

Exploring the Link between Share of Media Coverage and Business Outcomes

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ABSTRACT

Building upon a foundation established in "**Exploring the Link between Volume of Media Coverage and Business Outcomes**," this paper looks at the effect of competitive share of media coverage volume on business results. Through four case

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studies on a non-profit hospital, a pharmaceutical brand, a B2B service and a package goods manufacturer, the authors make the case for using competitive media analysis to see stronger correlations to results.

INTRODUCTION

In our last paper, **"Exploring the Link between Volume of Media Coverage and Business Outcomes"**¹, we set out to explore whether or not media coverage makes any real difference to business results; and, if so, what role volume plays. While most public relations practitioners would intuitively agree that of course, it must – or it is unlikely this \$5.4 billion industry² would exist – few if any studies have actually been published on the topic within industry literature.

So, we explored the topic through three case studies that looked at volume of coverage alone; at the effect of positive versus negative volume; and, at the effect of volume with appropriate versus non-appropriate messages. In all three cases, we saw that volume played a significant role in the effectiveness of public relations programs³:

- Volume Alone – A straightforward, neutral, non-competitive campaign comprised of 47,000 clips that stressed the importance of mammograms drove patients to doctors' offices for medical procedures at a Pearson Product Moment Coefficient⁴ correlation of $r = .89$. Mammogram procedures increased as the volume of press went up, and decreased as it went down.
- Tonality-Refined Volume – A damning news release that claimed cough medicines were ineffective caused sales to drop at unprecedented rates, and to rebound when the bad news eased up. Thus, negative coverage volume appears to correlate inversely to desired outcomes, while positive news correlates directly.
- Message-Refined Volume – A study from Porter Novelli⁵ illustrated how neutral-to-positive media coverage that simply mentions a brand, but does not deliver meaningful or accurate messages about that brand, had only

¹ Published by the Institute for Public Relations Commission on Public Relations Measurement and Evaluation, 2006; www.instituteforpr.org.

² Council of Public Relations Firms 2002 Industry Fact Sheet, www.prfirms.org.

³ "Public Relations Effectiveness" is defined in as *"the degree to which the outcome of a public relations program is consonant with the overall objectives of the program as judged by some measure of causation* in "The Dictionary for Public Relations Measurement and Research" by Dr. Don Stacks of the University of Miami, available through the Institute for Public Relations, www.instituteforpr.org.

⁴ ($r = .X$) - The Pearson Product Moment Coefficient is a measure of association that describes the direction and strength of a linear relationship between two variables; it is usually measured at the interval or ratio data level. Definition is from "The Dictionary for Public Relations Measurement and Research" (as above). Pearson Correlations were preferred by the authors of these studies, since the qualitative data in social science research is inherently less precise.

⁵ Study was entitled PProof© - Porter Novelli Key Message Assessment & Optimization" for Watson Pharma, Inc. on OXYTROL, with VMS.

modest impact ($r=.51$), whereas coverage that included at least one key message that resounded with the target audience saw correlations soar to $r=.97$.

So, while these cases fall short of offering absolute proof of cause between media coverage volume and business results, they do offer a preponderance of evidence demonstrating the existence of a very real relationship between these two variables. Furthermore, these findings add several insights to the industry's body of knowledge on how to seek coverage volume most effectively. For example, clip tonnage alone may be sufficient to drive outcomes for simple, non-controversial campaigns such as the importance of mammograms, but tone- and message-refined volume is needed for real-world situations where negative coverage will damage desired outcomes, and even positive volume without a compelling message may well fall flat.

While the studies above are good examples of why volume is important, there are certainly other factors and combinations that need to be clarified by further research. For example, is tonnage the biggest driver here, or is it "relative tonnage" in a sea of competing messages? Is it tone? Or, is it message? What is the optimal combination of the three? A study executed by David Michaelson and Toni Griffin in their paper, "A New Model for Media Content Analysis,"⁶ suggests that message *accuracy* is another critical factor. Additional work must be done to test various combinations, to find that which works most optimally.

NEXT STEPS

But working from the foundation that has been laid in our first paper – that volume matters, and all the more so if it is tonality- and message-qualified – a next logical step would be to consider the more real-world aspect of *competitive* media coverage, or *relative volume* among key players. In other words, is positive, well-messaged tonnage itself the driver, or is it quality-refined *tonnage in comparison to competing volume* that helps drive business outcomes?

Certainly, the concept of Share of Voice in paid media has long been accepted in advertising and marketing circles as a key driver of business results, and will be discussed in more detail shortly.

So, if we know from our first paper that correlations between coverage volume and business outcomes exists, can we learn even more about this link by looking at coverage volume through a competitive filter? The studies that follow suggest this is indeed the case.

⁶ "A New Model for Media Content Analysis," by David Michaelson of David Michaelson & Company, LLC, and Toni L. Griffin of MetLife, 2005; available at www.instituteforpr.org.

DEFINITIONS

The concept of relative share of unpaid media is currently known as **"Share of Coverage,"** and is defined in "The Dictionary for Public Relations Measurement and Research" as:

*"A measurement of total earned, or non-paid, media coverage in print, broadcast and Internet channels devoted to a particular industry or topic as analyzed to determine what percent of outputs (clip counts, impressions, media values, etc.) is devoted to a client or product."*⁷

This definition is helpful in setting out an overall competitive landscape, but is problematic because it suggests a focus on coverage *quantity* (i.e. clip counts, impressions, etc.) rather than *quality* (tone, message, prominence, etc.). Since we have seen from our last paper that qualitative factors are crucial in linking media coverage volume to outcomes, this definition will not be sufficient.

We thus propose a new definition that will take into account both quantitative and qualitative factors in competitive media coverage, called **"Share of Discussion (SoD)."** It is defined simply as:

*"The **quantity and quality** of an organization's non-paid media compared with that of its competitors."*⁸

The case studies that follow utilize this new term, with quantity representing coverage volume and quality representing tone and other subjective factors. In each study, competitive coverage for all players was evaluated in exactly the same way, to equalize the effects of the qualitative factors. A simple do-it-yourself formula for calculating Share of Discussion is also included in Appendix A of this paper.

THE QUESTION TO BE EXPLORED

So, the question this paper will explore is: **What effect does Share of Discussion have on the effectiveness of a public relations campaign?** If several competitors have relatively high-volume, neutral-to-positive, on-message media coverage, does *share* of that coverage make any real difference to business results?

The case studies that follow are among several hundred executed over the past four years by a leading media research firm⁹ that involved well in excess of 10 million news articles, and that compared quality-refined competitive client media coverage with business outcomes¹⁰. The studies share the following characteristics:

⁷ As defined by "The Dictionary for Public Relations Measurement and Research," as above.

⁸ "Share of Discussion" was identified and defined by Gary Getto, EVP of VMS Professional Services. The term is now in the public domain.

⁹ PRtrak actually pioneered this research in the late nineties. It continues today under the auspices of VMS, which purchased PRtrak in September of 2005.

¹⁰ Outcomes are defined in "The Dictionary for Public Relations Measurement and Research" as "quantifiable changes in awareness, knowledge, attitude, opinion and behavior levels that occur as the result of a PR program or campaign." In this paper, "business outcomes" are cited

- All involve earned media that was purposely placed by PR professionals, as well as over-the-transom news;
- All involve major campaigns and large numbers of clips;
- All organizations are national or regional, as opposed to local;
- All involve media coverage that precedes business results;
- All control for paid media.

Before presenting the case studies, let's take a quick look at the origination of the "share" concept in paid media.

BRIEF HISTORY OF SHARE OF VOICE IN PAID MEDIA

The basic concept of out-shouting the competition has been around for decades in the marketing and advertising worlds, though a literature search did not yield an exact start date.

"Share of Voice" (SoV) is most commonly defined as a percent of dollars spent, with the theory being: "knowing that our brand spent \$30 million last year out of a total category spending of \$150 million (SoV = 20%) tells us a great deal about the brand's relative position in the marketplace and in the minds of our consumers."¹¹

Those who outspend their competition by a big enough margin over a long enough period create disequilibrium within an industry, and win market share.¹² Several studies have suggested SoV may even outperform the old advertising favorite - frequency. For example, in one study, a 70% SoV at only one exposure produced a greater response than a 30% SoV at three exposures.¹³

Certainly, simply outspending the competition is an old-fashioned concept, and other strategic elements such as quality of creative and appropriateness of message must be present if spending is to produce the desired results.¹⁴ However, assuming these factors are in place, conventional advertising/marketing wisdom clearly warns that companies that lose sight of the connection between SoV and market share by cutting budgets may temporarily improve profits, but eventually lose the competition.

So, if share of paid media (SoV) is related to market share, is it not possible that share of quality-refined, non-paid media (Share of Discussion) might also relate in a similar way?

such as behavior changes resulting in an increase or decrease of sales, sales-closing ratios, prescription volumes or customer preference.

¹¹ "Advertising Media Planning" by Jack Z. Sissors and Roger B. Baron, 6th edition, page 285. McGraw Hill, 2002.

¹² *Harvard Business Review*, "Ad Spending: Growing Market Share," by Jack C. Schroer, January 1990/February 1990.

¹³ "Can share of voice replace effective frequency," by Larry D. Kelley, *Marketing & Media Decisions*, October 1985, v20, p98.

¹⁴ Jim MacNamara, *Media Monitors* (Australia)

RECAP OF MEDIA COVERAGE VOLUME METRICS

In “**Exploring the Link between Volume of Media Coverage and Business Outcomes,**” a summary of the most commonly used media coverage analysis metrics is supplied, along with their various strengths and weaknesses.¹⁵ Metrics include clip counts, audience impressions, media values, qualified-volume metrics (i.e. tonality, prominence, target-audience, key message, message accuracy and context, size, duration and dominance), and media indices that are comprised of both qualitative and quantitative factors.

In the case studies that follow, “Share of Discussion” is represented by each competitor’s share of quality-refined clip counts, media values or a media index¹⁶ comprised of the cost of media space/time refined by tone and prominence. (A do-it-yourself formula is included in Appendix A that approximates the most important aspects of this formula.)

It is worth mentioning here that research has shown that the information embedded in market-driven media space/time costs (media values) can improve correlations between media coverage and business outcomes by approximately 25% over clip counts and 12% over audience impressions. A summary of this research is included in Appendix B.

METHODOLOGY

The case studies that follow were executed through an advanced linguistics, artificial intelligence tool with human-like text analysis capabilities. The goal of these case studies, along with almost 200 others, was to determine how changes in media coverage correlated to changes in outcomes – primarily in competitive situations.

Print, broadcast and Internet articles were imported into the artificial-intelligence system from LexisNexis, VMS and/or other electronic sources. *Only the portions of each clip that were actually ‘owned’ by a client organization were counted for credit*¹⁷ and scored qualitatively and quantitatively. By “owned,” we mean the portions of each story that were obviously generated by, or focused on, a particular company. If a story contains several competitors, credit is split among them according to the space or time they occupy. If a company has a small passing mention, it is credited with only a few column inches or a paragraph, depending upon how the story lays out.

¹⁵ Available at www.instituteforpr.org.

¹⁶ Several of the studies utilize VMS’ Media Prominence Index, which is comprised of media costs refined by tone and prominence).

¹⁷ For a better understanding of this process, see “Measuring Media Coverage Effectively,” a white paper available at www.brainshark.com/survdata/PRIMER.

Business outcomes included customer preference survey results, prescription volumes, product sales and sales-closing-ratios with Pearson Product Moment Coefficient (r)¹⁸ correlations linking back to Share of Discussion scores.

CASE STUDIES

Study One: Comparing Correlations With and Without Share of Discussion

This first study vividly contrasts the difference between correlating only your own organization's media coverage against business outcomes versus doing so through competitive share.

The study, for a major regional medical center in North Carolina, looked at the coverage of more than ten hospitals over a three-year timeline, and included drill-downs to service levels such as cancer and cardiology. The metric used was a media index¹⁹ that accounted for the cost of media space/time refined by tone and prominence. The "outcome" measure against which coverage was compared was the client's favorability levels in its ongoing Consumer Preference Survey.

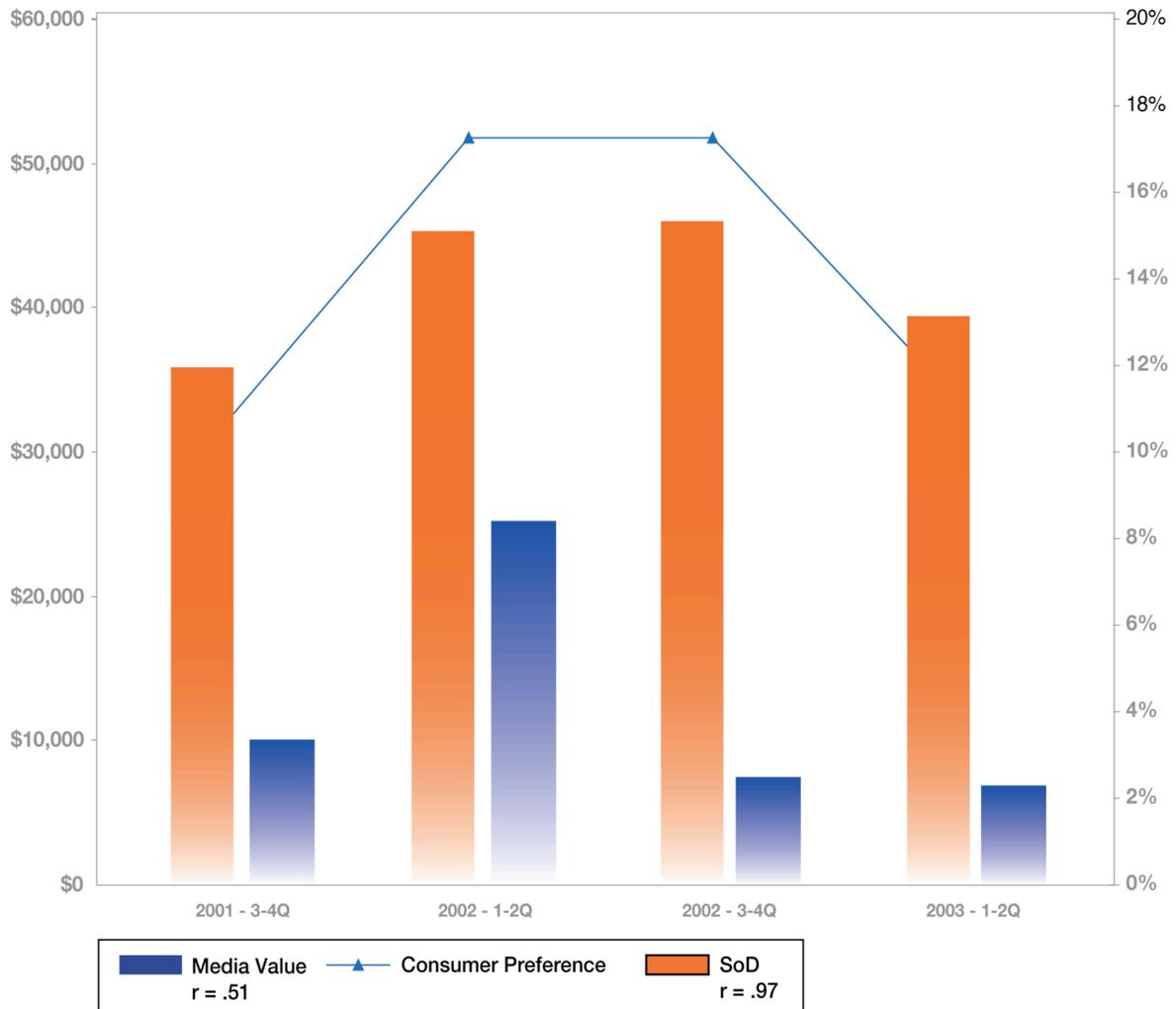
The chart below illustrates the correlations between the client's own media coverage (red bars) and its Consumer Preference Survey scores (thin blue line) at a modest $r=.51$. In contrast, correlations soar to $r=.97$ when Share of Discussion (orange bars) is correlated with preference.

As stated earlier, this and several other cases featured in this paper are only a sampling of almost 200 studies conducted to date with similar results.

¹⁸ The Pearson Product Moment Coefficient is a measure of association that describes the direction and strength of a linear relationship between two variables; it is usually measured at the interval or ratio data level. Definition is from "The Dictionary for Public Relations Measurement and Research" by Dr. Don Stacks of the University of Miami, available through the Institute for Public Relations at www.instituteforpr.org. Pearson Correlations were preferred by the authors of these studies since the qualitative data in social science research is inherently less precise.

¹⁹ VMS' Media Prominence Index utilizes Media Costs refined by tone and prominence (of client in article). Costs are affixed to only the portions of each article owned by each competitor.

Hospital Cancer Center With and Without SoD Vs. Consumer Preference



Studies Two Through Four: Share of Discussion in Practice

Pharmaceuticals Case

This study focuses on a hormone-replacement therapy product manufactured by a major national pharmaceutical company. After strong growth in prescription volume over several years, sales did not meet projected increases, with a shortfall of more than a billion dollars against goal. All elements of the marketing mix (including paid media) had remained stable, except for news coverage – which had actually tripled. Further, editorial discussion for the entire product category had seen strong growth.

A Share of Discussion study was commissioned to compare competitive media coverage for this product to its volume of new prescriptions. The metric used was

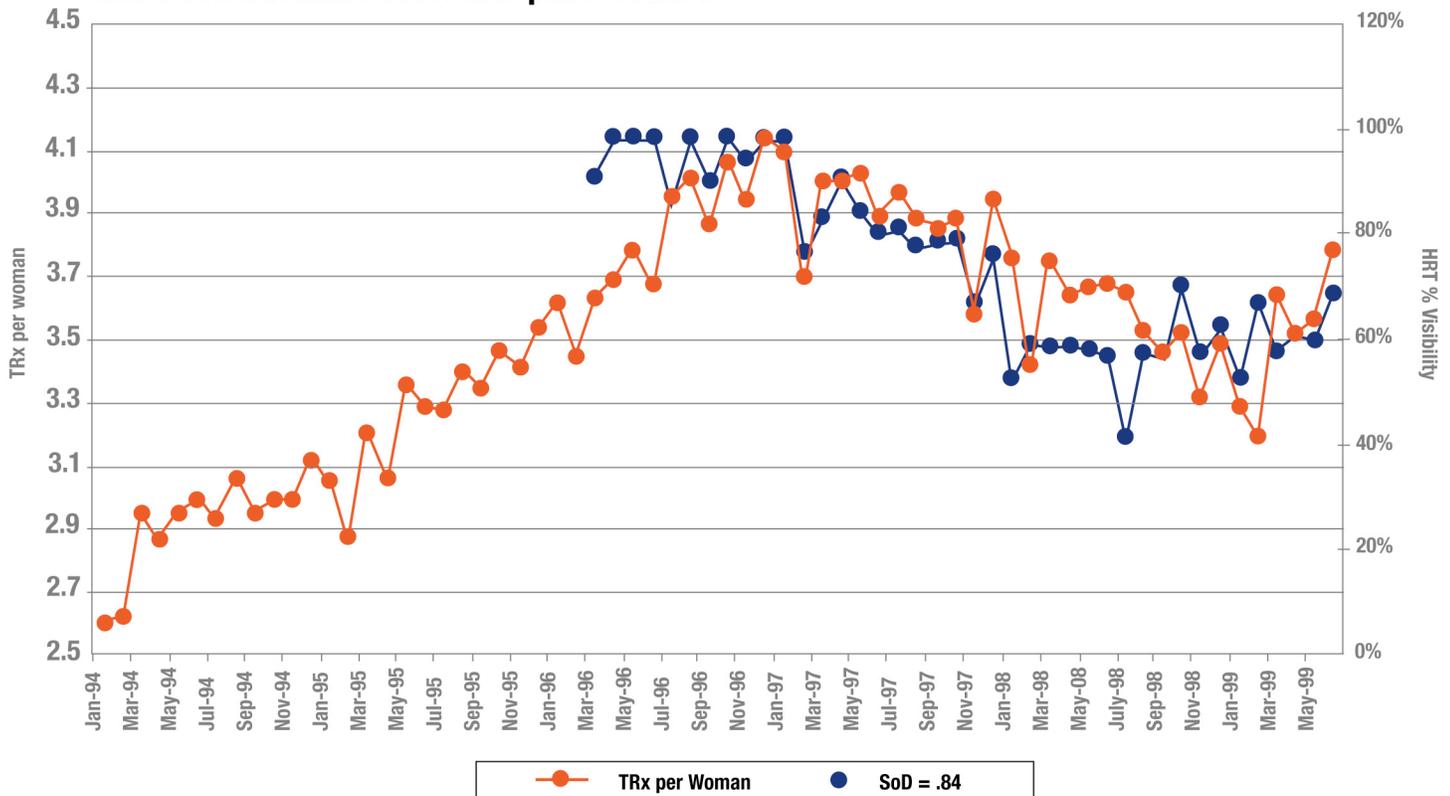
tone-qualified clip counts, which meant negative stories were subtracted from those scored neutral and/or positive. Several hundred thousand clips were analyzed.

The study discovered that per-capita prescriptions declined (the red line in the graph below) just as the client's Share of Discussion began to decline (blue line below) at a correlation of $r=.84$. The study further revealed that the entire product category had grown by a factor of five due to the introduction of herbal supplements, which would not have been evident without a look at competitive coverage. So, despite a tripling of publicity efforts, this client was not keeping pace in the category.

Note that discussion in this case preceded changes in sales by approximately 11 weeks. Nearly all Share of Discussion studies have shown that coverage precedes changes in sales by the usual product sales cycle. For example, in retail, discussion might precede sales by as little as a few days, whereas in computer hardware, it may be 26 weeks or longer.

These results have held true for this client for more than four years, even when the category came under fire from negative clinical results. Share of Discussion predicted a nearly 50% decline in prescription volume, which was within two percentage points of actuality.

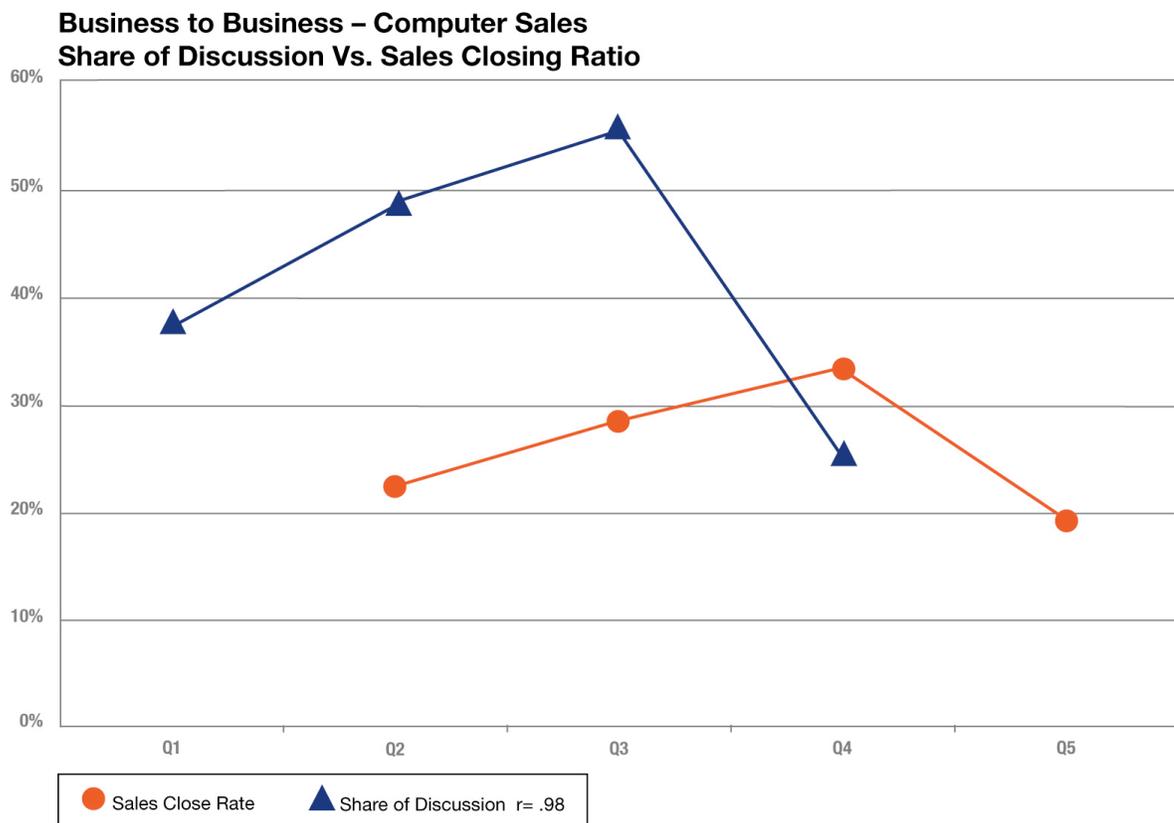
Hormone Replacement Therapy Share of Discussion Vs. Prescription Volume



Business-to-Business Case

A manufacturer of business-to-business computer software, analytics and other services competed with two other firms in this national vertical industry segment. Since very little paid advertising was utilized by this firm, it was a perfect guinea pig to further test Share of Discussion. The metric used was again tonality-qualified clip counts, and the outcome against which results would be measured was the sales closing ratio of the firm's sales team.

As the chart below illustrates, Share of Discussion (the blue line) preceded the sales closing ratio (red line) by approximately one calendar quarter at a very high correlation of $r = .98$. Thus, the company's sales force was more likely to close sales in face-to-face meetings when its competitive share of net positive competitive media coverage increased and less likely to do so when share decreased.



Packaged Goods

A major cookie and cracker packaged goods company missed its sales forecast by 9.5%, which meant millions of dollars had been wasted in production overcapacity. The sophisticated market mix model that had been used for years (which modeled sales based on prescribed amounts of advertising, promotion, product facings, sales efforts, pricing and other factors) simply did not work as it had in the past.

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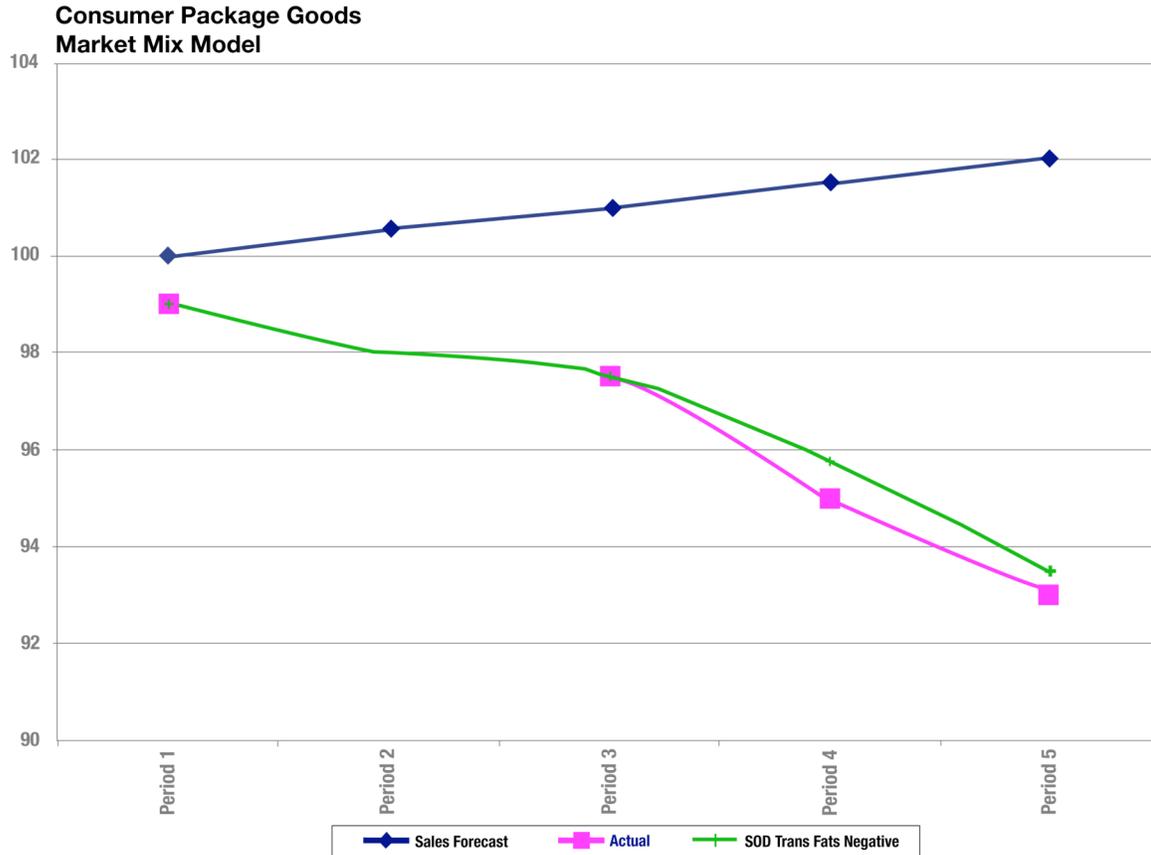
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One key independent variable not included in the model was unpaid media, so a Share of Discussion study was commissioned to explore its possible effect on sales. In fact, the study ended up showing that factoring in the brand's share of unpaid media would have solved the forecasting problem. The metric used to measure media coverage in this study was the same used in the hospital study above, comprised of the cost of media space/time, refined by tone and prominence.²⁰ The outcome metric against which results were measured was sales.

On the graph below, the blue line represents the brand's revenue forecast *before* the addition of Share of Discussion, and the pink line shows actual sales. The green line shows how accurately the downturn in sales could have been predicted had the model utilized Share of Discussion scores, since media coverage was dominated by negative messages about trans-fatty acids. This company now utilizes Share of Discussion as a permanent addition to its model.



²⁰ VMS' Media Prominence Index utilizes media costs refined by tone and prominence (of client in article).

INITIAL CONCLUSIONS

These cases support the hypothesis that competitive share of quality-refined media coverage (Share of Discussion) has a strong link to business outcomes; and, in most cases, this link is stronger than seen in non-competitive comparisons.

However, this effort is only a beginning, since proof of cause would require experimental research in a real-world environment beyond what has already been implemented. The authors of this paper recognize that many factors contribute to the success of any given business, including economic, environmental, market share, reputation, relationship, marketing and other communications and non-communications variables.

It is also important to mention here that of the 200+ case studies executed to date, a handful did not yield strong correlations between Share of Discussion and business outcomes because they had extremely low story volumes in comparison to paid media. A recent article in the *Harvard Business Review*²¹ underscores the need to achieve enough coverage to reach a basic “awareness threshold” to reap the benefits of competitive share. “This volume, which must be continual, varies somewhat from company to company depending on industry and country, but not on company size.”

Regardless of the caveats above, the initial evidence for the link between Share of Discussion and business outcomes remains compelling enough to warrant deeper research. A comprehensive study is now being designed to test whether or not the messages sent through the media in a given Share of Discussion study are actually the ones heard and understood by the target audience (outtakes²²) – and are thus the factors affecting the outcomes. This primary research study will be executed, and results shared, within 2007.

IMPLICATIONS AND DISCUSSION

Congruent with “**Exploring the Link between Volume of Media Coverage and Business Outcomes,**” media coverage volume matters, and especially tone-qualified volume refined through competitive analysis. Implications for the practice of public relations include:

1. **Plan goals, objectives and tactics that focus on areas in which one’s competition is weak.** For example, a hospital might learn that its major competitor has a dominant Share of Discussion in cardiology, but is weak in cancer. Depending, of course, on hospital service priorities, it may make

²¹ “Reputation and its Risks” by Robert G. Eccles, Scott C. Newquist and Roland Schatz, *Harvard Business Review*, February 2007, pages 104 – 114.

²² Outtake – a measurement of what audiences have understood and/or heeded and/or responded to a communication product’s call to seek further information from PR messages prior to measuring an outcome. From “The Dictionary for Public Relations Measurement and Research” by Dr. Don Stacks of the University of Miami, available through the Institute for Public Relations, www.instituteforpr.org.

strategic sense to run a PR campaign aimed at grabbing the dominant share of cancer discussion, and wait for a better time to address cardiology.

2. **Focus on positive tone and messages that resound.** A company can out-shout the competition all it wants, but if its message is off-strategy, or the tonality is negative, little will be accomplished.
3. **Keep up the pressure.** If Share of Discussion truly impacts business outcomes, as the evidence suggests, PR pros need to continually reinvent ways to secure media exposure to maintain share. This is a great argument for steady, on-going campaigns as opposed to short projects and disjointed, seat-of-the-pants messaging.
4. **Set Share of Discussion goals against outcomes.** Share of Discussion analysis can provide a tool to establish editorial placement goals that relate to potential outcomes. For example, if we can show that a 10% increase in Share of Discussion correlates to a \$500,000 increase in sales, we can work backwards to determine the level of additional share needed to help achieve a given goal.

Implications for PR measurement and evaluation would include:

1. **Don't measure in isolation.** For organizations in a competitive environment, measuring only that organization's media coverage in isolation may not yield meaningful correlations to outcomes. Rather, competitive analysis through quality-refined volume scoring will almost always provide improved correlations.
2. **Use precise measures and data.** To best see correlations, media cost data refined by qualitative measures appears to be the tightest metric, as compared with audience impressions and story counts. However, it is critical that only the portions of each story that is *owned* by each competitor is counted for credit, and that *conservative, negotiated rates* are used to the extent possible. Inflated scoring only obscures correlations. If using impressions instead of costs, do not use any type of multiplier.
3. **Ongoing measurement.** Share of Discussion measurement should be an ongoing system that enables one to benchmark and watch progress in very specific competitive areas. These studies always contain surprises, since most clients think they are stronger in key areas than they really are. It also becomes evident very quickly that undercutting the public relations function can be dangerous indeed.

It is also very easy to think your organization is doing worse than it really is, since negative stories tend to bubble up to the surface quickly, and positive ones are sometimes overlooked. As illustrated in the pharmaceutical case study, it is very difficult to truly understand how a firm is doing without measuring against the competition.

Appendix A: Calculating Share of Discussion

Here is a simplified method for calculating Share of Discussion, and for correlating against outcome metrics.

1. Capture media coverage of the organization and its competitors.
2. Calculate media values or audience impressions for all stories. (If using values, be sure to only count the portions of each story actually owned by each competitor. For guidance in doing that, see footnote below²³.)
3. Measure the tone of each story. Then, add together all neutral and positive media values or impressions, and subtract all negative, to get **net favorable** results.
4. Divide each company's net favorable results by the total of all competitors to obtain Share of Discussion.
5. Plot Share of Discussion at monthly, quarterly or annual intervals on graph paper or in a software program, and plot sales, customer preference, or other outcome measures at the same time intervals.
6. The lines should trend together with adjustments for sales cycle time lags. (For example, in pharmaceuticals, the time-lag might be three months; in computer sales, perhaps six months.) Exact correlations can also be generated in a statistical program.
7. Finally, track results over time.

The example below illustrates how firm B had the highest total media value, but firm A had the highest net positive media value, and thus owned Share of Discussion.

Example: Share of Discussion	Total Media Value	Negative Media Value	Net Positive Media Value	Share of Discussion
Firm A	\$100,000	(\$40,000)	\$60,000	44.4%
Firm B	\$150,000	(\$100,000)	\$50,000	37.0%
Firm C	\$50,000	(\$25,000)	\$25,000	18.5%
TOTALS	\$300,000	(\$165,000)	\$135,000	100%

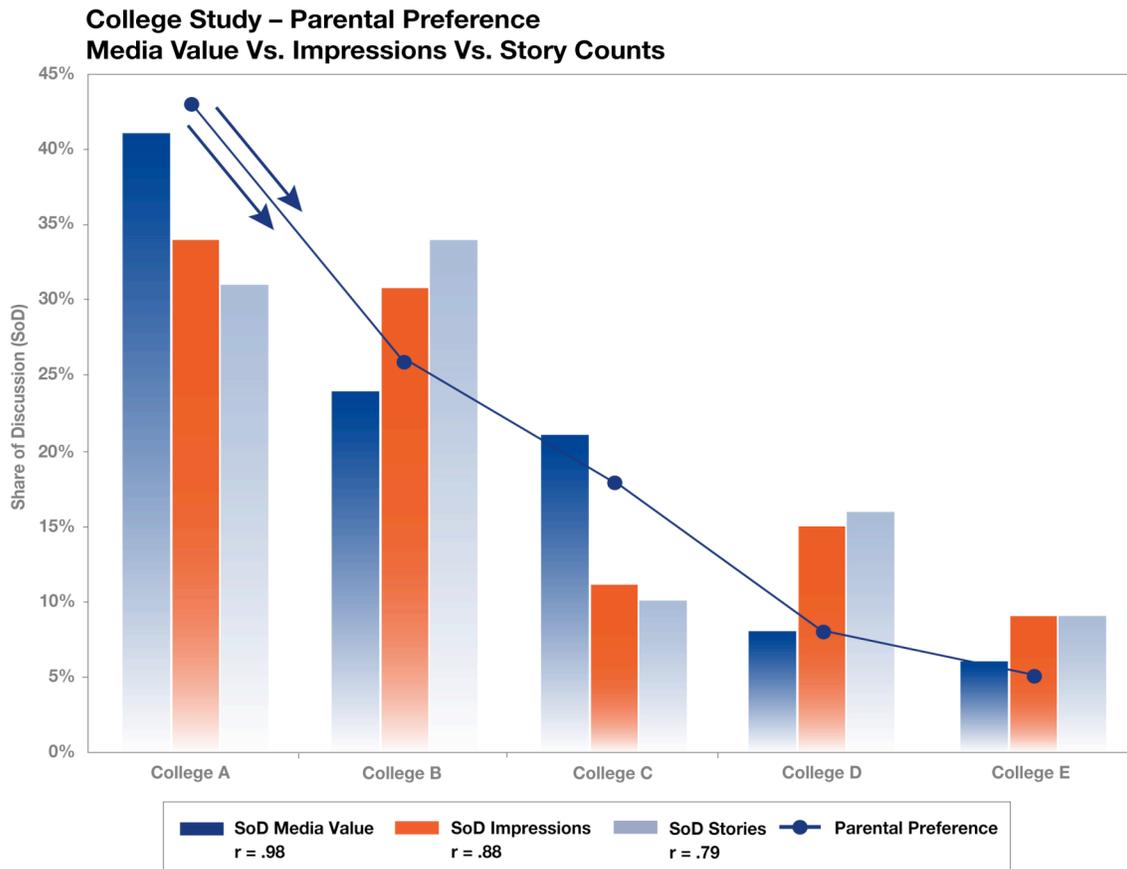
²³ Obtain a free copy of "Measuring Media Coverage Effectively," a white paper by Angela Jeffrey, APR available for download at: www.brainshark.com/survdata/PRIMER.

Appendix B: Comparing Media Value, Audience Impressions & Article Counts with Outcomes

In September 2003, 3,700 articles were analyzed by a major media research firm²⁴ for five northeast colleges, calculating Share of Discussion for each. Share of Discussion was calculated in three different ways, using story counts, audience impressions and media values. These scores were then correlated to results of a parental preference survey for these five colleges.

In all cases, Share of Discussion was based on tonality-qualified story counts, audience impressions and media values. Negative scores were subtracted from positive-plus-neutral to obtain net positive.

For example, if college A had a net positive score of 370 stories out of the 3,700 total stories, it had a Share of Discussion based on story counts of 10%.



²⁴ PRtrak, which is now owned by VMS

Similarly, if total Impressions were 185 million, and college A had net positive Impressions of 18,500,000, it would have a Share of Discussion based on impressions of 10%.

Similar calculations were done for media values, though only the portion of each story that was truly "owned" by each college was counted for credit. All impressions and media values were calculated using a database comprised of open-rates for print, and negotiated rates for broadcast and Internet.²⁵

As you can see in the chart above, the results clearly showed that media coverage correlated highly with parental preference. The higher the Share of Discussion, the higher the preference. However, there were clear differences between the metrics:

- Share of Discussion based on media values (dark blue bars) provided the best correlation: $r=.99$
- Share of Discussion based on impressions (red bars) was next best: $r=.88$
- Share of Discussion based on story counts (light blue bars) was least effective: $r=.79$

In this study, correlations based on Share of Discussion using media values are 12.4% clearer than when they are based on impressions, and 25.6% clearer than when based on story counts.

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²⁵ VMS database, which is comprised of audited data from Arbitron, Nielsen, SRDS, SQAD, comScore Media Metrix, BurrellesLuce, PRtrak and American Newspaper Representatives.