



Metadata Improvements on Historical Polling at the Roper Center

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The Roper Center for Public Opinion Research, located at Cornell University, is one of the world's leading archives of social science data, specializing in data from public opinion surveys.

- 23,000 datasets from 1935-today
- Data from over 100 countries
- 700,000 questions in the iPOLL database of US national poll results
- Current data organizations include media organizations, academic survey research organizations and nonprofits (from the U.S. and around the world)



The **Mission** of the Roper Center is to:

- **collect, preserve, and disseminate** public opinion data,
- to **serve as a resource to help improve the practice of survey research**; and,
- to **broaden the understanding of public opinion** through the use of survey data in the United States and abroad.

In November 2015, Roper relocated to Cornell University and embarked on a major rebuild of the archive

Major goals:

- Improve user tools

- Integrate with data from other archives

- Increase understanding of the data

- Unlock the value of the collection!**

How?

- Make metadata:

 - more comprehensive (add sampling procedure, PI information)

 - more normalized (country codes predated intl standards)

 - more granular (sampling, response rate, etc.)

- Make archive metadata *exportable in DDI format*

Metadata in older Roper system

Sample: National adult including an oversample of 18-33 year olds

Sample Notes: This study contains sampling using landline telephones and cellular phones

Sample Size: 1,821

Response Rate: Landline=AAPOR RR3: 8.7 percent, Cell=AAPOR RR3: 8.6 percent

Estimated Sample Error: +/- 2.5 percentage points at the 95 percent confidence level

Methodology

February 2014 Political Survey

Prepared by Princeton Survey Research Associates International
for the Pew Research Center for the People & the Press

February 2014

SUMMARY

The February 2014 Political Survey, sponsored by the Pew Research Center for the People & the Press, obtained telephone interviews with a nationally representative sample of 1,821 adults living in the United States. Interviews were conducted via landline ($n_{LL}=481$) and cell phone ($n_C=1,340$; including 786 without a landline phone). The survey was conducted by Princeton Survey Research Associates International. The interviews were administered in English and Spanish by Princeton Data Source from February 14 to 23, 2014. Statistical results are weighted to correct known demographic discrepancies. The margin of sampling error for the complete set of weighted data is ± 2.5 percentage points.

RESPONSE RATE

Table 3 report the disposition of all sampled telephone numbers ever dialed from the original telephone number samples. Response rates are computed according to AAPOR definition 3. Thus the response rate for the landline 18+ sample was 9 percent. The response rate for the 18+ cellular sample was 9 percent and the response rate for the 18-33 cellular sample was 10 percent.

DDI Standards

Sample: National adult including an oversample of 18-33 year olds

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Geographical Location (**GeographicLocation**): US
Universe (**UniverseRef**): Adult population
Sample1 (**StudyUnit.UserAttribute** key: **Sampling**) : All
(**StudyUnit.UserAttribute** key: **Coverage**) Adults
Sample2 (**StudyUnit.UserAttribute** key: **Sampling**: Oversample
(**StudyUnit.UserAttribute** key: **Coverage**) Age 18-33

Sample Size1 (**NumberofResponses**): 1,821
Sample1, Mode1 and 2: Telephone interviews/landline and Telephone interviews/cell phone
Sample Size2 (**NumberofResponses**): 481
Sample1, Mode1: Telephone interviews/landline
Sample Size3 (**NumberofResponses**): 1,125
Sample1, Mode2: Telephone interviews/cell phone
Sample Size4 (**NumberofResponses**): 215
Sample2, Mode2: Screened cell phone (18-33 oversample)

Mode1 (**ModeOfCollection**): Telephone interviews/landline
Response Rate 1 (**SpecificResponseRate**): 8.7%
Response Rate 1 Definition (**Description**): AAPOR RR3
Mode2 (**ModeOfCollection**): Telephone interviews/cell phone
Response Rate 2 (**SpecificResponseRate**): 8.6%
Response Rate 2 (**Description**): AAPOR RR3

Margin of error (**SamplingError**): +/- 2.5 (percentage points)

AAPOR's Transparency Initiative

- What is the Transparency Initiative?
 - "AAPOR's Transparency Initiative is designed to promote methodological disclosure...associated with...publicly releases studies."*
 - "The Transparency Initiative is an approach to the goal of an open science of survey research..."*
- Organizations can apply for membership to the TI
- Transparency Initiative membership indicated on Roper Center Data Provider pages

The Washington Post

VIEW COLLECTION DETAILS

AAPOR Transparency Initiative Charter
Member

AARP[®]

VIEW COLLECTION DETAILS

AAPOR Transparency Initiative Charter
Member



Adoption of DDI metadata standards and AAPOR TI disclosure standards has improved *New Roper* dataset ingest (DDI and TI Elements already incorporated into our new Data Deposit and Ingest Tool)

But what about existing, older Roper Data?

Recall that Roper's Mission extends beyond collecting, preserving, and disseminating public opinion data. Our mission is also to:

- **serve as a resource to help improve the practice of survey research; and,**
- **to broaden the understanding of public opinion**

And Roper has an extensive collection of early public opinion polls:

1935-1939: 161 Studies Gallup, Roper and British Institute of Public Opinion (British Gallup) only

1940-1949: 877 studies +NORC, Canadian Gallup, Minnesota Poll, ORC, Crossley, etc.

1950-1959: 1054 studies +even more providers

1960-1969: 1923 studies transitionary period to "modern polling" era

Why Focus on Early Data?

- “Lost knowledge” – fewer researchers are familiar with the debates of the early years of polling. Some simply discount these polls; others use them as if they are no different from current polls. User education is needed!
 - “One reason why scholars have ignored these data is that, from a modern standpoint, the data collection methods seem substandard. Principles of random selection took a backseat to interviewer discretion and concerns over survey cost. But acknowledging that the data were collected in ways that now appear questionable does not mean scholars should ignore these early public opinion polls. Whatever their flaws, these polls still provide insight into the beliefs of the mass public during a critical era of American history. The alternative, after all, is to consign a whole era of unique survey data to the dustbin of history.”*
- After several decades of relatively consistent methods among major polls, we’re in a period of greatly expanding methodologies. What goes around, comes around – some online opt-in nonprobability polls use quota methods, a new version of the approach taken before 1950.
- The key: early polls may have been inconsistently documented...but documentation often exists in some form!

*Berinsky, Adam J. "American public opinion in the 1930s and 1940s: The analysis of quota-controlled sample survey data." *International Journal of Public Opinion Quarterly* 70.4 (2006): 499-529.

What are the challenges?

Substantive: What

- Population Universe
- Quota Sample/Probability Sample
- Variable Information
- Weighting and Sample Size

Procedural: How

- Documenting changes in how terms are used (“national adult”)
- Differentiating data-provider information versus outside sources
- Dealing with missing or inconsistent information
- Choosing appropriate approaches to provide sufficient information

Population Universe

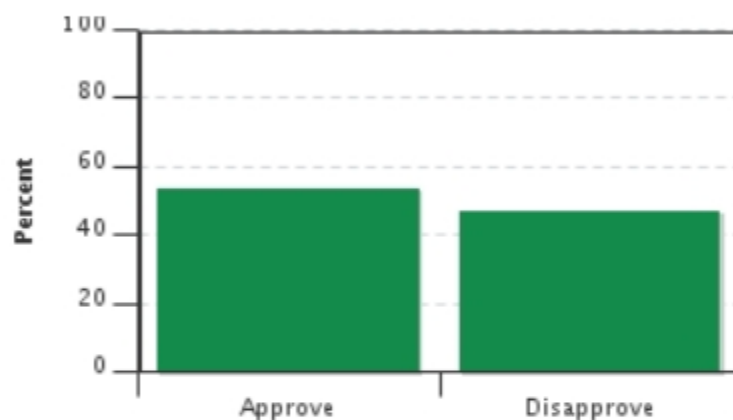
- Population Universe for most early polls described as “national adult”
- However, Berinsky/Schickler’s work reveals that:
 - Gallup’s target population was “the engaged public” (similar to a likely voter sample)
Gallup used voting in previous elections as guide to setting of quotas and selection of geographic area. This resulted in the undersampling of women, blacks in South, etc.
 - Roper and NORC: target population was the national adult population
- Important to note that this information was:
 - Well-known at the time
 - Well-documented in contemporaneous literature
 - Supported by documentation available on some Roper Center datasets
- Flagging of these issues is required AT THE POINT OF USE

Congress is now considering a lynching bill which would give the federal government power to fine and imprison those police officers who are negligent in protecting a prisoner from a lynch mob. Do you approve or disapprove of this bill? (Source: Gallup Poll, Oct, 1937)

Topline

53% Approve

47% Disapprove



[MORE FROM THIS SURVEY](#)



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Methodology: Conducted by Gallup Organization, October 30 - November 4, 1937 and based on 1,500 personal interviews. Sample: National adult. Sample size is approximate. [USGALLUP.012138.R03A] ([View Citation](#))

Population Universe (continued)

Other additions to the “national adult” population:

- Non-institutionalized (true of today’s polling as well)
- Ages ranges varied– NORC and Roper considered “adult” to be 21 or older, but Gallup datasets show age variables revealing respondents as young as 14
- Civilian population only...or not?
 - NORC documentation specified Civilian population only. No indication of this limitation in Gallup polling, except on the scanned questionnaires: interviewers were given instructions not to interview members of the armed services from August 1944 to November 1945:

16a. Did you vote in the presidential election last November?
COL. 33 ☒ Yes, voted ☐ No, didn't vote ☐ No, too young to vote

IF YES VOTED, ask:
b. Did you vote for Dewey, Roosevelt or Thomas?
44 Dewey 45 Roosevelt 46 Thomas 47 Other

17a. Is any member of your immediate family in the armed forces now?
COL. 34 ☒ Yes ☐ No

IF YES, ask b, c and d:
b. What relation is he (are they) to you? SEE CODE...
c. What branch of the service is he (are they) in?
(If respondent says AIRFORCE, ask whether Army or Navy).
COL. 36 ☒ Army ☐ Navy ☐ Marines ☐ Coast Guard
☐ Other 1-MERCHANT MARINE 2-TRANSPORT CORP 3-AIR CORP 4-FLIGHT COMMAND

d. When do you think he (they) will be released?
COL. 37, 38 SEE CODE

IF RESPONDENT IS EX-SERVICEMAN AND HAS BEEN TO COLLEGE, ask:
e. Did you go to college as a civilian or only when you were in service?
COL. 42 ☒ As civilian ☐ As serviceman ☐ Both

20a. Are you (or is your husband) a member of a labor union?
☒ Yes ☐ No
If YES, ask:
b. Which one?
COL. 43 ☒ C. I. O. ☐ A. F. of L. ☐ Other

21a. Is there a telephone in your home? *see code*
☐ Yes ☐ No
If YES, ask:
b. Is the telephone listed either under your name or the name of a member of your immediate family?
COL. 44 ☐ Yes ☐ No

PLEASE COMPLETE ALL VITAL INFORMATION BEFORE LEAVING RESPONDENT

Classify respondent as:
COL. 45 ☒ W. ☐ AV. ☐ OAA ☐ AV+ ☐ P ☐ OR

Check whether:
COL. 46 ☐ Man ☐ Woman ☐ Wh. ☐ Cl.

SPECIFIC OCCUPATION COL. 48, 49, 50 SEE CODE... RESPONDENT'S AGE P. 100-101...
(If housewife or student, record occupation of head of family. If retired or unemployed, record former occupation.) COL. 51, 52, 53

STREET CITY
INTERVIEWER Date this interview was made... COL. 54, 55, 56, 57

INDIVIDUAL INTERVIEWERS
No. 1187
COL. 54, 55, 56, 57

Please do NOT interview any member of the armed forces.

About how much longer do you think the war with...Germany will last from now? Just your best guess (Source: Post-War Survey, Jun, 1943)

Topline

- 16% Up to 6 months
- 43% Up to 1 year
- 25% Up to 2 years
- 4% Up to 3 years
- 1% Up to 4 years
- 1% Up to 5 years
- 1% Over 5 years
- 8% Don't know



[MORE FROM THIS SURVEY](#)



[DOWNLOAD DATASET](#)



Methodology: Conducted by National Opinion Research Center during June, 1943 and based on 2,557 personal interviews. Sample: National adult. [USNORC.43213.R04A] ([View Citation](#))

Topics: WAR EUROPE WORLD WAR II
Dataset: USNORC1943-0213

Quota Sampling/Probability Sampling

- Most organizations moved from purposive/quota sampling to some form of probability sampling after the 1948 election (“Dewey Defeats Truman”)
- Older documentation was the primary source for timing of changes of methods

For example:

Prior to 1950, the samples for all Gallup surveys, excluding special surveys, were a combination of what it known as a purposive design for the selection of cities, towns and rural areas, and the quota method for the selection of individuals within such areas.

- Gallup and NORC had clear documentation available on some surveys that referenced entire periods. Other organizations had less information. In some cases, inferences had to be made from other information.
- For example, interviewer instructions might describe selecting households by circling a block and stopping at every fifth house, indicating probability-based household selection. Or instructions might remind the field interviewers of the importance of trying to get a “good cross-section” of respondents by walking out of town and not just relying on those available in rail stations or stores. Such instructions indicate a quota sample.

Roper Center’s challenge: To determine when organizations switched methods and what polls were conducted using what sampling procedures

Variable-level information and subjectivity

Important information about some variables provided in some studies, but not others.

For example, Roper's interviewers were trained to code an economic class variable based on judgments of how wealthy an individual appeared to be for a particular location – so “wealthy” in NYC was different from wealthy in poor rural areas, a relative wealth scale*

*Roper, E. (1940). Classifying Respondents by Economic Status. *The Public Opinion Quarterly*, 4(2), 270-272.
Retrieved from <http://www.jstor.org/stable/2744643>

Weighting and Sample Sizes

- Weighting in the days of punch card data analysis was done by duplicating the punch card of the respondent to be weighted more heavily. Normally this was done by a “times at home” question, intended to determine whether a respondent would be more or less likely to be at home during the interview period. Those less frequently available to be interviewed were “weighted up.”
- In practice, this meant that some datasets could have many more records than actual respondents.
- To determine accuracy of sample sizes in Roper metadata, we first looked for perfect duplicates. Found no studies with these.
- Found documentation on a few files from the 1960s that indicated that duplicate cards were marked as such with punch in a particular columns (columns 79 and 80; variable sometimes given a name like “dup”)
- Removing the duplicate cards from a selection of studies from 1960-1967 resulted in sample size of approximately 1500, the size of standard Gallup poll samples as described by George Gallup in contemporaneous reports, including Congressional testimony*

*Congressional Record, August 22, 1960

Weighting and Sample Sizes (continued)

- But was that all? Sample sizes in the 30s and 40s as reported in the database were much larger (2500-5000), decreased in the fifties, then abruptly increased in 1960, only to drop to approximately 1500 suddenly in 1967.
- No similar documentation regarding weighting/columns or variable names like “dup” appeared on earlier Gallup polls, nor on Roper or NORC polls
- Many early questionnaires from Gallup had handwritten sample sizes for each form on the document – these roughly matched the larger sizes in the dataset
- Although it is possible to weight a quota sample, the point of using a quota is to “preweight.” It appears that Gallup introduced weighting after probability. Cost increases with probability polls also may have led to an interest in decreasing poll sizes.
- Further evidence indicates that large sample sizes on other studies were likely accurate – Roper Center documentation of change in sample sizes on a NORC study, as well as Congressional testimony from George Gallup and Elmo Roper in which Gallup described his standard sample as 1500, Roper as 3000.
- All evidence indicates the issue of recorded sample sizes representing the weighted sample size affected datasets from 1960-1967

Sources of information

- Roper Center documentation
 - Sampling method field in early records
 - Scans of questionnaires with valuable notes
 - Interviewer instructions
- Berinsky-Schickler's work, particularly:
 - Berinsky, Adam J. "American public opinion in the 1930s and 1940s: The analysis of quota-controlled sample survey data." *International Journal of Public Opinion Quarterly* 70.4 (2006): 499-529.
- Contemporaneous public opinion literature: Public Opinion Quarterly, etc.
- Contemporaneous books on public opinion research
- Later articles and interviews
- Congressional testimony
- Datasets themselves

What Roper Is Doing with This Information

Many possible approaches, including:

- Adding new metadata fields (sampling procedure)
- Increasing information in other fields (universe)
- Creating new fields to capture specific information (unweighted n, weighted n, estimated unweighted n – limitations of DDI, no notes field available on sample size)
- Flagging potentially confusing metadata and providing explanatory text
- Providing general information about the methods and data from each polling organization active in the early years to be linked from each study, as well as comparative information
- Providing a glossary of terms

Quota Sampling/Probability Sampling

	Classic Roper Center	Improved Roper Center
Early polls	<p>No information in metadata</p> <p>Extensive information about sampling provided in codebooks for some datasets; no information in others</p>	<p>SamplingProcedure, DDI controlled language</p> <p>Most are:</p> <p>Nonprobability.Quota (individuals) AND Nonprobability.Purposive (geographic selection)</p> <p>More extensive info in all documentation files</p> <p>Generalized resource pages about sampling procedures of major organizations</p>
Middle-period polls	<p>No information in metadata</p> <p>Extensive information about sampling provided in codebooks for some datasets; no information in others</p>	<p>SamplingProcedure, DDI controlled language</p> <p>Mixed approaches:</p> <p>Probability.Stratified.Proportional (most areas) AND Nonprobability.Quota (rural areas)</p> <p>or</p> <p>Nonprobability.Quota (individuals) AND Probability.Multistage (household selection)</p> <p>or</p> <p>Probability.Stratified.Proportional</p> <p>More extensive info in all documentation files</p> <p>Generalized resource pages about sampling procedures of major organizations</p>
Current polls	<p>No information in metadata; only probability-based polls accepted</p> <p>Information provided in documentation files dependent on data provider reporting</p>	<p>SamplingProcedure, DDI controlled language</p> <p>Most:</p> <p>Probability.Stratified.Proportional</p> <p>More extensive info in all documentation files</p> <p>Generalized resource pages about sampling procedures of major field organizations (most current data providers contract with small number of field organizations)</p>

3.9 MULTI-STAGE SAMPLING PROCEDURES CANNOT
BE CLASSIFIED SIMPLY

As illustrated in the preceding sections, many sampling operations are carried out in successive stages, a member of the defined population being obtained only at the final stage. This means, among other things, that an extremely large number of sampling procedures are possible in even a simple situation. For example, Table 3.1 shows

TABLE 3.1
POSSIBLE COMBINATIONS OF SAMPLING PROCEDURES IN A THREE-STAGE
SAMPLING OPERATION

Sampling Stage	Unit of Sampling	Procedures That Might Be Used in Selection
1	Blocks	a. Random b. Systematic c. Purposive
2	Dwelling units within blocks	a. Random b. Systematic c. Selection left up to interviewer
3	Adults from within dwelling units	a. All adults interviewed b. Random selection of a single adult c. Selection left up to interviewer (subject to quota restrictions)

what might have to be considered in drawing a sample of adults from a city.

Our Goal is to Promote:

- Better understanding by researchers of both limits to, and value of, early data.
- Increased and better-informed use of this data.
- Better understanding of polling methods overall, including “new” methods that bear similarities to old methods (quota samples online)

The past is never dead. It's not even past. William Faulkner

All in a manner consistent with the Roper Center’s Mission, to collect, preserve, and disseminate public opinion data, and:

- to serve as a resource to help improve the practice of survey research; and,
- to broaden the understanding of public opinion through the use of survey data in the United States and abroad

To those ends, we are soliciting feedback from the community:

What information do you need to understand and effectively use the data in our collection?

How should that information be presented on our website to ensure that users will find and utilize that information?

Thank you! Questions?

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 - William Block (block@cornell.edu)