USING CIRCULATION MIX TO IMPROVE ADVERTISER VALUE

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Introduction

As Scott McDonald and I noted in the paper we presented at the 2003 symposium, the relationship between circulation and audience has not only puzzled publishers and media researchers for decades, but has also featured prominently among topics discussed in this forum since the first meeting in New Orleans in 1981. Many of the earlier investigations found an apparent lack of relationship between circulation and audience measurement:

- At the 1993 San Francisco symposium, Bruce Goerlich and Helen Johnston both reported finding insufficient relationships between circulation data and audience as measured by MRI to justify adjusting audience estimates to reflect recent or planned changes in circulation. As Helen succinctly stated "estimating no change in audience is most likely to be right…"
- At the 1995 Berlin symposium, Julian Baim and Bruce Goerlich declared, after investigating 5-year changes in 148 titles measured by MRI, that "All the evidence seems to point in a similar direction; there is no necessary relationship between circulation changes and readership changes" (Baim and Goerlich, 1995).

Various hypotheses arose to explain the lack of apparent relationships:

- Both Jane Perry (1995) and Ingemar Lindberg (1997) suggested that we had our causal order all wrong – that changes in audience anticipate rather than follow changes in circulation.
- Skrapits and Appel (1997) argued that it was impossible to read the short-term changes in readership estimates because they seldom exceed the variations one would naturally expect as a result of sampling error.

However, as early as 1974, a few believed that various types of circulation – and in particular, public place circulation – had the potential to disproportionately influence audience levels (Joyce, 1974, 1983; Douglas, 1983). In 1993, Guy Consterdine used studies conducted in the U.K. to identify 20 factors that could determine RPC patterns and, hence, audience size. Of the factors identified, three were related to circulation: circulation level, source of copy, and public place distribution. He noted that "copies which are displayed in public places or circulated at work have an almost unlimited potential pool [of readers]." In 1997, Steve Douglas and Rick Jones, long proponents of the value of public place distribution in generating audience, discussed how public place copies – and the proper use of data associated with them – could be used to improve audience management.

In our 2003 paper, we observed that "the published investigations of the topic have suffered from a common limitation: they usually have not had access to the detailed circulation data that are proprietary to a publisher. While ABC statements provide a consistent data series for plotting the aggregate changes in circulation levels, they do not allow the analyst to take into account detailed changes in source mix that may also influence audience levels." Using highly granular historical information on circulation by source for three Condé Nast titles, in combination with regression analysis, we found that newsstand copies generated about 4 readers-per-copy, while public place copies generated an average of about 30 readers-per-copy. The relationships were highly significant ones, with P-values <.01. When we broke out public place distribution by type of outlet, we found that copies going into beauty parlors were producing an even higher average of 55 readers-per-copy – with a P-value of .05. It should be pointed out the titles that we studied lent themselves particularly well to this type of distribution because of their subject matter. We concluded our presentation with the assertion that "the proof of an effective circulation strategy is in the audience it generates."

Since 2003, the already vigorous debate in the U.S. regarding what constitutes quality circulation has further intensified. The debate has had some notable by-products. As advertisers have focused increased scrutiny on the value of public place distribution, a number of publishers have responded by undertaking studies to better understand the dynamics by which public place copies build audience. Additionally, beginning in the first half of 2006, publishers have been required to release more granular data on circulation composition. This change coincided with a Beta test of readership.com, McPheters & Company's effort to introduce weekly issue-specific print measurement and provide a level of accountability to print measurement more consistent with that provided by electronic media. As a result, we now have substantially more data with which to illuminate the relationships between circulation and audience. That said, it is important to note that even when the reporting of circulation by source is standardized, there are differences in the quality of individual elements in the source mix across titles and the dynamics between circulation and audience for individual titles can vary substantially.

A Case Study: How Public Place Copies Generate Audience

Earlier this year, McPheters & Company undertook a study on behalf of a niche women's title to determine the potential audience impact of its public place copies. These copies were distributed predominantly through beauty salons (90%), with the remainder going into outlets related to the specific category of the publication. Our methodology involved two steps. Using a random sample of 1000 of the locations to which public place copies of the titles were mailed, we used a database matching technique with substantial telephone follow-up to determine what proportion of the addresses were deliverable to appropriate outlets (i.e. operating businesses of the types designated), as well as the characteristics of the businesses (sales volume, number of employees) and the demographics of the surrounding areas. We coupled this with a survey of the locations themselves to collect information on:

- Location characteristics
- Customer demographics
- Incidence of magazine reading among customer base
- Attitudes towards magazines received

Almost all (93%) of the survey respondents – primarily business owners – said that they believed the presence of magazines enhanced the experience of their customers. They told us that customers waited an average of 19 minutes to be served and remained on site an average of 54 minutes. The establishments had an average of 39 magazines in their waiting area. They reported, on average, that 59.2% of their customers read magazines, that they had 41 customers a day and were open an average of 5.5 days/week. As a result, we were able to develop an estimate of the audience that resulted. Our calculation looked like this:

# of outlets to which copies were mailed ×
% deliverable to qualified outlets ×
customers/outlet/month ×
% who read magazines ×
% female ×
magazines/reader ×
title's share of copies present in waiting areas ×
time publication stays in the waiting area

Because we did not have data indicating the relative probability of pick-up of the specific title vs. the others present, we assumed that it was picked up in proportion to the share of copies present that it represented. Empirical data were available for all but two elements of the calculation:

- Number of magazines/reader, where we assumed that the typical reader read 1.5 copies[1]
- Average time publication stays in the waiting area, where we (very conservatively) assumed the publication interval – in this case two months

Based on this calculation, we estimate that public place copies for this publication produce about 28 readers-per-copy. While this is lower than what we found for beauty parlors in the study which we reported in 2003, this title targets a narrower market and would be expected to get a lower level of pick-up among those visiting beauty salons. It is important to note that the estimate of 28 readers-per-copy reflects the facts that not all copies were deliverable, nor did all actually remain in the locations to which they were delivered.

[1] We subsequently sent an observer to a non-representative sample of 20 Manhattan hair and nail salons, where he verified the reasonableness of this assumption – and found an even higher incidence of magazine readers than that reported by our survey respondents.

The First Half of 2006: More Granular Circulation Reporting & readership.com

In the first half of 2006, two events came together that offered the opportunity for a deeper understanding of relationships between circulation and audience. First of all, the Audit Bureau of Circulation began requiring publishers to provide more granular reporting of circulation by source in their twice-yearly Publisher's Statements. They added a category called verified, comprised of unpaid copies primarily distributed through public places, and began reporting more granular averages, providing a detailed breakout that includes the following:

- Paid Subscriptions
  - Individual Subscriptions
  - Combination Subscriptions
  - Sponsored
  - Loyalty/Award Points
  - Club/Membership
  - Partnership
- Verified
  - Public place
  - Individual use
- Non-Paid
  - Analyzed
  - Non-Analyzed

They also added verified to the categories reported by issue. Previously, their issue-by-issue breakout had included only single copy or newsstand sales and paid subs – of which public place was an unreported subset. It should be noted that some publishers chose to leave some or all of their public place distribution in a category of paid subs called sponsored. The sponsored category is where third party businesses pay for copies to be distributed on their behalf. Some of these copies are delivered to individuals, while others are distributed to waiting rooms of various types. Based on the information disclosed in the ABC statements, we were unable to determine with any reasonable degree of specificity what proportion of these sponsored copies went where.

Among the 141 titles we analyzed, reported circulation broke out as follows:

Circulation by Source	% to Total	% Pubs Using
Single Copy Sales	12.4%	97.2%
Ind. Subs	59.5%	94.3%
Comb. Subs	0.8%	51.8%
Club/Assoc. Membership	14.1%	22.0%
Loyalty/ Award Points	2.3%	65.2%
Partnership	1.2%	65.2%
Sponsored Sales	2.0%	85.1%
Verified - Public Place	3.0%	66.7%
Verified - Individual Use	0.6%	33.3%
Non-Analyzed Non-paid	3.5%	99.3%
Analyzed Non-paid	0.6%	10.6%

In February of 2006, we went into the field with the Beta test of readership.com. The study, which was in the field over an 11 week period, employed successive mail-outs to nationally representative samples and used cover recognition to measure specific readership of the last 5 issues of approximately 200 publications. Results were tabulated by week. Our total in-tab was about 8400, which was sufficient for us to report average issue audiences for 141 consumer magazines which were also reported through ABC. For these titles, the average issue audience was the average of the issues measured which we judged to have fully accumulated their audience. This determination was made using an algorithm which took into account whether the number of those claiming readership of the issue exceeded that for previous issues and whether reported readership had started to decline.

We analyzed the data in two ways, looking first at the relationships between average issue audience and circulation by source across all titles and then at the relationships between issue-specific audiences and public place distribution for individual titles which had varied their use of public place for the issues measured.

Circulation by Source and Average Issue Audiences

For the first portion of our analysis, we used the granular breakouts of average issue circulation for the first half of 2006, in combination with the average issue data from the readership.com Beta test for the 141 titles measured by both readership.com and ABC, and developed a regression equation across all of these titles, in which average issue audience was the dependent variable and the various types of circulation were the independent variables. We started by including each of the individual circulation variables identified above, then removed each variable for which P>.05. Our resulting equation showed that the remaining circulation variables explained 77.6% (R-Square) of the variation in audience.

Regression Statistics	
Multiple R	0.881
R Square	0.776
Adjusted R Square	0.768
Standard Error	3358
Observations	141

			Range	*Range*
Variable	β Coefficient	P-Value	*Lower 95%*	*Upper 95%*
Single Copy Sales	8.0	1.03454E-13	6.1	9.9
Individual Subs	4.6	4.19884E-30	4.0	5.2
Club/Assoc. Copies	2.0	6.50105E-13	1.5	2.5
Loyalty & Awards Programs	15.3	0.000527609	6.8	23.9
Public Place	-12.8	0.010020058	-22.5	-3.1

We have repeatedly found that single copy sales have a substantially larger effect on measured audience than non-public place subscription copies. The lower coefficient for club and association copies is consistent with the fact that association publications generally are characterized by low readers-per-copy. It is worth noting that combination, partnership and sponsored subscriptions did not have statistically significant relationships with measured audience in our cross-title analysis.

The disproportionate contribution of single copy sales to measured audience is important for publishers as they attempt to deal with the substantial changes which are occurring in the U.S. in the retail channel. It is also important because the demographic profile of readers contributed by this type of circulation differs significantly from that of readers resulting from individually paid subscriptions. Newsstand sales are disproportionately likely to produce readers who are younger, employed, and in households with children.

We were puzzled by the negative coefficient for public place not only because of the work that Scott McDonald and I shared at the 2003 symposium, but because of the findings of other noted researchers cited earlier, as well as what we have learned in the extensive work that McPheters & Company has undertaken for many individual publishers. When we have examined relationships between measured audience and circulation by source using detailed publisher supplied time series data, we have often found large positive coefficients and statistically significant relationships. Consequently, we went back to make sure that the result was not being skewed by atypical magazines.

We subsequently reran the analysis, excluding association magazines, which are characterized by unusual distribution patterns and low readers-per-copy, and ethnic titles, which are characterized by unusually high readers-per-copy. While club and association copies no longer entered into the equation, the results were otherwise quite similar to those of our earlier analysis.

Regression Statistics	
Multiple R	0.886
R Square	0.785
Adjusted R Square	0.778
Standard Error	3202
Observations	125

			Range	
Variable	β	P-Value	*Lower 95%*	*Upper 95%*
Single Copy Sales	8.0	6.71654E-14	6.1	9.8
Individual Subs	4.7	2.19132E-30	4.1	5.3
Loyalty & Awards Programs	14.7	0.000683692	6.4	23.1
Public Place	-11.4	0.027139148	-21.6	-1.3

We also looked at combining public place with sponsored as a single variable. This variable was statistically significant and had a negative β-coefficient of -9. The equation had slightly less explanatory value than the equation using public place only.

Regression Statistics	
Multiple R	0.879
R Square	0.773
Adjusted R Square	0.765
Standard Error	3382
Observations	141

			Range	
Variable	β	P-Value	*Lower 95%*	*Upper 95%*
Single Copy Sales	8.1	9.23E-14	6.1	10.0
Individual Subs	4.6	7.35E-29	3.9	5.2
Club/Assoc. Copies	1.9	1.94E-13	1.4	2.3
Loyalty & Awards Programs	16.7	0.00018	8.1	25.3
Public Place + Sponsored	-9.1	0.030473	-17.2	-0.9

Finally, we decided to look just at those titles reporting 1% or more of their circulation in public place on the assumption that we were more likely to know with certainty that their public place was actually being reported in the verified public place category. Here we had something of a breakthrough in two respects: First of all, despite the smaller number of observations, the equation was superior in terms of its explanatory value and secondly, public place had absolutely no significance (p-value=.49).

Regression Statistics	
Multiple R	0.932
R Square	0.868
Adjusted R Square	0.862
Standard Error	2440
Observations	73

			Range	
Variable	β	P-Value	*Lower 95%*	*Upper 95%*
SC	7.3	2.71129E-05	4.1	10.6
Ind. Subs	4.0	7.0546E-28	3.6	4.5
Loyalty/ Award Points	19.5	9.9695E-06	11.4	27.7

Why, we wondered, would public place distribution fail to explain higher audience levels in an analysis cutting across multiple titles – especially given that we have frequently seen its ability to impact measured audience at the individual title level? We have identified a number of factors which we believe at least partially explain this result.

- First of all, while the circulation data available for the first half of 2006 was a substantial improvement over that of previous years, it was still imperfect: copies distributed to public places could still be reported as sponsored copies and there was not sufficient detail in the disclosures relating to the sponsored category for us to consistently differentiate between copies going into public places and those going to individuals. We are glad to report that in July the ABC board discontinued the use of the sponsored public place category, with all public place copies to be reported as verified in future statements.
- Public place distribution is an important means of generating trial for a publication, but it is also sometimes used to compensate for shortfalls in paid circulation. Simply distributing copies isn't enough. People also have to want to read them.
- Public place distribution is not of uniform quality. There is significant variability in deliverability, outlet quality, and outlet suitability. For example, we have found copies of men's sports titles being delivered to beauty salons and copies of decidedly downscale publications being sent into the most affluent zip codes. However, I would be remiss if I didn't point out that these occasions are rare and that most copies are destined for appropriate outlets.

We were also somewhat surprised by the large Beta coefficient for loyalty & awards programs. These are typically copies that a consumer pays for using credit card points or frequent flyer "miles". We believe that this outcome is at least partially attributable to the fact that circulation of this type has a relatively high positive correlation with both readers in professional or managerial occupations and with the proportion of readers who say they read at work where the potential for pass-along is – to use Guy Consterdine's description – "almost unlimited". There are also probable promotional benefits that accrue to publishers

who participate in these programs. Lastly, loyalty programs are expensive for publishers. It may be that the titles that are already the strongest are the most likely to be able to afford to use this source, which is noted for producing readers of exceptionally high quality.

Circulation by Source and Issue-by-Issue Audiences

The second part of our analysis involved a detailed look at the issue-specific data for issues of the 36 titles measured by both readership.com and ABC where a substantive change of at least 5000 copies/issue had occurred in the level of public place distribution.[2] Because readership.com was in the field for only 11 weeks, and because different titles accumulate their audiences at different rates, the number of observations/title varied from a low of 2 to a high of 12, with an average of 4. Even with so few observations, we found positive correlations that were statistically significant at the 95% confidence level for four of these titles. Two of these were automotive titles, one was a specialty sports title and the last was a financial title. We found only one statistically significant negative correlation.

			Change in Distribution		% of Total Distribution	
Title	# Observations	Correlation	Low	High	Low	High
Automotive #1	3	.999	<200	24K	0%	1.5%
Automotive #2	3	.999	54K	139K	4.6%	11.3%
Sports	3	.974	0	25K	0%	2.6%
Finance	4	.987	<300	12K	0%	1.5%

Because of the high preponderance of titles that had issues with essentially no public place among those for which the correlations were statistically significant, we went and looked specifically at other titles exhibiting a similar pattern. In our group of 36 titles where public place distribution had increased or decreased by at least 5,000 copies, we had 8 titles which had at least one issue for which public place distribution was close to 0. Among this group, 7 had correlations that were positive, and 6 had correlations that were not only positive, but were also greater than 50%. The likelihood of this occurring by chance is less than 2%. The single negative correlation was for a tabloid which used the least amount of public place distribution in terms of both absolute quantity and percent distribution.

			Change in Distribution		% of Total Distribution	
Title	# Observations	Correlation	Low	High	Low	High
Automotive #1	3	.999	<200	24K	0%	1.5%
Sports	3	.974	0	25K	0%	2.6%
Finance	4	.987	<300	12K	0%	1.5%
Women's	4	.711	0	30K	0%	1.0%
Business	6	.634	0	10K	0%	1.1%
Music	4	.543	0	57K	0%	5.9%
Teen	3	.219	0	30K	0%	3.0%
Tabloid	11	-.338	<100	9K	0%	.8%

Conclusion

We continue to believe that the proof of an effective circulation strategy is in the audience it generates. Publishers have the ability to influence audience levels and quality through the manner in which they distribute their publications. Single copy sales, individually sold subs, association copies and subs sold through loyalty programs all have discernible and statistically significant relationships with measured audience. Our investigation of the mechanics of public place distribution documents the ability of well-placed public place copies to generate unusually high readers-per-copy. Public place copies have the potential to deliver advertising messages to a broader audience of qualified prospects and provide substantial benefits to advertisers. But public place distribution is not a panacea – and it does not work equally well for all titles. For the audience-building potential of public place distribution to be realized, public place programs need to be implemented and monitored with care. It is in the best interest of publishers to aggressively pursue an improved understanding of the effects of each element of their circulation strategy on the audiences of their publications and more work is needed to better understand why public place distribution impacts the measured audience of some titles and not of others.

[2] The analysis was confined to 2006 issues only because it was only for these issues that we had issue-specific circulation data which included a breakout of "verified". We used the average issue breakout of verified public place and verified individual use to estimate the proportions of each on an issue by issue basis.

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