2014 Pew Political Typology/Polarization Survey

Methodology Report

Submitted to:

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**I. SUMMARY**

The 2014 Pew Political Typology Survey, fielded for the Pew Research Center for the People & the Press by Abt SRBI, completed telephone interviews with a representative sample of 10,013 adults living in the United States (5,010 respondents were interviewed on a landline telephone and 5,003 were interviewed on a cell phone). Interviewing was conducted from January 23rd to March 16th, 2014 in English and Spanish. Data collection was divided equally into three phases (A, B, and C) with non-overlapping field dates, as shown in Table 1. Each third of the overall 10,004 interviews was essentially treated as a separate study with separate samples, field dates, weighting, and questionnaires, although some questions were asked throughout all three phases.

**Table 1. Completed Interviews by Data Collection Phase and Sampling Frame**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Phase** | **Dates of Data Collection** | **Completed Interviews** | | |
| **Landline Sample** | **Cell Sample** | **Total** |
| **A** | 1/23/14 – 2/9/14 | 1,671 | 1,670 | 3,341 |
| **B** | 2/12/14 – 2/26/14 | 1,671 | 1,666 | 3,337 |
| **C** | 2/27/14 – 3/16/14 | 1,668 | 1,667 | 3,335 |
|  |  | 5,003 | 5,001 | 10,013 |

Samples were drawn from both the landline and cell phone RDD frames. Persons with residential landlines were not screened out of the cell phone sample. Separate samples were drawn and dialed for each phase of data collection. Both the landline and cell phone samples were provided by Survey Sampling International. The combined sample is weighted to match demographic parameters from the American Community Survey and telephone status parameters from the National Health Interview Survey. The weighting procedure also accounts for the fact that respondents with both a landline and cell phone had a greater probability of selection. The margin of sampling error for full sample weighted estimates is ±1.13 percentage points when using interviews from all three phases and ±2.76 percentage points when using interviews from a single phase.

**II. SAMPLE DESIGN**

The target population for the study is non-institutionalized persons age 18 and over, living in the US. For each phase of data collection, new samples were drawn from both the landline and cellular random digit dial (RDD) frames to represent people with access to either a landline or cell phone. All samples were provided by Survey Sampling International, LLC according to Abt SRBI specifications.

Numbers for the landline sample were drawn with equal probabilities from active blocks (area code + exchange + two-digit block number) that contained one or more residential directory listings. The cellular sample was drawn through a systematic sampling from 1000-blocks dedicated to cellular service according to the Telcordia database.

**III. QUESTIONNAIRE DEVELOPMENT AND TESTING**

The questionnaire was developed by the Pew Research Center in consultation with Abt SRBI. In order to improve the quality of the data, the questionnaire was pretested before Phase A and Phase C with a small number of respondents using landline RDD telephone numbers. The pretest interviews were conducted using experienced interviewers who could best judge the quality of the answers given and the degree to which respondents understood the questions. Pretest interviews were audio recorded and reviewed by investigators at Pew Research Center and the Abt SRBI project management team. Some final changes were made to the questionnaire based on listening to the pretest interviews.

**IV. CALLING PROTOCOL**

Landline and cell phones numbers were called as many as seven times. Refusal conversion was attempted on soft refusal cases in both the landline and cell phone sample. Interviews were conducted from January 23 to March 16, 2014. Calls were staggered over times of day and days of the week to maximize the chance of making contact with potential respondents. Each number received at least one daytime call. The sample was released for interviewing in replicates, which are representative subsamples of the larger sample. Using replicates to control the release of sample ensures that complete call procedures are followed for the entire sample.

For the landline sample, interviewers asked to speak with either the youngest male or youngest female at home at the time of the call. For the cell sample, interviews were conducted with the person who answered the phone provided they were age 18 or older. Interviewers verified that the person was an adult and in a safe place before administering the survey. Cell sample respondents were offered a post-paid cash incentive of $5 for their participation.

**V. PANEL RECRUITMENT**

The Typology study also served as the first recruitment vehicle for Pew’s American Trends Panel. Respondents who reporting using the internet and a subsample of non-internet users were asked at the end of survey to join a panel to participate in future surveys. Respondents were offered $10 for agreeing to join the panel and an additional amount for each future survey completed.

**VI. WEIGHTING**

Weights were computed at the completion of each phase of data collection. The final survey dataset contains three weight variables, including the original full sample weight (*WEIGHT*), a weight for respondents from the landline sample (*LLWEIGHT*), and a weight for respondents from the cell sample (*CELLWEIGHT*). At the Pew’s request, weights are computed for respondents who completed the entire interview (n=10,003) as well as those who completed most (but not all) of the interview and reported their ZIP Code (n=10). The non-completed cases in this second category are classified with dispositions of either partial interviews (AAPOR Disposition 1.2) or qualified refusals (Qualified (AAPOR Disposition 2.1).

The specification for each weight follows the Pew People-Press Weighting Summary (Christian and Best, January 2014). The design of the original full sample weight (*WEIGHT*) is described first. Descriptions of the other three weights are provided at the end of this section.

***First Stage Weighting***

The first stage of weighting corrected for different probabilities of selection associated with the number of adults in the household and the respondent’s telephone usage (landline only, cell phone only or has both kinds of phones). This weighting also adjusts for the overlapping landline and cell sample frames and the relative sizes of each frame and each sample.

This first-stage weight, labeled NEWWT1, can be expressed as:



Where:

LL =1 if respondent has a landline phone

=0 if respondent has no landline phone

(OR number of landlines on which the respondent could have been reached)

CP =1 if respondent has a cell phone

=0 if respondent has no cell phone

(OR number of cell phones on which the respondent could have been reached)

Sll= size of the landline sample drawn across all released replicates (# of landline numbers dialed)

Scp=size of the cell phone sample drawn across all released replicates (# of cell phone numbers dialed)

Ull=size of the landline RDD frame (according to SSI)

Ucp=size of the cell phone RDD frame (according to SSI)

AD=number of adults in the household (1, 2, 3 or more)

***Second Stage Weighting***

The second stage of weighting balances sample demographics to estimated population parameters. The sample is balanced to match national population parameters for sex, age, education, race, Hispanic origin, region (U.S. Census definitions), population density, and telephone usage. The Hispanic origin was broken out based on nativity: U.S born and non-U.S. born. The white, non-Hispanic subgroup is also balanced on age, education and region. The basic weighting parameters came from an analysis of the Census Bureau’s 2012 American Community Survey (ACS) 1 year estimates. The ACS parameters were calculated for adults aged 18 years and older residing in households, excluding those living in institutionalized group quarters. The population density parameter was derived from Census 2010 data. The telephone usage parameter came from an analysis of the January-June 2013 National Health Interview Survey[[1]](#footnote-1) and was based on all adults living in households with a phone (either landline or cell phone) in the U.S., including Alaska and Hawaii.

The second stage weighting uses an iterative technique that simultaneously balances the distributions of all weighting parameters. Weights were trimmed at the 5th and 95th percentiles to prevent individual interviews from having too much influence on the final results. The use of these weights in statistical analysis ensures that the demographic characteristics of the sample closely approximate the demographic characteristics of the national population. In the final survey dataset, the original full sample weight is labeled *WEIGHT.*

***Design of LLWEIGHT***

This weight is computed for respondents in the landline sample only using the same procedures as the original full sample weight variable (*WEIGHT)* except there is no adjustment for frame overlap because only one sampling frame is used. Also, a phone use parameter is *not* included in the second stage weighting.

***Design of CELLWEIGHT***

This new weight was introduced during the second phase of data collection and is computed for respondents from the cell phone sample only. It is computed using the same procedures as the original full sample weight variable (*WEIGHT)* except there is no first stage weighting and a phone use parameter is *not* included in the second stage weight. A first stage weight is not required because the probability of selection from the cell phone frame is constant, there is no within household selection of cell phone respondents, and there is no adjustment for the number of cell phones. This new weight replaces a previous weight, labeled *COWEIGHT*, that was computed for landline sample and cell phone only respondents in the first phase of data collection.

**VII. DESIGN EFFECT AND MARGIN OF ERROR**

Weighting and survey design features that depart from simple random sampling tend to result in an increase in the variance of survey estimates. This increase, known as the design effect or *deff*, should be incorporated into the margin of error, standard errors, and tests of statistical significance. The overall design effect for a survey is commonly approximated as the 1 plus the squared coefficient of variation of the weights. For this survey, the margin of error (half-width of the 95% confidence interval) incorporating the design effect for full-sample estimates at 50% is ± 1.13 percentage points when using interviews from all three phases. Estimates based on subgroups will have larger margins of error. It is important to remember that random sampling error is only one possible source of error in a survey estimate. Other sources, such as question wording and reporting inaccuracy, may contribute additional error. A summary of the weights and their associated design effect is reported in Table 3 below.

**Table 3. Effective Sample Size: Full Sample Estimates**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Weight Variable** | **Number of cases (n)** | **Minimum weight** | **Maximum weight** | **Design effect** | **Effective n** |
|
| WEIGHT | 10,014 | 0.2962 | 2.3421 | 1.32 | 7,564 |
| LLWEIGHT | 5,010 | 0.1726 | 4.3263 | 2.01 | 2,496 |
| CELLWEIGHT | 5,004 | 0.4068 | 2.0424 | 1.17 | 4,274 |

**VIII. DISPOSITIONS**

Table 4 reports the disposition of all sampled telephone numbers dialed for the survey. Abt SRBI calculates four component rates: Response rate, Cooperation rate, Refusal rate and Contact rate:[[2]](#footnote-2)

* Response rate – the number of complete interviews with reporting units divided by the number of eligible reporting units in the sample.
* Cooperation rate – the proportion of all cases interviewed of all eligible units ever contacted.
* Contact rate – measures the proportion of all cases in which some responsible member of a housing unit was reached by the survey

Overall, the response rate (AAPOR3) was 11.2% for the landline sample and 9.8% for the cell sample.

|  |  |  |  |
| --- | --- | --- | --- |
| **Table 4. Final Dispositions and Rates, by Sample** | | | |
|  |  | **Landline Sample** | **Cell Sample** |
| **Interview** |  |  |  |
| Complete | 1.000 | 5,003 | 5,001 |
| Screen-outs | 1.100 | 0 | 0 |
| Partial | 1.200 | 210 | 249 |
|  |  |  |  |
| **Eligible, non-interview** |  |  |  |
| Refusal and breakoff | 2.100 | 265 | 164 |
| Refusal | 2.110 | 21,280 | 0 |
| Respondent never available | 2.210 | 123 | 0 |
| Telephone answering device (confirming HH) | 2.220 | 0 | 0 |
| Answering machine household-no message left | 2.221 | 12,136 | 0 |
| Answering machine household-message left | 2.222 | 0 | 0 |
| Deceased respondent | 2.310 | 0 | 0 |
| Physically or mentally unable/incompetent | 2.320 | 1,031 | 0 |
| Language problem | 2.330 | 0 | 0 |
| Household-level language problem | 2.331 | 632 | 0 |
| Respondent language problem | 2.332 | 0 | 0 |
|  |  |  |  |
| **Unknown eligibility, non-interview** |  |  |  |
| Always busy | 3.120 | 1,468 | 2,784 |
| No answer | 3.130 | 16,870 | 6,377 |
| Call blocking | 3.150 | 34 | 239 |
| Technical phone problems | 3.160 | 0 | 35 |
| Housing unit, unknown if eligible respondent | 3.200 | 0 | 0 |
| No screener completed: No live contact | 3.210 | 0 | 35,718 |
| No screener completed: Live contact made | 3.210 |  | 28,209 |
| Other: "cell phone" dispo used in error | 3.910 | 0 | 49 |
| Other: Cell case physically or mentally unable/incompetent | 3.920 | 0 | 509 |
| Other: Cell case language problem | 3.930 | 0 | 1,275 |
|  |  |  |  |
| **Not eligible** |  |  |  |
| Out of sample - other strata than originally coded | 4.100 | 0 | 0 |
| Fax/data line | 4.200 | 6,026 | 352 |
| Non-working/disconnect | 4.300 | 124,847 | 33,924 |
| Non-working number | 4.310 | 0 | 0 |
| Disconnected number | 4.320 | 0 | 0 |
| Temporarily out of service | 4.330 | 3,577 | 2,991 |
| Special technological circumstances | 4.400 | 0 | 0 |
| Number changed | 4.410 | 0 | 0 |
| Cell phone | 4.420 | 41 | 0 |
| Pager | 4.440 | 0 | 0 |
| Nonresidence | 4.500 | 0 | 0 |
| Business, gov't, other org | 4.510 | 8,309 | 3,671 |
| No eligible respondent: Child/Teen phone | 4.700 | 0 | 3,299 |
| Other | 4.900 | 41 | 0 |
| **Total phone numbers used** |  | 201,893 | 124,846 |
| Completes (1.0) | I | 5,003 | 5,001 |
| Partial Interviews (1.2) | P | 210 | 249 |
| Eligible Non-Interview: Refusal (2.1) | R | 21,545 | 164 |
| Eligible Non-Interview: Non-Contact (2.2) | NC | 12,259 | 0 |
| Eligible Non-Interview: Other (2.3) | O | 1,663 | 0 |
| Undetermined If Working and Residential (3.1) | UH | 18,372 | 9,435 |
| Working and Residential But Undetermined Eligibility (3.2,3.9) |  |  |  |
| Live contact was made | UOC |  | 29,993 |
| Live contact not made | UONC |  | 35,767 |
| Not Eligible: Nonworking, Nonresidential, or Ported (4.1-4.5,4.9) | NWC | 142,841 | 40,938 |
| Screen Out: Working and Residential but Not Eligible (4.7) | SO | 0 | 3,299 |
| **TOTAL** |  | 201,893 | 124,846 |
| **e1**=(I+P+R+NC+O+UOC+OUNC+SO)/(I+P+R+NC+O+UOC+OUNC+SO+NWC) |  | 22.2% | 64.5% |
| **e2**=(I+P+R)/(I+P+R+SO) |  | 100.0% | 62.1% |
| **AAPOR RR3** = I / (I+P+R+NC+O+[e1\*e2\*UH]+[e2\*(UOC +UONC)]) |  | 11.18% | 9.99% |
| **AAPOR CON2** = (I+P+R+O+[e2\*UOC]) / (I+P+R+NC+O+[e1\*e2\*UH]+[e2\*(UOC+UONC)]) |  | 63.51% | 48.05% |
| **AAPOR COOP1** = I / (I+P+R+O+[e2\*UOC]) |  | 17.60% | 20.79% |

1. Blumberg SJ, Luke JV. Wireless substitution: Early Release of Estimates from the National Health Interview Survey, January-June, 2013. National Center for Health Statistics. December 2013. [↑](#footnote-ref-1)
2. Abt SRBI’s disposition codes and reporting are consistent with the American Association for Public Opinion Research standards. [↑](#footnote-ref-2)