



SCREW UP ONE QUESTION AND A POLL IS WORTHLESS

On Election Day 2004, at 5 pm on the East Coast, Zogby International released the results of its final poll: John Kerry would win the electoral college vote, 311 to 213, though George W. Bush might eke out a slim popular-vote margin. Oops. But the lesson isn't that polls are misleading or bad. **We don't need to stop polling; we need to poll better.**

Taking the public's pulse is a \$6.6 billion industry that combines people skills and a certain artfulness with statistics. Good opinion surveys don't just ask questions - Who are you going to vote for? Have you had more than 20 sexual partners? - and then spit out numbers. Pollsters make adjustments, like giving more weight to answers from particular groups so the sample reflects the overall population they're trying to represent. Mathematicians and survey methodologists devote entire careers to getting more predictive and meaningful results.

For example, a couple of weeks before the election, *Science* published an article by Drazen Prelec, an MIT psychologist. Prelec describes how to put the statistical thumbscrews on poll respondents - "a Bayesian truth serum," he calls it. (Bayesian math is a branch of statistics and probability theory.) In addition to posing a direct question to the respondent, the pollster also asks for a guess about how other people will answer the same question - "What percentage of people in the population do you think have had more than 20 sexual partners?" People telling the truth tend to overestimate how common their own answer was; the math's complicated, but basically we all think we're typical.

Prelec's article addressed a small but vital problem. Mr. and Ms. America don't tell outrageous lies to pollsters, but they do tend to shade their answers to please interviewers - only a touch, maybe, but enough to change results. People say they plan to vote when they don't, or that they're paying close attention to an issue when they're not. But these little white lies are critical because pollsters use that information to determine if a respondent is a "likely voter," the linchpin question in any political survey. Screw that up, and the poll is worthless. In fact, many experts now suspect that volatility in political polls, especially in close races, is a consequence of flaws in the way pollsters identify likely voters.

Deeper problems threaten to kill off the modern poll altogether. Call-screening and an increase in cell phone-only households are chipping away at the population of respondents. When pollsters do a quickie three-day tracking poll, nobody's picking up - and every automated redial costs money. Samples get smaller; results get skewed.

So the industry is starting to adapt. A Menlo Park, California, company called Knowledge Networks is decoupling the random calls from the surveys. **KN first makes as many random phone calls as necessary to assemble a panel of 40,000 people. Then those panel members are asked to click through Internet-based surveys. Online, people can take their time, and there's no human to please. In other words, the company has a representative sample of respondents on standby.**

The cell phone problem is tougher. Pollsters are divided, but many believe calling cell numbers isn't kosher - or even legal - because it's tantamount to charging people to take the survey. Polling companies are experimenting with toll-free callback numbers, or calling on nights and weekends.

So here's a proposal: Right now, TV networks, magazines and newspapers pay their own polling companies. Some are better than others, as you'd expect. **What if instead they pooled resources into massive random-digit-dialed-plus-panel polls? Surveyors wouldn't have to worry about call screening. With a scientifically valid sample at the ready, stat geeks like Prelec could tweak the algorithms for cleaner results. And the paying media would have such detailed data that they wouldn't miss issues like "moral values" that can swing an election.**

The point is, something went kooky with the polls in November. They were overly volatile until a few days before the end, and then the exit polls called it for the wrong guy.

So big deal - the craven political hacks who use polls to divide the public got bad info. But fixing polls can do more than give cynics better tools. At their best, polls don't just tell us who people are going to vote for, but *why*. We can wait to find out who the winner is until Election Day. When we figure out what actually moves citizens, politicians won't be able to just pander to interest groups. They'll have to come up with some ideas.

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