

# THE IMPACT OF ONLINE READING ON TRADITIONAL PRINT MEDIA ESTIMATES

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The development of online editions of conventional print media vehicles has raised questions regarding the measurement of the printed editions themselves. In the U.S., neither the MRI questionnaire, the IntelliQuest questionnaire, the J. D. Power questionnaire nor the MARS questionnaire is specific as to whether or not such online versions should be included or excluded from the audience estimates. The Mendelsohn questionnaire does use a column heading that reads, for example, “Publications Printed Weekdays” in referring to dailies, but it is not specific as to whether the respondent should exclude or include *online* reading. It is not clear what effect, if any, this non-specificity is having on the *print* audience estimates these studies generate.

The present paper is the result of an initial attempt better to understand the effect on print audience estimates when the respondent is given specific instructions as to whether they should include or exclude online reading.

In order to accomplish this, we decided to take advantage of the fact that The Journal was about to field a subscriber study using a mail questionnaire that had three versions. The reason for the three versions was to accommodate the need to ask all the questions in which we were interested and to get them all into a questionnaire which we did not want to exceed eight pages.

## The Three Versions

All three versions asked past three-month readership for seven publications. One of the three versions, the control, made no mention of online reading. The actual question is shown in Exhibit #1, which also shows the seven titles: The New York Times, USA Today, Business Week, Forbes, Fortune, Newsweek and Time. The Wall Street Journal was not included since all respondents were print Journal subscribers.

Exhibit 1  
Control – No Instruction for Online Reading

Q9. For each of the publications listed below, please answer “yes” or “no” to indicate whether or not you read or looked into it in the **past three months**.

	<u>Read/Looked at In Past 3 Months</u>	
	<u>Yes</u>	<u>No</u>
The New York Times (Mon. thru Fri.).....	<input type="checkbox"/>	<input type="checkbox"/>
USA Today.....	<input type="checkbox"/>	<input type="checkbox"/>
Business Week.....	<input type="checkbox"/>	<input type="checkbox"/>
Forbes.....	<input type="checkbox"/>	<input type="checkbox"/>
Fortune.....	<input type="checkbox"/>	<input type="checkbox"/>
Newsweek.....	<input type="checkbox"/>	<input type="checkbox"/>
Time.....	<input type="checkbox"/>	<input type="checkbox"/>

The second version, which is shown in Exhibit #2 instructed the respondent not to include any online reading.

Exhibit 2  
Instruction to Exclude Online Reading

Q10. For each of the publications listed below, please answer “yes” or “no” to indicate whether or not you read or looked into it in the **past three months**. (*Include only reading of the printed edition. Do not include anything you may have read online/over the Internet.*)

	<u>Read/Looked at In Past 3 Months</u>	
	<u>Yes</u>	<u>No</u>
The New York Times (Mon. thru Fri.).....	<input type="checkbox"/>	<input type="checkbox"/>
USA Today.....	<input type="checkbox"/>	<input type="checkbox"/>
Business Week.....	<input type="checkbox"/>	<input type="checkbox"/>
Forbes.....	<input type="checkbox"/>	<input type="checkbox"/>
Fortune.....	<input type="checkbox"/>	<input type="checkbox"/>
Newsweek.....	<input type="checkbox"/>	<input type="checkbox"/>
Time.....	<input type="checkbox"/>	<input type="checkbox"/>

The third version, shown in Exhibit #3, instructed the respondent to include all reading – both the printed edition and online. Those claiming past three month reading were also asked whether it was the printed edition, the online edition or both.

Exhibit 3  
Instruction to Include Online Reading

Q20a. For each of the publications listed below, please answer “yes” or “no” to indicate whether or not you read or looked into it in the **past three months**. (*Include all reading, whether in the printed edition or online/over the Internet.*)

Q20b. For each publication for which you answered “yes”, please indicate whether you read the printed edition, whether you read it online or both.

	<u>Read/Looked at In Past 3 Months</u>		<u>How Read</u>		
	<u>Yes</u>	<u>No</u>	<u>Printed Edition</u>	<u>Online</u>	<u>Both</u>
The New York Times (Mon. thru Fri.).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
USA Today.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Business Week.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Forbes.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fortune.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Newsweek.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Time.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Mailing and Weighting**

A total of 12,606 questionnaires were mailed on April 7, 2003 along with a five-dollar incentive to respond. A second mailing to non-respondents went out three weeks later and, after removing 43 undeliverables, the response rate at the designated field close of May 28, was 52.1% ranging from 50.2% to 53.3% for the three questionnaire versions.

In analyzing the data, we first had to recognize the fact that the sample had been weighted to compensate for over-sampling of certain geographic regions, and also for differential response rates across different population segments. Such differential response rate weighting was introduced in the paper we delivered four years ago at the Florence symposium.

For the statisticians in the audience who may be interested, we calculated the effective sample sizes by dividing the unweighted base count for each of the three samples by a factor equal to one plus the ratio of the variance of the weights to the mean weight squared.

This resulted in the effective sample sizes shown in Exhibit #4 which indicates about a 25% loss in sample efficiency due to weighting. These losses were calculated for each questionnaire version by taking the difference between the effective sample size and the total returns and dividing that difference by the total number of returns.

Exhibit 4  
Efficiency Loss Due to Weighting

<u>Questionnaire Version</u>	<u>Total Returns</u>	<u>Effective Sample</u>	<u>% loss</u>
No mention of online reading.....	2226	1679	-24.6
Online reading included.....	2214	1670	-24.6
Online reading excluded.....	2104	1558	-24.0

### Online Reading Excluded

First let's compare the past three month reading levels when respondents were instructed to exclude online reading with the control where no instruction about online reading was given. Respondents claiming past three month reading of each of the seven publications are shown in Exhibit #5. This table compares the responses to the questionnaire version where online reading was specifically excluded with the control where such reading was not mentioned.

Exhibit 5  
Effects of Instructing Respondents to Exclude Online Reading

(Effective Base)	<u>Control Sample</u> (1679) %	<u>Online Excluded</u> (1558) %	<u>Pct. Diff.</u> ±%
The New York Times.....	38.9	34.9	-10*
USA Today.....	54.4	50.3	- 8*
Business Week.....	34.2	32.5	- 5
Forbes.....	33.0	32.5	- 2
Fortune.....	26.0	24.2	- 7
Newsweek.....	38.3	36.4	- 5
Time.....	37.6	34.4	- 9*

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\*Significantly different from zero (P<.02, one tailed test)

When respondents were told to exclude online reading, all seven publications showed somewhat lower observed levels of past three month reading compared to the control. For The New York Times, USA Today and Time, the differences were statistically significant beyond the 98% confidence point. We used a one- tailed test, because the direction of the expected difference was predicted in advance.

### Online Reading Included

Exhibit #6 compares the past three-month reading percentages for those in the control sample with those who were specifically instructed to include online reading.

Exhibit 6  
Effects of Instructing Respondents to Include Online Reading

(Effective Base)	<u>Control Sample</u> (1679) %	<u>Online Included</u> (1670) %	<u>Pct. Diff.</u> ±%
The New York Times.....	38.9	40.1	+3
USA Today.....	54.4	55.7	+2
Business Week.....	34.2	31.1	- 9
Forbes.....	33.0	32.0	- 3
Fortune.....	26.0	23.7	-9
Newsweek.....	38.3	34.5	- 9
Time.....	37.6	32.3	-14

For The New York Times and USA Today there was virtually no difference between the two groups: +3% and +2%. For the other titles, because the differences were in the reverse direction from that predicted, no statistical test is appropriate given the convention required for using a one-tailed test. All that can be said is that instructing the respondent to include online reading does not appear to raise the past three month reading percentage.

Respondents who claimed readership in the past three months when asked to include online reading were then asked an additional question – whether such reading was in the printed edition, the online edition or both. The responses to this question are summarized in Exhibit #7. Note that with the exception of The New York Times, approximately 95% of those claiming past three month reading claimed that they read the printed edition, i.e. print only or both print and online.

Exhibit 7  
Source of Reading When Instructed to Include Online Reading

	<u>Online</u> <u>Only</u> %	<u>Print</u> <u>Only</u> %	<u>Both</u> %	<u>Total</u> <u>Print</u> %
The New York Times.....	18.2	62.7	19.1	81.8
USA Today.....	2.1	91.8	6.1	97.9
Business Week.....	3.2	89.7	7.1	96.8
Forbes.....	6.0	88.7	5.2	93.9
Fortune.....	3.7	91.9	4.3	96.2
Newsweek.....	3.9	94.0	2.1	96.1
Time.....	2.3	94.4	3.2	97.6

In the case of The New York Times, however, only 81.8% of the past three month readers claimed such print readership (62.7 + 19.1 = 81.8), and 18.2% claimed that it was exclusively online. This may explain the reason why in Exhibit #5 the Times showed the largest (albeit not statistically significant from the next largest) drop in past three month readership when respondents were specifically told to exclude readership online.

**The MRI Release**

As we were tabulating these results and drafting this paper, MRI coincidentally released the results of the “source of copy” question from their most recent wave. These results included previously unreleased data from the “source of copy” show-card regarding “through the Internet or online” reading. The release was based on their Spring 2003 study and was entitled “Reading on the Web or Online in the Tabulation of Average Issue Audiences” (undated).

None of the more than 200 magazines generated as much as 5% online exposure among their recent readers. However, as can be seen from Exhibit #8, the national newspapers generated considerably more: 11.4% for the Journal, and 13.2% for USA Today. For The New York Times such online exposure was 30.2% among those claiming to have read the paper yesterday. What that means is that up to 30.2% of The New York Times’ print audience measurement may have been exclusively online, and gives credibility to the 18.2% figure previously reported.

Exhibit 8  
Percent of Average Issue Audience Exposed Online\*

The New York Times.....	30.2%
USA Today.....	13.2%
The Wall Street Journal.....	11.4%
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\*Source: MRI Spring, 2003

This may explain the dramatic increase in readers-per-copy for The New York Times reported by MRI over the past two years. This can be seen in Exhibit #9 which shows the MRI readers-per-copy (RPC) estimates from their five most recent Spring reports. Note the sharp increase in RPC for the New York Times beginning with the Spring 2002 report. The increase, from 2.77 in 2001 to 4.26 in 2003, represents a 54% increase in audience with no corresponding increase in circulation.

Exhibit 9  
MRI Spring Readers-Per-Copy

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
The Wall Street Journal.....	1.81	1.93	1.99	2.05	1.94
USA Today.....	2.02	1.93	2.08	2.46	2.49
The New York Times.....	2.55	2.41	2.77	3.38	4.26

It is possible that people could have been reading both print and online, but because of the single punch nature of the MRI source of copy question, such dual usage cannot be ascertained.

### **Conclusion**

The findings of the Journal's study, when taken alone, are indicative rather than conclusive. This is because of the lack of strict experimental control and because the respondents were all Wall Street Journal subscribers. But since the recently released MRI findings support the Journal's findings so completely, we can safely conclude that when a survey respondent is simply asked about reading without specifying the medium of exposure or whether or not online reading should be included, respondents will include it. If we may quote from the MRI Source of Copy Release, "publication ratings, along with other measures of media behavior, are ultimately designed to gauge the potential opportunity to see an advertisement." And might we add that, as they are currently worded, the leading audience measurement surveys in the U.S. may measure exposure to a media brand, but not the actual advertising vehicle. Research buyers should be mindful of this when interpreting survey findings based on questionnaires and tabulating procedures that are not specific with regard to online reading.

