

The PollyVote: Progress and Plans

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PollyHistory



In January 2004, Alfred Cuzán reads Armstrong's review of Fair's book, *Predicting Presidential Elections* and sends paper on fiscal policy to Armstrong who proposes that they conduct a competition for best policy model: Done but failed in its objective.

Randy Jones, author of *Who Will Be in the White House*, joins the team.

ForecastingPrinciples.com hosts the 2004 PollyVote in its political forecasting SIG (special interest group).

Polly the Parrot joins as the team's mascot.

Andreas Graefe joins in 2007 and becomes Polly's caretaker and innovator.

PollyVote.com site created before 2008 election.

Polly forecasts the 2008 and 2012 elections.

2013: Polly forecasts the German federal election.

Please use this page for suggestions related to revisions, corrections, improvements and useful sources

To: Scott (Armstrong@wharton.upenn.edu)

From:

Email:

Objectives

1. Demonstrate the value of evidence-based methods that can be used in many situations:

- Combining (counterintuitive; seldom used in organizations)

[Larrick & Soll \(2006\)](#)

- Damping (often ignored)
- Index methods (seldom used)

2. Assess the gains from combining forecasts under favorable conditions.

3. Provide forecasting models that aid decision makers. Thus, our focus is on long-term forecast accuracy.

4. Introduce the PollyVote to other countries, especially where cheating is likely.

Procedure for combining forecasts

Combining must use a formal pre-specified approach.

Use only evidence-based methods

Use methods that differ with respect to:

- Type of method
- Source and type of data

Use many methods

Conditions for combining forecasts

Desirable conditions

Two or more evidence-based methods available.

Uncertainty (the more the better). However, combining can be useful even when the best method is known.

Rules used for combining forecasts usually not critical

Unweighted average often the best course of action

[\[Clemen, 1989\]](#)

Differential weights can be useful under certain conditions

[\[Collopy & Armstrong, 1992\]](#)

Prior research on the effects of combining

Meta-analysis of 30 studies [\[Armstrong, 2001\]](#)

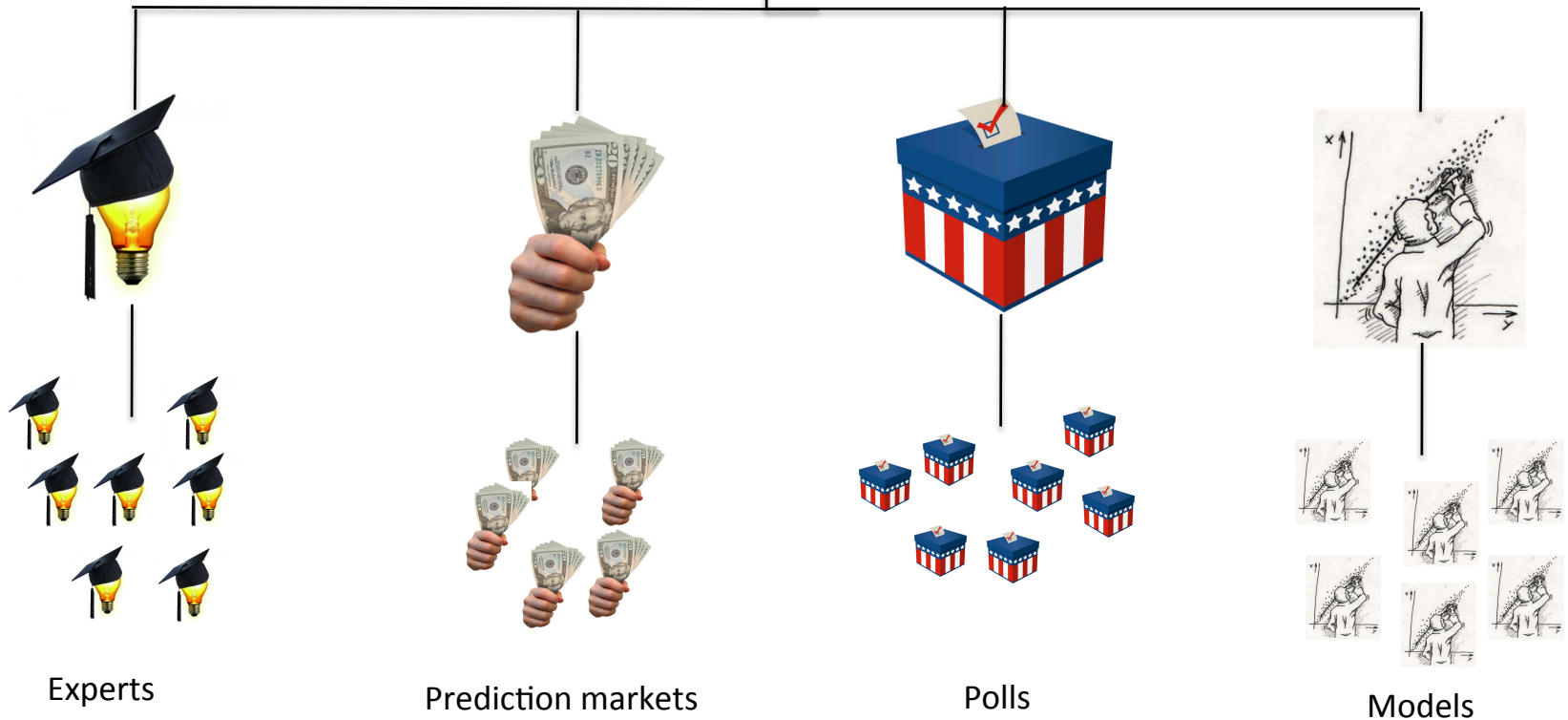
Averages of two or more component forecasts (mostly few forecasts from the same methods)

Error reduction compared to the typical individual forecast:

12%

How the PollyVote works

Polly averages forecasts within and across four component methods



Accuracy of the PollyVote (1992-2012)

v. combined component forecasts

Across the last 100 days prior to each of the past 6 elections, the PollyVote missed the final election outcome on average by 1.2 percentage points.

The PollyVote was more accurate than each of the (already combined) component forecasts.

	Average	1992	1996	2000	2004	2008	2012
PollyVote	1.2	2.0	1.2	1.4	0.5	1.7	0.4
Combined polls	1.6	1.5	1.7	1.4	0.9	3.2	1.0
IEM (7-day average)	1.3	2.8	0.8	1.2	0.6	1.2	1.4
Combined models	2.3	3.6	1.3	4.0	3.2	1.0	0.6
Combined experts	1.5				1.4	1.7	1.3

Accuracy of the PollyVote (1992-2012)

v. typical component forecasts

Across the last 100 days prior to each of the past 6 elections, the PollyVote more accurate than polls, experts, and models by more than 50%.

Compared to prediction markets, error was reduced by 16%

[\[Graefe et al., 2013\]](#)

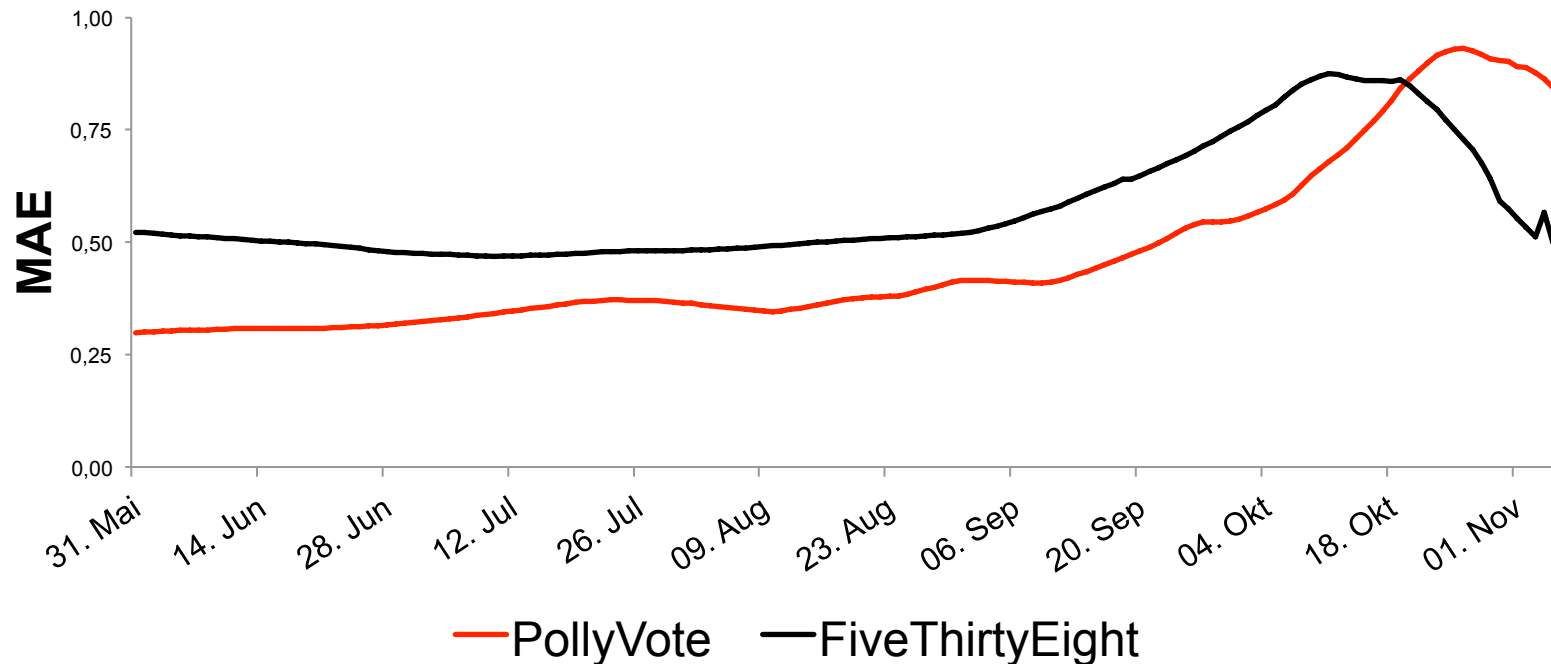
Component	Mean error reduction (in %) through the PollyVote
Typical poll	59
Typical model	58
Typical expert (only 2000-2012)	55
Iowa Electronic Markets	16

Errors of PollyVote v. FiveThirtyEight (2012)

Since May 31st, Polly's error was 43% below the error of FiveThirtyEight.

However, FiveThirtyEight was more accurate during the last two weeks before the election.

Mean absolute error across remaining days in the forecast horizon



Has the accuracy problem been solved?

1. Given mistakes and cheating, there will always be some error
2. It is hard to see how the accuracy can be improved much more.
3. Focus should be how forecasting can aid political decision-making.

The PollyProblem: Polly is not exciting

Polly predicted the correct election winner at *all times since she got involved in forecasting*, starting

In 2004: 8 months ahead

In 2008: 14 months ahead

In 2012: 22 months ahead

She is not a clever talker. No silver tongue.

Recent developments

Prior to the 2012 election, we added a fifth component, **index models**.

We expected index models to contribute to the accuracy of the PollyVote because they rely on a different method and different data.

They did. To be covered in our talk on index models.

Effects on practice

Combining was rare when we started. Today, combining is becoming standard practice *in political forecasting*.

- Combining polls (e.g., RCP, Pollster - Huffington Post, FiveThirtyEight)
- Combining model forecasts [[Montgomery et al., 2012](#)]

Campaign staffs follow the PollyVote.

New methods to add to the PollyVote

Add “citizen forecasts”

Vote expectation surveys are among the most accurate methods for forecasting elections to date

(see talk on [vote expectation surveys](#))

Additional index models:

PollyPersonality

PollyPersuasion (Persuasiveness + Expenditures)

(see talk on [index models](#))

Consider segmentation, such as used in the Simulmatics project (Pool et al. 1964)

Possible structure for the PollyVote 2016

#	Component	Added
1.	Intentions (traditional polls, damped)	2004
2.	Betting / Prediction Markets	2004
3.	Econometric models	2004
4.	Experts (PollyPanel)	2004
5.	Index models	2012
6.	Citizens (vote expectation surveys)	2016

PollyInternational

For the first time, Polly just left the U.S. and now predicts the German federal election. Visit her at PollyVote.de

Polly likes to travel. Where to go next?

Polly welcomes research by others

Polly believes in full disclosure and in aiding replications and extensions.

Contact [Andreas Graefe](#), LMU Munich, Germany

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Obtaining feedback

Suggestions?

Please submit the feedback pages to us.

Copies of these slides will be provided at PollyVote.com