

A Huge Poll

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The poll predicted Landon would win 62% to 38%.

The actual election results were Landon 43% vs. 57% for FDR.

Post Election Cover



What Went Wrong?

The literary digest poll was biased. The people polled were not representative. Here is how they picked their sample:

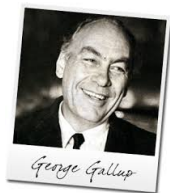
1. People listed in phonebooks
2. People with magazine subscriptions
3. People with club memberships

Lessons

- ▶ Large samples reduce **random error**.
- ▶ Large samples don't fix **bias**.

Quota Sampling

In 1936, George Gallup had a different method for polling that he called Quota Sampling.



Idea: Carefully select your sample so that you have exactly the right characteristics you want: right percentages of Men/Women, Urban/Rural, Black/White, etc. The goal is to match the true population of voters as closely as possible.

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- ▶ Gallup predicted: Truman 44.5% vs. Dewey 49.5%
- ▶ Actual results: Truman 49.9% vs. Dewey 44.5%



Lessons

- ▶ Large samples reduce **random error**.
- ▶ Large samples don't fix **bias**.
- ▶ The only way to avoid bias in a sample is **random sampling**.

Simple Random Samples (SRS)

The best kind of sample is a **simple random sample** (SRS) from the population.

Definition. A **simple random sample** is a random sample selected from a list of every individual in the population.

A SRS is guaranteed not to have any **sample bias**.