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FROM: John B. Horrigan, Ph.D.
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RE: **Peer Review of Nielsen’s “How People Get News and Information” Survey Pursuant to FCC rulemaking MB Docket No. 06-121**

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The following comments on the Nielsen Media Research survey focus on the response rate in the Nielsen sample, the composition of the Nielsen sample, and design of the survey questionnaire. I am employed by the Pew Internet & American Life Project (www.pewinternet.org), which is a project of the Pew Research Center (www.pewresearch.org).

I. Response Rate

The Nielsen survey, on page 16, states that 2.2% of the total sample completed the survey. On its face, that is a very low rate of completes from the sample. However, the way Nielsen presents its sample disposition makes it difficult to compare the survey’s response rate to industry standards. As reflected by practices established by the American Association of Public Opinion Researcher (AAPOR), response rates are based on contact rate, cooperation rate, and completion rate. For surveys commissioned by the Pew Internet & American Life Project, which are carried out by Princeton Survey Research Associates International (PSRAI), response rates typically vary from 25% to 30%. Exhibit I in these comments presents the sample disposition for the Pew Internet Project’s February 2007 survey; it shows a 29% response rate. Holbrook, Krosnick, and Pfent (2007) analyzed response rates in 114 surveys conducted by a variety of organizations, including the Pew Research Center, and found an average response rate of 30%.¹

Even though the way in which Nielsen reports its sample disposition makes it hard to develop a conventional response rate, one way to think about Nielsen’s response rate is to calculate completed interviews (3,101) as a share of the sum of completed interviews and non-completed interviews (3,101 plus 22,566). Calculating a response rate in that fashion yields a figure of 12.1%.² That, however, is an upper-end estimate of Nielsen’s response rate, since arguably numbers dialed that received no answer or were busy should be included in the denominator of that calculation. This would drive down the response rate. Nielsen reports that 51,643 phone numbers were either busy or had no answer. Including all or some sizable portion of those phone numbers would reduce the response rate to the single digits in terms of percentage points.

The upshot is Nielsen’s sample has, by standards of the survey research industry, a low response rate. In itself, this is not a debilitating criticism of the study, but the low response rate is likely to attract notice and, moreover, may decrease the demographic representativeness of the sample.³

II. The Nielsen Sample & Substantive Impacts

Exhibit II in these comments presents a side-by-side comparison of the Nielsen sample and two recent surveys commissioned by the Pew Internet & American Life Project and conducted by

¹ Holbrook, Allyson L., Jon A. Krosnick, Alison Pfent (2007). “The Causes and Consequences of Response Rate in Surveys by the News Media and Government Contractor Survey Research Firms,” in *Advances in Telephone Survey Methodology*, edited by James M. Lepkowski, Clyde Tucker, J. Michael Brick, Edith de Leeuw, Lilli Japac, Paul J. Lavrakas, Michael W. Link, and Roberta L. Sangster.

² The calculation is: $3101/(3101+22566) = 12.1\%$.

³ Holbrook, et.al. find that “lower response rates do decrease demographic representativeness within the range we examined, though not by much.”

PSRAI. The comparison shows that the Nielsen sample contains, relative to Pew Internet samples, a higher number of well-educated and higher-income individuals.

There are two likely reasons for the sample differences. First, like nearly all survey research organizations, Nielsen weights the raw data from its interviews to address well known non-response bias in telephone surveys. As the Nielsen study notes on page 13, Nielsen weights its data by gender and age; that is, Nielsen's weighting results in a sample that approximates the known percentages of males and females and distribution of age in the U.S. adult population. The weighting scheme used by PSRAI in Pew Internet samples includes education level and race, as well as gender and age; this results in a weighted sample that generally reflects the distribution of age, gender, racial composition, and educational attainment of the U.S. adult population. Neither weighting approach uses income as a weighting factor, but the strong correlation between education and income yields, in the Nielsen sample, a higher-than-normal share of upper income respondents.

Second, as noted above, the beginning portion of the Nielsen questionnaire may result in a high share of refusals. Remaining respondents may be highly interested and heavy users of media – which are positively correlated with well-educated and upper-income individuals.

The result is a Nielsen sample with a higher share of well-educated respondents; some 40% of the weighted Nielsen sample has either a bachelor's degree or higher, compared to 27% in the weighted samples from recent Pew Internet surveys. The Census Bureau's Current Population Survey (CPS) shows that 24% of adult Americans have a bachelor's degree or higher. Regarding income, the CPS finds that 30.5% of adult Americans live in households with incomes over \$75,000 annually. As Exhibit II shows, Pew Internet samples find that roughly 22% of respondent fall in the over \$75,000 annual household income category. The Nielsen sample, which categorized income at a slightly higher \$80,000 per year cutoff, has 35% of respondents living in households with an income over \$80,000 annually.

Substantively, the Nielsen sample has findings for internet and home broadband penetration that differ from results from Pew Internet Project surveys. The Nielsen study reports that 80% of adult Americans are internet users, with 75% of adult Americans having online access at home. According to the Pew Internet & American Life Project's February 2007 survey, 71% of adult Americans are internet users, with 67% having online access at home. With respect to home broadband connections, Nielsen finds that 77% of home internet users have broadband at home; Pew Internet's February 2007 survey finds that 70% of home internet users connect with broadband. This translates into 58% of adult Americans having broadband access at home according to the Nielsen survey versus a 47% figure from the Pew Internet February 2007 survey.⁴ It is not surprising that the relatively more affluent and well-educated Nielsen sample registers higher rates of home internet and home broadband adoption than Pew Internet surveys.

Finally, high levels of income and education are positively correlated with interest in the news and use of multiple news sources.⁵ Thus, questions on that topic directed to a sample with a

⁴ See the Pew Internet Project's July 2007 report "Home Broadband Adoption 2007," available online at: http://www.pewinternet.org/PPF/r/217/report_display.asp

⁵ See the Pew Internet Project's March 2006 report "Online News: For many home broadband users, the internet is a primary news source," available online at: http://www.pewinternet.org/PPF/r/178/report_display.asp.

relatively high share of high income/education respondents could yield results that do not reliably project to the general population.

III. Questionnaire Design

Several aspects of the Nielsen questionnaire invite comment:

- The beginning of the questionnaire where respondents are read two paragraphs describing the survey;
- Nielsen's strategy of asking respondents to estimate the amount of time in an average week they spend on various media activities, and;
- Consistency of questions across media categories.

a. Beginning of questionnaire

The first page of the questionnaire represents a standard way to generate a random sample of respondents. However, on page 2 respondents are read two paragraphs that describe in detail the nature of the survey, the specific items to be queried, and definitions of key terms. It is possible that this lengthy recitation by the interviewer caused some respondents to terminate participation in the survey. From the Nielsen sample disposition, it appears that the Nielsen sample has a high ratio of "Household Members Refused" (18,177) to completed interview (3,101), or a ratio of roughly 6 to 1. Analogous figures for the Pew Internet Project's February 2007 survey are 2,707 initial and second refusals and 2,200 completed interviews, or a ratio of 1.25 to 1.

One might also wonder if those who remain in the survey, after having listened to two lengthy paragraphs describing a survey on news consumption, might be sources of response bias. Those who choose to complete the survey may be unusually heavy users of media and very interested in news and current affairs. If that is the case, the survey findings may not fully represent the general population of U.S. adults.

b. Estimating time use

Nielsen asked respondents to estimate the amount of time they spend in an average week with seven different types of media outlets: broadcast television, cable or satellite television, the internet, daily local papers, weekly local papers, daily national newspapers, and broadcast radio. To be sure, measuring respondents' media use is a significant challenge for any research organization, the projects of the Pew Research Center included. Asking people to estimate time use is an approach subject to the criticism that people's memories may be inaccurate. In the Pew Research Center's surveys on media use, respondents are usually asked to estimate the amount of time spent "yesterday" on a specific activity. The hope is that respondents can accurately remember what they did yesterday, but this approach cannot guard completely against a respondent's faulty memory.

Rather than focus on what respondents did yesterday, the Nielsen survey asks respondents to estimate the amount of time they spend on various media activities in the average week. In the course of a telephone interview of approximately 20 minutes, it is perhaps difficult for respondents to generate estimates of time use for an average week across seven types of media use activities. It is worth reiterating that survey questions on time use for media are inherently challenging and any approach (including the Pew technique of asking people to remember

See also the Pew Research Center for the People and the Press's July 2006 report: "Online Papers Modestly Boost Newspaper Readership," available online at: <http://people-press.org/reports/display.php3?ReportID=282>.

yesterday) is open to question. Asking people to estimate media time use for the average week requires respondents to engage in a difficult “on the fly” calculation in a telephone interview.

Because of the challenges endemic to asking people to estimate time use, some researchers will ask people to fill out “time use” diaries by which they record the time spent on daily activities (including media). Others employ metering devices that record media use directly, rather than relying on self-reporting. Finally, it is worth pointing out that the growth of media multi-tasking presents challenges to measuring media use. Some people – the young especially – may be doing *multiple* tasks online (including perhaps getting news) while also paying some attention to a nearby TV or radio.

c. Consistency of questions by type of media

Nielsen’s question on use of the internet for news and current affairs information (Q13) asks respondents to name the specific website which they use most often. This yields information on the most popular websites for news. However, the Nielsen survey does not ask respondents to name the broadcast or cable/satellite channel they watch most often for news, nor does the survey ask respondents to name the national daily newspaper or magazine they read most often for news. Having such questions on specific news brands consulted by media type for television and newspapers would permit analysis of important dimensions of people’s media habits.

An analyst could examine, for instance, whether or not heavy users of “traditional media” (e.g., those who often watch news from one of the four broadcast networks) use the internet to consult different kinds of news sources (e.g. internet-only “new media” sources such as blogs) or the website of the “traditional media” outlets. A researcher could also, if the survey contained data on specific media brands consulted by all media types, see whether use of websites of broadcast news outlets are complements or substitutes for watching news on television (the same analysis could be performed for national newspapers). In a limited way, the survey’s questions on types of news (e.g., sports or weather) for each media type could address whether the internet is a substitute or complement to traditional media. However, those questions do not allow analysis of use of specific news brands across news *or* media type; both may be relevant for the Media Ownership proceeding.

Conclusion

The task of measuring people’s media use habits, including time spent on various media sources, is a challenging undertaking for survey researchers who seek to understand Americans’ use of mass media. There is no single solution to the challenges, and the Nielsen study represents a credible effort to address them. However, the Nielsen study raises two significant issues worthy of note.

- 1) The low response rate, in conjunction with survey design concerns raised above, may generate a sample that is more reflective of the behaviors and attitudes of well-educated and higher-income Americans. Because high levels of income and education are positively correlated with interest in news and current affairs, this may have substantive consequences on the survey’s result. That, in turn, could have consequences when projecting the Nielsen results to the public at large.
- 2) The inclusion in the questionnaire of specific media brands consulted for internet news, but not other media types (e.g., specific TV sources such as FOX or NBC or newspaper sources such as the Wall Street Journal), constrains the analysis of relevant aspects of people’s media use. This survey design decision does not, for instance, allow analysts to explore whether or not consumers of news from “traditional media” sources use the internet for news from other kinds of “new media” outlets.

EXHIBIT I

Following is the full disposition of all sampled telephone numbers for the Pew Internet & American Life Project's February 2007 survey:

Table 1: Sample Disposition	
	<u>Final</u>
Total Numbers dialed	19,200
Business	1,377
Computer/Fax	1,175
Cell phone	16
Other Not-Working	6,762
Additional projected NW	1,213
Working numbers	8,657
Working Rate	45.1%
No Answer	339
Busy	61
Answering Machine	1,312
Callbacks	186
Other Non-Contacts	155
Contacted numbers	6,605
Contact Rate	76.3%
Initial Refusals	2,610
Second Refusals	1,288
Cooperating numbers	2,707
Cooperation Rate	41.0%
No Adult in HH	26
Language Barrier	335
Eligible numbers	2,346
Eligibility Rate	86.7%
Interrupted	146
Completes	2,200
Completion Rate	93.8%
Response Rate	29.3%

PSRAI calculates a response rate as the product of three individual rates: the contact rate, the cooperation rate, and the completion rate. Of the residential numbers in the sample, 76 percent were contacted by an interviewer and 41 percent agreed to participate in the survey. Eighty-seven percent were found eligible for the interview. Furthermore, 94 percent of eligible respondents completed the interview. Therefore, the final response rate is 29 percent.

EXHIBIT II

Demographic comparisons of Nielsen sample for FCC and Pew Internet & American Life (PIAL) Project surveys. The PIAL figures in the table represented weighted results from Pew Internet samples; the Nielsen figures reported in its May 2007 study appear to be weighted results.

	Nielsen (May 2007)	PIAL (Mar. 2006)	PIAL (Feb. 2007)
Number of cases	3,101	4,006	2,200
Education			
Grammar school or less	1.6	2.8	3.2
Some High School	3.6	10.1	10.4
HS Grad or equivalent (GED)	23.6	33.5	31.8
Technical, trade, or vocational school after HS	--	3.2	3.8
Some college, no degree	18.1	22.8^	22.8^
Associate degree or equivalent	12.5	--	--
Bachelor's degree	25.3	17.0	16.3
Higher degree (master's, professional, doctorate)	14.8	10.1	10.7
Don't know/refuse	0.8	0.7	1.0
Race			
White	79.2	77.5	76.0
African American or Black	7.1	12.1	12.4
American Indian, Eskimo, or Aleut	1.1	1.8	1.5
Asian or Pacific Islander	2.0	2.4	3.3
Other	8.7	3.8*	3.5*
Don't know/refuse	1.9	2.4	3.2
Age			
18-24	13.0	11.9	11.3
25-34	17.5	17.8	16.8
35-49	28.5	29.0	29.0
50-54	10.1	10.5	11.0
55-64	14.4	13.8	14.8
65+	16.5	17.0	17.1
Gender			
Male	48.1	48.4	47.8
Female	51.9	51.6	52.2
* includes those who say they are "mixed race"			
^ includes people with "associate degrees"			

Nielsen categories	Nielsen	PIAL Categories	PIAL (March 2006)	PIAL (Feb. 2007)
Income				
Under \$20K	8.4%	Less than \$10K	6.9%	7.4%
\$20K to less than \$40K	14.6	\$10K to less than \$20K	8.2	8.0
\$40K to less than \$60K	17.6	\$20K to less than \$30K	8.7	9.7
\$60K to less than \$80K	13.7	\$30K to less than \$40K	10.4	8.1
\$80K to less than \$100K	12.0	\$40K to less than \$50K	9.7	7.9
\$100K to less than \$150K	12.8	\$50K to less than \$75K	13.9	13.2
\$150K to less than \$250K	6.0	\$75K to less than \$100K	10.2	10.4
\$250K or more	4.0	\$100K or more	12.0	11.0
Don't know/refuse	11.0	Don't know/refuse	20.2	24.3

	Nielsen	PIAL (March 2006)	PIAL (Feb. 2007)
Income			
Under \$40K	23%	34.2%	33.2%
\$100K or more	22.8	12	11
Don't know/refuse	11	20.2	24.3