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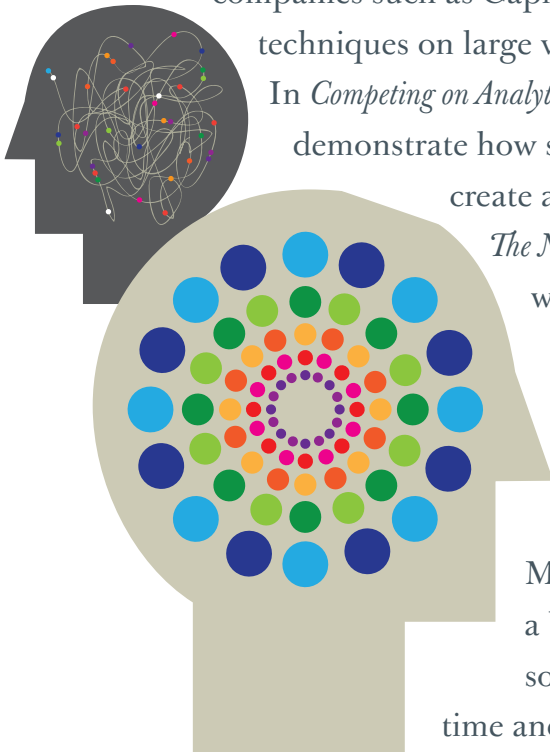
Math Marketing

The New Landscape of Marketing Analytics

Introduction

Over the last two years, we have witnessed the publication of a number of books that describe the revolutionary impact that mathematics is having on all aspects of everyday life, from online dating, shopping, wine tasting, baseball and gambling to health care, antiterrorism initiatives, human resources management and marketing. In *Super Crunchers*, Ian Ayres describes how companies such as Capital One and Harrah's use advanced mathematical techniques on large volumes of data to optimize their marketing efforts.¹ In *Competing on Analytics*, Thomas H. Davenport and Jeanne G. Harris demonstrate how some of these companies are now using analytics to create a real competitive advantage.² And Stephen Baker's *The Numerati* describes a new breed of mathematicians who are "in a position to rule the information of our lives."³ These are just a few examples of the many recent publications that have created a real buzz around Math Marketing.

This paper provides a practical view of the Math Marketing landscape today. It first describes a brief history of Math Marketing, and shows that some of its techniques have been around for a long time and how the large volumes of data generated in today's digital world have dramatically increased their potential. It then looks at some of the Math Marketing challenges that lie ahead. They come in the form of fragmentation, myopia, data deluge and a talent crunch. The next chapter describes some of the organizational issues companies face in trying to build their Math Marketing skills. This includes an overview of the different Math Marketing players and a description of what companies should look for when searching out Math Marketing partners. The last chapter has a series of practical tips that can help companies use Math Marketing to improve the accountability of their marketing efforts and generate powerful insights.



History of Math Marketing

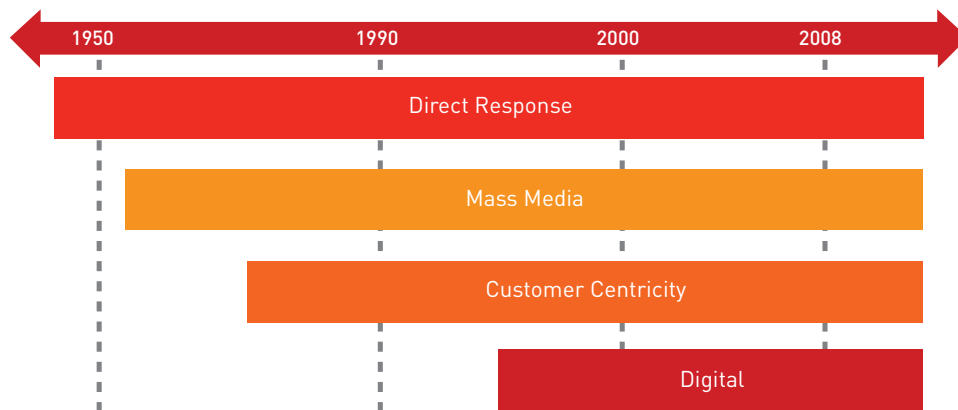
The First Era of Math Marketing

The Early Days of Direct Response



It's probably fair to assume that Math Marketing started soon after the invention of the first direct response campaigns. The first mail-order catalog was invented by Aaron Montgomery Ward in 1872, and it was copied by Richard Sears and Alvah Roebuck in 1886. While there is no real evidence of how the early catalog pioneers measured their success and optimized their operations, they had the ability to do so, and the fact that both catalogs are around today suggests they probably did a good job at it!

Claude Hopkins' *Scientific Advertising* (1923) was one of the first Math Marketing books. It opens with the following words: "The time has come when advertising has in some hands reached the status of a science. It is based on fixed principles and is reasonably exact. The causes and effects have been analyzed until they are well understood. The correct methods of procedure have been proved and established. We know what is most effective, and we act on basic laws."⁴ Hopkins and, later, John Caples—with his *Tested Advertising Methods* (1932)—wrote mainly about mail-order and other direct response vehicles.⁵ They measured what was easy to measure and therefore focused mainly on short-term effects. Unfortunately, from a measurability POV, the primary focus of marketing efforts would soon be directed toward mass media, and hence new techniques would be required to maintain the same levels of marketing accountability.



Math Marketing History

*The Second Era of Math Marketing***Mass Marketing Effectiveness**

The first applications of more advanced mathematical techniques in marketing can be traced back to the 1950s, when operations research and management science models in production and manufacturing that had become popular during and just after World War II were being applied to marketing for the first time. In those days, of course, marketing relied nearly exclusively on mass media such as print and radio, and later, TV. Data on the effectiveness of marketing in these mass media was scarce, which meant that the application of scientific methods in Math Marketing had its limitations. Data was either gathered through tracking sales and investments over time or through polls, which had been around ever since Raymond Rubicam hired George Gallup in 1932. Panels were another popular source of data. But econometric modeling became the technique of choice in this era. It helped marketers better understand the impact of various elements of the marketing and media mix on outcomes such as brand awareness, consideration and, ultimately, sales and profit. Early work from Timothy Joyce, Colin McDonald and Simon Broadbent in the U.K., and John Little in the U.S., helped shape Math Marketing in this era.

Today, independent companies—such as Market Share Partners, MMA and the Hudson River Group—specialize in econometric modeling and still use pretty much the same techniques to make recommendations regarding the effectiveness of mass media. This includes determining the impact of different marketing investment levels, the contribution of individual elements of the marketing mix and the timing of their effects. The insights lead to recommendations as to how much of any budget should be allocated to TV, radio, print and OOH, and what the timing and geographic dispersion of the investment should be.

Econometric modeling has been around for a while now, and its power in helping marketers understand what works and what doesn't has been demonstrated over time. Today, however, its use is still relatively limited. The U.K.'s IPA awards set the international gold standard for advertising case material, but only 15% of the case studies submitted for the awards use econometric modeling to identify the effects of campaigns.⁶ It seems that after all these years, econometric modeling still hasn't been adopted in day-to-day marketing decision making.

The Third Era of Math Marketing

1990 CRM Effectiveness

The third era in the evolution of Math Marketing took place during the 1990s, when customer relationship management (CRM) became an obsession for many marketers. During this period, the possibilities offered by new, powerful database solutions really transformed direct marketing—and Math Marketing with it. The CRM revolution in the 1990s forced companies to think in a customer-centric way. In 1996, Frederick Reichheld published *The Loyalty Effect* in which he demonstrated that a 5% improvement in customer retention rates usually yields a 25% to 100% increase in profit.⁷ The following year, Garth Hallberg's *All Consumers Are Not Created Equal* appeared, in which he demonstrated that a small proportion of the average company's customer base usually represents a disproportionate share of company revenue.⁸

Companies became determined to get to know their most valuable customers and focused on keeping them by treating them differentially. Loyalty cards that allowed companies to capture transactional data were introduced, and businesses invested heavily in data warehousing technology that stored all customer information in one database. These “single customer views” allowed companies to analyze their customers' transactions, value, responses to communications and even demographics. RFM models classified customers according to Recency, Frequency and Monetary Value of Purchases. Lifetime value models predicted what a customer would be worth over his or her entire lifetime. Anti-attrition models were built to predict the likelihood of an individual ceasing to be an active consumer. In this same period, a plethora of other analytical tools and frameworks were born that allowed companies to better understand who their most valuable customers were, what their next move would be, and how they could be influenced through direct, one-to-one communications.

Many of the mathematical techniques behind these models were very old. Statistical techniques such as logistic regressions and discriminant analysis became powerful tools once they were applied to customer-level data. These more traditional techniques were supplemented by new data-mining techniques made possible by ever-increasing computing power that collected vast quantities of data, as well as by developments in machine learning and artificial intelligence. Data-mining gurus, namely Michael J. A. Berry and Gordon S. Linoff, made new techniques such as neural networks, genetic algorithms and decision trees popular and added them to the Math Marketing toolkit.⁹ To this day, companies such as Dunhumby, Epsilon and Acxiom still thrive in what is now a mature, very scientific, data-rich CRM industry. The CRM revolution expanded marketing-effectiveness tools and techniques considerably, and the toolkit's ability to analyze vast quantities of data was soon tested on customer-centric data derived from digital media.

The Fourth Era of Math Marketing

Digital Effectiveness

One of the main promises of the digital communications era is that everything is measurable. In digital, everything generates data—and the volumes are enormous. Google’s digital database is probably the largest, capturing almost 10 billion searches per month. These huge quantities of data can give companies unprecedented visibility into how our customers engage with brands and how that engagement ultimately leads to revenue.

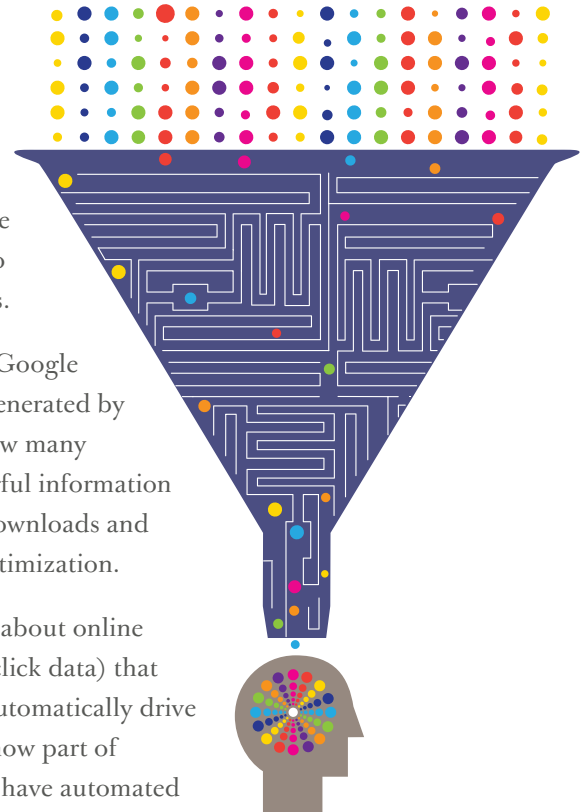
E-commerce environments provide us with a closed-loop system, which in marketing effectiveness terms gets us close to nirvana. Digital media data can show us exactly which media individuals have been exposed to. Website data can show us where individuals came from (or, in the case of search, what terms they typed in to arrive at a site). We can then observe these individuals’ entire shopping behavior, all the way to their actual conversion to a sale. With more and more media becoming digital, we could easily imagine a scenario where most, if not all, media exposures can be traced to an individual sale.

Digital data is also available in real time. We no longer have to wait weeks or months before we can observe the impact of our marketing activities. We can get a read almost instantaneously, allowing for real-time optimization.

This abundance of data, the promise of a closed loop and the speed with which we can react to insights have given birth to a wide range of analytical services in digital communications.

Web analytics vendors, such as Omniture, Coremetrics and Google Analytics, specialize in gathering the vast amounts of data generated by websites and transforming this data into insights, such as how many people come to a site and how they behave. This very powerful information can help streamline online processes such as registrations, downloads and purchases, and it can play a vital role in site redesign and optimization.

Ad servers, such as Google’s DoubleClick, can provide data about online media exposures and click-throughs (as well as beyond-the-click data) that enable us to optimize real-time frequency of exposure and automatically drive creative rotation decisions. Companies such as Memetrics (now part of Accenture), Offermatica (now part of Omniture) and Tumri have automated multivariate testing.



Tacoda (now part of AOL) and Audience Science (former Revenue Science), among others, are applying the mathematical targeting techniques first pioneered in the CRM era to digital data in a way that has made behavioral targeting almost a commodity.

Vendors such as TNS Cymfony, Nielsen BuzzMetrics and Radian6 specialize in analyzing what people write on blogs, message boards and in forums. Yet other vendors, including 33Across, are predicting who will analyze the connections between people on social networks to optimize social media communications.

Soon all media will be digital. Today, Google TV enables the use of TV set-top-box data to analyze advertising tune-out rates, allowing us to optimize TV commercials by using a number of the digital optimization techniques mentioned above.

It seems that, almost every day, new companies find ways to apply mathematics to the vast amounts of digital data currently available in order to optimize marketing efforts. Digital really has put the Math Marketing revolution on steroids.

Challenges for the Future

Although Math Marketing's possibilities seem endless, there are some substantial challenges ahead. They come in the form of fragmentation, myopia, data deluge and the talent crunch.

Fragmentation	Myopia	Data Deluge	Talent Crunch
Multiple analytical techniques.	Downside of instantaneous feedback.	Too much focus on data and math.	Shortage of math skills.
Isolated data sources.	Pressure to demonstrate short-term ROI.	Volume of data often complicates decision making.	Difficulty finding math marketers.
Plethora of metrics.	Longer-term effects exist but are not taken into account.	Need for decision-support systems.	Attractiveness of other industries.
Nobody seems to have the full 360 Degree view.			

Math Marketing Challenges

Fragmentation

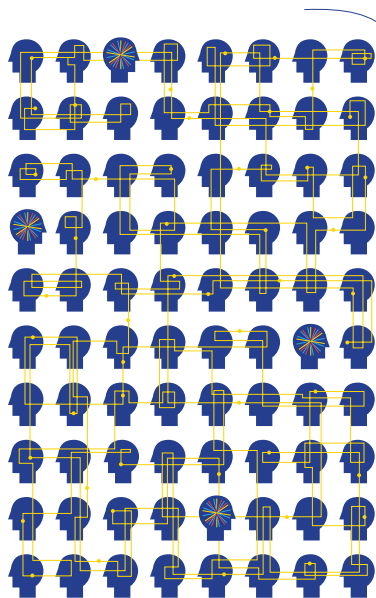
It is interesting to note that all of the techniques developed during the various stages in the history of Math Marketing are still being used. Mass marketing techniques such as econometric modeling are still around, as are CRM techniques which, arguably, have become even more important now that they can be applied to digital data. Digital mathematical tools are also evolving every day, and because of their incredible growth in marketing, an extremely high level of specialization is required to master them. This has caused a high degree of fragmentation in the Math Marketing world. Nobody is offering a complete range of analytical services and tools and, as a consequence, nobody provides the full 360 Degree picture.

Myopia

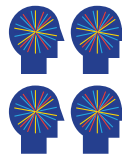
In our digital world, we can receive feedback on campaign performance almost instantaneously. We no longer need to wait weeks or months to attain sufficient data points to make a judgment on whether something worked or not. This opens up a number of opportunities for the real-time optimization of campaigns. But it also means that the focus of analysis has shifted to the short term. In the days of mass marketing, econometricians often had to look at the impact of marketing over multiple years in order to get sufficient data points. This meant that they analyzed both short-term and long-term effects. Today's focus on short-term results is reinforced by the pressure most CMOs are under these days to demonstrate short-term ROI. Their performance is increasingly being measured by the same KPIs that are used by CFOs and CEOs. These tend to be short-term financial metrics, which are forcing many CMOs to shift their emphasis from the long term to the short term.

Data Deluge

While the volumes of data have increased exponentially and the Math Marketing tools have grown considerably, the biggest challenge remains the translation of mathematical insights into recommendations and actions that can make a direct impact. The math can be extremely complicated and it can rely on millions of data points, but ultimately the recommendation will have to help marketers improve their everyday decision making. Marketers need to contact the people most likely to buy, determine how much to invest in them, find them through the appropriate channel, serve them with the right offer, and make sure creative and content are enticing so they stand out from the glut. All too often math marketers lose sight of this. They are driven by what is technically possible rather than by what will make a real difference.



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Talent Crunch

Good Math Marketing talent is extremely hard to find. First of all, math marketers need math skills, and math talent is scarce in the U.S.

According to the OECD PISA test, which tests 15-year-old students in different countries, the U.S. ranks 35th in the world in terms of math literacy. In *The World Is Flat*, Thomas Friedman outlined how the lack of engineering and math skills among the U.S. population is having detrimental effects on U.S. competitiveness in the global marketplace.¹⁰ John Kao

describes in *Innovation Nation* how the U.S. math education system lags behind that of most other developed countries, most notably China.¹¹ However, math skills alone are not enough. Math marketers also need to have an affinity for marketing and a desire to work in what can be highly creative “right brain” marketing environments where very few of their colleagues may understand, let alone know how to apply, math. Hence, math marketers must be able to use advanced mathematical techniques and explain their findings in a marketing context to a nontechnical audience, an extremely rare combination of skills.

Organizing for Math Marketing

In their book *The Four Pillars of Profit-Driven Marketing*, authors Leslie Moeller and Edward Landry touch upon an interesting area:¹² how should companies organize themselves to become ROI-driven organizations? The authors claim that being good at analytics is not enough. Though fundamental, analytics is only one of the four pillars needed in order to succeed.

The other three are:

- Decision-support tools: tools that automatically make the insights from analytics available to decision makers throughout the organization.
- Process: full integration of analytics and decision-support tools in all stages of the marketing process, from target setting to planning to execution to postevent analysis.
- Organization: an organizational framework that ensures support and resources are in place in order to implement the process.

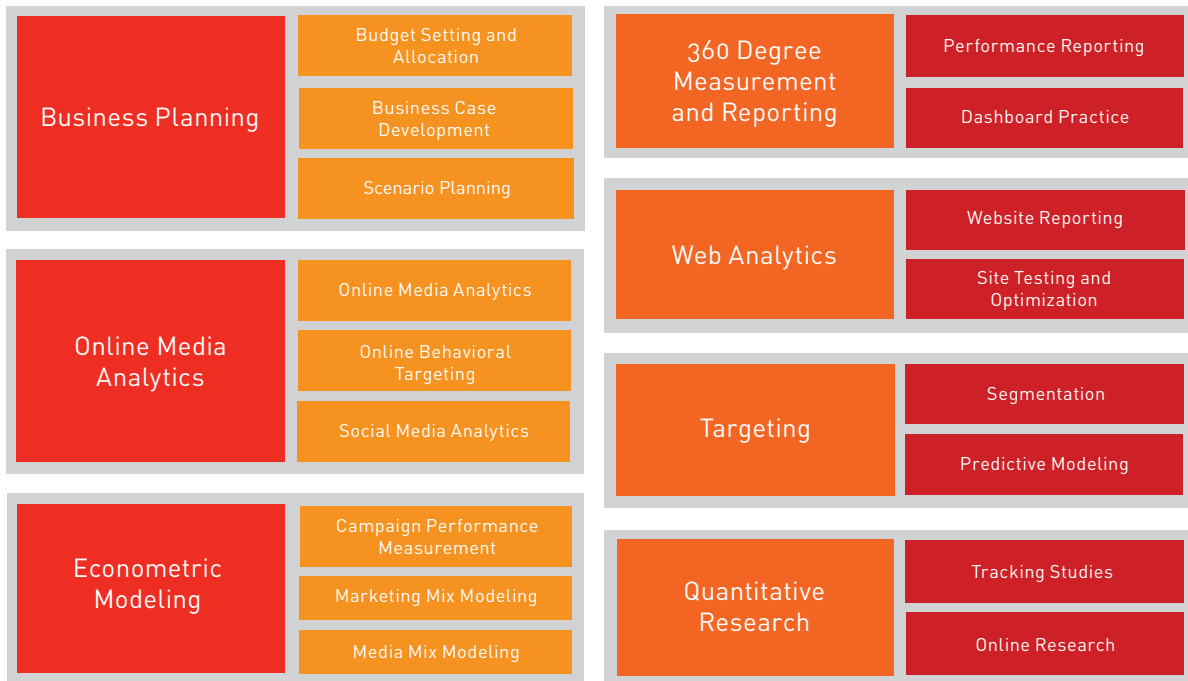
The authors are right—analytics is doomed to fail unless the following three ingredients are in place: the tools to disseminate the insights from analytics, the process that makes sure analytics is not an afterthought and organizational support. Most companies would acknowledge this. Very few, however, are actually taking the necessary steps to make sure these requirements are met.

In my experience, companies struggle the most with the fourth pillar—the organizational framework to support the ROI mind-set. According to Moeller and Landry, there are three main components to establishing the right organizational framework:

- Leadership: the ROI agenda needs to be driven by CMOs who are well versed in the science of marketing.
- Center of excellence (COE): companies need to develop a COE that is the headquarters of the analytical skills required for marketing ROI.
- New job definitions, training and hiring profiles: all layers of the organization need to be trained and involved in establishing marketing ROI.

Of the three components above, leadership is often the easiest to put in place. Marketers who understand marketing ROI and analytics are much better equipped to prove the value of marketing to the organization. They are also more likely to speak the same language as CEOs and CFOs. With the average tenure of CMOs now at 28 months (versus 53 months for CEOs), there is increasing pressure on marketing departments to hire more accountable marketers who understand ROI and analytics, and will therefore be the most successful and rise to the top automatically.

Establishing a COE for Math Marketing is difficult, and it may become a lot harder in the future. Most companies have some analytical capability in place. It usually resides within a marketing intelligence group that sits within a broader strategy group, often (though not always) as part of the marketing organization. Most of today’s marketing intelligence groups are heavily focused on market research and econometric modeling. They have grown and matured during the years of mass marketing, when research and econometrics were the primary ROI tools. As mentioned earlier, that has been changing rapidly over the last 15 years due to the CRM and digital revolutions described above, which brought with them an explosion of analytical tools. Today’s multichannel analytics team must consist of at least one web analyst, a website optimizer, a social metrics expert, a database marketer, a search analyst, a quantitative market analyst, a qualitative market researcher, a media analyst, a digital media analytics expert, an audience researcher, an econometrician, a data miner and a PR measurement specialist. I do not know of a single company that has a COE staff with this variety of skills. The diagram below illustrates the variety of analytical skills required in our multichannel world. It is the skills matrix for Ogilvy’s Analytics department, a group of more than 200 Math Marketing specialists worldwide.



Capability Matrix of Today’s Multichannel Analytics Team

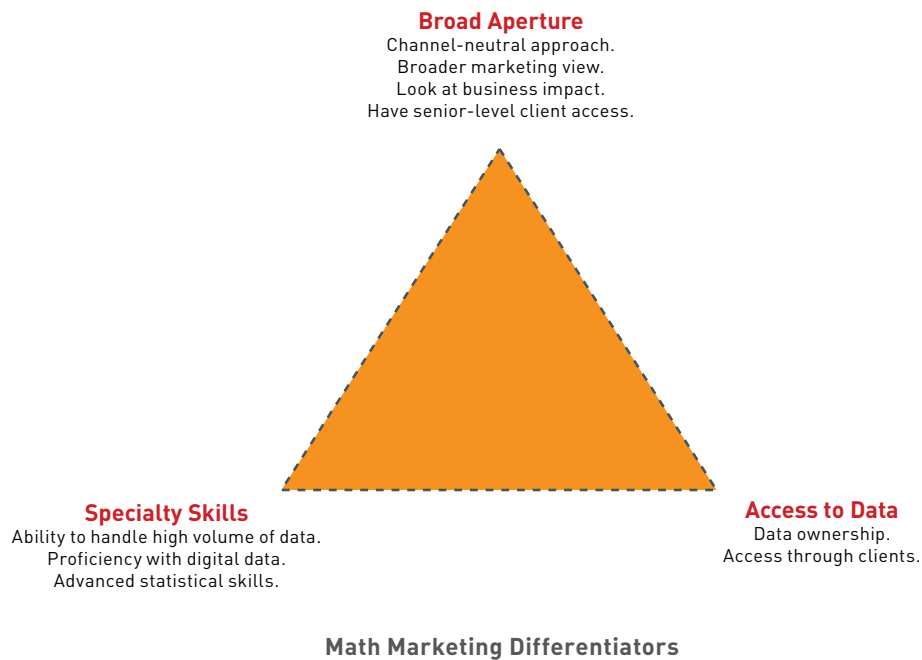
Furthermore, with new analytical applications being developed at the speed of light, the COEs need to evolve their capabilities continuously. Add to that the incredible scarcity of analytics talent mentioned earlier and we understand how it is virtually impossible for companies to scale internal capabilities that will be able to meet all the ROI challenges of tomorrow. Although the ROI function will never be able to be outsourced completely, the role of external partners is destined to grow in the future, and the right organizational framework will need to be established to support multipartner relationships.

The biggest challenge companies face is to have all layers in the organization involved in establishing marketing ROI. Even if one were able to establish a COE (internally or virtually through partnerships) that has people with all the necessary skills, its value would be limited if it were isolated from the rest of the organization. The main objective of a COE should be to make decision makers, who usually reside outside of the COE, smarter. The COE should provide them the insights, knowledge and tools to make smarter decisions independently. Therefore, if a COE is very successful, it will make itself obsolete. This, of course, has political implications. Very few COE teams feel comfortable with this, and most have a tendency to keep knowledge and expertise to themselves to a certain extent, if only to maintain their status as experts and the job security that comes with it. This is a very natural reaction that can result in tension between COE teams and other parts of the marketing organization. There are two things that can prevent this from happening:

- It should be clear that the main goal of the COE is to have others in the organization adopt the insights it produces and improve their decision making as a result of doing so. Members of the COE should have this written in their personal performance goals and should be incentivized accordingly.
- COEs should strive to automate the cutting-edge work they are currently doing so that it becomes common practice and, at the same time, be given the freedom to continuously push the ROI agenda and pursue opportunities to reinvent themselves. This will require ongoing investment in training and R&D.

Who Will Be Your **Best** Math Marketing Partner?

If companies need external partnerships to stay at the forefront of the Math Marketing revolution, whom should they partner with and what should they look out for? The Math Marketing partner of the future needs to be strong across three dimensions.



Broad Aperture

Math marketers must be able to look at the marketing landscape in its entirety. This includes all media and all elements of the marketing mix. They should understand the impact of marketing on overall business results. They also need the senior-level client relationships that can give them the authority to take, and act on, this broader view.

Specialty Skills

Math marketers must have the specialty skills necessary to master the modern Math Marketing toolkit. This includes econometric modeling, data mining, statistics, Web analytics, online ad serving competencies, quantitative market research techniques, dashboard and visualization technologies, and social media analytics. They must always stay abreast of the latest developments in the Math Marketing industry; departments must also have the robust technical infrastructure to handle the large volumes of data involved in modern Math Marketing.

Access to Data

Math marketers need access to data. Traditionally, most data was owned and stored by clients. While clients still internally house the bulk of transactional and customer-level data, the digital era has seen other islands of data being created outside of clients' corporate data warehouses. Microsoft and Google got in the ad-serving game with their acquisitions of aQuantive and DoubleClick, respectively. They are rapidly gathering online ad-serving data that can be used to optimize online ad spend. Online media agencies are investing in data infrastructures that enable them to get feeds from ad servers and store them themselves. Search engines have the most powerful source of search data for needs-based targeting. But very few companies have integrated this digital data with their customer data warehouses. It will be interesting to see in the next couple of years who will own what data and who will be creating the next-generation, single-customer views that will combine media exposure and interaction with search, website behavior with transactional and demographics data, all in one place.

There are various players in the Math Marketing area:

- **Media companies** have always used mathematics to make decisions about investing media budgets. Most of them have econometric capabilities and are investing in ad-serving, data-warehousing infrastructures, which will allow them to mine that data for optimization and give them a considerable competitive advantage. They are predominantly focused on media decisions and have historically had a more transactional and less strategic view. This was usually reflected in client relationships, where media agencies tend to have less board-level access. This is changing rapidly, however, with media companies aggressively building their strategic capabilities. If they can attract the talent and own the data, they will be in a great position to answer the ROI questions of the future. However, there will always be the perceived issue of the “fox guarding the henhouse.” Clients will always have a suspicion that media agencies will favor recommendations that might benefit media agencies first.
- **Integrated communications agencies** have traditionally had strategic relationships with clients through brand-planning teams. Some of them have built strong strategic services departments over the years. Teams like these will be able to take a broad view of ROI, and look at the impact of all 360 Degree marketing communications on a brand holistically. Their analytics teams also tend to have the technical skills to analyze large volumes of data. However, with new channels being introduced continuously, the teams will need to keep investing in new specialists who understand the inner workings of these channels well enough to use the data to answer the ROI question. (This technical knowledge might come more naturally for media agencies who know the details for media execution purposes.) Ogilvy's strategic services group in New York, for example, is comprised of a team of 150 planners and consultants specializing in brand planning, marketing and digital strategy, and analytics. The integrated communications agencies usually get access to data through clients and partner-

ships with media agencies. Very few communications agencies store their own data, which could put them at a disadvantage versus others in the category.

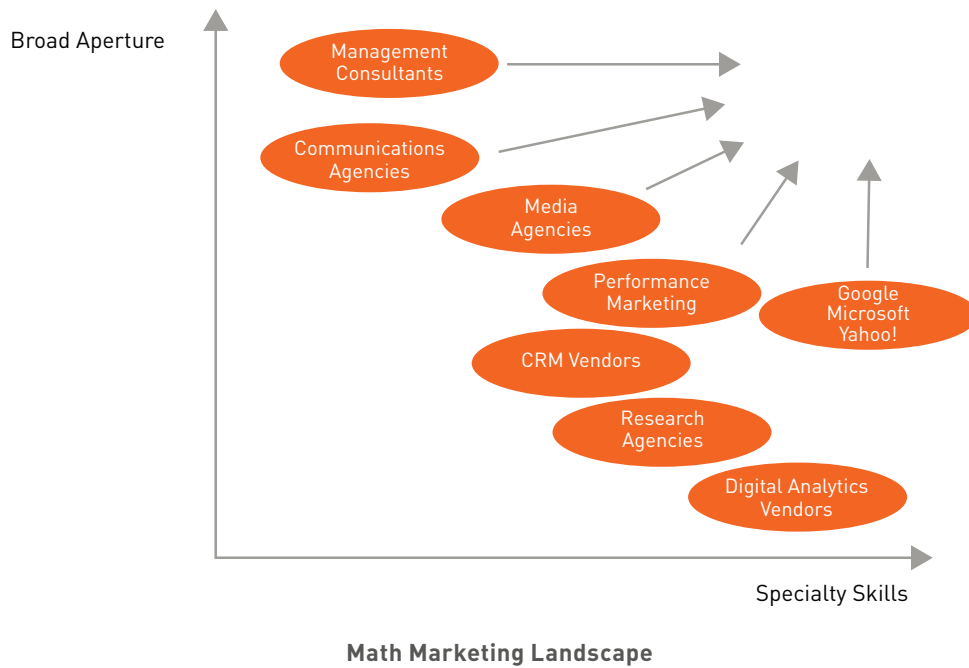
- **Management consultants** have entered the marketing ROI arena as an extension of their broader strategic services. For them, marketing represents perhaps the last area of expansion. By the very nature of what they do, they tend to take a broad and holistic view and probably have more senior client relationships than any other player in the category. This can give them the authority to tackle the marketing ROI question holistically. They are also often seen as more impartial than media and communications agencies. One of their main challenges is that they are often too far removed from the day-to-day execution of marketing campaigns, which means they often lack the in-depth technical knowledge of today's marketing channels required to analyze ROI. Some of them are ramping up their services fast, though, as demonstrated by Accenture's acquisition of digital multivariate testing company Memetrics in 2007. Management consultants usually do not have direct data access and therefore rely on clients to share data with them.
- As mentioned earlier, **Google and Microsoft** entered the marketing effectiveness area with their acquisitions of the major ad servers in the industry. With the digitization of all media, they will soon hold the majority of all marketing effectiveness data. They have the capability to handle the largest volumes of data, and have mathematicians and engineers who, if focused on marketing effectiveness, could have the ability to do just about anything. They are not positioned strategically and therefore lack the broad aperture required to become real ROI partners, but they have the size and the financial power to change this quickly.

These main players will be supported by specialized companies to help them solve certain pieces of the overall ROI puzzle:

- **Agencies with a strong CRM and technology focus**, such as Epsilon, Acxiom, Targetbase, Unica and Dunhumby, have a great ability to mine high volumes of customer-level data. Some of them also have easier access to data, as they tend to manage clients' data warehouses. They have mastered the art of optimizing one-to-one communications, but they are almost never responsible for the entire marketing mix, which usually prevents them from looking at marketing ROI holistically.
- **Marketing research agencies** help quantify ROI through surveys and panels. Since they are primarily the providers of research data and insights, some of them have developed extended ROI capabilities in brand measurement and econometric modeling. Millward Brown's Optimor is a great example of such an extended capability.

- Finally, there are **analytics vendors** who specialize in just one area of analytics. This category includes web analytics vendors such as Omniture and WebTrends; marketing mix specialists such as Market Share Partners, MMA and Hudson River Group; Financial social media analytics vendors such as Nielsen BuzzMetrics, Visible Technologies and TNS Cymfony; and many more. These players usually have partnerships with some of the players mentioned above and, in some cases, have even been acquired by them.

The diagram below summarizes the current Math Marketing landscape, with the main players plotted on a grid based on their ability to have a broad aperture and on their specialty skills.



A true ROI partner will have a combination of both and would therefore appear in the top right corner. No one is there at the moment. However, it is clear that the main contenders are management consultants, integrated communications agencies, media agencies, and Google and Microsoft.

Making Math Marketing Work for You

So how can you make Math Marketing work for your organization? It's a discipline that will help you leverage the enormous volumes of data that marketers now have at their disposal and turn it into increased marketing effectiveness. It can do this in two ways. First, Math Marketing will increase the accountability of your marketing efforts. It can help you understand how your marketing activities impact the bottom line and how you can optimize them by doing more of what works and less of what doesn't. Second, Math Marketing has the ability to uncover valuable consumer insights that can be turned into powerful marketing ideas that fuel future growth.

Increased accountability and insights can make your marketing strategy, your creative and your execution more efficient. How Math Marketing can help your organization is illustrated in the diagram below.



This diagram can be a useful starting point for developing your Math Marketing road map.

I will end this paper with some guidelines that can help you uncover new insights and increase your accountability through Math Marketing. They are not intended to be exhaustive, but hopefully they will give you some practical ideas for how you can get started in both areas.

Seven steps to increased accountability

1. Start with the basics

If you want to understand the impact of your marketing efforts, you need to start with measurement, then move on to analysis of the results, and, finally, use the insights from the analysis to optimize your marketing efforts. Now that marketing budgets are under increased scrutiny, many companies are looking for instant optimization by skipping measurement and analysis. This never works. You need the foundation of metrics and insights before you can optimize.

2. Align metrics to objectives

Measure what you need to measure, not what you can measure. Many marketers get over-excited about modern measurement tools that allow them to track everything. This often means they end up drowning in metrics. Starting from the business, marketing and communications objectives and aligning your metrics to them will ensure that you focus on the metrics that matter. Mapping metrics to objectives also often improves the quality of the objectives themselves.

3. Use a mix of financial and nonfinancial metrics

The last couple of years have seen a number of efforts by marketing professionals and academics to summarize marketing's performance in one metric. Reichheld's Net Promoter Score, Peppers & Rogers' Return on Customer and Doyle's Increase in Shareholder Value are examples of such efforts. While some of these metrics can be useful performance indicators, they will never be able to explain the workings of marketing in its entirety. At the same time, finance departments everywhere are forcing marketing departments to adopt financial metrics. This is a good thing. Focusing on financial metrics only, however, is not. It does not improve the understanding of how marketing works. Counting the money is not enough. Marketers (and all non-marketing decision makers) also need to understand where the money is coming from.

4. Build a results repository

A results repository which stores all marketing-related metrics in one place is probably the most important asset a marketer can have in the quest for accountability. Though this sounds very obvious, it is surprising how few companies have one. This doesn't have to be a sophisticated database. A simple Excel spreadsheet or Access table can often be a great improvement. It's not about the technology; it's about having the discipline of consistently capturing marketing performance metrics over time.

5. Track marketing cost data

It is interesting how few companies adequately track metrics related to the costs of marketing. Cost metrics tend to be stored in financial systems and kept at a very aggregate level. This often makes them useless for performance analysis. Keeping track of your marketing costs by marketing objective, program, channel, geography, segment and medium can greatly improve your ability to understand the effectiveness of your marketing investment.

6. Use statistical modeling to identify drivers of business performance

We have already seen that econometric modeling has been around for a long time, but that it still hasn't been adopted as a decision-making tool by most marketers. In my experience, even companies that do econometric modeling often struggle with integrating their models in marketing decision making. This is a shame, as econometric modeling can often identify the key marketing drivers that are correlated with business outcomes and help marketers focus on them.

7. Build a marketing dashboard

Marketing dashboards are a very visible and tangible output of your measurement efforts. This not only makes them popular, but also means dashboards can become the catalyst for doing the six things mentioned above. When you build a dashboard, you start with measurement. The design of a dashboard usually leads to a conversation about what metrics are important. You will need a set of metrics to populate the dashboard, which usually includes both financial and nonfinancial metrics. The financial metrics will require the discipline of tracking marketing cost metrics. And all metrics need to be stored in a results repository that powers the dashboard. A typical results repository also usually holds 80% - 90% of the data required to do econometric modeling.

Seven steps to transformational consumer insights

1. Build a single customer view

Owning your own data is never a bad idea. As described earlier, many companies have been building corporate data warehouses that create a single view of all their customer data since the early CRM days. This is often an expensive and labor-intensive task. But if done correctly, your database can be an incredibly valuable asset. Tesco in the U.K., for example, estimates that 16% of their margin is attributable to the knowledge they get from their customer database—that makes their database a \$3.2 billion asset. One of the key challenges in the future will be the increasing amount of customer data now generated outside of corporate systems. That data is owned by platforms like Facebook, Twitter, Google, Microsoft and

Yahoo!, rather than the companies themselves. We expect these companies, or even third-party data clearinghouses, to develop solutions that will enable companies to integrate these data sets with their own data warehouses.

2. Mine your data

Your data is only as valuable as the insights you distill from it. This is what Math Marketing allows you to do. There is a whole range of techniques available, but we suggest you start with the basics and prioritize your data mining efforts based on the questions they will answer. Do you know who your best customers are? What drives your profitability? How can you find prospects with the same profile? What can your data tell you about how to communicate with customers and prospects? These questions will determine whether you need a value segmentation, an attitudinal segmentation, a lifetime value model, an anti-attribution model, a browsing typology or any other Math Marketing tool at our disposal today.

3. Learn from search-intent modeling

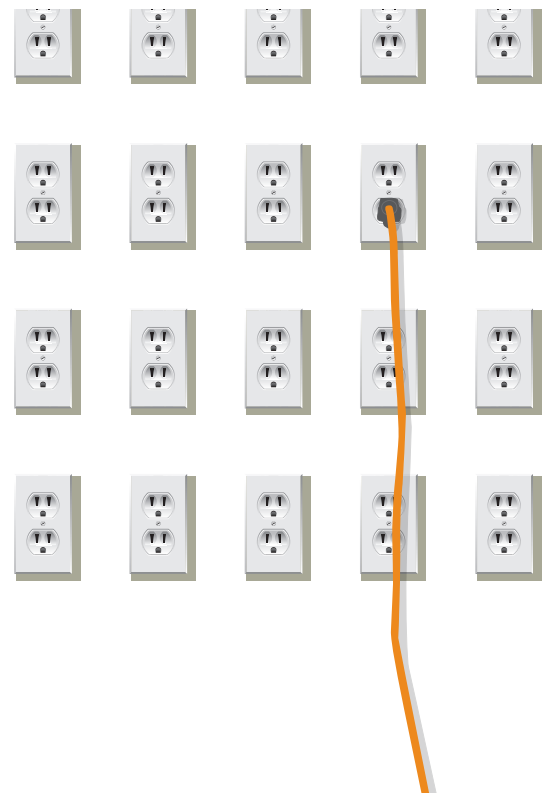
Search data is rich in information. And it's free. Search intent modeling tools mine that data and provide insight based on the search terms that consumers use to find your brands/products. This can teach you a lot about the thought process of your target audience and the words they use to talk about your brand, which can improve the effectiveness of your overall communication tremendously.

4. Plant your listening posts

Social web platforms such as blogs, microblogs, forums, social networks, and opinion and review sites give you another relatively easily accessible source of consumer data. This data can be used to generate insights in a manner similar to search intent modeling. Listening post technology can collect data from these platforms and perform semantic analysis of the conversations that are happening there. This can give you more insight into how many people are talking about your brand, whether they have positive or negative opinions and which other brands or characteristics they associate with it.

5. Revitalize your primary research

If you want to know what consumers think, just ask them. This is how primary research works, and this is why it has been the main data source for generating insights for a long time. But today's primary research is



an entirely new discipline from what it was a decade ago. Social communities and online survey tools have dramatically cut the costs of primary research. These tools can be used for idea generation, polling and even in-depth interviews. And they can be deployed very quickly. They even give you the ability to leave the feedback channel with your customers open at all times, providing your marketing group with a constant influx of fresh insights.

6. Simplify for increased actionability

Simplicity leads to action. This is definitely true for insights. But keeping things simple in a Math Marketing world is not obvious. Math Marketers are specialized in analyzing the vast amounts of data in our digital world. They often need to be taught how to embrace both the complexity of that data and the simplicity of actionable insights. There are plenty of techniques and tools that can help Math Marketing insights become more actionable. These range from personas and customer portraits to rulebooks and guidelines. Simplicity is key with all of them.

7. Empower the end user

Most companies spend far too little time on this last point. They put all their effort into generating insights and occasionally formulating them into simple, easy-to-digest formats only for their work to end up collecting dust on the shelf of the head of marketing intelligence. You should develop insights with end users in mind. These can be customer service representatives, new product development engineers, creative and design teams, or anyone else who could end up benefiting from your insights. Involving them in the insight generation process can help focus your efforts and will almost certainly help increase the adoption and use of those insights. This can often be achieved through small organizational changes. Consistent communication of insights to end users can be an easy but important first step.

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About the Author



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Dimitri leads the Ogilvy U.S. analytics capability, including brand tracking, media metrics, web analytics and marketing analytics. Dimitri began his career as a financial controller at Kraft Foods, after which he joined the Amsterdam Group (European Alcoholic Beverages Industry Group) as a market analyst for the EU.

He joined OgilvyOne Brussels in 1998 as a data analyst and has worked on various clients and on international product development for the Ogilvy Group. In 2001 Dimitri transferred to the London office to become Principal of International Consulting, responsible for developing the consultancy offering for international clients.

In 2004 Dimitri moved to San Francisco to work at Cisco's headquarters in San Jose, where he was responsible for developing the analytics department at Cisco Worldwide. After his spell in Silicon Valley, he moved to Ogilvy's New York office, where he is now Managing Director of Marketing Effectiveness for North America and Head of the Global Data Practice for the Ogilvy Group Worldwide.

Dimitri has a B.A. in applied economics and an M.A. in econometrics from the University of Antwerp, Belgium. He also has an M.B.A. from the Xavier Institute of Management, Bhubaneswar, India. On his blog, www.thedoublethink.com, he explores the synergies between traditional brand planning and marketing analytics. Dimitri and his wife, Katherine, live in Brooklyn, New York.

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