FREQUENCY, RECENCY AND THE MODERATING EFFECTS OF THE SCREENING INTERVAL

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Abstract

When a six month screen is employed regardless of publishing interval, the frequency method produces disproportionately larger audience estimates for weeklies and lower estimates for monthlies relative to the estimates produced by the recent reading method. However, when the screening interval is a constant multiple of the publishing interval the reverse pattern is observed.

Attendees at the 1995 Symposium in Berlin may recall a paper by Steve Douglas and Rick Jones which compared the frequency of reading average issue audience estimates collected by mail by Monroe Mendelsohn with the recent reading and reading frequency estimates collected via personal interview by Simmons and MRI.

This paper presented data which clearly indicated that weeklies fare better and monthlies fare worse when measured by Simmons and MRI than when measured by Mendelsohn.

The data which support this conclusion are reproduced here in Exhibit 1 which shows the mean readers-per-copy for the eight weeklies, 2 biweeklies and 22 monthlies measured in common by the three services. The table also shows the percent differences in the means for MRI and Simmons relative to Mendelsohn. The Mendelsohn comparisons to MRI are shown in the top half of the table, and the comparisons to Simmons are shown in the bottom half. For weeklies, Mendelsohn using the frequency method, produced lower mean RPC's than did either the Simmons or MRI recency method (-8% and -19%). The reverse pattern was found for the monthlies (+19% and +10%) and the pattern for the biweeklies was somewhere in between.

The Douglas-Jones paper also presented the RPC audience estimates for the same titles using the frequency of reading question which MRI and Simmons use to calculate multiple issue reach and frequency estimates. This allows us to compare the mean readers-per-copy produced by the recency and frequency methods when both are calculated from the MRI and Simmons data using the same respondents and screen-in levels. These comparisons are shown in Table 2.

Although Douglas-Jones took no notice of the fact, Exhibit 2 shows a dramatically different pattern of results than does Exhibit 1. To facilitate comparison the percent difference columns from Exhibits 1 and 2 are also presented in Exhibit 3.

From the left hand column in Exhibit 3, when the Mendelsohn frequency data are compared with the recency data published by MRI and Simmons, the Mendelsohn frequency data show the weeklies at a disadvantage (-8% and -19%). The monthlies, on the other hand, show larger audiences when measured by Mendelsohn (+19% and +10%).

Looking at the right hand column, however, when both the frequency and recency estimates are calculated from the MRI and Simmons data, the reverse pattern is observed. Now the weeklies produce higher mean estimates using the frequency of reading method (+15% and +11%), and the monthlies produce lower estimates (-6% and -9%) - an obvious contradiction.

How, then, is this contradiction to be explained? Why is it that when Simmons and MRI data are used to generate both recency and frequency audience estimates the frequency method favors weeklies and the recency method favors monthlies, but the reverse is true when the Mendelsohn frequency estimates are compared to the recency estimates generated by the other two suppliers?

The Mendelsohn procedure differs from MRI's and Simmons' in three fundamental ways:

1. The most obvious difference is that Mendelsohn uses the reading frequency method of questioning; MRI and Simmons use recent reading.
2. As mentioned earlier Mendelsohn is a mail survey; MRI and Simmons are done via personal interview.
3. The third difference, not mentioned to this point, is the difference in screening procedure.

We will examine each of these three differences in turn in an attempt to isolate the root cause of the different treatment of weeklies and monthlies between the Mendelsohn study on the one hand and the MRI and Simmons studies on the other.

Frequency vs Recency

It seems clear that it is not the frequency vs recency method of questioning per se which is causing the Mendelsohn procedure to treat monthlies more favorably and weeklies less favorably. When these same methods are applied to both the MRI and Simmons data the pattern of differences reverses. The frequency method now treats the weeklies more favorably and the monthlies less favorably. It is only the Mendelsohn version of the frequency of reading procedure which favors the monthlies over the weeklies.

Mail vs Personal Interviewing

In order to help answer the question of whether the mail vs personal interview difference was somehow causing the Mendelsohn service to treat monthly magazines more favorably and weekly magazines less so, I requested the cooperation of IntelliQuest. I chose IntelliQuest because they conduct an annual study by mail of the magazine readership of individuals responsible for the purchase of computer equipment for home use. Both Mendelsohn and IntelliQuest use the frequency method and both survey through the mail.

Eight weeklies, two biweeklies and 13 monthlies, the audiences of which were reported in the Douglas-Jones paper and also in the same year by IntelliQuest were first identified. Then, using these coverage percentages, the same analysis was performed as had been employed earlier. The analysis is shown in Exhibit 4. The raw data, for anyone who may be interested, are appended. The raw data underlying Exhibits 1-3 are in the Douglas-Jones paper.

Note that the pattern of differences observed in Exhibit 4 is the same as was observed in Exhibit 1 which compared the MRI and Simmons personal interview audience estimates with the Mendelsohn estimates. Relative to Mendelsohn the weeklies fare better in the IntelliQuest study as they did in MRI and Simmons. The monthlies fare worse in the IntelliQuest study, and the biweeklies are again in between.

This finding disputes the possibility that the weeklies less favorable treatment by Mendelsohn is somehow attributable to the fact that the Mendelsohn study is conducted by mail. This conclusion was confirmed by another study which IntelliQuest itself conducted. This study contrasted the coverage estimates obtained using frequency and recency procedures obtained from the same sample of respondents using 25 computer trade and non-trade titles. The sample consisted of 1422 business computer purchase influencers and was conducted by mail.

The results of this study are shown in Exhibit 5 which essentially confirms the results of the frequency/recency comparison based on the MMR and Simmons data presented earlier in Exhibit 2. The frequency method produced much lower coverage estimates for the monthlies (-23%). The biweeklies produced marginally lower estimates using the frequency method, and the weeklies coverage estimates were marginally higher.

The differences we have observed between the Mendelsohn frequency estimates and the MRI and Simmons recency estimates are not attributable to the mail vs personal interview method of data collection, nor are they attributable to the frequency vs recency method of questioning per se. Something else must explain why Mendelsohn disproportionately favors monthly titles.

Further evidence that something other than the average issue audience question (frequency vs recency) is the root cause for Mendelsohn favoring monthlies while Simmons and MRI favor weeklies can be seen from Exhibit 6, which compares the Mendelsohn with the MRI and Simmons readers-per-copy when all audience estimates are based on a frequency question. By wide margins the MRI and Simmons data continue to favor the weeklies (-21% and -27%) and Mendelsohn continues to favor the monthlies (+27% and +22%).

Screening Procedure

An important difference between the MRI and Simmons questionnaire is the screening procedure. Both MRI and Simmons use a six month screening question regardless of the publishing frequency of the publications being measured, and only those respondents claiming that they might have read or looked into the title in the past six months are asked the reading frequency question: 0, 1, 2, 3, or 4 issues out of four. The IntelliQuest study also uses a six month screening question followed by the reading frequency question.

Mendelsohn does not ask a separate screening question, but does ask a reading frequency question which varies with publishing frequency. Exhibit 7 illustrates the format. Note that on the left for weekly magazines, the respondent is given two categories to indicate that they did not read each title in the past four weeks, or on the right that they read one, two, three or four issues in that period of time. For biweekly publications the time period is changed to two months, and for monthly publications the time period is changed to four months.

The remainder of this paper will argue that it is this difference in screening interval which is the cause of the fact that relative to Mendelsohn, both MRI and Simmons produce disproportionately higher audience estimates for weekly publications and disproportionately lower estimates for monthlies.

We have seen, however, that when the recent reading and frequency methods are applied to the MRI and Simmons data, using the same six month's screen, we observe the reverse pattern of differences. The weeklies fare better using the frequency method and the monthlies fare better using the recency method.

The inference we have drawn from these contradictory findings is that Mendelsohn's more favorable treatment of monthlies may be caused by the difference in the de facto screening procedure rather than the difference between the reading frequency and recent reading questioning procedure among those screening-in.

The length of the screening interval is not a new subject for discussion at these international symposia. At the first one in 1981 in

New Orleans, Jean Haukatsalo presented the result of a controlled experiment conducted in Finland using personal interviews. Half the time a six month screen was used for all publications regardless of publishing frequency (a la MRI, Simmons and IntelliQuest) and the other half of the time the screening interval was made equal to six times the publishing interval - six weeks for a weekly, six months for a monthly, etc. (Mendelsohn uses four times the publishing interval.) Haukatsalo concluded that:

> "The change [from six months to six times the publishing interval] produced considerably lower readership levels for weeklies, while monthlies had only a slight reduction."

Most recently in Berlin, Val Appel and Mike Stien, who died this past Spring, presented the results of another controlled experiment using a mail questionnaire. They demonstrated that a six month screen produces larger audience estimates for national daily newspapers than does a seven day screen. The study employed three different average issue audience questions and produced essentially the same results for each.

Others who have written on the subject of reading frequency claims have largely ignored the influence of the screening interval. The result has been a series of misleading findings:

In 1967 Alfred Politz, using the now defunct BRI (Brand Rating Index) personal interview questionnaire and a variant of the through-the-book procedure with a screening interval of "six or seven months," concluded that the frequency method treated monthly magazines more favorably than it did weeklies and biweeklies. The Mendelsohn questionnaire is a mail adaptation of the BRI questionnaire.

Don McGlathery, in the same year, published a much quoted paper which essentially replicated the Politz study results. However, neither the Politz nor the McGlathery paper made anything of the fact that the two methods employed different screening intervals.

The purpose of presenting the paper today is to call specific attention to the screening interval as an important determinant of audience size regardless of whether the recent reading or frequency of reading questioning procedure is employed. When the same screening interval is employed regardless of publishing frequency, the frequency method will favor weekly magazine titles. When the screening interval is expressed as a multiple of the publishing interval it is the titles with longer publishing intervals that will be advantaged.

Unfortunately we don't know which of the screening interval options available will produce the more valid audience estimates. Until the validity question is somehow resolved, the publications with different publishing frequencies will undoubtedly continue to debate the matter seeking to maximize their own audiences.

References

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APPENDIX

Exhibit 1

DIFFERENT SUPPLIERS: RECENCY VS FREQUENCY

	MRI Recency (RPC)	MMR Frequency (RPC)	F/R Pct. Diff. (± %)
8 Weeklies	2.15	1.97	- 8
2 Biweeklies	2.78	2.97	+ 7
22 Monthlies	1.88	2.24	+19

	Simmons Recency (RPC)	MMR Frequency (RPC)	Pct. Diff (± %)
8 Weeklies	2.42	1.97	-19
2 Biweeklies	3.04	2.97	- 2
22 Monthlies	2.02	2.24	+10

Exhibit 2

SAME SUPPLIER: RECENCY VS FREQUENCY

	MRI Recency (RPC)	MRI Frequency (RPC)	F/R Pct. Diff. (± %)
8 Weeklies	2.15	2.48	+15
2 Biweeklies	2.78	3.04	+ 9
22 Monthlies	1.88	1.76	- 6

	Simmons Recency (RPC)	Simmons Frequency (RPC)	Pct. Diff. (± %)
8 Weeklies	2.42	2.69	+11
2 Biweeklies	3.04	3.23	+ 6
22 Monthlies	2.02	1.83	- 9

Exhibit 3

FREQUENCY/RECENCY PERCENT DIFFERENCES IN MEAN RPC's

	F/R % Diff. Different Suppliers* (From Table 1) (± %)	F/R % Diff. Same Suppliers (FromTable 2) (± %)
MRI		
8 Weeklies	- 8	+15
2 Biweeklies	+ 7	+ 9
22 Monthlies	+19	- 6
Simmons		
8 Weeklies	-19	+11
2 Biweeklies	- 2	+ 6
22 Monthlies	+10	- 9

*Comparison to Mendelsohn

Exhibit 4

FREQUENCY METHOD: INTELLIQUEST VS MENDELSOHN

(Mean Coverage Percentages)

	IQ Frequency (Mean %)	MMR Frequency (Mean %)	IQ/MMR Pct. Diff. (± %)
8 Weeklies	16.4	12.6	-23
2 Biweeklies	6.0	5.1	-15
13 Monthlies	10.2	11.2	+ 9

Raw Data for Exhibit 4

	IQ Frequency (%)	MMR Frequency (%)	IQ/MMR Pct. Diff. (± %)
8 Weeklies			
People	22.9	20.9	+10
Business Week	23.3	18.4	+27
New Yorker	21.2	16.1	+32
Newsweek	18.0	14.1	+28
Sports Illustrated	20.0	13.7	+46
U. S. News	11.1	8.7	+28
Time	10.2	5.1	+100
TV Guide	4.5	3.5	+29
2 Biweeklies			
Fortune	6.1	5.3	+15
Forbes	5.9	4.9	+20
13 Monthlies			
Reader's Digest	28.6	23.6	+21
National Geographic	24.9	21.9	+14
Better Homes & Gardens	20.9	21.3	- 2
Money	11.4	10.4	+10
Southern Living	9.0	9.6	- 4
Golf Digest	5.2	6.9	-25
Smithsonian	8.6	6.9	+25
Golf Magazine	4.2	6.0	-30
Sunset	5.6	5.3	+ 6
Vanity Fair	4.2	4.3	- 2
USAir	2.9	4.0	-28
Sky Magazine	1.7	3.8	-55
Home	5.2	3.6	+44

Exhibit 5

INTELLIQUEST: RECENCY VS FREQUENCY

	IQ Recency (Mean %)	IQ Frequency (Mean %)	F/R Pct. Diff. (± %)
13 Weeklies	52.7	53.6	+ 2
3 Biweeklies	47.0	45.4	- 3
12 Monthlies	68.3	52.4	-23

Exhibit 6

FREQUENCY METHOD: MMR VS MRI/SIMMONS

	Frequency MRI (RPC)	Frequency MMR (RPC)	Pct. Diff. (± %)
8 Weeklies	2.48	1.97	- 21
2 Biweeklies	3.04	2.97	+ 2
23 Monthlies	1.76	2.24	+27

	Frequency Simmons (RPC)	Frequency MMR (RPC)	Pct. Diff. (± %)
8 Weeklies	2.69	1.97	-27
2 Biweeklies	3.23	2.97	- 8
23 Monthlies	1.83	2.24	+22

Exhibit 7

QUESTIONNAIRE ABSTRACT FOR WEEKLY PUBLICATIONS

Publications Issued WEEKLY	Do Not Read	Read Occasionally But Not in PAST 4 WEEKS	Number of Issues Read or Looked Into in PAST 4 WEEKS: One	Two	Three	Four
Barron's	( )	( )	( )	( )	( )	( )
Business Week	( )	( )	( )	( )	( )	( )
The Economist	( )	( )	( )	( )	( )	( )
Newsweek	( )	( )	( )	( )	( )	( )
The New Yorker	( )	( )	( )	( )	( )	( )
New York Magazine	( )	( )	( )	( )	( )	( )
The New York Times (Sunday)	( )	( )	( )	( )	( )	( )
Time	( )	( )	( )	( )	( )	( )
TV Guide	( )	( )	( )	( )	( )	( )
U.S. News & World Report	( )	( )	( )	( )	( )	( )
Golf World	( )	( )	( )	( )	( )	( )
Sports Illustrated	( )	( )	( )	( )	( )	( )