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Magazine Media Sells: Validating Secondary Audience for Cross-Media Comparisons

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I.   Introduction

Over the past six years, Meredith, Time Inc. and Nielsen Catalina Solutions have presented multiple papers at research conferences – including the PDRF – highlighting the effectiveness of magazine media in driving sales for advertisers. To date, there have been over 75 magazine media 'sales lift' studies conducted for consumer packaged goods advertisers across more than 7 categories (including beauty, food, healthcare and pet) with extremely positive results.

In fact, the results from an analysis of over 1,400 studies conducted by NCS across media channels, show that magazine media ROAS is significantly higher than any other media measured ($3.94, 50% higher than ad networks/portals and 55% higher than linear TV). Importantly, the magazine media ROAS was based on an updated methodology including actual sales performance of the secondary audience (non-subscriber or newsstand buyers) and confirms the value of a magazine's total audience in driving sales.

This paper will provide a detailed description of this new methodology for measuring the impact of the secondary audience on sales, using GfK MRI Issue Specific data to explore the difference in sales response and ROAS among subscribers and newsstand buyers and pass-along (or secondary) audience.

II.   Background

Total magazine readership, based on GfK MRI data, comprises people who have "read or looked into" an issue during the most recent issue publication period. These readers are either "primary" (readers who either obtained a copy via subscription - sole or joint, purchased it another way, or live in a household with a subscriber/buyer) or "secondary" (readers who do not meet the definition of "primary," such as those who read in a salon or doctor's office). Advertisers evaluate magazines based on their ability to reach their desired target based on <u>total</u> audience (not primary audience) coverage or composition, e.g., percent reach of Women 18-34 with dogs, or composition of Moms with kids 0-2. The magazine's circulation is the starting point for this readership, but is only a portion of the total magazine audience. Magazine subscriptions are sent to homes (with known addresses) and to newsstands (with identifiable UPC codes). We know who these people are. However, any copy that is "passed along" and read by someone else (at a friend's house, doctor's office, at work, etc.) cannot be tied back to a specific person or household.

The NCS Print Sales Lift study methodology was developed and introduced in 2011 by Nielsen Catalina Solutions in conjunction with the Meredith Corporation (and branded as the "Meredith Sales Guarantee" in the next year). Core to the methodology was the match between subscriber and newsstand copies and the NCS frequent shopper sales database (FSD). The result of the Sales Lift study is a report illustrating the impact of advertising on brand sales among readers of the subscriber or newsstand copy compared to a matched control group. Meredith worked closely with GfK MRI and NCS to develop an appropriate methodology

to estimate sales impact of the remaining readers (i.e., secondary or "pass-along" audience), to account for sales among the total audience purchased by the advertiser. While the existing methodology for estimating secondary audience is logical and defensible, data from GfK MRI's Issue Specific Study now exists that allows the magazine industry to provide a more accurate representation of the value of the total magazine audience.

Historically, secondary audience value has been validated by comparing engagement or involvement metrics (e.g., time spent, frequency of reading, rating) of primary vs. secondary readers. This new analysis conducted by NCS, GfK MRI, Meredith and Time Inc. provides substantive proof that secondary readers are influenced by advertising and drive sales at comparable levels to the readers who make the decision to purchase the magazine themselves.

It is important to point out that the majority of magazine campaigns conducted by Meredith and Time, Inc. and measured by NCS Sales Lift over the past 5+ years have generated positive ROAS ($1+) even when only measuring primary audience response. However, since advertising is sold based on total audience, proof of performance must be based on total audience, including secondary audience.

Finally, while the positive results of the 75+ Magazine Sales Lift studies have been a great resource for the magazine industry (and one of the key pillars of the MPA's positioning), for practical purposes the process precluded smaller publishers from conducting sales measurements or being included in the analysis of cross-publisher studies (due to cost of pulling subscriber files and/or circulation size). Using GfK MRI's Issue Specific Study allows the inclusion of measurement of secondary audience, in addition to primary, as well as offering the potential to include all publishers in future Sales Lift studies, as long as the total reach for the additional magazine's audience is less than ten percent of the reach for magazines with subscriber studies.

III.   Key Findings/Benefits

Based on the analysis of six advertising campaigns in Meredith and Time Inc. magazines conducted by Nielsen Catalina Solutions, it is clear that secondary audience readers provide significant value and impact to advertisers. On average, a campaign's secondary audience contributes 76% of the primary audience sales contribution. Specifically, sales response among secondary readers was between 68% and 88% of the primary sales response. The average sales response was the same across each publishers' campaigns.

Benefit to Publishers

- Quantifies and validates total audience contribution to sales: primary and secondary audiences.
- Allows more publishers to be included in sales lift studies, regardless of size or ability to share subscriber file with NCS.
- Provides more accurate input for cross-media and cross publisher studies.
- Provides magazines with an apples to apples comparison of effectiveness with other media.

Benefit to Advertisers

- Advertisers can seamlessly evaluate sales lift across magazines in totality for total campaign sales lift, including all magazines, not only magazines that provide subscriber files to NCS.
- Validation of secondary/pass-along audience. Further proof that advertising in magazines drives sales – both paying subscribers and newsstand buyers and "pass-along" readers.

IV.   Overview of Methodology

The foundation of all NCS Sales Effect studies is the estimate of the incremental sales for a brand based on the advertising campaign that ran. For magazines, this includes an estimate of the incremental sales from the primary (subscribers/buyers of the magazine) and secondary (pass-along) readers of the magazine. The inclusion of the actual measurement of the incremental sales from the secondary audience is the new piece of research being discussed here.

The incremental sales due to advertising is measured within the primary audience by matching the subscribers to the magazines in the campaign to consumers that purchased the products. In addition, consumers who purchased any of the magazines in the campaign at NCS supermarkets or drugstores are added as primary readers. The purpose of this research was to measure the

incremental sales from the secondary readers of those same magazines in the campaigns. GfK MRI's Issue Specific Study was used to achieve that goal.

Overview of GfK MRI Issue Specific Study

GfK MRI's Issue Specific Study is an online study, conducted weekly, collecting readership data on specific magazine issues. Issue Specific is a companion study to GfK MRI's Survey of the American Consumer ("National Study"), with its primary objective being the measurement of audience variability from issue-to-issue.

Using two large panels as a sample source, GfK MRI conducts 4,000 surveys each week, asking about readership of over 170 titles and 2,500 issues annually. Invitation quotas are set on age/sex demographics.

To determine issue readership, respondents use magazine logos to choose publications they have read or looked into in the last six months. For screened-in titles, respondents are then shown cover images for the most recently published issues and asked to indicate whether they read the specific issue. Data are released as an index off of the National Study estimates, considered the currency for magazine audience estimates in the U.S. For the current project, however, we used Issue Specific respondent level data. The Issue Specific methodology is well suited for this project, since the respondent level database includes both readers and non-readers of each issue.

MATCHING PROCEDURE

Subscriber Match

The next step is to match Issue Specific respondents to individuals in the NCS database. To protect the anonymity of respondents, a third-party, Experian, is used to combine the relevant datasets.

For the analyses done for this paper, GfK MRI instructed each of its sample providers to send a file to Experian, containing respondent name/address information and a respondent identifier that could be linked to Issue Specific data. The sample providers sent this information for any respondent who completed an Issue Specific survey during the period from January 2015 to April 2016. Experian then matched the Issue Specific respondent dataset to the NCS dataset (previously combined with relevant Subscriber Lists). Experian removed all personally identifiable information, while maintaining the Respondent ID. This combined dataset was delivered to NCS.

Next, GfK MRI provided Issue Specific readership data (along with the relevant Respondent IDs) to NCS. For each advertiser campaign, Issue Specific data was provided in two files: 1) respondents who were exposed to the campaign (respondents surveyed during the campaign period who read any of the specific titles/issues included in the campaign) and 2) non-exposed respondents (those respondents surveyed during the campaign period who did not indicate reading any of the campaign issues). For the purposes of its analysis, NCS defined secondary readers as those individuals who were not subscribers and were not newsstand purchasers of the issues in the campaign (as indicated in the NCS database).

Overview of NCS database

Combining viewing and purchasing data sets gives transparency to what households are watching or reading or listening to and subsequently what products they are buying in a store. This is known as single-source, a data set that marks the foundation of measurement products at NCS that helps establish a causal relationship between advertising exposure and purchases made.

Purchase data
NCS obtains purchase data at a household level from Catalina Frequent Shopper data (FSD). This dataset collects details of purchases made by customers at retail stores with frequent shopper or loyalty cards. At present, NCS has purchase data for about 90 million households in its FSD dataset which are matched to exposure data at a household level by an external party.

Exposure data
The exposure data for magazines are obtained from three sources:
a. Subscribers: A list of active subscribers for the magazines in which the advertisement was placed is obtained from publishers (Time Inc., Meredith). These form part of the Primary Audience.

b. Newsstand: NCS mines its FSD data to identify households that purchased magazine issues with the campaign creative of interest. UPC codes are provided to ensure that specific issues featuring the advertisements are identified. These households also form part of the primary audience.

c. Secondary: As described above, GfK MRI's Issue Specific study identifies respondents who read the issues that carried the campaign creative. Respondents were matched to the NCS anonymous household ID using a third party to create a sample print universe. In addition to this, GfK MRI also provided NCS with the reader files that determine households where the person surveyed read specific issues. The list of GfK MRI respondent households is joined with the subscriber/newsstand households to give a superset of magazine reading households that can now be classified into primary and secondary audience in the following manner:

- **Responded "yes" to the survey <u>and</u> subscribed or purchased the magazine.** These are households in which the subscriber or purchaser of the magazine was likely the person surveyed by GfK MRI. These households are part of the primary audience.
- **Responded "no" to the survey <u>and</u> subscribed or purchased the magazine.** These are households in which the subscriber or purchaser of the magazine was likely *not* the person surveyed by GfK MRI. These households are part of the primary audience.
- **Responded "yes" to the survey <u>and did not</u> subscribe or purchase the magazine.** These are households that acquired the magazine through a friend or non-household member or read an issue outside the home, like at a salon or doctor's office. These households are part of the secondary audience.

ANALYSIS METHODOLOGY

We do not know the exact date of exposure for print; hence ANCOVA is considered as the appropriate method for determining sales response. Historically, NCS has been measuring primary sales response among a larger dataset of subscriber/newsstand households using ANCOVA. NCS's ANCOVA methodology starts with the exposed households and matches them to un-exposed households based on the prior year purchasing patterns, demographics, retailers shopped in and competitive brand purchasing. Since the matched homes are only different in that the exposed were either subscribers to the magazine or bought the issue at the newsstand, the difference in sales between the two groups is due to exposure. The sample sizes for this part of the analysis are generally in the multiple millions of households.

To measure the secondary audience, NCS leverages GfK MRI's Issue Specific Study. NCS uses a measurement tool called Cognitive AdVantics to measure these incremental sales because the exposure date is known. Cognitive AdVantics is a machine learning algorithm to measure Sales Effect that accounts for the endogeneity bias of targeting. The sample for this part are substantially smaller and range between 40,000 and 120,000 depending on the length of the campaign. Therefore, the results from this part of the study are calibrated to match the findings from the large samples. As an example, the following Table 1 shows the method of calibrating the results.

Table 1

	Original Subscriber/Buyer Model		From MRI Total Audience	Issue Specific Sample Primary + Secondary Model		Calibrated Results		
	% Reach	$ Per HH	% Reach	% Reach	$ Per HH	% Reach	$ Per HH	Total $
Primary	15.6%	$0.31	15.4%	12.3%	$0.37	15.4%	$0.31	$5,736,438
Secondary			45.1%	31.9%	$0.23	45.1%	$0.20	$10,586,560
Total			60.5%	44.2%	$0.27	60.5%	$0.22	$16,322,999

From Table 1 we see that the results from the large subscriber/newsstand panel was $0.31 incremental cents spent for every exposed buyer. From the Issue Specific sample we see that for households that were primary buyers, the lift was $0.37 cents. This is a larger lift, but for a smaller unprojected/ unweighted sample. To calibrate, we use the relationship between primary and secondary as measured in the Issue Specific study and apply that to the measure of primary $/HH to get the $/HH for primary and secondary audiences. These are combined based on the reach as measured by GfK MRI for primary and secondary.

An interesting observation from our analysis was that the household lift from subscribers was virtually the same whether the respondent was a reader or not. This is due to readership being measured by the person and subscription being measured by household – so while a household may be a subscriber, some of the subscribers were not the person in the home who subscribed

or read. It also implies that purchasing is often a household decision with exposure influencing purchase influence across the household.

Table 2

	Issue Specific Sample Primary + Secondary Model	
	% Reach	$ Per HH
Total Primary	12.3%	$0.37
Issue Specific Reader & Subscriber	6.3%	$0.37
Issue Specific Non-Reader & Subscriber	6.0%	$0.38

This method was applied to six print campaigns, three from Time Inc. and three from Meredith to determine the relationship between sales response among primary and secondary audience. The findings are as follows in Table 3. On average, the secondary audience delivered 76% of the lift of the primary audience. This average was the same for both publishers.

Table 3

Secondary / Primary $/HH	
Range of results	63% - 88%
Average Time Inc. campaigns	76%
Average Meredith campaigns	75%
Average of all campaigns	76%

ROAS CALCULATIONS INCLUDING SECONDARY AUDIENCE

Return on Ad Spend (ROAS) is the total incremental dollars achieved divided by the cost of the media. Now that secondary audiences are measured, we can measure the incremental sales from both primary and secondary and report an accurate ROAS.

PUBLISHERS WITH NO MATCHED SUBSCRIBER DATA

Publishers with no subscriber match to NCS can be included in the results if the reach among the non-matched publishers is less than 10% of the total reach. For instance, if the total reach of the campaign among publishers that have provided NCS with a subscriber match is 40%, then the total reach including all other publishers measured by GfK MRI's Issue Specific Study cannot be larger than 44% (40 + 10% of 40=44). The method for including those incremental sales will be similar to the inclusion of secondary readers with an additional measure of the incremental sales with and without the non-matched publishers. If the reach is higher, then NCS strongly recommends the publisher either does a match with NCS or is a smaller portion of a campaign's reach.

V.   **Next Steps**

- Going forward, all studies – from advertisers or publishers – conducted by NCS will include a measured secondary audience measure. NCS will conduct quarterly matches with GfK MRI's Issue Specific Study as long as there are at least two Sales Effect studies being conducted in that quarter for either advertisers or publishers.

- Meredith, Time Inc. and NCS will continue to track the relationship between primary and secondary audience contribution to sales lift across all measured studies, including differences by category (food, beauty, pet, etc.), monthly

vs. weekly, size of secondary audience/RPC, campaign length, campaign reach, etc. Results will be analyzed regularly and findings will be shared in future papers.

VI.   Appendix

- Average Return On Advertising Spend (ROAS) across media (from "From Ad to Aisle: CPG Advertising Benchmark Report"; NCS and Project team)
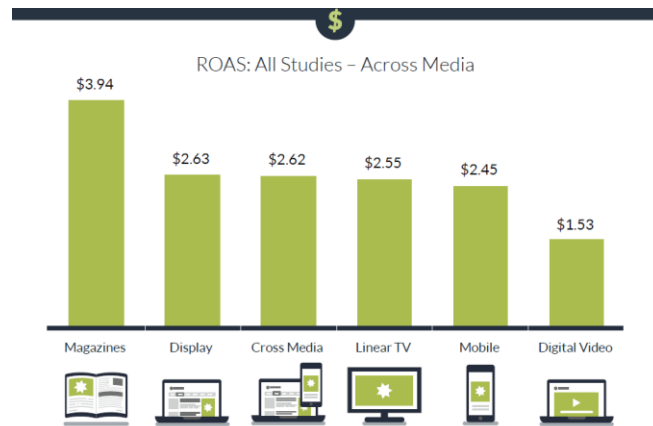
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