

SPSS files for British Social Attitudes 32 (2011): a cautionary tale for the unwary

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Abstract

Data for the British Social Attitudes Survey (BSAS) are deposited with, and distributed by, the UK Data Service (UKDS). The SPSS file for the [British Social Attitudes Survey, 2011](#)¹ (SN 7237) is examined. Items used to construct attitude scales are found to have incomplete specification of missing values. Consequently any indices constructed from them have all been wrongly calculated.

Wave 32² (2011) of the BSAS carries several batteries of questions purporting to measure social and political attitudes. Three³ of these are:

Scale	Items	Name
Welfarism scale ⁴ (actually Anti -welfarism)	8 items	welfare2
Left-right scale	5 items	leftrigh
Libertarian- authoritarian scale	6 items	libauth

(see [User Guide for 2011 \(revised 2014\)](#) pp 19-21)

In the SPSS saved file for this survey, the constituent items for the above scales do not have missing values fully declared. Consequently the three indices constructed from them have all been wrongly calculated and have values outside the correct range.

The constituent items and the derived scales are examined and recalculated to give the correct scores. Improved SPSS syntax is suggested and the results compared with the distributed file.

The technical comments in this note apply equally to SPSS files for other waves listed in [British Social Attitudes Survey](#), the UKDS Catalogue for the series.

¹ NatCen Social Research. (2014). *British Social Attitudes Survey, 2011*. [data collection]. 2nd Edition. UK Data Service. SN: 7237, <http://doi.org/10.5255/UKDA-SN-7237-2>

² See Natcen site [British Social Attitudes 32](#) for 2011 contents.

³ This example uses wave 32 (2011). The questions are in this order in the questionnaire, but in the SPSS file the sequence of scales is **leftrigh**, **libauth** and **welfare2**. The wording in items used for **leftrigh** and **libauth** are all loaded towards “right-wing” and “authoritarian”: wording in items for “**welfare2**” have mixed loadings, but the values for positively worded items in the SPSS file have been modified to indicate high anti-welfare attitudes. This could be confusing.

⁴ See: Taylor E and Taylor-Gooby P [Benefits and Welfare: Long-term trends or short-term reactions?](#)

Welfarism scale

Self-completion questionnaire A: Q.47 (a) – (h)

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Q47 Please tick one box for each statement to show how much you agree or disagree with it.

PLEASE TICK ONE BOX ON EACH LINE		Agree strongly	Agree	Neither agree nor disagree	Disagree	Disagree strongly	
a.	The welfare state encourages people to stop helping each other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1907
b.	The government should spend more money on welfare benefits for the poor, even if it leads to higher taxes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1908
c.	Around here, most unemployed people could find a job if they really wanted one	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1909
d.	Many people who get social security don't really deserve any help	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1910
e.	Most people on the dole are fiddling in one way or another	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1911
f.	If welfare benefits weren't so generous, people would learn to stand on their own two feet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1912
g.	Cutting welfare benefits would damage too many people's lives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1913
h.	The creation of the welfare state is one of Britain's proudest achievements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1914
		1	2	3	4	5	

[NB: The pdf file for the questionnaire displays, for each item, the associated SPSS variable names]

Left-right scale

Self-completion questionnaire A: Q.48 (a) – (e)

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Q48 Please tick one box for each statement to show how much you agree or disagree with it.

PLEASE TICK **ONE** BOX
ON EACH LINE

	Agree strongly	Agree	Neither agree nor disagree	Disagree	Disagree strongly	
a. Government should redistribute income from the better-off to those who are less well off	<input type="checkbox"/>	<input checked="" type="checkbox"/> Redistrb	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1915
b. Big business benefits owners at the expense of workers	<input type="checkbox"/>	<input checked="" type="checkbox"/> BigBusnN	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1916
c. Ordinary working people do not get their fair share of the nation's wealth	<input type="checkbox"/>	<input checked="" type="checkbox"/> Wealth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1917
d. There is one law for the rich and one for the poor	<input type="checkbox"/>	<input checked="" type="checkbox"/> RichLaw	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1918
e. Management will always try to get the better of employees if it gets the chance	<input type="checkbox"/>	<input checked="" type="checkbox"/> Indust4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1919
	1	2	3	4	5	

Libertarian- authoritarian scale

Self-completion questionnaire A: Q.49 (a) – (f)

Q49 Please tick one box for each statement to show how much you agree or disagree with it.

PLEASE TICK **ONE** BOX
ON EACH LINE

	Agree strongly	Agree	Neither agree nor disagree	Disagree	Disagree strongly	
a. Young people today don't have enough respect for traditional British values	<input type="checkbox"/>	<input checked="" type="checkbox"/> TradVals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1921
b. People who break the law should be given stiffer sentences	<input type="checkbox"/>	<input checked="" type="checkbox"/> StifSent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1922
c. For some crimes, the death penalty is the most appropriate sentence	<input type="checkbox"/>	<input checked="" type="checkbox"/> DeathApp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1923
d. Schools should teach children to obey authority	<input type="checkbox"/>	<input checked="" type="checkbox"/> Obey	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1924
e. The law should always be obeyed, even if a particular law is wrong	<input type="checkbox"/>	<input checked="" type="checkbox"/> WrongLaw	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1925
f. Censorship of films and magazines is necessary to uphold moral standards	<input type="checkbox"/>	<input checked="" type="checkbox"/> Censor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1926
	1	2	3	4	5	

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For each item in the above questions, **-1** (Skip: not returned) has been declared as a **missing value**.

Name	Type	Width	Decimals	Label	Values	Missing
WelfHelp	Numeric	2	0	The welfar...	{-1, 'No sel...	-1

The coding for the **Agree-Disagree** items is:

```
-1 = "No self-completion"
1 = "Agree strongly"
2 = "Agree"
3 = "Neither agree nor disagree"
4 = "Disagree"
5 = "Disagree strongly"
9 = "Not answered (9)"
```

Value **9** = "Not answered" **has not been declared as missing**.

Name	Type	Width	Decimals	Label	Values	Missing
leftrigh	Numeric	6	4	Left-right s...	{-1.0000, N...	-1.0000
libauth	Numeric	6	4	Libertarian...	{-1.0000, N...	-1.0000
welfare2	Numeric	6	4	Welfarism ...	{-1.0000, N...	-1.0000

This drastically affects the number of cases processed during statistical analysis and also any statistics produced. When calculating indices based on items contained in these batteries, the missing value **9** needs to be taken into account, otherwise it will be treated as a **valid value**, as illustrated in the following tables

N of cases

File as received

Statistics			
	DamLives	MoreWelf	SocHelp
N Valid	1896	1893	1898
Missing	322	325	320

File as modified

Statistics			
	DamLives	MoreWelf	SocHelp
N Valid	2845	2845	2845
Missing	466	466	466

Means

File as received

Report			
	leftrigh	libauth	welfare2
Mean	2.63	3.76	3.07
N	1902	1907	1900

File as modified

Report			
	leftrigh	libauth	welfare2
Mean	2.68	3.84	3.17
N	2845	2845	2845

Cumulative mother file (2011 only)⁵

Statistics			
	damlives:	morewelf	sochelp
N Valid	2792	2789	2795
Missing	519	522	516

Cumulative mother file (2011 only)

Report			
	leftrigh	libauth	welfare2
Mean	2.58	3.78	3.07
N	2799	2813	2798

For comparison: All years 1983 to 2014

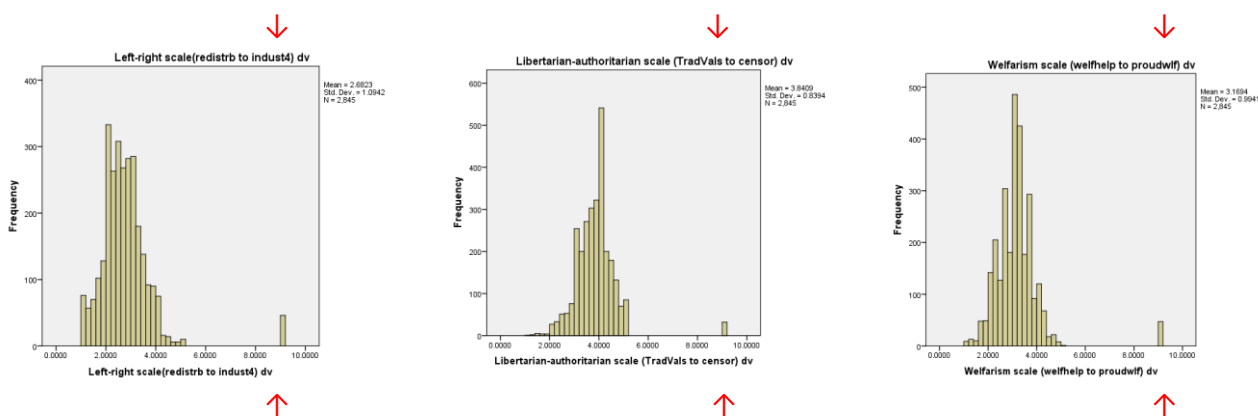
Report			
	leftrigh	libauth	welfare2
Mean	2.54	3.73	3.02
N	56496	51868	34294

The three derived variables:

leftrigh "Left-right scale"
libauth "Libertarian-authoritarian scale"
welfare2 "Welfarism scale"

. . were calculated by adding together the valid values of all items in the associated question and then dividing by the number of items, to yield an average score in the range 1 – 5. For **welfare2** the scores on the three positively worded items need to be reversed.

Because value **9** has not been declared as missing, all three derived variables include the value **9** (clearly visible as outliers in the charts below) when scores should only be between **1** and **5**.



Descriptive Statistics

		N	Minimum	Maximum	Mean
leftrigh	Left-right scale	2376	1.0000	9.0000	2.62
Libauth	Libertarian-authoritarian scale	2376	1.0000	9.0000	3.69
welfare2	Welfarism scale	2376	1.0000	9.0000	3.09

⁵ These figures are from the cumulative SPSS "mother" file for years 1983 to 2014 in which further adjustments

have been made. See: [British Social Attitudes 1983 to 2014: Cumulative SPSS file](#)

The value labels in the SPSS file are:

leftrigh

-1.0000 = "No self-completion"
1.0000 = "left"
5.0000 = "right"
9.0000 = "Missing values"

Libauth

-1.0000 = "No self-completion"
1.0000 = "libertarian"
5.0000 = "authoritarian"
9.0000 = "Missing values"

welfare2

-1.0000 = "No self-completion"
1.0000 = "sympathetic"
5.0000 = "poor dont deserve"
9.0000 = "missing values"

The only value declared as missing is **-1**:

Name	Type	Width	Decimals	Label	Values	Missing
leftrigh	Numeric	6	0	Left-right s...	{-1, No self...	-1
libauth	Numeric	6	0	Libertarian...	{-1, No self...	-1
welfare2	Numeric	6	0	Welfarism ...	{-1, No self...	-1

One solution is to declare **9** as a missing value, in addition to **-1**:

missing values leftrigh to welfare2 (-1, 9) .

Name	Type	Width	Decimals	Label	Values	Missing
leftrigh	Numeric	6	0	Left-right s...	{-1, No self...	-1, 9
libauth	Numeric	6	0	Libertarian...	{-1, No self...	-1, 9
welfare2	Numeric	6	0	Welfarism ...	{-1, No self...	-1, 9
CasesCom...	Numeric	1	0	Case By C...	{-1, Unmat...	None

Another solution, which can be applied across all variables in the file, and can also be used in other SPSS files, is to recode all positive missing values to negative and declare them as (**lo thru -1**) **before** calculating the scale scores.

missing values welfhelp to censor (-1, 9) .

Name	Type	Width	Decimals	Label	Values	Missing
WelfHelp	Numeric	2	0	The welfare...	{-1, No self...	-9 - -1

This convention allows many more user-missing values than the SPSS limit of three discrete values.

recode leftrigh to welfare2 (9=-9) .

missing values leftrigh to welfare2 (-9 thru -1) .

add value labels leftrigh to welfare2 -9 "Missing values" .⁶

Name	Type	Width	Decimals	Label	Values	Missing
leftrigh	Numeric	4	2	Left-right s...	{-1.00, No ...	-9.00 - -1.00
libauth	Numeric	4	2	Libertarian-...	{-1.00, No ...	-9.00 - -1.00
welfare2	Numeric	4	2	Welfarism ...	{-1.00, No ...	-9.00 - -1.00

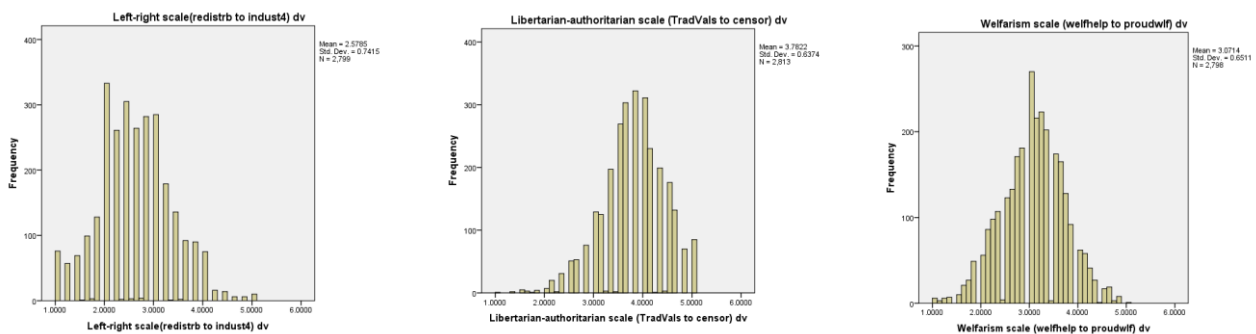
It also leaves a spare missing value, for example (**lo thru -1, 99**).

⁶ **add value labels** is needed here; **value labels** would over-write the existing labels.

When missing value **9** is taken into account the values are in the correct range between **1** and **5**:

	N	Min	Max	Mean
libauth Libertarian-authoritarian scale (TradVals to censor) dv	2813	1.0000	5.0000	3.782202
leftrigh Left-right scale(redistrb to indust4) dv	2799	1.0000	5.0000	2.578480
welfare2 Welfarism scale (welfhelp to proudwlf) dv	2798	1.0000	5.0000	3.071413

However, because of the resultant fractional values between **1** and **5**, the histograms are interspersed with sparsely populated bins:



An alternative to using the original 1 – 5 scores would be to use z-scores: that would still leave bins containing fractions, but the z-scores could be used to decide cutting points to group the scores into categories.

Neater histograms can be produced if the scores are left as integer totals, then adjusted to yield a true zero point (by subtracting the number of items in the scale).

***Reset missing values for all items in three batteries.**

recode welfhelp to censor (9=-9).

missing values welfhelp to censor (-1,-9) .

***Reverse code pro-welfare items by subtracting from 6, creating new variables with **r_** prefix.**

do repeat

 x = morewelf damlives proudwlf

 /y = **r_**morewelf **r_**damlives **r_**proudwlf.

compute y = 6 - x.

end repeat.

formats r_morewelf r_damlives r_proudwlf (f2.0) .

variable level r_morewelf r_damlives r_proudwlf (**ordinal**) .

variable labels

 r_morewelf 'Reverse scored morewelf'

 /r_damlives 'Reverse scored damlives'

 /r_proudwlf 'Reverse scored proudwlf'.

value labels

 r_morewelf r_damlives r_proudwlf

 1 'Disagree strongly' 2 'Disagree '

 3 'Neither agree nor disagree' 4 'Agree' 5 'Agree strongly'

 -1 'No self-completion form' -9 'Missing'.

*Recalculate derived variables to give score with true zero.

compute xleftrigh = **sum**.5
(redistrb,bigbusnn,wealth,richlaw,indust4) -5.

compute xlibauth = **sum**.6
(tradvals,stifsent,deathapp,obey,wronglaw,censor) - 6.

compute xwelfare2= **sum**.8
(welfhelp,r_morewelf,unempjob,sochelp,dolefidl,welffeet,r_damlives,r_proudwlif) -8.

formats xleftrigh **to** xwelfare2 (f3.0).

variable level xleftrigh **to** xwelfare2 (**scale**).

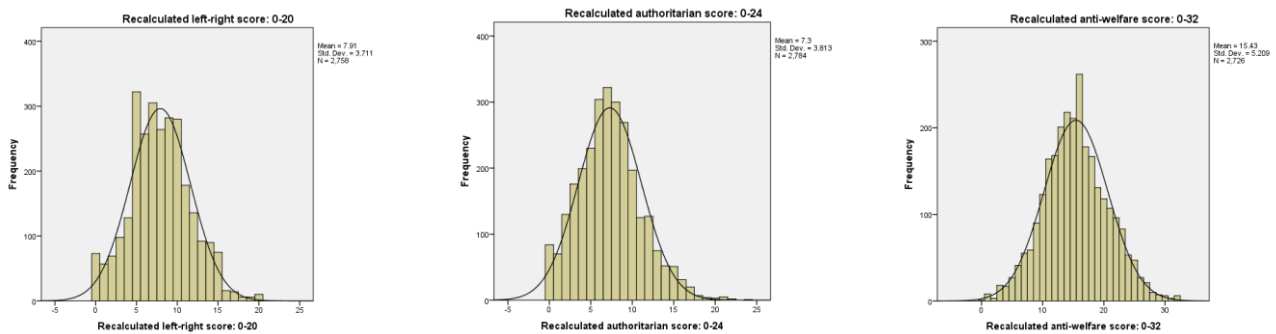
variable labels

xleftrigh 'Recalculated left-right score: 0-20'

/ xlibauth 'Recalculated authoritarian score: 0-24'

/ xwelfare2 'Recalculated anti-welfare score: 0-32'

frequencies xleftrigh **to** xwelfare2 **/format** **notable** **/histogram** **normal**.



descriptives xleftrigh **to** xwelfare2.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
xleftrigh	2758	0	20	7.91	3.711
xlibauth	2784	0	24	7.30	3.813
xwelfare2	2726	0	32	15.43	5.209
Valid N (listwise)	2680				