

## Methodology

Survey research by telephone has run afoul of technology, but the Internet creates some new opportunities. Where are we headed? (Kenneth Blake, Kathleen Frankovic, Tom Johnson and Dan Riffe)

# Two Suggestions

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By Ken Blake

First, a disclaimer: I don't know where survey research by telephone is heading. But I have two suggestions for anyone heading there with it.

The first pertains to those of us who use surveys for predicting elections. We've gotten pretty good at describing who intends to vote, and how, at a particular time prior to election day. But many variables besides voter intent may reflect or affect what eventually happens in the voting booth. An election is a complex, volatile system, much like the atmosphere or the economy. So like meteorologists and economists, perhaps we need models that simultaneously consider a wide range of indicators. We've already added "likelihood of voting" to measures of voter preference. Why not go further? Krosnick (2008) has suggested that Hillary Clinton picked up 3 percent in New Hampshire just by being listed high on the Democratic ballot. Fan's ideodynamic model can use media content to explain high percentages of the variance in subsequent public opinion patterns (Fan & Tims, 2002). Political scientists have documented strong links between economic variables and election outcomes (Nadeau & Lewis-Beck, 2001). Fundraising success probably matters. Patterns in traffic and content on blogs, YouTube, and other Web nodes could have predictive value, too. Most scientifically conducted polls are still right most of the time. But we could start working now on models that survey these and perhaps other variables in addition to voter preference and intent. Doing so may help us be ready if the reliability of traditional polling begins to slip.

The other suggestion concerns those of us who use surveys to build theory by exploring relationships among variables. I've lifted it from a recent book by Hayes (2005). Among other things, Hayes notes that statistical inference can concern itself with any of three different goals: 1.) Determining whether patterns in a random sample exist in the population the sample came from. 2.) Determining whether a relationship between variables in an experiment could be attributed to the experiment's random group assignment, and 3.) Determining whether a relationship between two or more variables in nonrandom, nonexperimental data could be attributed to a random process pairing the dependent and independent variables. Media research has tended to value the first kind of inference, tolerate the second, and shun the third. Perhaps we should rethink that bias. Randomly sampling the population of some geographic area is getting increasingly difficult and expensive. We'll be more likely to have the resources we need to do it well if we do it only when population inferences are absolutely critical to our research goals. When the goal is to assess relationships among variables - as it often is in media research - experimental designs or analysis of patterns in nonrandom data may make more sense.

It will take a better seer than I am to predict the course of telephone survey research over the next decade and beyond. But keeping these two suggestions in mind may help us better navigate that course.

## References

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Krosnick, J.A. (2008). "Ballot Changes Cited in Vote's Discrepancy With Polls." ABCNews Polling Unit. Retrieved Jan. 26, 2008 from <http://www.abcnews.go.com/PollingUnit/Decision2008/story?id=4107883&page=1>

Nadeau, R. & Lewis-Beck, M.S. (2001). National economic voting in U.S. presidential elections. *The Journal of Politics* 63 (1), 159–181.

# Raising the Ante: Survey Research and Poll Methodology

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**Kathleen A. Frankovic, CBS News**  
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The polls in this year's presidential election and the way they have been reported in the media – online and off -- illustrate the new problems that media polls face and the solutions that have been offered to deal with them. Despite all the journalistic questioning, the polls still exert a lure over American journalists. They remain the only acceptable journalistic assessment of discovering where the public stands.

Here are some fundamental characteristics of 2008 poll reports:

1. A reliance on poll aggregation (see CNN "Poll of Polls"), a concept borrowed from election coverage in Great Britain. (One recent example: <http://edition.cnn.com/2008/POLITICS/02/04/national.poll/index.html>). The [realclearpolitics.com](http://realclearpolitics.com) poll averages are repeated on cable television as summaries of where the races stand in various states. And [pollster.com](http://pollster.com) tracks the daily changes in all pre-primary polls. This reliance on aggregation, while simplifying the presentation of polling, makes the assumption that all polls are equal, including those with different and sometimes questionable methodologies.
2. Increased number of polls. Prior to the February 5 California primary, ten separate polls were reported in the final last week, according to [pollster.com](http://pollster.com). There were 24 New Hampshire polls were released in the five days between the Iowa caucuses and the New Hampshire primary. The Gallup Organization now has the "Gallup Daily" which reports daily estimates of the Democratic and Republican horseraces.
3. The polls that are more likely to get extensive coverage are those that fit a certain narrative. Prior to the New Hampshire primary, it was the Gallup Poll there that indicated a 13-point Obama lead that set the stage for the last few days of media. Shrinking Clinton leads nationally receive more coverage than continuing leads (this is probably analogous to the research that finds more coverage of declining presidential approval rating than rising ratings). In addition, for the most part media coverage of marginals and trends ignores (as it historically has) margins of error.
4. However, the breathless narrative of poll reporting is accompanied by criticism and skepticism when polls don't reflect the precision with which journalists imbue them. After Hillary Clinton won the New Hampshire primary, journalists speculated on the reasons the polls were wrong. Reporters, assisted by academics, touched on issues that were usually the purview of academics. And they were helped by pollsters themselves.

Journalistic discussion of polling shortcomings and methods was also part of the 2004 coverage. (See Frankovic, "Reporting 'the Polls' in 2004," *Public Opinion Quarterly* 2005 <http://poq.oxfordjournals.org/cgi/content/full/69/5/682>)

In that campaign, the media response to variable polls in the fall was to investigate polling methods. "The polls" overall were criticized in the early fall when there appeared to be little consistency in results, and no obvious cause. Neither sampling nor question orders provided a simple explanation of differences. Neither

did differences in the universe of respondents or slight differences in dates of interviewing. Consequently, reporters explored methodological questions in a way unusual for journalists. Were pollsters adequately measuring “cell phone-only households? Were there response rate issues? Blocked calls, privacy managers, unanswered phones and simple refusals were all part of the discussion.

This year, the same pattern occurred after the New Hampshire primary. Andy Kohut first raised the question of whether respondents would over-report their willingness to vote for an African-American, when he referenced polls in Tom Bradley’s races for Governor of California in The New York Times (<http://www.nytimes.com/2008/01/10/opinion/10kohut.html?scp=1&sq=Kohut+New+Hampshire&st=nyt>).

The characteristics of the major Democratic candidates – their race and gender – became a key topic for discussing the limits of polling accuracy.

A McClatchy story summarized some of the issues:

<http://www.toledoblade.com/apps/pbcs.dll/article?AID=/20080113/NEWS09/801130329>. And pollsters themselves were caught up in the debate. ABC News’ Gary Langer (<http://blogs.abcnews.com/thenumbers/>), Gallup’s Frank Newport (<http://blogs.usatoday.com/gallup/>) blogged about the issues, as did I (<http://www.cbsnews.com/sections/opinion/pollpositions/main501863.shtml>). However, one of the issues left untouched in the discussion was the potential impact of the race of interviewer effects in respondents’ self-reports of vote intentions. So far this year, exit polls have managed to avoid the limelight, even though the same issues would affect their accuracy.

The American Association for Public Opinion Research participated in the discussion – by establishing a committee to look into pre-primary polling methods. In the last few years, AAPOR has become more assertive in the media environment, hiring a communications director and making its president available to media on primary days. In addition, its website now links to other news web pages, and columns about polls and methods by its members and others. AAPOR (along with pollster.com and other websites) continues to demand greater openness and transparency in poll reporting.

At the very least, this election campaign may determine the future of media polling. Pollsters are confronting the problems of telephone surveys and rising costs. Thus far the modifications that have been adopted have yet to achieve general acceptance, and several of the adaptations are kept out of mainstream media reports. Those include the replacement of live interviewers with the recorded voice of a local newscaster and the use of recruited and self-selected internet panels in polling. One accepted change will make polls cost more: adding a cell-phone only component to the standard random-digit-dial sample. Cell phones are already reached in standard samples, without any special effort and perhaps without the pollster’s knowledge. At last count, between one and two percent of those interviewed in national CBS News Polls say we have reached them on a cell phone.

# “Are we researching how to do research?”

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Traditional polling methods and their results are losing their potency and, likely, their veracity. This is hardly a new insight. [1] The curves of polling difficulty and expense continue to rise at the very time there is greater awareness of surveys in general and, possibly, greater interest in and demand for their results. These trends suggest that we need an accelerated R&D agenda into not just the process of survey taking, but how we might tease insight from non-traditional data sets and by employing emerging methods such as data mining, geo-statistics, social network analysis and the geo-coding technologies increasingly built into cell phones, GPS, RFID and similar devices.

While it will continue to be difficult to survey directly for emotional and attitudinal responses, the ubiquity and potential accessibility of personal *digital* data will grow. Ergo, pollsters will need to explore alternative methods of building digital personas for population groups and, possibly, personas for individuals that can be tracked and/or updated dynamically.

Data mining, for example, traditionally draws on existing customer or user lists and extracts information from an already defined and accessible universe. Pollsters — while often hoping for an initial and ideally infinite population for sampling — increasingly lack the methods to reach subsets in such a way that a desired, representative sample might be shaken out of those large numbers of *potential* respondents. Yet, if we have no way to realistically contact those potentials (constraints of time, money and quality), what might be done?

I believe that in saying “...the **Internet** creates some new opportunities,” we risk framing our questions in too narrow a space. The Internet is just one corral in the much larger rangeland that encompasses all of cyberspace with its inherent ubiquity and the fluidity of the 1s and 0s that are the foundation of contemporary communications.

## Perspectives, Tools and Applications for Consideration

- Reality Mining: Inference in Complex Social Systems via the Mobile Phone  
<http://en.oreilly.com/et2008/public/schedule/detail/2142> and <http://reality.media.mit.edu/viz.php>  
**“ ... the collection of machine-sensed environmental data pertaining to human social behavior. This new paradigm of data mining makes possible the modeling of conversation context, proximity sensing, and tempo-spatial location throughout large communities of individuals. Mobile phones (and similarly innocuous devices) are used for data collection, opening social network analysis to new methods of empirical stochastic modeling.”**
- InTrade Prediction Market <http://www.intrade.com/>  
“Our market data is used by people who want to acquire the predictive intelligence from the Intrade marketplace. They include governments, >100 global media organizations, central banks, investment houses, universities, the military, private traders, consultancies, and public individuals. For example we have supplied market data to CNBC, CNN, FOX, WSJ, FT, New York Times, 7 Federal Reserve Districts, over 50 major universities and graduate schools in the US, the ECB, Cato, Bank of Japan, Bank of England, presidential candidates and major and boutique Wall Street firms.”

- Earthmine: Digitizing the Streets with NASA Technology  
 Earthmine has developed technology that enables it to get high-resolution 3D geo-imagery quickly. They've developed a street-level camera system that enables them to capture 3D data for each pixel. See <http://earthmine.com/> and <http://www.youtube.com/watch?v=HyqNuGf329o>
- Dash Express <http://www.dash.net/product.php>  
 Think of General Motors' OnStar system: is it a phone? A GPS? An output vector for a rolling package of all sorts of data about users and places? What would it be worth to you to let a marketer have a year's worth of your vehicular data? Would a marketer pay your car insurance premium? What would you pay – or what personal data would you share—to have newspaper stories read through the car's speakers as you commute each day?
- New magical blue circle on your map <http://tinyurl.com/yrvfo3> and <http://www.google.com/gmm/mylocation.html?hl=en>  
***"Google Maps for mobile with My Location . My Location is a new beta technology from Google that uses cell tower identification to provide you with approximate location information, so it will work on phones without GPS. Simply fire up Google Maps for mobile, press [0], and the map will indicate your approximate location by centering on a blue circle."***
- "Microchips Everywhere: a Future Vision" <http://tinyurl.com/2wux5e>  
***" Here's a vision of the not-so-distant future:***
  - \* Microchips with antennas will be embedded in virtually everything you -buy, wear, drive and read, allowing retailers and law enforcement to track consumer items—and, by extension, consumers — wherever they go, from a distance.*
  - \* A seamless, global network of electronic "sniffers" will scan radio tags in myriad public settings, identifying people and their tastes instantly so that customized ads, "live spam," may be beamed at them.*
  - \* In "Smart Homes," sensors built into walls, floors and appliances will inventory possessions, record eating habits, monitor medicine cabinets — all the while, silently reporting data to marketers eager for a peek into the occupants' private lives."*
- Center for Spatially Integrated Social Science [CSISS] <http://www.csiss.org/>  
 "CSISS's mission recognizes the growing significance of space, spatiality, location, and place in social science research. It seeks to develop unrestricted access to tools and perspectives that will advance the spatial analytic capabilities of researchers throughout the social sciences. CSISS was funded in 1999 with support from the National Science Foundation under its program to promote research infrastructure in the social and behavioral sciences."
- Holson, Laura M. "In CBS Test, Mobile Ads Find Users" **New York Times, 6 Feb. 2008, page C1.**  
<http://tinyurl.com/yvaqdg>  
*"... CBS plans to announce on Wednesday that it is trying one of the first serious experiments with cellphone advertising that is customized for a person's location. Its CBS Mobile unit is teaming up with the social networking service Loopt, which allows its subscribers to track participating friends and family on their mobile phones."*
- "Flat switch insertable into a magazine and usable as part of a survey technique for readership of publications"  
 "A technique for supplying power from a battery to a transmitter included as part of an insert in a magazine which is used to monitor magazine readership. A switch in the insert is open when the magazine is closed to break the circuit to the transmitter. However, the switch is closed when the magazine is opened. The circuit is then supplied to the transmitter which emits an identification

signal indicative of the magazine being read.”

Weinblatt, L. S. Xrint.com. Retrieved January 28, 2008, from <http://xrint.com/patents/us/4939326>

## Implications?

New – and little researched or understood – levels of privacy issues emerge

- Increasingly, governmental decisions are driven by data (often from a sample) and its analysis.
  - Government agencies around the world see potential revenue streams in harvesting citizen data, but then restricting public access to our (i.e. taxpayer) data
  - What will be the role of government in (a) conducting surveys and (b) what do we/it do with the data
  - How and who is responsible for determining the validity of that data?
- Surveys will become more global because of the ease of travel. I have the same cell phone number in Rome or Cape Town or Havana. If you call me, what does my geography – at that moment – suggest?
- “... there's a huge opportunity to get to data sooner via the sensor revolution. When phones report location ..., when phones listen to ambient sound, when credit cards report spending patterns ... when cars report their miles traveled, when we're increasingly turning every device into a sensor for the global brain, there will be more and more sources of data to be mined.” [2]
- Ergo, those in the world of surveys will probably want to start paying far more attention to developments in Geographic Information Systems and, especially, geo-statistics. See:  
<http://www.csiss.org/GISPopSci/research/tools/spatial.php>

What should be the role of journalism and mass comm educators in researching and teaching in this new data environment? First is the need for scholars themselves to immediately start preparing to work in this new environment while at the same time working with traditional methods and tools, i.e. researching how we might/can/should do research. (A preliminary study suggests this is not happening.) Second, apply these new methods simultaneously with the traditional ones and cross-check the results. In this new environment, if we in the academy are not spending 25 percent of our time learning how to swim in this new pool, then we – just as traditional journalism – will probably not survive, much less contribute to socio-political understanding.

[1] Kos. (2004, September 17). "Zogby gives up on telephones" Daily Kos. Retrieved January 25, 2008, from <http://www.dailykos.com/story/2004/9/17/145012/521>

[2] O'Reilly, T. (2008, February 8). "Reuters CEO sees 'semantic web' in its future". Posted to <http://blogs.oreillynet.com/mt/mt-tb.cgi/2863>

# Methodology

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**Daniel Riffe**

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The problems with survey research that I'm concerned about are not original to me, but they seem to have increasingly troublesome implications for what scholars are trying to study, the rigor that we require, and efforts to build theory.

One problem that concerns me is clutter, the sheer number of legitimate polls and, unfortunately pseudo-polls masquerading as legitimate polls. In "battleground" Ohio in 2004, 75 statewide election polls were conducted between March 14 and November 1, according to [realclearpolitics.com](http://realclearpolitics.com), with 31 between October 1 and November 1, and 10 during the week before Election Day. Of the 75, 61% correctly predicted the outcome. Samples were as small as 358 likely voters and as large as 3,344 registered voters. As an Ohioan with a landline telephone, I was called a dozen times in 2004.

Fans of tracking polls enjoy talking about overnight shifts in electorate opinion, and candidates who "stumble" and trigger shifts in the polls. I wonder what citizens think about polls that find differing results (My 81-year-old mother, whose opinion is slow to shift, wonders about "wishy-washy" people who sway poll results). As a researcher interested primarily in *non-election* surveying, I find myself wondering about the credibility of polling, people's willingness to participate in my surveys, and how that affects the validity of my results. I seldom have a "competing" tracking pollster to compare with my results.

Consider also the sense of desperation that contemporary survey researchers feel about just how *long* they can keep a respondent on the line. Election researchers tracking a two-candidate race may be satisfied with "yes-no" or preference questions, but scholarly researchers are increasingly told by reviewers and editors that multiple indicators of concepts with high internal reliability are the rule. My survey center manager warns me that I can increase completions if I hold the number of questions below 40. Some concepts I'm measuring have a dozen dimensions!

Questions about the representativeness of phone samples are increasingly serious because of caller ID, call-blocking, and other sources of refusals, as we all know. Scholars seeking to advance theory and basic knowledge have to wonder nonetheless about the validity of findings based on self-selected samples.

Representativeness is increasingly a problem because of larger numbers of people who rely only on cellphones. In our 2004 Ohio presidential election, Kerry led Bush 52% to 48% with a week to go and a week after another survey found Kerry leading 50% to 46%. Earlier, newspapers reported on first-time (cellphone-only) voters registering in record numbers. Studies have begun to explore how much cellphone-only citizens differ from "landline-onlies." Commercial pollsters will undoubtedly solve this riddle, and we in the cash-poor academic sector will try to come up with some solution.

Who is *not* in a sample for all these reasons is a concern, of course, but as an academic researcher, I'm equally concerned with who *remains*. Pollsters can sometimes address sample demographic imbalance through weighting, but scholarly researchers don't always know whether weighting is appropriate to the research objective.

Offered an open-ended question in one of our Ohio surveys, 45% of respondents were unable to think of *any* environmental problems where they live. When offered 14 *specific* environmental problems to rate as being “serious” problems, the average number of “serious” problems was 6. In last year’s Ohio gubernatorial race, we content analyzed candidate literature and releases, Web sites, and media coverage to identify the most important campaign issues in the campaign; 38% of our statewide sample couldn’t name *any* of the issues two weeks before the polls opened. After five months of publicity about five proposed constitutional amendments, 97% of our respondents in another survey could not identify a *single* amendment. Last fall, we looked at the slice of our sample that never reads newspapers, watches the news, reads magazines, listens to radio, or goes online, and found they were among the *most strongly opinionated in our sample*.

A case of “the dumbing of Ohio” or “chronic know-nothings” or unrepresentative samples? Regardless, these kinds of results have important implications for those who study political knowledge and attitudes about complex issues.

Researchers are trying to remedy these problems. Companies recruit massive pools of respondents with incentives, and then try to draw “demographically balanced” samples from those pools of volunteers. Some recruit respondents for online surveys from among those who go online, while other companies, like DDB, mail invitations to people identified by commercial list brokers. Other researchers shift our focus from cross-sectional representation by resorting to clever designs with secondary data (like ANES) in panel-type studies.

Do these efforts solve the problems? Or create new ones?