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AN EXPANDING DIGITAL DIVIDE? PANEL DYNAMICS IN THE GENERAL SOCIAL SURVEY

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ABSTRACT

One important question about the digital divide is whether the divide between users and nonusers is continuing to expand or is not. Dynamic answers to this question can only come from panel studies in which the same individuals are followed across time. This study examines such questions using reinterview data from the General Social Survey (GSS), in which 1538 respondents interviewed in person in 2000 were reinterviewed by telephone in the Fall of 2002, using items that most discriminated Internet respondents in 2000.Of the 15 GSS attitude questions, only the three dealing with interpersonal trust were notably related to changes and continuity in Internet use, and of 8 behavior questions only the increases and decreases in TV viewing mirrored the changes found in the static 2000 data.

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An important question relevant to the scholarly and policy debate about the digital divide concerns whether the divide between users and nonusers is continuing to expand or is not. Dynamic answers to this question can only come from panel studies in which the same individuals are followed across time. This study examines such questions using reinterview data from the General Social Survey (GSS), in which 1538 respondents interviewed in person in 2000 were reinterviewed by telephone in the Fall of 2002, using items that most discriminated Internet respondents in 2000 (Robinson, Kestnbaum and Neustadtl 2002; Neustadtl et al. 2002; Robinson and Shanks 2002; Neustadtl and Robinson 2002).

The first set of questions concerns attitude differences between Internet users and nonusers, described as the “diversity divide” by Robinson, Kestnbaum and Neustadtl (2002). After examining differences in more than 1000 GSS attitude items, these authors found only about 30 items on which users differed significantly from nonusers, and that held up after multivariate adjustment for gender, education, age, income, race and marital status. Moreover, on most of these items, mainly dealing with “tolerance” or acceptance of diversity, users did not differ in the extent of their Internet use. This raised questions about whether the differences were a function of Internet use per se, or could be traced to differences in the traditional demographic correlates of Internet use, like age, education, gender and the like. It seemed unlikely that it was exposure to the Internet that resulted in users being more tolerant of opposing or diverse points of view.

Similarly, many of the differences in behaviors (such as TV viewing or visiting friends) of Internet users were reduced to insignificance after adjustment for common demographic correlates for both of these behaviors (Neustadtl and Robinson 2002). The one exception to this conclusion was for sexual activity, which Robinson and Shanks (2002) found declined consistently and significantly with extent of Internet usage. Otherwise, there were only insignificant or inconsistent differences in the social or media behaviors of users and nonusers.

The major problem in interpreting these differences, however, is that they were collected at only one point in time. The more persuasive linkage of variables in the social sciences comes from data showing how changes in outcome variables are related to changes in IT use. If one finds that declines in their social life occur as users use IT more (or vice versa), then one has more solid arguments that there is some causal connection resulting from IT use.

METHODOLOGY

Field Procedures: The year 2000 GSS was a personal in-home interview that usually took about 90 minutes to complete with a national probability sample of 2817 respondents aged 18 and older. In that study, respondents were asked to provide a telephone number at which they could be recontacted.

The year 2001 GSS study, then, was a telephone reinterview with these same respondents that was carried out in the Fall of 2002, with a sample of 1564 or 58% of these year 2000 respondents. The reinterview questionnaire included almost all of the Internet module questions introduced into the GSS 2000 questionnaire, along with about 25 attitude and behavior questions that had traditionally asked in GSS surveys and that had correlated positively with Internet use in the 2000 GSS or was expected to have special interest in that relation. These included 5 questions on political tolerance, 4 questions on non-marital sex attitudes, 3 questions on interpersonal trust and other subjective questions on gender roles, personal health and happiness; in addition, traditional GSS behavior questions on social contacts, sexual relations, church attendance and mass media use were repeated. These questions are discussed below and are shown in Appendix A.

In the original 2000 in-home GSS sample, one adult person at each selected household was interviewed using random using sampling procedures. The GSS survey has been conducted at one-to-two year intervals since 1974 by the National Opinion Research Center (NORC) at the University of Chicago, and is generally considered the premier social science instrument for monitoring social life and trends in the United States. Like its predecessors, the 2000 national probability sample was selected in two major stages, with Primary Sampling Units (PSUs) consisting of one or more counties selected at the first stage and segments consisting of one or more blocks selected at the second. In a few cases, segments were sub-sampled, a procedure that constituted a third stage of sample selection.

The 100 first stage selections consisted of metropolitan areas or non-metropolitan counties, with the metropolitan PSUs including three types of metropolitan areas. Prior to the PSU selection, the United States was divided into 2,489 PSUs; the PSUs were then sorted into strata. The major strata again grouped metropolitan and non-metropolitan PSUs within each of the four Census regions. The non-metropolitan PSUs were further sorted by state; then, within state, by percent minority; and, finally, within population who are minority group members; this encompassed everyone but non-Hispanic Whites. Percent minority groupings were formed by classifying each PSU according to percent minority quartiles within its major stratum. The metropolitan PSUs were sorted by Census division, minority quartile, and per capita income. The sample PSUs were selected using systematic selection, with the selection probability for a PSU proportional to the number of housing units. This selection procedure ensured proportionate representation along each of the sort variables.

Prior to selection, the segments within each sample PSU were sorted successively by a) whether they were within the central city of a metropolitan area or outside of it (in metropolitan PSUs), b) state (in those PSUs that crossed state lines), or c) county, d) place, e) percent minority quartile within the PSU, and f) census tract (CT) or block numbering area (BNA). The sample segments were selected using systematic sampling with probability proportional to size (in housing units). About 5 housing units per segment were selected. Because the year 2000 GSS instrument was subdivided into 6 versions (see below) that were spread across segments, the design effect was much lower than if all respondents in a segment answered the same version.

Interviewer Training: Professional interviewers hired and trained by NORC conducted the interviews. In addition to a 2-3 day *general* training session before hiring, these NORC interviewers went through a mailed training session focusing on the various goals and modules of the year 2000 GSS. Interviewers made repeat visits to households at which no one was home, or the designated household respondent was not available. Enough repeat call-backs were made to such households that the main form of non-response was respondent refusal. Interviewers were able to complete interviews with 70% of designated respondents, compared to most GSS response rates that had exceeded 75%. The total of 2817 GSS respondents completed one of the six versions of the questionnaire shown in its entirety on the website http://www.webuse.umd.edu.

Questionnaire: Five of the six different versions or ballots in the year 2000 GSS, except ballot 3 (n=454), contained some Internet questions. That left 2363 respondents eligible for the Internet module questions on the remaining 5 ballots, with each ballot representing a separate (and minimally clustered) random sample of the country.

Adults: The full-probability GSS samples used since 1975 are designed to give each household an equal probability of inclusion in the sample. Thus for household-level variables, the GSS sample is self-weighing. Persons living in large households are less likely to be interviewed, because one and only one interview is completed at each preselected household. The GSS does not calculate any post-stratification weights to adjust for such differences.

Analyses of the self reported time spent online estimates involve simple questions that asked respondents to estimate the number of hours and minutes that they spent online in the previous week. The 2000 GSS had 2353 respondents were actually presented with the core Internet questions, given the distribution of the questions across the ballots. Respondents were first asked if they used a computer and if they used Web TV. If they replied no to both questions, they were considered nonusers. Those with a computer or Web TV were asked how many hours and minutes they spend answering emails.

Additionally, they were asked if, aside from email, they ever used the Internet or the Web, and if so, they were asked to estimate their time spent in minutes and hours over the course of a week. In order to calculate the number of web users, all those without a computer, or those with a computer that did not connect to the Web (even if they did other online activities, such as chatting and emailing) were coded as non-Web users. Roughly 1150 of the possible 2353 respondents (48%) were connected in 2000, whereas 928 of the possible 1538 (60%) were connected in the 2001 reinterviews.

In this article, the results from this panel are compared, in which 381 respondents reported no Internet use in either 2000 or 2001, and 671 reported use in both 2000 and 2001. Their responses are compared to the crucial group of 108 respondents who those who became Internet users between 2000 and 2001. Another 123 respondents were Internet "dropouts", that is users in 2000 but nonusers in 2001. The final 255 respondents were not asked the Internet questions in 2000, which were excluded in version 3 of the six versions used in the survey; of these 149 (58%) were users in year 2001, close to the 60% who were asked the Internet questions in 2000.

RESULTS

Overall changes: A major event that occurred just before the year 2001 reinterview was the tragedy of 9/11, which resulted in significant changes in attitudes and behavior. While many of these changes have since returned to pre 9/11 levels, these short-term changes do provide an ideal opportunity to track changes potentially linkable to changes in IT use.

The extent of these changes is outlined in Table 1 for each of the repeated GSS items. The changes are shown in three columns, the first for the responses among all GSS respondents in the year 2000 Spring survey, the second for that subset of year 2000 respondents who agreed to reinterviewed, and the third for their responses to these same items in the Fall of 2001. Sample sizes (shown in parentheses in Table 1) sum to nearly all of the 1538 reinterviewed respondents who answered these questions in the Fall of 2002, whereas only about half or two- thirds of them had been asked the question in year 2000 – and that they are only about 55% of those originally asked the question in Spring of 2000. These year 2000 sample sizes are lower, of course, because only about 55% of year 2000 respondents agreed to be reinterviewed.

Moreover, there is clear evidence in these numbers of the question response differences between those reinterviewed and those not, and many of these differences shown in the third column are correlated with Internet use. For example, Robinson and Neustadtl (2002) found Internet users to report higher levels of trust in people, and the largest difference in Table 1 is the increase in support for these three items on interpersonal trust—with Fall 2000 trust levels 13-17 points higher than Spring 2000 levels. Thus, while only 47% of

GSS respondents said that people were generally “helpful” in 2000, 64% said so about 18 months later.

TABLE 1: PERCENTAGE DIFFERENCES IN GSS ATTITUDES AND BEHAVIOR: SPRING 2000 AND FALL 2001 (SAMPLE SIZE IN PARENTHESIS)

Tolerance	GSS 2000 TOTAL	REINT	GSS2001 REINT	2000-2001 Change	Rel.
SPKHOMO	83% (1350)	86% (984)	89% (1481)	+6 (+3) points	.39
COLHOMO	79 (1338)	81 (970)	86 (1480)	+7 (+5)	.45
LIBHOMO	73 (1399)	75 (979)	76 (1477)	+3 (+1)	.38
COLRAC	50 (1326)	51 (975)	53 (1472)	+3 (+1)	.23
LIBRAC	65 (1345)	67 (980)	67 (1473)	+2 (0)	.27
Sex Attitudes					
PREMARSX	63 (1785)	65 (961)	65 (1470)	+2 (0)	.70
TEEN SEX	12.4 (1838)	12.3 (987)	12.5 (1500)	0 (0)	.42
XMAR SEX	10 (1811)	9.5 (997)	8.2 (1507)	-1 (-1)	.43
HOMO SEX	37 (1680)	37 (932)	42 (1437)	+5 (+5)	.70
Gender Roles					
FEPOL	77 (1723)	78 9932)	74 (1512)	-3 (-4)	.45
Life Assessment					
HAPPY	32 (2314)	33 (1518)	27 (1534)	-5 (-6)	.35
FINRELA	23 (2729)	26 (1527)	29 (1527)	+6 (+3)	.51
Trust					
TRUST	35 (1423)	40 (1053)	48 (1538)	+13 (+8)	.46
HELPFUL	47 (1427)	50 (1053)	64 (1538)	+17 (+14)	.34
FAIR	52 (1411)	58 (1047)	66 (1538)	+14 (+8)	.45
Activities					
SEXFREQ	43 (1898)	37 (1538)	36 (1294)	-7 (-1)	.47
SOCREL	37 (1857)	35 (997)	32 (1535)	-5 (-3)	.26
SOCOMMUN	22 (1854)	22 (718)	21 (1536)	-1 (-1)	.23
SOCFREND	23 (1855)	19 (998)	20 (1536)	-3 (+1)	.27
SOCBAR	9 (1853)	8 (995)	7 (1538)	-2 (-1)	.47
ATTEND	25 (2302)	28 (1505)	37 (1535)	+7 (+9)	.72
NEWSPAPER	32 (1866)	43 (1003)	48 (1538)	+11 (+5)	.69
TVHOURS	84 (1822)	84 (979)	85 (1532)	-2 (-2)	.45

** See Appendix A for exact question wording*

One can note, however, that among those reinterviewed 50% in year 2000 said people were helpful, 3 points higher than the 47% of GSS respondents overall. That means that those reinterviewed were originally more tolerant of others than those not reinterviewed. That would be consistent with their original response, in that they agreed to be reinterviewed—a conclusion which is further supported by their higher levels of expressed trust and attitudes of fairness seen in the other two questions in that trust series. Thus, those reinterviewed saw other people as more trustworthy, helpful and fair than those who refused to be or were otherwise not reinterviewed.

Moreover, these more trusting reinterviewees reported greater gains in these feelings in the Fall of 2001, with gains of about 10 points on average in the fourth and final column of Table 1. Again, one can see reinterviewed respondents were 5 points more likely (50% vs. 45%) to say people could be trusted and 6 points more likely (58 vs. 52%) to say they would try to be fair.

Changes in these trust responses as a function of changed Internet use, then, will be of major interest in the analyses that follow, first because they are significantly correlated with Internet use and secondly because they increased so markedly between 2000 and 2001.

A less notable, but similar, pattern can be found for the Table 1 items on tolerance (first developed by Stouffer 1956), which are shown at the top of the table. Reinterviewed respondents also gave more tolerant responses than other GSS responses in the year 2000 interview. Here, however, there is less change in these responses among the reinterviewed respondents in 2001, only 2 points on average, compared to 4 points in comparing overall GSS responses in 2000 with the overall responses in 2001. The most notable change is for the greater tolerance for homosexuals teaching at a college, being 5 points higher (86%) among reinterviewees in 2001 than in 2000 (81%).

There is also a 5-point greater tolerance for homosexual activity (42% in 2001 compared to 37% in 2000) in the next set of sex attitude questions in Table 2. No such increase is found for tolerance for premarital, extramarital or teenage sex in this question series. Nor is there greater tolerance of women working in politics.

In terms of expressed happiness with life, fewer GSS 2001 respondents said they "very happy" in 2001 than in 2000, and that was true among reinterviewed respondents as well. In contrast, there was a slight increase in feeling that their financial situation was "above average" in 2001 than 2000. Nonetheless, changes in all these other subjective questions are far less prominent than those for interpersonal trust.

Turning to the items on behavior at the bottom of Table 1, there is far less change in the items on informal social life (visiting and sex life) than on the items dealing with more formal church-going or media use. There was a 7-9 point increase in reported weekly church attendance and a 5-11 point increase daily newspaper reading in 2001, along with a slight drop in those estimating they watched TV more than 4 hours of TV per day. Robinson and Shanks (2002) and Robinson and Neustadtl (2002) found greater church attendance and newspaper reading among Internet users in the 2000 GSS, but not significantly greater. However, sex frequency was consistently *lower* among Internet users.

In comparing these panel changes in Table 1 responses, therefore, most attention will be focused on the increasing trusting subjective responses possible among those increasing their Internet use, along with greater church attendance and newspaper reading among them as well.

Relations with Changes in Internet Use: The relation of these attitude and behavior changes with changes in Internet use is the focus of Table 2, which first shows the year 2001 responses and how they varied as a function of overall changed Internet use, and then these same differences after MCA adjustment for gender, age, education, race and marital status differences – and most importantly for respondent's initial response to these same questions in year 2000. In that way, it is possible to reflect changes in response that take into account the other major predictors of respondents' positions in year 2002.

In examining these changes, major attention is on the second group in Table 2 of the 108 Internet adopters, those who reported 2001 use of the Internet but not in 2000. These are individuals who should show distinctly different responses in 2001 from the 381 continued nonusers, and being closer to the group of 681 Internet users than to nonusers in their responses. The group of 138 Internet dropouts, on the other hand, should show responses more in the direction of continued nonusers. In the analyses that follow, the sample sizes of the four groups are 20-40% lower than this because not all GSS questions were asked of the original sample to allow measures of change.

Turning first to the items on trust in the middle rows of Table 2, it can be seen that between 48% and 64% of year 2001 respondents gave a trusting response to the three items, and that continued Internet users (group 3) did give 8-14 point higher than average responses to the three items, while continued nonusers gave 11-14 point lower than average trust responses—before MCA adjustment. The two change groups (2 and 4) reported slightly below average 2001 trust levels, Internet adopters averaging about 2 percentage points below average and Internet dropouts about 7 points below average. In other words, the average responses were as expected, with lowest trust among continued nonusers (13 points below average per item), next lowest among dropouts (7 points below average), a little (2 points below) average for Internet adopters and well (7 points) above average for continued users. These differences are statistically significant.

TABLE 2: DIFFERENCES IN GSS ATTITUDES AND BEHAVIOR BY INTERNET ACCESS – REINTERVIEWED RESPONDENTS ONLY

		Internet Access – Unadjusted				Internet Access –MCA Adjusted			
		No	No/Yes	Yes	Yes/No	No	No/Yes	Yes	Yes/No
Tolerance	2001 Avg								
SPKHOMO	89%	-7	3	4	1	0	2	0	1
COLHOMO	86%	-11	3	5	4	-1	2	0	0
LIBHOMO	77%	-9	1	6	-5	-1	0	1	-5
COLRAC	54%	-3	-6	3	1	-2	-6	1	0
LIBRAC	68%	-7	1	5	-5	-5	2	2	-1
Sex Attitudes									
PREMARSX	65%	-10	-2	7	-7	-2	-2	2	-4
TEENSEX	12%	-1	-3	1	-2	1	-2	0	-1
XMARSEX	9%	1	-4	1	0	2	-3	-1	-1
HOMOSEX	42%	-19	-5	12	4	-4	-3	4	0
Gender Roles									
FEPOL	74%	-7	-4	7	-9	1	-4	2	-3
Life Assessment									
HAPPY	28%	-2	-1	0	-1	-1	-1	0	0
FINRELA	29%	-1	1	0	-1	-3	1	2	-2
Trust									
TRUST	48%	-14	0	14	-13	-7	4	9	-8
HELPFUL	64%	-11	-5	8	-3	-10	-1	6	0
FAIR	66%	-14	-2	10	-4	-10	0	6	0
Scale	*6.9*	*-7*	*-1*	*6*	*-3*	*-4*	*1*	*3*	*.1*
Behavior Activities									
SEXFREQ (#/yr.)	56.9	-26	14	12	-1	-10	7	5	-7
SOCREL (#/yr.)	29.	10	15	-7	-4	12	13	-7	-5
SOCOMMUN(#/yr)	33.0	13	-2	-6	-3	5	-1	-3	2
SOCFREND (#/yr.)	29.0	1	-2	0	-4	4	0	-2	-4
SOCBAR (#/yr.)	11.7	-5	0	2	3	-2	2	1	0
ATTEND (#/yr.)	24.4	0	2	-2	1	-2	3	0	1
NEWS (days/wk)	4.4	.2	-.2	-.1	-.1	-.1	.1	0	.1
TVHOURS (/day)	2.8	.9	-.4	-.5	.1	.4	-.3	-.2	.1

Moreover, they remain significant after MCA adjustment in these four groups, although the averages are reduced to -9, -3, +1 and +7—a high-low contrast of 16 points compared to the 20 point differences before adjustment. In other words, the pattern of differences is consistent with Internet access being a consistent predictor of increased trust. In this period of markedly increased trust, continued to maintain higher trust and increased that lead over other user groups, while dropouts reported decreased trust and adopters slightly increased trust. These are differences that hold up after initial levels of trust and other predictors of trust are held constant.

In order to further test this conclusion, the three trust items were added together to form a single index score, scores ranging from 3 (three non-trusting responses) to 9 (three trusting responses). The average index score as shown in Table 2 was 6.9, closer to the trusting end.

As with the individual item scores, the four group scores ranged from 6.2 to 7.5 on this scale in the expected order, with Internet dropouts at 6.6 and adopters at 6.8. After MCA adjustment, the
range drops from 6.5 to 7.2, with adopters and dropouts both at 7.0—but these differences remain statistically significant and in the predicted order.

The clarity of these patterns are in marked contrast to other attitude items in Table 2. For example, none of the five items on tolerance are significant, even if they remain in the predicted direction, ranging from an average of -3 for nonusers to +1 for users with adopters and dropouts in between, after MCA adjustment. In contrast, dropouts and adopters are the groups becoming least tolerant on the four sex morality questions, although again the differences are rather small.
That is also true for the pattern of differences in attitudes on women in politics, one's personal happiness and views about one's financial situation.

Turning to the behavior items at the bottom of Table 2, few of the patterns for them are consistent or significant as well. For these analyses, the original data have been converted to equivalent averages (e.g. visiting once a month= 12 times per year), in order to expedite and simplify the results.

The first set of behaviors deal with social visits to relatives, friends and the like. Visits with relatives are significantly higher among nonusers than continual users, but they are equally high among Internet adopters, who should show declines if it is the Internet that is responsible; and such visits are lower than average among dropouts who should increase these visits once Internet use has stopped. Visits with neighbors and friends and at bars otherwise show minimal or insignificant relations with changes in Internet use. The same can be said for the increased church attendance and newspaper reading reported by post 9/11 respondents.

The two other behaviors of sex and TV viewing, however, show more consistent and significant patterns in their relations with changes in Internet use, although in different directions. Reported sexual activity is actually higher among users and adopters, while TV viewing is less than average. The increased sex is completely opposite to that found in Robinson and Shanks' extensive multivariate analysis of year 2000 GSS data, in which steady and monotonic decreases in sexual activity was found to accompany increased use of the Internet after MCA and other adjustment. In other words, the suggested pattern of decreased sex with increased Internet use is reversed when examined in the dynamic context of these panel data.

The decrease in TV viewing is consistent with the findings of Neustadtl and Robinson (2002) with only the year 2000 data in hand. Here, the differences were not large enough to be statistically significant and were not monotonic; they are significant if the year 2002 GSS sample is used to expand the sample size, but again the results are again non-monotonic—no decreases in TV are found as Internet use decreases. That continues to make one cautious about making causal linkages between TV and Internet use.

SUMMARY AND CONCLUSIONS

In this first preliminary examination of the panel data from the 2001 reinterview with 1538 GSS respondents, few of the attitude and behavior differences between Internet users and nonusers were replicated using the dynamic possibilities of these data rather than the single-time measures originally available. In particular, the higher tolerance and more upbeat assessments of Internet users were not in evidence, either among continued Internet users—or among those who adopted the Internet between 2000 and 2001.

However, an exception to this conclusion appeared for the three items relating to general trust in people, items which showed notably higher public trust in the weeks after 9/11, and which discriminated between Internet users and nonusers in the year 2000 GSS. These results were replicated in the year 2001 data, also showing more trusting responses among those adopting the Internet in the 18 or so month interval between the two surveys. In other words, Internet adopters (and dropouts) became relatively more trusting across the study period.

Another way to show this relation is to compare change scores in trust across the two surveys, with a gain of about .50 units in the trust scale in Table 2 between 2000 and 2001. Arraying this gain across the four groups results in the following pattern:

	Original	After MCA
T1-T2 Nonusers	+.3	+.1
Dropouts in T2	+.8	+.5
Adopters in T2	+.5	+.6
T1-T2 Users	+.6	+.8

Once again, then, gains in trust vary as an expected function of dynamic use patterns. One might wish for larger differences, or more ability to test for alternative explanations, but these differences are significant and show a consistency not present for other variables plausibly linked to Internet use.

The differences in behavior are noteworthy as well, since they continue to show no notable decline in informal (visiting) or formal (church attendance) social activities as Internet use increases. Opposite to the pattern of lower sexual activity among Internet users in the GSS 2000 data, they emerge as significantly more active in the interim between 2000 and 2001.

In terms of mass media use, there is no evidence of any declines in newspaper reading in either these panel data or the original cross-section GSS data. However, there is dynamic panel evidence to support the conclusion of lower TV viewing among Internet users, to go along with the cross-section evidence in this regard. However, suggestions of a causal connection remain limited by the lack of evidence of lower viewing as Internet use increases.

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APPENDIX A: GSS PANEL QUESTIONS

SECTION 1: YEAR 2000 CORE INTERNET USE QUESTIONS

5. Do you personally ever use a computer at home, at work, or at some other location?
Yes......................(GO TO Q.5b).......................1
No.......................(GO TO Q.5a).......................2
a. Do you have access to the Internet or World Wide Web in your home through Web TV?
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MEDIA USE DIFFERENCES NEUSTADTL & ROBINSON
Yes......................(GO TO Q.5b).......................1
No...................(GO TO SECTION G).............2
b. About how many minutes or hours per week do you spend sending and answering electronic mail or email?
|___|___|___|___| Mins./wk |___|___|___| Hrs./wk

6. Other than for email, do you ever use the Internet or World Wide Web?
[INTERVIEWER: TREAT THESE AS THE SAME]
Yes......................(GO TO Q.7).........................1
No...................... (GO TO Q.8a).......................2

7. Not counting email, about how many minutes or hours per week do you use the Web? (Include time you spend visiting regular web sites and time spent using interactive Internet services like chat rooms, Usenet groups, discussion forums, bulletin boards, and the like.)
|___|___|___|___| Mins./wk |___|___|___| Hrs./wk

SECTION 2: TRADITIONAL MEDIA USE QUESTIONS

89. How often do you read the newspaper--every day, a few times a week, once a
week, less than once a week, or never?
Every day 1
A few times a week 2
Once a week 3
Less than once a week 4
Never 5

90. On the average day, about how many hours do you personally watch television?
NUMBER OF HOURS: __________