

## **Panel Characteristics, Attrition and Representativeness**

This section of the report is concerned with panel attrition--who left, who stayed and how such differences might affect the representativeness of the sample. The first part takes a comprehensive look at the differences between wave 1 and wave 2 for each of the three groups--regular Limbaugh listeners, regular "Other" listeners and Non-listeners. The second sub-section examines differences in these same groups on selected critical variables between waves 1 and 3, while the third compares the original sample of regular Limbaugh listeners at time 1 with the fresh sample of regular Limbaugh listeners added at time 3 on selected core characteristics.

### ***Panel Characteristics, Wave 1 to Wave 2***

With panel attrition we are primarily concerned as to whether the character of the sample has changed between waves 1 and wave 2 as a function of which respondents agreed to be reinterviewed. The "character" of the sample includes such things as:

- ▶ demographic attributes, such as age, gender, education, income and race,
- ▶ political orientations, such as partisanship and ideology
- ▶ political engagement, such as interest, media use and political knowledge
- ▶ substantive variables, such as evaluations of public figures, opinions on policy issues, etc.

The primary vehicle employed for examining differences between waves 1 and 2 is a Chi-square test of statistical significance, which attempts to reject the null hypothesis that there is no difference on any particular variable under study between those interviewed on wave 1 and those successfully reinterviewed on wave 2. A value of .05 or lower ( $p < .05$ ) means that the null hypothesis is not rejected, and that there is in fact a *statistically* significant difference between the two waves.

We highlight the term “statistically” significant, as the Chi-square test is extremely sensitive to sample size considerations. A large sample size, such as is the case with the wave 1 Non-listeners group, means that even small differences of two or three percentage points may be statistically significant--that is, differences this large will not be due to chance. However, the question of *substantive* significance remains. Many analysts would consider a difference of a few percentage points between samples not meaningfully different, even if it met the criterion for statistical significance. Given that there are so many variables, it is not practical to show the cross-tabular relationships that produced the Chi-square value for all of the three groups. We have instead prepared summary tables of Chi-square values for many variables, and the cross-tabulations for important ones that do not meet the test of statistical significance. Table 10 begins this presentation by detailing intra-group comparisons between waves 1 and 2.

**Table 10: Intragroup Demographic Comparisons, Wave 1 to Wave 2**  
Cell Entries (p =) are Chi-square Values

Variable	Limbaugh Listeners	Other Listeners	Non-Listeners	Comments Those leaving panel:
Gender	.41	.37	.50	No difference
Education	.92	.03	.57	Were less educated for Oth
Age	.01	.94	.23	Were younger for R.L.
Income	.55	.67	.13	No difference
Race	.97	.00	.24	Were non-white for Oth
Evangelical	.07	.90	.19	No difference

Table Notes: Within each listener category Chi-square tests compare those interviewed at wave 1 only with those interviewed at both waves 1 and 2. Tests were conducted on unweighted data. N-sizes are as follows: Limbaugh Wave 1 only (55), Waves 1 & 2 (158); Other Wave 1 only (127), Waves 1 & 2 (295); Non-listener Wave 1 only (354), Waves 1 & 2 (634).

Education is a four-category variable, age is a four category variable, income is a three category variable, race is a dichotomous variable (white/non-white), Evangelical is a dichotomous variable (born again/not). Differences by region (not reported here) were also not significant.

As these statistics indicate, those interviewed at wave 2 do not differ appreciably from the entire sample interviewed on wave 1 except in some very small respects. There were no differences among the two groups of regular Limbaugh listeners on five of the six demographic attributes tested, the sole exception being age. Younger listeners were significantly more likely to drop out of the panel from wave 1 to wave 2.<sup>1</sup> The group of regular talk show listeners to some “Other” host was different in that Whites and the better educated were more likely to stay with the panel than their respective counterparts. There were *no* differences on any of the six attributes among non-listeners due to panel attrition.

The panel also looks quite stable in its political orientations, in that attrition is not a compelling reason for change driven by partisanship or ideology. Three variables in this vein were tested: (1) Partisanship--a 7 point ordinal scale ranging from strong Republican, through weak Republican, Independent-leaning-Republican, pure Independents and back through the Democratic side; (2) Strength of partisanship, a folding of the partisanship scale to range from strong partisan to pure independent, and (3) Ideology, ranging from strong conservative to strong liberal with the midpoints of not-strong conservative/liberal on either side and moderate in the middle.

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<sup>1</sup> The age breakdown for those completing both wave 1 and wave 2 interviews is as follows: 18 to 29 (14%), 30 to 49 (47%), 50 to 64 (23%), 65 and older (17%). Among those completing only wave 1: 18 to 29 (34%), 30 and 49 (32%), 50 to 64 (17%), over 65 (17%).

**Table 11: Intragroup Political Orientation Comparisons, Wave 1 to Wave 2**  
**Cell Entries are Chi-square (p = ) Values**

<b>Variable</b>	<b>Limbaugh Listeners</b>	<b>Other Listeners</b>	<b>Non-Listeners</b>	<b>Comments Those leaving panel:</b>
Partisanship	.08	.37	.50	No difference
Strength of Part.	.09	.30	.51	No difference
Ideology	.12	.51	.02	Slightly more conservative

As the data in Table 11 show, there were no appreciable differences in the Limbaugh and “Other” listeners who stayed with or left the panel; the coloration of non-listeners who left was just slightly more conservative than those who stayed. But while statistically significant, possibly owing to the large number of cases involved, there is very little substantive difference between those who completed both waves 1 and 2 and those who only completed wave 1. This table is presented below.

**Table 12: Ideology and Panel Attrition for Non-Listeners**

<b>Group</b>	<b>Very Cons.</b>	<b>Conservative</b>	<b>Moderate</b>	<b>Liberal</b>	<b>Very Lib.</b>	<b>Total</b>
Wave 1 Only	8	29	40	21	2	<b>100%</b>
Waves 1 & 2	5	24	47	20	4	<b>100%</b>

**Table 13: Intragroup Comparisons on Attentiveness, Wave 1 to Wave 2**  
**Cell Entries (p =) are Chi-square Values**

<b>Variable (All numbers refer to Wave 1 questionnaire)</b>	<b>Limbaugh Listeners</b>	<b>Other Listeners</b>	<b>Non-Listeners</b>
Attention to Politics (Q36)	.14	.00	.00
Media Use Scale (Q29a-f)	.27	.60	.01
Political Activity scale (Q51a-d)	.14	.40	.02
Factual Knowledge Scale (q39, Q40)	.00	.00	.00
Cur Event Knowledge Scale (Q42, Q44)	.51	.76	.00
Felt Knowledge Scale (Q38a-c)	.23	.03	.00

Table Notes: All scales are simple additive indices of the variables designated. All components were weighted equally.

Attrition is more of a problem in sample representativeness around the issue of political attentiveness and its consequences. Table 13 arrays a number of variables on this score, including how closely people follow politics, their media use habits (largely centered around more “elite” media such as newsmagazine, NPR and public television news), the amount of political activity they reported having engaged in (donating money, attending meetings), and questions about how knowledgeable people were in a factual sense (know who controls Congress), about current events (Bosnia troops/flat tax proposal), and how knowledgeable they felt about various concerns (budget debate, Republican presidential nomination).

Among Rush Limbaugh listeners, those who were reinterviewed were not found to be statistically different from those who dropped out of the panel on five of these six attributes. They tended to be a bit higher in factual knowledge, a greater proportion were fully informed about who controlled Congress and the number needed to override a presidential veto. While Limbaugh listeners who remained on the panel followed politics to a greater extent than those

who dropped out (80 percent of the former group and 67 percent of the latter said they followed politics and government “most” of the time), this difference was not statistically significant.

**Table 14: Attentiveness to Politics by Panel Status**

<b>Follows Politics -----&gt;</b>	<b>Most of the Time</b>	<b>Some of the Time</b>	<b>Less Often</b>	<b>Total Pct.</b>	<b>Total (n)</b>
<b>Limbaugh Listeners</b>					
Wave 1 Only	67	24	9	100%	55
Waves 1 and 2	80	16	4	100%	158
<b>Other Listeners</b>					
Wave 1 Only	51	35	13	99%	127
Waves 1 and 2	75	18	7	100%	295
<b>Non-Listeners</b>					
Wave 1 Only	36	42	21	99%	354
Waves 1 and 2	51	31	19	101%	634

There were a few significant differences in panel attrition among listeners to some “Other” talk show host. Those staying on the panel were more attentive, had more factual knowledge, and felt they knew more than others. The largest number of differences in panel attrition were found among non-listeners, as expected, with those less engaged being less likely to cooperate with a second interview. Those remaining on the panel were significantly more attentive to politics, used more media sources, were more likely to engage in political activity, and were more knowledgeable on all of the dimensions evaluated.

**Table 15: Mean Difference in Activity and Knowledge for Non-Listeners by Panel Status**

	<b>Scale Range</b>	<b>Wave 1 Only Mean</b>	<b>Wave 1 Only St.</b>	<b>Waves 1&amp; 2 Mean</b>	<b>Wave 1&amp; 2 St. Dev.</b>
Media Use	0-3	<b>1.27</b>	1.05	<b>1.52</b>	1.26
Political Activity	0-3	<b>.70</b>	1.00	<b>.97</b>	1.09
Factual Knowledge	0-2	<b>1.17</b>	.79	<b>1.34</b>	.77
Cur Event Knowledge	0-2	<b>.60</b>	.68	<b>.72</b>	.68
Felt Knowledge	0-2	<b>.40</b>	.80	<b>.59</b>	.90

In addition to this analysis, significance tests were run on 78 other variables in the wave 1 questionnaire. These findings have been organized into sub-topics, and are presented in Tables 16 through 20. These data show the Chi-square tests for repeat/non-repeat interviews within each of the three groups. An “\*” in the table cell indicates the relationship is significant at  $p \leq .05$ , or that one cannot reject the null hypothesis that there is no statistically significant difference between those staying with and those leaving the panel with regard to the variable in question. The remaining narrative in this section summarizes the differences according to sub-topics.

### ***Clinton, Congress and Various Political Actors***

The data arrayed in Table 16 are concerned with substantive variables measuring opinions towards President Clinton, Republican leaders in Congress, and various political actors, including a number of candidates running the Republican presidential primaries this year, and the mass media. The *number* of significant differences for the Limbaugh group were not particularly noteworthy, occurring in just 6 of 20 possible instances. However, they were large and in important domains.

**Table 16: Chi-square Test on Substantive Variables--Panel Attrition Wave 1 to 2**  
**Cell entries (\*) indicates  $p \leq .05$**

<b>QUESTION TOPIC AREA -- Wording Abbreviated</b> <b>Clinton, Congress and Political Actors</b>	<b>Q Num Wave 1</b>	<b>Limbaugh Listener</b>	<b>Other Listener</b>	<b>Non-Listener</b>
Clinton Approval	24	*		*
Republicans in Congress Approval	25	*		
Opinion of Bob Dole	26a			*
Opinion of Newt Gingrich	26c		*	*
Opinion of Bill Clinton	26b	*		
Opinion of Clinton economic policy	27a			
Opinion of Clinton foreign policy	27b			*
Opinion of Clinton budget proposals	27c			*
Opinion of Clinton Medicare proposals	27d			
Opinion of Clinton welfare proposals	27e			
Opinion of Republican economic policy	28a			*
Opinion of Republican foreign policy	28b			
Opinion of Republican budget proposals	28c	*		*
Opinion of Republican Medicare proposals	28d			*
Opinion of Republican welfare proposals	28e	*		*
Opinion of Pat Buchanan	26f			
Opinion of Steve Forbes	26g	*		*
Opinion of Lamar Alexander	26i			*
Opinion of Bill Bennett	26j			
Media help or hurt society	37			



Those staying with the panel were more critical of the President and more supportive of Republican leaders. Among those remaining on the panel, Clinton's job performance rating at wave 1 was 81 percent disapprove to 13 percent approve. Among those leaving the panel, he held a rating of 64 percent disapprove to 35 percent approve at the same time. Approval of Republican congressional leaders' handling of the budget outnumbered disapproval by a margin of 70 to 27 percent among those staying on the panel, and by a much narrower 53 to 40 percent among those not re-interviewed in wave 2.

Among those listening to some "Other" talk show host, those successfully reinterviewed were statistically indistinguishable from those not reinterviewed in 19 out of 20 cases.

It is among the non-listeners that there is a concern about attrition producing a non-representative sample at time 2. Eleven of the 20 differences between groups are significant. However, it is important to remember that since the sample size involved is large, even small substantive differences can reach a threshold of statistical significance. And this indeed appears to be the case. Percentage differences between panel and non-panel respondents are small, and they are generally in the *amount* rather than *direction* of opinion. That is, panel respondents tended to have more opinions than non-panel respondents, rather than different opinions. This finding is quite consistent with their greater interest and knowledge. Consider the following examples, all of which were "statistically" significant relationships:

- ▶ Evaluations of Bill Clinton's job performance were divided 55 percent favorable, 35 percent unfavorable and 10 no opinion among those not completing Wave 2. Among those successfully interviewed both times opinion was divided 61 favorable, 33 unfavorable, with 6 percent expressing no clear view.
- ▶ Among those interviewed twice, favorable opinions of the Republicans budget proposals outnumbered unfavorable ones by a margin of 62 to 32 percent, with 6 percent undecided. Among those interviewed at time one only, favorable comments outnumbered unfavorable ones by a margin of 59 to 30 percent, with 11 percent undecided.

- ▶ On the initial interview, 50 percent of those subsequently reinterviewed expressed no opinion of Lamar Alexander, compared to 59 percent of those not reinterviewed

***Media Use, Attitudes towards the Political System, Participatory Activities***

The data in Table 17 summarize 20 indicators across these three dimensions. They offer strong evidence for the claim that panel attrition did not compromise the representativeness of the samples with the exception of non-listeners on participatory activities. The Chi-square tests indicate:

- ▶ On **none** of the 20 items--six focusing on media use, eight on key attitudes toward the political system, and six on participatory activities--are the Limbaugh listeners successfully reinterviewed different from those not recontacted on wave 2.
- ▶ Panel participants who listen to some "Other" talk show host are different from those who quit the panel on only four of the 20 items.
- ▶ Reinterviewed non-listeners are different from those quitting the panel in 9 of the 20 cases, although substantive differences were quite modest. As expected, those more interested panel respondents were more likely to use media to a slightly greater extent, and to have engaged in a participatory act recently. Importantly, there were no differences in efficacy or trust.

**Table 17: Chi-square Test on Substantive Variables--Panel Attrition Wave 1 to 2**  
**Cell entries (\*) indicates  $p \leq .05$**

<b>QUESTION TOPIC AREA -- Wording</b> <b>Abbreviated Media Use</b>	<b>Q Num</b> <b>Wave 1</b>	<b>Limbaugh</b> <b>Listener</b>	<b>Other</b> <b>Listener</b>	<b>Non-</b> <b>Listener</b>
Read newspaper	29a			
Watch national TV news	29b			
Read newsmagazine	29c		*	*
Watch CSPAN	29d		*	
Listen to NPR	29e			*
Source of most information	36a			
<b>Efficacy/Attitudes towards the political system</b>				
Trust government to do right	33			
People like me have no say	34a			
Public officials don't care what people like me think	34b			
Politics is too complex	34c			
Don't care who wins presidential	34d		*	*
No difference between the parties	34e			*
Politicians won't take on tough issues	34f			
Money buys votes	34g			*
<b>Participatory Activities</b>				
Regularly Vote	30		*	
Contacted/written a public official	51a			*
Attended a public hearing/town meeting	51b			*
Contacted newspaper/TV station about issue of concern	51c			*
Contributed money to candidate/organization	51d			*
Attempted to call into a political talk radio show	51e			

***Political Issues; Social and Communal Activities***

Table 18 summarizes group differences across 20 items in two domains: 12 questions dealing with opinions on topical issues, and 8 questions concerning interpersonal discussion and attitudes towards other people. Again, the preponderance of evidence is that those staying with the panel at Wave 2 were no different from those who dropped out. The intra-group Limbaugh differences were significant on none of the 20 items, only 3 times out of 20 for the “Other” group, and just 4 out of 20 times in the larger “Non-listener” group.

**Table 18: Chi-square Test on Substantive Variables--Panel Attrition Wave 1 to 2**  
 Cell entries (\*) indicates  $p \leq .05$

<b>QUESTION TOPIC AREA -- Wording</b> <b>Abbreviated Opinions and Attitudes towards</b> <b>Policies and Issues</b>	<b>Q Num</b> <b>Wave 1</b>	<b>Limbaugh</b> <b>Listener</b>	<b>Other</b> <b>Listener</b>	<b>Non-</b> <b>Listener</b>
Big change in government is necessary	35a			
Blacks need help from government	35b			
Immigrants strengthen the country	35c			
Government regulation of business is necessary	35d			
Stricter environmental law and regulations hurt	35e		*	*
Change to flat tax system	43a			
Reduce welfare for unmarried mothers	43b			
Give responsibility for welfare to the states	43c		*	
Balance budget through Medicare reduction	43d			
Relax air and water pollution standards for jobs	43e			*
Offer educational vouchers	43f			
Have free trade agreements like GATT and NAFTA	43g			
<b>Social and Communal Activities and Attitudes</b>				
Frequency of talking politics with others	31		*	*
Disagreement with others when talking politics	32			
Talk regularly to people in neighborhood	47			
Number people talk to in neighborhood	48			
Belief that people can be trusted	49			
Intensity of feeling that people can be trusted	49a			
Belief that people are helpful	50			*
Intensity of feeling that people are helpful	50a			

Finally, the data in Table 19 organize the various types of knowledge items and perceptions of talk radio. As noted earlier, among both non-listeners, and listeners to “Other” political talk radio show hosts, a greater number of those who said they felt knowledgeable continued with the panel. This also extended to some degree to those who actually were more (factually) knowledgeable. Better informed/more interested people were more inclined to complete wave 2 of the study. With regard to talk radio, there were few differences among Listener groups who did and did not complete wave 2 of the study. The main differences found were in the non-listener group, with those not completing the second interview having fewer opinions about Rush Limbaugh and the various attributes of talk radio asked about. In addition to having more opinions, those completing the second wave were relatively more likely to describe political talk radio as “conservative” and “unbalanced.” In sum, however, differences due to panel attrition were not large.

**Table 19: Chi-square Test on Substantive Variables--Panel Attrition Wave 1 to 2**  
 Cell entries (\*) indicates  $p \leq .05$

<b>QUESTION TOPIC AREA -- Wording Abbreviated Knowledge and Information</b>	<b>Q Num Wave 1</b>	<b>Limbaugh Listener</b>	<b>Other Listener</b>	<b>Non- Listener</b>
Felt Knowledge--Bosnia	38a		*	
Felt Knowledge--Washington budget debate	38b		*	*
Felt Knowledge--1996 Republican candidates	38c		*	*
How much vote necessary to override veto	39		*	*
Who has majority in House	40	*	*	
Know composition of Bosnia peace keeping forces	42			
Know Forbes proposal amount	44			*
Know number actually executed in US	45			
Know number of welfare mothers	46		*	*
<b>Opinion of Talk Radio</b>				
Opinion of Rush Limbaugh	26h		*	*
Talk radio balanced	64a		*	*
Talk radio liberal	64b			*
Talk radio honest	64c			
Talk radio fair	64d			
Talk radio dangerous	64e		*	*
Talk radio entertaining	64f			
Talk radio emotional	64g			*
Talk radio cynical	64h			

### *Panel Characteristics, Wave 1 to Wave 3*

The same statistical tests used to evaluate the representativeness of the sample at time 2 were employed allow us to ascertain the degree to which panel attrition posed a threat to representativeness of the third wave of the panel. This section presents these data in a less detailed fashion than presented above, as the argument that those remaining on the panel are not statistically different from those having dropped out is further strengthened.

The data presented in Table 20 present the results of tests on the demographic representativeness of the sample. As these data show, there are virtually no significant differences between those remaining with the panel at time 3 and those not having a wave 3 interview. Differences were not statistically significant for either the Limbaugh or “Other” listeners on any of the six attributes tested. Among non-listeners the only significant difference of the six tested was in education, and this was quite minor in substantive terms.<sup>2</sup>

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<sup>2</sup> The education breakdown is as follows for those not reinterviewed: 12% less than high school, 37% high school graduates, 27% some college, 24% college graduates. Among those reinterviewed: 9% less than high school, 33% high school graduates, 27% some college, 32% college graduates.



**Table 20: Intragroup Demographic Comparisons, Wave 1 to Wave 3**  
**Cell Entries (p =) are Chi-square Values**

<b>Variable</b>	<b>Limbaugh Listeners</b>	<b>Other Listeners</b>	<b>Non-Listeners</b>	<b>Comments Those leaving panel:</b>
Gender	.37	.72	.49	No difference
Education	.26	.90	<b>.05</b>	Were less educated for Non
Age	.29	.51	.07	No difference
Income	.54	.98	.49	No difference
Race	.17	.32	.33	No difference
Evangelical	.35	.81	.30	No difference

Table Notes: Within each listener category Chi-square tests compare those interviewed at wave 1 only with those interviewed at both waves 1 and 3. Tests were conducted on unweighted data. N-sizes are as follows: Limbaugh Wave 1 only (92), Waves 1 & 3 (121); Other Wave 1 only (185), Waves 1 & 3 (237); Non-listener Wave 1 only (461), Waves 1 & 3 (527).

Education is a four-category variable, age is a four category variable, income is a three category variable, race is a dichotomous variable (white/non-white), Evangelical is a dichotomous variable (born again/not).

As there were no social demographic differences of note between those staying with and those leaving the panel, neither were there significant differences in the most important political demographics--partisanship and ideology. Three areas were tested--the distribution of partisanship, strength of partisanship, and direction and strength of ideological identification--for each of the three groups. None of the nine entries in Table 21 shows a significant Chi-square value, arguing that panel attrition did not compromise the political character of the sample.

**Table 21: Intragroup Political Orientation Comparisons, Wave 1 to Wave 3**  
**Cell Entries are Chi-square (p = ) Values**

<b>Variable</b>	<b>Limbaugh Listeners</b>	<b>Other Listeners</b>	<b>Non-Listeners</b>	<b>Comments Those leaving panel:</b>
Partisanship	.24	.26	.47	No difference
Strength of Part.	.14	.29	.77	No difference
Ideology	.07	.40	.16	No difference

The differences presented in Table 22 parallel those presented in Table 13. While Limbaugh and Other respondents staying with the panel are generally representative of all in those listener groups, there is some distortion among the non-listeners. Those interviewed in wave 3 were more interested in politics, more politically active and generally more knowledgeable than those not successfully re-interviewed at time 3.

A full analysis of the 78 items presented in Tables 16 through 19 has not been replicated for the wave 3 time point, as it must necessarily be similar to these earlier findings. An examination of the two-by-two tables of response at time 2 and time 3 finds 70 percent of cases to be on the diagonal of either participating in either both or neither of the follow-up interviews.<sup>3</sup> This finding held for each of the three response groups--Limbaugh listeners, "Other" listeners, and Non-listeners.

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<sup>3</sup> This would take the following form for each group: The row variable is panel status at wave 2 with code 1 "wave 1 only" and code 2 "waves 1 and 2;" the column variable is panel status at wave 3 with code 1 "wave 1 only" and code 2 "waves 1 and 3."

**Table 22: Intragroup Comparisons on Attentiveness, Wave 1 to Wave 3**  
**Cell Entries (p =) are Chi-square Values**

<b>Variable (All numbers refer to Wave 1 questionnaire)</b>	<b>Limbaugh Listeners</b>	<b>Other Listeners</b>	<b>Non-Listeners</b>
Attention to Politics (Q36)	.32	.05	.00
Media Use Scale (Q29a-f)	.62	.79	.06
Political Activity scale (Q51a-d)	.24	.42	.00
Factual Knowledge Scale (Q39, Q40)	.00	.02	.00
Cur Event Knowledge Scale (Q42, Q44)	.21	.34	.27
Felt Knowledge Scale (Q38a-c)	.04	.49	.00

***Limbaugh Samples, Times 1 and 3***

Two independent RDD samples of regular Rush Limbaugh listeners were conducted. While screening and interviewing procedures were identical, they of course differed in the time dimension, with 213 being interviewed during the first wave of the study in February/March and 200 being interviewed contemporaneously with the third wave of the panel approximately two months later. Comparisons on substantive variables to address the comparability of samples--such as approval of the President or opinions on various policy proposals--are inferentially quite risky. Given that we know that these opinions change over time, time itself becomes a plausible rival hypothesis to explain any differences between the two samples. With this caveat, the final section of this report presents the “topline” findings for the Limbaugh RDD over-sample at time 3 in such a way that they can be compared with the Limbaugh RDD sample at time 1, and the panel of remaining Limbaugh listeners at time 3.

There are a number of attributes, primarily demographic, that would not be expected to change over the course of the study. Comparisons across these attributes between the samplings at times 1 and 3 do not present nearly the hazard in making inferences about the comparability of

samples. The data in Table 23 compare the two RDD samples of Limbaugh listeners on basic social status variables. Both unweighted and weighted data are presented. The unweighted shows the percentage in each category actually interviewed; the weighted shows how percentages and gaps change once the data files are adjusted to represent the general U.S. population.

**Table 23: Limbaugh Listener RDD Samples at Times 1 and 3  
Comparisons on Social Status Variables\***

<b>Variable</b>	<b>Time 1--UnWtd</b>	<b>Time 3--UnWtd</b>	<b>Time 1--Wtd</b>	<b>Time 3--Wtd</b>
<i>Gender</i>				
--Male	61	68	61	65
--Female	39	32	39	35
Total	100	100	100	100
<i>Age</i>				
--18 to 34	28	20	31	21
--35 to 54	41	39	40	40
--Over 55	31	41	29	39
Total	100	100	100	100
<i>Race</i>				
--White	91	93	94	92
--Non-White	9	7	6	8
Total	100	100	100	100
<i>Education</i>				
--H.S. or less	34	35	45	43
--Some College	31	28	29	27
--College Grad	35	37	26	30
Total	100	100	100	100
<i>Income</i>				
--Under \$30,000	36	32	39	34
--\$30 to \$50,000	25	33	25	30
--Over \$50,000	39	35	36	36
Total	100	100	100	100

\* Limbaugh time 1 unweighted n is approximately 213; time 3 is approximately 200. Actual ns are somewhat smaller due to missing data/don't knows.

In looking at the five attributes of gender, age, race, education and income, only on age do the two samples seem to diverge to a significant degree. The Limbaugh listeners interviewed at time 3 are comprised of a larger proportion of older citizens; time 1 correspondingly of younger people. The two samples are also a bit different in their gender makeup, with males being 68 percent of those interviewed at time 3 compared to 61 percent of those time 1 Limbaugh listeners. This difference is attenuated slightly by the weighting, which brings the margin down to four percentage points--65 to 61 percent. Differences between the two RDD Limbaugh samples on race, education and income are only a few percentage points from one category to the next.

The final table in this section presents data bearing on the political disposition of the two samples. They do not differ with regard to partisanship, but the first Limbaugh sample has more "strong" conservatives and slightly fewer other conservatives and moderates. It is difficult to tell if substantive differences between the two Limbaugh samples at the last time point are due to sample variation or attrition among the panel. When the fresh Limbaugh sample at time 3 (designated on the final top line in this report as LO3 for "Limbaugh Over Sample at Time 3") is compared with surviving members of the panel (designated LP3 for "Limbaugh Panel at Time 3"), a number of differences are apparent. Those remaining on the panel are more critical of Clinton's job performance and handling a number of tasks, more favorable toward the Republican leaders in Congress. (See questions 9 through 13c of that top line.) A greater number of them were also concerned about the budget and national debt as a critical problem. In many cases the remaining panel is more conservative or partisan in their evaluations than was the entire panel at Time 1, arguing for attrition. However, in making comparisons between the LO3 group and the panel sample interviewed at Time 1, before attrition, it appears that the sample of Limbaugh listeners at time 1 was more conservative or partisan than Limbaugh listeners interviewed at time 3. Again, this may be due to sample variability or the passage of time.

**Table 24: Limbaugh Listener RDD Samples at Times 1 and 3  
Comparisons on Political Status Variables\***

Variable	Time 1--UnWtd	Time 3--UnWtd	Time 1 --Wtd	Time 3--Wtd
<i>Partisanship</i>				
--Republican	61	64	60	60
--Democrat	14	12	14	12
--Independent	25	24	26	28
Total	100	100	100	100
<i>Ideology</i>				
--Liberal/St. Lib.	9	10	10	11
--Moderate	21	28	22	30
--Conservative	45	49	44	45
--Strong Conservative	25	13	24	14
Total	100	100	100	100

\* Limbaugh time 1 unweighted n is approximately 213; time 3 is approximately 200. Actual ns are somewhat smaller due to missing data/don't knows.

The Limbaugh listeners interviewed at time 1 appear to be quite similar to those interviewed at time 3 in terms of their media use and variables relating to Limbaugh himself. They use roughly the same media mix (newspapers, television, magazines--Q14 sequence) and give similar ratings to them. They also report voting and taking part in political discussions in equal numbers, and are similar in efficacy (questions 15-17). They have similar views of government policy towards blacks, immigrants and business corporations (questions 18a-c). Moreover, the two groups of Limbaugh listeners are quite similar with regard to the characteristics of how they listen to Limbaugh (questions 30-40), and their evaluations of political talk radio (questions 41a-h).

This is not to suggest similarity on all dimensions. Those interviewed in the over sample appear to be less trustful of other people (questions 21 and 22), were less attentive to politics (question 19) and were less knowledgeable (question 24) than those interviewed on the initial cross-sectional survey. While the difference in “time” can not be ruled out as an explanatory variable, the face validity of that explanation is not compelling. The groups were also different on some policy questions such as the “flat tax,” which could be explained by “time.” All in all, however, the preponderance of evidence comes down on the side of good sample comparability.

A final thought on the set of differences within the Limbaugh samples is that it is of course possible that differences between the Limbaugh cross-sectional surveys at time 1 and time 3 result not from sampling differences, but from actual change in the population. That is, there were differences in who were regular listeners to Rush Limbaugh at the two points in time. While one might think of this as a static group the evidence from the panel is that there is certainly some fluidity among listeners. One-quarter of the Limbaugh panel of those who had been “regular” listeners at Time 1 reported not having listened to the Limbaugh show in the week prior to being interviewed on wave 3, and 23 percent said they had not done so in the previous week when they were interviewed on wave 2. Another three in 10, on both waves 2 and 3 of the panel, said they listened either 1 or 2 days a week. Perhaps half of this number would not have met the definitional criterion for a “regular” listener at other points in the panel after they initially qualified.

#### ***Other Talk Radio Listener Samples, Times 1 and 4***

The same tests were performed on the two samples of “Other” talk radio listeners, comparing the 422 initially interviewed on the first wave with the smaller group of 90 identified during wave 3 and first interviewed for wave 4. Again, both unweighted and weighted data are presented, with one difference. In the analysis of the Limbaugh sample presented above, the weights used were those derived and assigned at time 1 and then carried through to the second and third waves. New weights were derived for the entire sample at wave 4. Thus the tables for



weighted data in this analysis, and for the following non-listener samples, show the wave 1 data using the wave 1 weights and the wave 4 data using the wave 4 weights. The chi-square tests have been computed on the unweighted data.

The data arrayed in Tables 25 and 26 may be summarized quite succinctly: there are no significant differences between the initial and supplemental samples on any of the five social status variables or on the two political status variables. The small number of new “Other” listeners added at time 4 look very much like the larger group of “Other” listeners interviewed at wave 1.

**Table 25: Other Listener RDD Samples at Times 1 and 4**  
**Comparisons on Social Status Variables**

<b>Variable</b>	<b>Time 1--Wtd</b>	<b>Time 4--UnWtd</b>	<b>Time 1--Wtd</b>	<b>Time 4--Wtd</b>
<i>Gender</i>				
--Male	54	54	53	56
--Female	46	46	47	44
Total	100		100	100
<i>Age</i>				
--18 to 34	16	9	18	14
--35 to 50	52	50	50	51
--Over 50	32	41	32	35
Total	100	100	100	100
<i>Race</i>				
--White	81	79	81	79
--Non-White	19	21	19	21
Total	100	100	100	100
<i>Education</i>				
--H.S. or less	31	30	41	41
--Some College	25	28	24	29
--College Grad	44	42	35	30
Total	100	100	100	100
<i>Income</i>				
--Under \$30,000	33	33	39	38
--\$30 to \$50,000	24	31	25	30
--Over \$50,000	41	37	37	32
Total	100	100	100	100

**Table 26: Other Listener RDD Samples at Times 1 and 4  
Comparisons on Political Status Variables\***

<b>Variable</b>	<b>Time 1--UnWtd</b>	<b>Time 4--UnWtd</b>	<b>Time 1 --Wtd</b>	<b>Time 4--Wtd</b>
<i>Partisanship</i>				
--Republican	27	31	28	29
--Democrat	38	37	28	38
--Independent	36	32	35	33
Total	100	100	100	100
<i>Ideology</i>				
--Liberal/St. Lib.	26	18	24	21
--Moderate	45	49	46	46
--Conservative	21	23	21	22
--Strong Conservative	8	10	9	11
Total	100	100	100	100

\* Other time 1 unweighted n is approximately 422; time 4 is approximately 90. Actual ns are somewhat smaller due to missing data/don't knows.

### ***Non-Listener Samples, Times 1 and 4***

The same tests on these social and political status variables were conducted on the two samples of non-listeners. In this case there are approximately 1,000 non-listeners initially interviewed at wave 1 and just under 500 who were added at wave 4. These larger sample sizes mean that even small percentage point differences may be statistically significant, as the chi-square test is sensitive to sample size considerations.

**Table 27: Other Listener RDD Samples at Times 1 and 4**  
**Comparisons on Social Status Variables**

<b>Variable</b>	<b>Time 1--UnWtd</b>	<b>Time 4--UnWtd</b>	<b>Time 1--Wtd</b>	<b>Time 4--Wtd</b>
<i>Gender p=.00*</i>				
--Male	47	39	46	39
--Female	53	61	54	61
Total	100		100	100
<i>Age p=.02*</i>				
--18 to 34	22	17	25	23
--35 to 50	44	43	41	41
--Over 50	34	40	34	36
Total	100	100	100	100
<i>Race p=.00*</i>				
--White	78	84	80	84
--Non-White	22	16	20	61
Total	100	100	100	100
<i>Education</i>				
--H.S. or less	45	48	58	59
--Some College	27	23	23	22
--College Grad	28	29	20	18
Total	100	100	100	100
<i>Income</i>				
--Under \$30,000	46	40	52	45
--\$30 to \$50,000	26	30	25	30
--Over \$50,000	28	30	24	25
Total	100	100	100	100

There are differences between the non-listeners first interviewed at wave 1 and those added to the study at wave 4 on the background characteristics of gender, age and race. The supplemental sample is significantly more female, by a margin of 61 to 53 percent, when compared to the initial sample. The supplemental sample is also somewhat older. When compared to those first interviewed in the spring, the fall sample has about five percentage points less in the under 35 category and 6 percentage points more in the over 50 group. Finally, the supplemental sample has slightly fewer non-whites than the original sample (16 to 22 percent). The samples were not dissimilar on the characteristics of education or income.

**Table 28 Non-Listener RDD Samples at Times 1 and 4  
Comparisons on Political Status Variables\***

<b>Variable</b>	<b>Time 1--UnWtd</b>	<b>Time 4--UnWtd</b>	<b>Time 1 --Wtd</b>	<b>Time 4--Wtd</b>
<i>Partisanship</i> p=.00*				
--Republican	26	35	26	32
--Democrat	36	38	36	38
--Independent	38	27	38	30
Total	100	100	100	100
<i>Ideology</i>				
--Liberal/St. Lib.	23	20	24	19
--Moderate	44	43	43	44
--Conservative	26	28	27	28
--Strong Conservative	7	8	6	9
Total	100	100	100	100

\* Non-listener time 1 unweighted n is approximately 988; time 4 is approximately 489. Actual n's are somewhat smaller due to missing data/don't knows.

The two samples of non-listeners are the same in terms of their ideological distribution, with similar percentages of liberals, moderates, conservatives and strong conservatives. The samples are different in their partisan composition, with the supplemental sample containing more Republicans and fewer Independents, when compared with non-listeners initially interviewed at wave 1.

***Panel Attrition: Waves 4 to 5***

The sampling frame for wave 5 included all respondents who completed an interview at wave 4, whether from the initial or supplemental samples. Given that 71 percent of those interviewed at wave 4 were successfully reinterviewed after the election (973 of 1,376) it is not surprising that wave 5 looks to be a very representative sub-sample of those interviewed just before the election. Table 29 presents the chi-square value for the seven socio-political status variables analyzed for each of the listener types. Only two of the 21 entries meet the statistical criterion of being significant at the .05 level. Both of these deviations occur among the non-listeners, where the generous n-size contributes to the findings of difference with regard to age and race. In actual fact, these differences are not terribly large: the percentage of non-listeners under 30 years of age declined from 22 to 15 percent from wave 4 to wave 5, offset by an increase from 34 to 41 percent of those over 50 years of age; non-whites comprised 25 percent of non-listeners interviewed only at wave 4 and 15 percent of those interviewed both at waves 4 and 5.

**Table 29: Intragroup Demographic Comparisons, Wave 4 to Wave 5**  
**Cell Entries (p =) are Chi-square Values \***

<b>Variable</b>	<b>Limbaugh Listeners</b>	<b>Other Listeners</b>	<b>Non-Listeners</b>	<b>Comments Those <i>leaving</i> panel:</b>
Gender	.45	.64	.19	No differences
Age	.21	.10	.00	Were younger--small diffs
Race	.88	.56	.00	Were non-white--small diffs
Education	.88	.54	.18	No differences
Income	.24	.81	.49	No differences
Partisanship	.37	.07	.06	NS, but: Others had fewer Dems; Non-Listeners had fewer Inds.
Ideology	.34	.49	.86	No difference

\*The chi-square test had two categories of the independent variable: (1) completed wave 4 only; (2) completed both waves 4 and 5. N-sizes for the three groups are, respectively, as follows: Limbaugh (49, 158); Other (91, 220); Non-listener (263, 595). N sizes involved in each of the seven dependent variables listed in Table 30 may vary slightly due to missing data/refusals/don't knows.

### ***Sample Effects on Vote Preference***

The samples were split into their source of origin to determine if there was evidence of panel activation or attrition affecting the dependent variable of who they voted for in the 1996 presidential election. These tests are displayed in Table 30. The differences according to sample origin--whether from the original sample interviewed at wave 1 or the supplements added at waves 3 and 4--are not statistically significant. It appears that the Limbaugh listeners added at wave 3 tended to prefer Dole over Clinton by a lesser margin (69 to 19 percent) than those who were initially interviewed at wave 1 and remained on the panel to be interviewed at wave 5. These respondents preferred Dole over Clinton by 78 to 10 percent. However, there are only 70 and 78 respondents in these two groups. The vote division for "Other" talk radio listeners shows no difference between the two sample groups. Finally, the Clinton plurality over Dole among non-listeners is slightly larger among those initially interviewed at wave 1 (54 to 32 percent) than

it is among those added to the panel at wave 4 (49 to 38 percent). But all in all, the evidence supports the proposition that the two samplings yielded similar respondents.

**Table 30: Reported Vote by Listener Group and Sample Origin**

	<b>Dole</b>	<b>Clinton</b>	<b>Perot</b>	<b>Other*</b>	<b>Total</b>	<b>(n)</b>
<b><i>Total</i></b> $p=.18$						
--Original	40	47	6	7	100	451
--Supplemental	45	44	5	6	100	377
<b><i>Limbaugh Listeners</i></b> $p=.44$						
--Original	78	10	6	6	100	70
--Supplemental	69	19	7	5	100	78
<b><i>Other Listeners</i></b> $p=.66$						
--Original	34	53	7	6	100	150
--Supplemental	38	52	2	8	100	52
<b><i>Non-Listeners</i></b> $p=.22$						
--Original	32	54	7	7	100	231
--Supplemental	38	49	6	7	100	247

\* Includes "other candidate," "don't know," and "refused" responses