COUNTING CALORIES - ON THE NEED TO ADJUST ISSUE READERSHIP DATA

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We are just beginning to understand the Natural Laws of advertising. Don't panic. They could have been written by Weight-Watchers. The first law seems to be *don't pig-out.* Moderation makes advertising work better. Consumer markets show decreasing marginal response to high levels of advertising. Each additional exposure contributes a little less, so shoveling-it-in in bursts or flights is not cost-effective. Weight-Watchers tells the planner to save some donuts for tomorrow.

The second law is *don't skip dinner.* More continuous advertising brings increasing marginal response. Each week added to a campaign produces more than the week before. It's like compound interest. This means spreading the advertising across time is more cost-effective. Besides, not eating can give a brand a headache.

These two Laws teach the planner that more weeks of advertising are a better choice than heavier weight each week.

Third Law. *Eat A Balanced Diet.* Diminishing marginal response describes media as well as media weight, which explain the importance of media-mix.

Marketing-mix models often show sales response to a medium is inversely related to its share of advertising dollars. As more dollars are spent, be it in TV or Magazines, the sales response per-dollar for that medium tends to go down. So no matter how much more effective one medium is at the start, there comes a point where the next dollar should be spent somewhere else.

Finding this crossover point is the key to mixing media. It is not as simple as comparing the average cost-per-response of each medium. It requires comparing the incremental cost of the next response. When advertisers say that they are exploring other media options because TV is becoming less cost-effective, they are suggesting that the crossover point is occurring earlier.

Judging from what we already know about how media combine and target, magazines should have a feast. Adding Print to a TV schedule will increase reach because Print will duplicate TV less than TV will duplicate itself. (Again diminished marginal utility.) Data integration and fusion will let us use Print-survey product data to plan Television. This will confirm that magazines target users far better and are more cost-effective in building selective reach than TV.[1]

The two factors, diminished returns and targeting, will drive the inevitable restructuring of media spending. The total dominance of TV will give way to a more balanced mix of media. After 35 years of nose-to-the-kitchen-window, magazines will finally storm the banquet table.

What's wrong with this picture?

Simply said, it's not happening. There has not been a discernable movement from TV to Print. It's the fourth Weight-watcher's Law I haven't told you about that screws things up. *Count the calories honestly.* And that's what this paper is about.

Magazines Always Win

Prominently posted on the website of the Magazine Publishers of America, the headline reads, "Magazines Have the Advantage Over TV." This annual FCB report on whose is bigger, TV's or Magazine's, has been a thorn in the TV Networks' collective paw for years.[2] Magazines always win.

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[1] Even targeted television, like the Food Network, tends to have a flat audience profile because unplanned viewing by the large number of persons channel-surfing dilutes its very small core audience. This doesn't happen as much with targeted magazines, which are not as universally available and where many people to pay to read the issue.

[2] "Ratings Gap Between Popular Magazines & Primetime Shows Continues To Widen," Media Research Report, Spring 2001, FCB New York.

This year CBS finally challenged the fairness of the comparison. And CBS has a point. Many magazines do have bigger numbers than hit TV shows, but those magazine numbers exaggerate what the advertiser gets.

Network TV uses an average <u>minute</u> audience measurement. Magazines use an average <u>issue</u> audience measurement. CBS points out that the equivalent TV number is total audience, which runs 10% higher for half-hour programs and 20%-to-30% higher for longer duration "magazine-type" programs. [3] A recent telecast of *Survivor 2* had a total adult audience that was nearly triple its average audience. That would put it ahead of most reported magazine.

Vehicle Vs. Ad Exposure

Planners work with counts of persons seeing the TV program or reading the magazine issue (*vehicle exposure*). The more relevant number is persons seeing the average ad *(advertising exposure)*. Differences in the probability of a reader versus a viewer seeing the average ad make audience and CPM comparisons misleading. And I think that's what happens, TV versus print.

Television's *average-minute* exposure is a reasonable substitute for advertising exposure, because the average minute audience and the average commercial audience are similar in size. (Although a buyer might want to reduce it some for those persons who leave the room and don't log-out on the Peoplemeter.)

Print's *Average issue* audience is not a reasonable substitute for average ad audience, because not all claimed issue readers page through all of the ads in the issue.

In the past, big magazine numbers have not been an issue. Print isn't planned that way. The unit is insertions, not target points. More attention is paid to the flow chart than to the actual impression-weight delivered. The readership numbers are used more for selecting magazines, where absolute levels are less important than how well competing titles do.

But as we focus on media-mix and begin to plan Print by target points and reach, readership data will influence which media we use and how we use them, though not in the cosy way publishers assume. Print's big audiences and low CPM's will ultimately hurt the medium.

It's not that strange. The advertiser's goal is most often a sales response. If magazine readers (as measured) are less likely to be exposed to the average ad than TV viewers (as measured), then the lower CPM's produced by high readership estimates are counter-productive. [4] Advertisers will simply accept the illusion of more weight for less money and run inadequate magazine schedules.

Then when the choice is "TV or Print?" Magazines will lose based on brand experience. Deceptively low CPM's will have encouraged brands to run ineffective print plans, which will have produced little response. And that's what advertisers seem to be finding. The following note is from a media manager at one of the world's largest advertisers.

"Given the cost-efficiency of Print vs. TV, I had hoped Print would deliver sales more cost efficiently, but that doesn't seem the case for most brands. Seems like fewer readers are reading the ads than the numbers suggest." [5]

Sounds a lot like a calorie-counting problem. I think CBS should just keep quiet. The bumbling way agencies plan Print is what keeps television looking so good.

Total Audience Vs. Average Audience

We find clear evidence of total audience inflation in the magazine readership data when we look at average pages exposed, cross-tabulated by frequency of reading (both from the Spring 2000 MRI release). My example is a large circulation, high RPC, weekly magazine with an audience larger than any TV show (Table 1).

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[3] See "Why Some Ratings Are Higher: Comparing Total Audience and Average Audience." SRI, January 1999, A SMART paper. The print equivalent for program length is number of pages, supporting the common-sense view that ads in an issue with many pages have a lower probability of being exposed than ads in a thin issue. See W.R. Simmons for This Week and Parade, "A Study of Ad Retention in Five Magazines", 1965.

[4] The FCB report shows key demo CPM's of $11.00 for magazines $27 for television.

[5] Private communication.

Table 1. Average Issue Reach
Ad Readers Compared to Issue Readers
Large Circulation, High RPC Weekly, MRI Spring 2000

Read of Avg. 4 issues	Read 0	Read 1	Read 2	Read 3	Read 4	Total	%
Issues Read (000)	1,452	7,589	8,936	4,216	12,274	34,467	100
% Distribution	4	22	26	12	36	100	
% Pages exposed	53%	73%	82%	106%	139%	104%	
See specific Ad (000)	770	5,540	7,328	4,216	12,274	30,128	87

Fifty-two percent of issue readers (4 + 22 + 26) will see fewer than all of the pages in an issue (53%, 73%, 82%).[6] These are the less frequent readers. Forty-eight percent of issue readers (12 + 36) will see every page, some more than once. These are regular readers. When we multiply readers in each reading frequency group by the percent of pages exposed, we find that the average reader will <u>not</u> see 13 percent of the ads (100 – 87). In effect, the advertising audience is 13% smaller than the issue audience.

The problem gets much bigger when we move to magazine reach calculations. The relationship between less-frequent-readers and fewer-ads-seen is critical here, because magazines can <u>only</u> build reach by adding less frequent readers.[7]

Ad Reach Versus issue Reach

The next analysis calculates the difference between ad and issue reach as reach builds over four issues. It's similar to the calculation used to produce average issue audience from a frequency of reading scale. In that transformation the one-of-fours weight-in at 25%, because the probability of that group reading the average issue is 0.25, the two-of-fours weight-in at 0.50, the three-of-fours at 0.75 and the four-of-fours at 1.00.[8]

The four-issue reach calculation inverts the process. Over four issues the people reading *one-in-four issues* grows four times, the *read-two-of-four-issues* group doubles, the *read-three-of-four* grows 1.3 times and the *read-four-of-four* doesn't grow at all (Table 2).[9]

Table 2. 4-Issue Reach
By Frequency of Reading
Large Circulation, High RPC Weekly, Author's Calculations*

Read of Avg. 4 Issues	0 of 4	1 of 4	2 of 4	3 of 4	4 of 4	Total
Avg. Issue readers (000)	1,452	7,589	8,936	4,216	12,274	34,467
4 Issue Reach (000)	1,452	30,356	17,872	5,621	12,274	67,575
Increment (000)	0	22,767	8,936	1,405	0	33,108
Percent	0	69	27	4	0	100

*Based on MRI Spring 2000 data

Again looking at the same high-circulation, high RPC weekly, the four-issue cumulative audience is more than double the average issue audience (67,575,000 compared to 34,467,000), but 96 percent of the readers added (69 and 27) are less frequent readers (one-of-four and two-of-four issues), who will not see every ad.

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[6] This uses the MRI page exposure score measurement.

[7] The counterpart in TV is cable, which builds reach by attracting short duration viewers. But that is another story.

[8] The direct probability translation of frequency-of-reading to average issue audience differs slightly from empirical data. See Cheryl Brink and David Napior, <u>Calibration of Frequency of Reading Scales</u>, Worldwide Readership Symposium 8, Vancouver, 1997, pages 73-78.

[9] This transformation is somewhat different from the formula MRI uses to estimate four-issue reach from frequency of reading because of how the zero-of-four cell is handled. MRI assigns it an empirical weight. For simplicity I have chosen to freeze that cell, which <u>reduces</u> the difference between issue and ad reach.

Table 3 shows what this addition of less frequent readers does to ad reach. The average new reader will miss 24% of the ads carried in the issues. [10]

Table 3. 4-Issue Reach Build
Ad Readers Compared to Issue Readers
Large Circulation, High RPC Weekly, Author's Calculations*

Issues Read	0 of 4	1 of 4	2 of 4	3 of 4	4 of 4	Total	
Readers Added (000)	0	22,767	8,936	1,405	0	33,108	100
% Pages Exposed	53%	73%	82%	106%	139%	104%	
See Specific Ad (000)	-	16,620	7,328	1,405	-	25,353	76

  * Based on MRI Spring 2000 data

The same thing happens when magazines are combined to add reach. The unduplicated readers – the ones that build reach – again will be the less frequent readers who tend to read less than the full issue.

Most Titles are Affected

This is not an occasional problem limited to quick-read magazines. MRI produced page exposure data for 188 titles. One hundred sixty-five (88%) showed average page exposures <u>below</u> 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).

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

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 sees fewer ads.

All of these calculations are not an argument against recent reading. In this competitive world, a medium will use the technique that most fully counts its audience. But it's then up to the intelligent buyer to discount that audience to realistic levels when it turns out to be too inclusive. That's the job of media research. This paper suggests we can adjust the readership data to provide a better estimate of ad reach. The *pages-exposed-by-frequency-of-reading-correction* is a simple way of doing this using data from the readership survey itself.

The size of the reach adjustment will be different for each title, because the two variables that affect it differ by title. They are *the percent of pages seen, by frequency of reading,* a measure of reading intensity and *the size of each frequency-of-reading group,* a measure of loyalty.

Certainly magazine issues provide repeat-exposure opportunities for ads, but the key planning metric today is reach, not gross impressions. The evidence shows readership data badly exaggerates ad reach.

We need to be more careful counting calories.

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[10] Over four issues the *campaign's* advertising reach to issue reach ratio improves slightly, because the two-of-four issue group gets to read a second issue carrying the campaign.