

Q-Step Workshop: Introduction to SPSS



Ekaterina Kolpinskaya, Susan Banducci, Katharine Boyd

While you're waiting...

Download data from SPSS Beginners workshop on the 'QStep Workshops in Applied Data Analysis' ELE page

Save QStep SPSS Beginners Data (BES2015_W3.sav) to your desktop

Download slides from the ELE page

What is SPSS?

Original: Statistical Package for the Social Sciences

Advantages:

- Simple to use
- Includes (nearly) all statistical procedures
- Widely used in research & non-academic

Disadvantage:

- Some limitations

Download software

SPSS 22

<http://as.exeter.ac.uk/it/equipmentandsoftware/software/frequent/spsswithamos/>

Note: you need only SPSS 22 not Amos. Does not make any difference on Windows but does not work on Mac.

Helpful textbook on SPSS

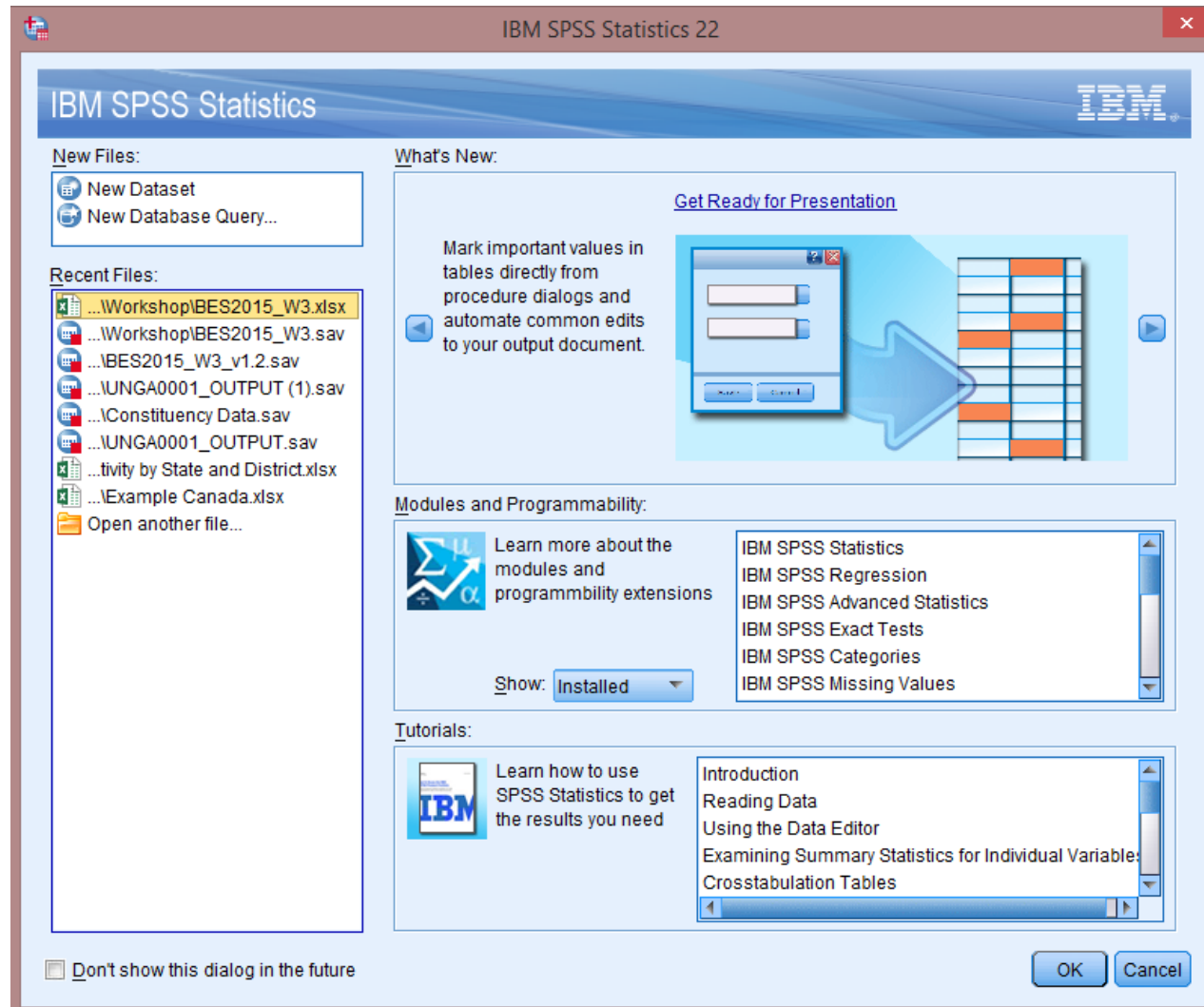
Pallant, Julie. (2010) SPSS Survival Manual: A step by step guide to data analysis using SPSS, 4th edition.

<http://lib.exeter.ac.uk/record=b2465953~S6>

SPSS: An overview

- Start-up window
- Variable view
- Data editor: viewing numbers or labels
- Output window
- Syntax editor

Start-up window



- Type in data
- Open a recently used dataset
- Open another file type

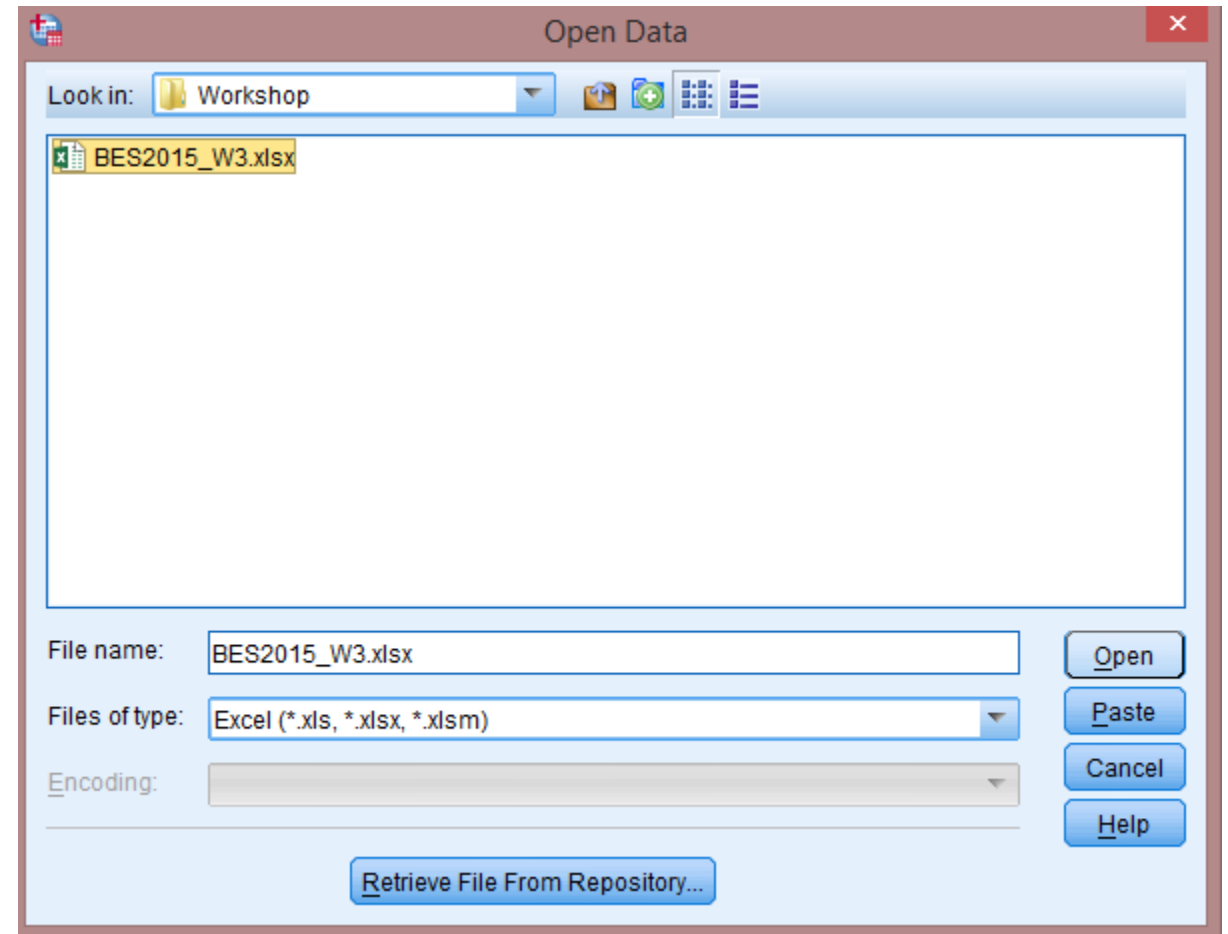
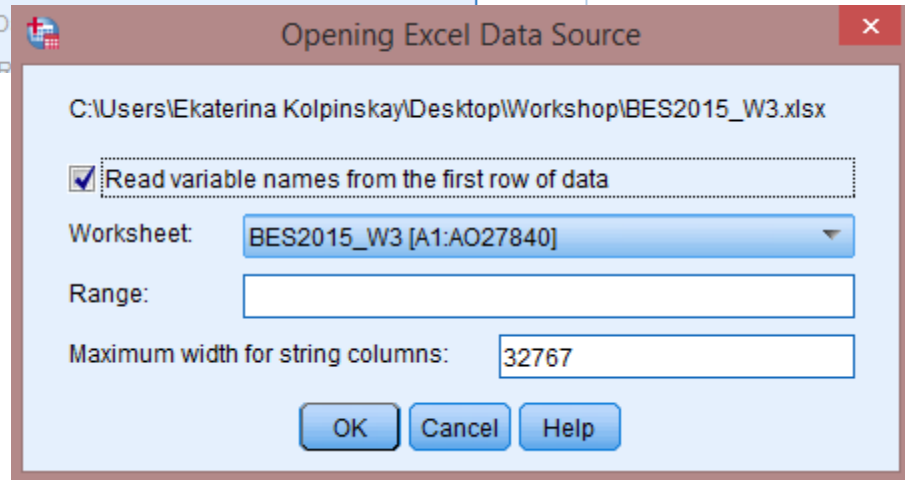
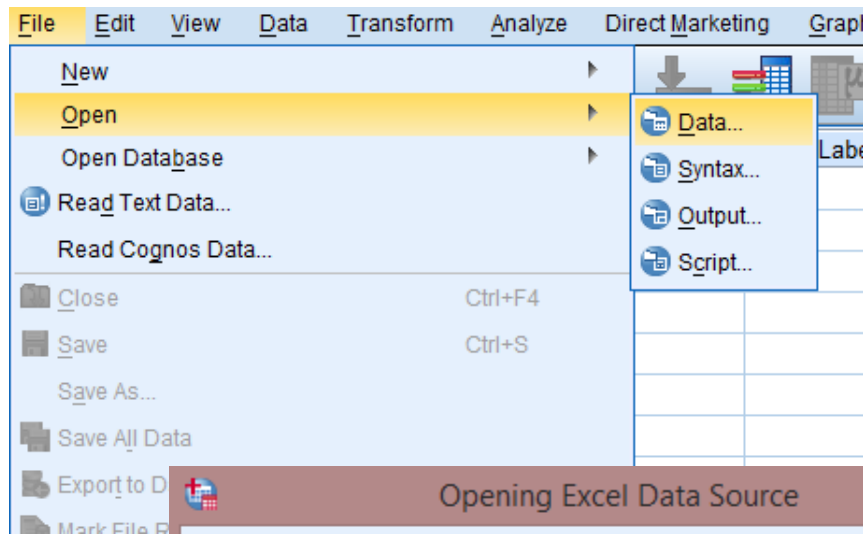
Let's open some data!

Start SPSS

Open 'BES2015_W3.sav' which is the QStep SPSS Beginners Data on the QStep ELE page

Note: Wave 3 of the British Election Study 2015. The data is trimmed for the purpose of the workshop

Opening Excel data in SPSS



Open → Data → Choose your file type (e.g., Excel) → Find the file → Open

Data view: Numbers

File Edit View Data Transform Analyze Direct Marketing Graphs Utilities Add-ons Window Help																
Visible: 40 of 40 Variables																
	id	country	turnoutUKGeneral	partyld	countryOfBirth	polAttention	trustMPs	trustYourMP	ptvCon	ptvLab	ptvLD	ptvSNP	ptvPC	ptvUKIP	ptvGrn	ptvLib
169	37502	1	5	10	1	6	2	4	.	.	.	.	.	.	.	.
170	37216	1	1	9999	9999	2	3	3	.	.	.	.	.	.	.	.
171	35008	1	3	10	1	3	3	9999	.	.	.	.	.	.	.	.
172	35004	1	5	1	1	8	5	6	.	.	.	.	.	.	.	.
173	34657	1	5	10	1	8	3	3	.	.	.	.	.	.	.	.
174	35000	1	5	2	1	9	4	2	.	.	.	.	.	.	.	.
175	34994	1	5	10	1	8	5	7	.	.	.	.	.	.	.	.
176	34772	1	9999	10	1	0	1	1	9999	9999	9999	.	.	9999	9999	.
177	34890	1	5	10	1	7	3	2	.	.	.	.	.	.	.	.
178	34751	1	5	1	1	8	4	2	.	.	.	.	.	.	.	.
179	34993	1	4	10	1	8	4	9999	.	.	.	.	.	.	.	.
180	34989	1	5	6	1	10	1	2	.	.	.	.	.	.	.	.
181	34988	1	5	1	1	8	5	6	.	.	.	.	.	.	.	.
182	37223	1	4	1	8	6	5	5	7	7	7	.	.	6	6	.
183	37613	1	5	2	1	9	2	1	.	.	.	.	.	.	.	.
184	36614	1	5	9999	1	7	3	5	.	.	.	.	.	.	.	.
185	34983	1	5	6	1	10	4	5	.	.	.	.	.	.	.	.
186	34470	1	5	1	1	10	3	3	.	.	.	.	.	.	.	.
187	35047	1	5	1	1	9	1	4	.	.	.	.	.	.	.	.
188	36101	2	5	4	2	10	1	4	0	5	5	10	.	0	9	.
189	36480	1	5	7	1	6	1	2	.	.	.	.	.	.	.	.
190	34976	1	5	6	1	7	1	1	0	0	0	.	.	10	0	.

Data View Variable View

IBM SPSS Statistics Processor is ready Unicode:ON

Cases and variables

Variable is any trait/factor that is measured in the data → **Column**

Case is each individual for which there is information on variables → **Row**

Variable view

File Edit View Data Transform Analyze Direct Marketing Graphs Utilities Add-ons Window Help

Variable View

	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1	id	Numeric	12	1		None	None	12	Right	Scale	Input
2	country	Numeric	12	1		None	None	12	Right	Nominal	Input
3	turnoutUKG...	Numeric	12	1		None	None	12	Right	Nominal	Input
4	partyId	Numeric	12	1		None	None	12	Right	Nominal	Input
5	countryOfBirth	Numeric	12	1		None	None	12	Right	Nominal	Input
6	polAttention	Numeric	12	1		None	None	12	Right	Nominal	Input
7	trustMPs	Numeric	12	1		None	None	12	Right	Nominal	Input
8	trustYourMP	Numeric	12	1		None	None	12	Right	Nominal	Input
9	ptvCon	Numeric	12	1		None	None	12	Right	Nominal	Input
10	ptvLab	Numeric	12	1		None	None	12	Right	Nominal	Input
11	ptvLD	Numeric	12	1		None	None	12	Right	Nominal	Input
12	ptvSNP	Numeric	12	1		None	None	12	Right	Nominal	Input
13	ptvPC	Numeric	12	1		None	None	12	Right	Nominal	Input
14	ptvUKIP	Numeric	12	1		None	None	12	Right	Nominal	Input
15	ptvGrn	Numeric	12	1		None	None	12	Right	Nominal	Input
16	ptvBNP	Numeric	12	1		None	None	12	Right	Nominal	Input
17	changeEco...	Numeric	12	1		None	None	12	Right	Nominal	Input
18	changeNHS	Numeric	12	1		None	None	12	Right	Nominal	Input
19	changeEdu...	Numeric	12	1		None	None	12	Right	Nominal	Input
20	changeCost...	Numeric	12	1		None	None	12	Right	Nominal	Input
21	changeImmig	Numeric	12	1		None	None	12	Right	Nominal	Input
22	changeCrime	Numeric	12	1		None	None	12	Right	Nominal	Input
23	leftRight	Numeric	12	1		None	None	12	Right	Nominal	Input
24	dutyToVote2	Numeric	12	1		None	None	12	Right	Nominal	Input
25	inequalityCh...	Numeric	12	1		None	None	12	Right	Nominal	Input

Data View Variable View

IBM SPSS Statistics Processor is ready Unicode:ON

Preparing the data – Variable View

Make the label of variable as detailed as possible

Type of variable: keep it String or Numeric

Names of variables

Values of variables specify what each number stands for, e.g. 1 – men; 2 – women

Levels of measurement: Nominal, Ordinal, Scale

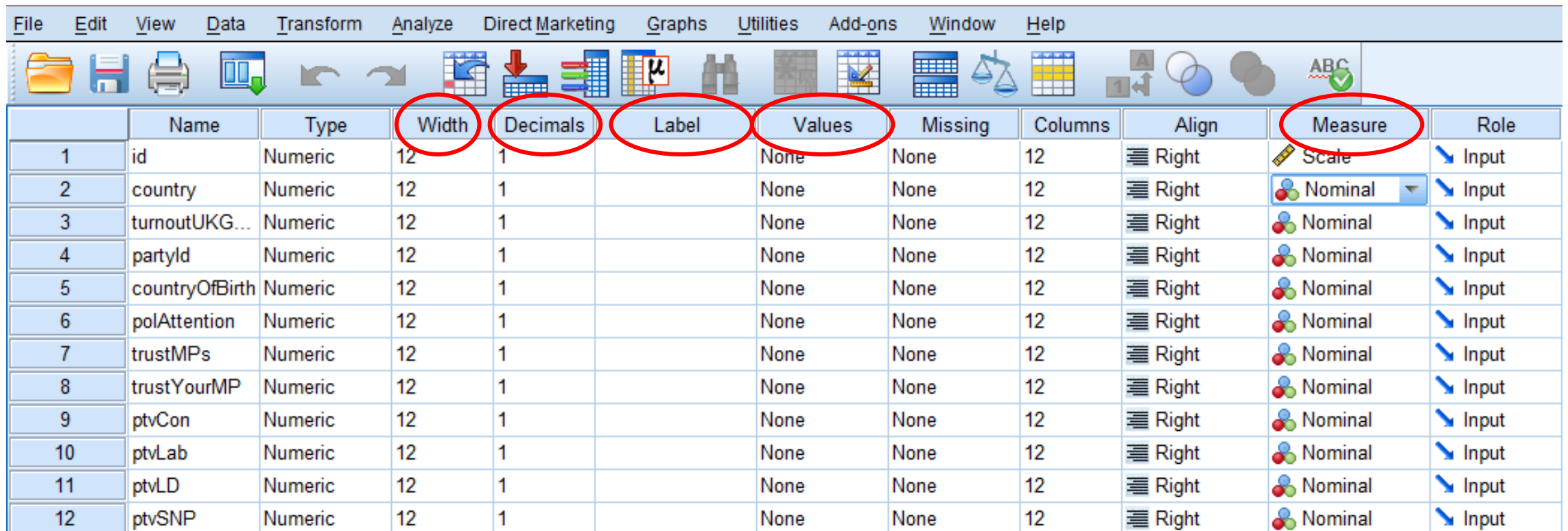
	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1	Seat	String	270	0	Seat	None	None	26	Left	Nominal	Input
2	Region	String	216	0	Census Region	None	None	26	Left	Nominal	Input
3	Win10	Numeric	1	0	Winner of seat i...	{1, Conserv...	None	7	Right	Nominal	Input
4	Con10	Numeric	5	2	% Vote Conser...	None	None	7	Right	Scale	Input
5	Lab10	Numeric	5	2	% Vote Labour ...	None	None	7	Right	Scale	Input
6	LD10	Numeric	5	2	% Vote Liberal ...	None	None	7	Right	Scale	Input
7	Grn10	Numeric	5	2	% Vote Green ...	None	None	7	Right	Scale	Input
8	BNP10	Numeric	5	2	% Vote BNP 2...	None	None	7	Right	Scale	Input
9	Maj10	Numeric	5	2	% Majority 2010	None	None	7	Right	Scale	Input
10	Turn10	Numeric	5	2	% Turnout 2010	None	None	8	Right	Scale	Input
11	Maj05	Numeric	5	2	% Majority 2005	None	None	7	Right	Scale	Input
12	Turn05	Numeric	5	2	% Turnout 2005	None	None	8	Right	Scale	Input
13	Consex10	Numeric	1	0	Sex of the Con...	{0, Man}...	None	10	Right	Nominal	Input
14	Conrace10	Numeric	1	0	Ethnicity of Co...	{0, White}...	None	11	Right	Nominal	Input
15	Labsex10	Numeric	1	0	Sex of the Labo...	{0, Man}...	None	10	Right	Nominal	Input
16	Labrace10	Numeric	1	0	Ethnicity of Lab...	{0, White}...	None	11	Right	Nominal	Input
17	LDsex10	Numeric	1	0	Sex of the Liber...	{0, Man}...	None	9	Right	Nominal	Input
18	LDrace10	Numeric	1	0	Ethnicity of Lib...	{0, White}...	None	10	Right	Nominal	Input
19	SES1	Numeric	5	2	SES 1. Higher ...	None	None	12	Right	Scale	Input
20	SES2	Numeric	5	2	SES 2. Lower ...	None	None	12	Right	Scale	Input
21	SES3	Numeric	5	2	SES 3. Interme...	None	None	12	Right	Scale	Input
22	SES4	Numeric	5	2	SES 4. Small e...	None	None	12	Right	Scale	Input
23	SES5	Numeric	5	2	SES 5. Lower s...	None	None	12	Right	Scale	Input
24	SES6	Numeric	5	2	SES 6. Semi ro...	None	None	12	Right	Scale	Input
25	SES7	Numeric	5	2	SES 7. Depriv...	None	None	12	Right	Scale	Input

Data View Variable View

IBM SPSS Statistics Processor is ready | Unico

Preparing the data –Variable View

Add labels & values, identify measures, set width & decimals

A screenshot of the SPSS Variable View window. The interface includes a menu bar at the top with options: File, Edit, View, Data, Transform, Analyze, Direct Marketing, Graphs, Utilities, Add-ons, Window, and Help. Below the menu is a toolbar with various icons. The main area is a table with columns: Name, Type, Width, Decimals, Label, Values, Missing, Columns, Align, Measure, and Role. The 'Width', 'Decimals', 'Label', 'Values', and 'Measure' columns are circled in red. The table contains 12 rows of variables. The first row is 'id' (Numeric, Width 12, Decimals 1, None, None, 12, Right, Scale, Input). The remaining 11 rows are 'country', 'turnoutUKG...', 'partyld', 'countryOfBirth', 'polAttention', 'trustMPs', 'trustYourMP', 'ptvCon', 'ptvLab', 'ptvLD', and 'ptvSNP', all of which are Numeric with Width 12, Decimals 1, and Measure set to 'Nominal' (indicated by a dropdown menu in the 'Measure' column for the second row).

	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1	id	Numeric	12	1		None	None	12	Right	Scale	Input
2	country	Numeric	12	1		None	None	12	Right	Nominal	Input
3	turnoutUKG...	Numeric	12	1		None	None	12	Right	Nominal	Input
4	partyld	Numeric	12	1		None	None	12	Right	Nominal	Input
5	countryOfBirth	Numeric	12	1		None	None	12	Right	Nominal	Input
6	polAttention	Numeric	12	1		None	None	12	Right	Nominal	Input
7	trustMPs	Numeric	12	1		None	None	12	Right	Nominal	Input
8	trustYourMP	Numeric	12	1		None	None	12	Right	Nominal	Input
9	ptvCon	Numeric	12	1		None	None	12	Right	Nominal	Input
10	ptvLab	Numeric	12	1		None	None	12	Right	Nominal	Input
11	ptvLD	Numeric	12	1		None	None	12	Right	Nominal	Input
12	ptvSNP	Numeric	12	1		None	None	12	Right	Nominal	Input

Exploring data: Levels of measurement

Level of measurement	Ordered	Constant distance	Example	In SPSS
Categorical				
Nominal	N	N	Religion, ethnicity	Nominal
Binominal	N	N	Gender	
Ordinal	Y	N	SES: high, medium, low	Ordinal
Continuous				
Interval	Y	Y	IQ, years in education	Scale
Ratio	Y	Y	Age, income	

Let's skip a few steps → Open BES2015_W3.sav

File Edit View Data Transform Analyze Direct Marketing Graphs Utilities Add-ons Window Help											
	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1	id	Numeric	8	0	ID	None	None	8	Right	Nominal	Input
2	country	Numeric	9	0	Country	{1, England}...	None	8	Right	Nominal	Input
3	turnoutUKGeneral	Numeric	31	0	Likelihood to vote in general election	{1, Very unlikely that I ...	None	8	Right	Ordinal	Input
4	partyld	Numeric	40	0	Party identification	{1, Conservative}...	None	8	Right	Nominal	Input
5	countryOfBirth	Numeric	36	0	Country of birth	{1, England}...	None	8	Right	Nominal	Input
6	polAttention	Numeric	29	0	Attention to Politics	{0, Pay no attention}...	None	8	Right	Ordinal	Input
7	trustMPs	Numeric	21	0	Trust MPs in general	{1, No trust}...	None	8	Right	Ordinal	Input
8	trustYourMP	Numeric	21	0	Trust own MP	{1, No trust}...	None	8	Right	Ordinal	Input
9	ptvCon	Numeric	13	0	Probability of voting for Conservatives	{0, Very unlikely}...	None	8	Right	Ordinal	Input
10	ptvLab	Numeric	13	0	Probability of voting for Labour	{0, Very unlikely}...	None	8	Right	Ordinal	Input
11	ptvLD	Numeric	13	0	Probability of voting for Liberal Democrats	{0, Very unlikely}...	None	8	Right	Ordinal	Input
12	ptvSNP	Numeric	13	0	Probability of voting for Scottish National Party	{0, Very unlikely}...	None	8	Right	Ordinal	Input
13	ptvPC	Numeric	13	0	Probability of voting for Plaid Cymru	{0, Very unlikely}...	None	8	Right	Ordinal	Input
14	ptvUKIP	Numeric	13	0	Probability of voting for UKIP	{0, Very unlikely}...	None	8	Right	Ordinal	Input
15	ptvGrn	Numeric	13	0	Probability of voting for Green party	{0, Very unlikely}...	None	8	Right	Ordinal	Input
16	ptvBNP	Numeric	13	0	Probability of voting for BNP	{0, Very unlikely}...	None	8	Right	Ordinal	Input
17	changeEconomy	Numeric	23	0	Economy doing better or worse	{1, Getting a lot worse}...	None	8	Right	Ordinal	Input
18	changeNHS	Numeric	23	0	NHS doing better or worse	{1, Getting a lot worse}...	None	8	Right	Ordinal	Input
19	changeEducation	Numeric	23	0	Education doing better or worse	{1, Getting a lot worse}...	None	8	Right	Ordinal	Input
20	changeCostLive	Numeric	23	0	Cost of Living getting higher or lower	{1, Getting a lot lower}...	None	8	Right	Ordinal	Input
21	changeImmig	Numeric	23	0	Immigration levels getting higher or lower	{1, Getting a lot lower}...	None	8	Right	Ordinal	Input
22	changeCrime	Numeric	23	0	Crime levels getting higher or lower	{1, Getting a lot lower}...	None	8	Right	Ordinal	Input
23	leftRight	Numeric	10	0	Left/right position: Self	{0, Left}...	None	8	Right	Ordinal	Input
24	dutyToVote2	Numeric	26	0	It is every citizen's duty to vote in an election	{1, Strongly disagree}...	None	8	Right	Ordinal	Input
25	inequalityChange	Numeric	14	0	Difference in incomes between rich and poor	{1, Less}...	None	8	Right	Ordinal	Input

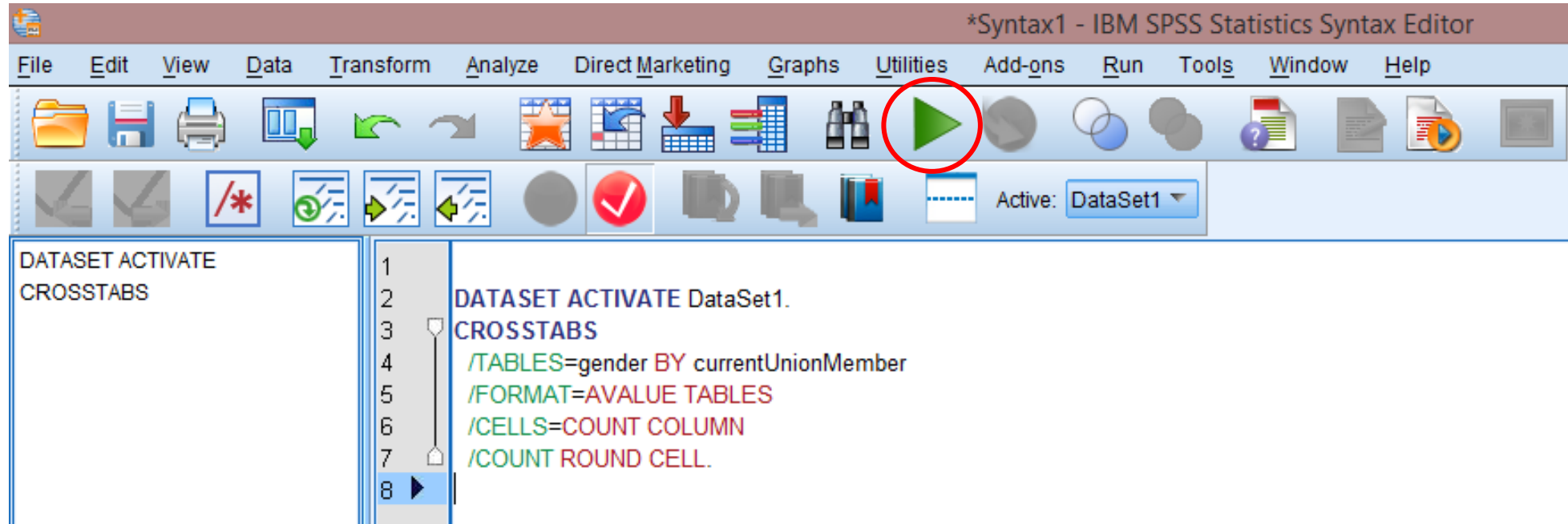
Data View Variable View

Data view: Labels

Use this button to switch between the numbers and label data view

File Edit View Data Transform Analyze Direct Marketing Graphs Utilities Add-ons Window Help																
																Visible: 40 of 40 Variables
	id	country	turnoutUKGeneral	partyId	countryOfBirth	polAttention	trustMPs	trustYourMP	ptvCon	ptvLab	ptvLD	ptvSNP	ptvPC	ptvUKIP	ptvGrn	ptvOther
169	37502	England	Very likely ...	No - none	England	6	2	4	.	.	.	.	.	.	.	.
170	37216	England	Very unlikely...	Don't know	Prefer not t...	2	3	3	.	.	.	.	.	.	.	.
171	35008	England	Neither like...	No - none	England	3	3	Don't know	.	.	.	.	.	.	.	.
172	35004	England	Very likely ...	Conservative	England	8	5	6	.	.	.	.	.	.	.	.
173	34657	England	Very likely ...	No - none	England	8	3	3	.	.	.	.	.	.	.	.
174	35000	England	Very likely ...	Labour	England	9	4	2	.	.	.	.	.	.	.	.
175	34994	England	Very likely ...	No - none	England	8	5	A great de...	.	.	.	.	.	.	.	.
176	34772	England	Don't know	No - none	England	Pay no att...	No trust	No trust	Don't know	Don't know	Don't know	.	.	Don't know	Don't know	Do
177	34890	England	Very likely ...	No - none	England	7	3	2	.	.	.	.	.	.	.	.
178	34751	England	Very likely ...	Conservative	England	8	4	2	.	.	.	.	.	.	.	.
179	34993	England	Fairly likely	No - none	England	8	4	Don't know	.	.	.	.	.	.	.	.
180	34989	England	Very likely ...	United Kin...	England	Pay a grea...	No trust	2	.	.	.	.	.	.	.	.
181	34988	England	Very likely ...	Conservative	England	8	5	6	.	.	.	.	.	.	.	.
182	37223	England	Fairly likely	Conservative	Other: Res...	6	5	5	7	7	7	.	.	6	6	.
183	37613	England	Very likely ...	Labour	England	9	2	No trust	.	.	.	.	.	.	.	.
184	36614	England	Very likely ...	Don't know	England	7	3	5	.	.	.	.	.	.	.	.
185	34983	England	Very likely ...	United Kin...	England	Pay a grea...	4	5	.	.	.	.	.	.	.	.
186	34470	England	Very likely ...	Conservative	England	Pay a grea...	3	3	.	.	.	.	.	.	.	.
187	35047	England	Very likely ...	Conservative	England	9	No trust	4	.	.	.	.	.	.	.	.
188	36101	Scotland	Very likely ...	Scottish N...	Scotland	Pay a grea...	No trust	4	Very unlikely	5	5	Very likely	.	Very unlikely	9	Very
189	36480	England	Very likely ...	Green Party	England	6	No trust	2	.	.	.	.	.	.	.	.
190	34976	England	Very likely ...	United Kin...	England	7	No trust	No trust	Very unlikely	Very unlikely	Very unlikely	.	.	Very likely	Very unlikely	.
1																
Data View Variable View																

Syntax editor



Example: **membership in trade unions by gender**

To execute → highlight the command and press 'CTRL + R' or green arrow

Output Window

(e.g. membership in trade unions by gender)

Lists output for
all operations

The screenshot shows the IBM SPSS Statistics Viewer interface. The left pane displays a tree view of the output, with 'Crosstabs' expanded. A blue arrow points from the text 'Lists output for all operations' to this tree view. The main pane shows the 'Crosstabs' output for the dataset 'C:\Users\Ekaterina Kolpinsky\Desktop\Workshop\BES2015_W3.sav'. It includes a 'Case Processing Summary' table and a 'Gender * Are you a member of a trade union? Crosstabulation' table.

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Gender * Are you a member of a trade union?	2925	10.5%	24914	89.5%	27839	100.0%

Gender * Are you a member of a trade union? Crosstabulation

			Are you a member of a trade union?			Total	
			No	Yes	Don't know		
Gender	Male	Count	1109	182	28	1319	
		% within Are you a member of a trade union?	45.7%	47.3%	24.3%	45.1%	
	Female	Count	1316	203	87	1606	
		% within Are you a member of a trade union?	54.3%	52.7%	75.7%	54.9%	
Total		Count	2425	385	115	2925	
		% within Are you a member of a trade union?	100.0%	100.0%	100.0%	100.0%	

Steps of data analysis (1)

1. Explore your variables of interest

Descriptive statistics: Frequencies, means, min, max, graphs

2. Recode or transform variables if necessary

Two commands: Recode and compute

Steps of data analysis (2)

3. Explore relationship between variables

Cross-tab, compare means, scatter plot, correlation, regression

4. Report your findings

Do not just copy/paste output tables from SPSS – edit them first!

Create tables that summarise the results of your analysis

Explore your variables of interest:

Measures of centrality

- **Mean:**

- **average** value of the data → the sum of all the data values in the distribution divided by the number of values.

- **Median:**

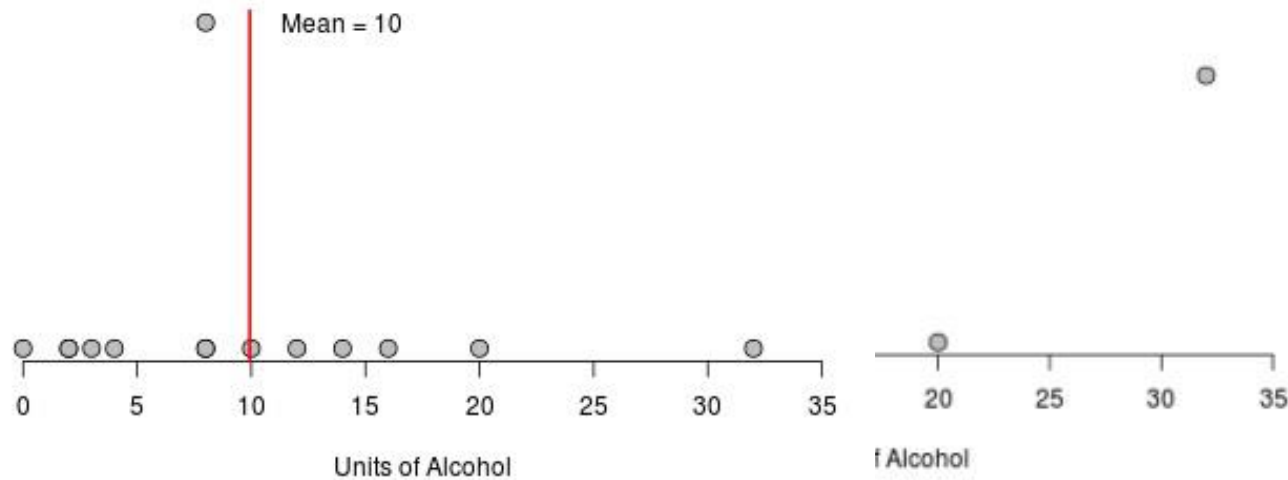
- the observation in the **middle** of the dataset, in ascending or descending order, or value in a distribution below which 50% of data values fall.

- **Mode:**

- the value that occurs **most frequently** for a variable.

Explore your variables of interest: Measures of dispersion

Deriving variance: and another point



le.

square root of the

How does a typical case look like?

Level of measurement	Mode	Median	Mean	Frequency table
Nominal	Yes	No	No	Yes
Ordinal	Yes	Yes	(Yes)	(Yes)*
Continuous	Yes	Yes	Yes	No

* Only if few categories, less than 10

1. Describing a **nominal, binary** variable – Gender

What command to use?

- Frequency tables and mode

Task: Run frequency for Gender

- CLICK: Analyze → Descriptive Statistics -> Frequencies → Choose the variable and click on arrow to move them into the 'Variable(s)' window
- CLICK: PASTE

Frequency table for Gender

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	14177	50.9	50.9	50.9
	Female	13662	49.1	49.1	100.0
	Total	27839	100.0	100.0	

What does a **nominal** variable 'look' like?

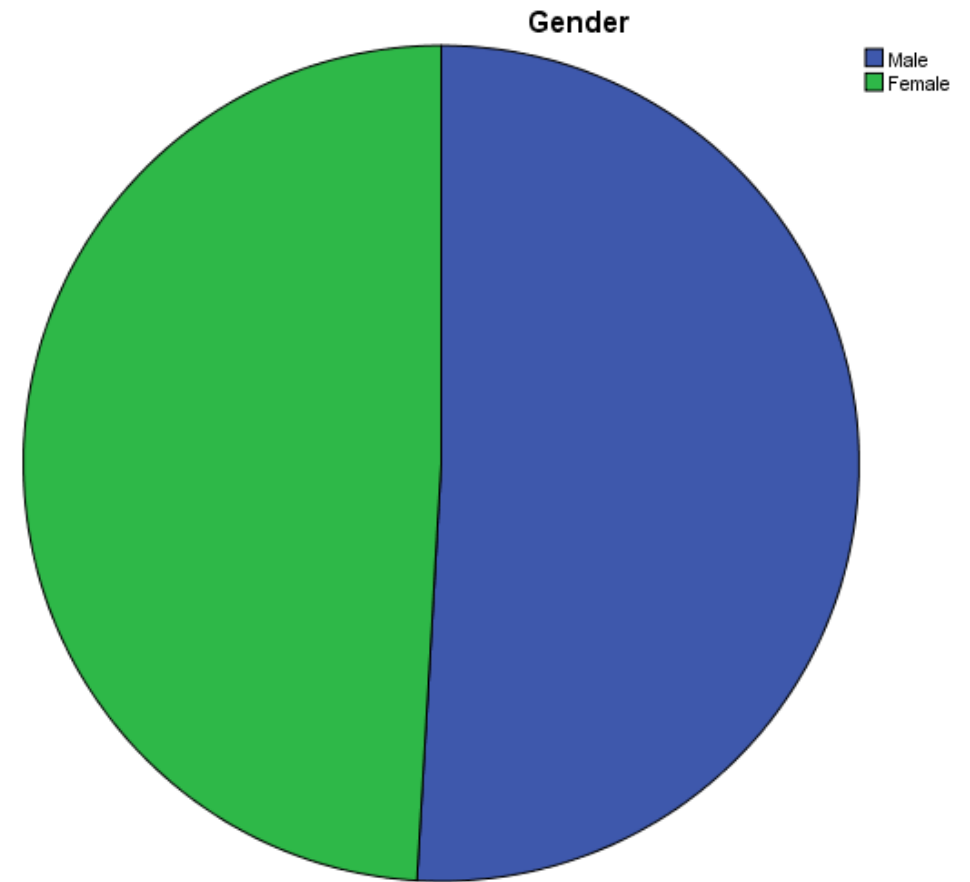
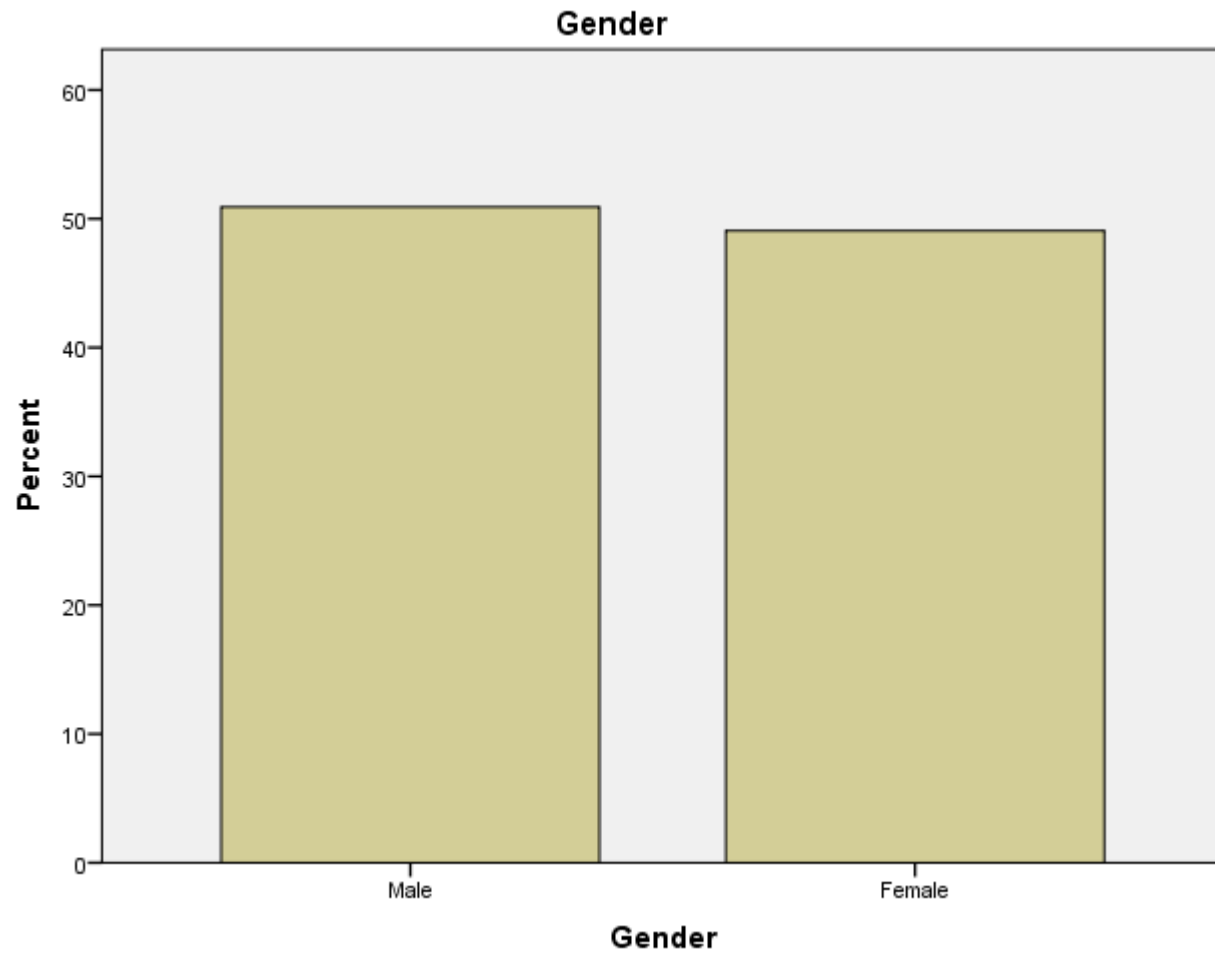
What command to use?

- **Graphs: Bar chart or Pie chart (do not use histogram!)**
- **Use chart editor to improve the look**

Task: **Get charts from Frequency command**

- **CLICK: Analyze → Descriptive Statistics -> Frequencies → Choose the variable and click on arrow to move it into the 'Variable(s)' window → Click: Charts (on the right) → Choose chart → Choose percentages**
- **CLICK: PASTE**

Bar chart vs. Pie chart for Gender



2. Describing an **ordinal** variable – Likelihood to vote in GE

What commands to use?

- Descriptives: Mean (frequency tables if there are few categories)

Task: Run descriptives for Likelihood to vote

- CLICK: Analyze → Descriptive Statistics -> Frequencies → Choose variable and click on arrow to move it into the 'Variable(s)' window → Click on 'Statistics' → Choose mean, median, mode, min, max, std deviation
- CLICK: PASTE

Mean, median, mode & frequency table for Likelihood to vote in GE

Statistics

Likelihood to vote in general elec

N	Valid	27824
	Missing	15
Mean		280.47
Median		5.00
Mode		5
Std. Deviation		1637.409
Minimum		1
Maximum		9999

Likelihood to vote in general election

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very unlikely that I would vote	1150	4.1	4.1	4.1
	Fairly unlikely	567	2.0	2.0	6.2
	Neither likely nor unlikely	810	2.9	2.9	9.1
	Fairly likely	2785	10.0	10.0	19.1
	Very likely that I would vote	21744	78.1	78.1	97.2
	Don't know	768	2.8	2.8	100.0
	Total	27824	99.9	100.0	
Missing	System	15	.1		
Total		27839	100.0		

What does an **ordinal** variable 'look' like?

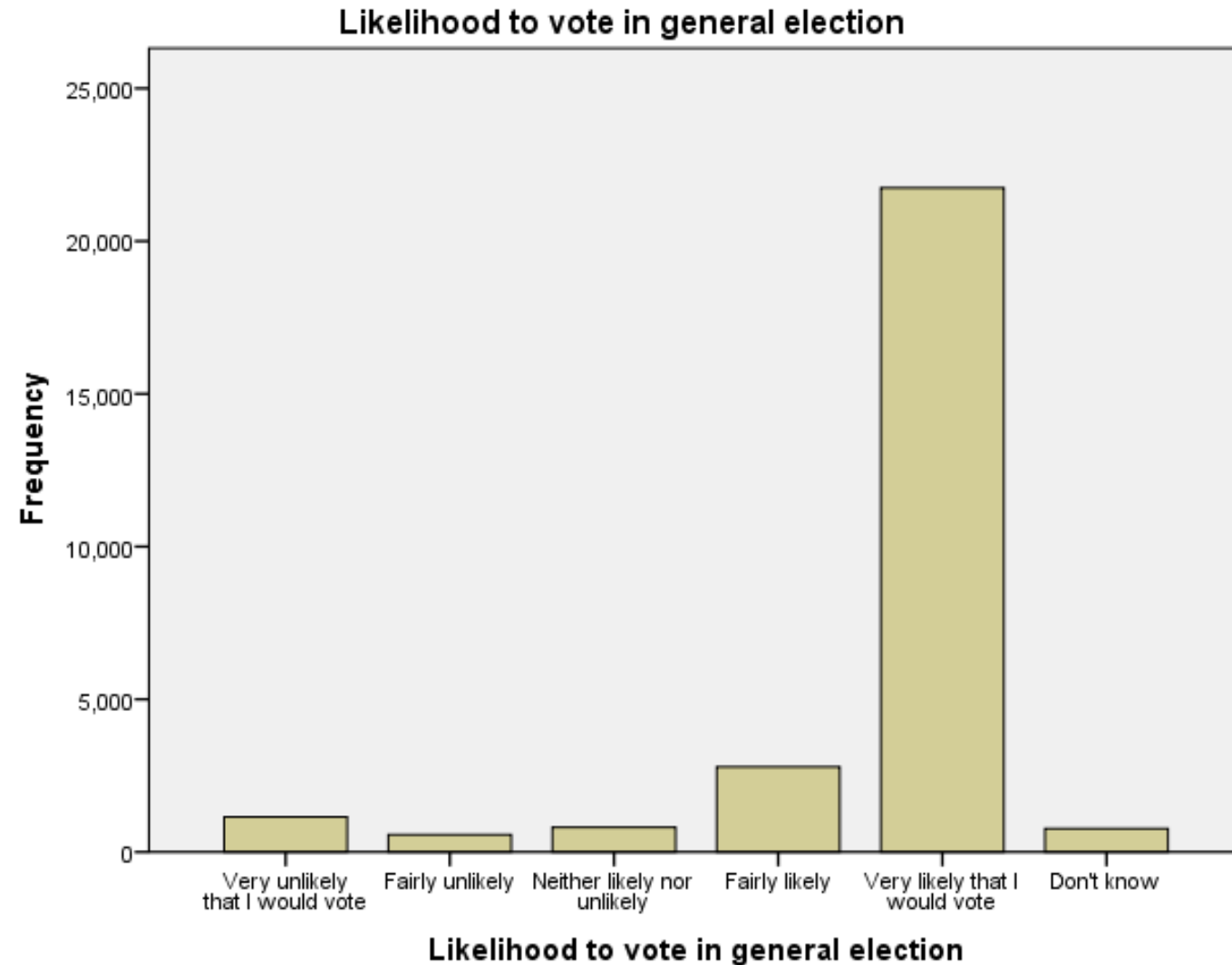
What commands to use?

- **Graphs: Bar chart or histogram (do not use pie charts!)**

Task: **Get charts from the frequency command**

- CLICK: Analyze → Descriptive Statistics -> Frequencies → Choose the variable and click on arrow to move them into the 'Variable(s)' window → Click: Charts (on the right) → Choose chart
- CLICK: PASTE

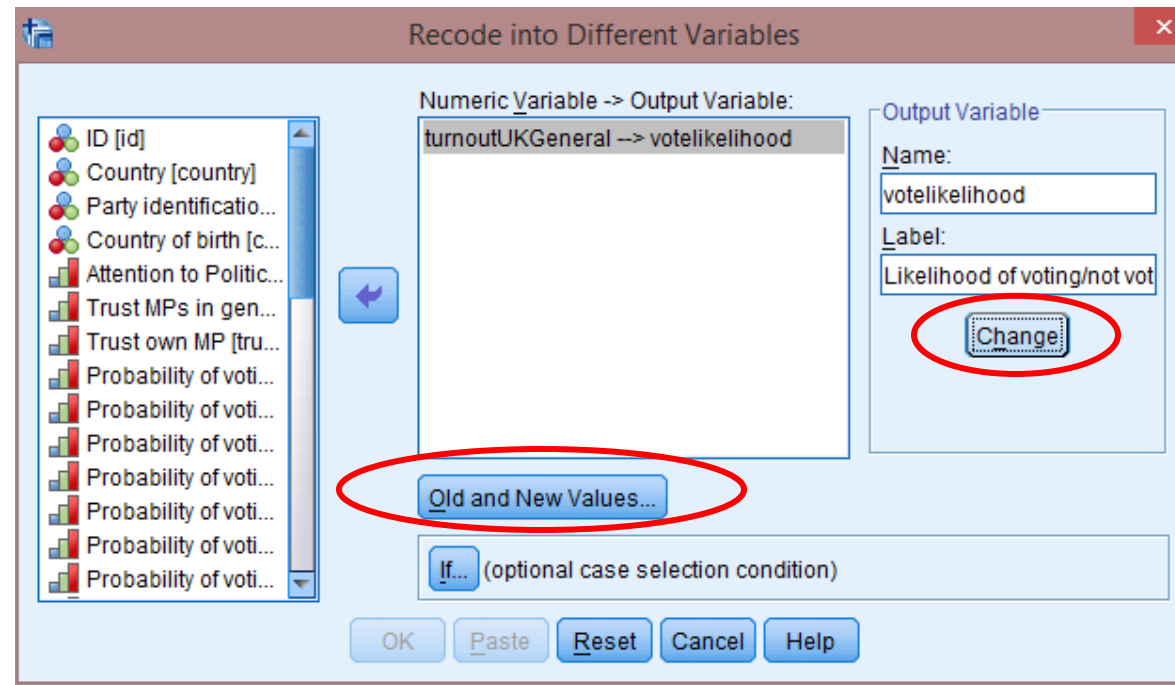
Bar chart for Likelihood to vote in GE



Recoding variables (1)

Sometimes it is useful to reduce the number of categories →

Let's compare how many people are likely and are not likely to vote

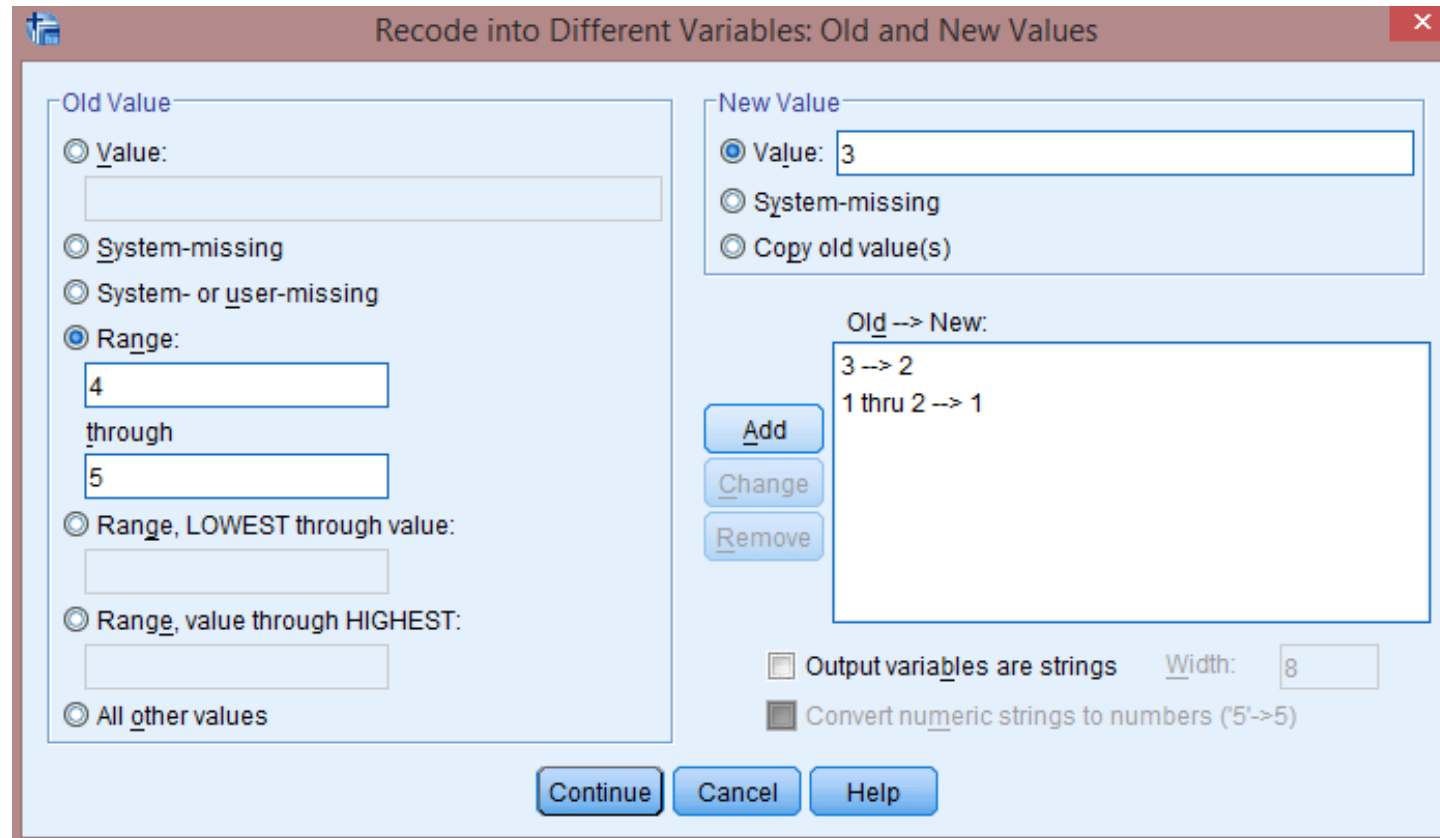


CLICK: Transform → Recode into Different Variables → Move the old variable (VAR=turnoutUKGeneral) into 'Input Variable' box → Name and label the new variable using the 'Output Variable' options → Click 'Change'

Recoding variables (2)

Click 'Old and New Values' → For each 'Old Value' a new value – Click 'Add' for each new value → Click: Continue

Click: Paste



The image shows the 'Recode into Different Variables: Old and New Values' dialog box in SPSS. The 'Old Value' section on the left has the 'Range' option selected, with '4' in the first box and '5' in the second box. The 'New Value' section on the right has the 'Value' option selected with '3' in the text box. Below these sections is a list of transformations: '3 --> 2' and '1 thru 2 --> 1'. The 'Add' button is highlighted. At the bottom, there are checkboxes for 'Output variables are strings' (unchecked) and 'Convert numeric strings to numbers' (checked), along with a 'Width' of 8. The 'Continue', 'Cancel', and 'Help' buttons are at the bottom.

Recode into Different Variables: Old and New Values

Old Value

- ☐ Value:
- ☐ System-missing
- ☐ System- or user-missing
- ☒ Range:
4
through
5
- ☐ Range, LOWEST through value:
- ☐ Range, value through HIGHEST:
- ☐ All other values

New Value

- ☒ Value: 3
- ☐ System-missing
- ☐ Copy old value(s)

Old --> New:

3 --> 2
1 thru 2 --> 1

Add
Change
Remove

☐ Output variables are strings Width: 8
☒ Convert numeric strings to numbers ('5'-->5)

Continue Cancel Help

Working with the new variable

- Add labels

Variable view → find the new variable at the end of list → click on 'Values'

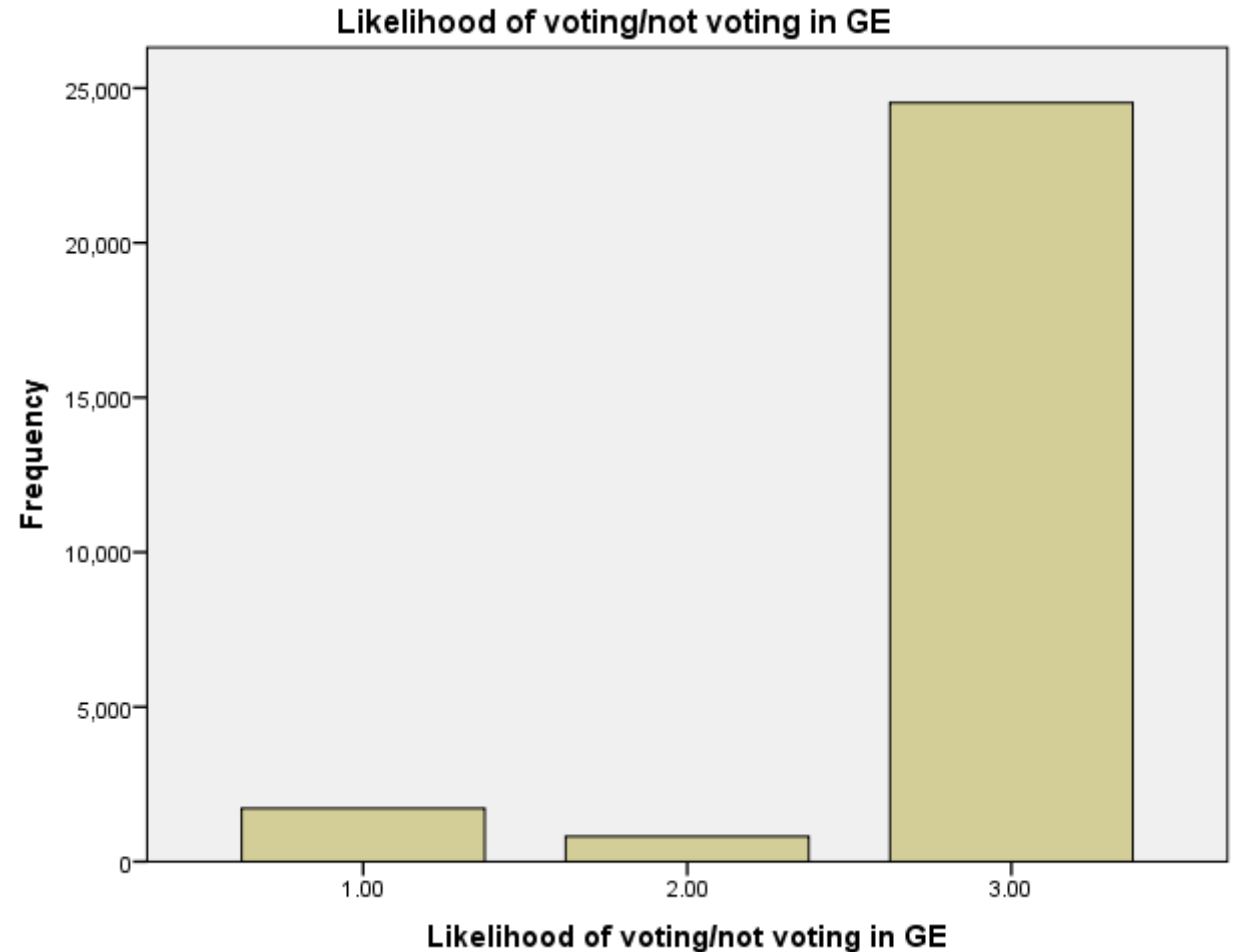
- Choose an appropriate level of measurement and variable type
- Adjust the variable width and decimals

DESCRIBE THE NEW VARIABLE

Describing the new Likelihood to vote variable

Likelihood of voting/not voting in GE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	1717	6.2	6.3	6.3
	2.00	810	2.9	3.0	9.3
	3.00	24529	88.1	90.7	100.0
	Total	27056	97.2	100.0	
Missing	System	783	2.8		
Total		27839	100.0		



3. Describing a **continuous** variable – Age

What commands to use?

- Descriptives: Mean or median (do not use frequency tables!)

Task: Run descriptives for Age

- CLICK: Analyze → Descriptive Statistics -> Frequencies → Choose variable and click on arrow to move it into the 'Variable(s)' window → Click on 'Statistics' → Choose mean, median min, max, std deviation
- CLICK: PASTE

Descriptive statistics for Age

Statistics

Age

N	Valid	27839
	Missing	0
Mean		50.54
Median		54.00
Std. Deviation		16.426
Minimum		17
Maximum		93

What does a **continuous** variable 'look' like?

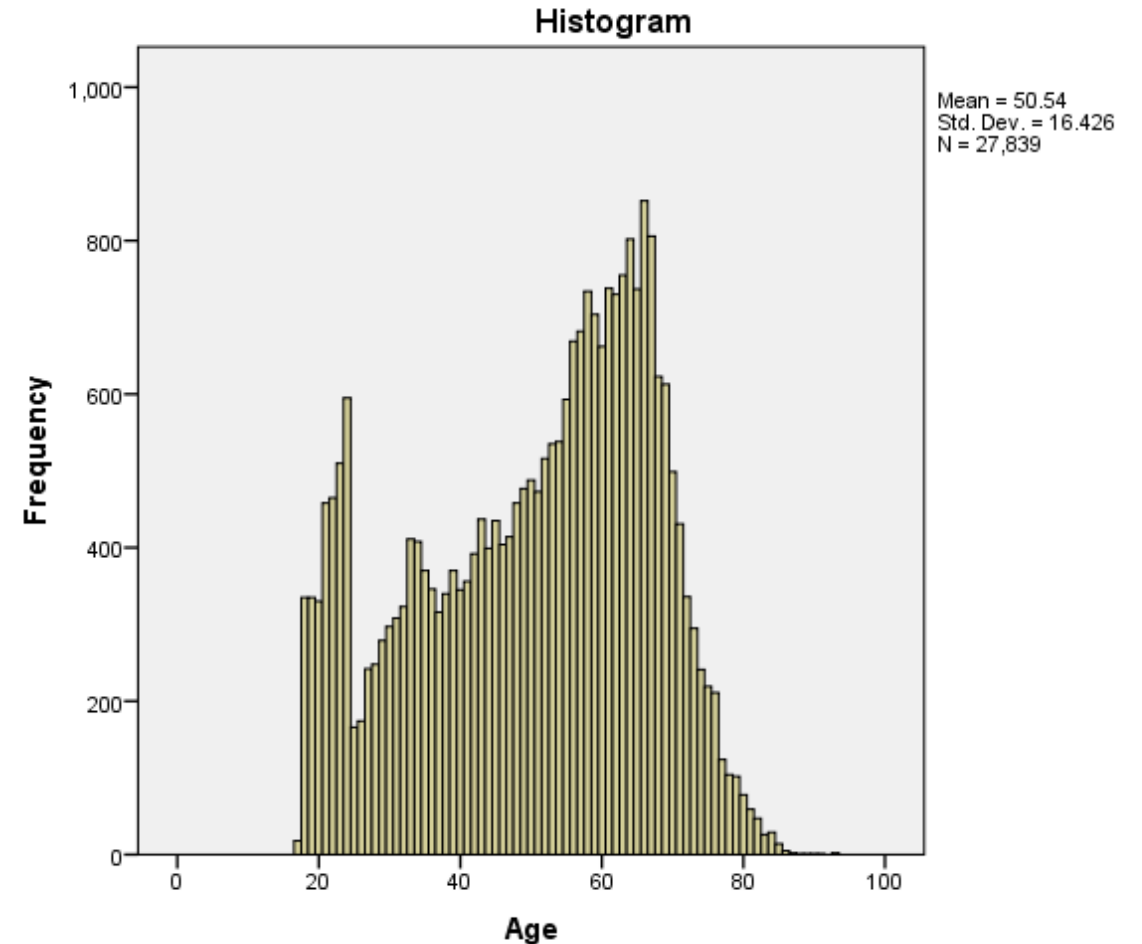
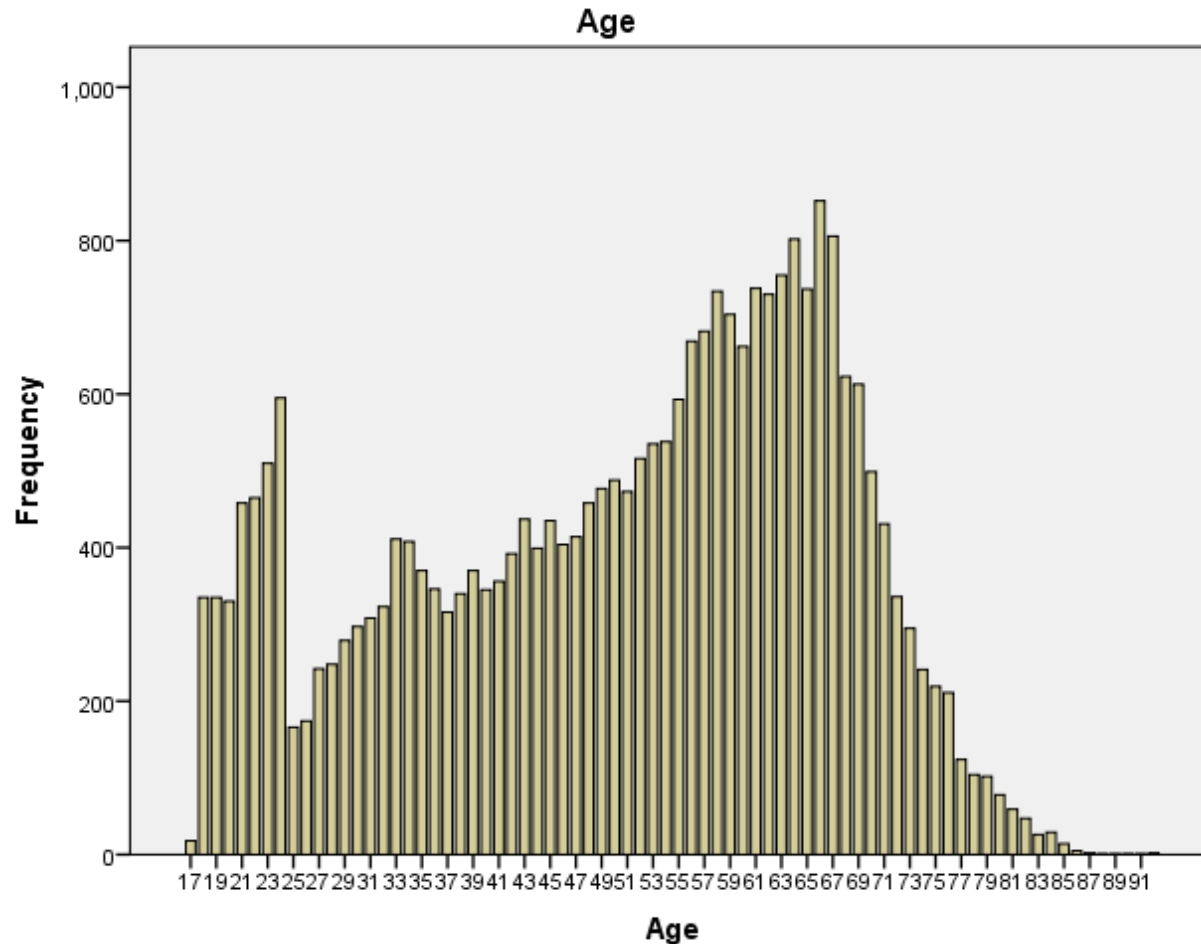
What commands to use?

- **Graphs: Bar chart or histogram (do not use pie charts!)**

Task: **Get charts from the frequency command**

- **CLICK: Analyze → Descriptive Statistics -> Frequencies → Choose the variable and click on arrow to move them into the 'Variable(s)' window → Click: Charts (on the right) → Choose chart**
- **CLICK: PASTE**

Bar chart vs. Histogram for Age



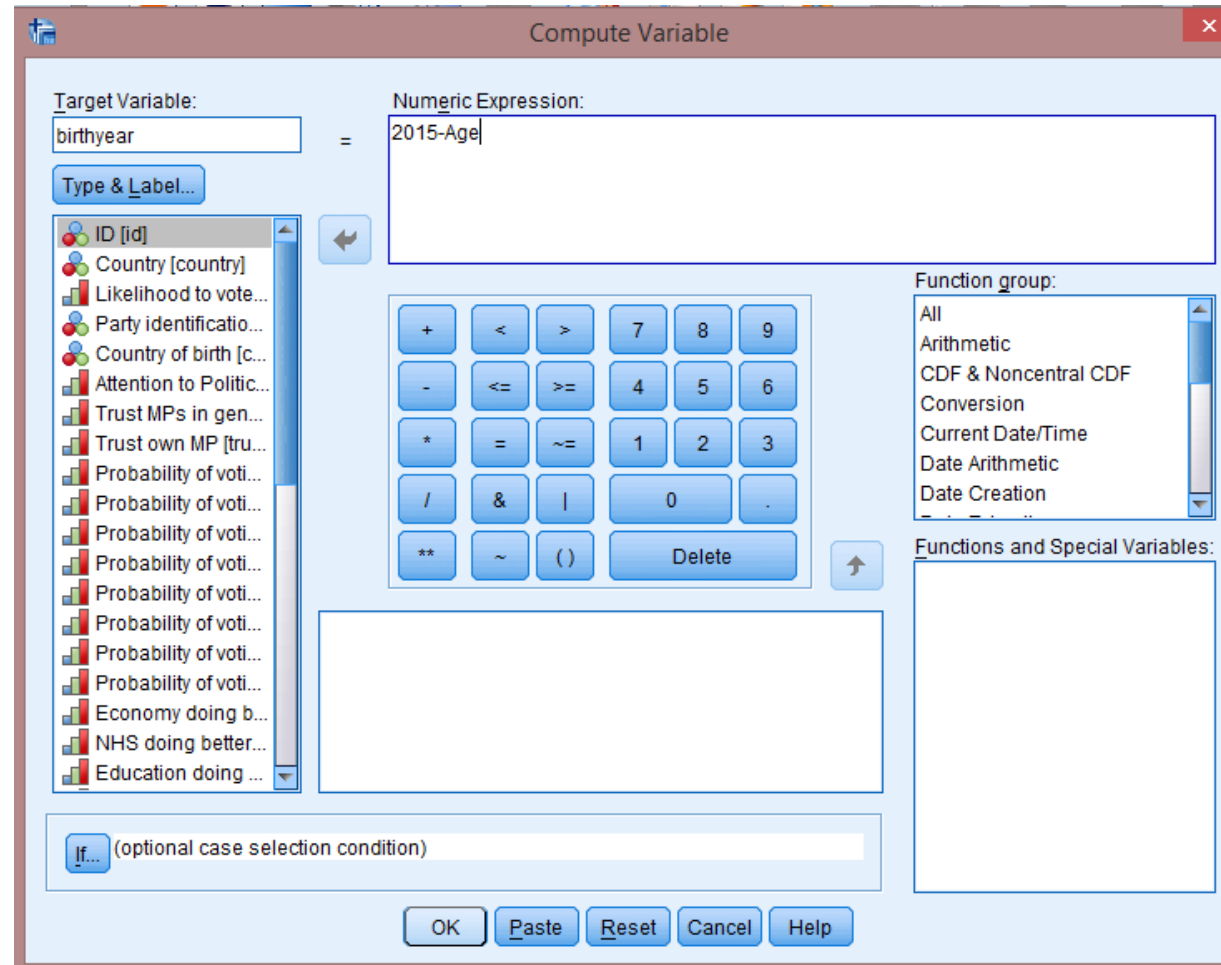
What if you need **birth year** instead of **age**? –
Compute a new variable!

- Check coding of year for **Age** → **coded by age at the time of interview**
- Birth year = survey year – age (i.e. birth year = 2015 – VAR=Age)

Task: Create new **birth year** variable from **age**

Compute birth year

- CLICK: Transform → Compute Variable → type 'birthyear' in Target Variable → Type '2015 - Age' in numeric expression
- CLICK: PASTE

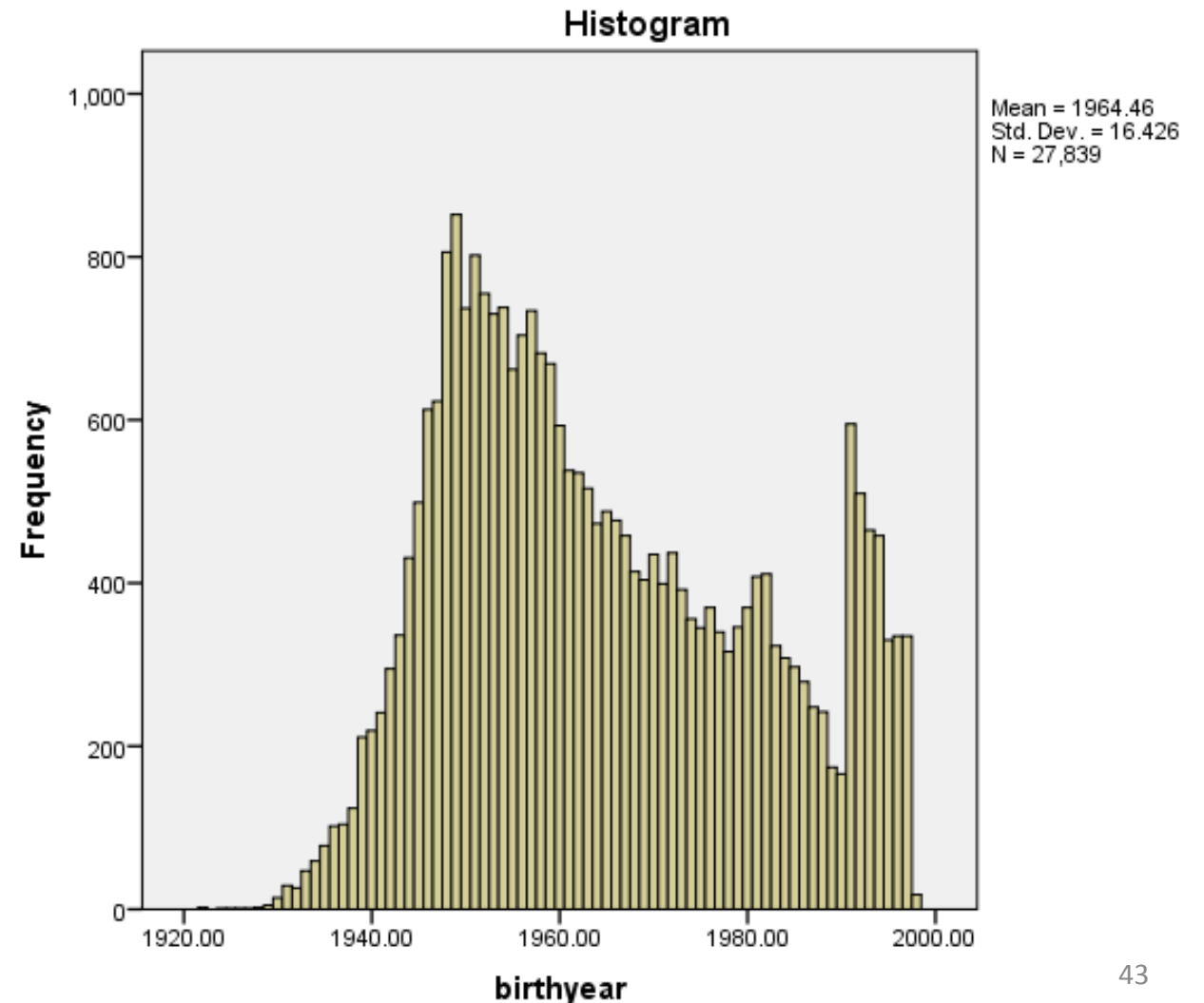


Describe the new variable – Birth Year

Statistics

birthyear

N	Valid	27839
	Missing	0
Mean		1964.4648
Median		1961.0000
Std. Deviation		16.42629
Minimum		1922.00
Maximum		1998.00



ALWAYS SAVE YOUR SYNTAX!

Fancy more practice?

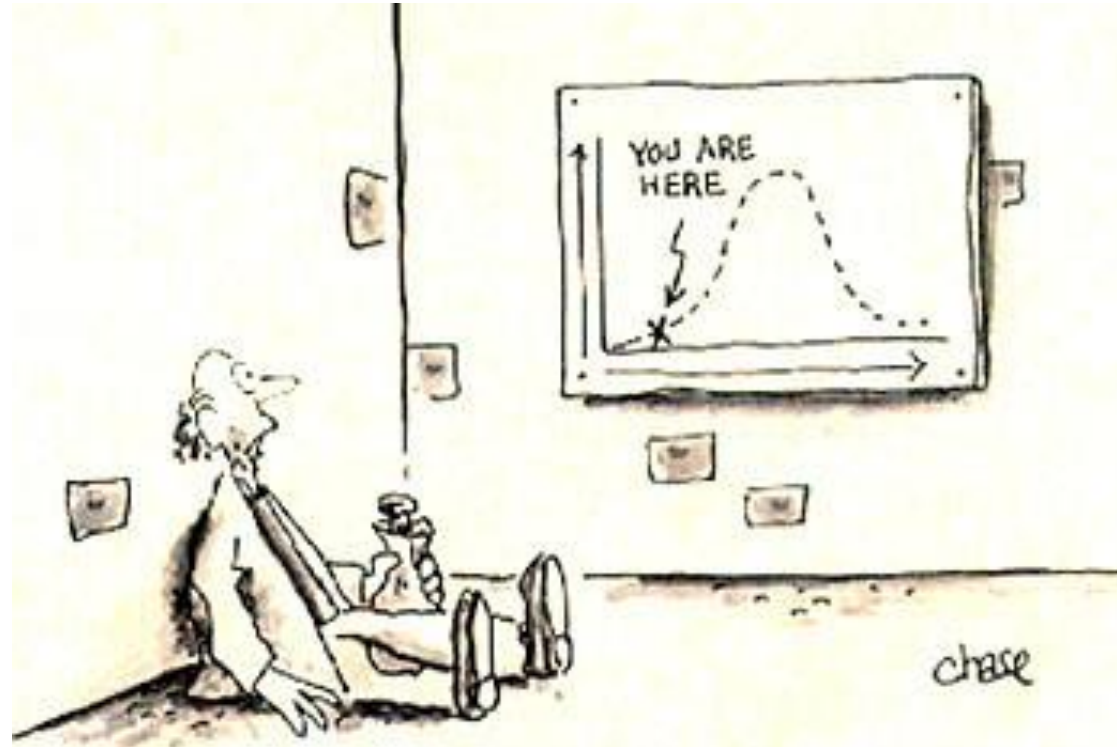
1. Are people who think voting is a civic duty and satisfied with democracy more likely to vote in the General Election?

Describe: `turnoutUKGeneral`, `dutyToVote2`, `satDemUK`

2. Are middle-aged people with higher income more likely to vote in the General Election?

Describe: `turnoutUKGeneral`, `Age`, `profile_gross personal`

Introducing Stats Help Desk



Wednesdays, 2:30-4:30pm, Amory 339

Make an appointment at <http://www.qstephelpdesk.eventbrite.co.uk>