

## PREDICTING MAGAZINE AUDIENCE

Helen Johnston, Grey Advertising, USA

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In the U.S., audience surveys for different media are used differently.

Broadcast audience research has two uses:

**Accounting** - It provides a determination of the audience obtained for advertising monies spent - a post evaluation.

**Prediction** - The past performance of media vehicles is used to predict their future performance, so that they may be evaluated for purchase.

So far, magazine audience research has not been used in either of these ways.

Accountability has not been extended to audience data in magazines. Performance guarantees, if any, are still based on circulation.

Predictions are probably not made because the vast majority of books' audiences do not change from year to year. Yet there are some for which significant differences in audience are reported. Could these have been predicted?

The purpose of this paper is to examine the possible causal factors, that could be associated with changes in audience, to ascertain if such changes are predictable; such factors as:

- Previous fluctuations
- Key demographics
- Degree of pass-along readership
- Degree of casual readers
- Place of reading
- Audience size
- Circulation size
- Subscription vs. single copy circulation
- Circulation changes

If factors associated with change can be found, magazines that have greater probability of changing can be isolated and buyers can assess their risks involved in buying them.

In the U.S., magazines often ask that agencies accept an estimate of change in audience that they have made, because of some change they propose for the book (e.g. changes in circulation, editorial direction, etc.).

This work can be helpful in putting such requests in perspective and evaluating their merit.

### Method

The analysis has been confined to MRI audience estimates. Access to data, and time available, precluded duplicating the analysis on SMRB data, although such analysis would prove interesting.

Year-to-year changes in Adult 18+ audience estimates were tested for statistical significance (two sigma) from 1986 through 1992, Fall reports. A special word of thanks goes to Julian Baim of MRI for executing this daunting task. Specific characteristics of magazines that experienced significant change were then examined to see if some emerged which are associated with audience change. Books were classified by their characteristics in the year preceding the change.

## Findings

### The Nature of Audience Changes

On the whole, magazine audience are remarkably stable.

Few books experience statistically significant audience changes from report to report - an average of 16 books a year (range 12 to 20). This is usually less than 10% of the total reported.

Most audience changes are very small in absolute terms. Few of these are significant. The Fall '92 report is an example:

Aud. Change (% of Pop.)	All Books %	Proportion significant %
Up to .0029	67	0
.0030-1.000	32	80
1.000+	1	100
	<hr/> 100	<hr/> 11

There were far more increases than declines (64% of changes were increases).

Changes were relatively large - two thirds were 20% or more of a book's audience. But a few books had changes which, although minor (less than 10% of their audience), were significant. These were, of course, the very large (20 million or more audience) books.

Some books (17 of the total) had repeated significant changes - none more than three times. No patterns of change emerge. The changes are as likely to occur in non-consecutive years as consecutive and to be in the same as in different directions.

In brief, changes are infrequent, relatively large, and books do not experience frequent unexplained volatility.

### Demographics

We speculated that books with specific demographic appeal might have more volatile audiences than others. We investigated Age, Income, Education and Sex.

#### Age

The books that have had audience changes are young. Almost half of these books have readers with a median age of less than 35. Only a third of all measured books are so young. The population's median age is 40.9

Median Age	Age of Readers		
	All Books %	Aud. Changed Books %	Index to All Books
45+	10	3	32
40-44	30	35	119
35-39	26	15	59
30-34	21	26	124
-30	13	20	152
Total %	<hr/> 100	<hr/> 100	
#	175	65	
Avg. Age	37.6	36.3	97

But a Young Age skew does not necessarily result in audience volatility; nor does an older age skew guarantee stability. Magazine reading is more complex.

Many of the young books that had audience changes had reading styles (place of reading, regularity of reading) that are associated with change. For example, they are less loyal readers:

Median Age	% Casual Readers			Total
	55%+	54-50%	-50%	
40+	28	20	52	100
40 -	74	13	13	100
Total	57	15	28	100

### Income

Books that appeal to lower income groups seem to be more vulnerable to change. Three quarters have a median income below that of the average book.

Median Hld Income	Household Income of Readers		
	All Books %	Aud. Changed Books %	Index to All Books
\$40,000+	52	29	56
\$35,000-\$39,999	28	34	121
\$30,000-\$34,999	14	31	207
-\$30,000	5	6	135
Total%	100	100	
#	175	65	
Avg. Income (\$m)	42.2	38.5	91

### Sex

Books were classified by the proportion of their audience that is Male or Female. Change is much more likely to occur among books that appeal to women.

% Women Readers	Audience Appeal		
	All Books %	Aud. Changed Books %	Index to All Books
80+	21	32	153
60-79	16	18	115
40-59	20	11	54
20-39	26	23	88
-20	17	15	93
Total%	100	100	
#	175	65	
Avg. % Women	49	57	116

## Reading Frequency

In the MRI survey, respondents are asked to estimate the regularity (or lack of it) with which they read each publication they screen in (how many of the average four issues are read).

Reading regularity was tested to see if it was associated with changes in audience levels.

Books which have a high proportion of readers who claim they do not read the magazine regularly (i.e. "read less than half of the published issues") are the most likely to have fluctuations in audience. Only 9% of all books have 60% or more of their readers say they are casual readers. But 29% of these books have such readers.

<b>Reading Regularity</b>			
% Reading Half or Less The Issues	All Books %	Aud. Changed Books %	Index to All Books
60+	9	29	322
55-59	13	28	215
45-54	39	30	77
-44	38	12	32
Total %	100	100	
#	175	65	
Avg. % Casual	48	55	115

A planner recommending such books runs the risk of not getting the anticipated audience. It's not possible to predict the direction in which the audience will change, but most changes are increases.

## Secondary or Pass-along Readers

One measure of Pass-along is "Readers per Copy" (Audience + Circulation). The higher this value the more people, other than the purchaser, read an average issue.

Surprisingly, books with very high pass-along audience (RPC) have remarkably consistent audience levels. The average RPC for books that change is 11% lower than the average book.

Books with below average readers per copy (i.e. less pass-along) are more subject to changes in audience than those with high readers per copy.

<b>Pass-along Audience</b>			
# Readers per Copy	All Books %	Aud. Changed Books %	Index to All Books
6.0+	35	20	57
4.5 - 5.9	22	23	106
3.0 - 4.4	30	41	140
-3.0	14	15	112
Total %	100	100	
#	175	65	
Avg. RPC	5.6	5.0	89

## Place of Reading

It was thought that where the book was read might have some relationship to audience change.

### Out of Home

Books with a below average proportion of their audience reading out-of-home are more likely to have changes in audiences size from report to report.

% Aud Out-of-Home	Place of Reading		
	All Books %	Aud. Changed Books %	Index to All Books
60+	11	5	43
50-59	29	22	74
40-49	36	32	90
30-39	14	26	183
-30	10	15	158
Total %	100	100	
#	175	65	
vg. % OOH	47	43	91

This is probably the least expected of our findings. But it bears some relationship to the findings on readers per copy. Since books with high readers per copy usually have high out-of-home readership.

### Public Place

"Public Place" reading was examined (i.e. that part of "out-of-home" that was not in "someone else's home").

Books that have lower levels of such reading are more vulnerable to audience fluctuation than others.

% Public Place	Public Place Reading		
	All Books %	Aud. Changed Books %	Index to All Books
40+	37	25	67
30 - 39	39	31	79
20 - 29	13	34	253
-20	10	10	103
Total %	100	100	
#	175	65	
Avg. % Public	33	27	82

The findings on pass-along and out-of-home reading are contrary to expectation. In an attempt to better understand them we examined "reading regularity" by place of reading.

For the average book, out-of-home and public place readers are less likely to be regular readers (3/4 of the issues). There are some who claim frequent reading but not enough to explain why these reading groups are more stable than the in-home audience.

**Casual Reading Level**

	Above Avg.	Below Avg.	Total
Total Aud.	60	40	100
<b>Out-of-Home Aud.</b>			
Above Avg.	40	60	100
Below Avg.	4	96	100
<b>Public Place Aud.</b>			
Above Avg.	30	70	100
Below Avg.	5	95	100

Similar patterns emerged for the books that had audience change i.e. their out-of-home readers were less likely to be regular readers.

**Casual Reading Level**

	Above Avg.	Below Avg.	Total
Total Aud.	57	43	100
<b>Out-of-Home Aud.</b>			
Above Avg.	76	24	100
Below Avg.	42	58	100
<b>Public Place Aud.</b>			
Above Avg.	80	20	100
Below Avg.	28	72	100

In spite of this, it was the books with the least out-of-home readers that experienced change.

**Size of Book**

It is to be expected that small books' audience might fluctuate from report to report more than larger ones, but that much of this fluctuation would be within sampling tolerances and not likely to be "real" change. Not surprisingly, few of the books (14%) having significant change were small (audience of less than 2.5 million). On-the-other-hand, there was no great skew to the biggest books (10 million or more audience).

**Magazine Audience Size**

Audience Size (mm)	All Books %	Aud. Changed Books %	Index to All Books
10+	17	18	111
7.5 - 9.9	5	9	179
5.0 - 7.5	13	15	117
2.5 - 4.9	34	43	128
-2.5	31	14	44
Total %	100	100	
#	175	65	
Avg. Aud. (mm)	6.6	8.1	123

Books with the largest circulation (i.e. copies sold as opposed to readers), however, were clearly the most vulnerable to significant audience change. This too, may simply be a function of sample size; smaller books have large sampling tolerance and less likelihood of having changes that are significant.

## Circulation Size

Circulation Size (mm)	All Books %	Aud. Changed Books %	Index to All Books
2.5 +	13	18	138
1.0 - 2.4	23	34	144
-1.0	64	48	75
Total %	100	100	
#	175	65	
Avg. Circ. (mm)	1.5	2.1	140

## Circulation Distribution

About half the books, that had audience changes, had more than 80% of their circulation sold through subscriptions.

The subscription/single copy split of the books with change was about the same as the average book (82% / 18%). The potential volatility of single copy circulation did not therefore explain audience changes.

## Circulation Change

There were very few circulation changes associated with these audience changes. More than half the books that had changes in audience had less than 5% change in circulation. Only 17% had circulation changes of 10% or more.

Circ. Change	% Books
10+	17
5 - 9	32
- 5	51
	100

This resulted in great changes in readers per copy. Two thirds of these books had RPC shifts greater than 15%.

RPC Change %	% Books %
30+	31
15- 29	37
-15	32
Total	100

## Conclusions and Practical Applications

1. Few books have significant changes in audience from report to report. Magazine audiences are stable, if one defines stability as within sampling tolerances.

It has become accepted to use variations in RPC as a measure of the stability of magazine audience surveys. This can be very misleading since readers per copy may change because the measured audience has remained the same when circulation has changed. Unchanging readers per copy suggests a constant relationship of readers to circulation, ie. audience variation. It has been demonstrated that audiences do not vary, even when circulation does.

2. Not all changes are the result of the vagaries of fate or whims of readers. Some are the result of deliberate changes made by the publication, (such as editorial changes in the book, aggressive circulation solicitations, etc.) that result in change in the number of readers.

Nevertheless there are characteristics clearly associated with change in magazine audience that have little to do with such activity. The most important:

- Books with a large proportion infrequent readers change more than those with loyal readers.
- Younger books are more volatile.
- Books skewing to lower income readers seem to be more vulnerable to change than upper income books.
- Women's books are more likely to change than men's or dual audience books.

It certainly cannot be said that any of these have a causal relationship to change; nor is it possible to use these data to predict future levels for a book.

All that can be said is that such books have a greater likelihood of having significant change in audience than others and, as such, represent some degree of risk for the advertiser.

Media Analysts should probably not attempt predicting changes in magazine audience levels. Few books change. Those that do, cannot be predicted.

3. But we are sometimes importuned by books to make such predictions. That is, many books will ask that audience levels be adjusted when they experience a change in circulation levels, or are planning such a change, or planning some other change.

It cannot be demonstrated that there is a one-to-one relationship in circulation change and audience change.

- Most books that experience audience change, did so without attendant circulation change.
- Books which have circulation changes do not inevitably experience commensurate audience change.

A general rule is that estimating no change in audience for these books is the estimate that is most likely to be "right" (i.e. that audience estimate reported in the next survey).

Also, no estimate of change should be made that is within the sampling tolerance for the book.

Magazines that are proposing changes other than circulation, and requesting that a different audience estimate be made, present a much more difficult task. There are no data in this analysis which can help quantify such estimates.

4. The demonstrated stability in audience numbers raises the question of print accountability. Guarantees might better be issued on audience than on circulation. Examination of the performance of the buy in relation to expectations should not stop at circulation, but should include audience data.