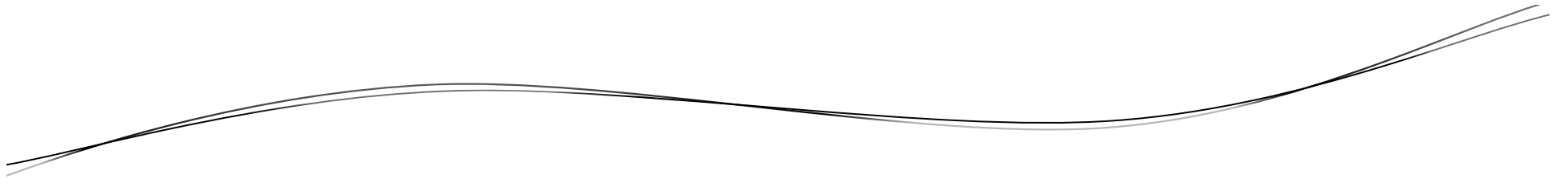


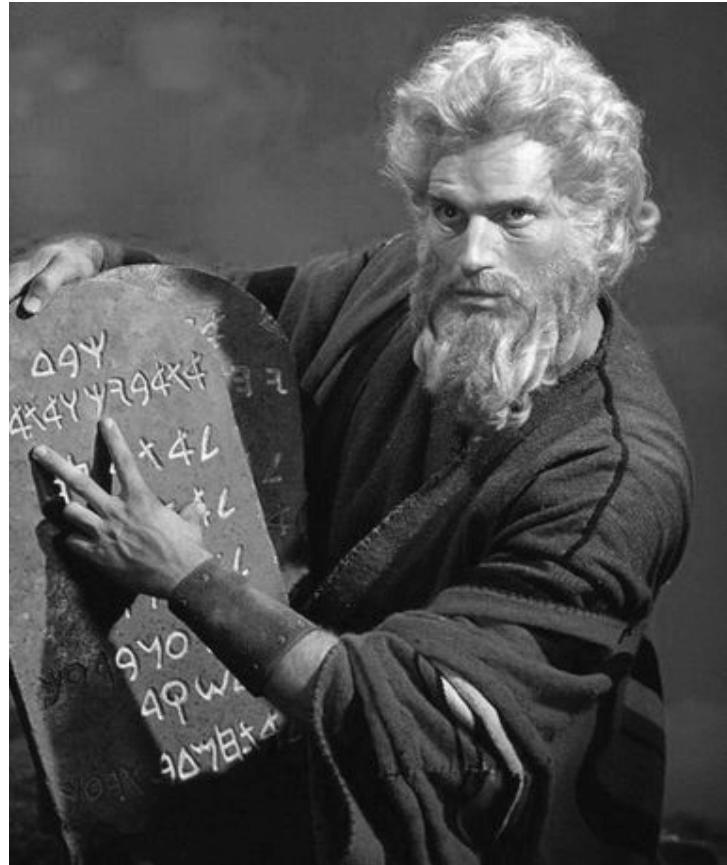


Survey Standards in Academia: A Look Behind the Ivy

Gary Langer
Langer Research Associates
info@langerresearch.com

Association of Academic Survey Research Organizations
May 19, 2012







Good Data

- Are powerful and compelling
- Rise above anecdote
- Sustain precision
- Expand our knowledge, enrich our understanding, inform our judgment
- *To the extent we use them wisely and well*

Other Data

- Leave the discipline of inferential statistics and the generalizability to population values conferred by probability sampling
- Are easily intentionally manipulated, e.g. to support a predetermined outcome
- Are equally easily *unintentionally* biased through poor design and erroneous analysis
- Are increasingly prevalent; cheaply produced via the internet, e-mail, social media
- Can misinform and misdirect awareness and action



The Challenge

- Know the difference
- Have and hold standards
- Adhere to best practices
- Disclose clearly and honestly
- Educate colleagues, students and the public

The Difficulties Before Us

In production:

Convenience samples

- Internet click-ins/opt-ins
- Blast faxes/e-mails
- Non-prob. intercepts

Methodological short-cuts

- Compromised sampling (e.g., noncoverage via listed, urban-only or census-density samples)
- Poor selection practices
- Robo-polls

Opaque or non-empirical weights

Absence of supervision, validation, QC

In presentation:

Misrepresentation of methods

Leading, unbalanced or ill-conceived questions

Biasing question order

Selective or hyped analysis

Fake trend

False or untested significance

Assumed causality

Untested relationships

Outright fabrication

Unfamiliarity with empirically supported best practices

Non-disclosure

et tu?





Stipulations

- The media, as a group, are worse
- The p.r. industry is the *worst*
- Imperfection is the human condition

...but

- Academics speak with particular authority
- With that authority comes particular responsibility

MARQUETTE UNIVERSITY
LAW SCHOOL POLL



A COMPREHENSIVE LOOK AT THE WISCONSIN VOTE

The poll interviewed 705 registered Wisconsin voters by both landline and cell phone April 26-29, 2012. The margin of error is +/- 3.8 percentage points for the full sample. For the 451 respondents who said they would vote in the Democratic recall primary, the margin of error is +/- 4.7 percentage points. As for results for “likely voters,” those who said they were certain to vote, the sample for the June recall is 561 respondents with a margin of error of +/- 4.2 percentage points. There were 399 likely voters in the May 8 Democratic primary, with a margin of error of +/- 5.0 percentage points. The entire questionnaire, full results and breakdowns by demographic groups are available at <http://law.marquette.edu/poll>.

###

$$\text{MOE} = \text{SQRT}((p * q) / n) * 1.96$$

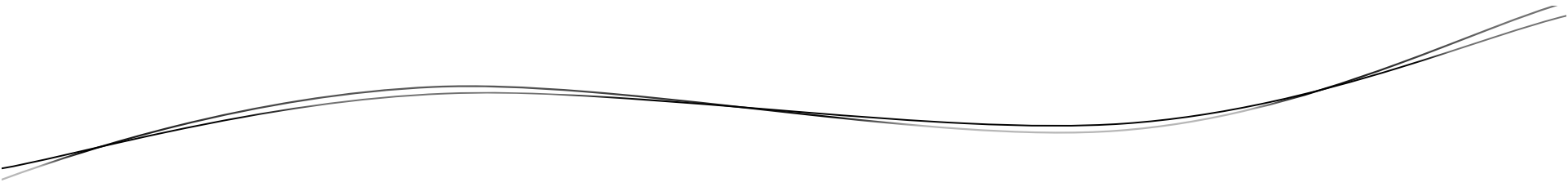
$$n = 705 = 3.7$$

However

$$\text{MOE W/DEFF} = \text{SQRT}(\text{deff} * ((p * q) / n)) * 1.96$$

$$N = 705 \text{ ne } 3.7$$





Milwaukee, Wis. – With less than a week until the primary in the historic Wisconsin gubernatorial recall election, a new Marquette Law School Poll shows Tom Barrett leading Kathleen Falk 38 percent to 21 percent, with 8 percent for Doug La Follette and 6 percent for Kathleen Vinehout. In a June general election between Barrett and Governor Scott Walker, Barrett *leads* by one percentage point, 47-46, among all registered voters, while Walker *leads* by one percentage point, 48-47, among likely voters. Both results are well within the margin of error of the poll. *Walker leads former Dane County Executive Kathleen Falk 49 percent to 42 percent among registered voters and 49 percent to 43 percent among likely voters.* (Emphasis added.)



Candidate lead

$$\text{MOE} = (\text{SQRT}(((p_1 + p_2) - (p_1 - p_2)^2) / n)) * 1.96$$

At n=705, diff. of 7 is sig. at .05 (using Franklin, 2007)

But diff. of 6 is n.s. - and with deff, likely neither

“Walker leads former Dane County Executive Kathleen Falk 49 percent to 42 percent among registered voters and 49 percent to 43 percent among likely voters.”

THE WINTHROP POLL



Rock Hill SC... The results of the latest Winthrop Poll, of 981 adults living in South Carolina, taken between April 15-April 22 are in. Results which use all respondents have a margin of error of +/-3.13% at the 95% confidence level. Reported results using a subset of the entire sample will naturally have a higher margin of error.

- When asked if they approved or disapproved of the way Nikki Haley is handling her job as governor of South Carolina, respondents were almost evenly divided on the subject, with 37.3% of all respondents saying they approved of the governor's performance, while 36.5% reacted negatively. However, among Republicans and Independents who are registered voters and lean Republican, her approval rating is almost 60%, with one-in-five disapproving (20.2%).

<http://www.winthrop.edu/winthroppoll/default.aspx?id=9804>

Self-reported partisanship from April 2012 Winthrop Poll*

All Registered Voters/Committed Voters				
	All Registered Voters		Committed Voters	
	Leaners counted as Independents	Leaners counted as Partisans**	Leaners counted as Independents	Leaners counted as Partisans**
Republican	34.3	43.15	36.8	46.77
Democrat	31.1	39.43	30.9	37.51
Independent	31.1	13.57	29.7	12.72
Something Else	1.3	1.3	.6	.6
Refused to Answer	2.2	2.6	1.9	2.5

<http://www.winthrop.edu/winthroppoll/default.aspx?id=9804>



Question writing 101

Which of the following comes closer to your opinion: [ANSWERS ROTATED]

George Zimmerman acted responsibly even though the end result was tragic
or

George Zimmerman acted irresponsibly and should be held accountable for
Trayvon Martin's death

Have increased gas prices directly caused you to consciously cut back your
spending on other things?

Would you consider yourself a MEMBER of the Tea Party Movement?

<http://www.winthrop.edu/winthropoll/default.aspx?id=9804>



Bloviation (1)

“The survey was administered by YouGovPolimetrix during July 16-July 26, 2008. YouGovPolimetrix employs sample matching techniques to build representative web samples through its pool of opt-in respondents (see Rivers 2008). Studies that use representative samples yielded this way find that their quality meets, and sometimes exceeds, the quality of samples yielded through more traditional survey techniques.”

Perez, *Political Behavior*, 2010



Bloviation (2)

Prof. Douglas Gentile, Iowa State University. Pathological Video Game Use among Youth 8 to 18: A National Study. *Psychological Science*, May, 2009

“The sample size yielded results accurate to +/-3% with a 95% confidence interval.”

“The study’s primary strength is that it is nationally representative within 3%.”

Harris Interactive opt-in online panel



See me after class

“There currently is no generally accepted theoretical basis from which to claim that survey results using samples from nonprobability online panels are projectable to the general population. Thus, claims of ‘representativeness’ should be avoided when using these sample sources.”

AAPOR Report on Online Panels, 2010



Rand/Oregon State

2005 Rand Corp./Oregon State University poll found “significant numbers of African Americans believe in conspiracy theories about AIDS.”

- 16 percent in agree/disagree (acquiescence bias).
- Sample limited to 15- to 44-year-olds.
- Survey intro twice says it is “about discrimination...”
- Sample limited to high-density (>26%) black Census tracts; noncoverage 49.5%.



Duke.... Hopkins...

2007 Duke University “nationally representative” study of infertility clinic patients (in *Science*)

- Convenience sample of 9 clinics.

Johns Hopkins Iraq casualty studies, 2004/2006 (in *The Lancet*)

- Bloomberg School censure, IRB
- AAPOR censure, nondisclosure
- Questions re: sampling and re: political motivation
- Methodologically: 47 sampling points, 40 interviews pp.
(Last ABC Iraq poll was 446 points, 5 int. pp.)



HEALTH AFFAIRS

The Policy Journal of the Health Sphere

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Health Affairs, 24, no. 3 (2005): 822-831
 doi: 10.1377/hlthaff.24.3.822
 © 2005 by Project HOPE

Americans' Responses To The 2004 Influenza Vaccine Shortage

Catherine M. DesRoches, Robert J. Blendon and John M. Benson

Abstract

Polling taken during the 2004 influenza vaccine shortage found a high level of public concern but no consensus on who should be responsible for solving the problem. A substantial minority questioned whether the vaccine should be reserved for high-risk groups, while a majority thought that care providers

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Citing Articles

Data Sources And Methods

The data presented here are mainly derived from a survey designed by researchers at the Harvard School of Public Health. Telephone interviews were conducted by International Communications Research (ICR) between 29 October and 9 November 2004. The questionnaire was administered to adults age eighteen and older, selected using a fully replicated, stratified, single-stage, random-digit-dialing sample of households nationally. A total of 1,227 adults completed interviews. This group included an oversample of parents with children ages 6–23 months. A total of 249 interviews with this group were completed.⁶

The data were weighted to account for the disproportionate probability of household selection attributable to multiple telephone lines and the probability associated with the random selection of an individual household member. In addition, the data were weighted by age, sex, race/ethnicity, education, region, census division, and metropolitan status to be nationally representative.⁷

7. The study was conducted as part of an omnibus survey; therefore, the data are not collected in a way that allows for the calculation of the response rate. However, studies have indicated that when the results from a survey with a long field period and a high response rate are compared with a survey with a field time that is similar to the Harvard School of Public Health survey, few statistically significant differences are observed...

- ▲ [Top](#)
- [Data Sources And Methods](#)
- ▼ [Study Results](#)
- ▼ [Discussion And Conclusions](#)
- ▼ [NOTES](#)

Excel 10/19/02

Completed Interview	1026
Intro Refusal	3785
No Answer/call limit reached	6303
Busy	576
Callbacks	636
Stopped Interview	233
Specific Callback Appt.	778
Disconnected/non-working	3596
Foreign language barrier	343
No eligible respondent	190
Respondent not available	94
Non-residential number	1787
Number has changed	1205
Claims to have done survey	15
Fax/Modem	1152
Caller ID Block/ans. machine	570
TOTAL	22289
Overall RR	0.07
Cooperation Rate	0.20
Noncontact Rate	0.63



“Knowledge Networks conducted a study of young adults on political issues on behalf of Harvard University’s Institute of Politics...

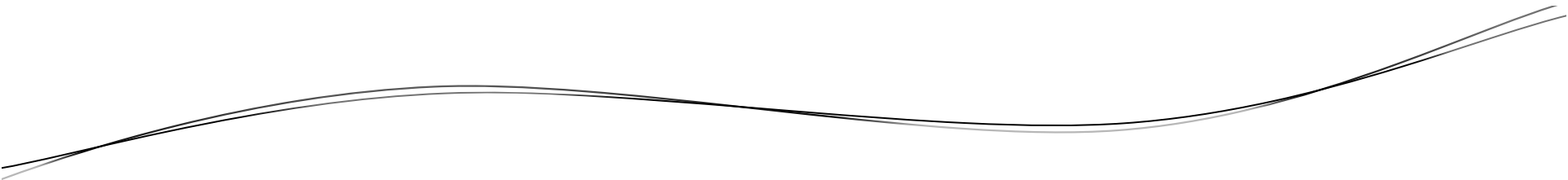
“...Six thousand, four hundred and sixteen (6,416) KnowledgePanel members were assigned to the study. *The cooperation rate was 48.3 percent* resulting in 3,096 completed interviews.” (Emphasis added.)

<http://www.iop.harvard.edu/Research-Publications/Survey/Spring-2012-Survey>



Compare (Langer Research project)

831 panelists were randomly drawn from the Knowledge Networks panel. 505 responded to the invitation, yielding a final stage completion rate of 60.8% percent. The recruitment rate for this study, reported by Knowledge Networks, was 14.6% and the profile rate was 65.4%, *for a cumulative response rate of 5.8%*. (Emphasis added.)



The 2011 version

“Knowledge Networks conducted a study of young adults on political issues on behalf of Harvard University’s Institute of Politics. The goal of the project was to collect 3,000 completed interviews with young Americans between 18 and 29 years old. Approximately 2,100 cases were to be collected on the KnowledgePanel® *with the remaining 900 coming from an opt-in panel sample source.*” (Emphasis added.)

“The web-enabled survey of 3,018 18-29 year-old U.S. citizens with a margin of error of +/- 2.4 percentage points (95% confidence level) conducted with research partner Knowledge Networks for the IOP between February 11 and March 2, 2011 finds...”

<http://www.iop.harvard.edu/Research-Publications/Survey/Spring-2011-Survey>



Harvard Medical School: “Medical Bankruptcies”

“...we must also address the crushing cost of health care. This is a cost that now causes a bankruptcy in America every thirty seconds.”

- *Barack Obama, address to joint session of Congress, 2/24/09*

“The cost of health care now causes a bankruptcy in America every thirty seconds.”

- *Obama, White House conference on health care, 3/5/09*

“Every 30 seconds in the United States, someone files for bankruptcy in the aftermath of a serious health problem.”

- *Elizabeth Warren, Harvard University, Washington Post op-ed, 2/9/05*



From Whence it Came

2005 paper by Dr. David Himmelstein, Harvard Medical School, Prof. Elizabeth Warren, Harvard Law, et al., on study of 2001 bankruptcies, *Health Affairs* W5.63

“Illness and Medical Bills Cause Half of all Bankruptcies – 2 Million Americans Financially Ruined Each Year”

Harvard Medical School news release, 2/2/05

“Costly illnesses trigger about half of all personal bankruptcies... according to findings from a Harvard University study to be released Wednesday.”

AP, 2/1/05

Problems

- “Medical” issues asked multiple “reasons,” not as “a/the cause” of bankruptcy; this plus others netted to 54.5%.
 - Question: “People give many reasons for filing for bankruptcy. Please check all of those that apply to your situation.”
 - Analysis: “cited medical causes,” “a significant cause,” “medical bankruptcies,” “medical debtors,” “families bankrupted by medical problems.”
- Qualifying “medical” reasons inc. death of a family member, gambling, alcoholism, drug abuse/addiction. “Illness or injury” alone was cited as a reason by 28%.
- “Medical bankruptcy” also inc. uncovered bills >\$1,000 over two years, or loss of 2 weeks’ pay for health reasons, regardless of cited reasons for filing.
- Survey sampled bankruptcy filers in five federal court districts; noncoverage of 86% of all filers nationally.
- Author: “Obviously the extrapolation is rough.”

Apparently no one told Barack Obama



“Since November 2011, public belief that global warming is happening increased by 3 points, to 66 percent.”

Interview dates: March 12, 2012 – March 30, 2012.

Interviews: 1,008 Adults (18+) Margin of error: +/- 3 percentage points at the 95% confidence level.

“...a large majority of Americans believe that this year’s unusually warm winter, last year’s blistering summer and some other weather disasters were probably made worse by global warming.”

The New York Times, April 17, 2012



The questions, 1

“How strongly do you agree or disagree with the following statement?
Global warming is affecting the weather in the United States.”

“A huge body of research conducted during more than five decades has documented the role that acquiescence response bias plays in distorting answers to agree/disagree questions.”

“... remarkably sizable differences in data quality” in agree/disagree vs. balanced forced-choice formats.

Saris, Krosnick and Shaeffer, “Comparing Questions with Agree/Disagree Response Options to Questions with Construct-Specific Response Options.”

“Some people say global warming made each of the following events worse. How much do you agree or disagree?”

<http://environment.yale.edu/climate/files/Climate-Beliefs-March-2012.pdf>



The questions, 2

“Have each of the following types of extreme weather events become more or less common in your local area over the past few decades? Would you say much more common, somewhat more common, somewhat less common, or has it stayed about the same?”

“Has extreme weather caused more or fewer of the following problems in your local area over the past few decades?”

“In the past year have you personally experienced each of the extreme weather events or natural disasters listed below?”

<http://environment.yale.edu/climate/files/Climate-Beliefs-March-2012.pdf>



The solution

- Good care
- Due diligence
- Commitment to the fundamentals



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STANDARDS AND ETHICS AAPOR Code Revised (1)

We pledge ourselves to maintain high standards of scientific competence, integrity, and transparency in conducting, analyzing, and reporting our work.

We shall exercise due care in developing research designs and instruments, and in collecting, processing, and analyzing data, taking all reasonable steps to assure the reliability and validity of results.



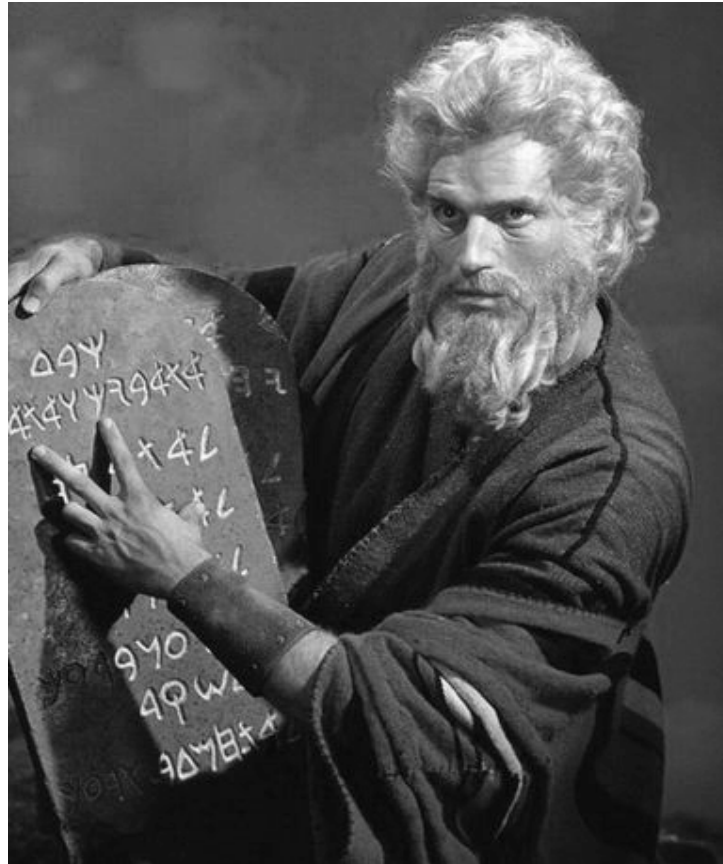
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STANDARDS AND ETHICS AAPOR Code Revised (2)

We shall not knowingly imply that interpretations should be accorded greater confidence than the data actually warrant. When we use samples to make statements about populations, we shall only make claims of precision that are warranted by the sampling frames and methods employed. For example, the reporting of a margin of sampling error based on an opt-in or self-selected volunteer sample is misleading.

We shall describe our methods and findings accurately and in appropriate detail in all research reports, adhering to the standards for disclosure specified in Section III.

And remember...



who's watching



Thank you!

**Gary Langer
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info@langerresearch.com**

**Association of Academic Survey Research Organizations
May 19, 2012**