DESPERATELY SEEKING ROI

A framework for marketing optimisation and accountability

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The importance of accurately assessing the impact of marketing, advertising, and communications efforts is evident to today's marketer. Much is riding on the proper evaluation and measurement of the efficacy, performance, cost, and impact of increasingly complex and integrated marketing activities. To that end the authors argue that applying the well-proven principles of the scientific method, coupled with proper research design and data collection, to measure and diagnose the incremental effects of multi-dimensional campaigns is a tried and true process that will achieve results that have generally eluded the majority of organizations to date. This paper presents both theory and practice, supplemented by case studies exemplifying projects that successfully assessed the ROI of integrated marketing campaigns and provided diagnostics for improvement. The goal is to challenge the status quo and outline a new direction for achieving marketing accountability that looks not through the lens of the research agency, but through the eyes of the client and the needs of the larger corporate system.

PREFACE

It is safe to say that the effective evaluation of marketing's impact on sales is as much an integration of research tools and methods as it is an outcome of marketing strategies. In fact, measurement approaches can, and probably should, start from the perspective of marketing strategy (i.e., the client's needs, challenges, and goals), rather than from the perspective of research technique, as it so often does.

In the end, marketing, communications, and advertising have both emotional and rational elements that must be understood in order to help marketers adjust, change, revise, or improve efforts and results. Applying a holistic process that aligns the insights and measures gathered from post campaign diagnostic and evaluation surveys, and that links marketing efforts to sales, will deliver an understanding of the success or failure of one's performance, as well as ways to improve and ultimately optimize future efforts. This, in turn, informs ongoing impact evaluation and accelerates the ability to build knowledge on specific situations, creative offerings, media combinations, and on how customer segments respond differentially to the brand. Ultimately, a continuous customer and marketing learning cycle can be put in place, fed by the distribution and application of the measurement principles described in more detail in our paper.

INTRODUCTION

In *Parsifal,* Richard Wagner's operatic masterpiece about the search for the Holy Grail, the resolution of the most difficult challenge occurs when Parsifal is given 'the spear that heals wounds'. Only when the hero is able to look at things in a different way is he equipped to fulfill one of mankind's most important quests.

While it would be foolish to equate our strivings in business to this holy endeavor, many in marketing and advertising indeed feel as if they are searching for the Holy Grail to help them solve seemingly insurmountable challenges.

The voices grow stronger every day. Take Mark Kaline of Ford (USA), who recently said in a public forum, that "clients have entered the age of accountability … at Ford, marketing is looked at as an expense and we are under attack to prove our worth."[1)]

It is evident today that advertisers and marketers face intense pressure from stakeholders to make the right decisions about where to invest their resources and to verify that they are receiving sufficient return on investment.

Jim Stengel, P&G's Global Marketing Officer, got it right when he identified the fact that we may not be making progress because *we don't know where we are going*. The number of definitions of ROI is staggering, and the lack of a common definition has all but paralyzed the industry, according to a recent ANA/Forrester study.[2)]

The demand for measuring the impact of marketing and advertising has risen significantly over the last five years and is still evolving to address the changing corporate, marketing, media, and communications landscape.[3)] The call to action is clear. We are desperately in need of new tools and methods of measurement. Until these are in place, marketers will continue to have difficulty in optimizing – increasing the effectiveness *and* efficiency of – their marketing efforts.

ART MEETS SCIENCE: THE CHALLENGE OF MEASURING THE IMPACT OF MARKETING

It's a question as old as business itself: How can an organization be sure it is spending the right amount of money on the right kind of advertising and marketing so that it can successfully impact and influence behavior and attitudes, and ultimately, sales?

To be sure, some marketers, especially those from data-rich firms focused solely on direct marketing, are able, in a stimulus-response fashion, to determine how responsive consumers are to an individual coupon or price reduction. But things are not that simple anymore. More than ever, the marketing discipline is art informed by science: most organizations still spend vast amounts of money trying to create awareness, shift attitudes, or influence behavior and adoption of new products and services without knowing the relationship between costs and effects.

Traditionally, companies relied in large measure on anecdotal evidence, marketer's experience, and rudimentary tools to develop marketing strategies and tactics, implement them, and assess their effectiveness. It was accepted that marketing cost money – a necessary evil. Today, Marketing Science is introducing sophisticated measurement methods and statistical techniques to analyze and quantify marketing spending and return on investment. But attaining Marketing ROI requires more than a statistical tool; it requires a method that uses a variety of research, analytic and measurement techniques at appropriate points in the process of marketing, and then the ability to execute on the results.

There are a number of ways to do this. For example, a growing proportion of marketers are very interested in using their detailed marketing databases to infer the unique contribution to sales of disparate marketing factors. But relatively few are actually deploying or successfully using the complex, and often expensive, statistical modeling techniques that are being promoted today, due to poor data quality, integration costs and concerns, and spotty, less than relevant results.

But other quantitative marketing measurement, assessment, and planning methods have evolved as well (some with generative bloodlines from the fields of agriculture, psychology, and education),[4)] and the demand for them is growing. Complex statistical modeling has a role, as we will see, in looking at the big picture of marketing's impact. Marketers, however, also need to be able to look at the effect of their efforts at the campaign (or even individual) level, across all media and communication channels, and sometimes across many brands or services.

TOOLS AND TECHNIQUES: NOT THE SAME AS METHODS AND APPROACHES

Most advertising measures are concerned with helping marketers get the right message in front of the right people. For years, the traditional way media impact has been measured is advertising delivery ratings. But to evaluate success and the incremental impact of multi-faceted campaigns, ratings are inadequate. The objectives today are to drive a response from the consumer in some way – generating branding value or attitudinal shifts, changing behavior, or stimulating sales – and then being able to measure the impact of these activities.

To accomplish this, Marketers (consciously or not) make a distinction between tools and methods. *Tools* are defined as statistical or measurement techniques that address one specific aspect of marketing. They are generally applied either directly (as in marketing mix modeling) or by utilizing a tool created by an agency or vendor that automates, standardizes, or packages a technique (or sequence of techniques) that focuses on one objective. Examples of tools to measure the impact of advertising include: packaged ad copy pre-testing, packaged brand tracking, and marketing mix modeling.

Just as a tool (such as a hammer) can be very useful for one specific objective (hammering a nail), in the real world of advertising, communications, and marketing, the needs of organizations are much more complex and sophisticated. To continue the metaphor, they require architects, blueprints, and a deep, rich understanding of 'what works'. A hammer can be used to build a house, but not to help you create an effective blueprint. *Methods* are process-based approaches that marketers can use to dissect, analyze, plan, and improve the more complex communications activities and impacts that are now common in the marketplace.

Methods use the tools and techniques of marketing science; but apply them in a process-based framework to help address a broader range and deeper level of marketing impacts or accountability outputs. They are not automated or synthesized models of reality, but are direct measures of what customers are thinking, feeling, and doing. Think of methods as the process an architect uses to plan, guide, and optimize the construction of a new house: a dynamic blueprint, if you will. The attention to process and holistic understanding needed here is more akin to application of the scientific method, rather than a single statistical technique, such as marketing mix modeling.

An important point to keep in mind is that both tools and methods are important to successful marketing and advertising. One does not preclude or replace another. That said, there is an optimal ordering or sequence to get the most value in today's marketing reality. Although it has been the case that tools have overshadowed methods in the advertising and communications world, this is changing rapidly as the complexity, sophistication, and demands on marketing increase. This change in perception suggests that we look at measurement and research approaches from the perspective of marketing strategies, rather than research techniques.

ACCOUNTABILITY IS AT A CROSSROADS

A number of solutions have been put forth by market research vendors to address the accountability issue. The problem is that tools, rather than methods, have been chosen for measuring marketing ROI that possess serious limitations:

- Tracking techniques are based on brand models that consistently measure 'short of sales' indicators, but never take the step to the most important relationship, which is marketing activity to sales.
- Statistical models strip away the most important data we need: attitudes, feelings, and emotions, while force fitting a linear model on a non-linear problem.
- Today's tools can't adequately address the dynamic reality of marketing.

This has led clients toward settling for less than optimal measurement, or, in the case of modeling, low adoption rates, due to its complexity and black box character. In both situations, client dissatisfaction is clear. In reality, industry best practices today leave much to be desired.

Tracking is perhaps the most common method used to assess the 'health' of brands or advertising across time. The number of ways to do this is fairly limited, yet each major market research firm has their own peculiar methodology that they claim is unique. This, coupled with the misleading use of the word 'equity' in relation to brand, has probably contributed the most to confusion in this area. Perhaps one of the biggest problems with 'Tracking' is that it has evolved more from research techniques, rather than a marketing process perspective and need. That is, the focus has been on accommodating linear and/or spatial models of 'how branding works', with a weak link to sales, and no accounting for the changing nature of the consumer and marketing/advertising in general.[5)]

As we know, the business problem and situation now includes a complex media mix (multiple ways to reach the customer and how to best optimize those efforts) and demands for accountability (ROI as an example). Tracking, as it is practiced currently, does not address these new emerging elements.

Heath and Hyder's recent Market Research Society paper[6)] is about advertising which works on our emotions without necessarily achieving high levels of attention or recall. They compared the most popular recall-based metric used in tracking studies – claimed ad awareness – against an approach that deduces effectiveness from recognition, and found that claimed ad awareness seriously underestimates the effectiveness of the advertising tested.

The findings of this paper seriously call into question the value of recall metrics and continuous tracking research. The continuous collection of data in tracking research is needed primarily in order to collect recall-based metrics such as claimed ad awareness, but this type of metric has been shown to provide confusing and misleading findings for advertising with a high emotive content. The Heath and Hyder paper noted that continuous research is unnecessarily costly: the findings derived from the point in time studies presented by the authors were more accurate and informative, and considerably less expensive. Overall, they concluded that methods based upon the periodic measurement and cross-analysis of recognition and brand metrics represent a better future direction for advertising research, because they are uniquely able to evaluate the hidden emotional power of advertising.

Heath and Hyder are on the right track (so to speak). If one looks at continuous tracking (as it has evolved in advertising and marketing) closely, it is clear that the method of choice is repeated cross sectional design, a notoriously weak and expensive technique.[7)] At its core:

- It uses frequent regular snapshots of comparable samples (weekly, monthly, etc., but these are different respondents each time).
- It cannot be used to tease out differential segment (cohort) variations, due to averaging.
- It makes causal claims suspect.
- It has tried to compensate with a variety of proprietary indices that have been seriously questioned over and over again.

In fact, tracking 'products' have more technical limitations that include: no real basis to claim 'equity' in the sense of financial numbers or sales dollars; few standardized elements (difficult to cross compare, even across brands within one firm's portfolio, frequently due to customization by research vendors); non-inclusion of competitive effects or emotional impact elements; and, finally, no way to determine the distribution of brand 'equity' across a customer set (how different segments resonate differently with the brand).

To accommodate the expensive (and lucrative to the provider) tracking model, what is lacking is the ability to point a microscope to explore, understand, and draw insight around the differential effects of brand, channel, media use, etc. Tracking affords little to no diagnostic guidance, but becomes instead a heart monitor that lets us know that the brand is, indeed, still alive. Missing is the doctor's detailed diagnosis and insight into how we can optimize our brand's health, safety, competitiveness, and response to changing consumer segments, marketing frameworks, and new opportunities.

Marketing Mix Modeling (MMM) encompasses a wide variety of econometric (statistical regression) techniques that attempt to make sense of a wide, disparate set of data that marketers may, or may not, have on hand. Ironically, the attempt here is to build a single-source data set: which is precisely what an empirical method achieves via large sample survey methodology and by asking the right questions to match the marketing strategy and objectives in relation to unique vertical needs.

With marketing mix modeling, the sources of data available about the consumer are disaggregated, come in many types, of varying quality, and in many levels. Thus, the difficulty here is to build a complete, holistic data set that can be analyzed to yield 'nuggets' of insight at an aggregate level. In reality, the results are often spotty, due to poor databases, poor data quality, and the inability of marketers to even access data (say, from CRM systems) that would be useful.

Models, indeed, are best used in target and direct marketing scenarios, where behavioral data is abundant and available in one place (or easily aggregated), and in planning and decision support, where portfolios of brands and, literally, thousands of variables need to be looked at. But, even here, the lack of the emotional, creative, and intangible elements needed to determine the optimal marketing mix of a campaign has to be taken as a serious deficiency of this technique.

SHINING THE LIGHT INSIDE THE BLACK BOX OF ECONOMETRIC MODELING

Smith (1999) has written about how econometric modeling can undervalue advertising benefits.[8)] His excellent points, however, represent just the tip of the iceberg. A study of the mis-use of regression techniques outside the marketing domain is well documented and can inform our discussion.[9)]

Marketing mix modeling (a.k.a. econometric modeling) was one of the more sophisticated techniques introduced to meet the desire for advertisers and marketers to measure ROI. Borrowed from the field of economics, it was championed by such firms as IRI in the United States, and very recently thereafter in the United Kingdom. The primary demonstration of its effectiveness as a technique was in the CPG arena, but some major CPG players are questioning even that today. Beyond CPG, its weaknesses overtake its strengths.

Unfortunately, it appears that marketing mix modeling was oversold as a ‘magic’ solution to marketer’s problems. While in theory, modeling should be able to mimic the complexities of reality, in practice, the limitations of the technique become all too evident.

Operations researchers, amongst others, were one of the earliest groups to identify the fact that econometric models generally fail to represent business processes, except possibly over a limited range.[10)] The major limitations that were identified, and which hold true today, include:

- *Collinearity*: factors (variables) that affect the impact of advertising are highly interconnected, thus clouding the assessment of ‘what is causing what’;
- *Autocorrelation*: data from one period may depend on a previous period (note this is also a problem with brand and ad tracking studies). This is another variation of the halo or carryover effect well known to marketers;
- *Simultaneity*: changes in advertising may take place at the same time as changes in another factor that also impacts consumer response and behavior.

While these appear to be fairly technical conditions, they are common, and can spell disaster to marketers tasked to make important and expensive decisions. When you add the factors of poor data quality and data integration biases (see below), the picture becomes even more dismal.

In a recent (February 2005) *Journal of Marketing Research*, Editor Dick Wittink (Yale University School of Management and an expert on econometric modeling applied to marketing) laid bare his concerns about how econometric (marketing mix) modeling is practiced. Here are his primary points:

- Marketing mix models use historical data and actually have a limited ability to forecast. They are most useful for short-term predictions.
- That said, marketers have been trying to use them for long term forecasting. The problem here is that confounding variables enter during the longer time frame to obliterate the predictive power
- *Specification* error is the biggest problem with marketing mix modeling – this simply means that the model is only as good as the variables that go in it. Thus, substantive insights depend greatly on which variables are included. And, the variables that are included are often the ones the client has, not necessarily the 'right' variables to arrive at insightful guidance or meaningful adjustments and change.

Specification errors also launch a whole host of additional technical problems, including:[11)]

- Interaction effects, if they are even considered, are misleading if the variables in the model are misspecified.
- The treatment of missing data has an effect on results, and most marketing databases have plenty of missing data.
- The measurement quality of data has a profound effect on results, and the quality is often highly inconsistent.
- The accommodation of endogeneity: endogeneity is a factor internal to the marketing mix model that refers to the fact that an independent variable included in the model is potentially a 'choice' variable, and this choice is moderately or highly correlated with other variables not included in the model – sometimes this is called a 'lurking variable' (lurking out of sight but having profound influence on the model). An example: if less able workers are more likely to join a union and therefore receive lower wages (all things being equal), then failure to control for this correlation will yield an estimated union effect on wages that is biased down.
- Allowance for cross sectional heterogeneity regarding impact: simply, can we measure and analyze the effect or impact of marketing across segments? There is a differential effect depending on which loyalty, satisfaction, and/or demographic segment one belongs. The ability to do

this is ‘averaged’ out by the econometric requirement of interval level independent variables.

- Avoiding aggregation biases: in building the single source database there are numerous analytic and statistical decision points that can increase bias due to the choice of aggregation levels, transformations of the data to fit a linear model, and/or the way a proxy metric is calculated.

In sum, Wittink states: ‘*Given data constraints, it is virtually impossible for researchers to accommodate all possible nuances (using econometric modeling). Thus, we rely on theories and experience to decide which aspects are most critical to include in a model … Because all models are incomplete representations of reality.*’[12)]

Firms dedicated to pushing MMM as a ‘silver bullet’ solution to marketing accountability, therefore, have taken to resorting to more sophisticated modeling techniques, such as Bayesian shrinkage modeling, which in effect estimates and generates synthetic ‘numbers’ from the data already on hand (using probability estimates).[13)] The result is a model of reality; a black box far removed from the horizon of the day-to-day marketer and his/her responsibilities. It is no wonder that modeling has disappointed as a general solution.

AN ALTERNATIVE IS AVAILABLE

An approach termed Longwoods R.O.EYE™, developed and launched by Longwoods International in 1990, uses less well known, but highly effective and proven experimental, analytical, and research designs to capture the rational and emotional impacts of marketing, advertising, and communication on consumer awareness, perception, feelings, purchase, and ultimately sales. This approach is less a technique, more a collection of techniques wrapped up in a method tempered with great validity, based on a scientific approach to marketing analytics.[14)] Survey-based, it avoids the problems of control-test markets: expense and time. In addition, it has been tested and validated over the last fifteen years by peer review commissions consisting of economists, legislators, and accountants.

This method evaluates post-campaign, thus setting a formative benchmark that can be used to build a relevant baseline and tracking system for brand health and sales impacts. In addition, since it is survey-based to a large representative sample of customers – and builds in control variables to allow for the teasing out of incremental effects on a variety of customer segments and situations – it affords diagnostic guidance on creative impact, the differential effects of marketing channels, and the ability to discern and suggest optimal improvements in media, messaging, and creative delivery (alone and in combination). But the primary potential benefit is the link to actual sales, an objective that many advertisers have long sought, but rarely have seen.

The method is built on four principles:

1. A post-campaign benchmark

Traditional approaches to evaluating marketing compare differences between pre-campaign and post-campaign surveys to measure advertising impacts. Using this research design, however, the pre-wave survey is contaminated by carryover effects from previous campaigns. In addition, many variables that change over time can further influence results, such as:

- A change in the economy
- Competitive activity
- Major crises (9/11, SARS, PR disasters, etc.)

Longwoods R.O.EYE™ uses a post campaign benchmark that eliminates the validity problems that plague pre-post test designs.[15)] The result is a pure measure of 'what happened' that takes advantage of the controls that are built in to the research design.

2. Forced exposure

Telephone tracking studies can produce highly inaccurate advertising recall data, including "Phantom Awareness" and confusion with other campaigns. Marketplace clutter is a mitigating factor that reduces the accuracy of the recall data, which is highly verbal, often missing the emotional element so important to advertising impact.

Longwoods R.O.EYE™ uses a forced recognition technique where survey respondents are shown actual marketing elements as close as possible to their original state. This greatly enhances the precision, accuracy, and detail of recall, including important emotional drivers. It also allows direct production of comprehensive diagnostics on markets, media, and creative, often to the individual level, which helps marketers improve.

3. Control

The ability to build controls into a research effort is based on both design and statistical analysis procedures developed and tested via many studies over the last fifteen years. The need for controls is critical for measurement of incremental impacts resulting from marketing efforts against all other factors.

This approach allows us to back out variables other than marketing that could explain results, such as repeat purchase, brand favorability, word-of-mouth, the economy, etc. Results attributed to marketing have been found to be normally well below 50% of total sales. Occasionally we have had to report a *zero* ROI!

4. Conversion

Longwoods R.O.EYE™ measures short-term conversion with an initial benchmark study. To measure the long-term conversion to purchase, a true longitudinal design is used. This conversion time frame depends on the purchase cycle for the product category. From both of these studies, the ratio of purchase intentions to sales is calculated. Thus, the measurement comes from survey respondents, not external data, and supports the delivery of:

- Short-term sales from the Post-Campaign Benchmark
- Longer-term sales from the Conversion Study

The end result is a direct linkage between marketing communication measures and both short-term and long-term sales.

The biggest problem with an empirical approach to marketing evaluation is the lack of familiarity most marketers have of it. Yet, again, beyond pre and posttests, other disciplines have moved ahead with factorial design techniques, co-variance analysis, and clever research design approaches to optimize yields, tease out incremental effects, and make sense of multi-dimensional processes (Six Sigma, as an example) with great success. Why marketing has lagged is an open question.

CASE STUDY DEMONSTRATES AN EMPIRICAL APPROACH

Longwoods International is a Canadian-based global market research consultancy. Since 1990, they have been involved extensively with economic development projects that required an approach to measuring the ROI of marketing, advertising, and communications that had to stand the scrutiny of legislatures, politicians, economists, and blue-ribbon panels. As such, they have employed a proprietary empirical approach that has been refined, improved, and increasingly extended to a new generation of clients in FMCG, financial services, automotive, retail, and technology. The following case study demonstrates the efficacy of an empirical approach to marketing optimization.

Vail (Colorado, United States)

In this particular case, brand re-positioning and redeployment of marketing dollars led to a 26:1 ROI from zero ROI, with no increase in spending in year one.

The purpose of this project was to:

- Quantify current campaign effectiveness and establish a benchmark for ROI;
- Identify segment, messaging and market opportunities;
- Identify channel priorities based on yield efficiency;
- Work with existing communications partners to ensure successful translation of strategic research, positioning and marketing recommendations;
- Determine incremental post bottom-line marketing impacts – ROI of the new campaign.

In 2001, Longwoods International was hired to undertake Benchmark/ROI research for a respected national/international brand (Vail, Colorado, famous the world round for skiing and winter sports), and assume the role of strategic advisor to the clients' management team. Specific responsibilities were in the area of strategic research, marketing and brand assessment/planning.

An empirical, experimental design approach based on the four principles outlined earlier in this paper was deployed.

At the time of beginning this project, sales revenues had declined and there were perceived problems with communications. The initial Image/ROI Benchmark study demonstrated that a campaign that had won awards for creative excellence was generating a zero return on investment, after all other possible impacts were factored out. The research pinpointed problems with segment focus, brand positioning, messaging, and the media. From the data-driven analysis, Longwoods recommended solutions and worked with the clients' communications partners to establish a course of action to deliver short term ROI, while beginning to build longer-term brand equity.

Applying the learning from the initial study led to the repositioning of the brand, the adoption of a research-based marketing strategy, and the redeployment of marketing dollars, yielding a 26:1 ROI with no increase in budget.

As mentioned earlier in the paper, recent work using an empirical approach has garnered acceptance and success in the private sector. The basic extensions and refinements enabled by this method include the ability to:

- Holistically determine the effects of Integrated Marketing Communications campaigns, including the impact of individual 'creatives' (ads);
- Issue a brand health report that includes the efficacy of the campaign in dollar return on investment;
- Analyze multiple brands in a corporate brand portfolio to assess and compare differential results;
- Tie in metrics and analytic results from both online and offline channels, as well as enhance CRM systems.

We conclude with a call for a new direction for marketing accountability that places the proper analytic and research tools and methods in context of the needs of the marketer, the corporate finance department, and the overall business intelligence objectives of the organization.

A NEW DIRECTION

The question must be asked: Does the industry want more of the same? If so, that would entail:

- More complex modeling procedures; i.e., Next Gen Models;
- Continued reliance on telephone tracking;
- Greater data overload;
- Higher costs;
- Unintelligible, habitual, or ineffective reports to the CEO/CFO.

Or should we listen to clients who are ready for a simpler, more usable approach? Choosing the path of experimental design, we have an alternative:

- A robust set of single source data;
- Proven experimental designs;
- ROI in financial terms;
- A measure of both media and creative;
- An understanding of both emotional and rational motivators;
- Lower costs;
- Links to directly enhance CRM.

Just as for Parsifal, the quest for corporate and business efficiency and effectiveness is not an easy one. Chief executives, managers, investors, and dynamic consumer expectations are demanding long overdue changes. At some point, marketing and advertising will be swept forward, kicking and screaming, into the future. In many ways, we are already experiencing it. Wise counsel would advise that we start to think differently and consider taking the reins towards a new direction in marketing accountability. We certainly have the capacity, based on our own expertise, experience, and understanding of how to bring new ideas to the art of marketing. The time has come for us to willingly look through the eyes of the client to their needs, problems, challenges, and issues, rather than through our own opaque, and possibly self-serving, lenses.

FOOTNOTES

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