© Copyright 2016 John F Hall   (Draft only: 14 March 2016)
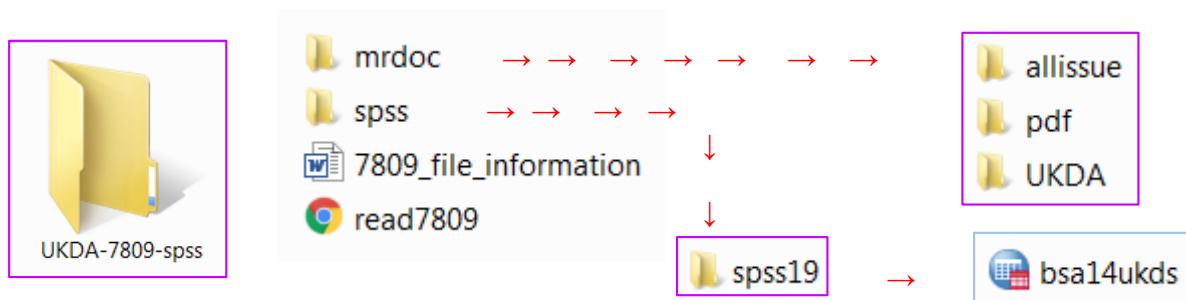
British Social Attitudes Survey, 2014 [1]   **[UK Data Archive Study Number 7809]**

Notes following initial exploration of the SPSS file and associated User Guide

[NB: You can follow this tutorial without access either to the data or to SPSS, but you will not be able to replicate the analyses]

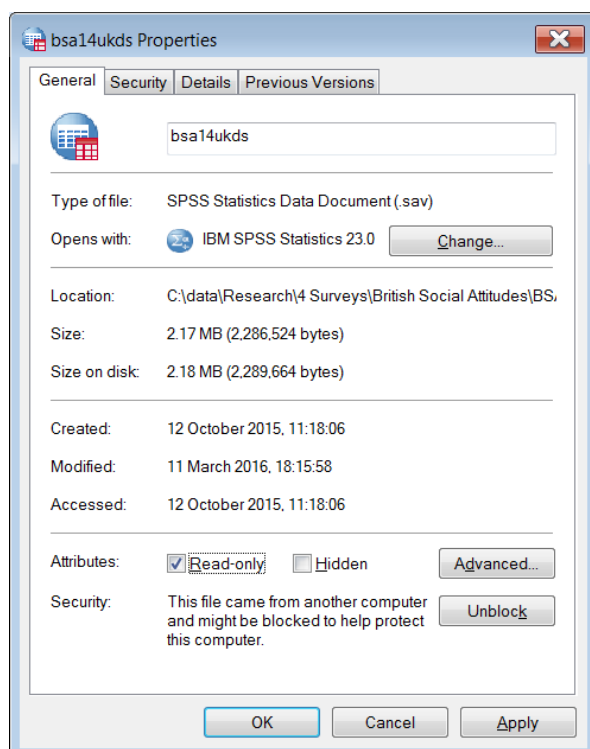Zip file downloaded from UKDS (11 March 2016)

📁 7809SPSS_BFE857DBAAF1CD0C85DE3AEF6D4875CE   contains folder **UKDA-7809-spss**:

📁 mrdoc   → → → → → → →   📁 allissue
📁 spss   → → → →   📁 pdf
📁 UKDA-7809-spss   ↓   📁 UKDA

📄 7809_file_information
🌐 read7809   ↓

📁 spss19   →   📊 bsa14ukds

Before working on any analyses, we need to make this file **read only**, so that we cannot inadvertently make changes to it.

Right click on   📊 bsa14ukds

then click on **Properties**

bsa14ukds Properties

| General | Security | Details | Previous Versions |

bsa14ukds

Type of file: SPSS Statistics Data Document (.sav)
Opens with: IBM SPSS Statistics 23.0   Change...

Location: C:\data\Research\4 Surveys\British Social Attitudes\BSA
Size: 2.17 MB (2,286,524 bytes)
Size on disk: 2.18 MB (2,289,664 bytes)

Created: 12 October 2015, 11:18:06
Modified: 11 March 2016, 18:15:58
Accessed: 12 October 2015, 11:18:06

Attributes: ☑ Read-only   ☐ Hidden   Advanced...

Security: This file came from another computer
               and might be blocked to help protect   Unblock
               this computer.

OK   Cancel   Apply

---

[1] Documentation for BSA 2014 is freely downloadable from both UKDS and Natcen, but to download data files from UKDS you need to be a registered user. To use SPSS you have to be a registered user on an authorised site.
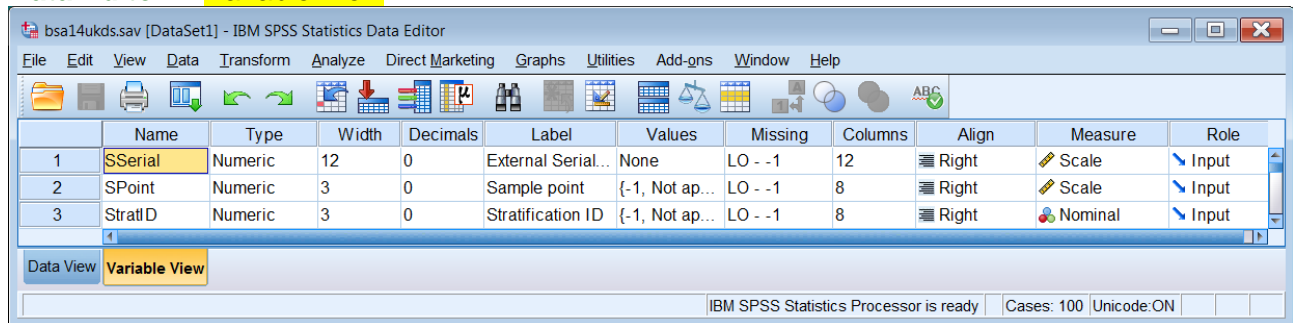
On the **Attributes** line at the bottom, check the Read only box: Attributes: ☑ Read-only

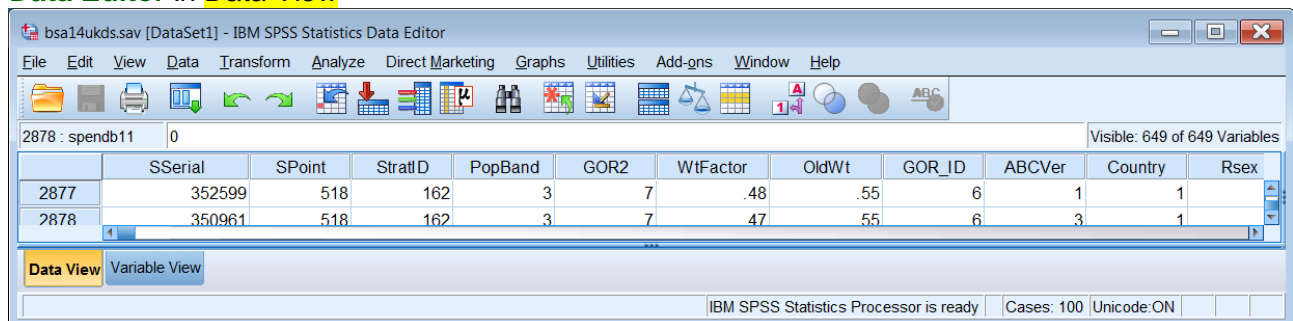Click on Apply then on OK Cancel Apply

Now **make a separate working copy** of the **Data Editor**:

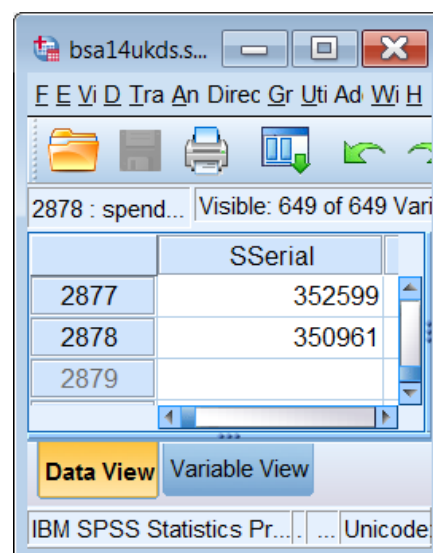Double click on 📊 bsa14ukds

Data Editor in Variable View

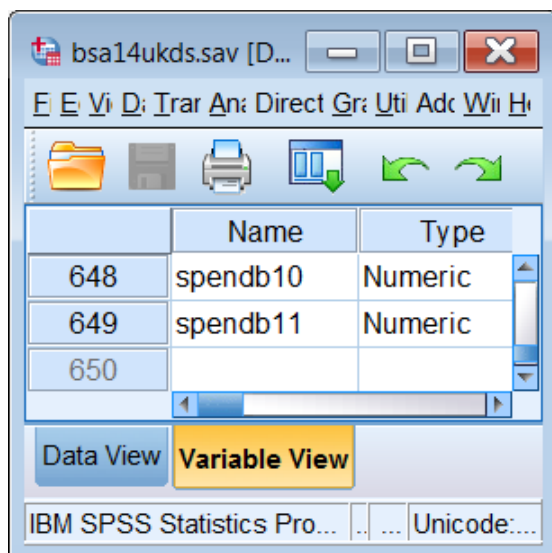**Data Editor** in Data View

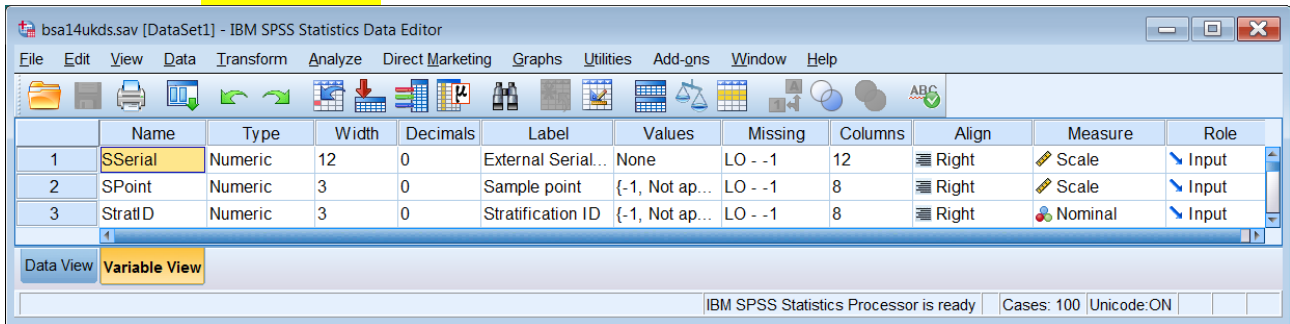In either view, scroll down to the end of the file and you will see that there are:

649 **variables** . .   . . and 2878 **cases**:
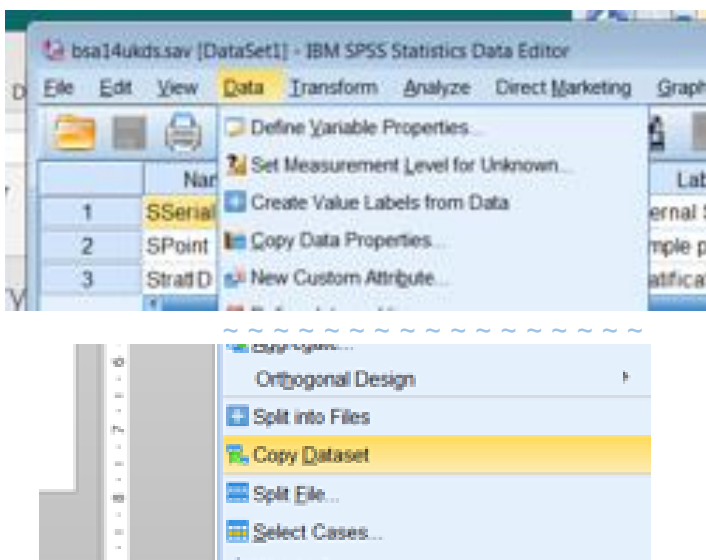
To make a copy of the data:
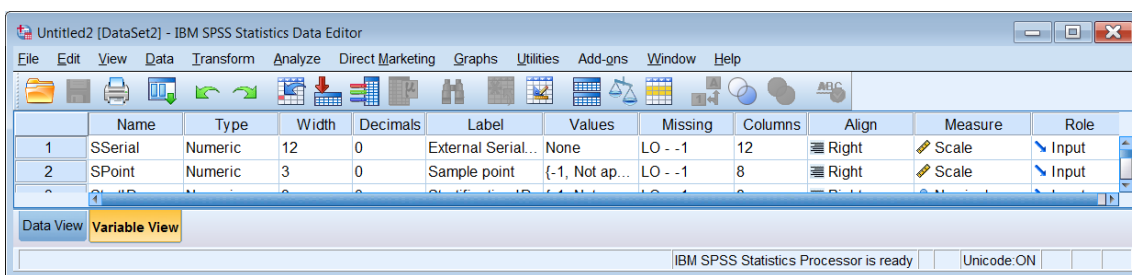
Data Editor in <mark>Variable View</mark>

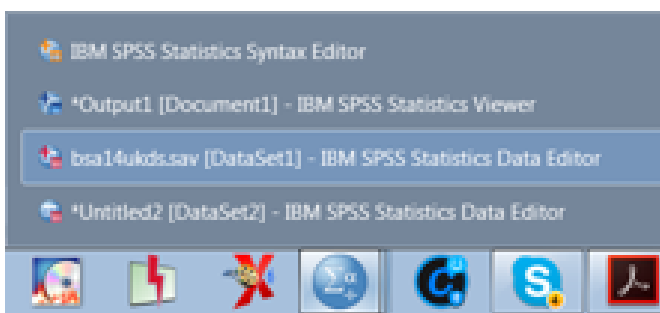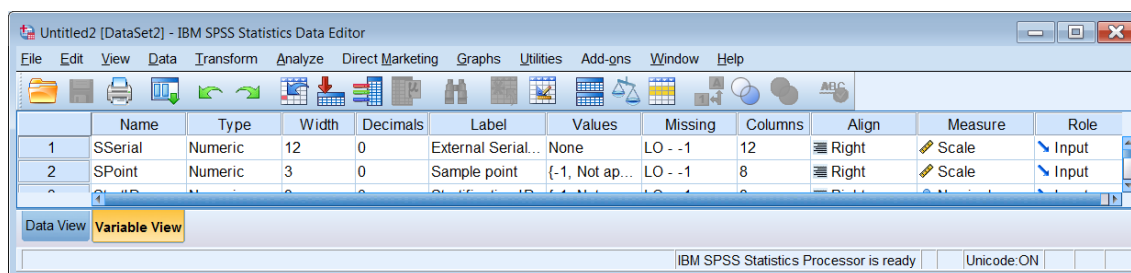
<mark>Data</mark> >> <mark>Copy Dataset</mark>

A copy of the **Data Editor** will be displayed as Untitled2 [Dataset 2]

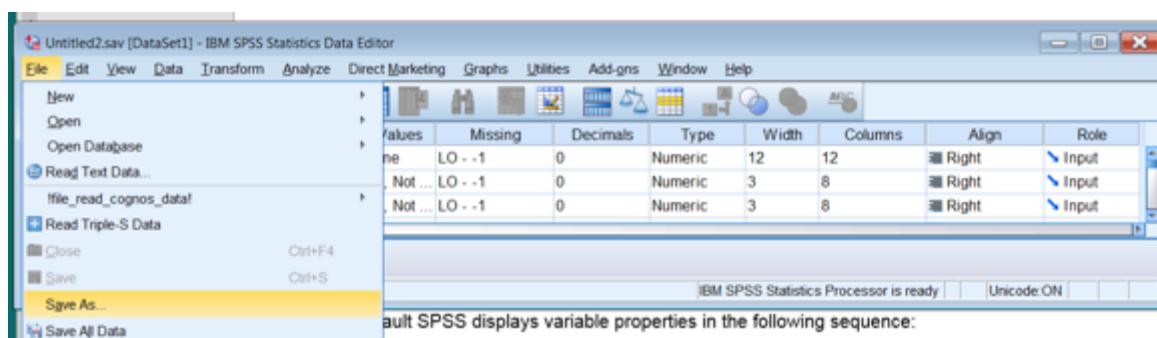. . and its icon will appear in the taskbar when clicking on

Switch to Untitled2
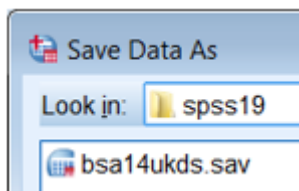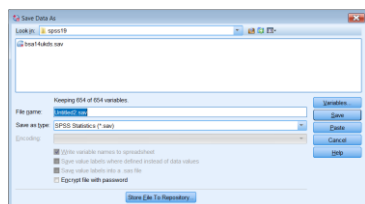

Change the name of the file to something memorable:

File >> Save As

. . to display: [Enlarged view of relevant parts]

Save Data As

Look in: spss19

bsa14ukds.sav

Keeping 654 of 654 variables.

File name: Untitled2.sav

Save as type: SPSS Statistics (*.sav)

We don't want to save the file there, so navigate to our working folder: in my case Desktop/data-Shortcut/data/research/surveys/ British Social Attitudes/ BSA32 (2014)

Save Data As

Look in: BSA32 (2014)

bsa14ukds.sav
Untitled2.sav

File name: Untitled2.sav
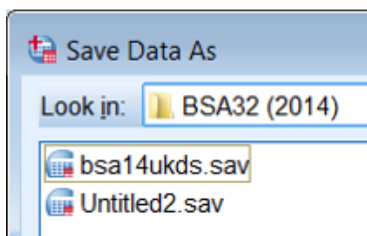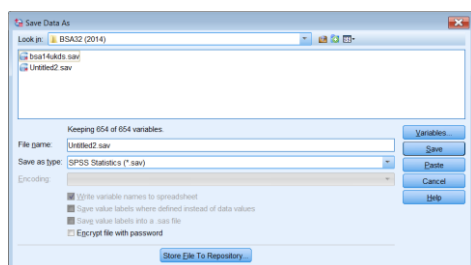
Change Untitled2 to a more memorable name:
[in my case bsa14 plus my initials jfh and an edition number 1 viz: **bsa14jfh1**]

File name: bsa14jfh1   and click on   Save
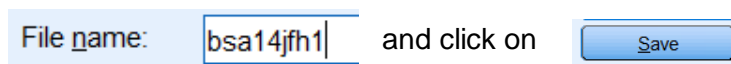
The working folder BSA32 (2014) now contains three *.sav files:
the initial download, the copy we made and the new file we shall
use for the following workthrough.

bsa14jfh1
bsa14ukds
Untitled2

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The new file should already be open:
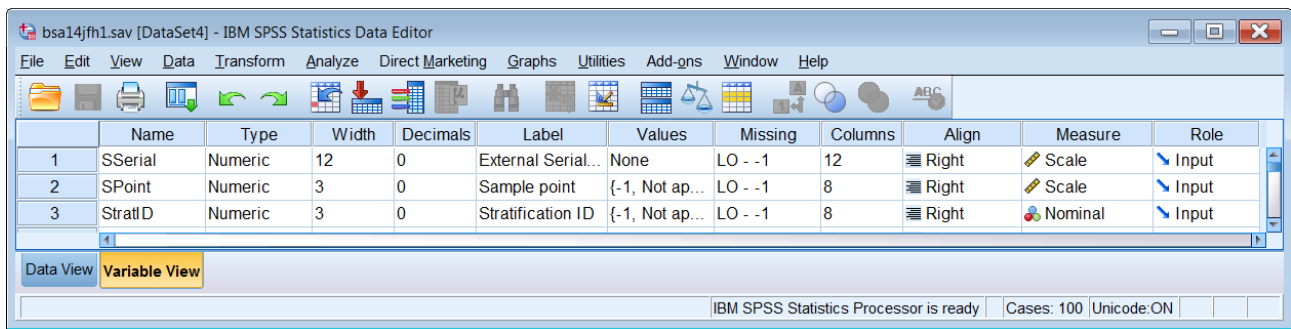
By default SPSS displays variable properties in the following sequence:

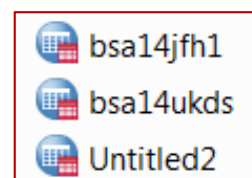| Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role

. .but I prefer to rearrange the sequence so that the more important (to me) properties are prioritised on the left in the following sequence:

Name Measure Label Values Missing Decimals   [the rest are of no immediate interest]

View >> Customize Variable View:
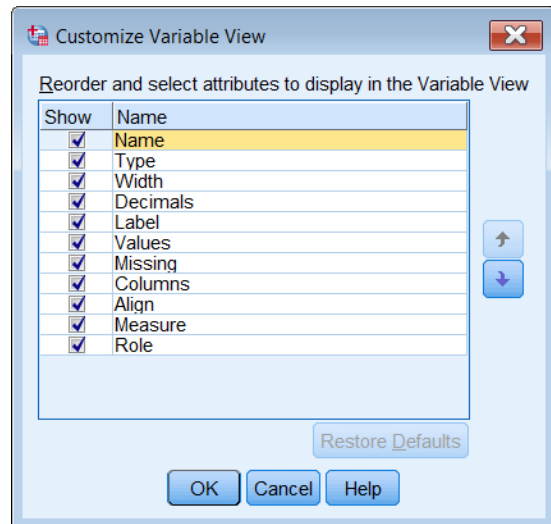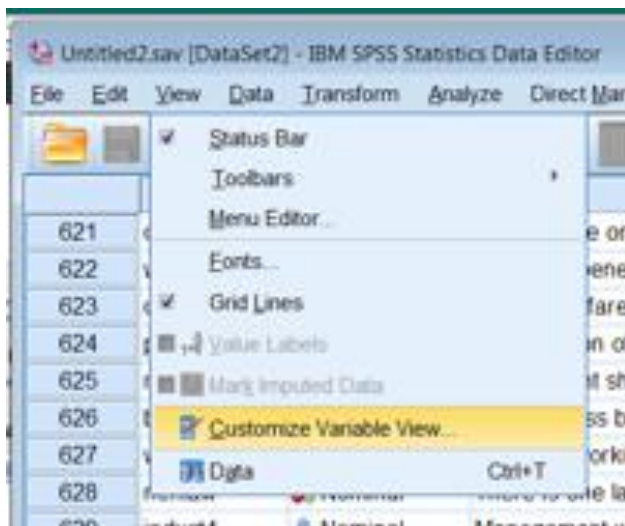
Use the blue arrows to move properties up or down the priority list:

. . and so on   . . . until ↓↓ then click OK:
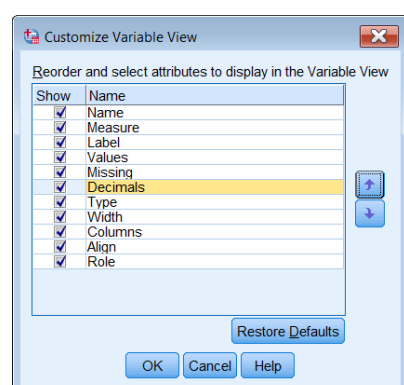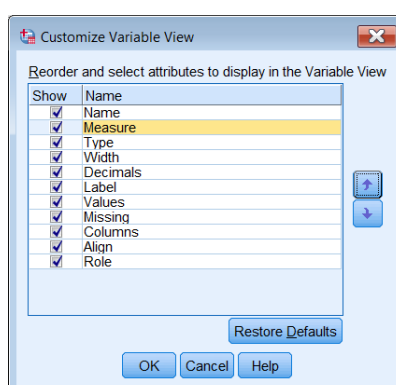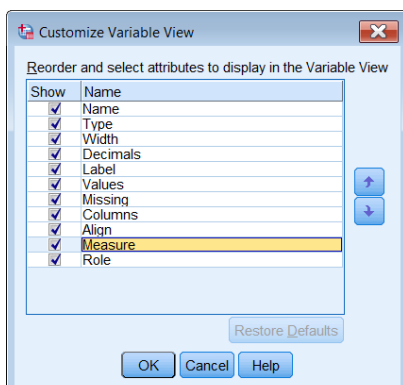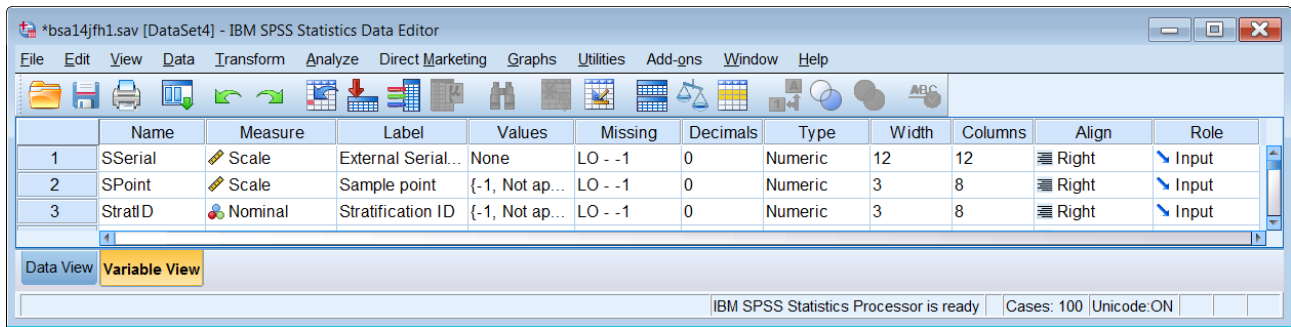
Drag the column margins out to see the contents of the **Label** and **Values** columns:
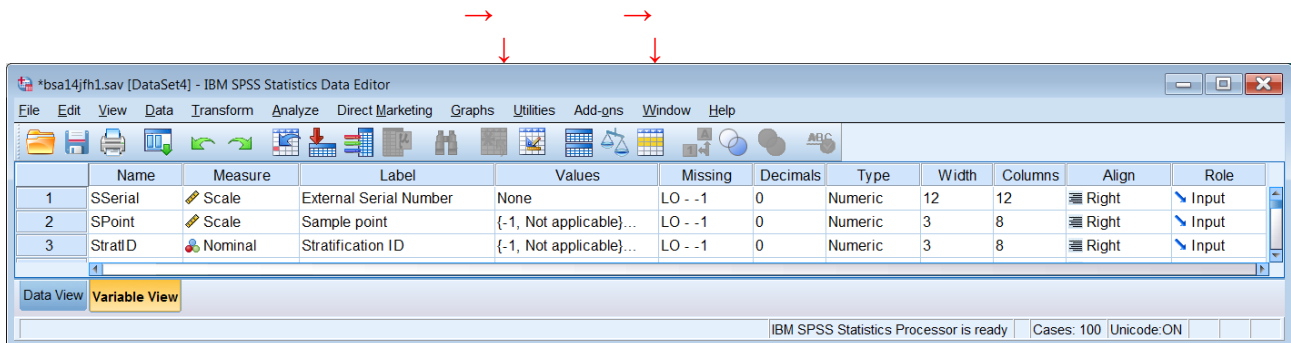
. . and drag the right edge in to hide the properties you don't need:
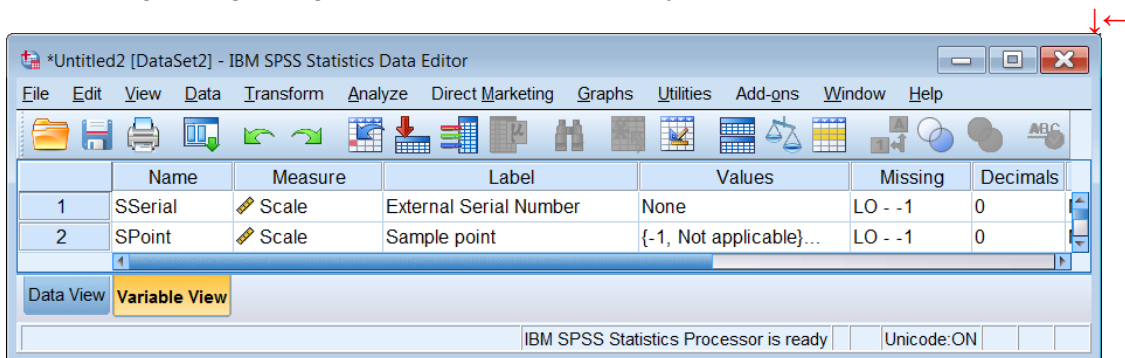
We don't really need **Decimals**, but it's handy to scroll down and see if there any superfluous decimal places for integer variables (which happens when you use **COMPUTE** and forget to follow it with a **FORMATS** command)

We are now ready to proceed.

Example 1: Welfare
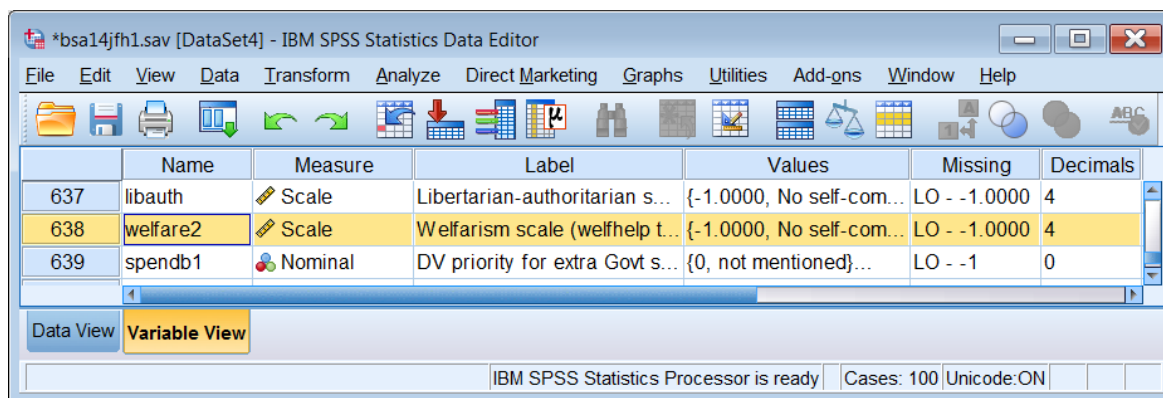
The file contains a variable **[welfare2]** labelled ***Welfarism scale (welfhelp to proudwlf) dv*** which is derived from eight items in Q.41 of the self-completion questionnaire.

 (See: **User Guide**: p20)

Self-completion questionnaire: Q.41 (a)-(h).
Anti-welfare: Items (a)(c)(d)(e)(f)
Pro-welfare: Items (b)(g)(h)

How the scale was derived

Responses for all items were coded:

1 = Agree strongly; **2** = Agree; **3** = Neither agree nor disagree; **4** = Disagree; **5** = Disagree strongly

[Extract from user guide]

The welfare state encourages people to stop helping each other. [WelfHelp] The government should spend more money on welfare benefits for the poor, even if it leads to higher taxes. [MoreWelf] Around here, most unemployed people could find a job if they really wanted one. [UnempJob] Many people who get social security don't really deserve any help. [SocHelp] Most people on the dole are fiddling in one way or another. [DoleFidl] If welfare benefits weren't so generous, people would learn to stand on their own two feet. [WelfFeet] Cutting welfare benefits would damage too many people's lives. [DamLives] The creation of the welfare state is one of Britain's proudest achievements. [ProudWlf] The indices for the three scales are formed by scoring the leftmost, most libertarian or most pro-welfare position, as 1 and the rightmost, most authoritarian or most antiwelfarist position, as 5. The "neither agree nor disagree" option is scored as 3. The scores to all the questions in each scale are added and then divided by the number of items in the scale, giving indices ranging from 1 (most prowelfare) to 5 (most anti-welfare).

Variable **[welfare2]** (line 638)

. . is derived from eight items (**Data Editor** lines 617 to 624)

The method of calculation is not given, but if I understand the explanation above, it seems to have been calculated by reversing the "pro-welfare" items (b) (g) (h), summing all 8 items (yielding a score in the range 5 - 40) and then dividing by the number of items (8) to yield an average score in in the range 1 – 5 (with 4 decimal places).

Let's take a look.

My SPSS settings always open a new syntax file on startup. If yours don't then:
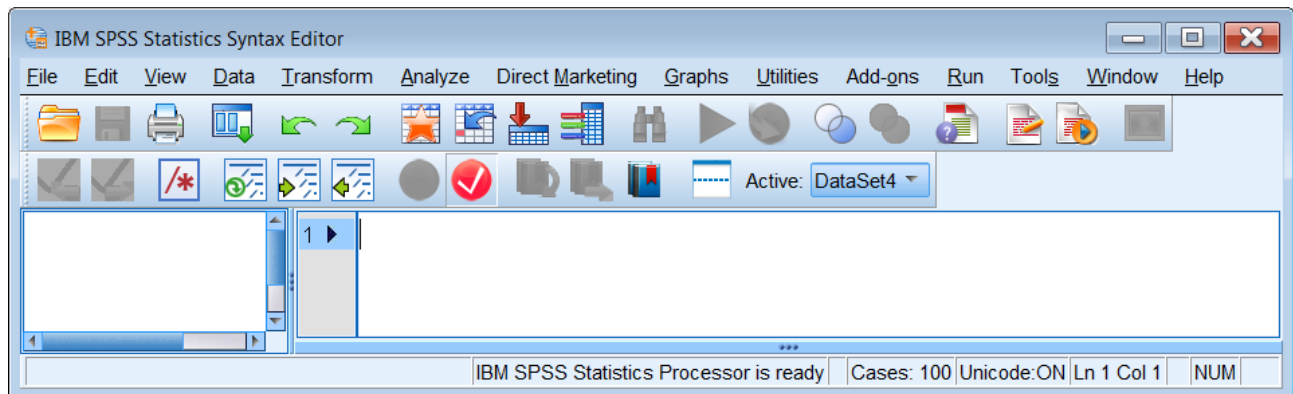
Users of my site should now be able to do the following without step-by-step text and screenshots.

frequencies welfare2 / his nor.
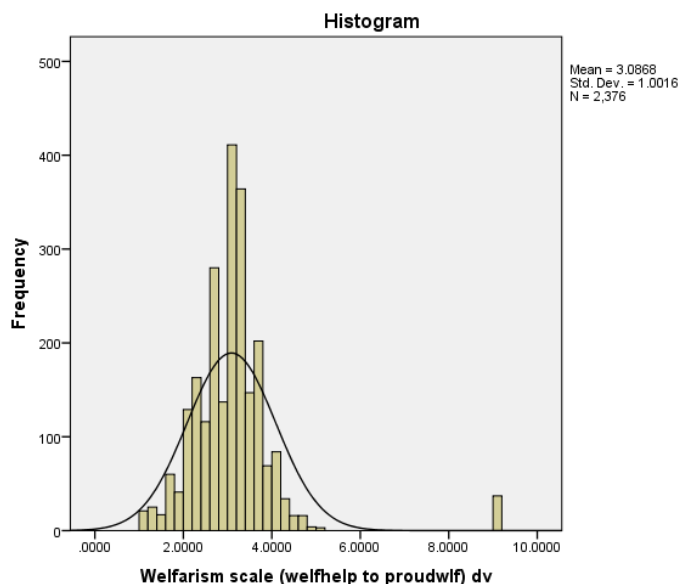
This can't be right. On a scale which should be in the range **1 – 5** there are cases with an average score of **9**.

freq welfare2.

reveals 37 cases with value **9**: they should have been omitted..

	5.0000 poor dont deserve	3
	9.0000 missing values	37
	Total	2376
Missing	System	502
Total		2878

Don't be misled by the value label: value **9** is not declared as missing.

The first time I ran the analysis I changed missing values for **[welfare2]** to **9**.

> **missing values** welfare2 (9).
> **frequencies** welfare2 /his nor.

Oops! Now value -1 is included instead!
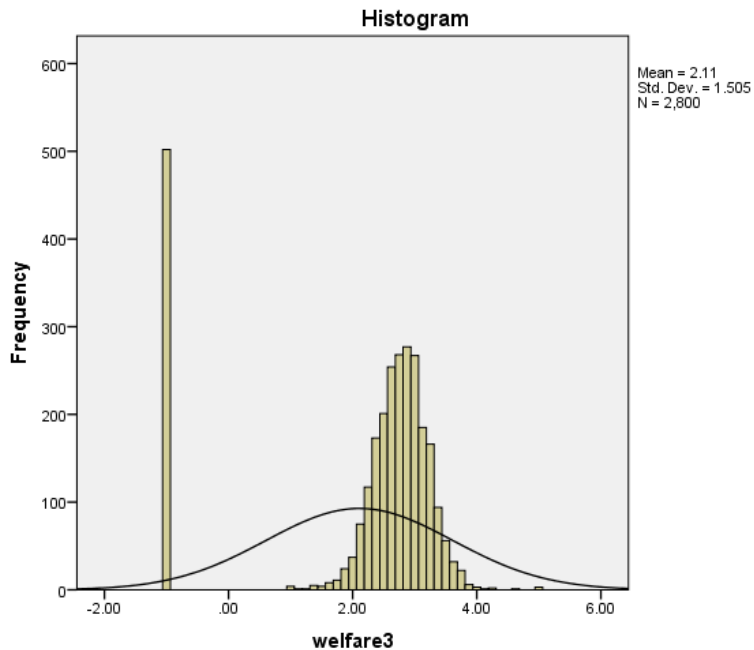
Value **9** is treated as missing, but now **-1** is not, because the **missing values** command over-rides the previous value(s).

	5.0000 poor dont deserve	3
	Total	2339
Missing	9.0000 missing values	37
	System	502
	Total	539
Total		2878

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Welfare2	2800	-1.00	5.00	2.1080	1.50486

That's what comes of working in a hurry and not properly checking the data first!
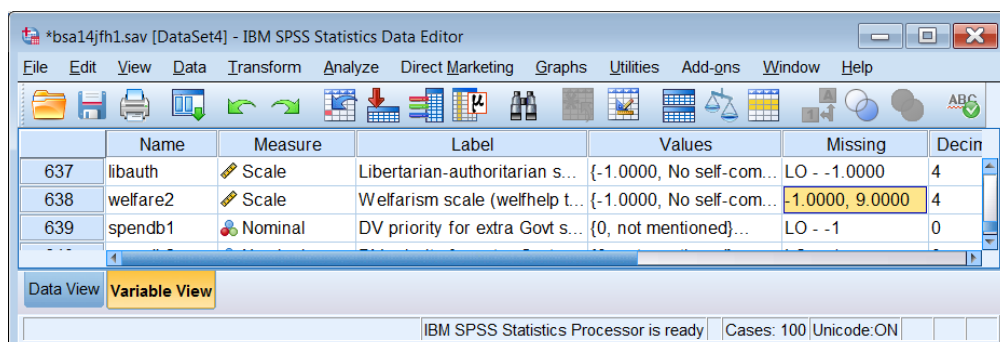
frequencies welfare2 /his nor.

. . now produces the correct chart:

Histogram

Mean = 2.9933
Std. Dev. = .6760
N = 2,339

Welfarism scale (welfhelp to proudwlf) dv
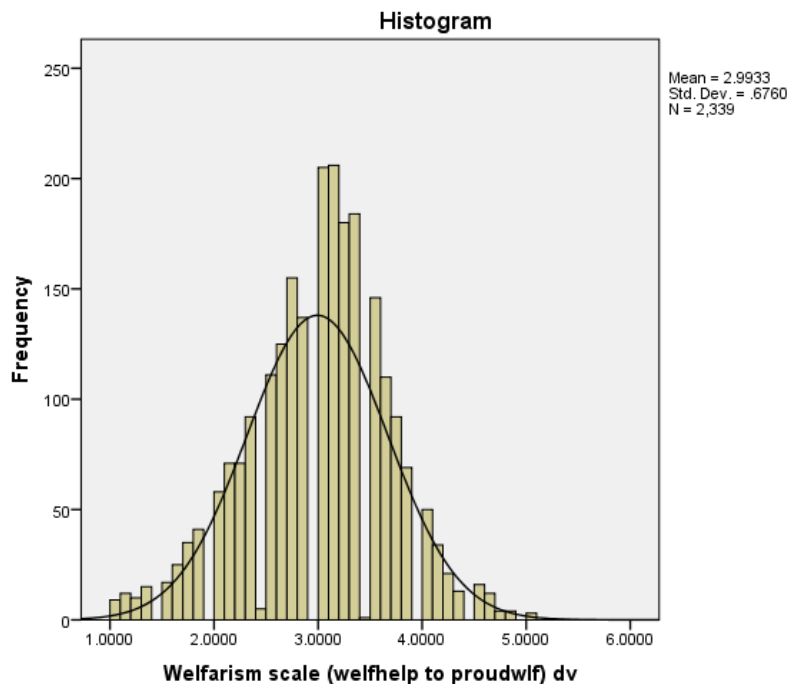
Nice example (but statistically naughty to treat 5 point ordinal measures as interval).
(the gaps are an artefact of the calculation)

Q: How did the original error happen?

A: Variable **[welfare2]** has been calculated to include the value **9** when it should have been declared as missing.

We can check this by looking at the range of values in component items (a) to (h):

```
desc welfhelp to proudwlf /sta min max
```

[**NB:** SPSS is case insensitive for variable names and operands]

Descriptive Statistics

	N	Min	Max
welfhelp The welfare state encourages people to stop helping each other	2376	1	**9**
morewelf The government should spend more money on welfare benefits for the poor, even if it leads to higher taxes	2376	1	**9**
unempjob Around here, most unemployed people could find a job if they really wanted one	2376	1	**9**
sochelp Many people who get social security don't really deserve any help:	2376	1	**9**
dolefidl Most people on the dole are fiddling in one way or another:	2376	1	**9**
welffeet If welfare benefits weren't so generous, people would learn to stand on their own two feet:	2376	1	**9**
damlives Cutting welfare benefits would damage too many people's lives:	2376	1	**9**
proudwlf The creation of the welfare state is one of Britain's proudest achievements	2376	1	**9**

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In the above table, value **9** should have been declared as missing, but appears as the maximum valid (non-missing) value for each variable. In the file **[welfare2]** has clearly been calculated to include the value **9**.

Inspection of the **Data Editor** shows that, for variables **[welfhelp]** to **[proudwlf]** the only values declared as missing are **Lo thru -1**.

Check the frequencies of the component items:

In the following tables, value **9** (Not answered) has been included as valid: **it should have been declared as missing**. Code **-1** was used for non-response (ie "questionnaire not returned") and is declared as missing, but code **9** for "Not answered" is not.

welfhelp The welfare state encourages people to stop helping each other: [S-C]ABC

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Agree strongly	88	3.1	3.7	3.7
	2 Agree	561	19.5	23.6	27.3
	3 Neither agree nor disagree	926	32.2	39.0	66.3
	4 Disagree	642	22.3	27.0	93.3
	5 Disagree strongly	115	4.0	4.8	98.1
	9 Not answered (9)	44	1.5	1.9	100.0
	Total	2376	82.6	100.0	
Missing	-1 skip, didn't return SC questionnaire	502	17.4		
Total		2878	100.0		

morewelf The government should spend more money on welfare benefits for the poor, even if it leads to higher taxes: [S-C]ABC

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Agree strongly	120	4.2	5.1	5.1
	2 Agree	626	21.8	26.3	31.4
	3 Neither agree nor disagree	709	24.6	29.8	61.2
	4 Disagree	745	25.9	31.4	92.6
	5 Disagree strongly	136	4.7	5.7	98.3
	9 Not answered (9)	40	1.4	1.7	100.0
	Total	2376	82.6	100.0	
Missing	-1 skip, didn't return SC questionnaire	502	17.4		
Total		2878	100.0		

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unempjob Around here, most unemployed people could find a job if they really wanted one: [S-C]ABC

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Agree strongly	312	10.8	13.1	13.1
	2 Agree	1049	36.4	44.1	57.3
	3 Neither agree nor disagree	463	16.1	19.5	76.8
	4 Disagree	438	15.2	18.4	95.2
	5 Disagree strongly	77	2.7	3.2	98.4
	9 Not answered (9)	37	1.3	1.6	100.0
	Total	2376	82.6	100.0	
Missing	-1 skip, didn't return SC questionnaire	502	17.4		
Total		2878	100.0		

sochelp Many people who get social security don't really deserve any help: [S-C]ABC

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Agree strongly	167	5.8	7.0	7.0
	2 Agree	609	21.2	25.6	32.7
	3 Neither agree nor disagree	801	27.8	33.7	66.4
	4 Disagree	622	21.6	26.2	92.6
	5 Disagree strongly	141	4.9	5.9	98.5
	9 Not answered (9)	36	1.3	1.5	100.0
	Total	2376	82.6	100.0	
Missing	-1 skip, didn't return SC questionnaire	502	17.4		
Total		2878	100.0		

dolefidl Most people on the dole are fiddling in one way or another: [S-C]ABC

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Agree strongly	193	6.7	8.1	8.1
	2 Agree	604	21.0	25.4	33.5
	3 Neither agree nor disagree	794	27.6	33.4	67.0
	4 Disagree	600	20.8	25.3	92.2
	5 Disagree strongly	141	4.9	5.9	98.1
	9 Not answered (9)	44	1.5	1.9	100.0
	Total	2376	82.6	100.0	
Missing	-1 skip, didn't return SC questionnaire	502	17.4		
Total		2878	100.0		

damlives Cutting welfare benefits would damage too many people's lives: [S-C]ABC

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Agree strongly	245	8.5	10.3	10.3
	2 Agree	871	30.3	36.7	47.0
	3 Neither agree nor disagree	749	26.0	31.5	78.5
	4 Disagree	427	14.8	18.0	96.5
	5 Disagree strongly	50	1.7	2.1	98.6
	9 Not answered (9)	34	1.2	1.4	100.0
	Total	2376	82.6	100.0	
Missing	-1 skip, didn't return SC questionnaire	502	17.4		
Total		2878	100.0		

proudwlf The creation of the welfare state is one of Britain's proudest achievements: [S-C]ABC

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Agree strongly	478	16.6	20.1	20.1
	2 Agree	851	29.6	35.8	55.9
	3 Neither agree nor disagree	670	23.3	28.2	84.1
	4 Disagree	267	9.3	11.2	95.4
	5 Disagree strongly	75	2.6	3.2	98.5
	9 Not answered (9)	35	1.2	1.5	100.0
	Total	2376	82.6	100.0	
Missing	-1 skip, didn't return SC questionnaire	502	17.4		
Total		2878	100.0		

Sharp-eyed users may also have spotted a further error: variables **[welfhelp]** to **[proudwlf]** are listed as Nominal when they are in fact Ordinal, but in calculating **[welfare2]** have in fact been treated as Scale.
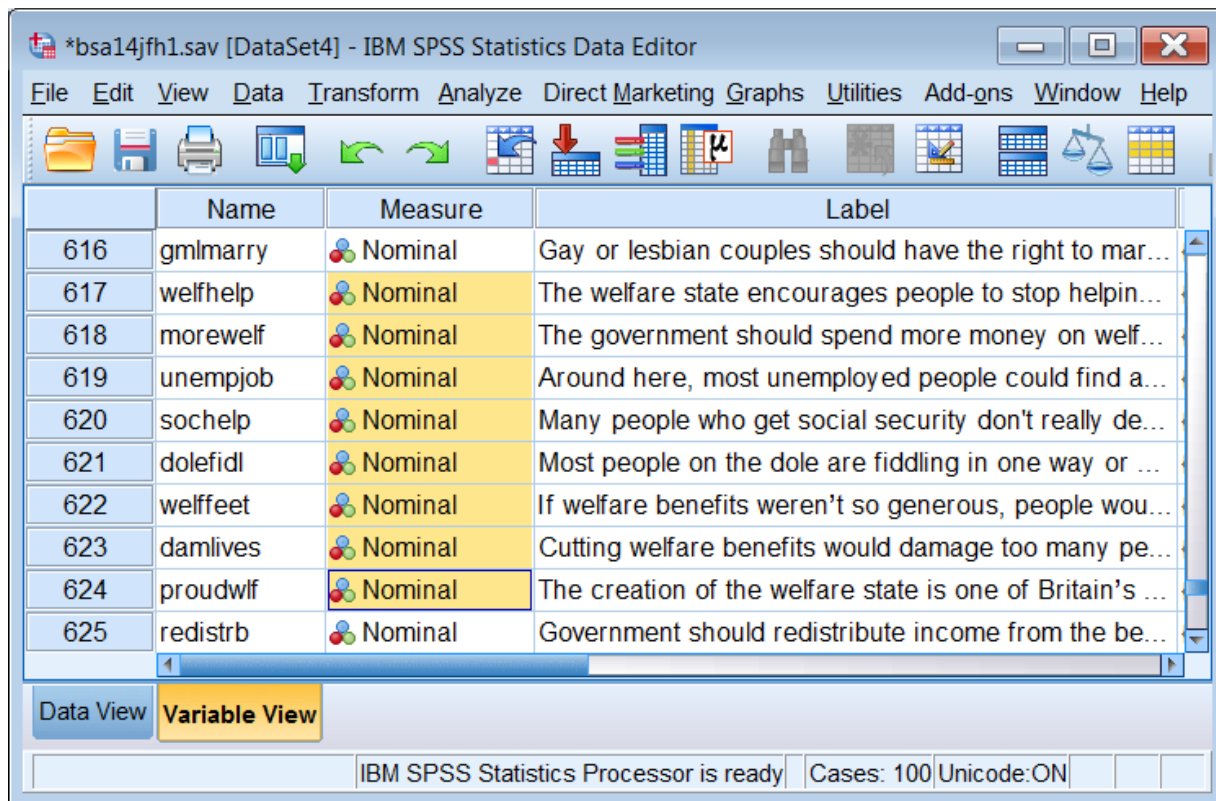
This easily rectified by:

       variable level welfhelp to proudwlf (ordinal).
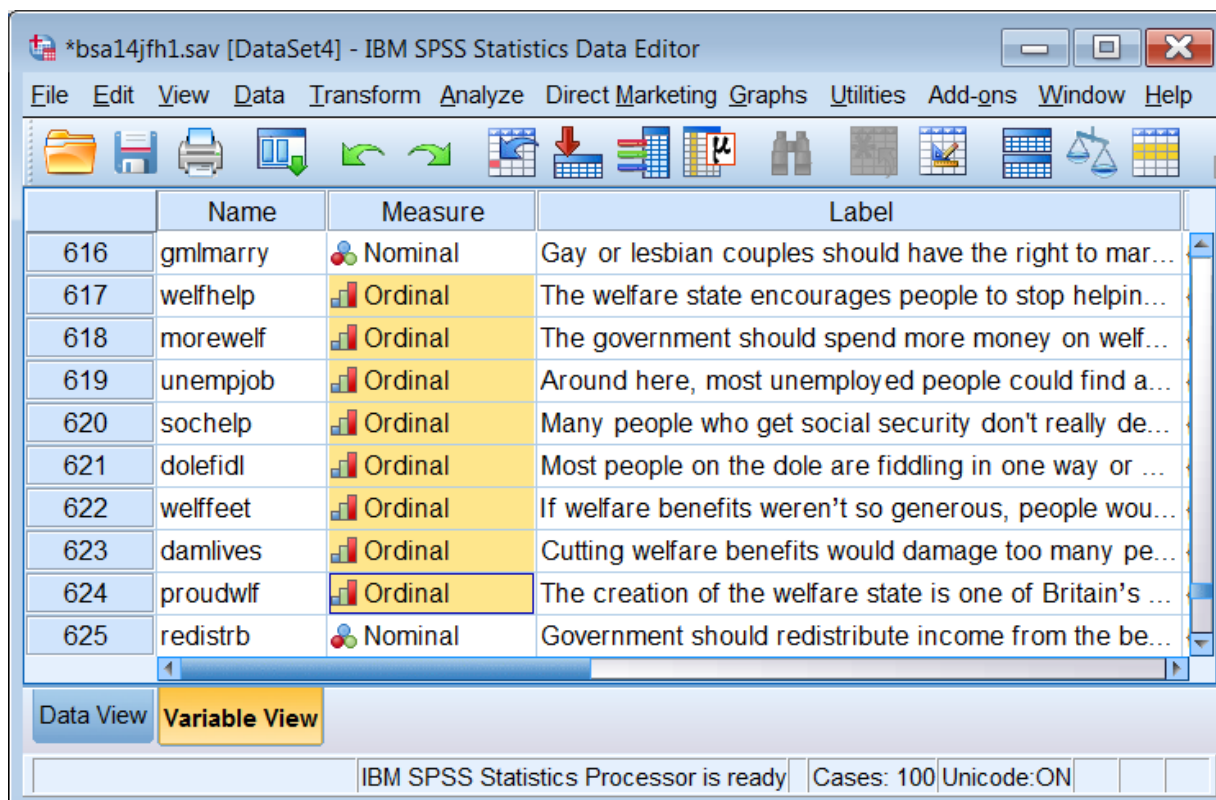
In the coding scheme for the whole survey, values **8**, **98**, **998** (Don't know) **9**, **99**, **999** (Not answered) are used throughout the data set, but in this file the only values declared as missing are for the range **Lo thru -1**. Consequently, any statistical calculations, including generation of attitude scales, will include these outlying values and will therefore be distorted. **This is serious** and needs to be rectified by immediately declaring correct missing values for all component items.

```
missing values welfhelp to proudwif (-1,9).
descriptives welfhelp to proudwif /sta min max.
```

This time the **minimum** and **maximum** valid values are within the correct range.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
welfhelp The welfare state encourages people to stop helping each other: [S-C]ABC	2332	1	5	3.06	.928
morewelf The government should spend more money on welfare benefits for the poor, even if it leads to higher taxes: [S-C]ABC	2336	1	5	3.06	1.011
unempjob Around here, most unemployed people could find a job if they really wanted one: [S-C]ABC	2339	1	5	2.54	1.043
sochelp Many people who get social security don't really deserve any help: [S-C]ABC	2340	1	5	2.98	1.026
dolefidl Most people on the dole are fiddling in one way or another: [S-C]ABC	2332	1	5	2.95	1.043
welffeet If welfare benefits weren't so generous, people would learn to stand on their own two feet: [S-C]ABC	2331	1	5	2.63	1.082
damlives Cutting welfare benefits would damage too many people's lives: [S-C]ABC	2342	1	5	2.64	.965
proudwlf The creation of the welfare state is one of Britain's proudest achievements: [S-C]ABC	2341	1	5	2.41	1.035
Valid N (listwise)	2298				

Tables of means of **[welfare2]** are consistent within the categories of the component items **[welfhelp]** to [**proudwlf]:** the gradients are all in the expected direction.

```
means welfare2 by welfhelp to proudwlf /cel mea cou.
```

welfare2 Welfarism scale (welfhelp to proudwlf) dv *
welfhelp The welfare state encourages people to stop
helping each other: [S-C]ABC

welfare2 Welfarism scale (welfhelp to proudwlf) dv

welfhelp The welfare state encourages people to stop helping each other: [S-C]ABC	Mean	N
1 Agree strongly	3.719359	88
2 Agree	3.377392	560
3 Neither agree nor disagree	3.044778	926
4 Disagree	2.637313	641
5 Disagree strongly	2.123277	114
Total	2.993307	2339

welfare2 Welfarism scale (welfhelp to proudwlf) dv *
morewelf The government should spend more money on
welfare benefits for the poor, even if it leads to higher
taxes: [S-C]ABC

welfare2 Welfarism scale (welfhelp to proudwlf) dv

morewelf The government should spend more money on welfare benefits for the poor, even if it leads to higher taxes: [S-C]ABC	Mean	N
1 Agree strongly	2.059424	119
2 Agree	2.624800	625
3 Neither agree nor disagree	2.964815	708
4 Disagree	3.326366	745
5 Disagree strongly	3.839815	135
Total	2.993307	2339

welfare2 Welfarism scale (welfhelp to proudwlf) dv *
unempjob Around here, most unemployed people could
find a job if they really wanted one: [S-C]ABC

welfare2 Welfarism scale (welfhelp to proudwlf) dv

unempjob Around here, most unemployed people could find a job if they really wanted one: [S-C]ABC	Mean	N
1 Agree strongly	3.708581	312
2 Agree	3.231665	1046
3 Neither agree nor disagree	2.791048	462
4 Disagree	2.337981	438
5 Disagree strongly	1.790584	77
Total	2.993307	2339

welfare2 Welfarism scale (welfhelp to proudwlf) dv *
sochelp Many people who get social security don't really
deserve any help: [S-C]ABC

welfare2 Welfarism scale (welfhelp to proudwlf) dv

sochelp Many people who get social security don't really deserve any help: [S-C]ABC	Mean	N
1 Agree strongly	3.960449	166
2 Agree	3.396235	608
3 Neither agree nor disagree	3.067316	799
4 Disagree	2.518403	622
5 Disagree strongly	1.791667	141
Total	2.993307	2339

welfare2 Welfarism scale (welfhelp to proudwlf) dv * dolefidl Most people on the dole are fiddling in one way or another: [S-C]ABC

welfare2 Welfarism scale (welfhelp to proudwlf) dv

dolefidl Most people on the dole are fiddling in one way or another: [S-C]ABC	Mean	N
1 Agree strongly	3.917129	193
2 Agree	3.400764	603
3 Neither agree nor disagree	3.007746	793
4 Disagree	2.553929	600
5 Disagree strongly	1.768237	141
Total	2.993307	2339

welfare2 Welfarism scale (welfhelp to proudwlf) dv * welffeet If welfare benefits weren't so generous, people would learn to stand on their own two feet: [S-C]ABC

welfare2 Welfarism scale (welfhelp to proudwlf) dv

welffeet If welfare benefits weren't so generous, people would learn to stand on their own two feet: [S-C]ABC	Mean	N
1 Agree strongly	3.895048	288
2 Agree	3.277767	955
3 Neither agree nor disagree	2.828758	536
4 Disagree	2.331579	424
5 Disagree strongly	1.728346	127
Total	2.993307	2339

welfare2 Welfarism scale (welfhelp to proudwlf) dv * proudwlf The creation of the welfare state is one of Britain's proudest achievements: [S-C]ABC

welfare2 Welfarism scale (welfhelp to proudwlf) dv

proudwlf The creation of the welfare state is one of Britain's proudest achievements: [S-C]ABC	Mean	N
1 Agree strongly	2.437838	476
2 Agree	2.922906	850
3 Neither agree nor disagree	3.164152	670
4 Disagree	3.525013	267
5 Disagree strongly	3.910473	74
Total	2.993307	2339

Despite the consistent gradients above, this prompts the question of how accurately **[welfare2]** has been calculated. Let us try to replicate it using the component variables.

[WelfHelp] *The welfare state encourages people to stop helping each other.*

[MoreWelf] *The government should spend more money on welfare benefits for the poor, even if it leads to higher taxes.*

[UnempJob] *Around here, most unemployed people could find a job if they really wanted one.*

[SocHelp] *Many people who get social security don't really deserve any help.*

[DoleFidl] *Most people on the dole are fiddling in one way or another*

[WelfFeet] *If welfare benefits weren't so generous, people would learn to stand on their own two feet.*

[DamLives] *Cutting welfare benefits would damage too many people's lives.*

[ProudWlf] *The creation of the welfare state is one of Britain's proudest achievements.*

A quick way of checking for negative and positive wording in the items is to run a correlation.

correlations welfhelp to proudwif.

The negatively worded items used in calculating (anti-)"welfarism" are marked in red in the table of correlations below. The correlations with the positively worded items are all negative.

z

		welfhelp The welfare state encourages people to stop helping each other: [S-C]ABC	morewelf The government should spend more money on welfare benefits for the poor, even if it leads to higher taxes: [S-C]ABC	unempjob Around here, most unemployed people could find a job if they really wanted one: [S-C]ABC	sochelp Many people who get social security don't really deserve any help: [S-C]ABC	dolefidl Most people on the dole are fiddling in one way or another: [S-C]ABC	welffeet If welfare benefits weren't so generous, people would learn to stand on their own two feet: [S-C]ABC	damlives Cutting welfare benefits would damage too many people's lives: [S-C]ABC	proudwlf The creation of the welfare state is one of Britain's proudest achievements: [S-C]ABC
welfhelp The welfare state encourages people to stop helping each other: [S-C]ABC	Pearson Correlation	1	-.151	.284	.311	.296	.377	-.235	-.204
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000
	N	2332	2324	2325	2328	2321	2320	2328	2330
morewelf The government should spend more money on welfare benefits for the poor, even if it leads to higher taxes: [S-C]ABC	Pearson Correlation	-.151	1	-.275	-.296	-.251	-.374	.423	.330
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000
	N	2324	2336	2329	2331	2324	2324	2332	2331
unempjob Around here, most unemployed people could find a job if they really wanted one: [S-C]ABC	Pearson Correlation	.284	-.275	1	.521	.523	.566	-.319	-.245
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000
	N	2325	2329	2339	2334	2326	2326	2335	2333
sochelp Many people who get social security don't really deserve any help: [S-C]ABC	Pearson Correlation	.311	-.296	.521	1	.618	.606	-.350	-.206
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000
	N	2328	2331	2334	2340	2327	2328	2335	2336
dolefidl Most people on the dole are fiddling in one way or another: [S-C]ABC	Pearson Correlation	.296	-.251	.523	.618	1	.649	-.317	-.223
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000
	N	2321	2324	2326	2327	2332	2322	2330	2329
welffeet If welfare benefits weren't so generous, people would learn to stand on their own two feet: [S-C]ABC	Pearson Correlation	.377	-.374	.566	.606	.649	1	-.484	-.247
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000
	N	2320	2324	2326	2328	2322	2331	2329	2328
damlives Cutting welfare benefits would damage too many people's lives: [S-C]ABC	Pearson Correlation	-.235	.423	-.319	-.350	-.317	-.484	1	.363
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		.000
	N	2328	2332	2335	2335	2330	2329	2342	2338
proudwlf The creation of the welfare state is one of Britain's proudest achievements: [S-C]ABC	Pearson Correlation	-.204	.330	-.245	-.206	-.223	-.247	.363	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	
	N	2330	2331	2333	2336	2329	2328	2338	2341

The items all have the same coding scheme (**1** = **Agree strongly** . . .**5** = **Disagree strongly**) so you cannot simply add them all up as the positive items will run counter to the negative items.

Anti-welfare: Items (a)(c)(d)(e)(f)
Pro-welfare: Items (b)(g)(h)

To replicate the score for "anti-welfarism" **[welfare2]** as described on page 5 above, it is necessary to reverse the codes for the pro-welfare items. One way of doing this is to recode the values 1 – 5 to 5 – 1 either in the same variables or into new variables: another is to re-compute each one as (6 – value). Either way value labels would need to be changed. Both of these methods mean changing the values in the Data Editor, with a consequent risk of them becoming permanent. An alternative method is to compute two intermediate indices, one for the negative items and one for the positive items.

```
compute antiwelf = welfhelp+ unempjob+ sochelp+dolefidl+  welffeet.
compute prowelf= morewelf +damlives+ proudwlf.
descriptives antiwelf prowelf /sta mea min max.
frequencies antiwelf prowelf/ for not /his nor.
```

Descriptive Statistics

	N	Minimum	Maximum	Mean
antiwelf	2306	5.00	25.00	14.1787
prowelf	2329	3.00	15.00	8.1172
Valid N (listwise)	2298			
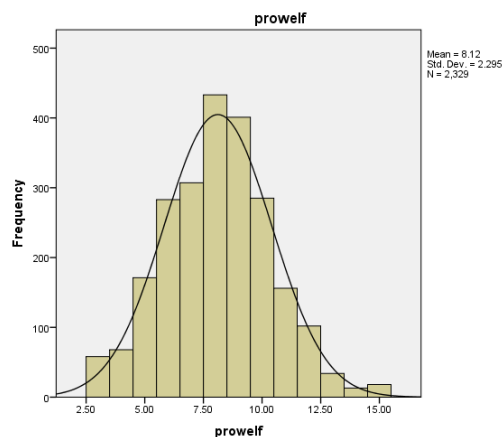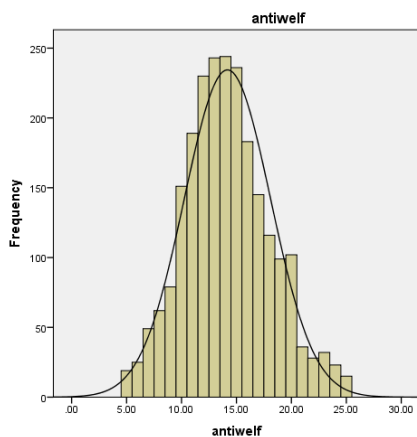
The easiest way to reverse the values for **[prowelf]** is:

```
compute revprowelf = 16-prowelf.
```

The new variables are appended to the file:

650	antiwelf	Scale
651	prowelf	Nominal
652	revprowelf	Scale

One of the peculiarities of SPSS is that it assigns measurement levels according to the number of values encountered> [prowelf] is listed as Nominal but should be Scale

```
variable level prowelf (scale).
```

650	antiwelf	Scale
651	prowelf	Scale
652	revprowelf	Scale

Here's the whole set of SPSS syntax:

```
compute antiwelf = welfhelp+ unempjob+ sochelp+dolefidl+  welffeet.
compute prowelf= morewelf +damlives+ proudwlf.
variable level prowelf (scale).
descriptives antiwelf prowelf /sta mea min max.
frequencies antiwelf prowelf/ for not /his nor.
compute revprowelf = 16-prowelf.
descriptives revprowelf /sta mea min max.
frequencies revprowelf  /his nor /mis inc.
compute antiwelf2= antiwelf + revprowelf.
descriptives antiwelf2  /sta mea min max.
frequencies antiwelf2 / for not /his nor.
```

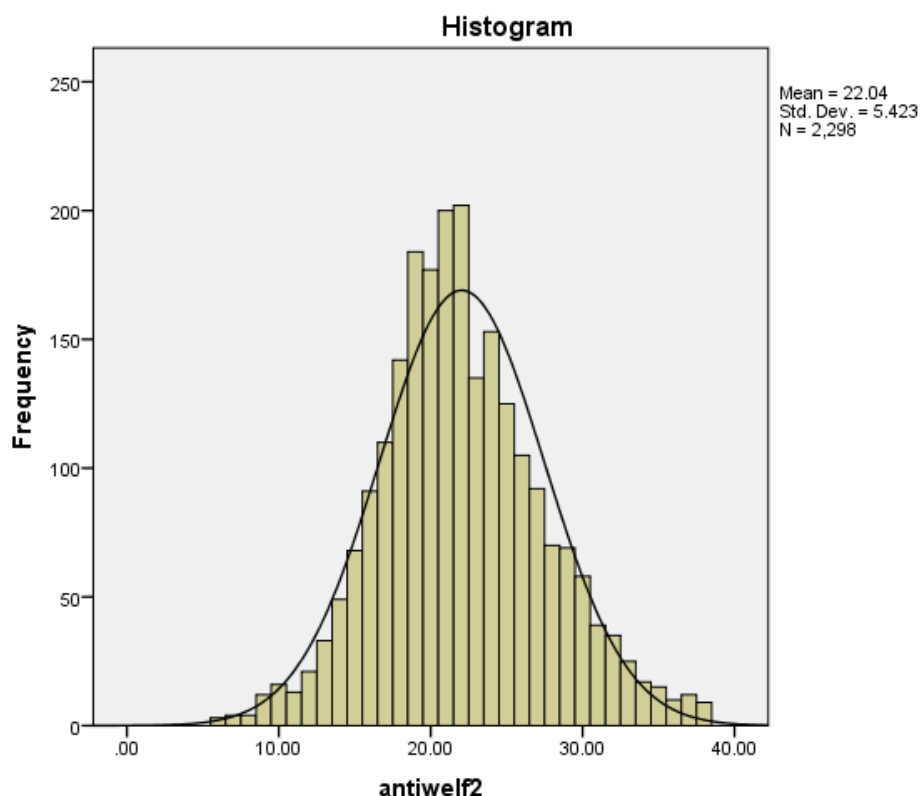The two intermediate indices can now be added together:

```
compute antiwelf2= antiwelf + revprowelf.
descriptives antiwelf2  /sta mea min max.
frequencies antiwelf2 / for not /his nor.
```

Descriptive Statistics

	N	Minimum	Maximum	Mean
antiwelf2	2298	6.00	38.00	22.0444
Valid N (listwise)	2298			

Histogram

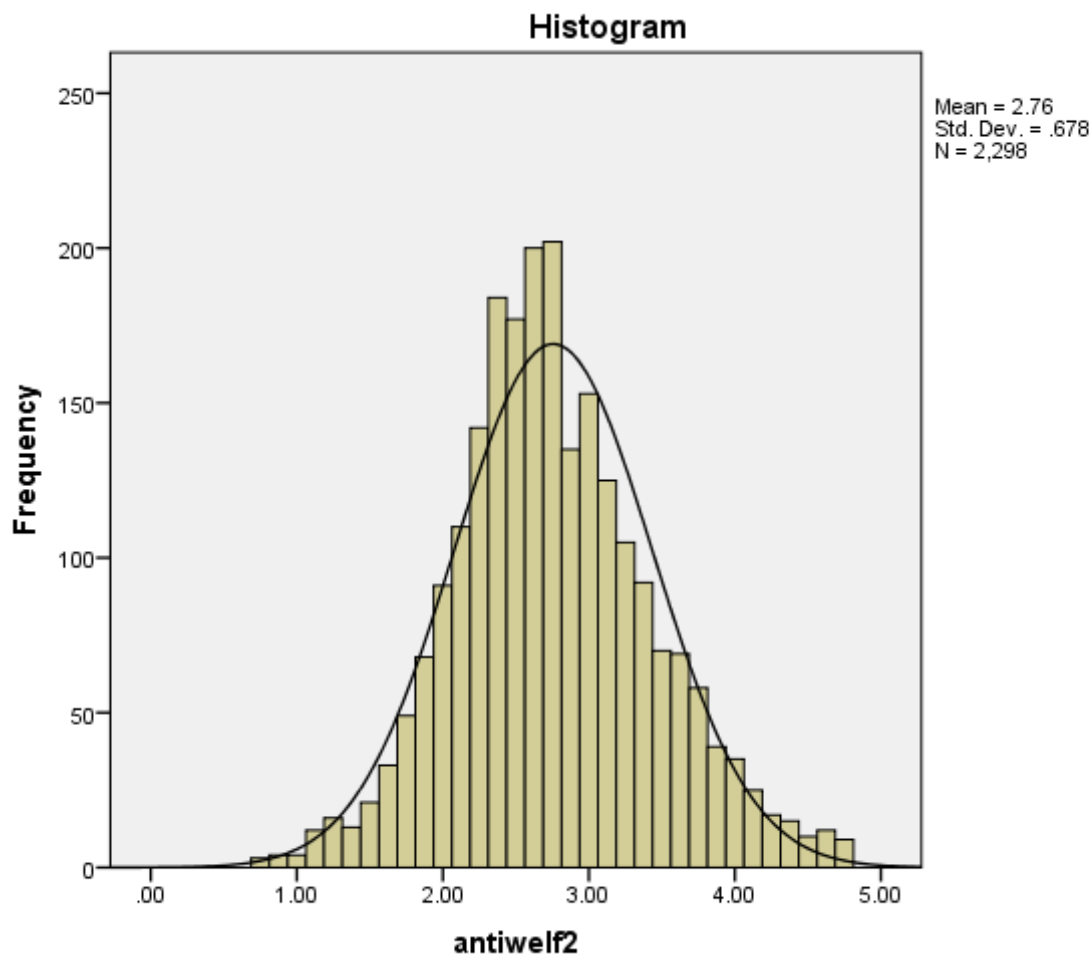Mean = 22.04
Std. Dev. = 5.423
N = 2,298

The scores are in the correct range of **8** to **40**: a quick check is to correlate **[welfare2]** with **[antiwelf2]**

correlations welfare2 with antiwelf2.

Correlations

		welfare2 Welfarism scale (welfhelp to proudwlf) dv	antiwelf2
welfare2 Welfarism scale (welfhelp to proudwlf) dv	Pearson Correlation	1	-1.000
	Sig. (2-tailed)		.000
	N	2339	2298
antiwelf2	Pearson Correlation	-1.000	1
	Sig. (2-tailed)	.000	
	N	2298	2298

This is perfect positive correlation. It remains only to convert the raw scores to an average in the range **1 – 5**.

compute antiwelf2 = antiwelf2 / 8.
frequencies antiwelf2 / for not /his nor.

Histogram

Mean = 2.76
Std. Dev. = .678
N = 2,298

Et voilà!