

Arizona Republic/Morrison/Cronkite News Poll

Methodology Report

August 2016

The purpose of this document is to showcase the features and choices in the **Arizona Republic/Morrison/Cronkite News Poll** conducted in August of 2016. We hope that this methodological report provides the necessary transparency for readers to compare this poll to other polls of Arizona voters.

This poll was approved by the Arizona State Institutional Review Board under protocol number STUDY00004747. Please direct questions about the methodology to the Morrison Institute's Senior Research Fellow, Dr. Eric Hedberg, at ehedberg@asu.edu.

The Arizona Republic/Morrison/Cronkite News Poll questionnaire was written jointly by representatives of Arizona State University's Morrison Institute, The Arizona Republic, and The Walter Cronkite School of Journalism and Mass Communication at Arizona State University. The Poll team contracted with Behavior Research Center (BRC) to collect the data. BRC attempted a total number of 1,893 live telephone interviews (in English and Spanish), 1,689 calls were answered. The interviews were conducted between August 17 and 31 2016. The average number of valid responses to the questions was 800. Generally, the response rate for complete interviews was 47 percent.

Sample

The sampling frame was obtained from "L2 Data" of Bothell, WA, which maintains up-to-date lists of registered voters. By keeping the database up to date, it includes voters who registered for the primary. As the sampling frame uses phone numbers as they are reported by the registered voter, whether the number was a land or cell number is unknown.

Weighting

The sampling frame used only registered voters. The weighting procedure involved a post-stratification technique that adjusted the sampling weights¹ of the individuals who answered the questions analyzed to match the proportions in the registered voter database of county (determined from sampling frame), party (determined by sampling frame), age (determined by a question at the end of the survey), and gender (determined by interviewer observation at the beginning of the interview). Before using the weights, the total counts of voters were adjusted to compensate for the number of likely voters (based on the survey data proportions) and survey non-response.

¹ Sampling weights based on counts by county, party, age (10 year increments), and gender in the registered voter database obtained by the Arizona Secretary of State and used with permission. Gender was imputed using the first names and the "genderize.io" website.

Sampling Error

It is incorrect to use a single margin of error² for all answers in a survey. For percentages and proportions, the margin of error is directly related to the sample size, the weighting technique and population sizes, and the proportion or percent estimated.³ Thus, our tables present a margin of error for each answer choice and classification category. The margin of error is also impacted slightly by the percentages of the other categories and the size of the registered voter population. For the presidential questions, the two primary candidates have levels of about 40 percent based on 700 responses, so the margin of error is approximately 3 to 4 percentage points.

Comparison with CNN/ORC Methodology

CNN/ORC⁴ recently conducted a poll in Arizona and estimated different results, showing Trump ahead. However, the methodology was different, and may explain the difference in results. CNN/ORC obtained interviews with 1,003 individuals from the *population* (with a mix of cellphone and landlines) between August 18 and 23rd. The number of interview attempts is unknown and thus response rates are not reported. They achieved a total of 842 likely registered voters.

CNN/ORC identified registered voters using a question that *asked* respondents if they were registered to vote. They identified likely voters with a question as well. CNN/ORC then weighted the responses to *census* counts based on gender, race, age, education and region of the state.

In contrast, the Arizona Republic/Morrison/Cronkite News Poll used a database of *registered* voters and weighted the sample to match the proportions of *registered* voters. We also only asked the candidate questions to likely voters. Finally, the wording of our questions is slightly different (we ask “planning” to vote for then leaning to vote for, whereas CNN/ORC asked “likely” to vote for then leaning to vote for). This led to far more respondents reporting that they haven’t decided. Moreover, more Republicans are undecided than Democrats.

² The margin of error is defined in our tables as twice the estimated standard error of the estimate.

³ This is because, unlike an average, the variance of a proportion is a function of the proportion itself.

⁴ <http://i2.cdn.turner.com/cnn/2016/images/08/24/topaz1.pdf>

CNN/ORC Poll Excerpt:

BASED ON 833 REGISTERED VOTERS AND 9 WHO PLAN TO REGISTER, FOR A TOTAL OF 842 REGISTERED VOTERS -- SAMPLING ERROR: +/- 3.5 PERCENTAGE PTS.

Q3. (P5) Now suppose that the presidential candidates on the ballot in your state included Hillary Clinton as the Democratic Party's candidate, Donald Trump as the Republican Party's candidate, Gary Johnson as the Libertarian Party candidate, and Jill Stein as the Green Party candidate, who would you be more likely to vote for? (RANDOM ORDER)

Q3a. (P5a) (IF NONE OR DON'T KNOW) As of today, do you lean more toward --?

	RV Aug 18-23 <u>2016</u>	LV Aug 18-23 <u>2016</u>
Clinton, the Democrat	38%	38%
Trump, the Republican	43%	45%
Johnson, the Libertarian	12%	12%
Stein, the Green party candidate	4%	4%
None (vol.)	2%	1%
Other (vol.)	1%	1%
No opinion	*	*

Arizona Republic/Morrison/Cronkite News Poll Excerpt:

3) In the upcoming election, do you plan to vote for president?

Yes

No

Haven't decided

[If yes in question 3]

4) Who are you planning to vote for? (Read choices, alternating Trump and Clinton as the first choice)

The Republican Nominee, Donald Trump

The Democratic Nominee, Hillary Clinton

The Libertarian Nominee, Gary Johnson

The Green Party Nominee, Jill Stein

Or haven't you decided

[If "haven't yet decided" in question 4, ask:]

5) Which, if any, of these candidates – Clinton, Trump, Johnson, and Stein are you leaning toward?

Hilary Clinton

Donald Trump

Gary Johnson

Jill Stein

None/Don't Know

Assumptions

Every poll makes assumptions. The difference in the results of each poll speaks, in part, to the difference in the assumptions made when conducting the poll. The CNN/ORC poll assumes that individuals accurately respond to questions about voter registration (and those planning to register) and the likelihood of voting. By weighting the data to census counts, they rely on the self-report of registration to implicitly generalize to the registered voter population.

The Arizona Republic/Morrison/Cronkite News Poll used as its sampling frame an updated database of registered voters. This methodology makes the assumption that each campaign is likely to attract newly registered voters (who are not captured in the sampling frame that included primary voters) at the same rate.

Demographic Comparisons to Registered Voters

Although the weighting procedure compensates for the uneven distribution of respondents compared to the proportions in the sampling frame, it is still useful to access the demographics that comprise the sample. In addition, we also test whether certain demographics were more or less likely to respond to the voting questions. Thus, it is important to employ the weighting adjustments. For example, the sample was generally more female than male.

Table A1: Unweighted answers to 'GENDER: (OBSERVED)' by 'All respondents'

	Male	Female
All respondents (N = 1689)	45.3	54.7
	(± 2.4)	(± 2.4)

Notes: 95 percent margin of error below estimates in parentheses.

Table A2: Unweighted answers to 'GENDER: (OBSERVED)' by 'Did respondent answer voter and age questions'

	Male	Female
Did not respond to voter and age questions (N = 985)	44.2 (± 3.2)	55.8 (± 3.2)
Responded to voter and age questions (N = 704)	46.9 (± 3.8)	53.1 (± 3.8)

Notes: 95 percent margin of error below estimates in parentheses. Pattern of answers is not statistically significant based on unweighted Pearson chi-square test.

About 60 percent of registered voters reside in Maricopa, 15 percent of registered voters reside in Pima, with about a quarter in the rest of the state. The 1689 interviews that were attempted reflect these proportions. However, the respondents to the voter questions are slightly more representative of Pima and less representative of Maricopa.

Table A3: Unweighted answers to 'COUNTY (FROM SAMPLE)' by 'All respondents'

	Maricopa	Pima	Rest of Arizona
All respondents (N = 1689)	63.7 (± 2.3)	11.6 (± 1.6)	24.7 (± 2.1)

Notes: 95 percent margin of error below estimates in parentheses.

Table A4: Unweighted answers to 'COUNTY (FROM SAMPLE)' by 'Did respondent answer voter and age questions'

	Maricopa	Pima	Rest of Arizona
Did not respond to voter and age questions (N = 985)	66.9 (± 3.0)	8.8 (± 1.8)	24.3 (± 2.7)
Responded to voter and age questions (N = 704)	59.2 (± 3.7)	15.5 (± 2.7)	25.3 (± 3.3)

Notes: 95 percent margin of error below estimates in parentheses. Pattern of answers is statistically significant based on unweighted Pearson chi-square test.

Registration among parties is about 35 percent Republican, 30 percent Democrat, and the rest with other parties or with no preference. In our data, respondents to the voting questions tended to be a little more representative of Republicans, but no statistical association between party and response was found.

Table A5: Unweighted answers to 'PARTY (FROM SAMPLE)' by 'All respondents'

	democrat	republican	OTHER/INDEPENDENT
All respondents (N = 1689)	31.4 (± 2.3)	38.8 (± 2.4)	29.8 (± 2.2)

Notes: 95 percent margin of error below estimates in parentheses.

Table A6: Unweighted answers to 'PARTY (FROM SAMPLE)' by 'Did respondent answer voter and age questions'

	democrat	republican	OTHER/INDEPENDENT
Did not respond to voter and age questions (N = 985)	31.0 (± 2.9)	37.4 (± 3.1)	31.7 (± 3.0)
Responded to voter and age questions (N = 704)	32.0 (± 3.5)	40.8 (± 3.7)	27.3 (± 3.4)

Notes: 95 percent margin of error below estimates in parentheses. Pattern of answers is not statistically significant based on unweighted Pearson chi-square test.

Other Demographic Characteristics

The following tables present details about the unweighted demographics of the sample.

Table A7: Unweighted answers to '1. Generally speaking, do you usually think of yourself as a Republican, a Democrat, an Independent, or what?' by 'All respondents'

	Republican	Democrat	Independent/Other
All respondents (N = 891)	35.7 (± 3.2)	31.0 (± 3.1)	33.3 (± 3.2)

Notes: 95 percent margin of error below estimates in parentheses.

Table A8: Unweighted answers to '3. In the upcoming election, do you plan to vote for president?' by 'All respondents'

	Yes	No	Haven't decided
All respondents (N = 867)	93.0 (± 1.7)	2.2 (± 1.0)	4.8 (± 1.5)

Notes: 95 percent margin of error below estimates in parentheses.

Table A9: Unweighted answers to '7. For whom did you vote for President in the 2012 election: Barack Obama, Mitt Romney, someone else or didn't you vote in the presidential election in 2012?' by 'All respondents'

	Barack Obama	Mitt Romney	Someone else	Didn't vote	Don't know
All respondents (N = 849)	41.7 (± 3.4)	41.6 (± 3.4)	4.1 (± 1.4)	9.1 (± 2.0)	3.5 (± 1.3)

Notes: 95 percent margin of error below estimates in parentheses.

Table A10: Unweighted answers to 'Level of Education' by 'All respondents'

	High School or Less	Some College	Bachelor's or more
All respondents (N = 800)	17.9 (± 2.7)	24.9 (± 3.1)	57.3 (± 3.5)

Notes: 95 percent margin of error below estimates in parentheses.

Table A11: Unweighted answers to 'Racial Background' by 'All respondents'

	White	Hispanic	Other
All respondents (N = 954)	67.6 (± 3.0)	10.4 (± 2.0)	22.0 (± 2.7)

Notes: 95 percent margin of error below estimates in parentheses.

Table A12: Unweighted answers to 'Age' by 'All respondents'

	Age 18-35	Age 36-50	Age 51+
All respondents (N = 784)	14.5 (± 2.5)	16.6 (± 2.7)	68.9 (± 3.3)

Notes: 95 percent margin of error below estimates in parentheses.

