StRegion
Label: Standard Region [11 categories] dv Q11
Measurement Level: Scale
Suggest
Type: Numeric
Role: Input
Width: 2
Decimals: 0
Unlabeled values: 0
Attributes...
Value Label grid: Enter or edit labels in the grid. You can enter additional values at the bottom.
Changed Missing Count Value Label
1 331 1 Scotland
2 202 2 North East
3 312 3 North West
4 292 4 Yorkshire&Humberside
5 277 5 West Midlands
6 281 6 East Midlands
7 134 7 Eastern
8 274 8 South West
9 590 9 South East
10 322 10 London
11 184 11 Wales
Copy Properties
From Another Variable...
To Other Variables...
Unlabeled Values
Automatic Labels
OK
Paste
Reset
Cancel
Help

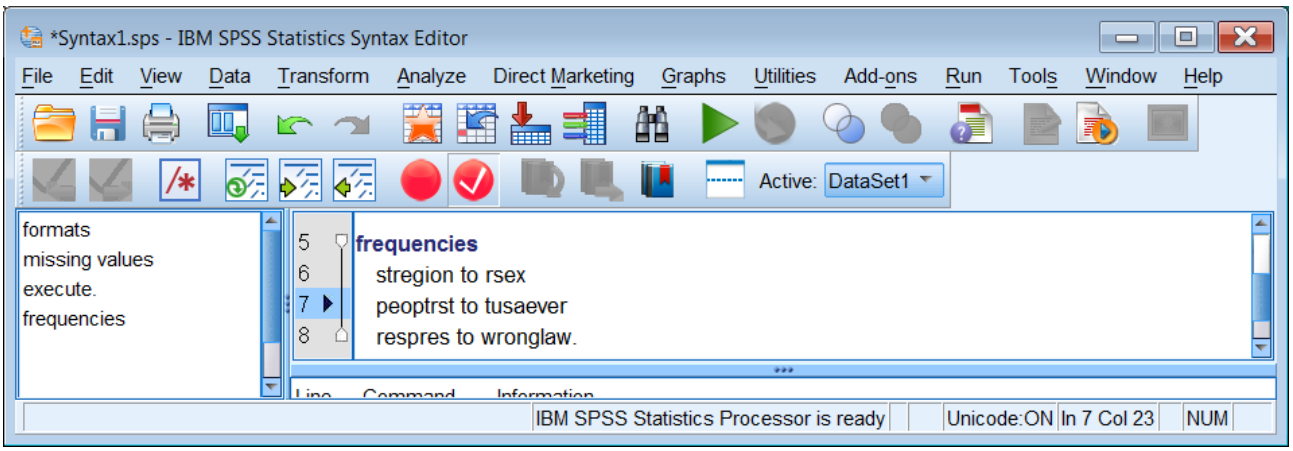

Define Variable Properties
Scanned Variable List
Unl... Me... Role Variable
StRegion
Region
Country
RSex
RAge
PeopTrst
RNSSEC
REconAct
Tea
Tea2
HEdQual
HEdQual2
HHincome
UnionSA
TUSAEver
NghBrHd
ResPres
Voted01
Cases scanned: 3199
Value list limit: 200
Current Variable: RAge
Label: Respondent's age in years Q40
Measurement Level: Scale
Suggest
Type: Numeric
Role: Input
Width: 2
Decimals: 0
Unlabeled values: 76
Attributes...
Value Label grid: Enter or edit labels in the grid. You can enter additional values at the bottom.
Changed Missing Count Value Label
60 26 77
61 31 78
62 32 79
63 21 80
64 22 81
65 21 82
66 19 83
67 24 84
68 15 85
69 7 86
70 16 87
71 8 88
72 7 89
73 7 90
74 2 91
75 3 92
76 1 94
77 1 97 97+
78 0 98 Don't know
79 6 99 Not answered
80
Copy Properties
From Another Variable...
To Other Variables...
Unlabeled Values
Automatic Labels
OK
Paste
Reset
Cancel
Help


77 1 97 97+
78 0 98 Don't know
79 6 99 Not answered
80

As you work your way down the list you will see that -3, -2 and -1 have (mostly) been declared as missing (skipped) but that codes 8, 9, 98 and 99 have not, even though have been labelled as Don't know, Refused, Can't choose etc. Code 97 is also used = Other uncodeable? You need to deal with this before running any analysis. You may find it easier to work down the list and check the **Missing** boxes where applicable, but you need to use Paste to collect the syntax. If you click OK the changes will be effected, but you will have no syntax and therefore no audit trail.

However there is still a further problem. SPSS allows up to three discrete missing values, but many of the variables in this file actually have more than three values to be treated as missing (eg **TUSAever** has four: -3, -1, 8 and 9) SPSS allows two of the specified missing values to be the lower and upper limits of a range of values eg (77 thru 99) One way round this is to recode the positive values 8 and 9 to -8 and -9 and specify the missing values as (-9 thru -1).

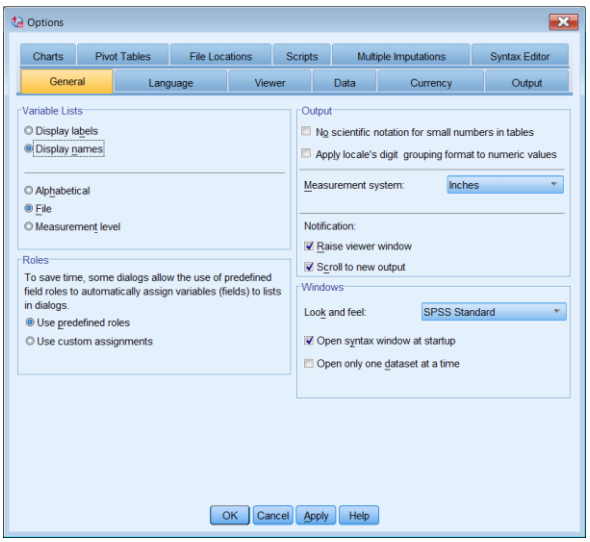
The safest thing to do is to run frequency counts first, but some variables have many values, so don't print them up if you want to save paper.



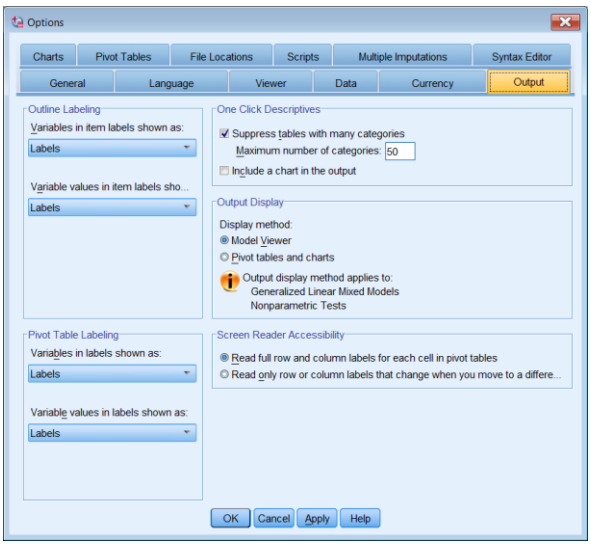
You can then work your way through the frequency counts and build up a single **missing values** command for variables with three or fewer missing values and then separate **recode** and **missing values** commands for the others. Personally I would recode all the positive missing values to negative and just use (-99 thru -1) but this entails changing the value labels to match.

To do this accurately you need to change the settings to print both variable names and labels and also values and labels on output.

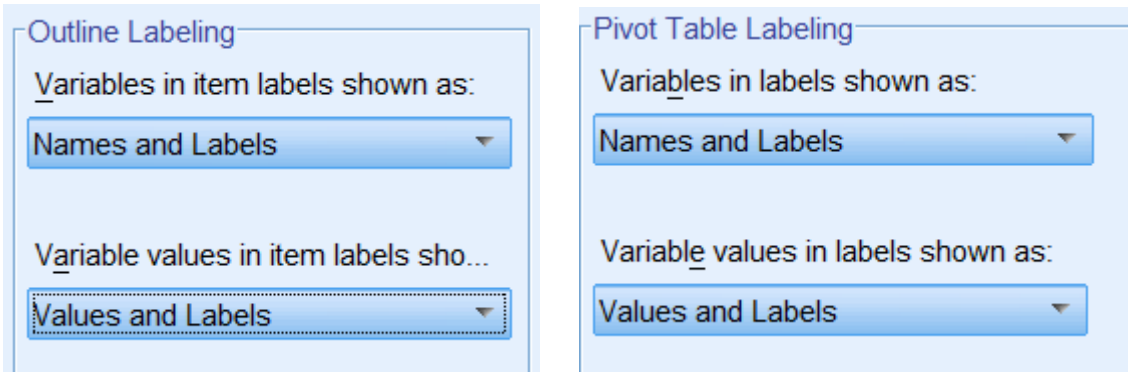
Edit > Options



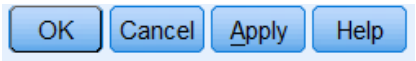
Click on Output



Change Labels to Names and Labels in both Outline Labeling and Pivot Table Labeling in the left hand side of the window:



. . then click on Apply, then OK



If you scroll down the **Measure** column, you will see that all variables are Scale: none are specified as Nominal or Ordinal. Again these can be changed manually inside the **Data Editor** but there will be no audit trail. It's better to use the DVP and Paste, and even better to write a separate **VARIABLE LEVEL** command. Some variables appear to be Ordinal, but are only partially ordered, so you need to make decisions about whether to treat them as Nominal or recode them into ordered categories. Some variables are binary and can be treated at any level.

The following SPSS program will make the necessary modifications:

```
title 'Corrections to bsa04_teach_jfh.sav'.

formats agegp1 to qual2 (f3.0).

variable level
  stregion to rsex reconact unionsa tusaever voted01
  partyid2 agegp1 pdjobsc incomegp to qual2
  (nominal)
  peoptrst rnssec tea tea2 hedqual hedqual2
  hhincome respres charoft to demonow
  grpmemb1 to wronglaw agegp2
  (ordinal)
  serial spoint rage nghbrhd
  (scale).

missing values
  partyid2 hedqual  charoft (8)
  hedqual2  (9)
  respres voted01 pdjobsc (8 9)
  idcards (-1 -2 9)
  morewelf  (-1 9)
  unionsa pdjobsc sochelp deathapp wronglaw (-1 8 9)
  charoft (-2 8 9)
  rnssec (-1, 98 99)
  reconact (98 99)
  tea tea2 (97 98 99)
  hhincome (97, 98)
  nghbrhd (98 99)
  partyid2 (8).
```

```
recode
  peoptrst  tusaever charamt politsc govright govself
  grpmemb1 to grpmemb5 incdiff incdiffs
  (8=-8)(9=-9)
  /rnssec
  (99=-99)
  /demonow (98 = -98)(99 = -99).

missing values
   peoptrst  tusaever charamt politsc govright govself
  grpmemb1 to grpmemb5 incdiffs incdiff rnssec  demonow
  (-99 thru -1).

add value labels
 peoptrst  govself  politsc govright
  grpmemb1 to grpmemb5 incdiffs  incdiff
   -8 "Can't choose"
  -9 'Not answered'
  /tusaever charamt -8 "Don't know" -9 'Not answered'
    /demonow
   -98 "Can't choose"
  -99 'Not answered'.
```

Finally, there is the problem of the question numbers being at the end of the variable labels. These can be moved to the beginning manually as there are only 49 variables, but the full survey has more than 800!

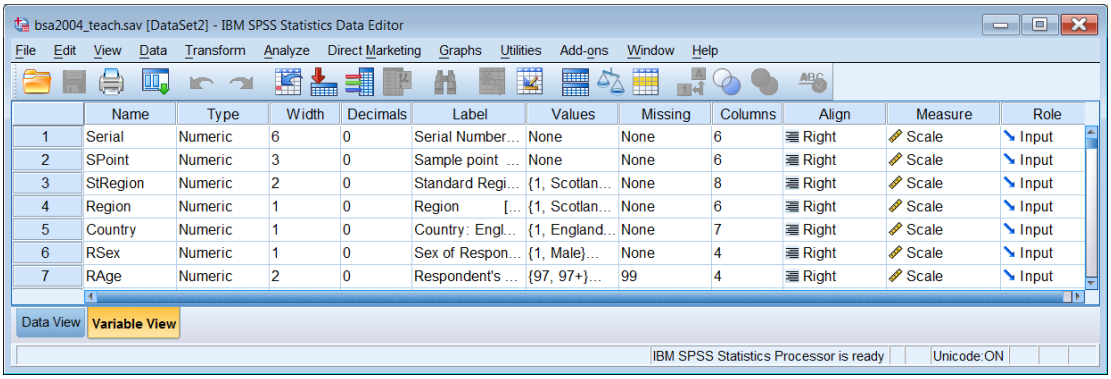
Variable labels were modified for the 2011 survey using a neat piece of Python code supplied to my specifications by Jon Peck (Senior Software Engineer, IBM/SPSS) but it needs some minor modifications for the 2004 survey as the variable labels are not quite in the same format.

Once I have the data organised to my satisfaction, I plan to produce some tabulations demonstrating how to use percentages in contingency tables to illustrate what the models in the book are trying to do, a process known as **elaboration**.

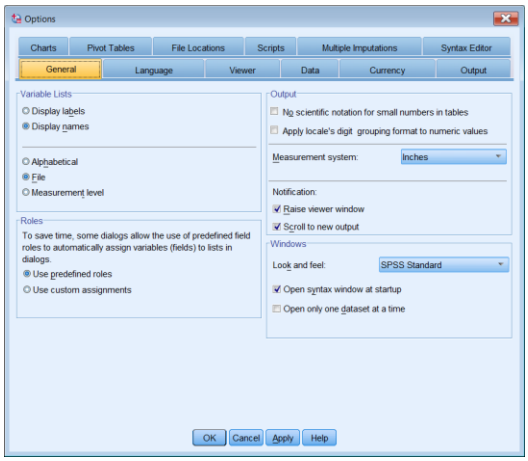
Appendix 1

Changing SPSS settings for the Data Editor

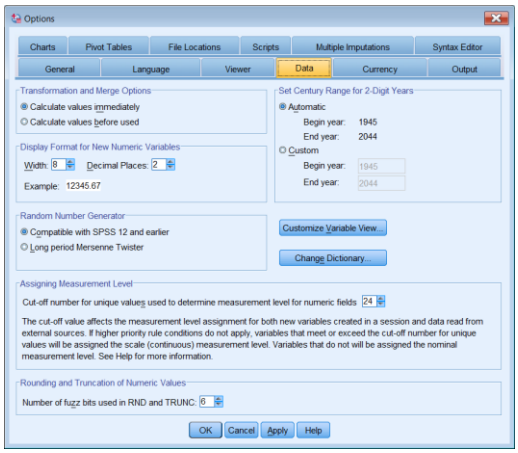
You can change the number and order of columns displayed in the **Data Editor**:

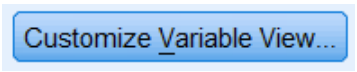


Click on Edit > Options:

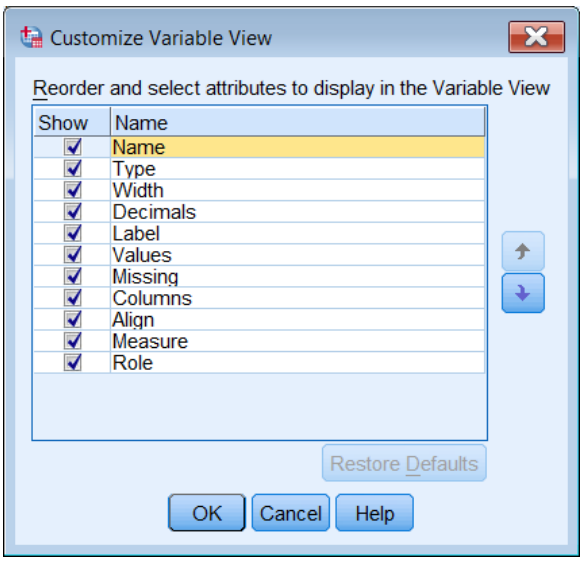


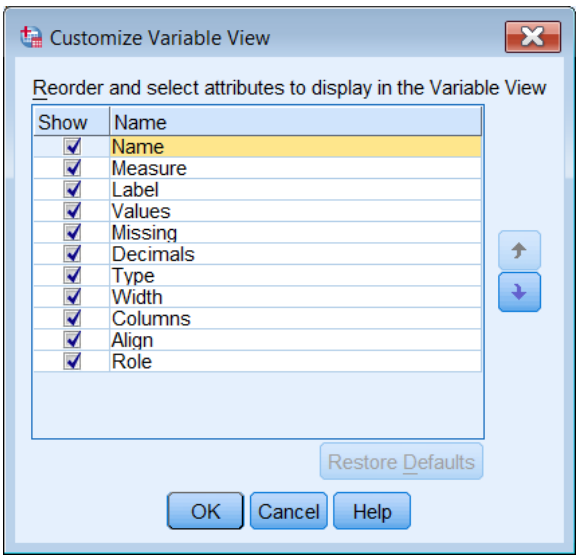
Click on Data >

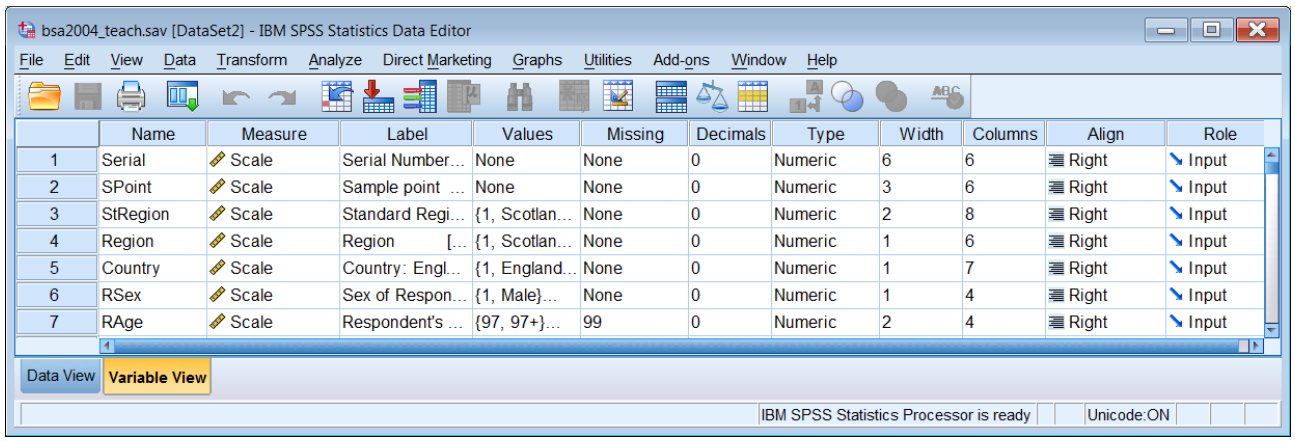


Click on 

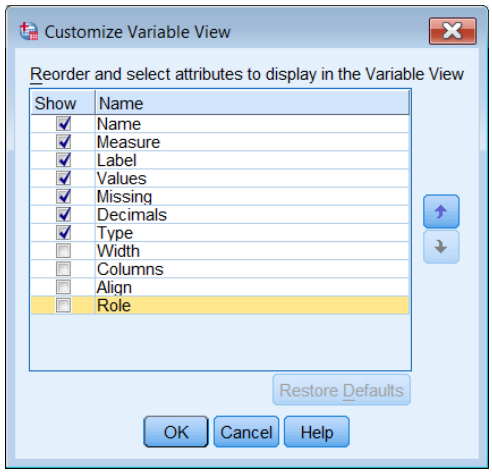
You can move the attributes up or down using the arrows:

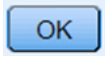




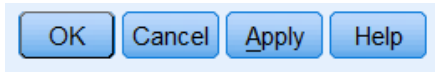


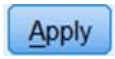
or uncheck them so they don't display at all:

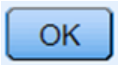


Click 

to go back to **Customise** menu:



Click on 

then 

to go back to the **Data Editor**