Election Forecasting
GRAD-E1234

Why Forecasting Elections is a Hard Case

or:
*"Let's look at many election forecasting
failures and try to learn from them."*

Simon Munzert

Spring Semester 2017
Humboldt-University of Berlin

Session outline

Election forecast of last week
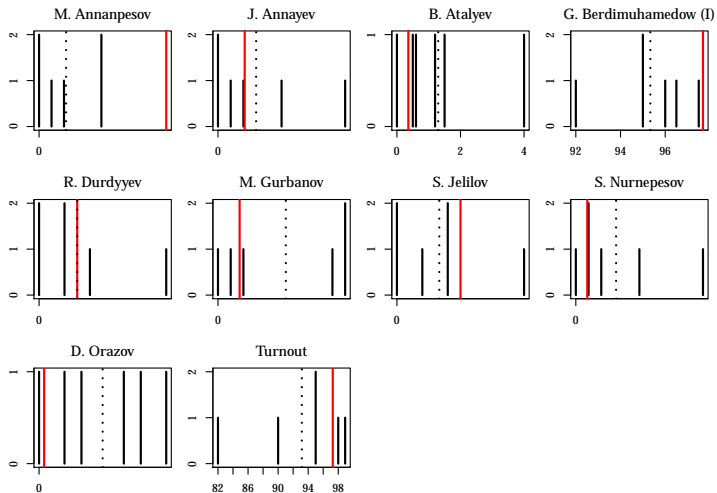
Election forecast of last week

rank	respondent	mae	rmse
1	Alexander Sacharow	0.39	0.57
2	Jeremie Bonnemort	0.44	0.59
3	Christoph Abels	0.54	0.69
4	Moritz Hemmerlein	0.70	1.12
5	Nadina Iacob	0.72	1.06
6	Akira Sasaki	1.35	2.30

$\rightarrow$ Can you come up with alternative benchmarks?

Election forecast of last week

rank	note
1	Looking at past elections in Turkmenistan reveals the incumbent candidate always received more than 89% and its average is about 94%. Taking this as a basis; other factors are included. First; the results should have a positive trend in order to shed a positive light on the president. Second; this election is internally described as the most competitive one as two other parties are allowed to run. Unclear how to evaluate this: It could justify a worser result; it could be used to show that the president receives the same or more votes even with "alternative" candidates. Third; the country is in an dire economic situation and this is not talked about in the campaign at all. So it is also unlikely to be reflected in the results.
2	Well it seems Gurbanguly Berdimuhamedow has a good thing going on..
3	A combination of news articles and information from last elections. For all non-incumbent candidates; however; I just guessed. I am also wondering whether turnout will stay the same as in the two previous elections …
4	I found no evidence that anything has changed in Turkemistan regarding voting fraud and the way the elections are organized in the country. Thus; there is no reason to assume anything will be different in the last years. Regarding other candidates; I took the ones who are most known in the country as the one who win the second and third places.
5	I used the results of previous presidential elections; coupled with profiles of the candidates.
6	I read some articles on Turkmenistani politics and looked into the past results. Although it is very obvious who is going to win the election; I thought the two other parties' candidates would gain a bit of shares each so that the president can claim the legitimacy of the election to the international society.

Election forecast of last week
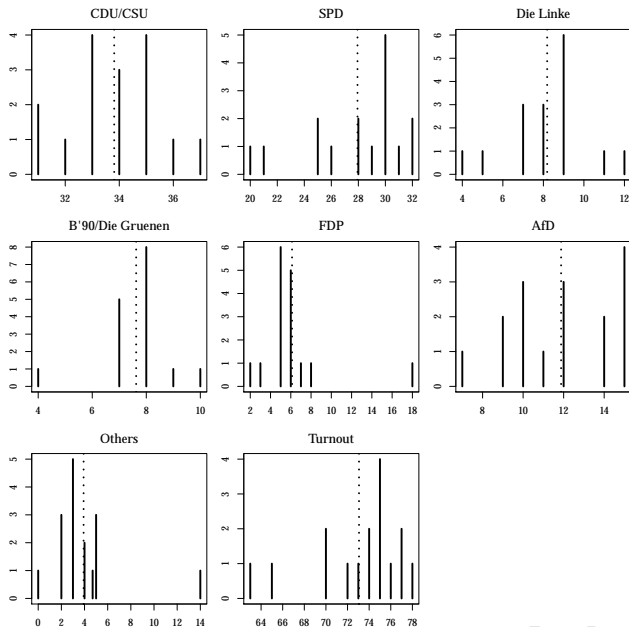
Election forecast of the week

- 19 February, Ecuador: **Tax referendum**, **President**, and Parliament
- Task for until Sunday noon: Make an educated guess about the outcome of the elections and document it here:
  https://goo.gl/forms/Y2q0JEqDJ8oDKMR52 (also on Moodle)

Potential future applications

"If you have to forecast, forecast often." – Edgar R. Fiedler in *The Three Rs of Economic Forecasting—Irrational, Irrelevant and Irreverent*, June 1977.

Lists of potential applications

- https://en.wikipedia.org/wiki/National_electoral_calendar_2017
- https://en.wikipedia.org/wiki/Local_electoral_calendar_2017

- some of them might serve as good applications for your forecasting project
- reports could be published on election forecasting blog

Last week on "Election Forecasting", S01E01

Question

Imagine you had (practically) unlimited resources and your sole task was to forecast the outcome of the US presidential election one month ahead of time with as much precision as possible. Which strategy would you implement?

Answers included:

- ask MANY people
- target hard-to-reach population
- monitor social media channels
- collect data from betting markets
- poll indirect evidence of voting behavior, e.g., issue preferences

Popular failures in election polling

The Literary Digest

NEW YORK   OCTOBER 31, 1936

Topics of the day

LANDON, 1,293,669; ROOSEVELT, 972,897

Final Returns in The Digest's Poll of Ten Million Voters

Well, the great battle of the ballots in the Poll of ten million voters, scattered throughout the forty-eight States of the Union, is now finished, and in the table below we record the figures received up to the hour of going to press.

These figures are exactly as received from more than one in every five voters polled in our country—they are neither weighted, adjusted nor interpreted.

Never before in an experience covering more than a quarter of a century in taking polls have we received so many different varieties of criticism—praise from many; condemnation from many others—and yet it has been just of the same type that has come to us every time a Poll has been taken in all these years.

A telegram from a newspaper in California asks: "Is it true that Mr. Hearst has purchased THE LITERARY DIGEST?" A telephone message only the day before these lines were written: "Has the Repub-lican National Committee purchased THE LITERARY DIGEST?" And all types and vari-eties, including: "Have the Jews purchased THE LITERARY DIGEST?" "Is the Pope of Rome a stockholder of THE LITERARY DIGEST?" And so it goes—all equally ab-surd and amusing. We could add more to this list, and yet all of these questions in recent days are but repetitions of what we have been experiencing all down the years from the very first Poll.

Problem—Now, are the figures in this Poll correct? In answer to this question we will simply refer to a telegram we sent to a young man in Massachusetts the other day in answer to his challenge to us to wager $100,000 on the accuracy of our Poll. We wired him as follows:

"For nearly a quarter century, we have been taking Polls of the voters in the forty-eight States, and especially in Presidential years, and we have always merely mailed the ballots, counted and recorded those returned and let the people of the Nation draw their conclusions as to our accuracy. So far, we have been right in every Poll. Will we be right in the current Poll? That, as Mrs. Roosevelt said concerning the Presi-dent's reelection, is in the 'lap of the gods.'

"We never make any claims before elec-tion but we respectfully refer you to the opinion of one of the most quoted citizens to-day, the Hon. James A. Farley, Chair-man of the Democratic National Commit-tee. This is what Mr. Farley said October 14, 1932:

"'Any sane person can not escape the implication of such a gigantic sampling of popular opinion as is embraced in THE LIT-ERARY DIGEST straw vote. I consider this conclusive evidence as to the desire of the people of this country for a change in the National Government. THE LITERARY DIGEST poll is an achievement of no little magnitude. It is a Poll fairly and cor-rectly conducted.'"

In studying the table of the voters from

Literary Digest polling debacle

Background

- weekly magazine *Literary Digest* correctly predicted the outcomes of all presidential elections between 1920 and 1932 using straw polls
- 1936 poll indicated that Republican candidate Alfred Landon would be the overwhelming winner
- in line with conventional wisdom "As Maine goes, so goes the national"

Anatomy of a debacle

- samples: (1) own readers, (2) registered automobile owners, (3) registered telephone users
- everyone was mailed a mock ballot and asked to return marked ballot
- response: 10 million individuals polled, 2.4 million responded

Literary Digest polling debacle

Aftermath

- actual outcome: President Franklin Roosevelt carried 46 out of 48 states and won 60.8% of the popular vote
- outcome correctly predicted by George Gallup with sample of 50k people

Literary Digest polling debacle

Table 1. 1936 Presidential Vote by Car and Telephone Ownership (in Percent)

Presidential Vote	Car & Phone	Car, No Phone	Phone, No Car	Neither
Roosevelt	55	68	69	79
Landon	45	30	30	19
Other	1	2	0	2
Total *N*	946	447	236	657

SOURCE: American Institute of Public Opinion, 28 May 1937.

Table 2. Presidential Vote by Receiving *Literary Digest* Straw Vote Ballot or Not (in Percent)

Presidential Vote	Received Poll	Not Receive Poll	Do Not Know
Roosevelt	55	71	73
Landon	44	27	25
Other	1	1	3
Total *N*	780	1339	149

SOURCE: American Institute of Public Opinion, 28 May 1937.

Table 3. Presidential Vote by Returning or Not Returning Straw Vote Ballot (in Percent)

Presidential Vote	Did Return	Did Not Return	Do Not Know
Roosevelt	48	69	56
Landon	51	30	40
Other	1	1	4
Total *N*	493	288	48

SOURCE: American Institute of Public Opinion, 28 May 1937.

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Take-away lessons

- Big Data ain't necessarily good data
- selection bias and nonresponse bias are important

"Dewey Defeats Truman"

Scenario

- Dewey win expected (Truman unpopular, split of democratic party)
- Truman gaining momentum in the last weeks before election day (Dewey's lead in polls dropped from 17pp in Sep to 5pp in Oct); still: gambling odds 15:1 against Truman
- Truman won by 303–189–39 majority
- swing of less than 1% of popular vote in Ohio, Illinois, and California would have resulted in Dewey victory

By Associated Press photo by Byron Rollins, Fair use, https://en.wikipedia.org/w/index.php?curid=701915

German general election 2005

Scenario

- early federal election triggered after Schröder failing motion of confidence
- Conservatives started campaign with 21% lead over SPD in polls
- CDU/CSU losing momentum, still: CDU/FDP coalition expected

All institutes, all parties
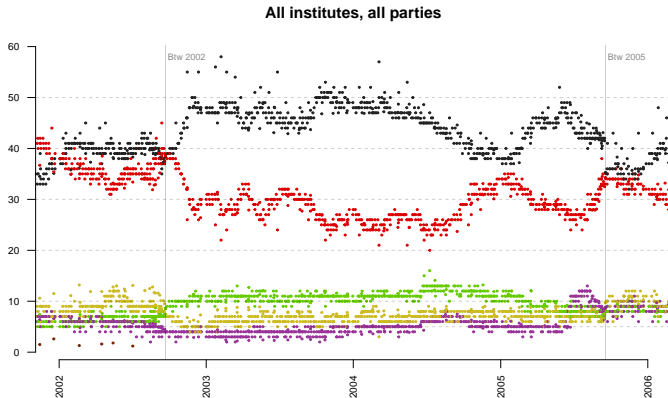
German general election 2005

Polls and result

Institut	Allensbach	Emnid	Forsa	Forsch'gr. Wahlen	GMS	Infratest dimap	Mittelwert	Wahl-ergebnis
Veröffentlichung	16.09.2005	13.09.2005	16.09.2005	09.09.2005	12.09.2005	08.09.2005		18.09.2005
CDU/CSU	41,5 %	42,0 %	41–43 %	41 %	42 %	41,0 %	41,6 %	35,2 %
SPD	32,5 %	33,5 %	32–34 %	34 %	33 %	34,0 %	33,3 %	34,2 %
GRÜNE	7,0 %	7,0 %	6–7 %	7 %	8 %	7,0 %	7,1 %	8,1 %
FDP	8,0 %	6,5 %	7–8 %	7 %	7 %	6,5 %	7,1 %	9,8 %
Die Linke. PDS	8,5 %	8,0 %	7–8 %	8 %	7 %	8,5 %	7,9 %	8,7 %
Sonstige	2,5 %	3,0 %	k. A.	3 %	3 %	3,0 %	3,0 %	3,9 %

Structural forecast (Gschwend/Norpoth 2005)

### Prognosemodell auf dem Prüfstand: Die Bundestagswahl 2005

Thomas Gschwend / Helmut Norpoth

Unser Vorhersagemodell für Bundestagswahlen sagte das Stimmenergebnis der amtierenden Regierungskoalition (SPD und Grüne zusammen bei 42,3 %) bei der Wahl am 18. September bis auf 0,3 Prozentpunkte richtig voraus und das bereits lange vor der Wahl. Dieses Modell bezieht drei Faktoren ein: (1) die Popularität des amtierenden Bundeskanzlers, (2) den langfristigen Wählerrückhalt der Regierungsparteien, und (3) ihre Abnutzung im Amt. Das Antreten der neuen Linkspartei machte eine Bereinigung der Kanzlerpopularität notwendig (unter der Annahme, dass die Anhänger der Linkspartei überwiegend Kanzler Schröder statt seiner Herausforderin wünschen). Unsere Prognose sagte in jedem Fall den beiden regierenden Parteien genügend Stimmen voraus, um einen Sieg des Oppositionslagers (CDU/CSU und FDP) unrealistisch erscheinen zu lassen, solange die neue Linkspartei soviel Stimmen bekommt, wie die Umfragen signalisierten.

German general election 2005

Plischke/Rattinger: '"Zittrige Wählerhand" oder invalides Messinstrument?'

- claim: projections by polling institutes vary too much
- Erhardt (1998): asymmetric deactivation of supporters (unit/item nonresponse)
- treatment of undecideds in polls questionable
- argument for the "normal vote" (Converse 1966): fictional result based on long-term support; short-term factors canceling each other out
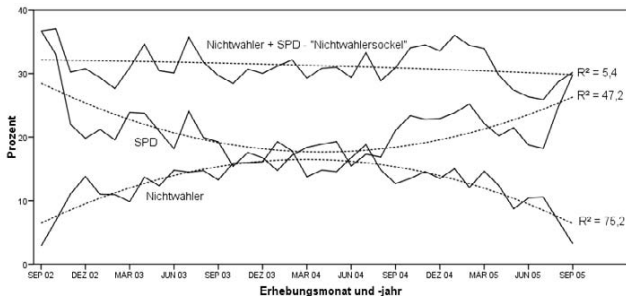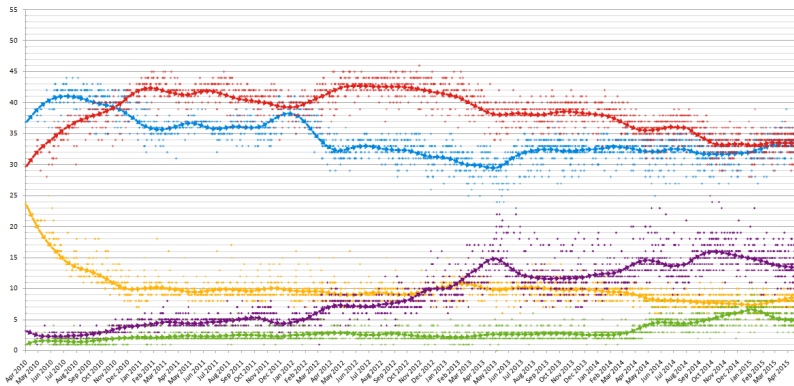

Quelle: Politbarometer.

UK general election 2015

Scenario

- election anticipated as difficult to predict; hung parliament expected
- strong SNP expected after 2014 Scottish independence referendum
- LibDems expected to be marginalized after huge success in 2010

UK general election 2015

Polls

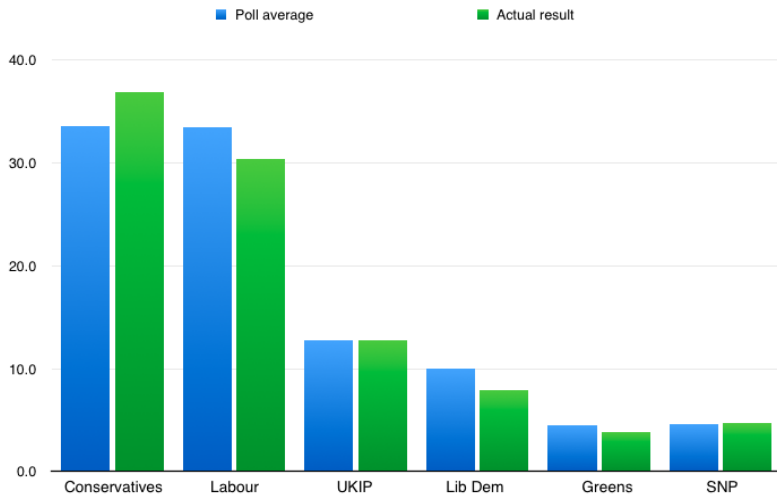| Party	BMG[145]	TNS-BNRB[146]	Opinium[147]	ICM[122]	YouGov[148]	Ipsos MORI[149]	Ashcroft[150]
Conservative	33.7	33	35	34	34	36	33
Labour	33.7	32	34	35	34	35	33
UKIP	12	14	12	11	12	11	11
Liberal Democrats	10	8	8	9	10	8	10
Green	4	6	6	4	4	5	6
SNP	4	4	4	5	5 PC	5	5
Other	2.6	2	1	2	1	0.5	3
Lead	Tie	Con +1	Con +1	Lab +1	Tie	Con +1	Tie

UK general election 2015

Academic and non-academic forecasts

Party	ElectionForecast[132][155] (Newsnight Index)	Electoral Calculus[133]	Elections Etc[156]	The Guardian[157]	May2015.com[136]	Sporting Index[137]	First Past the Post[138]	Mean
Conservatives	278	280	285	273	273	286	279	279.1
Labour	267	274	262	273	268	269	270	269.0
SNP	53	52	53	52	56	46	49	51.6
Liberal Democrats	27	21	25	27	28	26.5	25	25.6
DUP	8	Included under Other	GB forecast only	Included under Other	Included under Other	No market	8.7	
UKIP	1	1	3	3	2	3.3	4	2.5
SDLP	3	Included under Other	GB forecast only	Included under Other	Included under Other	No market	2.7	
Plaid Cymru	4	3	3	3	3	3.35	3.1	3.2
Greens	1	1	1	1	1	1.15	0.7	1.0
Other	Sinn Féin 5 UUP 1 Sylvia Hermon 1 Speaker 1	18 (including 18 NI seats)	1, although its GB forecast only, 18 NI seats	18 (including 18 NI seats)	19 (including 18 NI seats & Respect 1)	No market	Sinn Féin 4.7 Hermon 1 Speaker 1 UUP 1 Respect 0.6	
Overall result (probability)	Hung parliament (100%)	Hung parliament (92%)	Hung parliament (91%)	Hung parliament	Hung parliament	Hung parliament	Hung parliament	Hung parliament

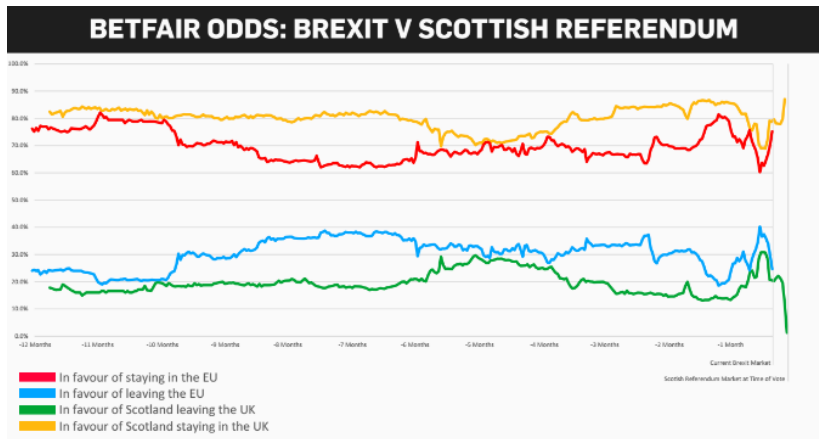# UK general election 2015

Aftermath

UK EU Referendum 2016

Is it only the polls that fail?

UK EU Referendum 2016

The UK's EU referendum: June 23rd 2016
Voting intention %

44 Remain

44 Leave

9 Don't know

BMG; ComRes; ICM; Ipsos
MORI; Survation; TNS; YouGov
(polls of >900 adults only)

UK EU Referendum 2016

Will Britain Remain a Member of the European Union? (Odds)
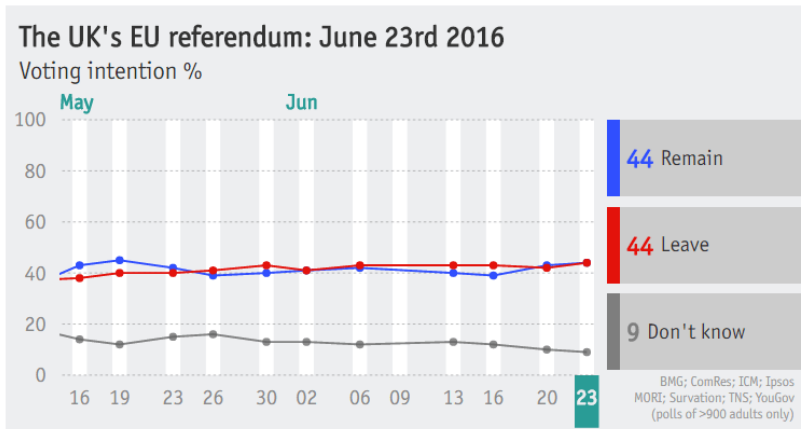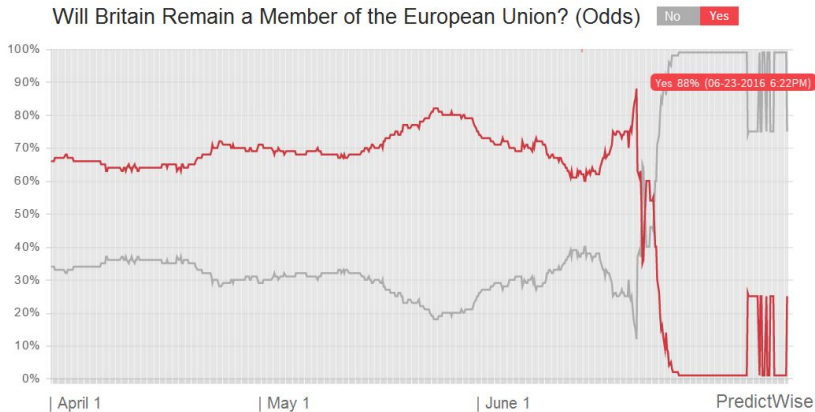
Gelman and King 1993: Why are polls so variable when votes are so predictable?

Gelman and King 1993

Gelman and King 1993

1. What is the paradox that is addressed in this article?

Gelman and King 1993

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2. Summarize the four classes of "flawed explanations"—measurement theories, journalists' theories, political science theories, and rational actor theories. Why are they probably insufficient to explain the paradox?

Gelman and King 1993

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3. Why might Gelman and King's empirical strategy to "test" the competing theories, in itself, be flawed?

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3. Why might Gelman and King's empirical strategy to "test" the competing theories, in itself, be flawed?

4. What is the alternative explanation they offer? Do you buy it?

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5. What does Gelman and King's hypothesis mean for the practice of election forecasting?

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4. What is the alternative explanation they offer? Do you buy it?
5. What does Gelman and King's hypothesis mean for the practice of election forecasting?
6. Sum up the forecasting strategy they present!

Discussion

Discussion

Question 1

Can we forecast unexpected outcomes? If yes, how? If no, what's the point of (election) forecasting?

Question 2

Aside from "merely" being an intellectually or statistically difficult task to forecast electoral outcomes, what other factors make election forecasting a hard case? Take both a scholarly and journalist/pundit perspective!
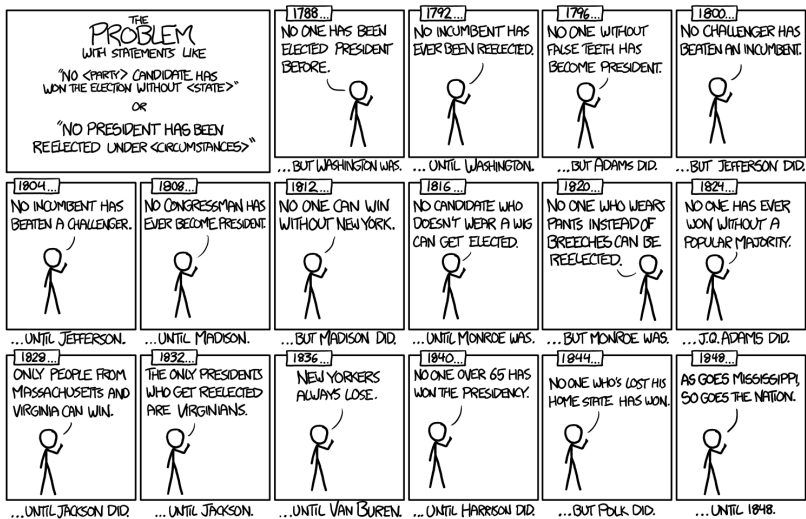
Discussion - advice

Question 1

- the nature of (silly) expectations (see also following slide)
- "black swan" events (Nassim Taleb) vs. "seemingly unexpected events" (Tetlock)
- evaluation of historical forecasting performance can help → fool me once, shame on you; fool me twice, shame on me
- if expectations are built on all available information → difficult

Question 2

- one-shot game
- concurring with pundits
- staying neutral - but difficult when, e.g., contradicting polls
- communicating uncertainty

The problem with electoral precedents and derived expectations

https://xkcd.com/1122/

See you next week!