AAPOR
AMERICAN ASSOCIATION FOR PUBLIC OPINION RESEARCH

Weighting

Weighting adjusts the poll data in an attempt to ensure that the sample more accurately reflects the characteristics of the population from which it was drawn and to which an inference will be made. Weighting is used to adjust the relative contribution of the respondents, but it does not involve any changes to the actual answers to survey questions. The table below shows how weighting will affect data.

UNDERSTANDING & INTERPRETING POLLS

QUESTION RESULTS Weighted vs. Unweighted

	VERY WORRIED	SOMEWHAT WORRIED	NOT TOO WORRIED	NOT AT ALL WORRIED	DON'T KNOW /REFUSED
Your income not keeping up with rising prices					
WEIGHTED	45	30	12	13	1
UNWEIGHTED	39	32	14	15	1
Having to pay more for your health care or insurance					
WEIGHTED	41	34	14	11	1
UNWEIGHTED	37	35	15	13	1
Not being able to pay your rent or mortgage					
WEIGHTED	25	19	20	34	1
UNWEIGHTED	19	17	19	44	1

Weighting can be used to:

- Adjust for the probabilities of selection of a respondent in a survey
- Adjust for features of the sample design
- Make adjustments after data are collected to bring certain features of the sample into line with other known characteristics of the population

Adjusting for Probability

One of the basic principles of probability samples is that every respondent must have a known, non-zero chance of being selected. In the typical media poll, the sample is designed to represent all adults 18 years of age and older. In practice, this also means "among those residing in telephone households" because that is the way the data are collected. So survey data is weighted for the probability of selecting a respondent.

Adjusting for Sample Design

In a certain kind of design called stratified sampling, groups of potential respondents with an identifiable characteristic are selected with unequal weights in order to increase the sample size. This is sometimes called an oversample. It is used to generate more precise estimates of how that group feels or is reacting to the campaign.
For example, in some surveys in the 2008 election cycle, African Americans, who represent about 12 percent of the U.S. population, are being oversampled to assess their reactions to Barack Obama and Hillary Clinton. That means that the probability of selecting an African-American respondent is increased and the probability of selecting a white respondent is decreased, in relation to their relative proportions in the adult U.S. population. Data can be used

straightforwardly to compare the reactions of whites and African Americans. But if the you want to produce a national estimate of support for Clinton and Obama, a weight will have to be created to "reduce" the contribution of each African American respondent and "increase" the contribution of each white respondent. Otherwise, the estimate of support for each candidate will not reflect their actual support.

Adjusting for Demographics

Finally, after all of the data have been collected, some simple frequencies are run on certain demographic variables so they can be compared to known characteristics of the population obtained from an external source, such as the U.S. Census. This adjustment is made because some demographic groups tend to be overrepresented or underrepresented in the sample. For example, young men are considerably harder to reach at home than older women. So unweighted data frequently include a larger proportion of older women and a smaller proportion of younger men than what the U.S. Census reports. A pollster typically makes small adjustments -- called post-stratification weights -- to bring the sample into line with known population characteristics such as age, gender, region and education. The table below shows how unweighted survey data can incorrectly represent the population.

UNDERSTANDING & INTERPRETING POLLS

UNWEIGHTED DATA Why We Weight

DEMOGRAPHICS	U.S. POP.	UNWEIGHTED
GENDER	**DATA**	**DATA**
male	48%	46%
female	52%	54%
AGE		
18-24	12%	5%
25-34	18%	8%
35-44	20%	13%
45-54	20%	21%
55-64	14%	21%
65+	16%	29%
EDUCATION		
less than HS graduate	15%	7%
HS graduate	36%	30%
some college	24%	24%
college graduate	27%	38%

This information was developed by AAPOR as part of a comprehensive online journalism polling course created in partnership with NewsU, a project of the Poynter Institute and funded by the Knight Foundation. The course launched September 2007.