AD EXPOSURE AS A MODEL OF PRINT COMMUNICATION VALUE

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There is no greater cliché in media planning than "you get what you pay for." Yet even with universal awareness that CPM's do not measure communication value, the trend in all media is to forsake virtue and go with price. And for good reason. It is difficult to come up with a behavioral model, which explains how CPM relates to value, perhaps because Print and TV are priced and create value in very different ways.

In TV, CPM is tied more-or-less directly to audience size.[1] High ratings command high CPM's as with *ER, Friends* and *Frazier*. Low ratings cost less per-thousand as in the equally familiar case of broadcast vs. cable.

In Print, near the opposite can be true. Because of Print's ability to target consumers by qualities marketers value such as *income, occupation, interests and lifestyles*, smaller audiences when they are selective often carry higher CPM's.

Within both media there has been a continuing search for convincing measures of communication value to take planning beyond simple cost-per-thousand comparisons. Unfortunately in Print these have focused on soft measures of reader involvement, like *"one of my favorites",* or highly inferential measures of value-to-the-reader such as *average price paid*. Recent proposals for an "Involvement Index" have also argued that *reading time* is a good measure of involvement. However as Rebecca McPheters[2] and others have noted, reading time is not neutral with regard to editorial format. Magazines with more pages, or with more words and fewer pictures, will generate higher *reading times*, but not necessarily higher levels of involvement.

More problematic still have been the recent attempts to use ABC's newest statistic, *average price paid*, as a proxy for quality of reader involvement. Modern subscription marketing practices often obscure price through devices like installment billing, combination offers, free-issue introductions, or credit card billing. Even if one bought the questionable argument that consumers were fully aware of the price of each magazine subscription, one would be hard-pressed to prove any relationship to their readership or involvement with the magazine. To draw analogies from other media: if HBO raises its price by $5/month, do its viewers watch the shows more intently? If one buys a book at Barnes and Noble at a 25% discount, does one read the book less closely? The absence of a relationship between ABC's *average price paid* statistic and reader involvement can be demonstrated by examining the poor correlation with MRI's qualitative measures of involvement.

CORRELATION OF AVERAGE PRICE PAID WITH INVOLVEMENT

ABC Price Variables	APX	Avg Reading Minutes	One of My Favorites	Considerable Interest in Advertising
Net Price/Copy	0.270	0.084	-0.077	0.176
Net Annual Subscription Price	-0.346	-0.205	0.042	-0.354
One Year Subscription Price	-0.344	-0.172	0.064	-0.349

Source: ABC December 2001. MRI Spring 2002.

[1] Granted this is in part an inventory issue, since there are far more low than high ratings. But unless there is some greater perceived value, the demand for the higher ratings would not be there to support the higher cost-per-thousands.

Clearly, the ABC price paid variables bear no discernible relationship to any available measure of involvement or of reader value to the advertiser.

We believe the more useful universal model of media value relates directly to the *greater or lesser probability of the ad itself being seen by the consumer*.[2] Such a model called "Quads" has been developed for television. This paper suggests the Quads approach can provide a behavioral model of communication value for Print, and one that can be constructed directly from the MRI data we currently use.

Quads

TV Quads divide a program's audience into four groups by how often they watch the program, which is a measure of *viewer loyalty* — and by how long they stay tuned to the program, which is a measure of *viewer persistence.* Quads look like this:

NIELSEN QUADS

Quad 1	Loyal	Persistent
Quad 2	Loyal	Less Persistent
Quad 3	Less Loyal	Persistent
Quad 4	Less Loyal	Less Persistent

Source: Nielsen Quad Pilot Study. 1999

The important finding for advertisers is higher-rated programs (broadcast television) have on average *three times (302%)* as many loyal and persistent viewers per rating point as low-rated programs (cable). Here are the numbers for Adults 24-54:

% OF PROGRAM VIEWING BY QUAD

	Quad 1	Quad 2	Quad 3	Quad 4	Total
Broadcast	25.4	29.3	15.5	29.8	100
Cable	8.4	32.9	9.9	48.8	100
Bdcst : Cable	302%	--	--	61%	-

Source: Nielsen Program Quad Pilot Study. 1999

The stronger Quad results for broadcast compared to cable are not surprising. They relate to rating level, which correlates with longer duration viewing and also mitigates the effects of *dial switching*.[3]

[2] Rebecca McPheters. "Forget Average Price Paid – Does the Advertising Work?". McPheters and Company, New York. 2002.

[3] Almost all programs, regardless of audience size, have a core group of *loyal* and *involved* viewers. But there is always a large number of viewers tuning through, looking for something to watch. The Nielsen estimate ten years ago was 2,000,000 searching households during the average 30-seconds of Prime time. The number is now considerably larger. All programs have a pretty equal chance at getting these dial-switching viewers, because all channels have a single position on the dial. *But in equal numbers they become a larger part of low-rated program's audience.* It's like cooking, where a teaspoon of salt can spoil a cup, but leave little trace in a pot-full.

Quads offer supporting evidence for what advertisers have long suspected. Higher ratings may be more valuable because they bring more attentive viewers to their message.

Quads applied to Print

MRI data can yield comparable estimates of *Loyalty* (number of issues read of average four) and *Persistence* (percent pages exposed by an issue reader). Although the *higher-the-rating, higher-the-value* model doesn't fit Print, because of the greater importance of reader selectivity in magazine advertising.

But a Quad-type analysis for Print produces something even more useful for planning: *the average issue reach and frequency patterns of the average ad.* It can distinguish ad readers from issue readers, (thus providing an estimate of the reach of the advertising campaign, not the magazine schedule), and it can show the distribution of repeat exposures to the advertising carried in the issue (thus providing a better estimate of the probability that an ad will actually be seen by a reader.)

These are important dimensions of media value not reflected in a CPM.

The following analysis takes the MRI-reported *average pages exposed*, and cross-tabulates it by *frequency of reading* (both from the Spring 2002 MRI release). The examples used are a monthly upscale, dual-audience magazine and a weekly business magazine (Table 1 and 2).

Table 1. MAGAZINE A
Ad Readers Compared to Issue Readers
Monthly Upscale Dual-audience, MRI Spring 2002

Read of Avg. 4 issues	Read 0	Read 1	Read 2	Read 3	Read 4	Total	%
Issues Read (000)	224	1343	1072	513	1583	4,735	100%
% Distribution	5	28	23	11	33	100	--
% Pages exposed	48%	78%	119%	188%	238%	152%	--
Sees Avg. Ad (000)	108	1048	1072	513	1583	4324	91%

The 33% of the Monthly's issue readers who read fewer than two of four issues (5 + 28, highlighted) will see fewer than all of the ad pages in an issue (48%, 78%).[4] These are the less frequent readers.

The Sixty-seven percent of issue readers who read more than two of four issues (23 + 11 + 33) will open every page, some more than once. These are more regular readers.

We calculate ad reach and frequency by multiplying the *number of readers in each reading frequency group* by *percent of pages exposed* limited to a maximum of 100%.[5] This shows the ad's reach. The average reader of the monthly will not see nine percent of the ads in the average issue (100 – 91). Said another way,

[4] By definition, the average page is the same as the average ad page.
[5] Over 100%, *Percent Pages Exposed* generates frequency, not reach.

an ad in the average issue of this title will reach 91% of the issue's readers.[6] But what is lost in reach is more than gained in frequency. Here the average reader will turn to the ad 1.5 times.[7]

When we look at a different type of magazine, this time a Business Weekly, we see a very different pattern.

Table 2. MAGAZINE B
Ad Readers Compared to Issue Readers
Weekly Business Magazine. MRI Spring 2002

Read of Avg. 4 issues	Read 0	Read 1	Read 2	Read 3	Read 4	Total	%
Issues Read (000)	191	821	1020	457	1726	4215	100
% Distribution	5	19	24	11	41	100	-
% Pages exposed	48%	52%	87%	123%	119%	96%	-
Sees Avg. Ad (000)	92	427	887	457	1726	3589	85

Here 48% of the issue audience reads fewer than three of four issues (5 + 19 + 24, highlighted) and opens fewer than all of the ad pages in an issue (48%, 52% and 87%). These again are occasional readers.

Fifty-two percent of issue readers (11 + 41) will see every page, many more than once. These are frequent readers.

When we multiply readers in each reading frequency group by the percent of pages exposed, we find that the average reader of this Business Weekly will not see 15 percent of the ads in the average issue (100 – 85). In this case, the reach of the average ad is 15% less than the issue audience. And across all readers, the average ad will be opened-to slightly less than once, but frequent readers will have multiple exposures.

Ad page exposure data show a loss in reach and a gain in frequency compared to the current numbers we use because they are based on the page exposure not the issue reading. The adjustment will be different for each title, because the two measures that affect it vary by title. They are *the percent of pages seen,* a measure of reading intensity and *the size of each frequency-of-reading group,* a measure of loyalty.

Most titles are affected

This new measure, ad versus issue readership, will affect most titles. In 2000 (a typical year), MRI produced page exposure data for 188 books. One hundred sixty-five (88%) showed average page exposures below 1.0 in the *read-zero-of-four-issues group*, 132 (70%) in the *read-one-of-four group* and 75 (40%) in the *read-two-of-four-issues group* (Table 4).[8]

[6] The loss becomes greater when we move to magazine 4-issue reach calculations. The relationship between less frequent readers and fewer-ads-seen is critical here, because magazines can only build reach by adding less frequent readers.

[7] 1.52 divided by 0.91.

[8] The distribution of frequency-of-reading for a typical magazine is "U shaped." A large group reads four-of-four issues, a small group reads three-of-four, and a large group reads fewer than three-of-four. People reading fewer than three-of-four issues usually comprise more than half of all issue readers, and this is the group that will, for some titles, see fewer ads. More frequent issue readers will typically see the average ad more than once.

Table 4. Number of Titles Where Average Page exposures Falls below 1.0
Base: 188 Titles

Issues Read	0 of 4	1 of 4	2 of 4	3 of 4	4 of 4
Titles	165	132	75	20	2
%	88	70	40	11	1

MRI Spring 2000

Needed: An improved measure of APX.

Today there is renewed interest in measures of communication value to move Print planning beyond simple cost-per-thousand comparisons. As already noted, these efforts have tended to focus on soft measures of reader involvement, like *"one of my favorites",* or highly inferential and dubious measures of value-to-the-reader such as *average price paid*.

We believe the more useful behavioral model of media value is *Ad Exposure*, i.e., the *probability of the ad itself being seen by the consumer*. But the ad exposure measurement needs to be even-handed. Although many titles lose ad reach among less frequent readers, they and many others gain frequency through repeat ad exposures among more frequent readers. We believe these two dimensions provide a better value model than current CPM reader estimates, because ad reach and frequency focuses on the probability of the ad being seen.

Indeed, one could use the same calculations that we present here – multiplying Average Page Exposure by Average Issue Audience -- to estimate CPX – the cost per ad exposure. We submit that this may be a more useful and relevant basis for Print comparisons – one that captures the inherent variability in levels of involvement and the impact of that variability on the probability of an ad being seen.

The industry has been uncertain about how to value and apply ad page exposure data to Print planning. We believe that this is more discomfort with the page exposure measurement than the concept. We recommend that the Industry work towards incorporating a better measurement of page exposure in our current readership studies.