What can we learn from recent election polling misses?

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What I'll talk about

- Accuracy of 2015 UK election polls

- Accuracy of 2016 EU referendum polls

- Mode differences

- Herding

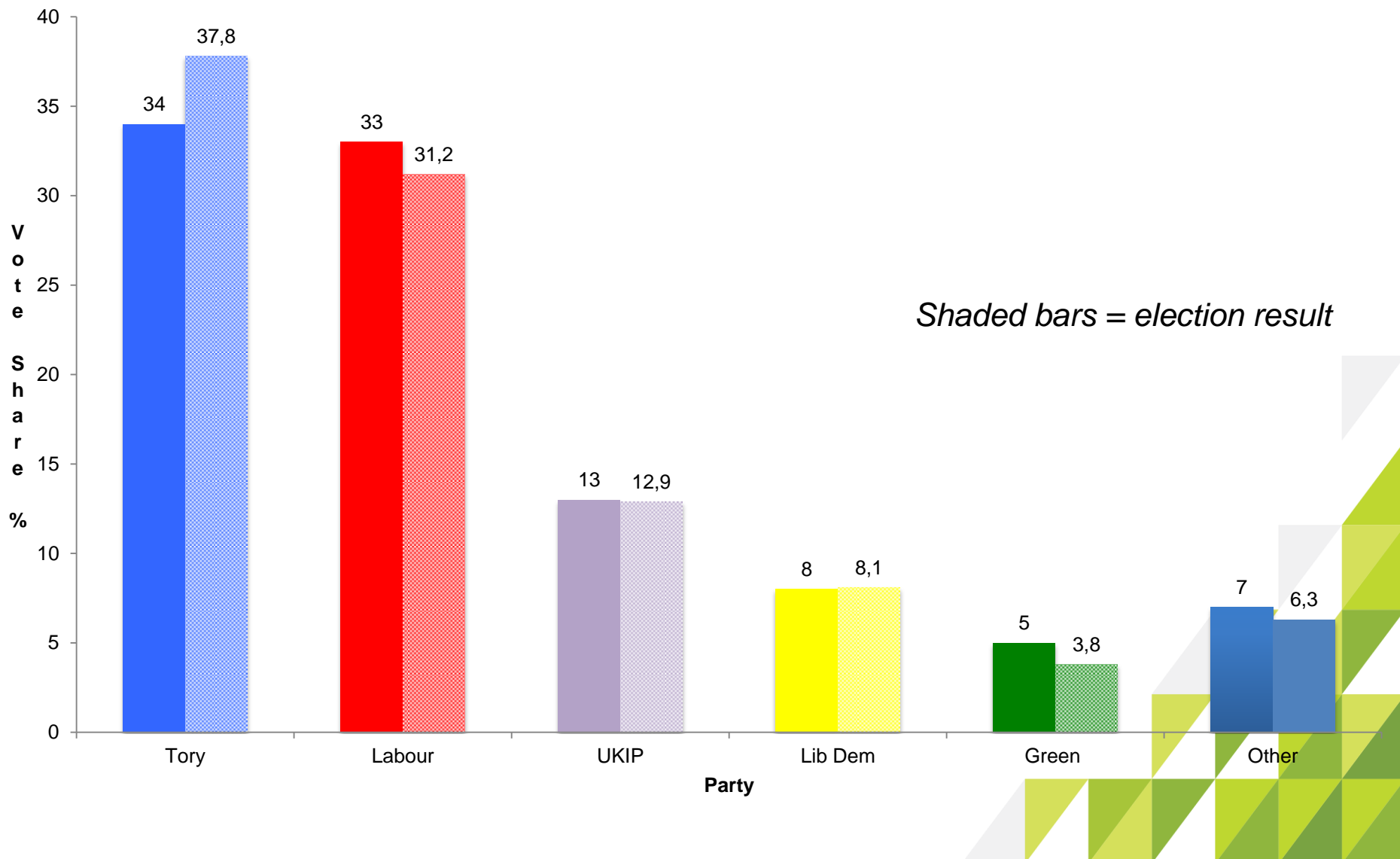# Frequency of GB Polls 1940-2015

N of election polls 1945-2010 = 3,500

N of election polls 2010-2015 = 1,942

2015 UK General Election polls

# Election Result v Average of final Polls (GB)

Shaded bars = election result

Final 2015 election polls

Pollster	Mode	Fieldwork	n	Con	Lab	Lib	UKIP	Green	Other
Populus	O	5–6 May	3,917	34	34	9	13	5	6
Ipsos-MORI	P	5–6 May	1,186	36	35	8	11	5	5
YouGov	O	4–6 May	10,307	34	34	10	12	4	6
ComRes	P	5–6 May	1,007	35	34	9	12	4	6
Survation	O	4–6 May	4,088	31	31	10	16	5	7
ICM	P	3–6 May	2,023	34	35	9	11	4	7
Panelbase	O	1–6 May	3,019	31	33	8	16	5	7
Opinium	O	4–5 May	2,960	35	34	8	12	6	5
TNS UK	O	30/4–4/5	1,185	33	32	8	14	6	6
Ashcroft*	P	5–6 May	3,028	33	33	10	11	6	8
BMG*	O	3–5 May	1,009	34	34	10	12	4	6
SurveyMonkey*	O	30/4-6/5	18,131	34	28	7	13	8	9
Result				37.8	31.2	8.1	12.9	3.8	6.3
MAE (=1.9)				4.1	2.5	1.0	1.4	1.4	0.9

MAE Con/Lab= 3.3

# Mean Absolute Error Con/Lab 1945-2015
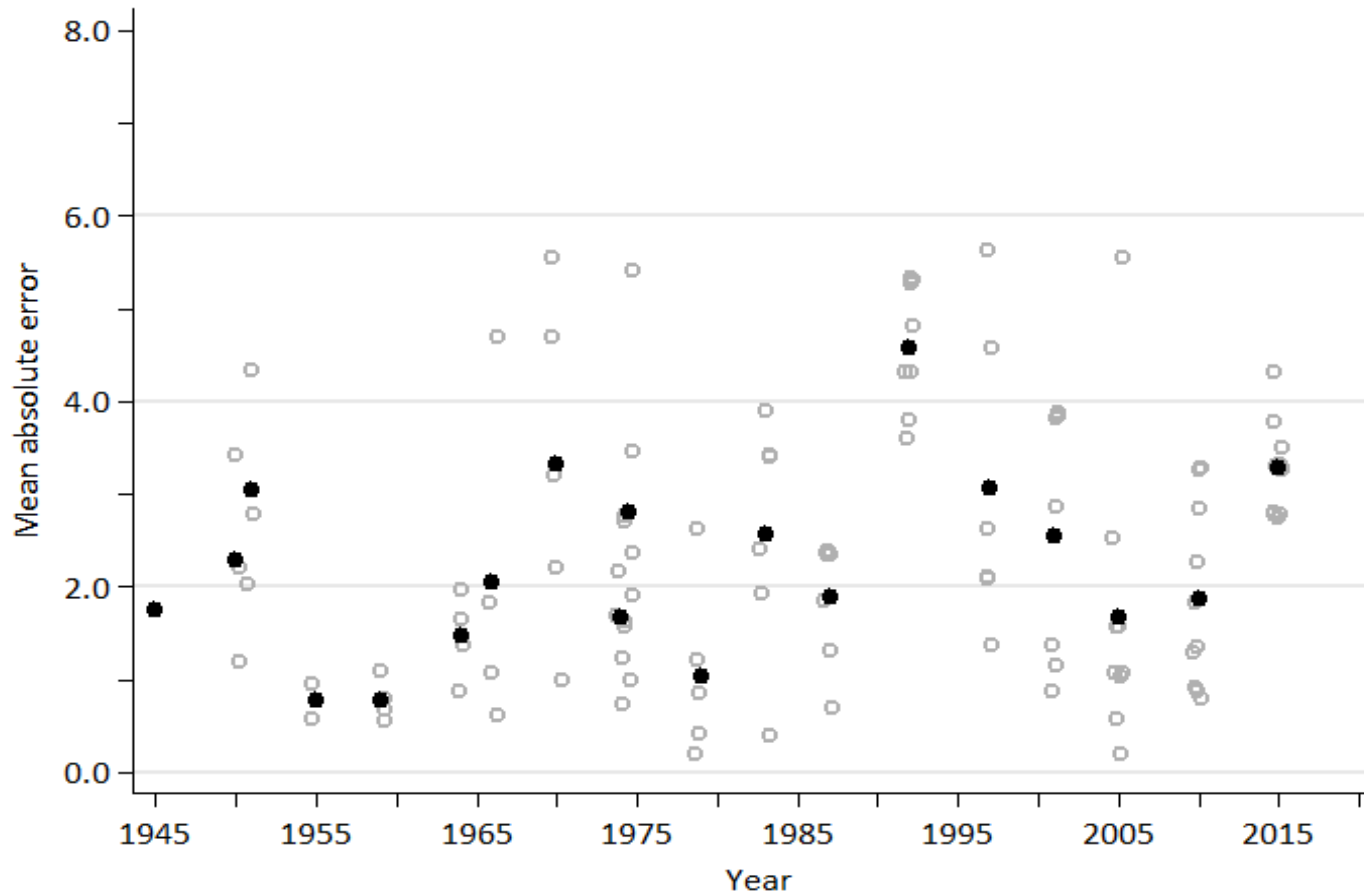
Unrepresentative Samples

Polling Inquiry:

"Our conclusion is that the primary cause of the polling miss in 2015 was *unrepresentative samples*. The methods the pollsters used to collect samples of voters systematically over-represented Labour supporters and under-represented Conservative supporters. The statistical adjustment procedures applied to the raw data did not mitigate this basic problem to any notable degree."
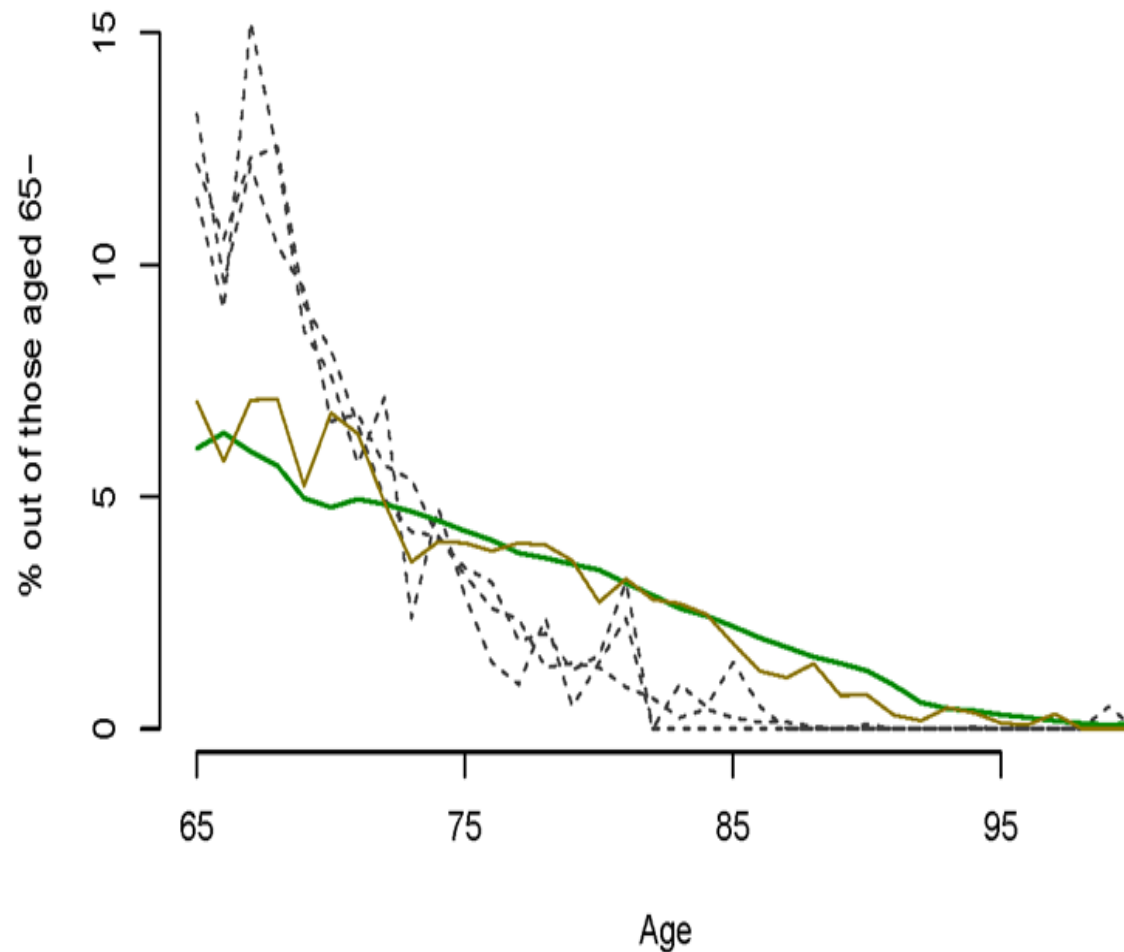
(Sturgis et al 2016)

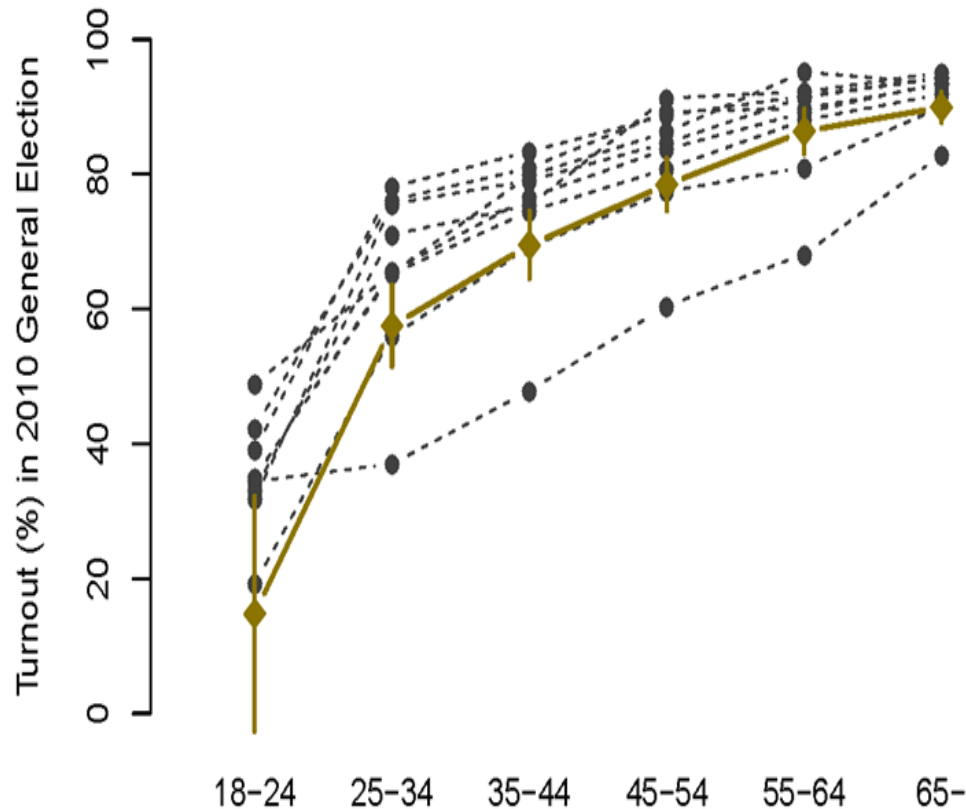# Final polls vs. Post-election random probability surveys
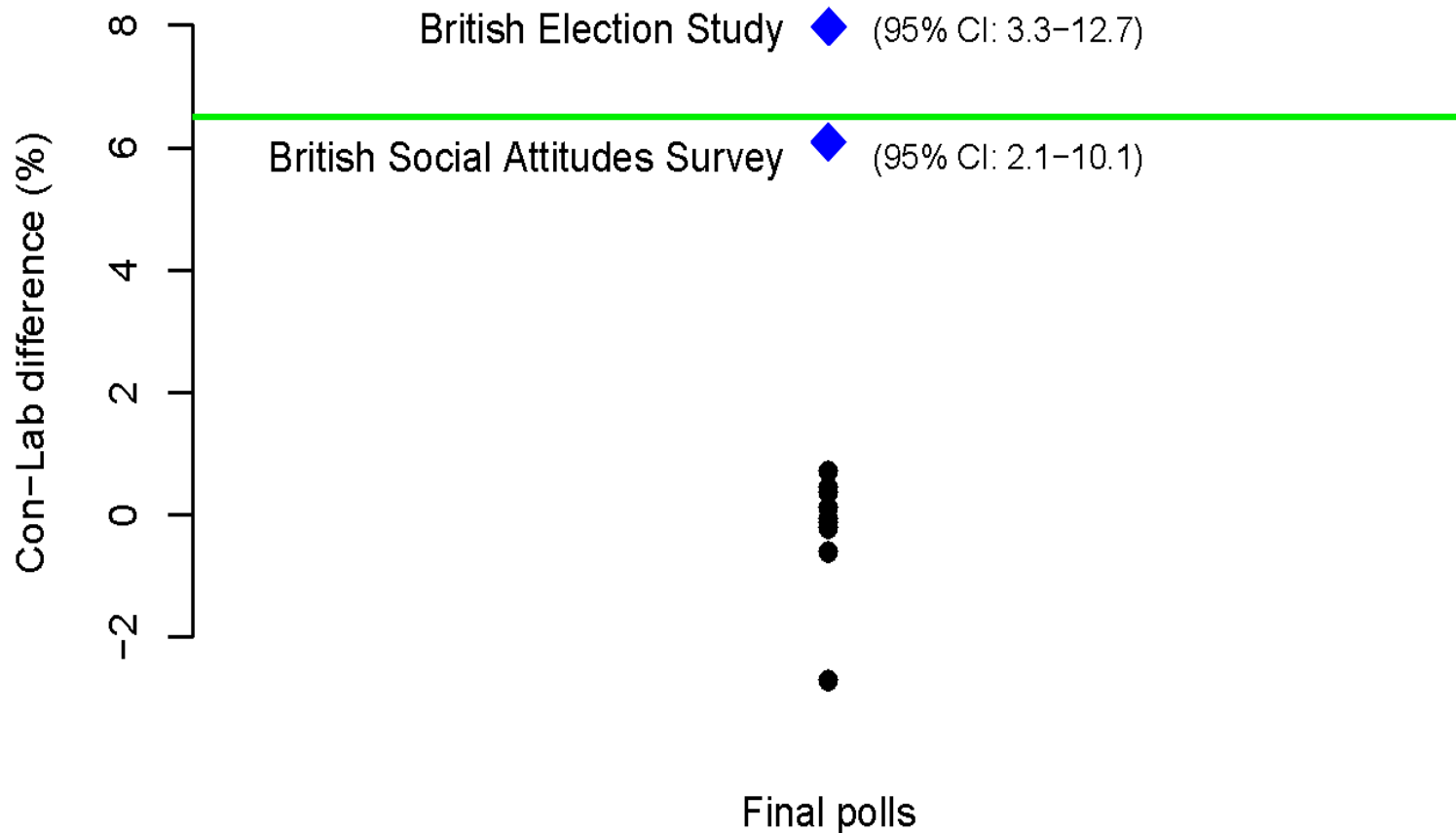
Reported vote before and after election (known voters)
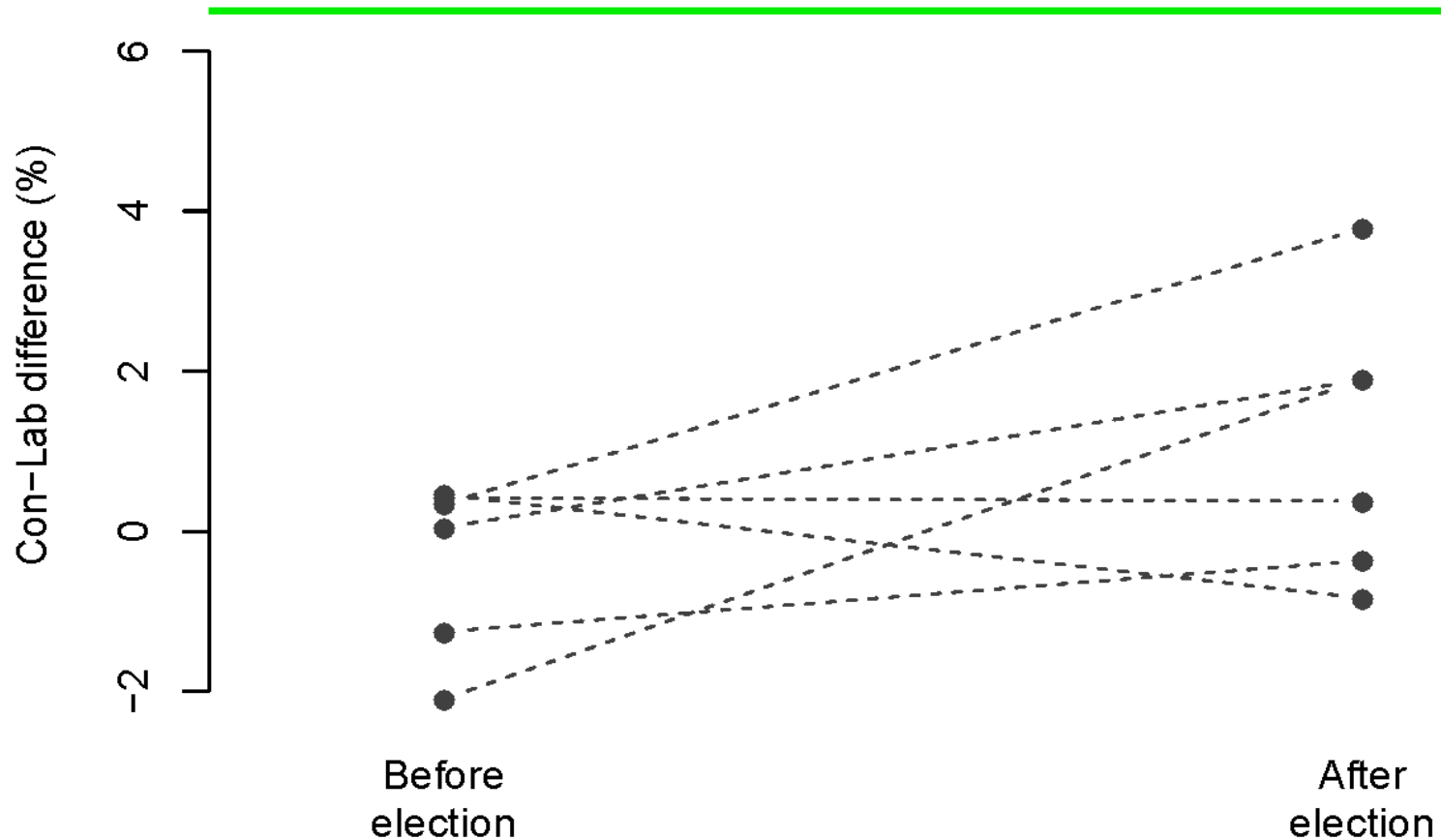
Age among those aged 65+ (three polls)

self-reported 2010 turnout by age band (polls v BES)

EU Referendum Polls

Final EU Referendum polls

|	Fieldwork	n	Mode	Remain %	Leave %	Error
ORB	14–19 June	877	P	54	46	-5.9
Survation	20 June	1003	P	51	49	-2.9
ComRes	17-22 June	1032	P	54	46	-5.9
Opinium	20-22 June	3011	O	49	51	-0.9
YouGov	20-23 June	3766	O	51	49	-2.9
Ipsos MORI	21-22 June	1592	P	52	48	-3.9
Populus	21-22 June	4740	O	55	45	-6.9
TNS	16-22 June	2320	O	49	51	-0.7
Result				48	52	
Average MAE						*3.8*

Online vs. phone
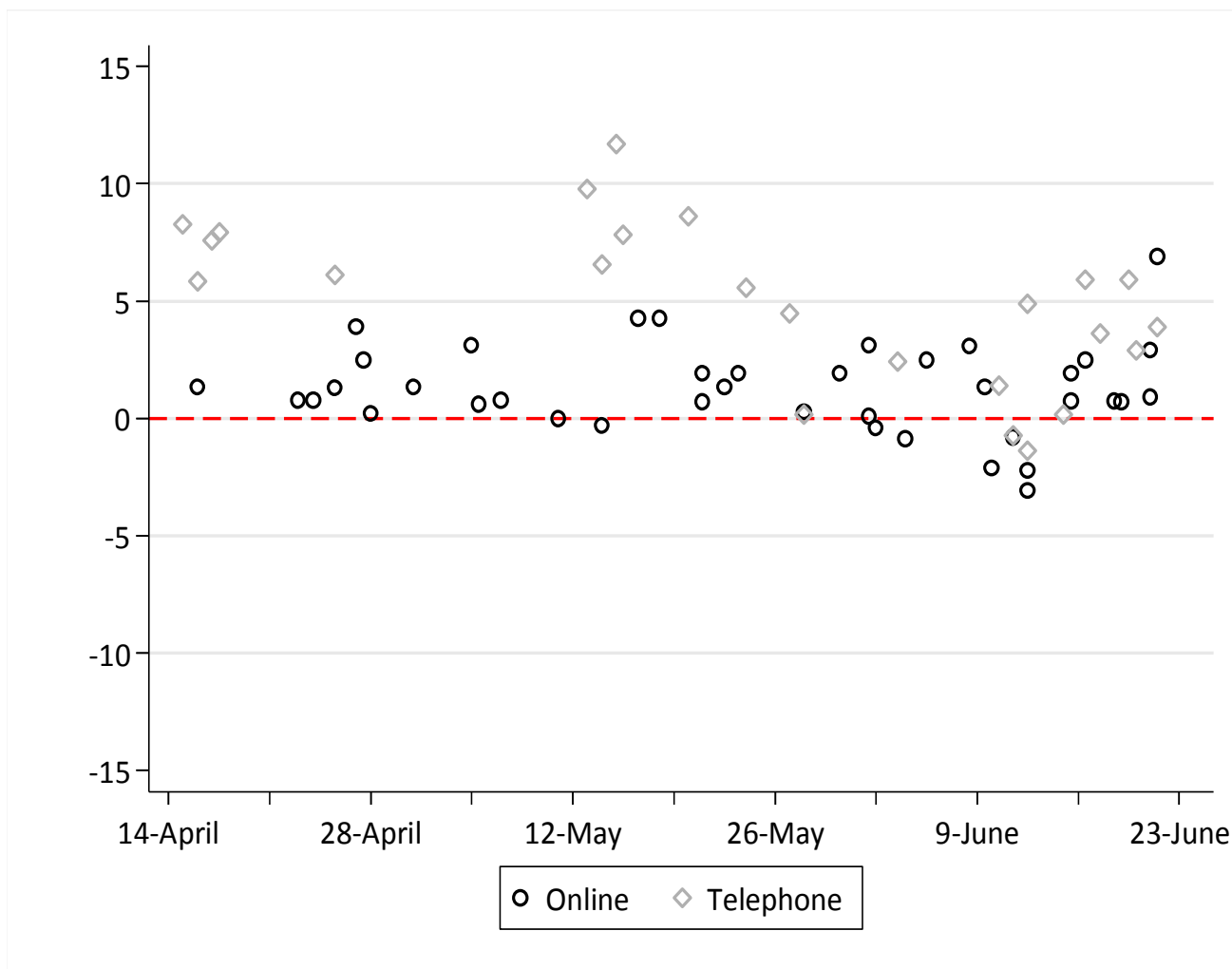
Difference in Con lead phone-online 2010-2015
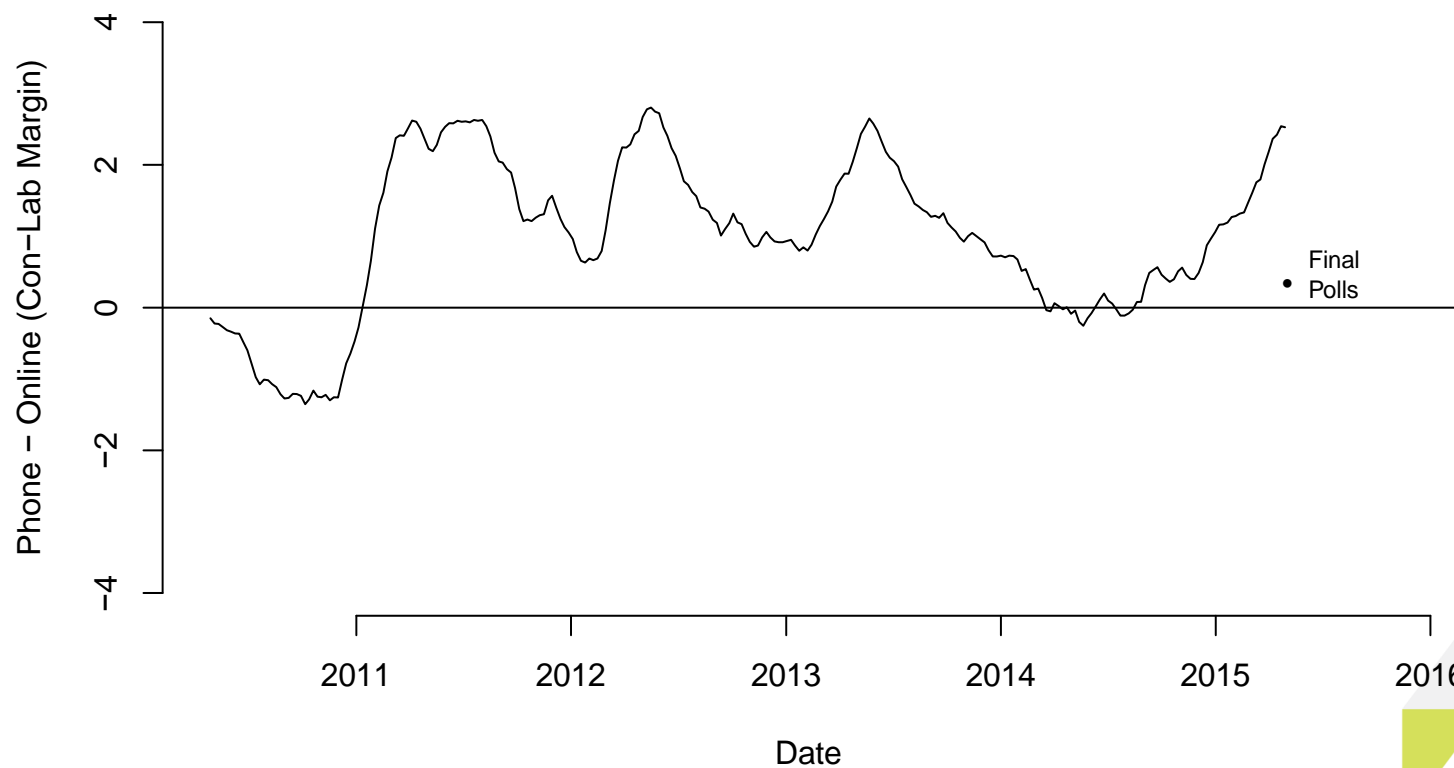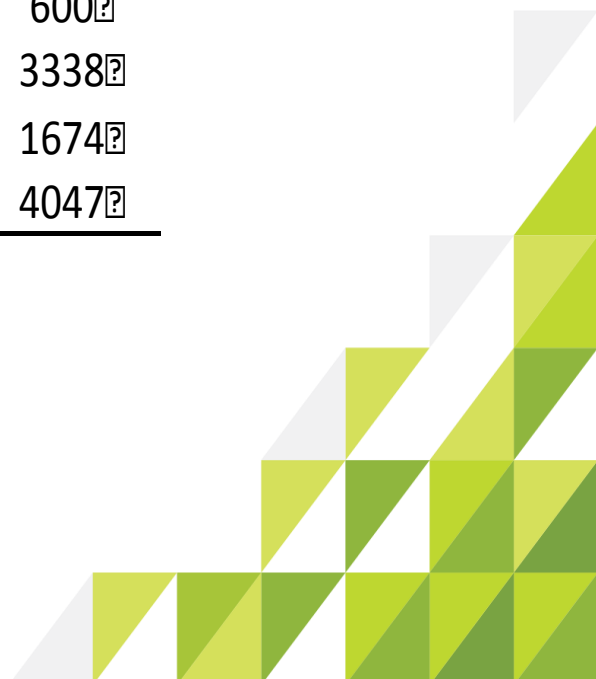
Mode comparisons

- Compare estimates for same questions across modes:

  - British Social Attitudes (f-t-f) 2015
  - British Election Study (f-t-f) 2015
  - ICM (f-t-f) 2016
  - Populus (phone) 2015
  - ORB (phone) 2016
  - Populus (online) 2015
  - ORB (online) 2016

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Interest in Politics
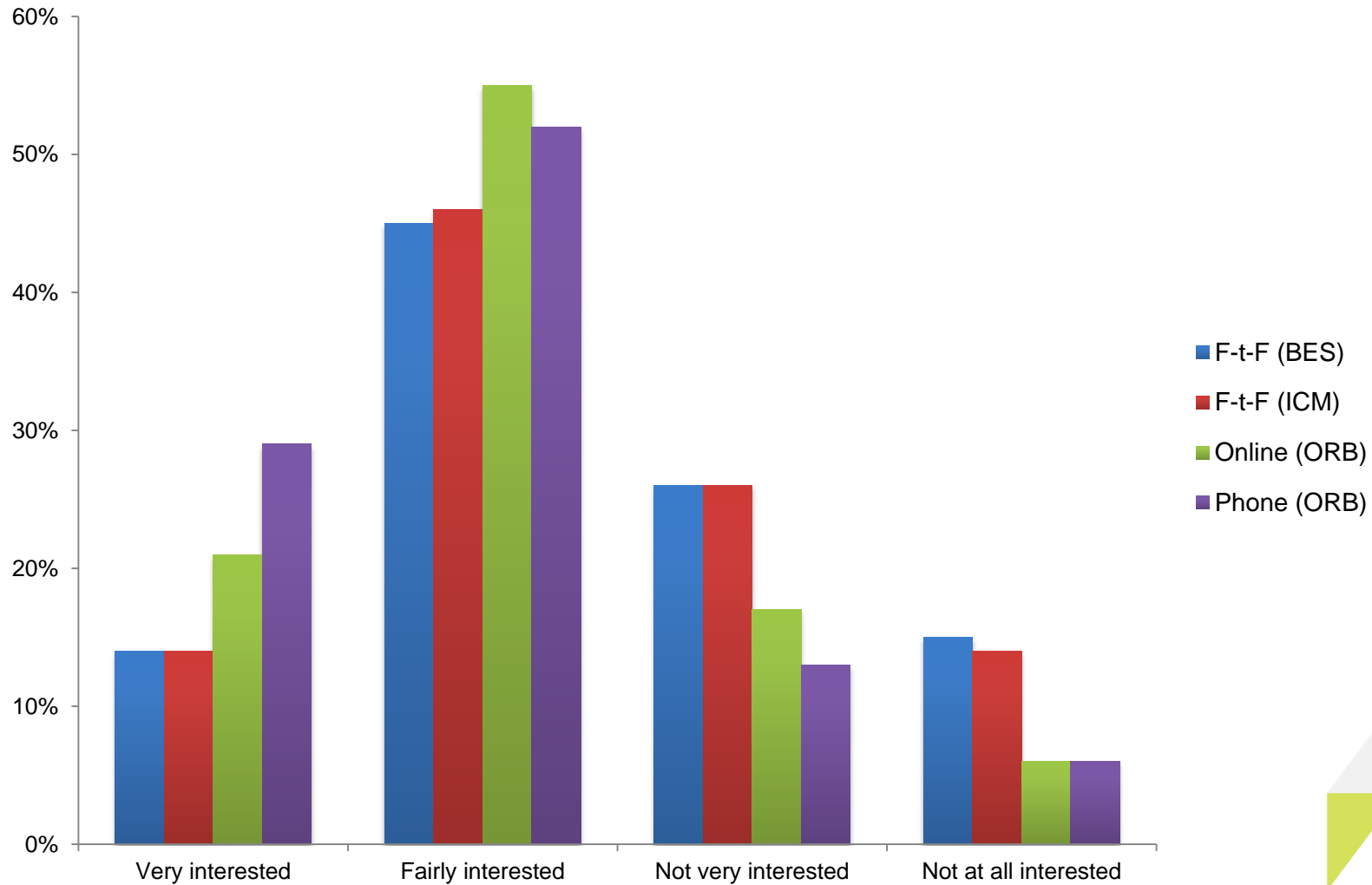
English v British identity

|	more English than British	equal	more British than English	n
Phone (ORB)	19%	51%	31%	1191
Phone (Populus)	26%	45%	29%	1004
F-t-F (BES)	27%	53%	20%	1931
F-t-F (ICM)	27%	50%	24%	600
F-t-F (BSA)	30%	47%	23%	3338
Online (ORB)	38%	44%	18%	1674
Oline (Populus)	35%	43%	21%	4047

Death Penalty & young people's respect for British values

	Strongly agree	Agree	Neither agree/disagree	Disagree	Strongly disagree	n
Respect values						
F-t-F (BSA)	20%	48%	21%	10%	1%	3612
F-t-F (ICM)	24%	40%	17%	14%	3%	2987
Phone (ORB)	26%	19%	25%	18%	12%	1483
Online (ORB)	33%	36%	19%	9%	3%	2092
Death penalty						
F-t-F (BSA)	24%	25%	17%	19%	16%	3612
Phone (ORB)	19%	14%	8%	18%	41%	1483
Online (ORB)	34%	29%	13%	9%	15%	2021

British or English identity

Mode/survey	more English than British	equal	more British than English	n
Phone (ORB)	19%	51%	31%	1191
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F-t-F (BES)	27%	53%	20%	1931
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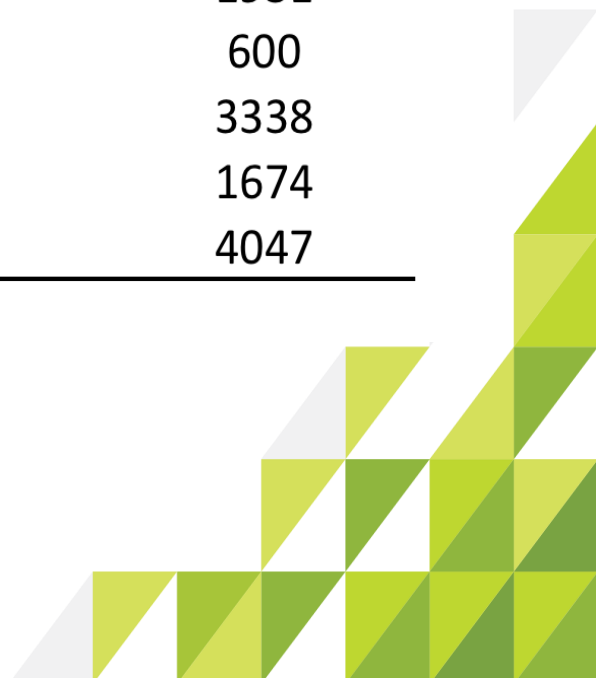
Herding

Final 2015 election polls

| Pollster	Mode	Fieldwork	n	Con	Lab	Con Lead
Populus	O	5–6 May	3,917	34	34	0
Ipsos-MORI	P	5–6 May	1,186	36	35	1
YouGov	O	4–6 May	10,307	34	34	0
ComRes	P	5–6 May	1,007	35	34	1
Survation	O	4–6 May	4,088	31	31	0
ICM	P	3–6 May	2,023	34	35	-1
Panelbase	O	1–6 May	3,019	31	33	-2
Opinium	O	4–5 May	2,960	35	34	1
TNS UK	O	30/4–4/5	1,185	33	32	1
Ashcroft*	P	5–6 May	3,028	33	33	0
BMG*	O	3–5 May	1,009	34	34	0
SurveyMonkey*	O	30/4-6/5	18,131	34	28	6
Result				37.8	31.2	

Herding - AAPOR Definition

"Herding" specifically refers to the possibility that pollsters use existing poll results to help adjust the presentation of their own poll results. "Herding" strategies can range from making statistical adjustments to ensure that the released results appear similar to existing polls to deciding whether or not to release the poll depending on how the results compare to existing polls."
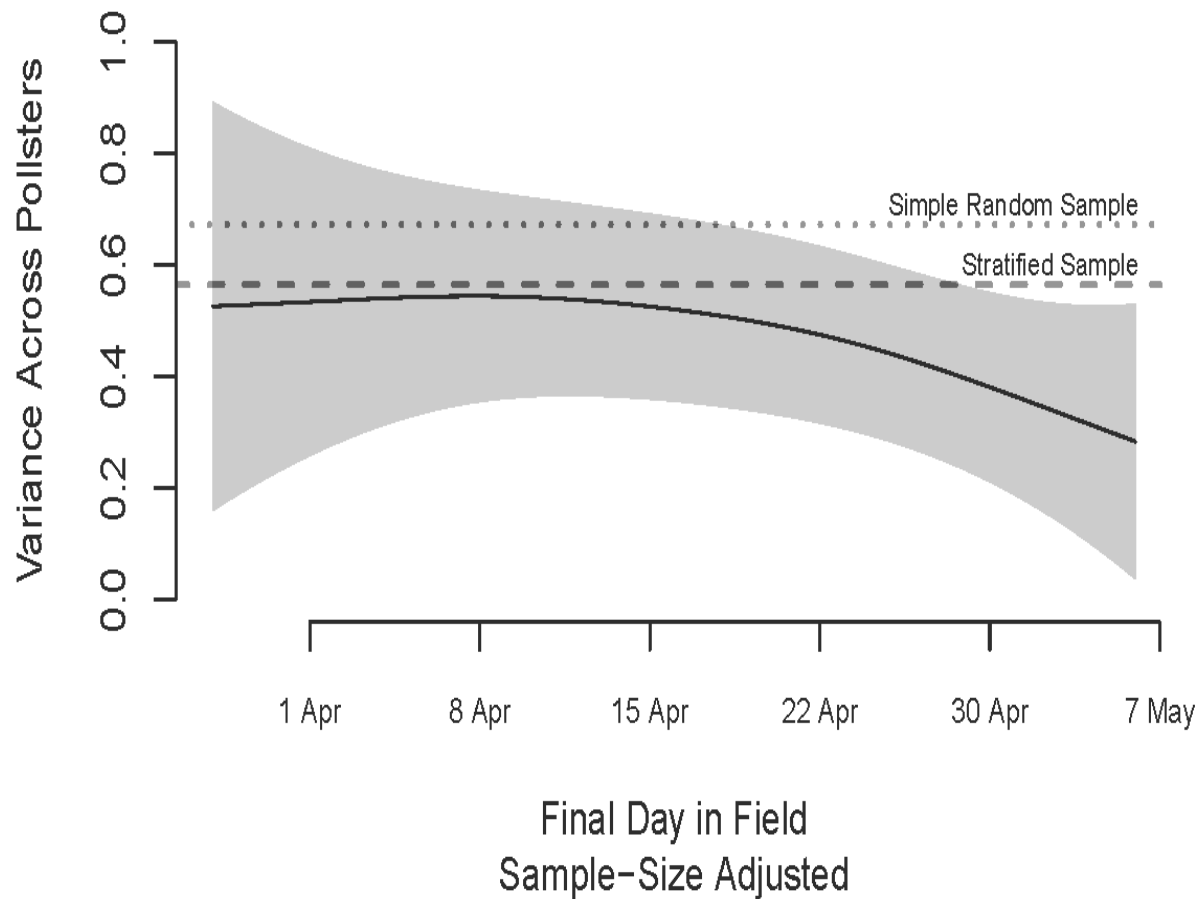
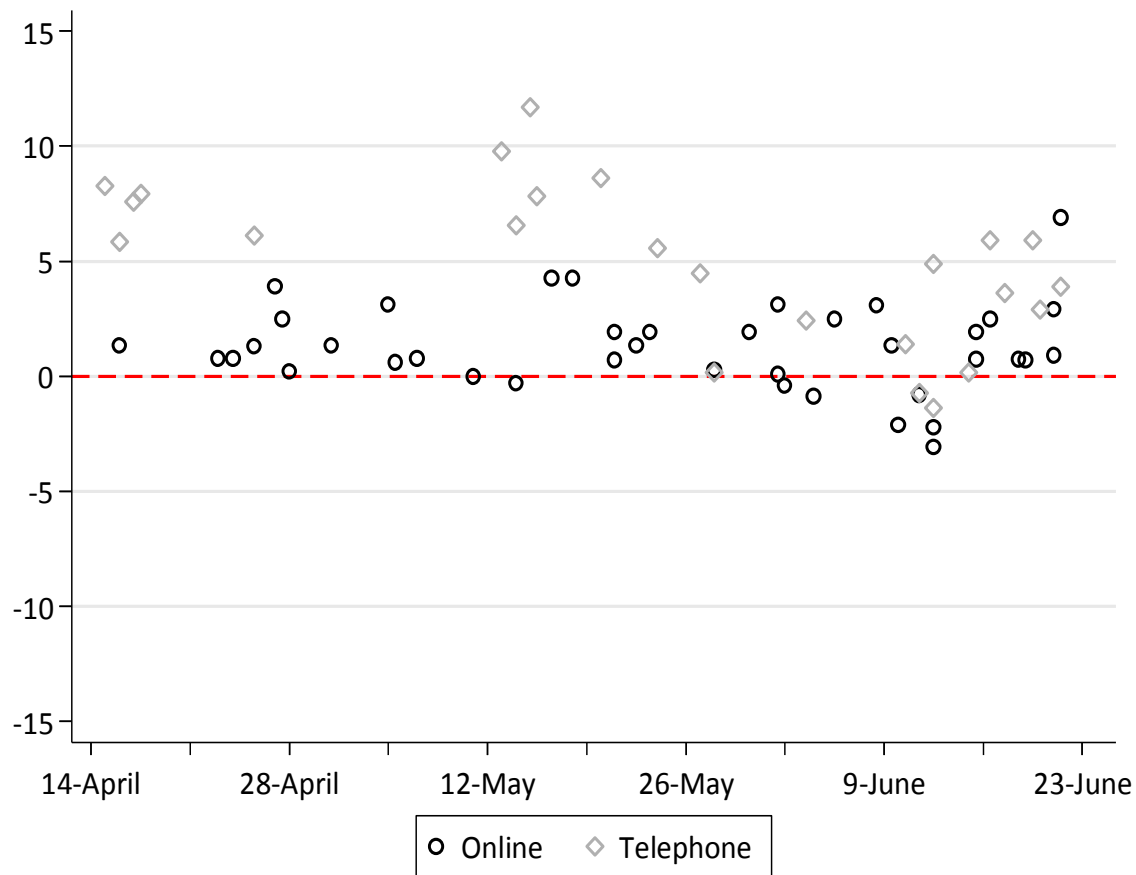# Effect of methodological changes on estimates of Con-Lab difference
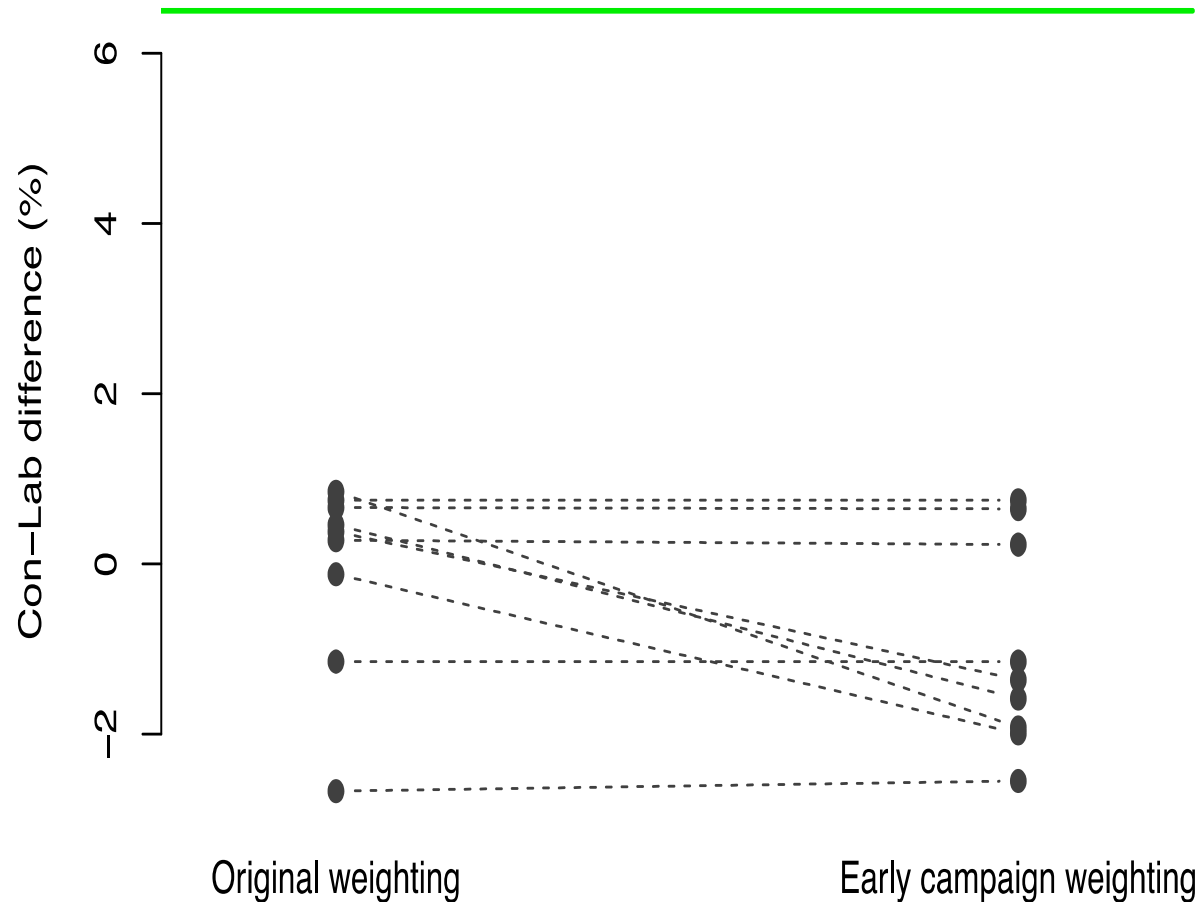
Final polls weighted identically for all pollsters
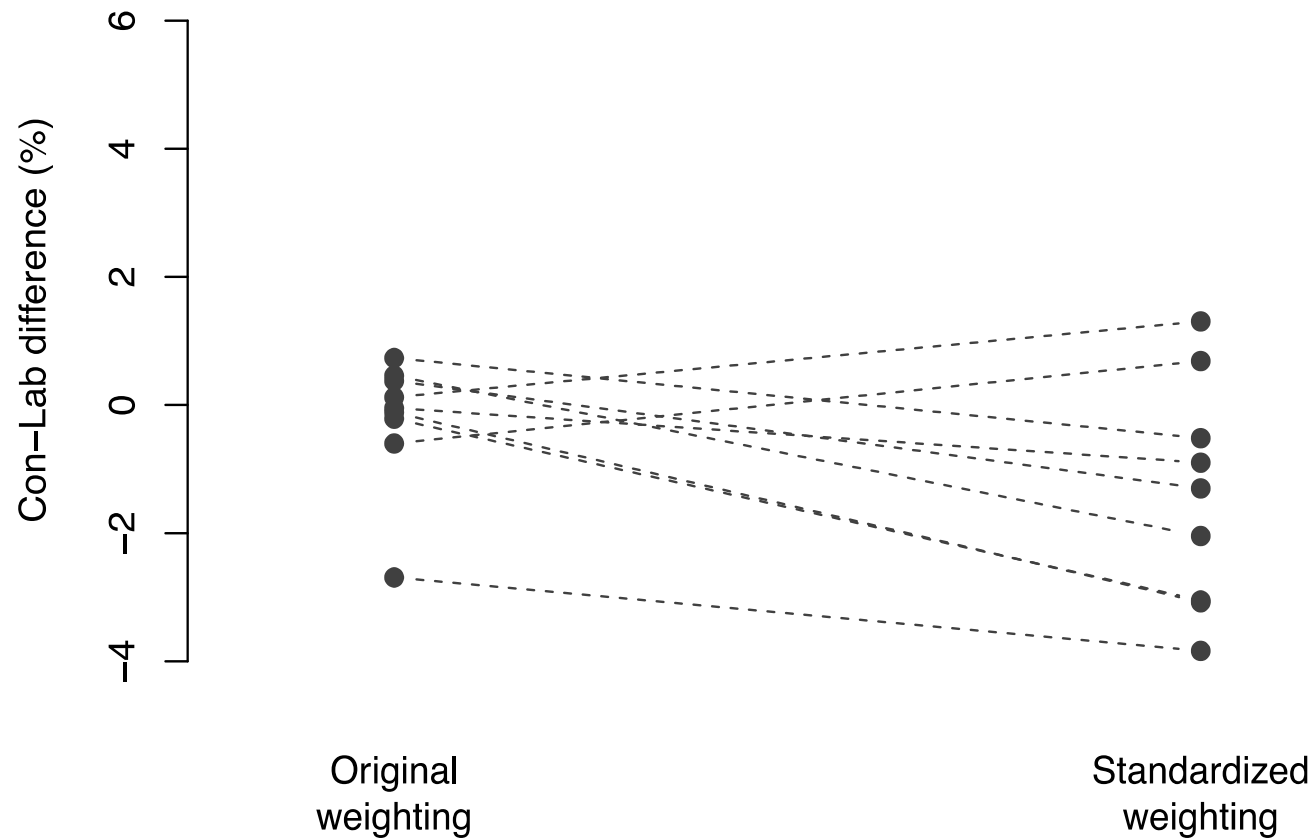
Variability of final polls

Online vs. phone

Pollster adjustments – EU Referendum

	Date	Change	Reported effect
ORB	14-19 June*	Only those who indicate they are definite to vote; *Assume DKs break 3:1 to Remain*	+2 Remain, -2 Leave
Survation	n/a		
ComRes	17-22 June*	DKs reallocated on economy question; Target population includes Northern Ireland (UK not GB)	+1 Remain, -1 Leave
Opinium	31 May - 3 June	Weighting targets include attitudinal questions (via BES)	+3 Remain, -3 Leave (31 May-3 June poll)
YouGov	20-22 June*	Target population includes NI (UK not GB); weighted by reported probability of voting.	+1 Remain, -1 Leave
Ipsos MORI	21-22 June*	Only those included for whom outcome of the referendum is very or fairly important	+1 Remain, -1 Leave
Populus	n/a		
TNS	16-22 June*	Not weighted by estimated likelihood to vote (in contrast to previous two polls)	-3 Remain, +3 Leave

*Adjustment to final poll.

Conclusions

- Unrepresentative samples was key problem for 2015 election polls

- Sampling problems also evident for EU Referendum

- Evidence online & phone get more politically engaged respondents

- Evidence online get more socially conservative respondents

- Evidence of herding – rationale for methodological changes during campaign?