METHODOLOGY FOR THE GENERAL PUBLIC SURVEY: EXECUTIVE BRANCH SURVEY

Summary

The public portion of the Executive Branch Survey, sponsored by the Annenberg Foundation Sunnylands Trust, conducted telephone interviews with a nationally representative sample of 1,300 adults living in continental United States telephone households. The interviews were conducted in English and Spanish by Princeton Data Source, LLC from August 19 to November 4, 2003. Statistical results are weighted to correct known demographic discrepancies. The margin of sampling error for the complete set of weighted data is ±3.3%.

This examination of the executive branch of the federal government is part of a larger study that the Annenberg Foundation's Sunnylands Trust is conducting on *Institutions of Democracy*. Details on the design, execution and analysis of the public portion of the Executive Branch Survey are discussed below.

Sample Design

The sample was designed to generalize to the U.S. adult population in telephone households and to allow separate analysis Americans between the ages 18-29 and of African-American and Hispanic respondents. This design uses random-digit dialing (RDD) methods, where telephone numbers are drawn disproportionately from area code-exchange combinations with higher than average densities of African-American and Hispanic households. This method increases the proportion of respondents in these target groups, but special weighting adjustments are required to restore the overall representativeness of the sample.

The telephone sample was provided by Survey Sampling International, LLC (SSI) according to PSRAI specifications. The sample was drawn using standard *list-assisted random digit dialing* (RDD) methodology. *Active blocks* of telephone numbers (area code + exchange + two-digit block number) that contained three or more residential directory listings were equally likely to be selected; after selection two more digits were added randomly to complete the number. This method guarantees coverage of every assigned phone number regardless of whether that number is directory listed, purposely unlisted, or too new to be listed. After selection, the numbers were compared against business directories and matching numbers purged. A total of 1,071 interviews were completed from the RDD sample.

To help boost the incidence of key demographic groups while keeping costs in check, 229 interviews were conducted from callback sample. The households included in this sample were recently interviewed as part of PDS' Demographic Omnibus survey, and were likely to have an African-American or Hispanic respondent.

Contact Procedures

Interviews were conducted from August 19 to November 4, 2003. As many as 10 attempts were made to contact every sampled telephone number. 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.

Calls were staggered over times of day and days of the week to maximize the chance of making contact with potential respondents. Each household received at least one daytime call in an attempt to find someone at home. In each contacted household, interviewers asked to speak with the youngest male currently at home. If no male was available, interviewers asked to speak with the oldest female at home. This systematic respondent selection technique has been shown to produce samples that closely mirror the population in terms of age and gender.

Weighting and Analysis

Weighting is generally used in survey analysis to adjust for effects of the sample design and to compensate for patterns of nonresponse that might bias results. The weighting was accomplished in two stages: a first stage sampling weight to adjust for the designed oversampling in minority areas, and a second stage adjustment to account for demographic distortions due to non-response.

First Stage—Sample Design Weight

All completed interviews were given a first stage sample weight based on the level of disproportionality imposed by the sample design. Telephone exchanges were divided into *strata* defined by African-American and Hispanic household densities associated with each exchange. The first stage weight for each stratum is the approximate proportion of active blocks in each stratum divided by the proportion obtained in our sample. The weighted distribution of cases interviewed across strata will no longer show effects of the designed oversampling. Table 1 documents design parameters and survey returns across strata.

Table 1: First-Stage Weight Calculation

Strata	Active Blocks		Completes		weight
1	1391901	53.8%	445	34.2%	1.5718
2	643846	24.9%	260	20.0%	1.2444
3	132389	5.1%	102	7.8%	0.6522
4	145340	5.6%	167	12.8%	0.4373
5	273496	10.6%	326	25.1%	0.4216

Second Stage—Demographic Adjustment

In the second weighting stage, the demographic composition of the final sample was weighted to match national parameters for sex, age, education, race/ethnicity and region (U.S. Census definitions). These parameters came from a special analysis of the March 2003 Current Population Survey (CPS) that included all households in the continental United States that had a telephone.

This stage of weighting, which incorporates each respondent's first stage weight, was accomplished using Sample Balancing, a special iterative sample weighting program that simultaneously balances the distributions of all variables using a statistical technique called the *Deming Algorithm*. The second stage weight adjusts for non-response that is related to particular demographic characteristics of the sample. This weight ensures that the demographic characteristics of the sample closely approximate the demographic characteristics of the national population. Finally, weights from this stage were *trimmed* to prevent individual interviews from having too much influence on the final results. Table 2 compares weighted and unweighted sample distributions to population parameters.

Table 2: Sample Demographics

	Parameter	Unweighted	1st-Stage Weight	Final Weight
Gender				
Male	47.9	51.2	52.1	48.0
Female	52.1	48.8	47.9	52.0
Age				
18-24	12.6	13.4	11.2	12.6
25-34	18.2	19.6	19.2	18.0
35-44	20.7	20.7	20.9	21.1
45-54	19.1	18.4	18.4	19.1
55-64	13.1	14.6	16.0	13.3
65+	16.4	13.4	14.2	15.9
Education				
Less than HS Grad.	15.6	11.5	9.6	14.2
HS Grad.	35.8	33.9	33.0	35.9
Some College	23.3	26.2	27.0	23.8
College Grad.	25.3	28.4	30.4	26.1
Region				
Northeast	19.4	14.8	16.8	19.1
Midwest	23.1	16.6	21.7	22.8
South	35.8	40.4	37.4	36.2
West	21.6	28.2	24.2	21.8
Race/Ethnicity				
White/not Hispanic	71.9	53.3	64.8	71.4
Black/not Hispanic	10.7	16.5	11.7	10.9
Hispanic	11.8	25.7	19.4	12.2
Other/not Hispanic	5.5	4.6	4.1	5.4

Effects of Sample Design on Statistical Inference

Post-data collection statistical adjustments require analysis procedures that reflect departures from simple random sampling. PSRAI calculates the effects of these design features so that an appropriate adjustment can be incorporated into tests of statistical

significance when using these data. The so-called "design effect" or *deff* represents the loss in statistical efficiency that results from a disproportionate sample design and systematic non-response. The total sample design effect for this survey is 1.46.

PSRAI calculates the composite design effect for a sample of size *n*, with each case having a weight, w_i as:

$$deff = \frac{n\sum_{i=1}^{n} w_i^2}{\left(\sum_{i=1}^{n} w_i\right)^2} \qquad \textit{formula 1}$$

In a wide range of situations, the adjusted *standard error* of a statistic should be calculated by multiplying the usual formula by the square root of the design effect ($\sqrt{deff}$). Thus, the formula for computing the 95% confidence interval around a percentage is:

$$\hat{p} \pm \left(\sqrt{deff} \times 1.96 \sqrt{\frac{\hat{p}(1-\hat{p})}{n}} \right) \qquad \textit{formula 2}$$

where $\hat{p}$ is the sample estimate and *n* is the unweighted number of sample cases in the group being considered.

The survey's *margin of error* is the largest 95% confidence interval for any estimated proportion based on the total sample— the one around 50%. For example, the margin of error for the entire sample is ±3.3%. This means that in 95 out every 100 samples drawn using the same methodology, estimated proportions based on the entire sample will be no more than 3.3 percentage points away from their true values in the population. It is important to remember that sampling fluctuations are only one possible source of error in a survey estimate. Other sources, such as respondent selection bias, questionnaire wording and reporting inaccuracy, may contribute additional error.

Response Rate

Table 3 reports the disposition of all sampled telephone numbers ever dialed from both telephone number samples. The response rate estimates the fraction of all eligible respondents in the sample that were ultimately interviewed. At PSRAI it is calculated by taking the product of three component rates:[1]

[1] PSRAI's disposition codes and rate formulas are consistent with the American Association for Public Opinion Research standards.

- Contact rate – the proportion of working numbers where a request for interview was made[2]
- Cooperation rate – the proportion of contacted numbers where a consent for interview was at least initially obtained, versus those refused
- Completion rate – the proportion of initially cooperating and eligible interviews that were completed

Thus, combining the two samples, the response rate for this survey was 40 percent.

Table 3: Sample Disposition

	RDD		Callback		Total	
Total Numbers dialed	5257		613		5870	
Business	561		6		567	
Computer/Fax	436		26		462	
Other Not-Working	1082		99		1181	
Additional projected NW	241		0		241	
Working numbers	2937	55.9%	482	78.6%	3419	58.2%
No Answer	54		0		54	
Busy	26		2		28	
Answering Machine	196		14		210	
Callbacks	40		6		46	
Other Non-Contacts	223		64		287	
Contacted numbers	2398	81.6%	396	82.2%	2794	81.7%
Initial Refusals	184		9		193	
Second Refusals	968		137		1105	
Cooperating numbers	1246	52.0%	250	63.1%	1496	53.5%
No Adult in HH	27		4		31	
Language Barrier	43		17		60	
Eligible numbers	1176	94.4%	229	91.6%	1405	93.9%
Interrupted	105				105	
Completes	1071	91.1%	229	100.0%	1300	92.5%
Response Rate		38.6%		51.9%		40.5%

[2] PSRAI assumes that 75 percent of cases that result in a constant disposition of “No answer” or “Busy” over 10 or more attempts are actually not working numbers.

Summary

The government portion of the Executive Branch Survey, sponsored by the Annenberg Foundation Sunnylands Trust, conducted telephone interviews with 501 presidential appointees who served in the second Ronald W. Reagan administration, or the George H. Bush, William H. Clinton or George W. Bush administrations in an Executive Level I-IV position requiring Senate confirmation. The interviews were conducted by Princeton Data Source, LLC from August 25 to November 10, 2003. The margin of sampling error for the complete set of weighted data is ±4.4%. The margin of error is ±9.7% for the sample of 104 George W. Bush appointees, ±7.1% for the 190 Clinton appointees, ±8.6% for the 132 George H. Bush appointees and ±11.4% for the 75 Reagan appointees. Details on the design, execution and analysis of the government portion of the Executive Branch survey are discussed below.

Sample Design

The government portion of the Executive Branch Survey focused on presidential appointees who had served in at least one of five presidential administrations between 1984 and 2003. Every effort was made to ensure that the lists of presidential appointees were as exhaustive as possible.

Past Administrations: 1984-1999

The sample of appointees who served between 1984 and 1999 included appointees who served in either a cabinet department or one of six independent agencies: the Environmental Protection Agency (EPA), the Federal Emergency Management Agency (FEMA), the National Aeronautics and Space Administration (NASA), the Small Business Administration (SBA), the United States Agency for International Development (USAID) or the United States Information Agency (USIA).

PSRAI identified the population of 1984-1999 appointees in three stages: First, using the list of presidential appointments published every four years in *U.S. Government Policy and Supporting Positions*, PSRAI culled the titles of Executive Level I-IV presidential appointee positions requiring Senate confirmation. Again, this was limited to cabinet departments and six independent agencies. Second, using the *U.S. Government Manual*, PSRAI matched these titles with the names of those who held them. Third, using a variety of search strategies, including Who's Who and Internet directories, PSRAI matched names with addresses and telephone numbers.

Current Administration: 2000-2003

For the sample of presidential appointees serving in the current George W. Bush administration, PSRAI used the *Federal Leadership List* by the Leadership Directories, Inc. The *Federal Leadership List* provides contact information for leaders in the 14 cabinet-level departments and over 70 independent agencies and identifies positions that require

presidential appointment. The *Federal Leadership List* is updated quarterly with publication of the *Federal Yellow Book*. Following the design for earlier administrations, PSRAI selected only presidential appointees with Senate confirmation who served in a Cabinet department or one of five independent agencies: the Environmental Protection Agency (EPA), the Federal Emergency Management Agency (FEMA), the National Aeronautics and Space Administration (NASA), the Small Business Administration (SBA), or the United States Information Agency (USIA).

Contact Procedures

PSRAI sent letters to presidential appointees on behalf of the Annenberg Foundation explaining the purpose of the survey. Interviews were conducted by highly qualified elite interviewers from August 25 to November 10, 2003. Over 20 attempts were made to contact every sampled appointee. Calls were staggered over times of day and days of the week to maximize the chance of making contact with potential respondents.

Weighting

Weighting is generally used in survey analysis to adjust for effects of the sample design and to compensate for patterns of nonresponse that might bias results. The sample of presidential appointees was adjusted to give equal weight to each of the five administrations. Table 1 compares weighted and unweighted sample parameters.

Table 1: Weight Calculation

Administration	Unweighted		Weighted		Weight
Reagan	75	20.80%	100	20%	1.33
G.H. Bush	132	26.30%	100	20%	0.76
Clinton	190	37.90%	201	40%	1.06
G.W. Bush	104	20.80%	100	20%	0.96

Respondents who served in more than one administration are classified based on the last administration they served in. At the outset of each interview, we confirmed with the respondent that they were in fact a presidential appointee of the presumed administration. Later on, we asked the appointees if they had served in any other administrations. The fact that we classified appointees based on the last administration they served in may partly account for the lower incidence of Reagan appointees in the final sample.

Margin of Error

The survey's *margin of error* is the largest 95% confidence interval for any estimated proportion based on the total sample— the one around 50%. For example, the margin of error for the entire sample is ±4.4%. This means that in 95 out every 100 samples drawn using the same methodology, estimated proportions based on the entire sample will be no more than 4 percentage points away from their true values in the population. The margin of error is ±9.7% for the sample of 104 George W. Bush appointees, ±7.1% for the 190 Clinton appointees, ±8.6% for the 132 George H. Bush appointees and ±11.4% for the 75 Reagan appointees.

It is important to remember that sampling fluctuations are only one possible source of error in a survey estimate. Other sources, such as respondent selection bias, questionnaire wording and reporting inaccuracy, may contribute additional error.

Response Rate

Table 2 reports the disposition of all sampled telephone numbers dialed. The response rate estimates the fraction of all eligible respondents in the sample that were ultimately interviewed. At PSRAI it is calculated by taking the product of three component rates:

- Contact rate – the proportion of working numbers where a request for interview was made
- Cooperation rate – the proportion of contacted numbers where a consent for interview was at least initially obtained, versus those refused
- Completion rate – the proportion of initially cooperating and eligible interviews that were completed

Thus, the response rate for this survey overall was 45 percent. As we expected, the response rate varied by administration with the appointees of the current George W. Bush administration (24%) considerably less likely to participate than appointees who served in the Clinton (55%), George H. Bush (56%) or Reagan (55%) administrations.

Table 2: Sample Disposition

Total Numbers dialed	1702	
Wrong number	168	
Disconnects	36	
Working numbers	1151	
No Answer	5	
Busy		
Left Voice Mail	73	
Callbacks	215	
Other Non-Contacts		
Contacted numbers	842	73%
Gatekeeper Refusal	78	
Respondent Refusal	219	
Cooperating numbers	545	65%
Ineligible	19	
Eligible numbers	526	
Interrupted	25	
Completes	501	95%
Response Rate		45%