

WHY WE ARE SEEING A RISE IN MARKETING ANALYTICS JOBS?

BUSINESS INTELLIGENCE

By [Josh Rosenberg](#), Published August 12, 2013

There was a great article in Forbes last week by [Daniel Kehler](#), the “Chief Content Officer” at [Marketshare](#), called [Analysis Shows Jump in Marketing Analytics Jobs](#). The main hypotheses from this piece (based on a study that was commissioned with [icrunchdata](#)) were that companies are starting to hire people with more “big data” specific skill sets and marketing organizations are getting better at defining their analytics needs and thus hiring people with those skills.

Big data is a term that gets thrown around a lot (and I really mean *a lot*) – but for many companies this still seems like an abstract concept. McKinsey published an [interesting report](#) back in 2011 on the topic that describes big data in the intro as “[analyzing large data sets](#)”, which is a pretty good way to look at it. The problem has been in the past that many companies have had the information needed to discover trends in their programs but didn’t necessarily understand the value in doing so. In fact leveraging big data to make marketing decisions has been more of an art than a science to many enterprises in the past – and one of the changes that has come about since 2011 is that now companies are realizing they need more marketing scientists who can work with the data that is stored in their [CRM and marketing automation](#) solutions like [salesforce.com](#), [Marketo](#), and [Eloqua](#).

It makes complete sense from a revenue generation perspective or from a profit margins perspective because within all the “big data” companies have compiled lies many nuggets of information that can help close deals faster, eliminate bottlenecks, cut costs, and most importantly validate all the programs Marketing is running. CMOs are starting realize this and building marketing operations teams that know how to find critical information inside of CRM and marketing automation solutions such as which campaigns influence the most new deals based on specific product lines, geographies, or industry verticals. Or the simple ROI of each marketing program. Or even the volume, conversion rates, and velocity of all responses through the Marketing and Sales funnels.

Leveraging big data is important for the success of any company today, but in order to maximize its value, especially for Marketing and Sales, companies need people with solid analytics, reporting, and other data-driven skills who are good at finding those key pieces of information that can speed up deal velocity and generate more revenue for the company

Some of the tough questions answered through MMM

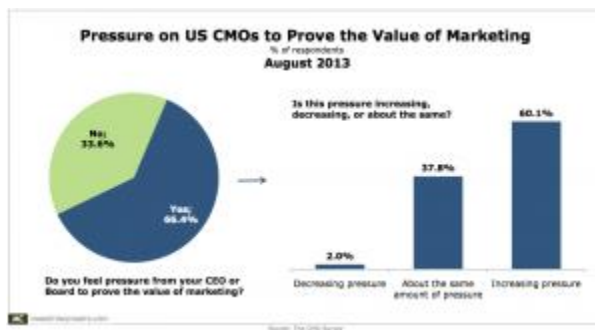
- What are the most important sales drivers – TV, Radio, Outdoor, Print or Digital?
 - What has been the ROI of paid search and display banner ads?
 - Which marketing messages are most effective in driving sales?
 - What would my sales be if I increased price by 10%?
 - How important are holiday promotions?
 - What is the effect of seasonality on sales?
 - What is the best way to allocate my marketing budget?
-
- Hollywood film executives often wrestle with the decision of whether or not to back a film with blockbuster potential. It may seem promising if hot directors love the script and major stars are interested in it, too. But in Hollywood, there are no guarantees. That project you're thinking of green lighting could wind up being a hit — or it could be a career-destroying flop.
 - With films often costing \$150 million and up, film studios need a better way than gut feelings to ensure they get their money back. Just look at last year's "John Carter" (which lost some \$200 million for its investors) and it's easy to understand why. That's the reason many producers are moving beyond intuition and focus-group research and starting to turn to predictive analytics.
 - Predictive analytics identifies patterns in past data. For example, if a proposed script is a raucous comedy about a wedding aboard a cruise ship, the data process can take into account information on how well recent comedies have done, while adding in box office receipts for previous wedding films. Programmers would also include information on movies that took place aboard cruise ships, along with the track records of the potential stars and the director. The more data that's added, the more accurate the predictions will be. Analysts may even include data taken from user comments on YouTube, Twitter, and Facebook.
 - So-called script evaluators can also suggest changes to a script, such as that cruise ship comedy not including a scene set in a bowling alley — movies with bowling alley scenes tend not to do well, script evaluator Vinny Bruzzese [told the New York Times](#). Entire characters can also be rewritten to reflect the latest data. Are vampires still a good bet? Look to predictive analytics to find out.
 - Ultimately, predictive analytics can give filmmakers the ability to make smarter decisions and have a better idea of how much money their films will make well before

they're released. That could mean fewer bombs and more films that audiences would actually want to see.

- In the meantime, though, we may still have to slog through long Saturday nights watching films that should never have been made.
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2 IN 3 CMOS FEELING PRESSURE FROM THE BOARD TO PROVE MARKETING'S VALUE

August 29, 2013 by MarketingCharts staff



This may be “[the year of the marketer](#),” but with added responsibilities come added pressures. The latest biannual [CMO Survey](#) [pdf] from Duke University’s Fuqua School of Business finds that CMOs are not immune: according to the study, 66.4% said they feel pressure from their CEO or Board to prove the value of marketing. What’s more, 6 in 10 of those said that their leaders are turning up the heat, with just 2% reporting decreasing demands to prove their worth.

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CMOs are being asked to prove their value at a time when the intensity of competition is ratcheting up a notch. Respondents indicated that the rivalry for customers is likely to become more intense in the next 12 months (5.5 on a 7-point scale, where 7 represents very likely), with competitor price-cutting also increasing (scoring 5 on the scale). Moreover, compared to surveys from prior years, CMOs are more likely to be anticipating the emergence of new domestic and global competitors.

CMOs are also feeling increasing pressure while seeing budgets dip: they expect [marketing spending to grow by 4.3%](#) over the next 12 months, a fairly marked step down from the February

survey's 6.1% growth forecast. Currently, marketing budgets are reported to account for an average of 9.4% of firm budgets, down from 10.6% in February.

CMOs claimed year-over-year increases in brand metrics such as customer acquisition (3.4%), customer retention (2%) and brand value (3.1%). But while they're generally pleased with their company's marketing excellence, their confidence has also dipped relative to the previous survey. In this latest installment, 53.3% rated their company's marketing excellence as "strong" or higher (top-3 box score on a 7-point scale), down from [57.8% in the February survey](#).

Still, CMOs' performance appears to be holding steady. Respondents reported that marketing ROI increased by 3.1% over the past 12 months, a figure consistent with results from August 2012 (3.2%) and 2011 (3%). And they continue to harbor lofty expectations, with a goal of 5% growth in marketing ROI in the next 12 months. (It's worth noting that their goals have dipped from a [5.5% objective in the last survey](#) released in February.)

CMOs are likely hoping that if they hit those goals, pressure from the Board will ease somewhat.

See [here](#) for marketers' main problems calculating ROI, and the toughest questions they face on the job.

About the Data: The CMO Survey is conducted online twice a year. The latest survey was fielded from July 16 to August 6, 2013. The survey had 410 respondents, of whom 93% were VP level or above.

CHIEF MARKETING OFFICER OPTIMISM AT FOUR-YEAR HIGH; PROVING THE VALUE OF MARKETING REMAINS ELUSIVE

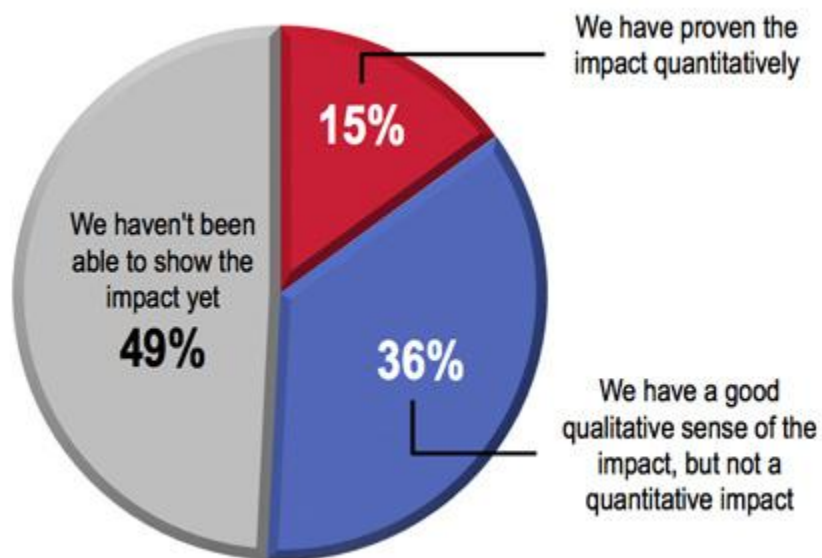
August 27th, 2013

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New results from The CMO Survey offer encouraging predictions about the future of markets and document ongoing challenges to marketing excellence and leadership. The 410 top marketers surveyed in August report their highest levels of optimism for the overall U.S. economy in four years. On a scale of 0-100, with 0 being the least optimistic, CMO scores came in at 65.7. This is nearly a 20-point increase over the same measure taken in August 2009 near the low point of the recession. Almost 50% of top marketers answered they are "more optimistic" about the overall U.S. economy compared to last quarter. Back in 2009, the optimists came in at just 14.9%. "Pessimists" went in the opposite direction with those reporting to be "less optimistic" dropping from 59.3% in 2009 to 13.2%.

Now for the rough news. Demonstrating the impact of marketing spending remains a challenge for marketing leaders. Only one-third of top marketers surveyed report their companies are able to demonstrate quantitatively the impact of their marketing spending. This percentage worsens when considering social media investments. Only 15% of CMOs surveyed report proven quantitative impacts from their social media marketing expenditures. Another 36% respond they have a good sense of the qualitative impact, but not the quantitative impact. Almost half of the CMOs surveyed (49%) have not been able to show that their company's social media activities have an impact on their business (Figure 1). Despite this, marketers are expected to increase expenditures in social media from 6.6% to 15.8% over the next five years (Figure 2).

Figure 1. How companies show the impact of social media on their business



This “spend-not-show” pattern is not sustainable, of course. Given this situation, it is also not surprising that 66% of CMOs report experiencing more pressure to prove the value of marketing from their CEOs and boards. Of these, two-thirds report that this pressure is increasing. Marketing leadership requires that CMOs offer strong evidence that strategic marketing investments are paying off for their firms in the short and long run. CMOs will only earn a ‘seat at the table’ if they can demonstrate the effect of their marketing spend.

Figure 2. Social media spending as a percentage of marketing budgets



Marketing analytics, marketing's version of big data, is currently 5.5% of marketing budgets and is expected to increase to 8.7% over the next three years. The use of this big data remains a challenge, however, as the reported percentage of projects using available or requested marketing analytics has decreased from 35% a year ago to 29% at present. This coincides with the finding that CMOs report only "average" contribution of marketing analytics to company performance (3.5 on a 7-point scale where 1 is "not at all" and 7 is "very highly"). This number has decreased from its first measurement (3.9) a year ago. Opportunities remain to convert this treasure trove of data into powerful insights for companies.

Marketers are also increasing their efforts to collect data about online customer behaviors. Approximately 60% collected online customer behavior data for targeting purposes and 88.5% are expected to increasingly do this over time. Despite growing outcry about surveillance in public and private sectors, privacy doesn't seem to be a worry for marketers. Fifty percent of the respondents had low levels of concern, while just 3.5% answered they were "very worried" about privacy. I found this number lower than expected. My own view is that marketers need to strike an honest bargain with customers on the issue of privacy—customers need to know they are being observed, agree to those observations, and get more value from marketers in return.

More results to follow. Stay tuned as together we try to improve the value of marketing in companies and society.

The future ROI of offline advertising

I read with great interest that [Google has filed a patent for Pay Per Gaze advertising](#), leveraging the power of the upcoming wearable computing/wearable tech trend. Whether or not they choose to use it, I think the concept has the potential to help answer one of the most long-standing questions in marketing analytics: **the power of offline**.

Here's why. Eye-tracking studies are notoriously expensive and scale very poorly. They require tightly controlled conditions, cumbersome equipment, and may have measurement issues (it's harder to behave naturally in a test environment). As a result, we don't have the same body of research about overall offline brand impact that we do for online, where we can measure things like where someone's mouse moved on screen.

That will change as wearable computing technologies with eye tracking built into them become more prevalent. Data collected from eye-tracking information transmitted by wearable computing after a user has become accustomed to their wearable devices may give a much more usable result than trying to do an eye-tracking study outdoors and moving around today, or surveying and relying on people's (flawed) memories of what they saw.

What will this answer?

You know all of those offline brand impressions? Billboards. Logos. T-shirts. Spotlights at car dealerships at night. Blimps. Magazine ads. Newspaper quarter page ads. Brands on baseball fields. Even non-visual interruption marketing like loud noises that make you turn to look for them. All of these are offline attempts at catching your attention. How many of them work? **How many of them deliver any kind of real brand impression at all?**

Now we'll know. It may not be Google Glass, but it will be some kind of wearable computing that can transmit that data back to marketers and advertisers as to what really works. Believe it or not, this could be a good thing for society at large. After all, if advertisers suddenly find out that plastering their logo all over everything goes completely unnoticed and unheeded (as we believe it does anecdotally), the data will suggest they find more effective ways of advertising instead of visual pollution, unless the data shows that visual pollution is actually effective.

This is the future ROI of offline advertising, and it will happen as part of the wearable computing trend

MEDIA ANALYTICS: UNIVERSAL MCCANN

by [Nina Lentini](#), Jan 10, 2012, 4:09 PM

By combining art, science, math and humanity, UM achieves analytic breakthrough

We were so impressed with Universal McCann's new media analytics technology that we created a new category and declared the Interpublic agency this year's winner. UM has found an innovative way to refine the media plan as it's playing out. Therefore, it can make adjustments accordingly and, it is hoped, reach the targeted audience more effectively.

How does it work? Think about Wall Street, where stockbrokers constantly evaluate which stocks are working harder than others and moving money around to their advantage. Well, over on Madison Avenue, this media agency has produced a continuous cycle of "measure, analyze, optimize." It's called UM 3.0.

Huw Griffiths, executive vice president and head of global performance, describes the methodology as a "one-two punch, an accelerated market-mix approach with macro feedback [that] tells you broadly to move money to national TV, to print, say, complemented by [audience measurement] research.

"These are high-level, strategic learnings of what's working and how to execute the change at the channel level. We hand that to the planners and buyers, and it's not conceptual any more; it's very practical."

Clearly, the agency has made a significant investment in 3.0. One reason is that it is moving toward a pay-for-performance compensation model. "We have to have a high degree of confidence that we can impact and optimize this," Griffiths says.

"The key part is that we've created a next-generation measurement first, about measuring performance, the business impact our plans are having for our clients," he says. "Not just reach of frequency but how many units are sold, media performance. We try and take that and blow it out. These techniques allow you to link media with sales."

Whereas the methodologies of the last 10 to 20 years are to do this annually or every six months, Griffiths says that is too late to change anything that isn't working. 3.0, he says, does the analytics every month or weekly, even, depending on how fast data is available, making mid-campaign changes possible.

"It's a combination of having the technology to handle data sources and deploying the right people — having enough people to build and execute models faster," he says. UM has invested in modeling and analytics talent and has the bandwidth to build the technology out.

Hari Abhyankar, executive vice president of global performance enablement at UM, says the level at which you make the buying decision is more granular than mere analysis. He notes the

yin and yang of 3.0.

“The first part is a combination of doing analytics more frequently and the planner, buyers and analytics working together. No amount of math will ever solve this problem. Math is not be-all and end-all. It’s all top down and stops where human judgment takes over. It’s art and science, math and humans contributing, closing the last mile, to a degree.”

Abhyankar’s been on a five-year journey to where he is now and excitedly speaks about having arrived. “It’s happening! Data’s coming in, clients want it; it’s all coming to life in meetings. We are at the proving stage.” (Among the clients already using 3.0 are Charles Schwab, Chrysler, Johnson & Johnson and Sony.)

Keith Camoosa, UM’s senior vice president and head of North American research, is the guy behind UM’s Audience Measurement Platform or AMP, the engine that drives 3.0.

It is “the umbrella term for data platforms, involving lots of sources of data across the media industry. We customize and create data with suppliers in the industry,” he says, noting that the types of data NPD Group and Nielsen offer “are not things that can be purchased off the shelf.

“Agencies have invested in a lot of data intelligence to plan and buy, but not in the data that tell us how well those are working or not working. It’s a new way of thinking about research within the agency.”

How to Make a Marketing Analytics Mindset Stick



MarketShare, Contributor
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By [Pat LaPointe](#), Executive Vice President of [MarketShare](#)

As more and more marketing organizations embrace advanced marketing analytics, a few trends are beginning to emerge that separate the most successful efforts. And one that’s

most striking is this: While building the right marketing measurement tools and processes is hard, getting people to embrace and use them can be ever harder. *Much harder.*

Making the marketing analytics mindset stick across the organization doesn't happen automatically. What's more, most marketing measurement failures are not due to some technical flaw or material things that were overlooked. They fail because the key constituents – those who would ultimately sit in judgment of the conclusions drawn – had not bought into the process from the beginning.

As multi-channel campaigns and cross-platform attribution become more critical for marketing organizations, CMOs face a daunting new task: stitching together disparate groups into a receptive team that shares goals, information and measurement frameworks. Such an integrated organization not only improves efficiency, it also improves performance by increasing visibility into how the various pieces interact with one another to drive sales or other conversions.



Why ROI Is Often Wrong For Measuring

Marketing Impact  MarketShareContributor

Applying Adoption Management Techniques

How, then, do you get groups with different perspectives who are accustomed to operating independently to buy into a more integrated approach? Some organizations have had great success by applying principles of "adoption management," a fancy term for a proven set of techniques that can get a variety of stakeholders to embrace a new program, initiative or way of thinking.

Successful adoption management is driven by these seven key principles:

1. **Goal Setting:** Clearly articulating the business objectives of a new program or initiative in ways that relate back to both the shared goals and the individual goals of the key constituents
2. **Visibility:** Building and maintaining a highly visible level of senior leadership involvement and commitment

3. **Transparency:** Providing time and appropriate forums for people to express concerns and ask “stupid” questions in non-threatening environments; ensuring that all voices are “heard”
4. **Honesty:** Acknowledging the inevitable flaws and imperfections of the proposed approach up-front instead of trying to gloss over them
5. **Bluntness:** Directly addressing concerns about incremental workload
6. **Training:** Offering training and on-going support to implement the program
7. **Communication:** Communicating the benefits and proof points of the program continually through regular updates of progress vs. program objectives

These principles can be fine-tuned to ensure adoption of marketing measurement/attribution efforts by:

- **Mapping your current business process to the new initiative.** This will set the context for how your analytics efforts will work within the established process.
- **Developing a phased adoption plan.** Creating a measurement mindset is an evolution – it’s generally not wise to attempt a “big bang” approach.
- **Involving the right players from the outset.** Those responsible for making resource allocation decisions must be solidly on-board or they won’t support the findings.

Proactive adoption planning helps marketers avoid spending hundreds of hours and hundreds of thousands of dollars on attribution initiatives that ultimately have no real impact on the business. Technical confidence in the math is important, but the credibility of the process is what ultimately gives the key stakeholders the conviction to take action on the results

What A Horse Can Teach Marketers About Winning



MarketShare, Contributor

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By [Daniel Kehrer](#), Director at [MarketShare](#) | [Twitter](#)

Marketing Mix (Photo by Cecilia Gustavsson Felix; courtesy of Glen Hill Farm)

Marketing Mix has one of the best track records in the business. But whoa. I'm not talking about allocating your organization's ad dollars. I'm talking – literally – about racing. Horse racing.

Marketing Mix, you see, is a horse (that's her in the photo). And a darned good one. Naturally, she's our unofficially "adopted" horse here at [MarketShare](#). She loves running on grass and owns a stunning career record (to date) of nine wins in 13 races on that surface, with three second-place finishes to boot. Every CMO's marketing mix should model that kind of behavior.

Marketing runs in Marketing Mix's family – both her horse family, and human family. Her sister, for example, is named Promotional. And [Glen Hill Farm](#), the thoroughbred breeding operation that owns her, is the passion of Leonard Lavin, the 93-year-old founder of Alberto Culver, which Unilever bought for \$3.7 billion in 2010. In addition to being an entrepreneur, master marketer and horse enthusiast, Lavin is a philanthropist in entrepreneurial education (a passion of my own), including the Lavin VentureStart programs at the Entrepreneurial Management Center at San Diego State University where he still lectures.

Breeding Winners

Leonard and Bernice Lavin bought their first horse in 1966 and the first foal was born at their 400-acre Glen Hill Farm in 1971. They've been breeding stakes winners ever since. According to Lavin's grandson Craig Bernick – who I spoke to recently and who worked on marketing mix during his years in the marketing department at Alberto Culver – marketing is deeply ingrained in the entire family. His mother has written books on branding, and Glen Hill Farm has used the marketing theme to name several of its horses. Bernick is the one who named this horse Marketing Mix.

Now as President and COO of Florida-based Glen Hill, Bernick oversees one of the premier thoroughbred operations in the country. Glen Hill breeds, raises and races horses that compete – and win – at the highest levels of the thoroughbred business. And Marketing Mix is one of their best ever. How appropriate

Marketers Race to Adopt Analytics

Horse racing is a particularly timely and apt metaphor for what's going on in the fast changing worlds of marketing and media mix modeling, predictive analytics, advanced marketing analytics and, for that matter, big data. Marketing organizations are locked in a race to adopt and deploy marketing analytics to help them allocate budgets more effectively, segment customer populations, provide fact-based support for strategic decisions, and quickly apply test-and-learn techniques to "what-if" scenarios (our [Harvard Business Review cover story](#) explains. Download it [here](#).).

And in fact, racing – or perhaps more accurately, the betting community – has long employed a form of predictive analytics of its own, collecting a wide range of “handicapping” data to predict which horse has the best chance of winning. This data includes, of course, such things as horse and jockey records, post position, competition, race length, injury status, track surface and even the animal’s “body language” including ears and tail, as well as external factors such as the weather.

Tapping Data to Win

To marketers now gathering and analyzing endless data about customer behavior in both the online and offline worlds, this starts to sound familiar. Race handicapping models might include a host of other independent variables, such as recent finishes, weight, lengths behind, “trip difficulties” (such as got bumped in a race), track work, trainer and others. In all, over 100 factors might go into building a competitive race model. Likewise, marketers are including vast arrays of data to model their own breed of race.

Marketing organizations are pouring money, time and effort into the kind of big data analytics never before available until recently. But this is no tortoise-and-hare affair. Slow and steady *won’t* win this race any more than it would if our girl Marketing Mix took that tack. [See this MarketShare *CMO Briefing* on [Secrets of Successful Marketing Analytics Adoption](#)]

Advanced analytics practices are taking hold rapidly in a highly dynamic environment. Those taking only small initial steps (or worse, no steps) will fall quickly behind. For large marketing organizations, this is a highly competitive race for scale – a battle to unlock new forms of value, not a delicate dance of wait-and-see.

That’s the message of Marketing Mix (the horse). My money’s on her!

What’s *your* take? Leave a comment below. View our MarketShare Voice [videos](#) and follow us on [Twitter](#), [LinkedIn](#) and [Facebook](#).

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IAB UK reveals ROI of social media for FMCG brands

Social media is generating three times the return on investment for some UK FMCG brands, according to a new study released by the Internet Advertising Bureau.

by [Helen Leggatt](#)

The study, which included top brands Twinings, Heinz and Kettle Chips, reveals the cost-effectiveness of social media involvement. For every £1 spent, a potential value of £3.34 can be generated.

"The IAB study validates what we've seen for Kettle and our other clients - social is an essential part of the marketing mix in making offline media investment work harder and in reaching people on emotional levels impossible in other media," commented Julian Grainger, Director of Media Strategy at Unique Digital, agency for Kettle Chips.

Social media's strength lies in its ability to positively shift attributes such as consumer sentiment, recommendation, propensity to trial new products and brand loyalty, found the research.

According to the research, conducted on behalf of the IAB's Social Media Council and carried out by Marketing Sciences, four out of five consumers said they would be "more inclined to buy a brand more often in the future" after seeing a brand's social media activity, while "83% of consumers exposed to social media would trial a brand's product".


All three of the brands studied saw a rise in consumer sentiment following the implementation of social media campaigns. Over a period of eight weeks, uplift was 22% (Heinz), 17% (Kettle) and 19% (Twinings).

Two key activities strengthened social media activity - frequent and relevant activity and a fan-centric strategy.

"Because fans don't just like, but love, the brands they choose to interact with, what people are often looking for is as simple as a lovely picture of the Heinz beans they love for breakfast, the Twinings tea they drink at elevenses, and a picture of the Kettle chips they snack on," said Kristin Brewe, the IAB's director of marketing and communications and chair of the Social Media Council.

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- **Digital Likely to Gain as P&G Focuses on ROI, Tempers Marketing Spend**
- **Lafley Talks Effectiveness in First Quarter After Return**

- By:

-  [Procter & Gamble Co.](#) will hike ad spending next year, but not as fast as the 1% to 2% sales growth it expects globally. This part of its plan to step up focus on effectiveness in part by **holding all brands to minimum standards for marketing return on investment**. All of which is likely to be good news for the digital space.
- The company beat expectations for top-line growth and earnings last quarter. But in the first quarterly earnings report since A.G. Lafley returned as Chairman-CEO, P&G is also tempering forecasts for market-share growth.

- While P&G is ahead of targets for cost savings and headcount reduction under its restructuring plan, it's planning to take more savings to the bottom line this year and less to marketing spending as it steps up efforts to restrain costs there.
- "We are holding all of the businesses to a minimum ROI," Mr. Lafley said on the company's earnings conference call. "We're pounding away on best media," he said, in part by focusing more on digital spending. He said the share of P&G marketing spending on digital in the U.S. is "up to 35%," ranging down to 25% on some brands.
- "We have some businesses and brands where digital is incredibly effective and we're doing more," he said. "We have other brands that are on the learning curve. We've got to get up the learning curve faster."
- Chief Financial Officer Jon Moeller said he expects advertising spending to lag sales growth by about 0.2 percentage points this year. The company declined to disclose reported advertising spending for the just-concluded fiscal year prior to release of its 10-K later this month, but spent \$9.3 billion globally the prior year, and that's expected to have grown at least 1% in line with sales, which rose to \$84.2 billion.
- Restraining ad spending below sales growth "does not mean less reach, less frequency," Mr. Moeller said. "It means more effective advertising, the right mix of media, and, importantly, reducing non-advertising costs that the consumers never see."
- Overall, P&G organic sales growth of 4% in the fiscal fourth quarter beat analyst expectations of closer to 3%, and core earnings per share (excluding restructuring costs) of 79 cents, while down from 82 cents a year ago, beat the company's forecast by 2 cents.
- But P&G is tempering expectations, calling for organic sales growth, excluding effects of acquisitions, divestitures and currency, of 3%-4%, about in line with the 3.5% growth it projects in its markets, and below prior targets of a point or two ahead of market growth under Chairman-CEO Bob McDonald, who stepped down in May. P&G had moved away from growth-above-markets target last year as Mr. McDonald worked on a turnaround plan, but P&G's forecast today indicated it doesn't see a return to aggressive share growth in the near future.
- "We continue to believe that the right organic sales growth target is one that is modestly above the rate of market growth," Mr. Moeller said.
- P&G's global market share of around 20% in March through May was "about in line" with a year ago, Mr. Moeller said, while it held or grew share in 70% of its U.S. business, the best performance in several quarters.
- While P&G beat expectations for the quarters, Mr. Lafley tempered Mr. McDonald's prior projections of a major step-up in innovation this year.
- "It takes time to work out of a tough patch," he said, adding later: "I think it's going to take a couple of years before we get everything in place where we're performing to our best potential." He called this "a transition year," following a "stepping-stone year" last year.
- After participating along with the management team in two-month a "deep dive" into P&G's issues, Mr. Lafley said the company will step up focus on such things as innovation, productivity and execution. P&G will focus on its core businesses, including the U.S., but isn't retreating from any countries entered under Mr. McDonald.

Secrets Of Successful Marketing Analytics Adoption



MarketShare, Contributor

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By [Wes Nichols](#), Co-Founder & CEO, MarketShare | [Twitter](#)

When Duke University's Fuqua School of Business released its latest edition of [The CMO Survey](#) recently, it revealed a curious paradox. Some 500 U.S. chief marketing officers surveyed said they expect to increase – and in fact *dramatically* increase – their spending on marketing analytics over the next three years. Currently, marketing organizations spend an average of about 6% of marketing budgets on analytics, which is expected to hit 10% within three years. That's to make sure the other 90% is optimally invested and the right customers are being offered the right things.

But here's the paradox: Even as marketers allocate more money to analytics, efforts to *apply* analytical learnings to organizational decision-making are lagging well behind. In other words, there's still a big gap in extracting the real value in big data. That gap, I would wager, results from what I call "institutional lethargy" – the tendency toward status quo that keeps organizations from making the changes they need to make.



Solving the Riddle of Measuring Social Voice [MarketShareContributor](#)



[Why ROI Is Often Wrong For Measuring Marketing Impact](#) [MarketShareContributor](#)
Mistakes with Marketing Analytics

"I think the mistake that a lot of companies make is that they spend on marketing analytics but they don't worry enough about how you *use* marketing analytics," says Christine Moorman, who directs The CMO Survey and is a professor of business administration at Duke, "...we don't see the commensurate use of those analytics to drive decision-making."

Other studies reveal a pattern of such paradox. Adobe, for example, found that 77% of marketers surveyed believe data on customer purchase histories can improve marketing ROI, yet only 21% actually use it. Likewise, 88% believe behavioral data can do the same, but only 20% use it.

Meanwhile, more than three of every four organizations say their marketing will be more measurable next year than it is today, and half say shrinking budgets are putting more pressure on accountability. Yet less than one in five feels they have the technology or expertise to pull it off.

But hey, in case your entire C-suite hasn't looked up lately, the world has changed. It's no longer about simple marketing mix modeling, or how much you spend on digital, or old-school digital attribution. It's a seismic, societal shift. And it's not even about big data. It's about *better decisions* – capturing value from the advanced analytics technology and capabilities now available.

McKinsey, for one, has framed this as the intersection of three sectors, where "value capture" exists at the point of overlap between: 1) Big data; 2) Predictive & optimization models; 3) Organizational transformation. For those who get it right, opportunity abounds in the form of new abilities to segment customer populations, fact-based support and greater transparency for strategic decisions, and a way to quickly apply test-and-learn techniques to explore war game scenarios, among others

Like many organizations, however, yours is probably scrambling to simply stay upright against hurricane force changes, let alone advance. And simply throwing money at big data won't help achieve the business goals you seek. Our experience at MarketShare suggests that the war against institutional lethargy can only be won with organizational change. Here are some suggestions:

Create an Analytics “SWAT” Team – To succeed, companies must embrace fact-based decision-making across the entire organization. But it’s not news that such efforts can meet strong resistance. The Rx is to create a *neutral* “Analytics Innovation and Transformation” team. This team reports to the CEO, has buy-in from the entire C-suite and is tasked with disrupting institutional lethargy so that the organization can begin to capture analytics value.

(In this video, Jim Garrity, former CMO of Wachovia and Compaq, offers tips on integrating advanced analytics into a marketing organization.)

Re-position Paradigms – A simple starting point is the realization that analytics is no longer the purview of the green eye-shade set, but is (or should be) a core organizational competency. To get there, C-suite seat holders might need reminders of what’s going on “out there.” I recently spoke to a senior executive at a global packaged goods company who had just led his executive team on a pilgrimage to Silicon Valley for immersion training in the fast-evolving world of social media, big data technology and more. They visited Google, Facebook and other disruptive players who’ve made sure that “business as usual” is gone for good. Changing the paradigms of your team members is just the beginning.

Make Marketing Lead – CMOs (in concert with finance) must be key players in this transformation team. Maybe, as some have suggested, CMO should really stand for “Change Management Officer”. Everyone’s feeling the heat. Accountability (through transparency) has never been such a hot topic among marketers. The Duke survey, for one, spotlights the urgent need for CMOs to strengthen their hand within the organization by taking the lead around fact-based decision making.

Articulate Answers & Data Sources – A key to bringing cross-functional teams on board is to simply articulate the answers you are seeking, and where the data to provide those answers will come from. Some divisions may be sitting on valuable data assets without even knowing it. By identifying that data and setting up a system to collect, protect and use it, data doubters can be won over.

Fact-based decision-making is only partly about math and computational power. It’s an organizational challenge as well. **Marketing is now a war of information, insight and asymmetric advantage gained by applying advanced analytics. The organizations most adept at integrating this change will win.**

Wes Nichols, co-Founder & CEO of MarketShare, wrote the March 2013 Harvard Business Review cover story “Advertising Analytics 2.0”. © 2013 MarketShare LLC. All rights reserved.

Why ROI Is Often Wrong For Measuring Marketing Impact

By [Daniel Kehrer](#), Director at [MarketShare](#) |

ROI is seductively simple. But is it what you really want?

Marketers beware, this might hurt: Using ROI to gauge impact can severely distort the true value marketing is delivering for your organization. Oh-Oh! Sure, it’s hard to have a marketing conversation these days without hearing ROI-this and ROI-that. It is, after all, one of today’s most beloved business buzz terms. And of course top management wants the “bottom line” on marketing’s contribution to business goals, and ROI is a handy yardstick.

But is “return on investment” an accurate way to measure marketing effectiveness? Sadly – and perhaps even shockingly to some – the answer is no.

It's not that the notion of ROI is evil or anything. After all, linking marketing to financial performance is absolutely critical. It's just that most people who use ROI *in a marketing context* probably aren't applying it correctly, or really mean something else, says Dominique Hanssens, professor of marketing at UCLA Anderson School of Management. ROI's roots are in evaluating one-time capital projects. "But is marketing a one-time capital project?" asks Hanssens. Clearly not.

We might (and indeed do) talk about marketing "investments" all the time. But marketing expenditures are technically an expense, as opposed to an investment, and that's an issue here. In finance-speak, marketing costs are a P&L item, *not* a balance sheet item.

As a result, notes Hanssens, who is also co-founder of MarketShare, marketers rarely *mean* ROI when they *say* ROI. "Plain" ROI is certainly an important metric for managers. But it falls well short of helping us understand marketing's contribution to business goals, or how those contributions can be improved. **ROI is too limited.** To gauge and improve marketing effectiveness, for example, we must factor in the strategic intent of all marketing investments a company makes.

The Rub over ROI

We'd all love to quantify marketing performance with a single number. But ROI is a ratio, and ratios are not what matter here. Net cash flows are what really matter, says Hanssens. Performance measures such as net profit, for example, are derived by subtracting various costs from revenue. ROI is different. You get it by *dividing* net revenue by cost.

Question is, how can a CMO compare the ROI for different marketing investments, such as a television ad campaign versus a paid search campaign? As it turns out, you can only make an ROI comparison if the *spending* amounts are the same.*****

And it's also critical to know that maximum ROI does not necessarily produce maximum profit. Oops! Blame the Law of Diminishing Returns. Many marketers might think that the highest ROI corresponds to the best spending level. Unfortunately, that's not so. For example, should you stop spending when ROI drops, even if you continue to produce bigger profits? Most likely not. **The point at which you'd stop or make a change depends on the return of the last incremental amount spent, not the overall ROI.**

This is also what's known as "return on *marginal* investment" – or ROMI. And "marginal" return vs. an average is what makes all the difference for accurately interpreting results and making decisions on future spending. So if you must use a return measure to gauge marketing effectiveness, use ROMI.

ROI, you see, changes at different spending levels. It is not only a function of the medium, but also of the *investment* in that medium. The only thing you really need to know is whether ROMI is positive or negative. Or, put another way, are you underspending in a given category...overspending...or getting it "just right" (where ROMI is zero)? And the determining lever is how much you spend.

Tracking Complex Interactions

What's more, a good ROI around a specific activity means nothing if **broader** marketing goals aren't being met.

Focusing solely on dollars-in ("I") compared to dollars-out ("R") ignores a complex web of interactions that happen in between. Only by analyzing as many of those intermediate processes as possible can we gain insights into what's working and what's not, and alter allocations to achieve better results. (This video on the "[Essentials of Advertising 2.0](#)" explains further.)

The core takeaway bears repeating: If you settle for a seductively simple measure such as ROI, you may severely distort the true value that marketing is delivering for your organization.

What's **your** take? Leave a comment below. View our [videos](#) and follow us on [Twitter](#), [LinkedIn](#) and [Facebook](#).

Daniel Kehler, a long-time business & financial journalist, columnist and editor, is the author of seven books and earned his MBA from the UCLA Anderson School of Management.

UNIVERSAL MCCANN'S ART THOMAS TALKS MARKETING MIX MODELING

by [David Goetzl](#),

Some might say with so much media research promising improved insight into ROI, the role of marketing mix modeling (MMM) has been overlooked. Recently, though, the trade's complicated work has received some criticism and come under increased attention, largely through a report by an industry group.

The report on the state of MMM came from the Council for Research Excellence (CRE), which commissioned consultancy [Sequent Partners](#) to conduct a study. CRE, which says it acts independently, is funded by Nielsen.

Both Nielsen and Sequent have a stake in how MMM evolves at agencies and clients. Sequent showed a commitment to independence in its research, though, by offering disclaimers about potential conflicts of interest on multiple occasions.

The CRE report, completed this spring, determined that marketing mix practitioners have a "great deal of integrity and pride" and are "sensitive to criticism about their 'black box' legacy and a perceived lack of transparency." [The research determined much of their "statistical techniques" go over the heads of clients.](#)

But it credited some modelers for pushing the envelope on evaluating how to navigate building short-term sales growth along with long-term brand equity. Their work has become more complex with the onset of social media and boom in mobile use. There has also been growth in big data and single-source research, which looks to link media exposure with purchasing behavior.

The report concluded that agencies could play a greater role in the modeling ecosystem. Their involvement is “considered better than it was 10 years ago, but still not where it needs to be.” One potential issue is clients use so many different agencies for so many different disciplines that coordination can be difficult.

MMM works best with “a cross-functional team and consistent involvement from the marketer, the modeler and the various agencies,” the report said.

The research included interviews with some 50 modelers, advertisers and academics. Modelers came from firms such as Ipsos MMA and Accenture, while advertisers included researchers at AT&T and Staples.

Among the modelers was Art Thomas, a veteran of MMM who worked at IRI and The Modeling Group before moving within an agency structure. He now leads the advanced analytics group at Mediabrands' Universal McCann, where he's worked with a client list that includes Hyundai, MasterCard and Six Flags.

In the spring, *Ad Age* ran a piece detailing some of the criticism percolating around MMM. It cited CBS Chief Research Officer David Poltrack suggesting modeling practitioners have failed to sufficiently incorporate newer single-source research into their work and “attribute sales to specific segments or groups of consumers.” Poltrack also suggested modelers overlook the impact search can have on sales with its potential for immediate action.

It should be noted Poltrack would hope modelers find TV and radio – core CBS businesses – make for exceptional uses of advertiser dollars.

Ad Age also noted Effective Marketing Management's David Hoo believes MMM has led consumer packaged goods (CPG) companies to misguidedly move money away from advertising into promotional activity.

With all the interest in MMM, Universal McCann's Thomas spoke with MediaPost and offered his take on the criticism and other issues affecting the business. His edited comments follow:

On suggestions modelers haven't moved fast enough to integrate emerging marketing options into their optimization models:

"Just like media has been evolving a lot -- especially over the last 10 years -- we expect there to be more people really looking into what the models are showing. So a lot more interested parties. Our clients are very aware of new media channels and there's always excitement around what's new. You've got to

make sure that balances with what's been around for a long time and what's still very reliable, even if it's considered I guess traditional media.

I've seen so much change just over the last 15 years and I expect there to be a lot more change going forward because (MMM) is an industry that really has a lot of people very anxious to explore new avenues (and) to look at better ways to read things.

To hear criticism like that ... some of us agree with it to a certain extent. I certainly do.

I know there's always a risk of misattributing something to a short-term outcome and that's something we'll have to keep in mind. I think a good modeler, a good practitioner knows that, but there's always a risk of somebody misusing model output for sure."

On the *Ad Age* article saying some critics believe models fail to acknowledge the value of advertising, including network TV, and overly focus on promotions around price:

"I'm not surprised. I think there is a danger of that happening. As a modeler, you have a couple of fears. Number one, of course, is you do a model and it sits on the shelf and nobody pays attention to it.

But the second fear and I think it's actually much more dangerous is the idea that (clients and planners) will take the model results as gospel. They'll go back and when you're not there to help them interpret the results ... just run with it.

There is a danger of seeing big returns from immediate actions like promotions and couponing for something that's a CPG (product).

A standard disclaimer we use for every presentation we give -- and every time we're talking about the ROIs with clients and planning teams -- is if you're trying to hit short-range goals, you can do that through promotions and through couponing. But, there are a lot of risks you run there. You never want to train your consumer to wait for a promotion.

The other thing is you can kind of cheapen your brand image a little bit by looking like it's not necessarily worth your real price you want to sell it at. And so we make sure we make that clear to planners and down the line to clients, because really your brand equity is the most important thing.

If used correctly and judiciously, promotion is not a bad way to get people in there, but you never want to rely on that as your main marketing effort. I understand the concern there for sure."

On suggestions modeling fails to account for the benefits of search enough:

"I think it's false. We have trouble capturing search really well in the models because it's always out there and that can be kind of a weakness for a time series model. But I don't think we're ignoring it. I do

think we understand that it's there and I think the fact is we use search very often in those upper funnel metrics, in those awareness metrics and consideration models."

On MMM's evolution and changes coming, including with social media:

"We're not necessarily modeling against sales these days. We do run sales models, but we construct an overall modeling structure that looks at the entire funnel.

There are so many more metrics that are available now than 10 years ago. We're measuring awareness, we're measuring top of mind, we're measuring preferences and we're measuring recommendations -- kind of post-sales satisfaction measures. It's about getting people considering the brand and then getting that conversion anywhere along that cycle.

And, then on the other side of the coin, when it comes to actual metrics, there's a lot more interest now in social media and just online media in general. There is the question of how can you best capture the impact of advertising and other marketing on social media-- and whether that's (measuring) brand equity effectively (or) whether it's just kind of a thing that people are not really involved with as much as we think they are. So, the challenge there has been making sure we're measuring the right metric for social and I think that's (gotten) better and better over time.

I don't trust a lot of the metrics right now. Because Facebook likes? What does that really mean? Is that really involvement by a consumer? I don't really think it is.

We have Twitter mentions (about a) product. That seems to be a little more accurate, but we're still kind of working on it. There is a lot of noise in that sphere. We want to make sure we're looking at the right data to make sure we're measuring things correctly."

On what new metrics provide as far as broader insight:

"A much better picture of the entire realm for a product ... If you have a big purchase like an automobile or something like that, it's a very long (period) between when (a consumer) sees an ad and considers a product and when you actually go and make a purchase. And now with better metrics (capturing) those in-between steps, we're able to get a much better picture about how a TV ad for instance ... feeds the awareness part and consideration part before you get to actually deciding on that final purchase."

The best people in this profession tell an entire story. They don't just give an ROI and an effectiveness and efficiency measure. You give a whole story about how a consumer considers a product. So, it gives us much more depth that way.

We're talking about getting people involved and moving them down the funnel. When it comes to planners using the modeling results... when you're trying to drive awareness, if you're trying to get trial for your product, the most effective way may not be the same one that necessarily reflects itself very easily in the sales down the line."

On cross-platform measurement and its intersection with MMM:

“Part of the challenge going forward is how do you really measure that ... One thing we have to remember, we really need to keep in mind throughout the modeling process, is that cross-channel can make certain things look more attractive than they really are compared to other things.

So, something that happens a lot is you’ll see digital video doing very well and digital in general doing really well -- because very often it’s much closer to that final result, that KPI you want to measure. But it shouldn’t come at the expense of more broad-reaching media – your network TV, your print ads. A good campaign tends to strengthen all of those things.

We’ll (give) a presentation that says your effectiveness and your ROI is higher for some of these new digital advertising platforms, **but those wouldn’t work as well without a really solid broad-reaching TV ad. That is the foundation that allows these more targeted media channels to be as effective as they are.** So, it’s really important to get a message out that people are familiar with, that kind of resonates with the consumer. And, then you’re able to go in and hit them on some of the smaller media platforms and make those so much more effective.”

On the impact of single-source measurement products like those from Nielsen Catalina Solutions and TRA on MMM:

“I think overall it’s helping. Anytime a client understands the usefulness of analytics in any way, shape or form as a tool in the entire portfolio of their planning process, I think it’s good.

I don’t know if marketing mix is ever really going to be replaced. I hope it isn’t actually. But I do think it is going to be incorporating more of these other strategies over time.

I’m always amazed at how many fairly large clients haven’t used any analytics over time or very few anyway. And, then you show them the process and their kind of like wow we’ve never really had numbers that back up some of (our) decisions ...

I don’t think it’s a bad thing to at least make them open to the idea of using analysis as a way to at least guide some decisions -- **not in a black and white gospel kind of way -- but at least a way to kind of nudge them one way or another.**

Part of the whole thing is kind of educating clients and making them very comfortable with the numbers, with the process, with the math behind it, without necessarily going into depth about the math -- but at least having them comfortable with the idea that you know what you’re doing and that you’re using both math and reason in combination to hopefully inform some good decisions. The more players in the market, I think the better it is.”

On the most impressive new metrics available:

“Better tracking of social media has been great. It’s really helped fill out that brand profile really well. And, more granular data overall.

The more granular data overall has made things much better. The trick to our industry is variation, making sure we can measure changes in inputs. And anytime we get more granular data -- whether it's digital, whether it's radio, in some cases TV is still getting better about that -- the better it is for us. I think across the board most media channels have gotten better about that over the last few years.”

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Read more: <http://www.mediapost.com/publications/article/203945/universal-mccanns-art-thomas-talks-marketing-mix.html?edition=61926#ixzz2YCs281zc>

by Herman Manson (@marklives) *Mad Men to Math Men* is where advertising has been heading for a while now, and the pace of transformation is only picking up, Steven Plimsoll (@splimsoll), Chief Technology Officer at the WPP Data Alliance and at Mindshare Worldwide, told delegates at the recently held Acceleration Digital Ignition Symposium.

In case you don’t know, the WPP Data Alliance is a partnership between WPP companies “to connect diverse data to provide powerful, analytics-driven solutions for our clients.” This is where direct marketing meets media, says Plimsoll, who argues that the traditional adoption model used by many marketers is broken as consumers adopt communication technology at an unprecedented pace.

WPP, with its keen eye on shifts in marketing spend, and backed up by the findings of a 2012 Gartner report that says by 2017 the CMO (Chief Marketing Officer) will spend more on IT than the CIO, is investing in building data partnerships, like the one recently announced with [Twitter](#), and going into client data strategy.

For the WPP Data Alliance every interaction, across the various channels we make use of, becomes an opportunity to collect data on consumers. “Insight opportunities” extend from store openings to tweets, call center activity, online ratings and reviews, media preferences and more. Data sources include traditional market research, owned activity monitoring (own website, call centre activity etc), social monitoring and media intelligence. Now plug all that data into a single pipe and see what you come up with.

According to Plimsoll collecting data is a never-ending task – 2% of customer records are made irrelevant each month. Of course you now have to figure out which 2%!

Plimsoll talks of a value exchange between engaged consumers and marketers as the future of brand communication. As a delegate I thought the word 'engaged consumers' should have been in caps, because I really can see value in only seeing advertising on topics I'm engaged with, on the proviso that the rest gets junked. It seems unlikely that media owners, or frankly marketers, would honour such a deal, where they get to collect my data in return for only relevant marketing communication. I'm betting my data will be collected, sold, resold, and I'll still receive a ton of messaging

Charles Duhigg, the NY Times writer and author of *The Power of Habit*, explains how data are already mined to predict consumer behaviour. Plimsoll uses Duhigg's video as an example of power of data already held by many corporations (watch video below).

Plimsoll gave a telling example of what customer data integration is already in play (for those companies who can afford it). An anonymous consumer is served a display ad. The same consumer later drops in on the brand site and their activity is recorded against the initial cookie. This second visit indicates consumer interest, the cookie is targeted on ad networks, after the brand site visit triggered a rule to ensure the highest bid against said cookie.

The consumer might well land back at the brand website, where they register via Facebook Connect and sign up for the opt-in newsletter. The Facebook ID and email address are recorded and Facebook Graph provides social network insight. With a name and email address in hand 3rd party data brokers will be approached for lifestyle data and address details (by now your full real name will be available to the marketer as well as your location).

The cookie might be identified as a regular visitor to a site catering to new moms, a text to a competition line with the email address included matches email and mobile numbers. Finally a call center operator calls with baby product offers, capture, and match personal details. That is anonymous browser to a personalised call with a relevant product offer in eight not terribly hard steps.

Plimsoll isn't worried about legislation targeting cookies, saying WebObjects in HTML5 remains active even when cookies are cleared, and offers more data. "No one is missing cookies," says Plimsoll.

This did make me wonder about the trust conversation marketers and brands are having with consumers. Trust us, we will tell you when we make use of cookies, and we don't capture a lot of your data anyway, the conversation goes. But it's not quite true, is it. As consumer realise the value of their data, and as data scandals receive more publicity, the big data conversation with consumers are going to have to change, or brands, and their agencies, will face risk to their reputations, and ultimately sales.

Customer path attribution proves TV ads still tops

By [RBR-TVBR](#) on Jun, 26 2013 with [Comments 0](#)

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Recently, the [Interactive Advertising Bureau](#) reported that digital ad revenues in the US reached \$36.6 billion in 2012. As online publishers continue to lure advertisers to the Web and the public's appetite for all things Internet lingers on, one might think that marketing dollars are better spent online. However, digital advertising isn't the only piece of the customer path puzzle; for many advertisers, the returns on online ad units continue to trail those of traditional broadcast buys. Yet brands are asking hard questions about TV campaigns: "Is TV right for us? Should we shift our ad spend to the Web?" Advertising and media agencies need to be ready to answer these questions with concrete data that reflects the full context of every customer touchpoint. This includes online assets as well as offline ones, such as direct mail, radio and, of course, television.

Even as online ad revenues climb, industry experts say that [97 percent of video watching still occurs on television](#), and TV marketing retains its broad reach. For advertisers with wide-ranging audience targets, high average order value or significant gross margins, TV remains a good bet. Understandably, though, few companies want to wager based on gut instinct, especially when the initial investment in TV requires substantial upfront spending for creative services and media buys. Smart marketers prefer an accurate view of what they are getting for those expenditures, and successful agencies find reliable, value-added ways to give it to them. This is where customer path attribution comes in.

The best way to demonstrate return on investment to any client is to continuously test, measure and improve (the "TMI cycle") on the marketing mix. [This strategy simply does not work without customer path attribution, which relies on cross-channel, cross-device algorithms to reveal a comprehensive view of customer behavior and the full path to conversion.](#) Customer path data is essential to understanding which exposures along the way influence the ultimate purchase. This allows companies and their agencies to measure the direct lift to digital channels that occurs immediately after a spot airs, as well as the longer term halo effect the offline advertising has on these digital channels, empowering them to concentrate on not only the incremental changes to the number of visitors to a website, but also on the real profit.

At the moment, when brands ask whether their offline media is generating positive ROI, what their costs per action are and which TV networks and creatives are performing best, ad agencies have to be ready to respond with [marketing attribution](#) data in hand. These measurement

methods should support specific recommendations that spark constant optimization, ultimately demonstrating the ongoing value of TV advertising for most brands.

When marketers examine all the interactions they have with their prospects, the majority determine that the return on Web video can't compete with that of TV advertising. Armed with cross-channel attribution data, brands are more likely to not only keep their TV ad budgets intact, but also augment them in order to generate additional revenue from a high-performing marketing asset.

—Jeff Zwelling is co-founder and CEO of [Convertro](#), which provides marketers and agencies with cross-channel analytics, insights and recommendations to monitor and optimize marketing strategies.

MARKETING PROS FOCUS ON COST CONTROL, ROI

by [David Goetzl](#), Yesterday, 4:53 PM

A survey from the Association of National Advertisers (ANA) indicates that procurement professionals remain heavily focused on keeping costs down when evaluating agency selection and compensation -- but they want ROI to play a larger role.

Among the 113 survey participants, almost all marketing procurement professionals, 30% said improving ROI is a metric currently being used in the procurement process, although 64% said it would be ideal to employ it.

In addition, only 44% are using innovation as a procurement benchmark, while 68% would ideally like to use it. Industry intelligence came in at 42% and 58%, respectively.

Agencies might be heartened to learn that 72% said “agency/supplier performance improvements” are being used and 84% think that ideally they should.

On the expense side, 94% said cost reduction is being used and 84% said cost avoidance.

“A key concept some organizations struggle with is understanding marketing spend as an investment to be maximized and not an expense to be minimized,” stated AFLAC’s Terri Burns, co-chair of the ANA Procurement Task Force. “In that context, the role of marketing procurement is to help maximize the investment in marketing activities.”

Let's Stand Up to the Attack on Marketing-Mix Models

For Years, These Calculations Have Enhanced Marketing and Media Spend

By:
Randy Stone

Published: *June 19, 2013*

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RANDY STONE

Long-established marketing-mix models are [coming under attack](#), with critics saying the approach was wrong all along and has only gotten worse with the emergence of digital and social media.

At the Advertising Research Foundation's Audience Measurement conference just concluded in New York -- aka "Geekapalooza," and I'm one of the geeks, so I can say that -- several sessions even proclaimed these models to be the enemy of worthwhile ad spending.

Really? Marketing-mix models are a statistical technique that explains how much of the weekly ups and downs of brand sales are due to various factors: media, promotions, pricing, competition, the economy, weather, etc. You then figure out the return on investment for each marketing activity. Some senior executives on the media side say the models systematically undervalue media and overvalue short-term promotions. To which I say: settle down Beavis, not true.

Barely a generation ago, the marketing and media ROI revolution, fueled by marketing-mix models, began a swift and steady march out of the basement of research experimentation. The models then made themselves at home on C-Suite couches and in boardroom briefing books.

To many, watching the near ubiquitous adoption of these models was akin to witnessing an Asian carp invasion. The waterways and ecosystems of marketing creativity became clogged and

choked as numbers seemed to out-compete ideas. Sadly, in some timidly managed meetings, this probably really happened.

Yet the vast majority of these models (with their ROI figures and "sweet spots" on marketing-plan simulations) supported and enhanced marketing and media spend. I say this with conviction, having been a partner and CEO of a "mix shop" for over a decade.

Marketing-mix models helped show, for example, that marketers' infamous tendency to try to make their annual numbers by cutting ad budgets in the fourth quarter ("oh please, consumers won't notice a thing, sales won't suffer that much") was usually ultimately more expensive. In the long run, brands had to compensate in subsequent quarters to regain lost sales momentum.

Even the finance department, no fan of spending in general, would come on board. In one of many examples, the CFO of a top-10 retailer told me, in the presence of the CMO: "I don't hate marketing spend, I hate marketing waste. I'll march into the boardroom arm in arm with [the CMO] tomorrow and fight for more marketing money if I know it's going to grow the business."

The CEO of a multibillion-dollar global firm in the health-and-beauty sector proclaimed, "I want these insights for every major category in every key geography. When we add in our plans on new products, we'll have our platform for long-term growth. That's what I'm paid to do, not just 'make the quarter.' " Half a year later, armed with positive marketplace results, the CEO and the CFO jointly shared some of the findings with the financial analyst community. Not bad for a bunch of geeks and geek-ettes, eh?

I've seen first-hand how these models provide critical and compelling cases for media budgets, more than any other methodology I'm aware of. My firm (as well as my competitors) employed smart, sophisticated and highly principled practitioners with diverse professional and academic backgrounds. And if we were smart, our clients and their agencies were usually even smarter. They collectively subjected the results to exhaustive scrutiny and validation. Guess what? In almost every case the models were stable. They predicted what would happen in different spend allocations with amazing accuracy. Clients absorbed the advice, took action, reaped the rewards and came back for more.

This happened in consumer packaged goods, retail, pharma, financial services, telecom, what have you. Media and promotions were better balanced and worked with greater synergy.

Brands took advantage of free opportunities in media execution (spend level, timing, traditional vs. digital allocations), seasonality, halo effects (off-line affecting on-line sales and vice versa, one brand's media driving a sister brand sales) and portfolio management (how to lay down the money among all the brands an advertiser has for the greater good). During the great recession, mix models were front and center in answering the question of the day: "I have to cut spend, how I do it in the least damaging way?"

Mix models are all about improving the process. The models themselves also benefit from improvements in technique, methodology and smart application. They enhance judgment and strategy; they do not replace them. Such enhancements have and will help capture the longer term effects of media spend. Smart and successful practitioners have always expressed the media results as short- to medium-term calculations, and therefore inherently conservative.

Maybe my clients, my former competitors and I wouldn't find today's criticism so striking if it came from a new generation of marketing scientists. I'd tell myself and my peers "Hey, stand down, it's their turn." But this new Greek Chorus is comprised of folks that have (or should have) gray hair like me. They spend ten minutes bashing for every minute spent trying to revive their old alternative methodology. Moreover, none of us can recall these folks participating consistently and meaningfully in the rough-and-tumble ROI revolution we've been a part of for a quarter century. To now whine and imply that that all of us: clients, providers, agencies and consultants have been naïve and duped for decades is silly and, well, incredible.

ABOUT THE AUTHOR

Randy Stone is an independent consultant who works with media agencies, research companies and advertisers on marketing effectiveness and client/agency relations. He was previously CEO of the marketing analytics firm MMA (Marketing Management Analytics), then part of [Aegis](#), for over 10 years.

DEBATE: IS A FOCUS ON ANALYTICS STIFLING MARKETERS' CREATIVITY?

BY [MARKETING](#) ON 20 JUNE 2013

Topic sentence: An increased focus on analytics is stifling marketers' creativity.

Andy Bateman
Global CEO
The Leading Edge

Negative – To some extent, I can see the logic in the question – the image of marketing people buried in spreadsheets and the 'paralysis of analysis', de-risking every single decision and only doing what the numbers say.

Agencies whine about conservative clients who just 'won't take risks' and so they can't sell their creative 'breakthrough'. The reality is that this image couldn't be further from the truth or the

reality of today's best marketers. Far from being buried in the numbers, they are liberated by them!

And the growth in analytics **is far more often used as a headlight than a rear view mirror**: helping marketers look for new product and service innovations, new opportunities to connect with customers and gaps in markets and categories where latent demand is unmet. And predict the potential for success.

The growth in big data analytics is being driven by the identification of growth opportunities more than it is being used to drive out cost and waste. And it makes sense. We've had seven years of painful, anaemic growth that has amounted to shrink-wrapping our businesses and we can't squeeze much more. I see much more activity around growth initiatives and innovation – and most of this is being driven by new business models, new products and markets identified by and de-risked through thorough data analysis.

I'd go as far as to say that I've never seen so much creativity in marketers who have made friends with data and are predicting opportunity with data. Of course we want to reduce risk in these growth initiatives and access to good predictive analytic models helps to de-risk them.

But don't confuse that with a lack of creativity.



Dominic Walsh

Managing director

Landor Associates

Affirmative – The debate over whether marketing is a science or an art is as old as the profession itself. In reality, it's about using analytics to make informed yet genuinely creative decisions.

In recent years, marketers have become increasingly reliant on analytics to inform decision-making. This is largely a result of the desire to manage risk and make educated decisions at the request of clients.

True innovation and sales performance is not about science or analytics alone, rather it is about abstract problem solving. This requires a lateral leap and insightful design thinking that breaks category norms, which cannot be achieved through mere 'informed decision-making'.

The fact that Dyson is now a \$1 billion business is testament to the fact that creative thinking has a commercial value and can produce commercial outcomes. James Dyson did not conduct in-depth regression analysis to determine what type of vacuum cleaner would meet a market need – he decided to ‘build a better mousetrap’ and allow the market to follow. The same can be said for the creative leadership of Steve Jobs and Jonathan Ive. Apple has been the world’s most powerful brand for years and, again, this success has been built on innovation and by taking a leap on the market rather than focusing heavily on in-depth analytics.

I do still believe there remains a place for analytics in informed decision-making – choice modelling and shopper analysis, for example, are providing marketers with great tools that assist in this area. But it needs to remain in this space and not attempt to substitute creative thinking – analytics will never be able to replace human capacity for abstract problem solving.



Susan Lyons

**Head of customer experience
CHE Proximity**

Negative – It’s a widely accepted belief in the advertising industry that great creative comes from a tight brief. Yet, there is still some nervousness and trepidation when it comes to the role that data can play in this process.

If the question was whether or not research data constrains the creative process, then most wouldn’t hesitate to say ‘no’. But when asked whether the seemingly dark art of behavioural data analytics constrains the creative process, most aren’t quite so sure. We still believe that the answer is ‘no’.

The defining role of data is in helping to create the parameters for the brief. There are many moments along the creative process where data can play a key role. But at its heart, the role of data in creativity is to illuminate a truth.

But it’s not ubiquitous. The shape and form of that ‘truth’ will be different every time. In one instance we’ve used data to identify and pinpoint the true business problem. Our client was concerned about customer churn and had briefed us to put in place a communications strategy to help alleviate the problem. But a closer look at the data actually highlighted that the business was in fact losing more revenue from customers slowly reducing their spend, rather than completely

churning. The true business problem was smaller competitors chipping away at the edges – not customers leaving altogether.

Without the use of data in this instance, the creative would have been chasing the wrong problem. The key to working with data is to understand and respect its limits. Data is the ultimate ‘lie detector’ and gets to the heart of ‘what’. But if you are expecting it to tell you ‘why’, then you will be disappointed. That still requires a leap. Every great brief has parameters and constraints. Data just helps us define these.



Ross Bark

**Principal consultant
Salmat Digital**

Negative – Many companies require defined metrics and ROI utilising analytics before investing in or pitching programs, which can mean a marketing initiative is harder to get off the ground. Previously, the marketing program may have been run based on the experience of the marketer or agency.

Executive management of many companies now expect to equate a tangible value or outcome to a marketing effort. This can mean there are challenges to create marketing assets instead of campaigns.

For years, marketing positions were filled by ‘creative types’, whose contribution to the bottom line was difficult to measure. But a lean economy and a competitive marketplace have mandated that marketers take a more engineering-based approach to their roles.

However, this does not necessarily mean that creativity is stifled. As the data is where you start – and then you get creative around whatever the analysis of that data is.

It’s also about ‘leveraged creativity’ – analytics by itself does not mean improved marketing measurement, but, if used effectively, the marketer can leverage the data with their creative expertise to drive better outcomes and generate higher engagement and revenue. The process is about data, then analytics, then measurement leading to creativity. As such, analytics gives you a focused direction, so that time and cost are spent in the most effective areas.

This is the ‘sweet spot’ where analytics improves a marketer’s creativity, rather than taking a broad-based data approach. As such, I believe an increased focus on analytics is not stifling marketers’ creativity. However, it is important to consider that a scattergun approach to analytics can lead to lack of understanding or appreciation of the right approach by management, which may limit creative freedom.

Is ROI killing creativity?

There are many discussions out there about the future of the agencies and the consensus seems to be that analytics will get a more prominent part in marketing departments and agencies. The discussion than seems to revolve around the tension between ROI and creativity and I remember having done some master classes in Europe with the title “Is ROI killing creativity?”. I’m obvious happy with more analytics, it’s Pointlogic’s core business. However, as I mentioned in my first blog post, I’ve always specifically enjoyed the tension between numbers and creativity. But my true believe is that these two could and should go hand in hand. If ROI is killing creativity, the only good reason would be if creativity indeed doesn’t deliver a better ROI. I’m guessing most would disagree.

The key problem is, I believe, that most marketers and agencies are comfortable with ROI in a historical sense. How well did this piece of creative perform? How well did this media plan perform? Then the strategic application of the ROI insights are to redo what worked and to stop what didn’t. And yes, this is like glue for creativity as creativity is about new and fresh and not about redoing.

But the solution is relatively straightforward although I know in my daily practice that it is out of the comfort zone of many. But analytical thinking and ROI should be applied in forward looking programs. Demand that analytics provide answers to expected ROI of campaigns before they happen. You might find that it could really transform the way you look at and apply research (with more assessments based on the unknown and more focus on how to monitor and adjust in real time). It’s only then that you’ll find that ROI helps creativity and that creativity helps ROI. And finally, it makes our job as analysts more fun!

Peter

Response attribution, while challenging, provides tremendous benefits. Not only does it provide full visibility into channel performance, it may be used as an input to optimize long term media spend as well.

The key benefit for cross channel attribution is to provide visibility into which marketing channels are driving sales well and which are performing poorly. This will allow you to adjust your marketing tactics accordingly and track performance over time.

In many environments several challenges exist when implementing a cross-channel response attribution model. They include:

1. The process of attributing a 'sale' to one or more channels is challenging from both a data and analytic perspective. It is best to start with bringing your data house in order before implementing the attribution model(s).
2. The modeling techniques can be complex and difficult to communicate. All teams (business, database, and analytics) need to be a part of the process of choosing the proper analytic techniques. Analytics should drive this process but gain feedback and buy-in from all teams at every step of development.
3. Implementation of the response attribution process typically requires a database, a data transformation layer, and an analytic engine. Be sure to have a vision on how the implementation should occur before starting development. That vision will help identify complexities during the implementation that may be minimized during development.
4. Once you have your response attribution house in order, then it may be used to help optimize media spend over time, through the use of media mix models. When mapping out the response attribution process spend time to understand how it will be used within media mix models as that will enable a more seamless process from response attribution to media mix.

Cross-channel response attribution can be difficult, but it is worth the effort. Think agile, start simple, gain buy-in and momentum, and enhance over time. It is human nature to take an all-in approach and build out the 'perfect' solution right away. I would argue that approach, in many environments, is fraught with pitfalls given the challenges that exist in cross-channel response attribution. Build out a roadmap with milestones and quick wins and a solution built out in phases so you can learn and enhance over time while providing value quickly.

Read more at <http://www.business2community.com/strategy/why-intelligent-cross-channel-response-attribution-is-the-way-to-go-0524363#rqt2X6Bvuhq1Q5Yc.99>

Marketing Governance Home About Us » Mission and Vision Vendor List
Contact June 6, 2013 | 0 Comments Analytics Isn't Business Acumen but it is a Mighty Important Part of the Equation In today's data-driven environment it's important not to confuse analytics with acumen. Analytics may help facilitate or enhance business acumen or astuteness, but it certainly doesn't replace it. The Oxford English Dictionary defines acumen as "the ability to make good judgments and quick decisions." Analytics, on the other hand, is logical analysis derived by applying some type of algorithms or mathematics to data. In 2007, Davenport and Harris described analytics as a set of technologies and processes that use information and data to understand and analyze business performance. Certainly well-thought out logical analysis can be very useful in understanding and addressing business situations and making quick decisions that will produce a desired outcome. But there's more to business acumen than logical analysis. A McKinsey article I once read framed this well, "good analysis in the hands of managers

who have good judgment won't naturally yield good decisions." Research by the Perth Leadership Institute, the Conference Executive Board (CEB) and others offer a variety of recommendations for how we can improve our business acumen. One of the key competencies cited is strong, quantitative skills. Why? Because being able to see the big picture requires an understanding of your market and how your organization operates in that market, and what drives profitability and cash flow for your organization.

This is where analytics come into play. Making Analytics Pay Off Here are a few concepts that will help you make sure your analytics give you what you need to enhance your business acumen. Separate is not equal. If you can, avoid having the analytics exist in a separate silo from the business. It's hard to leverage analytics that are divorced from the business. And before you set the data scientists loose, have clear business issues and opportunities in mind so that the analytics can be used to provide relevant insights. Keep in mind the analytics are a means to an end, not the end in itself. The best and brightest. Work to secure analysts with strong technical skills who also have some business experience. They should be thought of as integral members of the team whose work is helping solve business problems or identifying business opportunities. Strive for analysts who can bridge the technical knowledge and the business knowledge to serve as fully integrated business partners who focus on key business needs and decisions. Make analytics part of the DNA. When implemented well, analytics create impact throughout the organization by empowering better decisions. To generate this kind of value, analytics need to be integrated into day-to-day business operations and decisions Invest in systems and tools. Unlocking the full potential of data requires the appropriate technology, something above and beyond Excel or Access. There are more and more technology options available to help companies of all sizes and types leverage Big Data. Be sure the analytics team, IT and business users work together in the technology evaluation, selection and roadmap. Putting Analytics to Work Analytics enable businesses to better utilize data to make better business decisions. Analytics can contribute to improved understanding in a number of business situations. Some ways to put analytics to work include understanding: How individual business decisions are interrelated The potential impact of a decision on company value creation and the customer experience The effect of customer, product, and market decisions on revenue and profitability. Analytical capabilities help to identify problems as well as opportunities to create and innovate, redesign and re-engineer processes and systems, and support the evaluation of strategic and tactical options that will deliver the desired results - See more at:

http://marketinggovernance.com/?p=6922&sthash.WMZnyqXI.mjjo&goback=%2Egde_129575_member_249971482#sthash.WMZnyqXI.5fc3le8z.dpuf

• 39% of Marketers Cite Lack of Data as a Top Marketing Challenge

- June 14th, 2013 by [Olivia Cole](#)
- Marketing has reached a point in its growth where the concept of marketing measurement isn't an "if," but rather a "when" and a "how well." [Big Data](#) is already a popular topic of discussion, so metrics aren't an abstract idea known only to some. Yet in [Ifbyphone's 2013 State of Marketing Measurement Report](#), 39% of marketers cited lack of data as one of the top challenges faced by their organization.
- At first glance, this paints a different picture of the state of marketing measurement than we were expecting from what seems to be such a data-centric zeitgeist. But if you look at the rest of the [report](#), things make a little more sense.
- 39% of marketers cite lack of data as a top marketing challenge. Another stat in the report states that 45% of those marketers also report increased marketing budgets. Big deal, right? It's not really, until you look at one more piece of data from the report: 20% of marketers report plans to invest in marketing automation solutions, and another 20% report plans to invest, more specifically, in [voice-based marketing automation](#) solutions. One more telling stat? Another angle the [marketing report](#) tells us is the importance of the growth hacker to marketing teams, whose sole purpose is to generate growth from data and technology. 25% of marketing teams now have one, and more want one.
- So what does all this tell us?
- It tells us that data is hot, and it's not cooling off.
- Look at the data. First we have marketing teams that complain of too little data. Then we see an increase in marketing budgets. Then we see plans to invest in marketing measurement technology, as well as a rise in the number of marketing organizations who have a growth hacker.
- The pattern is clear: metrics and data are musts, and more and more marketing teams are realizing this is one trend that they can't stay on the sidelines for. If you're ahead of the curve and are already using voice-based marketing automation tools to close the gaps in your marketing strategy, rest easy. If not....you might want to download the [2013 State of Marketing Measurement Report](#) to see what your marketing peers are planning.

"Marketing mix modeling has evolved dramatically in the past 5 years," said Doug Brooks, EVP of Marketing Management Analytics. "Not only have more robust [data management](#) solutions enabled us to incorporate richer and more holistic data sources such as loyalty, digital and social media, but new and [integrated approaches that incorporate attitudinal data and the consumer](#) pathway are transforming the predictability and actionability of marketing analytics. We are now able to work with clients to identify and target their most valuable customers with the most effective [mix of both short and long term media](#) putting a premium on brand building and the equity and sustainable profitability that provides," said Brooks.

DANNON BOOSTS MARKET SHARE WITH BIG DATA ANALYTICS

The Dannon Company Inc., the leading selling yogurt company in the United States, works with food retailers and other partners to maintain its competitive advantage in the dynamic and growing yogurt category, in which segments such as Greek yogurt are rapidly increasing.

For example, the company is using IBM's cloud-based predictive analytics to ensure it has the right product mix delivered at the right time to satisfy consumers in the highly competitive \$7 billion U.S. yogurt market. Through the use of integrated analytics planning, Dannon is able to improve forecasting abilities in real time.

Through IBM's trade and strategic trade planning solutions, Dannon analyzes shopper behavior through the use of big data and predictive analytics to improve trade investment decisions and make more precise and accurate predictions on product volume and profitability. IBM was instrumental in helping Dannon's sales team to streamline the forecasting and planning process.

To meet continually changing consumer demand generated by promotions, Dannon must precisely anticipate how much additional yogurt is needed by its retailer customers, while also keeping in mind yogurt's limited shelf life. Empty shelves cannot be filled overnight and too much production can result in spoilage, both of which are losses for shoppers, retailers and Dannon.

By utilizing these tools and statistics, Dannon is able to more accurately measure how much yogurt they will need through predictive analytics, which ensures enough yogurt is on the shelf, resulting in happier shoppers, less wasted product, and a more profitable business for retailers.

"Our goal was to eliminate the time our sales team was spending on forecasting and instead focus their attention on executing their promotional plans, allowing them to work more closely with our retailer customers," said Timothy Weaver, chief information officer, The Dannon Company. "Through IBM's planning solutions, we not only streamlined the forecasting process for our sales team, but we increased our planning accuracy from 75 percent to 98 percent, helping us to further distinguish ourselves as the leading yogurt maker."

This type of planning accuracy is key to Dannon maintaining its leadership in the yogurt market. And armed with new insights, the company will now attempt to challenge Chobani for the No. 1 spot in the highly competitive, fast-growing market for Greek yogurt.

IBM's Smarter Commerce initiative features software and services that help companies transform their business processes to more quickly respond to shifting customer demands in today's digitally-transformed marketplace. The initiative is driven by CMOs, CIOs, and other C-suite executives who are increasingly looking for ways to bring new levels of automation to marketing, sales and fulfillment

to secure greater customer loyalty.

Current IBM cloud-based software and services being used by The Dannon Company include IBM Strategic Trade Planning and Customer Trade Planning solutions.

Preparing the Next Generation of Chief Marketers

Kellogg School of Management Launches Program To Help Current, Prospective CMOs Acquire New Skills

By:
[Eric Leininger](#)

,

[Gregory Carpenter](#)

Published: [May 22, 2013](#)

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ERIC LEININGER



GREGORY CARPENTER

Among leading industry observers and the media, there's widespread consensus that dramatic changes in the business landscape have made the role of **CMO ever more complex**. Globalization and technological advances have left organizations struggling to adapt their strategies to meet the heightened expectations of consumers. These developments have created more dynamic and potentially more profitable opportunities for companies that can infuse marketing into every facet of the enterprise.

While the challenges are widely acknowledged, solutions have proved to be in much shorter supply. Prescriptions have ranged from replacing the CMO with a chief customer officer to doing away with the CMO altogether. It's little wonder, then, that many CMOs are struggling with the lack of concrete direction about what their role should be, let alone how to make a tangible impact on the organization.

To address these challenges, we created the CMO Program. A critical component is to instill a broader perspective among CMOs for the complexities of global opportunities. Accordingly, we have assembled a roster of instructors that include leading faculty and practitioners from Fortune 500 companies. **The course, developed for future leaders of Fortune 500 companies across a range of industries, combines the latest research and insight from academia, mentoring from CMOs and CEOs, as well as hands-on problem solving to build capabilities through experiential learning.**

This week Northwestern's Kellogg CMO Program is hosting 21 current and prospective chief marketing officers for an intensive two-day executive development course. The program, which will conclude with another installment in late July, aims to provide participants with the perspective and skills they need to excel in their new role.

Given marketing's enhanced profile, we believe the next wave of CMOs must accomplish three core objectives to be successful:

1. Drive top-line growth and brand strength in a new era **of empowered consumers**. CMOs must be able to demonstrate their importance to business growth **and reorient company culture around customers**. Doing so requires that the CMO engage functional areas across the organization to ensure that **customer experience is consistent with brand promise**. At the same time, the

explosion of media means that effective communications must coordinate customer outreach, **public relations**, investor relations, communications, sales and customer service, among others. To assume this role, CMOs will need to embrace a cross-functional approach.

2. Anticipate and build the marketing competencies of the future. Companies across industries are struggling to extract value from rapidly evolving technologies such as **data analytics and social media**, and CMOs will increasingly drive these efforts. While tactics will come and go, the more significant challenge will be organizational. Companies will have to make a massive investment to find, attract, integrate, retain and develop key talent such as **data scientists and social media specialists**. To be effective, CMOs will also have to gain a better understanding of **analytics, social media** monitoring and the organizational challenges they pose.

3. Navigate a significant career transition into the C-suite. While the average CMO tenure has nearly doubled since 2006, to 45 months, that's hardly cause for celebration. Executives still have a relatively short time to implement their strategy and demonstrate progress. What's more, the transition period can be critical, with new CMOs seeking to gain an understanding of the challenges. Since many executives have long viewed marketing as more art than science, **CMOs must embrace hard metrics to more effectively advance the customer perspective in the C-suite and realize opportunities arising from this approach.**

These objectives will require CMOs to expand beyond their traditional responsibilities. Yet many marketing executives lack the range of skills and knowledge to excel in this changing environment. One of the primary obstacles for potential CMOs is that so much of the knowledge they must acquire to be successful lies beyond their formal marketing organization. With little time to learn on the job, **the most successful candidates will focus on professional development in the years preceding their ascendancy.** Leadership training programs have long been offered to aspiring executives, but CMO candidates must actively seek out mentoring opportunities in increasingly critical areas such as technology and data analytics

ABOUT THE AUTHORS

Ted, you make some nice points about objectives. With a control group, the incremental awareness can be pinpointed to the exposure within social media (as done in the seminal "never ending friending study" in 2006).

We, at Marketing Evolution, have had good success linking attitudinal shift to behavioral action (such as purchase, or increase purchase frequency). **In models for automotive, for example, we can see how changes in brand perceptions lead to increased consideration and increased probability of purchase.** We also, found a clear distinction between what we call "planting the seed" and "harvesting." (as published in our 1800 Flowers case study. **Search engine (SEM) with branded key words, for example, is typically a harvesting activity. The customer that searches and then buys typically had the seeds planted by other branding activities - or organic brand development (such as word of mouth recommendations).** In the 1800 Flowers study, we found 16% of sales came from search, but using control group, we could see the

baseline of those exposed to online display ads that search and then bought, and how many more in the exposed group who bought. This showed that 2% of sales came from the seed planted but an online banner the user did not click on, but then were more likely to search and buy. The CMO learned that the power of the brand increased the probability of conversion from the harvesting media like email offers and search. This resulted in a more balanced marketing mix.

Looking deeper into the data, focused on modeling why customers move forward, or don't to make a purchase. This holistic model effectively tells us which brand perceptions are the strongest driver of subsequent purchase behavior. We verify this with longitudinal analysis.

Now, we can use these key "leading indicators" as metrics to measure the success of particular branding programs without going through all the cost of the big customer centric "brand attribution modeling" (as we call it).

Back to the question at hand, which social media metrics matter the most in predicting the impact on the path to purchase. We find there are certain engagement metrics that are indicative of brand impact and increased purchase probability.

But, as Ted says, a cute kitty picture without brand connection might get passed along and other engagement indicators, so we find that either a qualitative look at the message that matches the metrics, or a pre-test, or a brand impact study (live, in-market), or some other way of confirming the engagement has a brand connection.

I've typed a lot here on a tiny iPhone screen, so let me stop here and offer that I'd be happy to post the referenced studies, or refer you to a free copy of *SIRFs-up*, my book that covers a lot of these points in detail.

Sent from my iPhone

On May 24, 2013, at 6:30 PM, "Ted Mcconnell" <ted.mcconnell@me.com> wrote:

I am compelled on this Friday night (no life), to react to both points of view. They are not in conflict. And, as always, YMMV (your mileage may vary).

To start ... its ALL surrogates ... or misattribution. Even in DR, a purchase may be attributed to a click, but of course it might have been because the person was sick of their old supplier. (Grass is greener). Or, heaven forbid, the product is better.

Social media is rife with misattribution ... mostly because people are responding to a post not to the brand equity. And even if they like the brand, the causal connection is shaky. I agree that "top of mind" is a valuable outcome of social, but I seriously doubt if people will change their mind about pet food because a pretty picture of a cat was posted by a sharp community manager. It might make them feel better about the brand, but even that is tenuous. For example, I love Mercedes, but I don't have a car. If I needed a car, I could not afford a Mercedes. I still love Mercedes.

I question the implication that interaction and visits are useless. They are surrogates alright .. for media effectiveness .. not brand lift. Since a metric butload of bucks are spent on media, we should care whether people saw it or thought about it. I once had a client brand who told me they didn't want more traffic because the operations costs would go up. haha. I told them they could save a lot of money by shutting down the website. Bottom line, if you spend money to get visits and engagement maybe you should know if that's what you actually got. No one is saying its anything but an accountability measure.

There's no point in either ignoring or demonizing "digital" measures. There's not much clarity about what the term means anyway. Also remember, in the context of Marketing goals, that most goals are the outcome of objectives, and the parent of strategies. Measuring goals is really simple. For example, if my marketing goal is "awareness" of a product attribute in some percent of a population (they usually leave off that last part) then you just ask that population if they are aware. The harder part is whether a given exposure was responsible for that change in awareness. The conversation is about attribution of marketing success. That's a good conversation.

CMO's narrative is not empty so much as it is hopeful. As a measurement industry, we sabotage ourselves by asking them what they want. Maybe they can't have that. IBM used to characterize all knowledge into 4 categories: Known, Unknown, Un-knowable, and complex. Maybe we should stop the sales guys from promising the un-knowable. :).

On May 24, 2013, at 7:41 AM, joel rubinson wrote:

Hi Ken:

need to disagree with you here. The two biggest value-adds of digital metrics are:

1--turning CMOs' empty narrative about the importance of social media, owned media, digital into a measurable model is critical. the narrative is often wrong, and measurement will inform this. It is disheartening that our industry hasn't measured this, but it has also turned into the full employment act for me as I have done a series of consulting assignments on exactly this theme.

2--creating brand measurement systems that allow for near real time sense and respond. If you can map sales to highly predictive digital behaviors, those become passively measurable conversion acts that can be used to optimize advertising in flight. Of course the listening aspects of social are also part of the sense and respond system so you don't miss a quick turn in the market or brand attacks.

On Thu, May 23, 2013 at 7:50 PM, Ken Mallon <kpmallon@yahoo.com> wrote:

Frances,

Although I've been in digital product development and digital ad research for a long time, I'm opposed to the use of the phrase "digital metrics". In my view, a marketer has marketing goals and therefore marketing success metrics, which are typically trying to change perceptions about a brand/product and/or driving short-term sales.

Measures such as generating ad interaction, website visits, likes and so on, in my view, are surrogates (at best) for true marketing success metrics.

Changes in brand perceptions and sales are device agnostic metrics.

All the above being said, you might be asking about website metrics versus ad/brand communications metrics. The best website metrics depend highly on your product and your marketing goals. In the e-commerce world, for example, the main goals of your website are much different than those who have little to sell online. Outside of e-commerce, a website is essentially an opportunity to change consumer perceptions and lead them to increased rates of purchase.

Does that help?

Why Big Data Marketing Needs To Get A Whole Lot Bigger

In the old days, marketers sought to identify a target consumer and then would spend millions to catch her at the right time, in the right place, with the right message. Success was like winning the lottery, you were never quite sure what you had until the results were in.

In the digital age, we identify a target market; bombard them with banner ads, online videos and tweets. If we get a good response, we bombard them some more. Has anything really changed?

The truth is that while media has been transformed, marketing practice has not kept pace. We throw budgets into different buckets, but the decision-making process remains much the same. You develop a theory of the case, test it in-market and then, if it goes well, do it some more. A true digital revolution in marketing has yet to take hold, but it has begun.

Who Is The Consumer, Really?

An often-repeated lament has been that we waste half of our advertising budget, but just don't know which half. It continues to resonate because we all know that increasing marketing efficiency is a great way to improve profitability.

Conceptually, the simplest way to increase efficiency is to prevent wastage. By targeting the right consumer at the right time, in the right place, with the right message, we can get the most out of a marketing budget. In other words, fish where the fish are. Put your time, effort and money where they can do the most good.

In practice, however, targeting becomes more problematic. If 60% of your consumers are women, should you ignore men? If 35% of your consumers are 18-24, does that really mean that you should spend all your money on college students? A recent Catalina study found that over half of brand sales come from outside the demographic target.

We need to stop thinking about target consumers and start thinking in terms of consumer networks. Just because the daughter buys it, doesn't mean the mother (or father or brother) won't and beyond consumers themselves, there are advocates and detractors that can affect a purchase as well. They all matter.

Consumer Journey Or Drunkard's Walk?

Another popular marketing concept is the consumer journey. (Here's McKinsey's version). In this view, prospects begin totally unaware of the wonderful brand experiences that await them until they are led on a fabulous adventure in which they consider, evaluate and purchase on a never-ending quest to becoming advocating consumers.

In reality, our behavior looks nothing like that. I might plan on having a hamburger for lunch until my friend mentions that she's on a diet and we opt to go for salads. Then we hear a colleague rave about a

new Tex-Mex restaurant and decide to go there until a client emergency has us hunkering down in a conference room and ordering pizza.

So our path-to-purchase looks less like a guided tour and more like a drunkard's walk, in which we stumble around, bouncing from innate preferences to brand impressions to peer recommendations to personal experiences before we land on any particular purchase decision.

The Limits of a Statistical Approach

The use of simplistically blunt methods such as target consumers and sales funnels wasn't so much a product of self-delusion as it was a marriage of convenience between available technology and the need for accountability. We never thought our models were a perfect depiction of reality, but developed techniques to suit the tools we had.

With a small, but controlled sample, you can extrapolate out to large populations and the error will be somewhat manageable and measurable for a limited amount of variables. The problem is that in a complex system, different factors interact with each other in often unpredictable and counterintuitive ways. Micromotives often result in macrobehavior.

This issue isn't exclusive to marketing, but occurs in many fields. The study of epidemics, for instance, has historically used statistical models with some effect, but much was left to be desired. More recently, they have begun to use new models with an agent-based approach, where whole populations are simulated.

One company, Concentric, is now applying similar techniques to marketing that incorporate a wide range of data sources, including qualitative and quantitative factors, in order to simulate the marketplace. This creates a far more accurate depiction than using econometrics to optimize one KPI or another. It also allows more flexibility.

Testing "What Ifs"

In the future, this type of agent-based modeling approach will become standard. Instead of spending hours in conference rooms arguing the merits of targeting techniques, the "consumer mindset" or what the Marketing Director overheard his daughter and her friends say, we will come up with "what if" scenarios and test them virtually.

The models will never be perfect. They will not account for emerging factors that we haven't encountered before, nor will they calculate existing ones with absolute accuracy. What they will do is help us weed out failed approaches before we spend money on them. They will also alert us to significant market changes through post-analysis.

Most of all, an agent-based simulation approach will increase our understanding of how the marketplace works. By continually asking "what if" and testing our notions in simulation, we can run experiments and learn from them, at negligible cost.

Flipping The Funnel

Amazon has taken a different approach to big data and simulations. Instead of worrying about the consumer journey, its enormous scale and heavy IT investment make Amazon a market simulation unto itself. The insights they gain are then deployed to offer you what you want, when you want it, through on-site optimization and email marketing.

The strategy has paid off and Amazon dominates online retail, accounting for 45% of desktop visits and almost 60% of mobile traffic. It's becoming more and more difficult for any company without a strong big data effort to compete in e-commerce and even those that do make the investment have a hard time matching Amazon's data quality.

BloomReach is looking to close that gap. It offers its own big data solutions to companies ranging from Drugstore.com to Nieman Marcus to Crate and Barrel. By monitoring search engines and social media, BloomReach's algorithms can identify consumer intent and can even create pages that match that intent with retailers' inventory.

Much like agent-based simulation, this represents a fundamentally different approach to marketing. Rather than trying to surmise what's going on by extrapolating from a small sample, big data solutions allow you to track the marketplace and adapt to changes in real time.

From the "Big Idea" to the Big Simulation

Throughout its history, marketing has always been driven by visionary ideas. A big, bold concept, backed by significant media investment, could mean the difference between a hit product and a flop. It was exciting, but risky. No amount of research or rigor could change the fact that you were, to a large degree, taking a leap of faith.

However, in the information age, we are no longer required to believe, only to imagine, test and observe. Instead of dreaming up big ideas and testing them in-market, we can test them in a virtual marketplace built by real-world, real-time data. If our wild hunch falls flat, all we lose are some bits and bytes.

Concentric has put together a nice set of case studies which report a 90% model accuracy and Forrester found that BloomReach delivers conversion increases of 60%. We are, in effect, entering a new simulation economy that looks very much like the real one except that the cost of failure is negligible while the rewards of success remain massive.

And that's the beauty of marketing driven by big data simulations, it allows us to dream bigger than ever. We can now go and test our wildest ideas, tweak them and then turn them into realities.

Ken

From: "Yu, Frances (US - Chicago)" <francesyu@deloitte.com>
To: "wonks@researchwonks.com" <wonks@researchwonks.com>
Sent: Thursday, May 23, 2013 1:05 PM
Subject: [wonks] Digital customer engagement metrics

Hello Wonks, I would love to hear your thoughts on the following two digital measurement questions:

1. In your view, what 2 - 3 **digital metrics** should a CMO manage to ensure high **digital customer engagement** (e.g., advocacy, visit duration, recency, loyalty)?
2. Is there composite metric for digital engagement that is useful for measuring cross-channel digital touches and/or can help drive behavior change?

Thanks in advance.

Frances

VOLTARI GEARS UP FOR PERFORMANCE-BASED MODELS, RELEASES SECONDCLICK TECH

by Tyler Loechner, Yesterday, 2:15 PM

While real-time in mobile hasn't seen the explosive growth online has, the technology is catching up. After officially announcing their mobile RTB platform last week, Voltari, a predictive analytics solutions provider for mobile, today launched SecondClick, which allows brands to target consumers beyond their initial click in real-time.

David Castillo, chief technology officer at Voltari, told RTM Daily that because the mobile advertising industry is moving towards performance-based models, Voltari wants to be prepared. Part of that preparation was releasing SecondClick.

The second click is a "clear decision point for most consumers," Rich Stalzer, Voltari's CEO said in an earlier statement. Castillo agreed, saying that following through to the second click "helps optimize on conversions."

Castillo said that what differentiates SecondClick's technology from other similar offerings is that a "score card" is updated in real-time. "Real-time scoring...allows us to look at any behavior post-first click and apply it immediately to our score card," he commented. The score cards are updated with training data, which analyzes live data to create new predictors, every 5-20 minutes. "[The] coefficients will change according to whose clicking on what in that second click experience," Castillo claimed.

In theory, the company's new SecondClick technology will allow advertisers to have real-time predictors based on second click data. This technology, along with their new mobile RTB platform, are gearing Voltari up for what they think is the future of mobile advertising. While the growth of RTB in mobile hasn't skyrocketed, Castillo argued that it has met expectations, and, in the near future, will take off.

Worlds Collide: The New Data-Focused CMOs and Their CIO Counterparts

Role of CMO is Morphing to Embrace Technology

By:
Kate Kaye

Published: *May 21, 2013*

71 share this page



Sheryl Pattek, Forrester Research

In 10 years, there will be 50 billion industrial machines connected to the internet, predicts Stephen Liguori, executive director-global innovation and new models at GE. The 123-year-old

firm calls it the "industrial internet" and it's the next wave of the consumer-focused internet of things [connecting everyday products to data](#)-collecting platforms.

The phenomenon is a ways off but GE is working to generate technology that collects and parses data to create greater efficiencies for businesses such as aviation, health care and "for folks that work in the power grid," said Mr. Liguori, speaking yesterday afternoon at the [Ad Age Marketing and Technology Summit](#) at Internet Week in New York.

Mr. Liguori joined a host of other marketers to discuss the new tech- and data-driven CMO and the increasing need for CMOs to work in tandem with CIOs to manage the vast swaths of data generated in his new era.

Nationwide CMO Matthew Jauchius, who works closely alongside CIO Michael Keller, offered a glimpse of what tomorrow's marketer looks like. The company spent \$100 million to build an integrated database platform for storing and analyzing CRM, sales and other data that was previously stored in disparate places. Mr. Jauchius and Mr. Keller worked together on development of the platform, completed in 2012.

Data should be an "enterprise asset" not a "departmental asset," stressed Mr. Jauchius.

Marketers should have a plan for IT, said Sheryl Pattek, VP and principal analyst at Forrester Research, adding that CMOs must be involved in vetting technology vendors, historically a job for the CIO that marketers ignored. Marketing execs should "step up and own that infrastructure," she told the audience.

The CMO-CIO connection is manifesting in a variety of ways. For Eric Pearson, the CIO at InterContinental Hotels Group, that means rethinking the role to better reflect the importance of technology when it comes to the customer experience. Mr. Pearson was the hotel firm's CMO before being named CIO.

"I firmly believe that technology is such a commercial enabler of the business," he said, noting that the commercial experience he gained as CMO is helping him achieve that with his technology purview.

Perhaps the meaning of CIO should reflect the new reality, continued Mr. Pearson, suggesting it could stand for chief integration officer, chief insight officer or chief innovation officer.

"At IHG I've been putting a little bit of marketing into technology and helping educate them in the importance of marketing," said Mr. Pearson. "Having them attend marketing conferences, reading marketing collateral."

Eduardo Conrado, senior VP-marketing and IT at Motorola Solutions, had his own twist on the evolving relationship between marketing and IT. The former CMO of Motorola Solutions in

January was elevated to a role into which marketing and IT report. About 18% to 20% of his company's marketers work in technology these days, said Mr. Conrado.

To truly wrap their heads around technology, marketers might consider learning to code -- at least enough to understand its possibilities, said [Razorfish](#) CEO Bob Lord and CTO Ray Valez. They pointed to online opportunities for such development, such as [Coursera](#) or [Udemy](#).

"That's actually a great, great, great suggestion," affirmed GE's Mr. Liguori.

P&G Launches Major ROI Review

Under Pressure, U.S.'s No. 1 Ad Spender Examines How It Measures the Impact of Its Outlay.

Published: [May 20, 2013](#)

[Procter & Gamble Co.](#) is the U.S.'s largest ad spender—and now it's embarking on a major review of how it measures the impact of that \$5 billion-plus annual outlay.

The move comes only two years after adopting a new system for measuring return on marketing investment and amid investor pressure for the world's biggest advertiser to get more bang for its marketing bucks.

Two years ago, P&G consolidated marketing-mix-modeling efforts with Nielsen and brought on DemandTec, an [IBM](#) company that worked with Nielsen to deliver monthly ROI reports supplementing the annual or quarterly analyses the company used in the past. P&G scrapped DemandTec after getting readings that varied widely month to month and sometimes didn't gibe with analyses by Nielsen and others, according to people familiar with the matter. (P&G and Nielsen declined to comment.)

The U.S.-focused review looks to try something [beyond](#) the marketing-mix modeling P&G and many others have for years used to judge marketing efficacy. According to people familiar with the matter, P&G has been talking to MarketShare Partners, ThinkVine and [Marketing Evolution](#), all of which at least in part use approaches other than marketing-mix modeling.

The effort aims to better capture impact of digital media—including social and search—and explain sales trends P&G's models sometimes can't. The idea is to start relatively small—with five brands—then expand to as many as 20 before rolling out any system companywide.

The impact could be huge. P&G spent \$2.8 billion last year in U.S. measured media, according to Kantar Media, but ROI models also cover broader spending, including another \$3 billion to \$4 billion in trade and consumer promotion.

LAGS COMPETITORS

While P&G's measured spending fell 5% last year, according to Kantar, the company plans to hike spending this quarter and through the balance of the fiscal year ending June 30, Chairman-CEO Bob McDonald said last month. Globally, P&G's reported \$9.4 billion in ad spending last year, which was up 25% in three years.

But P&G's organic sales growth continued to lag behind [Unilever](#), [L'Oreal](#) and [Colgate-Palmolive Co.](#) last quarter. Hedge-fund manager and P&G investor Bill Ackman said at an investor conference earlier this month that Mr. McDonald may need to go if P&G's results, including the top line, don't improve within three quarters.

Sanford C. Bernstein analyst Ali Dibadj said P&G is under pressure to improve the impact of its marketing spending because investors are questioning whether it can improve its top-line growth. "The question is no longer can they cut costs ... but as they're spending more and more money, it doesn't look like they're helping the top line."

But P&G Chief Financial Officer Jon Moeller at a Goldman Sachs conference May 14 pointed to steady improvement in market-share trends in the U.S. and globally in recent quarters and predicted better things still from coming product launches.

Leading the ROI review is Patrick McGraw, P&G's director of consumer and market knowledge. He also directed the effort two years ago to consolidate work with Nielsen and DemandTec, according to people familiar with the matter.

Marketing-mix modeling has always had critics, but is getting increased scrutiny. CBS Chief Research Officer David Poltrack has been leading a Council for Research Excellence examination of issues surrounding use of the models and plans to push the Advertising Research Foundation, which he chairs, to launch a quality inquiry into the models.

A P&G spokesman said the company "anticipates some industry analysis on marketing-mix models in the coming weeks" from the CRE and ARF, and after that "we'll consider if there's anything we would say publicly." But he declined to comment on relationships with individual suppliers

ALTERYX RAISES \$12M TO MAKE PREDICTIVE ANALYTICS USER-FRIENDLY

By [Derrick Harris](#)

Analytics provider Alteryx has raised another \$12 million as it tries to make statistical analysis a more consumer-friendly experience.

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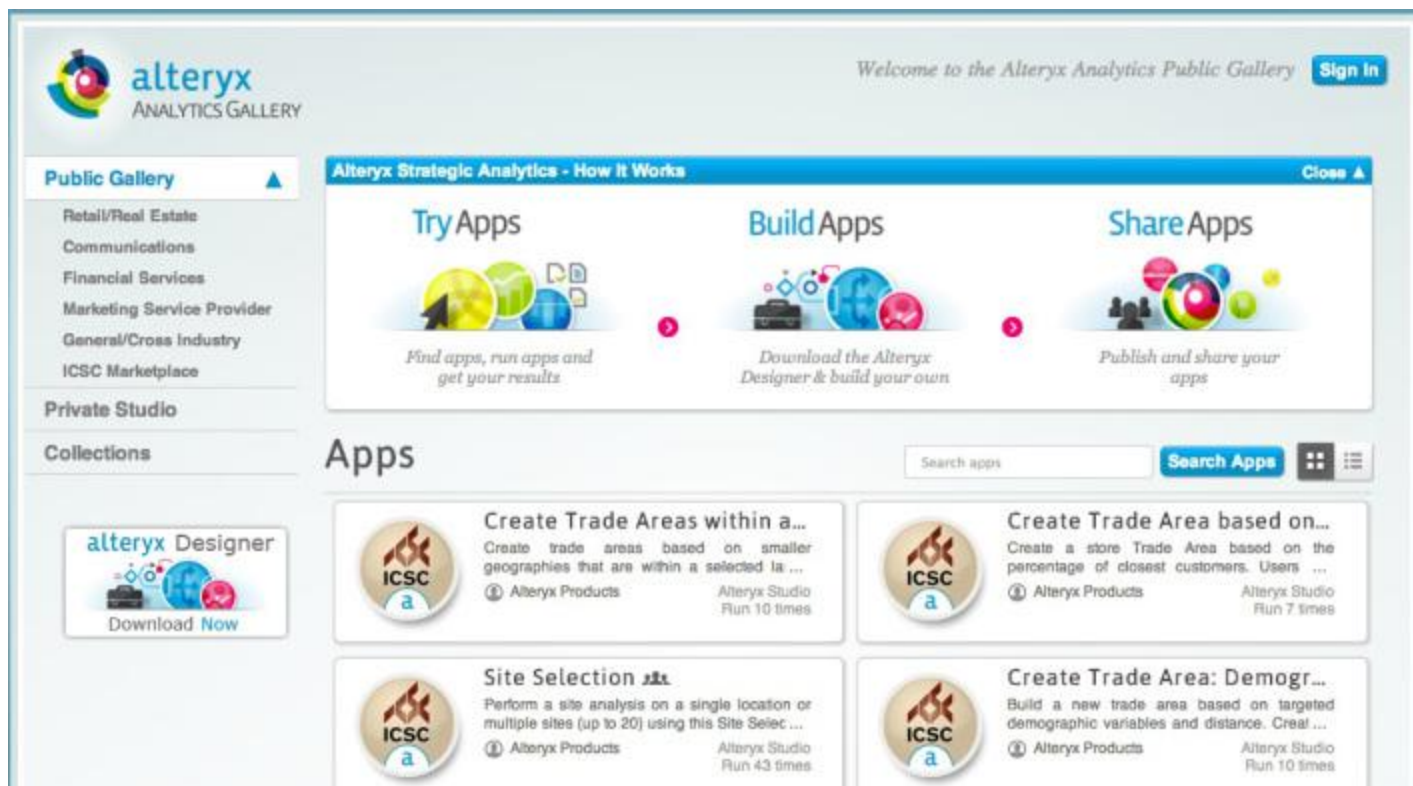
photo: [Shutterstock / ramcreations](#)

[Alteryx](#), an Irvine, Calif.-based startup trying to be a hybrid of Tableau and statistical analysis software like SAS or R, raised \$12 million in an extended Series A round. Newcomer firm Toba Capital led the round, with existing investor SAP Capital also contributing.

President and COO George Mathew says the company's mission is to be a one-stop shop for statistical analysis. It wants to be the one place where analysts and data scientists can blend their data, model it on it and then visualize it. Often, he noted, that same process might require two or three separate products.

Another feature that Alteryx hopes will set it apart is its collection of prebuilt models in what the company calls an analytics gallery. Users can share their own work or find models others have built for tackling similar issues. Alteryx also offers up its own pre-formatted datasets for analysis, often public data [such as the U.S. census](#).

"The canvas for creating an analytics application should never be blank for the analyst when they're getting started," Mathew explained. They often need to understand external data as well as their internal data, so Alteryx's software gives them easy access to it.



Because it's based on the R statistical-programming language, heavy R user Walmart has been able to transition some workloads to Alteryx when employees need an easier user experience. McDonald's uses it to analyze data about franchisees and about its growth strategy in China, and Bloomin' Brands (parent of company of Outback Steakhouse and other restaurants) is using it to help build menus that take into account what diners in various parts of the country prefer to eat. Nine of the 10 leading top wireless providers are also users, Mathew said, trying to blend actual call data with traditional sources such as customer service data.

Mathew compares Alteryx's current growth as analogous to software-as-a-service applications like Salesforce.com in the CRM space, or even [Tableau in the traditional business-intelligence space](#). In a business world increasingly driven by at least the idea of big data, one might expect any vendor pushing a more consumer-like purchase and consumption experience to get interest from companies tired of dealing with legacy software or never wanting to experience it in the first place.

"The disruption that's happening is creating a new space for ourselves," Mathew said, "without having to go head to head, frankly, with the status quo out there."

4 MARKETING BUZZWORDS THAT SHOULDN'T SCARE YOU

[Andrew Edwards](#) | May 20, 2013 | 1 Comment

Perhaps you've noticed certain buzzwords that attempt to define a changing landscape in digital analytics: "big data," "mobile marketing," "predictive analytics," and even a term I coined here in 2012: "[convergence analytics](#)."

Convergence analytics encompasses all of the emerging trends, and you can download the free report about that [here](#).

But somehow you have to navigate the next couple of years as new measurement paradigms mature and become mainstream. Understanding what's behind the buzz can help.

First, let's deconstruct some of the buzzwords - it tends to make them less scary. Then after each definition, we'll add a few notes as to what you can do now to take advantage of what's really going on.

Buzzwords and What to Do

1. Big data. There really is no such thing. It's a term used by business journalists and product marketers to create fear and doubt for the digital marketer. Yes, lots of data is being collected. Yes, there are tools that now can analyze multiple streams of data. Yes, you should try to make decisions based on data. But "big data" is not an enterprise in and of itself. It's just a word for "lots of data" and some of the practices evolving as folks try to utilize that data.

What you should do. Find out what kind of data is being collected within your organization, and how much of that might affect marketing (in a broad sense). Decide what data might help you make decisions and take a look at its current form. Determine if you can use it as-is, or if you need to pull it into a tool you a) already have or b) need to subscribe to that will help you make decisions. The keyword is "decisions." If you can't use the data to make any decisions, leave it alone.

2. Mobile marketing. Ask five experts about this and you'll get five different answers. No one really knows if this is a category yet, or several categories, or what the rules are, or how to win at it. Again, application vendors enjoy talking about "mobile marketing" because they want to sell a tool that some marketers may use to "optimize" their "mobile marketing." But we haven't even figured out what success looks like, and on what devices. And if you don't have a mobile strategy yet, you're not alone.

What you should do. Decide what platforms matter to you. Do you need to reach people on their smartphones? Or maybe just their tablets? Or both? Do you need an app to deliver the full value of your product or service? Or do you want to deploy adaptive screen technology (e.g., your site looks different depending on the device being used to view it)? Are you advertising to people on their smartphones? Or not? Does your product or service gain any particular relevance by being specially constructed for mobile users? And most importantly, where do your customers convert: on a device or in a browser? If you can start answering these questions, you will have

the foundations for what is commonly called "mobile marketing." The healthy approach is to go through some of the above exercises and then decide if you need a mobile strategy at all. Depending on your business, you may, or you may not!

3. Predictive analytics. It sounds like you should now expect to see into the future and ensure outcomes. Except not. Predictive analytics is essentially a data modeling exercise that looks at historical trends related mostly to campaign ROI and then allows you to review them in a dashboard. Then, in the same dashboard (generally), you can change some of the parameters - chiefly, how much you would spend on a campaign - and then allow the data model to extrapolate that out into the future. So, if you then advance the date range of your report into the future, you can see what your "future ROI" might look like. Often, these predictions turn out to be fairly accurate but there's certainly no guarantee.

What you should do. If you have a large marketing group that does lots of campaigning, you should certainly be tracking campaign success and trying to determine best outcomes for future campaigns. If you want to automate this somewhat, look for the predictive capabilities already built into your measurement tools. Many digital analytics tools today have some predictive capabilities in them, and often these are overlooked. You may need some help from the vendor or an outside expert getting these capabilities implemented, but the insights can be very useful when properly modeled. Hint: this capability is more commonly included in the existing tools on the market than you might think (because it's not very complex from a technology point of view).

4 . Convergence analytics. This term defines the confluence of technologies like: multi-channel data collection, powerful algorithms, and sophisticated display layers. The results can be powerful - a little bit like what used to be called "business intelligence" - but with a kinder, gentler approach. And geared specifically for marketers. There are at least 50 and probably more than 50 vendors converging on this space right now: all laying claim to the ability to connect lots of disparate data sources and put them into one dashboard or a series of dashboards.

What you should do. Accept the multi-channel future. Web analytics or any analytics in a silo just won't make hay anymore. The new paradigm is to mash data together and find correlations. The warning is: beware of false positives. Just because trends look similar doesn't mean there's causation between one and another. But there's no doubt that looking at multi-channel data in an aggregated form can lead to rich insights.

NEW INDEPENDENT RESEARCH REPORT NAMES LEADERS IN MARKETING MIX MODELING

PR Newswire

LOS ANGELES, May 21, 2013

LOS ANGELES, May 21, 2013 /PRNewswire/ -- In a new **Forrester Research, Inc.** report, MarketShare received the highest scores in all three of the top line categories measured by Forrester's Wave methodology – Strategy, Market Presence and Current Offering. The report also named MarketShare a leader for the second time in a **Forrester Wave™**. MarketShare's scores emerged from a rigorous evaluation of marketing mix modeling by Forrester that identified the providers that "matter most" and evaluated them against 63 individual criteria.

According to Forrester, an independent research firm serving global leaders in business and technology, "MarketShare earns its position as a Leader specifically for its innovative approach to marketing mix and its deep analytical capabilities." Describing leaders as "analytic visionaries," Forrester said **MarketShare** "has the right mix of strategy consulting and change management services, customized modeling expertise, an easy-to-use mix and optimization tool, and in-depth cross-industry and domain expertise."

"The message coming out of this Forrester Wave™ report couldn't be better for our clients who trust our solutions to help make better decisions," says Wes Nichols, Co-founder and CEO of MarketShare. "Our top scores in Strategy, Market Presence and Current Offering, along with Forrester's description of leaders as 'analytic visionaries' reinforces for us the market perception that we're leading the way in predictive analytics. Read the full report from Forrester and see for yourself why our fast-growing roster of major global companies is moving the industry beyond traditional media/marketing mix modeling, digital attribution and other 'Analytics 1.0' solutions, and toward integrating analytics across their entire organizations." (MarketShare's vision of "Analytics 2.0" was featured as the March *Harvard Business Review* cover story.)

The Forrester report cites a MarketShare client's own words, saying, "The depth and breadth of experience of the leadership and the support team is significant and not likely to be found with another vendor." MarketShare's top ranking in the report's "Current Offering" category encompasses services, technology/software, data, methodology, analysis and Net Promoter Score (NPS). Its top-ranked position in "Strategy" covers: management team strength, along with corporate, product, and global strategy. Under "Market Presence," where MarketShare also earned the top score, the individual criteria were: financial stability, global footprint, customer base and packaging.

In its new report, Forrester describes an evolving market that "is growing as marketers increasingly appreciate different methodologies and the unique insights that support them in making key budget allocation decisions." Leading vendors "have the capability to act as strategic partners advising clients on communication, marketing and business strategy decisions," the report says.

The Forrester Wave™: Marketing Mix Modeling, Q2 2013 – written by Tina Moffett, Customer Insights Analyst, and Luca Paderni, VP and Research Director - Marketing Leadership Practice at Forrester – also highlights the evolution of marketing mix modeling as it expands into consumer and business insights. With cheaper computational power and increasingly complex statistical model capabilities available to them, marketers can now uncover insights on consumer behavior and marketing performance across all channels, even down to the campaign level.

"There's a reason why half of Fortune 50 companies have worked with MarketShare, and that our software now influences the allocation of \$10's of billions in marketing investments," says Nichols. "And we believe it's the same reason Forrester found us to be a leader: MarketShare's track record of groundbreaking strategic solutions and

software innovations, pushing the boundaries of what marketers once thought impossible, is delivering bottom-line results that brands can't ignore."

The complexities resulting from today's multi-channel world are leading to traditional marketing and mix analytic methods being displaced by solutions like those offered by MarketShare, as marketers are demanding ever-more sophisticated solutions. Marketers who read Forrester's latest report will now have a clear mile marker for helping them choose the best partner to bring order to chaos and move beyond traditional media and marketing mix modeling.

Apply fact-based marketing mix optimization solutions to marketing investments to drive 40% improvements in your marketing effectiveness

- Use fact-based, predictive analytics to optimize future marketing investments to drive increases in sales, profits and share
- Balance short term marketing and promotion tactics with long term brand building needs
- Understand ROI for each off-line and online media channel, campaign and execution (i.e., search vs. circular vs. TV)
- Optimize allocation of traditional media vs. digital media and determine the synergies between the two
- Quantify the value and impact of emerging/new digital media (Facebook, Groupon, Foursquare, mobile aps, etc.)
- Lock into the right mix of marketing investment by DMA, region, country and "go to market" channel
- Determine which media vehicles and campaigns are most effective at driving revenue, profits, share and consumer segments
- Understand the economic, competitive, seasonal, weather and operational factors impact on sales by key time period
- Quantify the ROI of improving marketing effectiveness in terms of sales, profits, share and target consumer growth

Marketing Metrics Must Predict as Well as Describe

In [a recent post at Marketo's B2B Marketing and Sales Blog](#), [Jon Miller](#) identified six categories of marketing metrics to avoid. Jon's primary criticism of these metrics is that they relate very little to the financial outcomes (revenue growth and profitability) that are of the greatest interest to CEOs, CFOs, and other senior company leaders. When marketers use these kinds of metrics, it doesn't help their credibility in the C-suite.

Here are the six categories Jon identified:

- **Vanity metrics** - These are "feel good" measures such as press release impressions, Facebook "Likes," and names gathered at trade shows.
- **Measuring what is easy** - These are metrics that take the place of revenue and profit measures because they're easier to capture.
- **Focusing on quantity, not quality** - A good example is measuring the quantity of leads generated, but not their quality.
- **Tracking activity not results** - Senior company leaders care about results, not activities.
- **Efficiency instead of effectiveness** - Effectiveness metrics do a better job of convincing company leaders that marketing delivers real business value.

- **Cost metrics** - Jon contends that these are the worst kinds of metrics to use because they frame marketing as a cost center, rather than a revenue generator.

I agree with Jon that marketers should usually emphasize revenue and profit metrics when communicating with CEOs and CFOs. However, it's often necessary to use other types of metrics to provide a complete picture of marketing performance. This is particularly true when you need to communicate to senior company leaders why and how current marketing activities and programs will drive future revenue growth.

One limitation of financial measures is that they are **lagging indicators**. They measure the financial consequences of past marketing activities, but they can't measure how today's marketing activities will affect future financial performance.

You can, of course, use financial projections, but unless those projections are supported by sound and convincing evidence, their accuracy and value will be questioned.

In many cases, therefore, the most meaningful marketing metrics will be non-financial measures that are **leading indicators** of future financial results. When marketers use these kinds of metrics, they must be prepared to demonstrate that the metrics they've selected are truly leading indicators of future financial performance. In other words, you must be able to **"connect the dots"** between the metrics you're using and the financial results that senior leaders care about.

For example, a company blog rarely produces revenues directly for a B2B company. Not many people will read your blog and immediately call you to make a purchase. **However, a blog can be an effective tool for attracting the attention of potential buyers and generating leads for your business.**

The most obvious metric to use with a blog is "number of readers," but that metric will not be compelling to senior company leaders if it's used in isolation. To make this metric meaningful, you need to demonstrate that increasing the number of blog readers will contribute to future revenue growth. More specifically, what you need to do is "connect" blog readership to revenues by providing your senior leaders answers to the following questions:

- How many blog readers register to obtain access to other content resources?
- How many of these identified leads are affiliated with organizations in your target market?
 - How many of these identified leads become sales-ready leads?
- How many of the sales-ready leads become legitimate sales opportunities?
 - How many of these sales opportunities result in a closed sale?

- How much revenue is produced by these sales?

When you answer these questions, you can link blogging to revenues and demonstrate the value of your blogging program to senior leaders.

Including non-financial leading indicators in your marketing measurement system is particularly critical if your company offers complex products and has a long revenue generation cycle. In these circumstances, many marketing programs will contribute to revenues that won't show up on the income statement for several weeks or months. Leading indicator metrics provide the mechanism for demonstrating the value of marketing programs that take time to bear fruit.

WHY PREDICTIVE ANALYTICS MATTERS TO CMOs

Predictive analytics has become a buzzword for marketers on the quest to get to know their customers better, but how do CMOs utilise this methodology and the latest technology innovations to maximum benefit?

Predictive analytics is being touted as the best way for marketers to unearth fresh insights into their customer base using the wealth of data, technology tools and data science skills now at their disposal.

In the recent Temkin Group report [Prepare for Next Generation VoC Programs](#), 72 per cent of respondents cited predictive analytics models and open-ended verbatims as increasingly important sources of customer insight over the next three years. Of the large companies with more than 500 staff surveyed, 26 per cent claim to be using predictive analytics software and 36 per cent use text mining software already, with the same ratio of both actively considering investment.

But without the right approach from the [CMO](#) and business support, projects can fail to deliver the significant returns they should. So what problems can predictive analytics help the CMO to solve, how do you get started, convince your executive peers of the need for such an investment, and gather the right data to achieve the right outcome?

Big data battle

Predictive analytics is not a marketing-specific methodology or activity, but it is gaining wider application in this sector for a couple of reasons. The first is the availability and cost-effectiveness of technologies delivering the horsepower to churn through immense amounts of data. Increased levels of automation in the marketing function, along with the push to **understand consumer behaviour through insights hidden within big data,**

are also prompting more marketing chiefs to adopt predictive analytic solutions to drive sales and efficiency.

Well-entrenched applications of **predictive analytics** already exist outside the marketing sphere such as fraud detection and credit risk profiling, while regular users of the methodology include law enforcement, government and pharmaceuticals. Of course like most things, predictive analytics as a concept and intention is not new, and has its roots in data mining, response modelling and statistical regression.

Eric Siegel is founder of and author of the book *The power to predict who will click, buy, lie and die*. He whittled down predictive analytics in marketing to two main goals: **Who is going to buy, and who is going to cancel.** The defining characteristic of **predictive analytics** and what separates it from forecasting is the ability **to generate predictions for each individual customer or prospect.**

“It’s the holy grail of marketing – to proactively pounce on every individual customer opportunity,” Siegel told *CMO*. “Making a prediction about each individual is not such a crazy idea. You could have a business rule for customers who fit into a certain segment based on profile, purchases of a particular product, or geography. That’s the ‘if’ part of the rule. The ‘then’ part of the rule might be that these customers are three times more likely than average to cancel their subscription.

“Whatever the business problem is you’re trying to solve, **you’re applying each of these rules to assign probability to an individual. It’s not about making accurate predictions, it’s about better predicting outcomes.**”

Like most marketing innovations today, data lies at the heart of successful predictive analytics projects. All industries are getting excited about data because **it represents an experience and an aggregate recording of things that happened in the company or brand’s history,** Siegel claimed.

“Predictive analytics is a technology or methodology that learns from that experience and works out how to predict,” he explained.

“There is a lot of excitement about big data right now, but discussion often sidesteps the most salient question, which is: **‘What is the point of that data and where’s the value?’** The most actionable thing you can get from data is predicting. These predictions directly inform the action, treatment, recommendation, contact or retention on a per-customer basis across millions of customers. It’s the automation of millions of decisions based on millions of decisions.”

What predictive analytics is doing for marketers

Among the applications of predictive analytics in marketing are recommendation engines for cross-selling and upselling, customer churn, and retention programs. John Elder, the founder of data mining specialist consulting group Elder Research, said text analytics is another area gaining popularity, and some companies are even starting to use link analysis to identify connections between customers and account holders.

The US-based company has customers from all industries and describes predictive analytics as a way of addressing the “needle in a haystack”.

“The meaning of predictive analytics is relatively simple: It gives me the ability to help my sales team focus on the best opportunities,” Mindjet global CMO, Jascha Kaykas-Wolff, said. “The complications and complexity of the way you deploy predictive analytics feeds into that equation, but put simply, it’s about providing clarity to the sales organisation about which opportunities they should talk to.”

The US-based company provides collaboration and project management tools and claims 83 per cent of the Fortune 100 as customers. It has already invested in employing a third-party agency to undertake several predictive analytics projects and is now looking to invest in a software solution.

Alongside the technology improvements, Kaykas-Wolff attributed the rise in predictive analytics to a change in the way companies structure their sales capability. “Sales organisations are increasingly looking at traditional enterprise sales as being inside-sales driven,” he claimed.

“The model we had in the past of expensive enterprise sales people in the field, looking for a specific buyer, doesn’t make sense anymore. The dynamic today is to have groups of people inside your company looking at opportunities opening up through your website and digital channels, who then try to mine through that data about those prospects and customers and ultimately convert them.

“When you have a lower-cost product and sales organisation, you need a way to make sure you’re filtering out the deals that will take a long time to close and bring the cost of sale to a level that suits the business.”

Predictive analytics in action

One of the hottest applications of predictive analytics is around customer churn or attrition. A local example is [American Express’s global B2B marketing team, which is using predictive analytics to identify at-risk customers](#) who otherwise look healthy in its database. Through a pilot project, the company was able to improve identification of attrition risks by 8.4 times, and arm their marketing and sales staff with more accurate lists of individuals to target with retention campaigns and communication.

Another high-profile and controversial international example of the insights that can be achieved through predictive analytics is from [US retailer Target. The company successfully predicted one of its customers was pregnant before her father knew](#) when using predictive analytics to apply a pregnancy prediction score to new parents-to-be.

Siegel estimated organisations using predictive analytics to solve a particular customer problem will increase response and/or decrease costs by 15-30 per cent.

“You can’t afford to give your retention offer to your entire customer base, so it has to be effectively targeted,” he said. “If your top 40 per cent of customers actually includes 80 per cent of those who will respond, then you’re going to cut your costs by 60 per cent, because you’re going to suppress the other 60 per cent of your customer list and only sacrifice 20 per cent of the sale. That makes the bottom line skyrocket.”

At [Mindjet](#), predictive analytics is being applied to inbound trials of its software and activity inside those trials. Resulting data is then fed to the sales team to direct activity.

“The relationship between predictive analytics and the marketing and product teams is pretty important as well,” Kaykas-Wolff said. “Because we are in the SaaS [software-as-a-service] business, the relationship between those two data sources is important to use.”

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[Lattice Engines](#) is a consultancy group which uses predictive analytics to help brands better their sales and customer insights. Clients include Staples, Adobe, Wolters Kluwer, Hewlett-Packard and Microsoft.

According to founder and chief, [Brian Kardon](#), companies employing predictive analytics see an average of 20-40 per cent improvement in revenue. As an example, he pointed to his client, Internet networking vendor Juniper Networks, which looked to better identify suitable prospects for its sales team to pursue.

“There are thousands of variables that can trigger people to buy switches and routers, such as a change in the company’s size, or a new CIO,” Kardon said. “Using predictive analytics, we identified one variable which accounted for 60 per cent of an account buy, and that’s companies that have signed a real estate lease within the past 30 days. These companies are 10 times more likely to close than someone who hasn’t moved offices.

“Could a sales rep find that out by themselves? No, because every organisation and territory has a different way of filing leasing information. We also identified five products out of Juniper’s 500 SKUs that are most likely to be purchased by those signing leases. So instead of focusing broadly on prospects, we enabled Juniper’s sales team to focus on signing up key accounts that were almost certain to convert.”

The result was quicker sales and conversion rates, as well as an improved performance right across the sales cycle, Kardon said.

In another example, Lattice Engines worked with the life sciences division of GE to find out who its sales team should target first to purchase its specialised lab equipment. “What we discovered was that those that had just received a government grant were eight times more likely to purchase equipment,” Kardon explained. “But when it came to labs that worked on a particular type of protein, we found they were 50 times more likely to buy GE’s lab products.”

By using historical data to learn from a company’s previous customer transactions and history, Lattice Engines was able to apply the knowledge to an Internet and academic search to find new prospects for GE. For both Juniper and GE, the process involved looking at thousands of purchases and different attributes of its customers over a two-year period.

In the case of its work for Dell, Lattice Engines helped the sales team understand what products are best pitched at which existing accounts in order to improve the technology manufacturer’s upsell rates. This involved looking for patterns in the purchase history, as well as researching existing customers looking for new job listings, recent venture capital injections and office relocations.

“Many companies know the business triggers but can’t prove it, or have this kind of ‘tribal’ knowledge within their sales division,” Kardon said. “By using [big data](#), we can prove and predict where best to position efforts for maximum return.”

How CMOs make it happen[Anamatrix CEO and former CMO, Pelin Thorogood](#), claimed marketers are in “spring training” right now when it comes to interpreting data and utilising predictive analytics. The company produces business intelligence and data analytics technology tools to help companies drive better data insights.

“Part of it is data scientists and the people manipulating the data don’t understand the business side, and the people understanding the business side don’t really know how to manipulate the data,” she said. “It’s important for people to speak each other’s language so the analysis is done in a much more holistic manner and they can truly answer the right question. There needs to be a lot more conversation between the analytics/data science people and the business people – the general and category managers, plus the brand managers who own the product category and its P&L.”

There are a host of technology products, third-party agencies and data scientists available on the market today that actually do the hard work of predicting but none of these will be successful without certain elements and processes in place.

Firstly, **having a person to champion your predictive analytics project is vital** if you're to gain a measurable return on investment. "I often recommend my customers watch the movie *Moneyball* because it's a great example of success in this field," Elder said. "Brad Pitt plays a real-life person who used analytics in baseball to great effect. He wasn't the analyst himself, but he believed in it, protected the work being done and made decisions using the data. He was the hero of the story and earned rewards as a result."

Having **accessible, historical data in the right format** is another must. Whatever predictive analytics tools, third-party consultant or in-house staff member you employ to do the predicting for you, they will require data and snapshots of customers and information at various points in time if they are to learn how to predict.

"Predictive analytics is never going to solve bad hygiene in sales processes and product marketing," Kaykas-Wolff pointed out, adding CMOs need to have a deep comprehension of how predictive analytics works at least in principle if they're going to get significant returns. "You have to be clear on what your targets are, your pain points, value proposition and on top of that, the price has to match the market needs."

"You also have to understand your business," Elder continued. "We could be great at the data science component, but the best results come from being teamed up with someone who knows their industry, domain, data and the problem so we can learn from each other."

Thirdly, **CMOs must seek senior executive support**, as well as access to plenty of data, Kardon added. "We often find data is kept in siloes where marketing has website information, sales are holding onto CRM and the IT department has purchase history. No one person can make this effective," he said.

"You must first build the case with the CEO. Then team up with sales, IT and your support desk. A CMO can choose the predictive analytics technology, vendor or solution, but when it comes to big data it's about collaboration and data sharing."

It's also important to remember **predictive analytics is only useful if you act on the information generated**. CMOs need to build a plan for what is going to be predicted and what they are trying to achieve. In addition, they must look at how best to give the results of their predictive marketing efforts to the sales team. In this case, Kardon advised integrating the results into the company's CRM, and rank customer lists in order to those more likely to buy.

"You have to flesh out what the business value is going to be and how to act on that prediction, or you're just putting the cart before the horse," Siegel said. "Is Sarah over the wall going to be willing to throw away 40 per cent of the prospect list? As a marketing chief, you must do whatever it takes to make that operational change."

If you're not 100 per cent clear on what the output will look like and aren't willing to incentivise behaviour in the sales organisation or marketing team, it's not worth making the investment, Kaykas-Wolff argued.

"The increases in customer conversion will pay for the technology multiple times over, so often the CEO or CFO will see it as a good investment," he claimed. "It's really the behaviours and changes where the rubber hits the road, and that is the sales organisation. Are they going to accept the data? Where are they going to see it? Will it sit inside of Salesforce, attached to documentation, is it going to change the business process or change the sales pipeline?"

For Thorogood, **next-generation analytics is about finding new information, not proving your own suppositions**. "The key is using the data and analysis to eliminate things you may have not even thought about before, instead of using data to support existing premises, which is really using it as a crutch," she said. "Keep an open mind and leverage data through the edge cases, rather than the cases in the middle of the delta. And really look at it with a holistic understanding of the business, and optimise the forest, don't optimise the tree."

Whatever approach CMOs decide to take, **predictive analytics needs to be treated as a business initiative**, not an IT one. Siegel believed most companies have the potential to do more and better act on the data, while Elder saw further opportunities for predictive analytics around sales attribution across channels and has started pioneering this approach with one of its clients.

“One of the nice things about data mining is that it usually has a direct bottom line affect,” Elder said. “But what I would point out is that better companies do things they know won’t make them money but will teach them things about their customers. Learning more about customers and what the response rates are in different groups, and not always doing what will give them the more return next week, really pays off long term.”

So are you ready to predict?

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- Roi- “Nielsen Catalina Ventures” 12/09. Nielsen Catalina helps CPG marketers and media companies measure and improve ad performance with single-source analytics on all three screens – television, online and mobile. This new single-source capability allows them to identify the most valuable customers, more precisely select media that reaches them, and measure the ROI at a very granular level.
- For CBS, Nielsen Catalina examined sales lifts generated by TV campaigns across 18 different CPG categories to validate the hypothesis that using single-source data to link TV viewing with purchaser data provides new insights that could be incorporated into the media planning and buying process.
- The categories included snacks, prepared dinners, dairy, condiments, soft drinks and frozen items. The campaigns’ sales impacts were analyzed through two different lenses: the women 18-49, and behaviorally defined heavy-category consumers.
- Research demonstrated that improving campaign delivery to top category buyers – such as heavy detergent purchasers – can deliver 2.5 times more ROI leverage/sales lift, than improving the delivery to a specific demo, such as women 18-49.
- CBS will use the study and learnings to increase accountability for media buys made by their ad clients by having the ability to measure ROI among specific consumer groups. “Buyergraphics” leverage buyer segments based on purchase

behavior just as demographics use age, gender and income to define an audience. Buyergraphics build on demographics rather than replace them, sometimes including a demographic as an element of the definition.

- “CBS is pleased to work with Nielsen Catalina Solutions to offer clients a new way to grow their return on investment by factoring in brand purchasers as opposed to just looking at age/sex-defined demographics,” said David Poltrack, Chief Research Office

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Measurement, Discovery and Mistakes - Michael Kassan

Published: April 22, 2013 at 4:57 AM PDT

By Michael Kassan

All marketing begins with an insight. But it takes art and science to activate it. For this to work, all media—every touch point, every channel, every platform, every conversation—needs to be effectively represented and accurately measured.

If your plan is cross-platform minus one, it is not a cross-platform plan. You need it all, old and new. Look at how radio and social are both asking the same questions, for example. They share concerns, challenges, and opportunities because they share an ecosystem, each playing a role.

This is not just integration. It's interdependence.

Italian physicist Enrico Fermi said of any analysis, "there are two possible outcomes: if the result confirms the hypothesis, then you've made a measurement. If the result is contrary to the hypothesis, then you've made a discovery."

Every marketer should have this quote tacked up on their wall. But there's a third alternative—if the data that goes into your analysis is flawed, you have neither measurement nor discovery—you have a mistake. Or worse, a confirmation bias.

And as we know, nothing eats up a marketing budget faster than a mistake.

Here again, radio can provide a teachable moment. According to a recent Association of National Advertisers study, up to 70 percent of advertisers rely on Marketing Mix Modeling (MMM) to determine the potential impact each segment of an ad campaign – TV, radio, print, online – will have on sales.

These models are supposed to offer marketers a blueprint that strikes the right balance across several media and extracts the most from their ad budgets. But without reliable data for each medium, the MMM results can be misleading -- resulting in the wrong balance and wasteful ad spending.

Historically, radio data has not been sufficiently timely or appropriately detailed for best use in these models because it was averaged quarterly. Consequently, MMM has consistently under-represented radio's impact on consumers, meaning that the platform is often undervalued or even entirely left out of brands' marketing plans.

But the best counter-argument is one that takes an industry-wide view rather than a platform-centric one. An argument which holds that the right measurement is a rising tide lifting all boats.

That's how Clear Channel approached the challenge. Beyond their own internal research projects, the company partnered in a two-year industry initiative on how radio data can be optimally leveraged by MMM systems. Now that confidence was developed in those models – which demonstrate a better read on radio as well as overall media mix, they are being made available to marketers and MMM providers.

Incomplete measurement can damage any effort.

Good measurement leads to discovery.

Bad measurement leads to mistakes.

Marketers must pay heed to these truths.

Fermi certainly did. He was one of the inventors of the nuclear bomb.

Eye Tracker Finds Which Ads Actually Stick, Pushes 'Cost-Per-Visual' As New Madison Avenue Currency

by Joe Mandese, 3 hours ago

Even as Madison Avenue pushes to raise the bar for ad exposure from an “opportunity to see” to a “likelihood to see,” a promising new research technology has emerged that could raise it even further to, well, actually seen. The new research, which is based on state-of-the-art eye-tracking technology, uses consumers' own eye movements to verify what ads they have looked at.

While eye-tracking technology has been around for years, what makes the new system -- **dubbed Sticky** -- so powerful is that it doesn't apply it in a laboratory or a resting facility, but in the real world, in real-time, **while people are exposed to ads online.**

"Fifty percent of all ad impressions are never seen," says Jeff Bander, president of Sticky, who recently won the Advertising Research Foundation's **"Great Mind Award"** for helping to develop the innovative media tracking technology. That percentage, he notes, is the same as the oft-quoted John Wanamaker line: "Half the money I spend on advertising is wasted. The trouble is, I don't know which half."

"Now," says Bander, **"we know which half."**

Utilizing the webcams built into their own computers and handheld devices, Bander says Sticky has already tracked ads actually seen, or not, among 350,000 consumers. That's 700,000 eyeballs, more or less, creating a new form of media currency that some of the biggest advertisers in the world have already begun to use. **Among Sticky's biggest customers is Procter & Gamble.**

How Sticky might play into media negotiations isn't exactly clear, but it comes at a time when Madison Avenue is pushing the online industry to adopt a new standard of "viewability" for advertising exposure, meaning an ad has to be viewable on a consumer's screen -- not "below-the-fold" -- for at least one second to be credited as an ad exposure. Fifty percent of impressions are never seen.

“Viewability is nice, but viewability just means that an ad is within the viewable area of a screen,” notes Bander, adding: “It doesn’t mean a consumer is actually looking at your ad.”

Citing estimates from the Interactive Advertising Bureau that as much as 30% of online ads run outside the viewable area of a consumer’s screen, Bander says viewability is a good first step, but that the only way to know if someone has actually seen an ad is to track their eye movements.

Sticky was recently re-branded from its original corporate name, Eyetrackshop, to evoke the connotation that only the ads your eyes stick to are the ones advertisers should pay for. Bander says that logic evolved from some early beta work Sticky did with P&G, which wanted to know which of its ads were seen or not seen, in order to develop a “real CPM,” or cost-per-thousand for the money it spends to reach consumers.

“Their question basically caused us to reinvent our model,” recalls Bander, who says Sticky has refined the notion of a CPM by developing a CPV, or cost-per-visual, which is the actual dollar cost of reaching 1,000 consumers -- or 2,000 consumer eyeballs

Meredith Expands Program Guaranteeing Sales Lift for Big Advertisers

Publisher Adding Product Categories, Opening Up More Slots for Marketers

By: Nat Ives Published: April 29, 2013

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Some major magazine companies are expanding efforts to guarantee that advertising with their brands directly increases sales.

RELATED STORIES

Magazines to Marketers: We'll Prove How Much We Lift Sales

Following Meredith's ROI Promise on Campaigns, Time Inc. to Gauge Ads' Sales Results

Meredith Corp., the publisher of magazines such as Ladies' Home Journal and Better Homes and Gardens, is expanding its program for large advertisers to encompass more product categories, such as pharmaceuticals, and the number of clients it will work with. "We're a multimedia company," said Tom Harty, president of Meredith's National Media Group, which sells digital media as well as magazine ad pages. "We just feel like print gets bashed a little too much."

In the first year of Meredith's program, participating marketers earned an average return of \$7.81 for every \$1 they spent on ads in company magazines, Meredith said. The program uses consumer purchase data from sources such as Nielsen's Homescan panel to compare sales to households that receive Meredith magazines and a comparable group that does not. So far it has covered categories such as food, beauty and over-the-counter drugs.

Time Inc., meanwhile, plans to add evaluation of tablet and mobile ads to its program this year, a company spokeswoman said. Participating clients have seen returns ranging from \$4 to \$33, she added.

This kind of research seems likely to become more common. "There are more opportunities to merge media exposure with purchasing behavior," said Jeff Bickel, VP-delivery and analytics at Nielsen Catalina Solutions, which integrates Nielsen's media and household purchase information with Catalina's frequent shopper data. "That's really the heart of this type of analysis: to understand directly that here's a group of consumers, of households, that are exposed to this marketing and are compared to a like group of consumers who did not have that exposure." (Same thing we do with otx)

Marketers increasingly demand some sort of evidence that their ad spending is paying off, and the media sellers that can provide it may get a leg up. "We encourage all of our media partners to bring us more evidence in the form of custom research in order to better understand what is working and what is not, or at least not as well," said Mark Kaline, global director-media, licensing and consumer services at Kimberly-Clark, which participated in the program. "The Meredith sales guarantee was a unique approach to that end and we will be holding that up and encouraging our other partners to have the courage to do the same."

That said, Mr. Kaline added, the overall methods that marketers use to determine return on investment need to be revisited, making a reevaluation of traditional marketing mix modeling now underway at the Advertising Research Foundation "one of the most important efforts in the industry today."

Google Universal Analytics: Benefits of Integrating Call Tracking

April 24th, 2013 by Angelo Tsakonas

Many of you are eager for more insight into Google's newly released Universal Analytics, and we are eager to provide it. Our first blog on the subject gave you the basics and introduced our Universal Analytics integration. Now we're back to dig a little deeper into some of the truly powerful things you can do with the assistance of this new tool to extract more information about your marketing campaigns.

A Broader Scope

The ability to see which ads, search keywords or social media platforms are driving web site visits and phone calls to your business is just the beginning. Google Universal Analytics allows users to view call data inline with all other web metrics right in the standard Universal Analytics reporting interface. No

more having to look at virtual pageview goals that limit your ability to view other metrics/dimensions in contrast with your call data–Ifbyphone sends call data in as a Custom Metric to Google Universal Analytics which will allow you to add a reporting column for phone calls to any report/dashboard you already use daily.

You can also gain valuable insight into where (geographically) visitors are calling from. By adding a column for phone calls to your Visits by Geography report, you are able to see not only where the most visitors to your site come from but also which states, regions, or cities convert the most phone calls for your business. This is an invaluable tool for any multi-location retailer, franchise or business to determine the origin of their call flow.

Your Call Data–Organized

Another compelling aspect of Ifbyphone’s Universal Analytics integration is that we attribute your business’s calls to the unique Google Client ID that is assigned to each visitor on your site. Not only is this a much cleaner way to integrate call data into Universal Analytics, but you can now see how your users are interacting with your site and how that interaction leads to or generates phone calls.

For example, you can view the actual page a user was on when they picked up the phone and called you, or see if they made an online purchase before calling. You can also see how a person who originally found your site from a paid search ad and contacted you via web form, returns to your site via organic search and then calls. Needless to say, the amount of information that can now be mined

about your customers' activities—not to mention the connections being made within your marketing strategy—is much broader, and much more valuable. These metrics enable you to optimize not only your marketing campaigns, but your overall website experience as well.

Take More Action

We built our GUA integration using events as opposed to virtual pageview Goals. This not only changes the way we get our call data into Universal Analytics but also allows you to take more action with this data. For example, if you are A/B testing pages on your site and rely on phone calls as a conversion metric, you can now use calls to your business as a Content Experiment Objective.

Do you see the possibilities? Universal Analytics provides a much broader landscape in your marketing campaigns than ever before, and with Ifbyphone's integration, you're able to explore that landscape without missing a thing.

Have you seen a demo of our Universal Analytics integration yet? If not, do it now to start taking an active approach to your marketing campaigns. Also be sure to stay tuned for our next post in this series, we will be giving you a step-by-step how to on setting up your Ifbyphone Universal Analytics integration.

The Future Of Advertising Is Facial Recognition

April Joyner, Inc. | Apr. 27, 2013, 12:00 PM | 2,211 | 8

Affectiva

If Rana el Kaliouby has her way, you will never have to channel surf again. Affectiva, the company that el Kaliouby founded with MIT colleague Rosalind Picard, develops technology that reads minute facial expressions to measure emotion. A television equipped with a webcam and Affectiva's technology could determine which shows you like to watch, given your past emotional reactions to them, and program your television accordingly.

Affectiva's facial-reading software, Affdex, is already being used by major advertisers, including Unilever and Coca-Cola, that previously depended on focus groups and surveys to test ads. The problem with the old approach? It requires people to self-report their reactions. Affdex is more scientific. It records viewers as they watch ads on their computers and uses an algorithm to analyze subtle facial cues, drawing from a database of more than 283 million facial frames. Then it adds viewers' moment-to-moment reactions to a timeline for the ad, so companies can see precisely which segments might need tweaking. Affdex also determines if each viewer's overall reaction was positive or negative.

Since its launch in 2011, Affdex has helped measure audience sentiments for several high-profile events, including the 2012 U.S. presidential debates and this year's Super Bowl. The technology has spread globally, too: Affectiva's algorithm now includes data from viewers in 35 countries. Its ability to detect cultural differences in audience reactions has proved especially valuable to advertisers, says el Kaliouby, Affectiva's chief technology officer. For instance, when one company tested an ad in Brazil, it found an enthusiastic reception in one region of the country and a lackluster response in another. "If they find these things out earlier, advertisers can save millions of dollars," el Kaliouby says.

Originally, Affectiva's technology was developed for a far different purpose. El Kaliouby and Picard, an MIT professor and Affectiva's chief scientist, were developing a device that could respond to users' emotions, with the aim of helping autistic children communicate better. They realized that companies and researchers could benefit from the technology. In 2009, MIT's Media Lab spun off the project into a separate company. That year, David Berman, formerly the president of WebEx, joined as CEO.

Since then, Affectiva has grown in large part by signing partnerships with market research companies, including Millward Brown and InsightExpress, both of which offer Affdex to customers. It has raised \$21 million from investors, including Kleiner Perkins and WPP.

Eventually, Berman says, the technology could be used to test websites for ease of use or become a more scientific version of Facebook's Like button. In the next two years, Berman envisions Affdex becoming a complement to "smart" televisions that can understand people's preferences. "If my wife and I both like to watch the same show, it will fine-tune the algorithm," he says. "It puts the emotion back into viewing."

Measuring ROI of Social Media Efforts

Measuring the ROI of social media has become one of the biggest challenges for businesses and agencies alike. The presentation explains how both e-commerce and non e-commerce websites can measure social media return on investment.

Social Media ROI for E-commerce Sites

E-commerce sites can track social media sales and visitors by adding the Google Analytics e-commerce tracking code to their site. □ By setting up goals and using the conversion reports feature in Google Analytics, you can determine when a visitor has converted into a customer or lead, as well as the number transactions completed by social media visitors from a specific network. (i.e. Twitter, Facebook, Pinterest, etc.)

Savings: Social Media vs. Paid Media

Are your social efforts generating more results than what you would see with paid media? □

This can be answered by calculating how much it would cost to buy the same number of social impressions and actions with paid media as you do organically. To determine actual savings, use the Facebook ads, Twitter promoted tweets, YouTube promoted videos, and Google AdWords PPC advertising prices in your calculations.

Let's End the Obsession with Marketing ROI

Periodically, I feel the urge to rant about the current obsession with marketing ROI. I say obsession, not because marketing ROI isn't a very important measure of marketing performance, but because marketers now seem to feel compelled to calculate the ROI (or a projected ROI) of almost every marketing activity - even when the ability to accurately measure ROI is questionable at best.

I published my last rant on this topic in January of last year, and Stop Trying to Measure Marketing ROI has become one of the most popular posts at this blog. I won't rehash all of the arguments here, but the biggest challenge in measuring the ROI of an individual marketing program is revenue attribution. In order to calculate the ROI of a marketing program, you must know how much incremental revenue the program produced. If you can't accurately attribute revenue to a marketing program, you can't calculate an accurate ROI.

I was thinking about this topic when I came across a post at the Harvard Business Review Blog by Alnoor Ebrahim, an associate professor in the Social Enterprise Institute at the Harvard Business School. Ebrahim's post discusses how three "social action" organizations measure the performance of their programs. The focus of the post is whether the organizations only measure the immediate outputs of their programs, or also attempt to measure ultimate impacts or outcomes.

For example, Acumen Fund is a venture philanthropy fund that invests in social enterprises in Africa and Asia. Its primary social metric is the number of lives reached in poor markets. If Acumen invests in a company that manufactures anti-malarial bed nets, it will count the number of nets made and distributed. Acumen does not try to measure ultimate outcomes such as reduction in malaria or improvements in health, because it believes that measuring ultimate outcomes is too complicated, expensive, and impractical.

Robin Hood Foundation is a grant-making foundation whose objective is to fight poverty in New York City. When Robin Hood makes educational grants, it first identifies a set of results that can be easily measured - increased school attendance, scores on standardized tests, and high school graduation rates. Then it attempts to find third-party research studies that correlate these near-term results to expected lifetime earnings or quality of life (the ultimate desired outcomes). Robin Hood uses these studies to estimate the ultimate benefits of the programs until direct measurement (or better research) is available.

Professor Ebrahim argues that organizations must be realistic about measuring ultimate impacts: "Surely measuring impact matters but we need to be realistic about the constraints. It requires a level of research expertise, commitment to longitudinal study, and allocation of resources that are typically beyond the capabilities of implementing organizations. It is critical to identify when it makes sense to measure impacts and when it might be best to stick with outputs - especially when an organization's control over results is limited and causality remains poorly understood."

So, what does this have to do with marketing? I would suggest that the measurement challenges facing marketers are similar to those faced by these philanthropic organizations. Marketers would like to quantify the impact of every marketing program on revenue growth (the ultimate desired outcome), but that may not be realistic in some situations

In today's B2B marketing environment, prospective customers will be exposed to numerous marketing messages and programs over the course of their purchase journey. On top of that, for B2B companies that offer complex products or services, personal selling plays a significant role in driving new sales.

The issue is: How do you accurately attribute revenues across all of the marketing and sales activities that play some role in the generation of those revenues? With the use of extensive, longitudinal testing and marketing mix modeling, it may be possible for a company to arrive at a reasonably accurate attribution of revenues. However, these techniques require significant expertise and can be very expensive to use. As a result, few companies go this far. Research by the Lenskold Group indicates that only 11% of companies use test and control groups, and only 3% use market mix modeling. Without these techniques, it can be all but impossible to accurately attribute revenues in a complex demand generation environment.

For most companies, the more practical approach is to measure the outputs of individual marketing activities and to correlate those outputs to revenues without trying to attribute a specific dollar amount of revenue to each activity. With this approach, you can judge the value of an individual marketing activity without needing to use arbitrary revenue attribution to calculate ROI.

For a thorough and less "ranty" discussion of this topic, I recommend that you take a look at this recent post by Jon Miller at the Marketo B2B Marketing and Sales Blog.

The “Old Days”

Important-Just 12-18 months ago, marketers expected marketing attribution solutions to provide them with directional insights – mostly in the form of reports –on which channels, campaigns and tactics were contributing most to their success metrics in a multichannel environment. They were glad to have specific tactics identified as their top “introducers,” “advancers” and “closers” within their “attribution funnel,” as such insights ensured they would not blindly reduce their spend on tactics that were, for example, very productive introducers just because they weren’t effective as closers when judged by last-click methodologies.

Attribution expectations circa 2011-2012 were also heavily focused on “path-to-purchase” analysis – with marketers uncovering the top five or ten combinations of marketing touches that contributed to their desired conversions

More, More, More

Fast-forward to today. Brands and their agency partners are now asking for more: more translation of insights into actual media-spend recommendations. More facilitation of marketers’ daily tasks. And more detailed attribution for specific audience segments.

Media Spend Recommendations

Sometimes driven by a lack of in-house analytical support, and often driven by a desire for speed and simplification, marketers are increasingly demanding that attribution solutions go a step beyond displaying findings and delivering reports reflecting past performance. Instead, they require that these insights be translated into forward-looking media spend recommendations using

sophisticated predictive analytics, so they need do nothing more than push a button to have optimized media plans across multiple channels produced – which, when put into market will take advantage of cross tactic impact. And to get there, they want to be able to safely explore an unlimited number of media spending combinations in “pre-launch” mode, using their goals for overall cost, CPA or conversions as variables in “what-if?” scenario exploration exercises.

Facilitate Media Buying & Optimization

In addition to the demand for actual media buying recommendations referenced above, marketers are requiring that attribution solutions accommodate the real-world optimization constraints they face. Be those limits in available display/search inventory, pre-contracted media buys that can’t be changed, or internal resource limitations to how many changes can be executed, attribution isn’t valuable if it simply points to theoretical optimization tactics – it has to present executable recommendations.

And once those truly actionable recommendations have been identified, marketers are no longer satisfied by the ability to hand media buying recommendations to their media buyers, or to translate them into whatever campaign management platform they’re using. They now want to be able to deploy those recommendations into market by a push of a button that will send a feed to their demand side platform (DSP), real time bidding (RTB) or other buying platform that will automatically execute their optimized buys without the delay and exposure to human error that comes with manual execution.

Tailored Optimization By Segment

Finally, it’s no longer acceptable to deliver a shared set of attribution findings across the entire universe of prospects to which brands and their agencies target

their efforts. Increasingly, marketing attribution must be performed at the audience segment level to be deemed accurate. Identifying the combination of channels, campaigns and tactics that are most effective at producing conversions for each segment, optimizing to maximize the number of conversions produced by brands' most profitable segments, and targeting limited budgets to the audience segments with the highest propensity to convert are all strategies that attribution is now expected to enable.

The demands of the marketplace will continue to drive innovation within the marketing attribution space. Today's requirements are just stepping-stones to a more efficient media buying future, and will soon give way to even more cutting-edge functionality that further empowers marketers' multichannel efforts

Marketing Metrics: Do your analytics capture the real reasons customers buy from you?

[Jonathan Greene](#) April 16th, 2013
[No comments](#) [Leave a comment](#)

How can you track the most impactful elements of your marketing funnel? Let's start with an analogy ...

I once had a crush on a girl. I talked to her every day, but she rarely took notice of my existence. She liked the "bad boys," and I was kind of a nerd. It seemed as if the stars were aligned against us.

I tried asking sweetly, coming up with inventive date ideas, even appealing to her sense of pity, all to no avail. Finally, after a year or so of trying, I wrote her a letter telling how I felt. She finally accepted my invitation and we went on a date.

My takeaway from this exchange was letters work best. (Admittedly, my letters are particularly awesome.)

What I *didn't* know was my letter had relatively little to do with her decision. Years later, I asked her why she finally decided to go out with me. She admitted my persistence played a role, but the bigger factor was how she had her heart broken by one of the afore-mentioned "bad boys," and decided to give a nice guy a chance.

I was floored. I had no idea these events had ever transpired, and more importantly, had vastly overestimated my letter writing ability.

What I had was essentially a last click attribution model. This is the way in which countless organizations currently measure conversions. We, as an industry, have come a long way in terms of being excited about measuring and testing our marketing efforts.

However, looking at the last click before conversion as a sole contributor to the conversion decision is as near-sighted as assuming the young lady accepted my date invitation based upon my letter writing skills. The letter was a factor, but it wasn't the *only* factor.

I need a better model.

Where should I spend my marketing dollars?

Using the last click attribution method, I can determine the value of a conversion generated from an email campaign. I might arrive at the conclusion my marketing dollars are best spent on building email lists and optimizing email campaigns.

While there may be truth in that statement, it's only partially correct. The real story in this scenario might be a customer first interacted with my brand when a friend shared a product review on Facebook. From there, a likely scenario of events could be:

- The customer visited and liked my Facebook page, and then left.
- Weeks later, I launched a new product via Facebook post. The customer saw the post and then left the platform to do some research.
- While researching the new product on Google, a PPC ad appeared and convinced the customer to click through to my site.
- Once on the website, the customer joined my email list.
- Two weeks later, I sent an email which the customer subsequently viewed and converted, purchasing my product.

From this example, it's obvious the customer was nurtured to conversion through a series of interactions including social media, PPC, landing pages and email. Now, how much of my marketing dollars should go to each channel, since in this case, they were all obviously necessary for conversion?

Attribution models

Solving this problem requires the use of a different attribution model, and not all attribution models are created equal. I remember how happy I was when I learned there were multiple varieties of steak. I had always eaten sirloin, because that's what my dad always cooked. So, you can imagine my excitement the first time I tasted filet mignon!

Similarly, there are a wide variety of attribution models to suit everyone's taste.

One example is the linear ratio model, which is a dynamic model that attributes different values to different purchase and research phases. For instance, it might:

- Attribute 5% of revenue to Facebook for the research and awareness piece of our sample transaction above.
- Assign 25% of that revenue to PPC ads.
- Finish by assigning 70% of the attribution to the email campaign that caused the click.

There are many implications to using a model such as this. The social media manager is very happy because he just went from being a nonexistent entity in this conversion to owning 5% of the revenue.

The email manager might not be quite as happy, but the marketing executive should be thrilled.

There are many more models to experiment with. First-click, U-shaped, custom models and linear modeling are just a few. We're getting closer to really understanding *why* people buy our stuff, and *how* they arrive on our pages.

Moreover, we've attributed our revenue to particular interactions along the funnel, which should get us started in the process of assigning value to each marketing activity we undertake.

To learn more about each of the above attribution models, [see Google Analytics' definitions here](#).

A brief case study

Electronic Arts (EA), one of the largest video game developers in the world, made some big gains with attribution modeling. Like most gaming companies, short product life cycles and a reliance on blockbuster products was increasing pressure on the marketing department, and causing them to use "gut instincts" to plan marketing operations.

The company's traditional advertising model involved a wealth of offline promotions, theater advertisements and television. Before launching the attribution model, EA campaigns allocated approximately 80% of its ad budget to television, with very little spending on paid search, social media or online video.

Using the attribution, optimization and allocation framework, EA was able to learn several key things about its advertising. First, the in-theater ads – heavily favored by the company – were underperforming. Secondly, significantly more revenue was being attributed to search, online advertising and online video.

Finally, EA discovered its ad campaigns were being timed incorrectly for product launches. The subsequent reallocation of resources resulted in 12% less television spending, 90% more YouTube

spending and a 32% increase in paid search. The net impact on the campaign was an estimated 23% increase in sales from the previous product launch.

[Source: Wes Nichols, "[Advertising Analytics 2.0](#)," *Harvard Business Review*; March 2013, Vol. 91 Issue 3, pp. 60-68]

It's not a perfect solution

There are still some problems with attribution modeling. The method relies upon Web cookies, which cause underrepresentation on social media and other mediums, which are frequently accessed from mobile phones, apps and other devices.

In addition, attributing offline sales to online activities continues to be problematic. As far as we know, there's really no strong method for tracking view-through conversions caused by content syndication and third-party sites.

But, in the end, knowing more is usually better than knowing less; it's kind of like how having more steak is usually better than having less, regardless of the cut.

16 CASE STUDIES PROVE ROI OF MOBILE MARKETING

By Rob Petersen. Filed in [Mobile Marketing](#) |

Tags: [App Store](#), [Facebook](#), [Janssen](#), [McDonald](#), [MediaVest](#), [mobile marketing](#), [Multimedia Messaging Service](#), [QR code](#), [ROI](#), [SMS](#)



Photo credit: Wikipedia

Are you paying attention to your mobile marketing yet? After years of being the next big thing, mobile might finally be the current big thing. But there is a big problem—most people don't know how to prove it. A joint study by the [ANA \(Association of National Advertisers\)](#) and [MediaVest](#)

shows marketers are excited about opportunities for mobile marketing but frustrated about the ability to prove return on investment (ROI). Are you one of them?

Consider these highlights:

- 96% of marketers currently use or are planning to incorporate mobile marketing into their marketing mix
- **85% report an intent to raise their mobile budgets in the near future**
- 84% use mobile websites; 78% mobile search; 76% mobile apps and 75% mobile display ads
- 42% are concerned about having proper mobile metrics in place
- 42% report an ability to prove ROI
- Only 21% state they have been successful in mobile – a decrease from 2010

To help alleviate the frustration, here are case studies. They cover opportunities from mobile optimized websites, mobile apps, mobile search, mobile ads, MMS, SMS, QR Codes to social media. They also prove ROI is more often achieved when marketers pursue mobile with a specific business purpose rather than mobile for mobile's sake.

Here are 16 case studies that prove ROI of mobile marketing

1. **BMW:** Began using MMS (Multimedia Message Service) to send images, video, sound files and text messages for customized snow tire offers. They increased conversion +30%
2. **CARITAS HOME CARE:** Boston-based home healthcare agency used mobile health devices to enhance communications and data collection with its 150 mobile clinicians. Caritas documented how the mobile devices were able to save 19,200 hours or 98 hours per clinicians per year. Although Caritas didn't release salaries of clinicians, if we estimated \$50/hour, which would be conservative, Caritas saved \$960,000. If the devices were \$100 each for 150 clinicians at \$15,000, which would also be conservative, the ROI would be 64-to-1.
3. **DUNKIN DONUTS:** Used SMS (short message service) or text messaging to increase store traffic and drive sales. The SMS campaign offering mobile coupons. It increased store traffic +21%.
4. **HAIR CLUB:** North America's leading provider of hair restoration solutions for men and women created a mobile website with one purpose, to get mobile phone users to "click-to-call" for more information. Their "click-to-call" button goes to a live sales person within seconds. Once a call is made, their close rate goes up exponentially. ROI for the mobile website was 30-to-1.
5. **HARLEY-DAVIDSON:** Wanted to maintain visibility with current customers and add new customers and revenue through a holiday promotion. They sold HD related merchandise through a Route 66's mobile club. Communications of the 12 Days of Christmas campaign were promoted through a mobile social media campaign. Sales increased 250% on helmets; 16% on leather jackets and there were significant increases in holiday dealer traffic which was also an objective.
6. **HOTEL TONIGHT:** Sought to acquire new customers who would download its last-minute hotel booking app and ultimately use it to book room nights. To acquire new users of its app (available in the App Store and Google Play), Hotel Tonight used Facebook's granular targeting and two key products: the mobile app install ad and Facebook Offers. For three months between October 2012 and HotelTonight ran app install ads that: 1) Drove people to the App Store, 2) Targeted people based on demographic information and likes and interests such as "travelers," "parents" and "golf" and 3) placed on mobile news feeds targeted to iOS users. Hotel Tonight receive 10X

higher click-to-install rate from the mobile app install ads and 80% higher return on ad spend from Facebook Offers than average mobile advertising spend

7. **JANSSEN (PSORIASIS 360)**: Launched a mobile phone app to help psoriasis patients track the severity of their condition. The index helped them know when to seek professional care and allowed their medical professional assess to the severity of their patient's condition. Janssen also opened a Facebook page, which they moderated for regulatory reasons, to let patients tell personal stories and had over 30,000 posts and comments. According to Janssen, the investment in the mobile app overachieved ROI but more important delivered the right therapy to the right patient at crucial times.
8. **MCDONALD'S**: Designed a 'restaurant finder' app to enable consumers to find a late-night McDonald's. 2/3's of its restaurants close at 11pm. McDonald's employed location-based technology and geo-targeted above-the-line messaging, to avoid sending potential customers to a locked door. The app was downloaded 1,300,000 times over the course of the campaign, and when the sales uplift was calculated, the campaign delivered an ROI of 2:1.
9. **PETCO**: Expected the creation of a mobile website and a mobile ad campaign would be made up by higher conversion rates to coupons and offers. Mobile coupon redemption outnumber online coupon redemption by 5 to 1 more than paying back the cost of the website and ad campaign.
10. **PIZZA HUT**: Created a mobile optimized website, integrated with Pizza Hut's back-office systems and all devices had a user experience tailored to each device. By the end of the first week after going live, the site accounted for 10 per cent of all online orders increasing at a rate 60 per cent each week.
11. **ROY'S RESTAURANT**: Used a paid search mobile-only campaign that enabled them to budget, bid, target, and track their mobile performance separately from their desktop AdWords campaigns. They also focused on Google's click-to-call phone numbers in local ads on mobile devices and hyperlocal advertising. They achieved an astounding 8-to-1 ROI by focusing solely on mobile advertising.
12. **VEGAS.COM**: Noticed that mobile visitors to their destination-based travel and entertainment booking website didn't stay long. They created mobile versions of the: 1) Homepage, 2) Category pages and 3) Hotel room search tool with special functionality to improve the mobile customer experience. An improved mobile experience resulted: 1) 22% lower bounce rate 2) 16% more page views and 4% higher conversion rate.
13. **VERIZON**: Used QR codes to take store customers that scanned the QR code through to a competition to win a smartphone, via sharing on Facebook. If one of those Facebook friends brought a Verizon mobile, the original customer would get a free smartphone. A pretty nifty promotion that generated \$35,000 in additional revenue during the week of the promotion, with a mere \$1,000 investment. The promotion generated a 200% in smartphone sales, a staggering figure that can be attributed to a QR Code.
14. **WINNEPEG HEALTH AUTHORITY**: Used SMS to get adults 18-24 tested for sexually transmitted infections (STIs), increase awareness of STI incidents and remove false perceptions about testing. Text the keyword PEEINACUP to the short code 82442 or go to www.peeinacupwinnipeg.ca for clinic locations and a chance to win \$1,000. Over the course of the four-week campaign, more than 10,000 people visited the Web site and 825 people entered the contest, which is 1.2 percent of the total target population in Winnipeg.
15. **WOOGA**: The world's third largest social game developer. Among its popular social game titles is Diamond Dash, a colorful jewel blitz game that challenges players to match three or more of the same colored gems in under 60 seconds. Wooga ran sponsored stories in Facebook mobile news feeds that displayed when one of their friends had played Diamond Dash for at least four

minutes or twice during the previous month. This campaign strategy generated great success for Wooga, from increasing installs by over 25% to lowering the cost-per-install by 10%.

16. **zPIZZA**: Had a business goal to deliver at least 1,000 heavy-use customers who spend \$50+/month for each of their restaurant locations. They also had a loyalty program, zTribe, to identify regular customer and reward them with sweepstakes, cash prizes and inform them of new product. zPizza decided to use SMS messaging to improve registration and timeliness of the zTribe rewards and product information. The result was a 5% improvement in registration and a +106% in conversion for program participation.

Does your company use mobile marketing? Do these case studies prove ROI to you? Do they help teach how mobile marketing could be better used for your business?

DRIVE TOWARD ROI. BRAND ADVERTISERS ARE NO LONGER CONTENT TO TARGET USERS TO BROAD DEMOGRAPHICS, OR SEMI-TRANSPARENT SITE LISTS, AND HOPE FOR A POSITIVE OUTCOME. INCREASINGLY BRAND ADVERTISERS, LIKE KELLOGG AND KIMBERLY CLARK MENTIONED ABOVE, ARE CLOSELY MONITORING ROI AND DRIVING FOR CONTINUOUS IMPROVEMENT ON THIS METRIC. THE ABILITY TO OPTIMIZE CAMPAIGNS TO SPECIFIC GOALS IS ONE OF THE STRENGTHS OF REAL TIME BIDDING, SO IT IS AN EXCELLENT FIT FOR BRAND ADVERTISERS LOOKING TO IMPROVE SLOW ECONOMIC GROWTH WILL PRESSURE ADVERTISERS TO MAXIMIZE ROI

In Atlas Deal, Facebook Gets Serious About Measuring Ads

Says Deal Is About Measurement, Not an Ad Network

By:
Cotton Delo

Published: *February 28, 2013*

Facebook today **formally announced a long-rumored deal** to acquire Microsoft's Atlas Solutions division today **and that its interest in the technology stack boils down to measurement.**

Ad Age previously reported that Facebook had agreed to buy the ad-serving business, which **Microsoft** had busily been seeking a buyer for over the past six months. Microsoft has acknowledged that it's looking to focus on developing the ad business for its owned and operated products like xBox and Windows 8, not on its ad tech.

The deal price was not disclosed, and the parties would only say that a "commercial agreement" will be put in place whereby Microsoft will continue to buy its own ads through Atlas. The price had been expected to be less than \$100 million, based on prior bids for Atlas, [which were in the \\$30 to \\$50 million range](#).

RELATED STORIES

[Facebook Set to Announce Microsoft Atlas Acquisition Tomorrow](#)
Acquiring Ad Tech to Prove Its Ads Work

[Facebook Deal to Buy Microsoft's Atlas Coming As Soon As Next Week](#)
Social Network Is Building An Ad Stack to Rival Google

Atlas had looked like a potential building block for Facebook to start building an external ad network powered by its social data, but the social network's director of product marketing Brian Boland said that's not the plan. He said that Facebook's advertisers have been clamoring for more tools to let them see how effective their spend is across online channels, and that's where Atlas comes in.

Facebook has been steadfast that the effectiveness of its ads shouldn't be gauged by clicks alone. Owning an ad server will allow the social network to track actions after a user is exposed to an add, so-called "attribution." Atlas can help Facebook prove that exposing users to its ads does spur them to take an action – whether it's providing their email address or making a purchase – even if they've never clicked on a Facebook ad. Atlas [released a tool last year](#) to help advertisers measure their Facebook ads and get into deeper insight into how they drove conversions.

"This acquisition is about measurement, it is not about building an ad network," Mr. Boland said, adding that Facebook intends to invest in Atlas's core technology, as well as new areas like mobile ROI. He acknowledged Atlas's reputation in the marketplace for having antiquated technology due to years of neglect.

"We're excited to apply the same level of focus and investment in Atlas that we've applied to mobile over the last year, and really accelerate the development of its core features," he said.

Mr. Boland declined to say whether all Facebook advertisers would eventually be given access to Atlas's measurement tools. He noted that Facebook will continue to support existing Atlas customers -- comprised of agencies, major marketers, and publishers like Microsoft -- in their contracts.

Atlas's team will continue to be based out of Seattle, which is also where most of Facebook's engineers who develop ad products are based. "Most if not all of Atlas's employees" will join Facebook in the deal, Mr. Boland said.

How P&G Inspired Cleveland Indians to Offer Fewer Bobbleheads

Old-School CPG Marketing Practice Comes to the Business of Baseball, and Fewer Bobbleheads Result

By:

Kate Kaye

Published: *March 18, 2013*

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Cleveland Indians fans can expect an injection of new blood this season from former New York Yankee Nick Swisher, speedy outfielder Michael Bourn, and ex-Red Sox skipper Terry Francona. One thing they can't expect: lots of bobblehead giveaways this season. In fact, while the Tribe in the past has planned five to seven promotions featuring bobbleheads -- wobbly figurines of beloved team players -- the 2013 season will bring just two, according to Alex King, VP-marketing and brand management for the Cleveland Indians.



The Cleveland Indians used marketing-mix models to sell seats

Marketing-mix modeling, a data-centric marketing approach that's still novel in the sports world, drove that decision, he said. "What we found is, it's most incremental for us to have more giveaway nights and fewer giveaways per night," said Mr. King, a former P&G exec who grew

up a Cincinnati Reds Fan. So, rather than give a promo to every attendee, only the first 10,000 or 15,000 might get them.

Mr. King hails the consumer-packaged goods sector, where marketing-mix modeling -- a process by which marketers look at hundreds of data inputs to predict the impact of a specific marketing effort or media buy -- are a way of life. But although baseball has embraced the use of data and complex statistics to evaluate player performance, the use of data analytics for marketing is still rare.

Mr. King suggested some baseball insiders looked at him cockeyed when he introduced the concept. "It was somewhat of a risk for me but it was worth it."

The Indians organization began working with marketing-mix-modeling firm ThinkVine before last season. Unlike other marketing-mix-modeling systems, ThinkVine mimics a market rather than employing actual consumer data. The company built a marketplace of 5,000 simulated consumers living in the greater Cleveland area, some die-hards, others infrequent visitors to Progressive Field.

Around 40 variables that could affect attendance and how much fans are willing to pay for tickets are added to the system, including weather-forecast data; the win/loss record for recent games; star players from opposing teams; player injuries; and whether other entertainment options such as blockbuster-film releases might have more appeal.

"It's a mirror image of what actually happens in the marketplace," said Damon Ragusa, chairman and chief strategy officer of ThinkVine.

The Indians did a segmentation study to determine who its most profitable fans are. The next step was to determine the best days of the week for particular giveaways, such as jerseys, and how to flight media buys. The organization compiled marketing and promotional information from the previous five years -- things like PR impressions, TV and radio ad buys, digital spending, promotion dates, and how all those efforts translated into daily sales for each game day.

"It was very much digging things out of file drawers," said Mr. King, calling the process "a huge win just being able to catalog what we've done in the past."

Pinterest Launches Web Analytics to Track Popular Content

Service for Brands and Bloggers Includes Tally of Impressions Inside Pinterest

By:

Cotton Delo

Published: March 12, 2013

How Does Facebook

The Social Media world has been scratching its head about Return on Investment for almost as long as social media has existed as an entity. Not only have influencers in the space been unsure as to how the actual platforms were going to make any money, it has remained an enigma as to how any business person could possibly make money, trackable sales, or any other non-fluffy stuff using social media platforms.

This puzzle has puzzled me. You're spending money. You should make sure you are making money. It's not a social media problem, it's a business basic. If you're spending money and not making that much money on the other side of the coin, you're not going to do too well. But thanks to the conversation on the post I wrote here about [communities and cliques](#) I think I have finally understood why ROI in the world of social media is so tricky. Are you ready?

It's because so many people in the online world don't believe in SELLING.

The Myth of Social Media Serendipity

Here is how I understood social media when I first started tweeting. You go online, you mention in your Twitter bio that you work for xyz company. After you get that settled, you start talking to EVERYONE. You accrue followers, you get subscribers to your blog, you do people favors, you support people, and you create an ever-growing community. You post pictures of kitties, write poems about unicorns, and do other things to keep these people happy. It may seem like it's not working, but then one day, one of those people commenting on your kitty picture says, "You know, I happen to need a car, and I know you sell cars. Can we talk?"

Because you've been talking to this person for such a long time, you know exactly what kind of car they REALLY want. They trust you because they've been talking to you. You sell them a car. You've made money for your business. While you might have mentioned along the way things about being a car salesman, you never actually promoted your business, mentioned specifically what kinds of cars you sell, and you never said anything directly tied to your job. You just wafted the idea out there, it stuck in peoples' heads, and lo, when they needed a car, they thought of, well, you.

Your Investment is What?

OK, I should not have used the word “Myth.” This kind of thing really does happen. But here’s the problem. If you use that kind of approach to social media, your investment will far, far, far exceed your return. You might get an opportunity like that once a year. Even if it’s once a month or once a week, that’s still a lot of nurturing, tweeting, chatting, blogging, sharing, and networking. The time can really add up, and though we don’t like to say it out loud, in the business world, time is money. This of course does not mention the computer you’re using, the electricity you’re using to keep that computer running, the time you’re NOT spending on other stuff. You get the point. It’s no wonder that tracking social media ROI seems impossible. How can you track your investment when you’re sending 7,000 tweets a day? How can you realize a return on a regular basis if you never remind people what it is you’re trying to sell?

Don’t go to the other end of the spectrum

Some companies realize that the fuzzy version of social business doesn’t really pay the bills, but they go too far the other way. They do nothing but sell. Their Facebook pages are nothing but pictures of their products (yawn). Their “blog” is nothing but news releases (yawn). Their tweets are just shares of their Facebook and blog posts (yawn). That won’t bring you a good return because people will run for the hills.

The Dance

How can ROI seem less confusing and more achievable? You need to do a special social media dance. You need to learn how to work in mentions of your company while also conversing genuinely with people. You need to be willing to talk about your company but also about things that have nothing to do with your company. You need to jump on opportunities to offer your service or product without being pushy. You need to be honest about why you’re using social media from the start. And you need to respect the people around you. That means not sending out a sniper shot direct message with a sudden “Buy now” starburst inside.

It’s not surprising that so many are having a hard time measuring the ROI of their social media efforts if you think about the kind of advice that gets tossed around. “Be non-transactional.” “Support other peoples’ business ventures first.” In an ideal world that would work all of the time. This is the real world, sadly. You’re not tweeting with psychics who know what you’re selling. You need to get it out there without being pushy or offensive. Once you learn that dance, you’ll have a far easier time cracking the ROI nut

Pinterest Launches Web Analytics to Track Popular Content

Service for Brands and Bloggers Includes Tally of Impressions Inside Pinterest

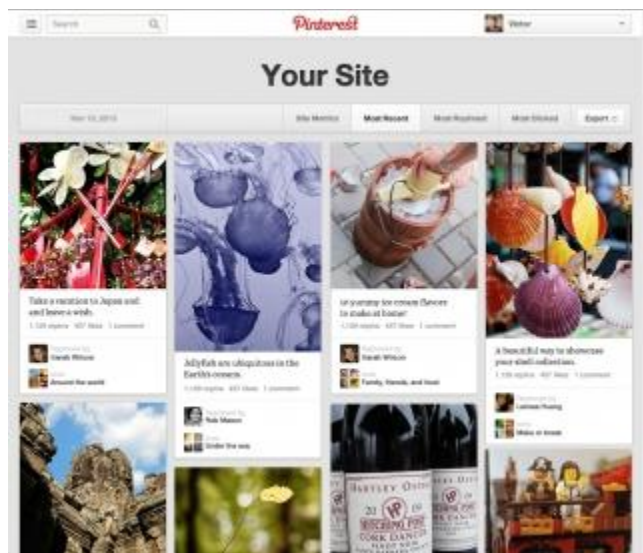
By:

Cotton Delo

Published: March 12, 2013

Pinterest today became more measurable to brands and bloggers alike by launching web analytics that shed light on how images shared there resonate with users.

Available to any account that's gone through the automated verification process on its web site, Pinterest's new analytics tool lets accounts track how many people have pinned content from their sites, how many people have visited their sites from Pinterest, and how many Pinterest impressions their content has generated. It will also show a selection of the most recent pins captured from their site and the content that's been re-pinned and clicked on the most within Pinterest.



View of recent pins from a user's website now offered by Pinterest.

RELATED STORIES

Pinterest Image Data Proves Valuable to Brands

Startups Curalate and Pinfluencer Provide Data In Absence of APIs

Group M Next Taps Pinterest Analytics Company Curalate

Agencies Will Use Startup's Software for Tracking Images on Social Site

Marketers are keen to know what content is popular on Pinterest, since it gives them a window into consumers' ever-changing preferences.

For example, for marketing purposes, a retailer might want to know that red is the most popular color of a particular style of shirt. But in the past, it would have had to work with a startup like Curalate or Pinfluencer that scrapes Pinterest data to get analytical insight into its content's

performance. Pinterest hasn't yet opened up an API that would allow developers to build applications on top of the service, and harvest the data.

Cat Lee, Pinterest's product manager for platform, said the idea is to help brands with their content strategy. Now they can see which pins are popular on a given day, for example, and highlight those on their website to juice Pinterest sharing even further. She acknowledged a continuing opportunity for startups that can do custom integrations with brands, helping them map out the connection between their Pinterest presence and sales, for example, and execute contests and promotions on the platform.

"There will continue to be a need for the companies that provide an even deeper level of services for businesses," she said.

Curalate's CEO Apu Gupta said he views a Pinterest analytics product as a boon to small businesses instead of competition for his company, which is focused on charging big companies for Pinterest analytics. (Pinterest's own product is free.)

"Pinterest is driving material revenue to small brands, and they don't have the means to afford some of the more robust solutions that are available to enterprises," he said.

However, companies specializing in Pinterest measurement may need to evolve their feature set to keep the business of big brands. Hearst Digital was among the publishers beta-testing Pinterest web analytics over the last weeks, and its director of audience development and social media Ross Geisel said his team was still on the fence about whether to keep working with a startup. (Hearst has tested both Curalate and Pinfluencer.) There's something to be said for getting data direct from the source, he said.

"The other services are scraping that content," he said. "So far as the analytics trust factor, I feel more comfortable with the numbers I'm getting from Pinterest."

Chartbeat Aims to Show Publishers If Their Ads Work

Below-the-Fold Isn't an Advertising Wasteland After All

By:

Jason Del Rey

Published: *March 18, 2013*

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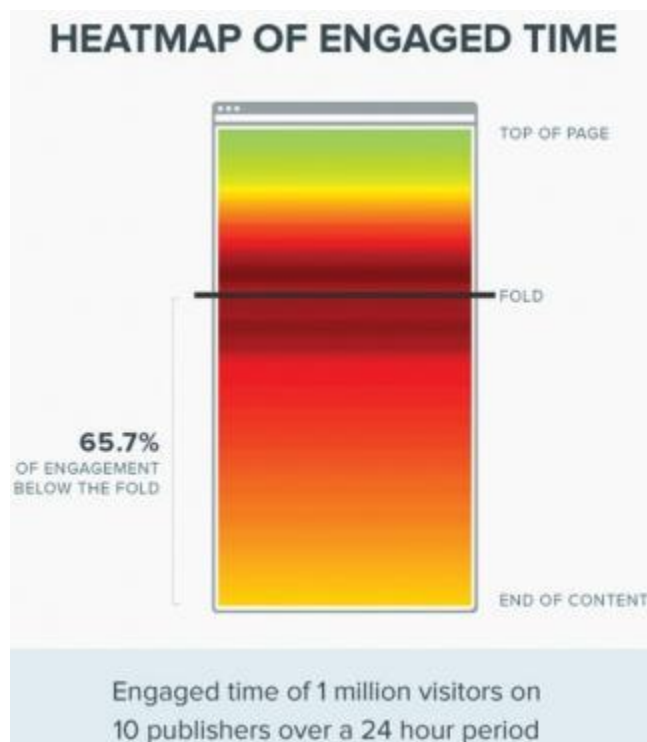


Many a news operation has fallen in love with Chartbeat, the web-analytics software that gives reporters and editors a real-time look into which parts of their websites readers are visiting. Now Chartbeat has begun mining that same publisher data to help digital-media salespeople sell ads on parts of their websites historically dismissed as advertising wastelands.

In December, Chartbeat began offering a handful of publisher sales teams a beta version of a new dashboard that displays the amount of engaged time website visitors are spending in front of certain ad-unit placements and certain sections of the site. By arming sales teams with this information, Chartbeat believes it can help them make a case to brand advertisers that certain parts of webpages are more valuable than originally assumed. (Direct-response advertisers already use audience buying to find the best impressions to buy, often no matter page placement.)

"The lesson is that the place where readers are spending their time is not where we traditionally assumed," said Alex Carusillo, a product manager at Chartbeat.

In conversations with editorial departments, Chartbeat kept hearing that a big challenge for them is striking a balance between creating compelling, high-end work while at the same time churning out as many posts as possible to increase page views because most ads are sold on an impression basis.



So Chartbeat conducted an online study with 1,500 people to see if pages that have high levels of engagement -- what Chartbeat tracks and calls "engaged time" -- get higher brand recall for the ads on them. When an article that contained an ad was placed in front of a reader for five seconds, only 50% of readers were able to identify the advertiser afterward. But when Chartbeat

extended viewing time to 15 seconds, about 70% of readers recalled the brand's name. Chartbeat is now working with a third party to further validate the correlation.

Beyond that, Chartbeat identified another interesting trend in its publisher data. When it looked at 1 million anonymous readers across 10 websites: 66% of the "engaged time" over a 24-hour period happened "below the fold" -- or below the part of page that originally showed up in the browser when a reader first opened a page. Not surprisingly, the data analysis also showed that web visitors are only engaged for a few seconds at the top of the page, where the highest-priced ads often sit.

"We've been placing value in the wrong places," Mr. Carusillo said. "We decided banners on top were the most valuable ... because they were easy to measure because you know people saw them even if they flew by."

The "engaged time" essentially measures how long a person is showing some signs of activity -- such as scrolling or moving a cursor -- while a browser tab is open. The company believes its engagement metric is more accurate than most others, because Chartbeat checks for signs of activity every second.

Buzzmedia, one publisher with beta access to the advertising dashboard, believes the "engaged time" metric could eventually help it create new ad products and packages, such as one that would run an advertiser's ads exclusively next to the 10 articles with the highest engagement time, said Director of Product Max Engel.

Craig Atkinson, chief digital officer at media agency PHD, said the industry could benefit from a new type of engagement metric if the correlation between "engaged time" and branding performance holds up.

"We want to find the highest-value areas of any partner sites," he said. "I'm all for changing the conversation about pricing if we can prove the value piece."

Chartbeat plans to eventually charge for the product once it's out of beta

GOOGLE TOOL CAN CALCULATE WHAT THAT MOBILE AD IS REALLY WORTH

Adidas tested the AdWords-only calculatorBy [Tim Peterson](#)

- March 26, 2013, 9:00 AM EDT
- [Technology](#)
-

Mobile doesn't get enough credit. That's largely the reason industry experts [cite](#) for mobile advertising's pitiful pricing, often described as reaping pennies compared to the dimes online ads attract. To help rectify matters, Google has created a tool to let AdWords advertisers measure how mobile clicks lead to dollars.

"People are interested in the broad idea of, does mobile have a conversion problem. [Instead] we believe mobile has a measurement problem," said Jason Spero, Google's head of mobile global sales and strategy.

The new tool, the [Full Value of Mobile Calculator](#), aims to measure what various mobile ad campaigns mean to a marketer's bottom line, taking into account whether the campaign initially intended to drive calls, app installs, in-store traffic, mobile site visits or attribute cross-device attention and plugging in those metrics by connecting with an advertiser's AdWords account.

To oversimplify the calculator's formula, it basically multiplies the number of people who take the initial call to action, like clicking to call a store, by the percentage who complete the next actions down the conversion funnel (i.e., completing a call and/or buying something), then multiplied by the value of the actual conversion (i.e., how much money the person spent). The result is the estimated revenue an advertiser received from the campaign.

The calculator arose from a partnership between Google and Adidas to help the sportswear brand determine how its search ads were driving people into the company's owned-and-operated stores and how that translated into revenue. First, Google populated stats from Adidas' AdWords account on how many people clicked its ads to get directions to a store. Then Adidas and its agency iProspect ran some A/B tests, comparing markets in which it ran ads with those in which it didn't and correlating foot traffic, to estimate how percentage of people who clicked for directions ended up in an Adidas store. ([Twenty percent, it turns out.](#)) Next, the brand factored in the portion of people who walk into a store and make a purchase—about one in five—followed by the average transaction amount, which was \$70 to \$75. [After crunching all those figures, the companies were able to compute that each click on the ad's store locator button was worth \\$3.20.](#)

Adidas could take that \$3.20 stat and conclude that that's how much it would be willing to bid for click-to-store campaigns (though not necessarily how much it would need to bid, since AdWords operates as a second-price auction). That type of understanding is particularly important as Google migrates AdWords advertisers to the [new Enhanced Campaigns bidding process](#). Rather than setting independent bids for desktop and mobile campaigns, Enhanced Campaigns tie the two together with advertisers placing a desktop bid price and how much more or less they'd be willing to pay to reach a mobile user. The change has been seen as Google attempting to buoy mobile ad rates by tethering them to their higher desktop counterparts. Spero said the Full Value of Mobile Calculator is "directly connected" to Enhanced Campaigns by providing the attribution to help marketers understand whether they're effectively toggling their mobile and desktop buys.

While the calculator can be crucial to maximizing AdWords campaigns, Spero stressed that it's only an estimator. For example, the ability to measure cross-device performance isn't available yet and would be limited to users who are logged on to the Chrome browser on their phone and desktop computer with one account. To that end, the calculator doesn't cycle its computations

back to AdWords so that an advertiser can compute a mobile campaign's value and have that instantly adjust its bid prices in AdWords.

"It's not meant to be a real-time updating tool," said Spero, noting that advertisers have to upload their AdWords data each time they want to use the tool and that if Google were to build a similar product to be used for bidding, it would launch through AdWords, not on a stand-alone site. The calculator will be available on the [Full Value of Mobile microsite](#) along with educational videos, case studies and tips

MORE MARKETERS HAVING TROUBLE UNDERSTANDING ROI FROM DIGITAL CHANNELS

February 6, 2013 by MarketingCharts staff

Digital marketing channels have been viewed as better than traditional media [for their measurability](#), but [new research from Econsultancy and Responsys](#) [download page] suggests that marketers are having a harder time measuring their ROI from digital channels. **Among company marketers surveyed – primarily from the UK (46%) and other European countries (19%) – just 50% rated their understanding of ROI from digital marketing channels as “good” (33%) or “very good” (17%), down from 55% last year.** By contrast, the proportion rating their understanding as “okay” or “poor” rose from 42% to 48%. The remaining 2% this year rated their understanding as “very poor.”

Agencies responding to the survey had more mixed opinions. On the one hand, the proportion who said their clients' understanding of digital's ROI was “very good” rose 3% points (from 5% to 8%), seemingly moving from the column who said it was “good” (which dropped by 3% points to 23%). On the other hand, the percentage saying their clients' understanding was “okay” dropped by 5% points (to 33%), appearing to move instead to the column rating it as “poor” (which increased by 5% points to 27%). **In fact, more agencies said their clients' understanding of digital marketing ROI was “poor” or “very poor” (36%) than said it was “good” or “very good” (31%).**

Given that drop, digital marketing seems to be almost on par with traditional marketing channels in terms of measuring ROI. This year, 47% of company marketers said that their understanding of traditional marketing channels' ROI was “good” or “very good.” That's up from 44% last year – though the increase was entirely for those rating it “good,” while the proportion rating it as “very good” actually dropped.

Among agencies, 45% said their clients' understanding of ROI from traditional marketing channels was “good” or “very good” – and that was an increase from 41% last year. That means

that agencies were actually more likely to say that their clients had a “good” or “very good” understanding of ROI from traditional (45%) than digital (31%) marketing.

About the Data: The Econsultancy / Responsys Marketing Budgets 2013 report is based on a survey of more than 800 client-side marketers and agency respondents. Information about the online survey was emailed to Econsultancy’s user base of internet professionals and marketers, and promoted online via Twitter and other channels during December 2012 and January 2013.

A total of 834 respondents took part in the survey, including 457 client-side marketing professionals and 377 supply-side respondents (including agency marketers and those working for technology vendors or other service providers).

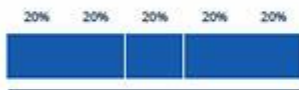
Select your attribution models:



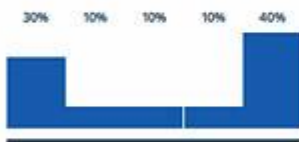
The **Last Interaction** model attributes 100% of the value to the last channel before a conversion or sale. It's a great baseline for comparison with other models.



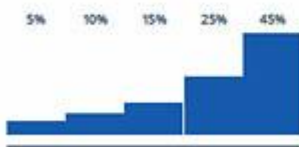
The **First Interaction** model can help you understand which campaigns create initial awareness for your brand or product.



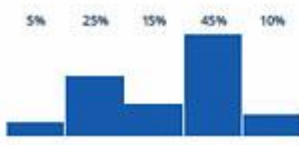
The **Linear** model might be used if your campaigns are designed to maintain contact and awareness with the customer throughout the entire sales cycle.



The **Position Based** model can be used to adjust credit for different parts of the customer journey, such as early interactions that create awareness and late interactions that close sales.



The **Time Decay** model assigns the most credit to touchpoints that occurred nearest to the time of conversion. It can be useful for campaigns with short sales cycles, such as promotions.



Google Analytics also makes it easy for you to **Customize** your models and create credit rules based on position, type of interaction, traffic source, campaign, specific keywords, and more.

The take away on Web Analytics & Attribution

It goes without saying that data integrity is essential for marketing analytics, not just attribution.

You do attribution because you want to get to the bottom of your marketing efforts. It's a complex process of giving credit to your paid, earned, and owned media. It's about translating the value of your marketing programs.

We're talking about segmentation, media buying, content management, optimization, and a whole lot more!

And don't forget whatever metrics you're tracking and measuring, they must align with business objectives, agreed upon across departments (or at least as many as possible).

Web analytics is part of marketing analytics, it requires new process and technology; but most importantly it requires change – you, your team, your management, or your organization must understand and support the adoption of utilizing analytics for it to be effective and actionable.

And ultimately attribution modeling should be part of your marketing efforts to break the department (channel) silos and move towards integration.

Truly integrated marketing campaigns will have great marketing analytics with sophisticated attribution modeling.

I hope you find the above information useful, feel free to share your thoughts on Google Analytics below!

BOSTON – January 10, 2013 – Sapient (NASDAQ: SAPE), today announced the acquisition of (m)PHASIZE, a leader in the fast-emerging field of cross-channel marketing analytics. (m)PHASIZE helps senior executives to better plan their marketing investments against the backdrop of dramatic changes to media and marketing allocation driven by the rise of digital channels and an increasingly connected consumer.

The move establishes Sapient as a go-to partner for its clients needing strategic advice to better navigate the range of channels and choices that now confront marketing executives. (m)PHASIZE brings a strategic, data-driven approach to Sapient's offerings, with immediate applicability to SapientNitro clients.

(m)PHASIZE's custom-built, proprietary analytics tools and services help marketing executives make optimal budget allocation and planning decisions to achieve business objectives and enhance ROI. Their innovative predictive forecasting models enable clients to run "what if" scenarios that simulate how targeted consumers will respond to different variables. (m)PHASIZE is also distinguished for its ability to quantify cross-channel impacts, taking into account the interplay between traditional media (radio, print, TV) and digital (search, display, social, mobile) at a brand and category level. This wide-angle approach enables clients to continuously measure and calibrate marketing investments to generate incremental ROI in today's dynamic, always-on marketplace.

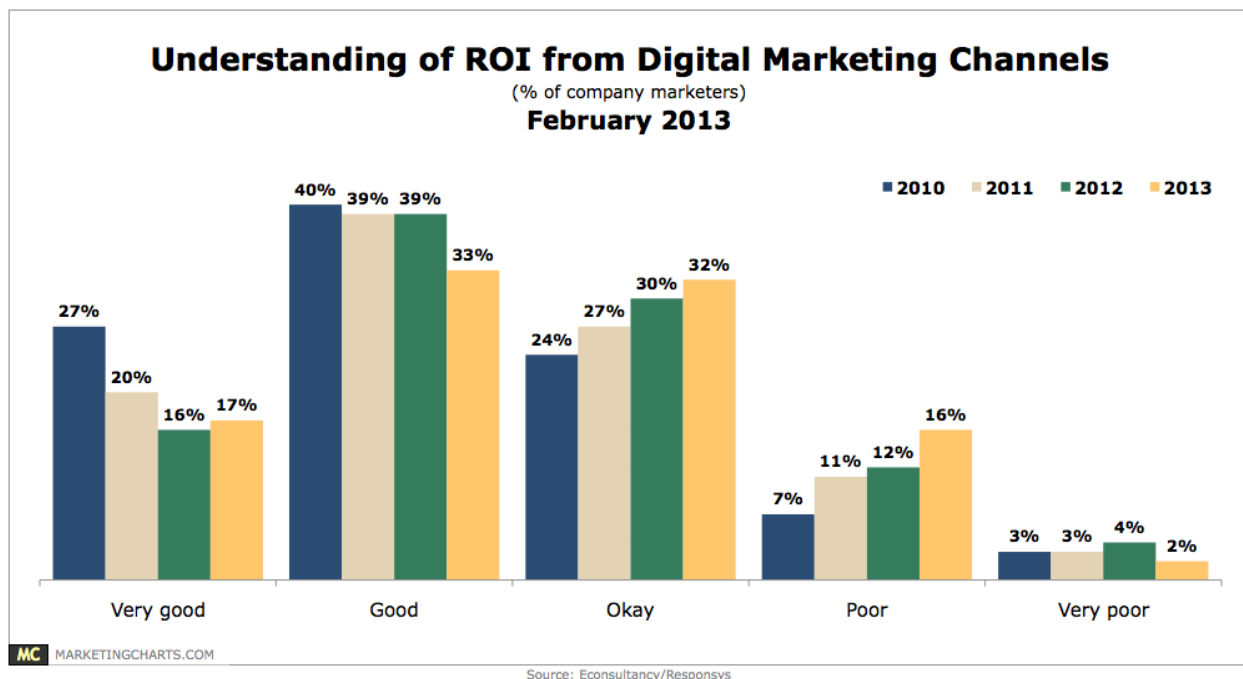
"Today's consumer has very different and ever-changing media consumption and buying patterns, making it much more complex to effectively allocate marketing resources," said Alan J. Herrick, president and CEO of Sapient. "In a world driven by this connected consumer, "traditional" and "digital" paradigms no longer exist. The proliferation of marketing touchpoints and the explosion of data demand more sophisticated tools and nuanced models to truly understand performance. With (m)PHASIZE, we're able to show clients the mix of investments needed to drive sales targets and significantly improve ROI."

Added Bill Kanarick, Sapient CMO: "As the \$500 billion dollar global advertising industry struggles with the disruption caused by an always-on world, CMOs are increasingly challenged to determine how best to spend their marketing dollars. With

(m)PHASIZE, we're able to better plan those investments and assess the true impact of cross-channel marketing investments on business performance."

(m)PHASIZE was founded by Sunil Garga, a respected innovator in the field of marketing mix modeling and an executive and entrepreneur recognized as a pioneer in the category. Former president of IRI Global Business and Consumer Insights and Marketing Management Analytics (MMA), Garga founded (m)PHASIZE to develop an approach to quantifying the optimal mix between traditional and digital media, and to understand these effects at not only a brand level but performance of the portfolio and category overall.

"In my 20 years in the field of marketing mix and ROI analytics, I have never seen a time more ripe for the application of our solutions and our thinking," said Garga. "At (m)PHASIZE, we've developed innovative methods that take a Wide Angle View (WAV) to help clients understand true marketing and media ROI and make fact-based investment decisions in the face of an increasingly complex set of choices about ways to spend. Sapient is truly redefining the space through its uniquely connected capability across brand, digital and commerce. The addition of (m)PHASIZE creates a unique and powerful combination."



Marketing Analytics and the Problem of Attribution Modeling

December 18th, 2012 - Posted by [RuthBurr](#) to [Analytics](#)

Guys, we need to talk about attribution modeling. It's a hot issue in our industry and most of us (SEOMoz included) aren't doing it as well as we want to be. It's tough stuff. Mike P from Distilled gave a great [MozCon presentation](#) on the topic, but most of us aren't anywhere close to that sophisticated - and even his model is impacted by Google Analytics' limitations.

It's been [covered in far more detail elsewhere](#), but in a nutshell: attribution modeling attempts to solve the problem of which channel gets credit when a user touches multiple channels prior to converting. Many marketers simply throw up their hands and say the last touch gets all the credit – but then we have to live with the knowledge that some of our efforts are far more effective than we give them credit for.

Not-so-super modeling

[Supermodel by Soggydan on Flickr](#)

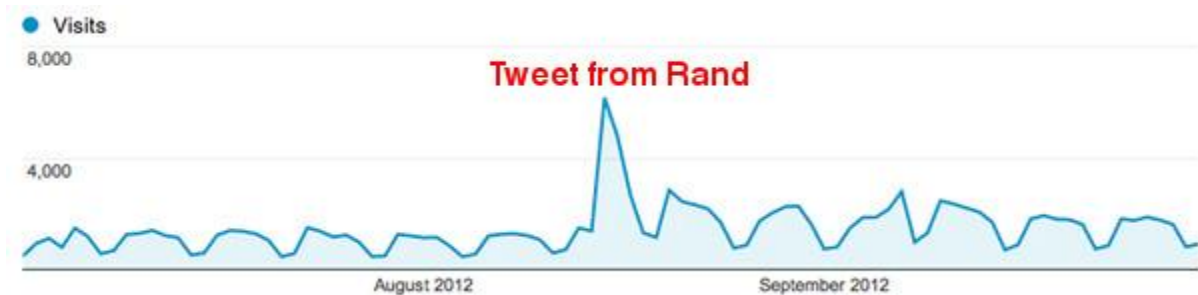
Unfortunately, attribution modeling is very hard to do well for a lot of reasons:

- Any site to which users return daily (like, for example, SEOMoz.org) quickly fills up with touches that may or may not be related to conversions.
- Channels like social media and community building are often a first touch but rarely the only touch before conversion, meaning they tend to get less credit than they deserve.
- [Attributing offline sales to online efforts can be very painful](#), not to mention tracking one user's conversion path as she uses multiple devices during her buying decision.
- In our post-Panda world, we're spending a ton of time and effort on content that may end up on third party sites, opening us up to the near-impossible task of tracking view-through conversions.

In my opinion, however, the biggest problem with the attribution models available to us today is that their roots lie in web analytics tools like Google Analytics. [This means that attribution models tend to be biased toward on-site efforts.](#) The bulk of our marketing efforts doesn't happen on-site, so why should our measurement?

Our competitors certainly aren't doing things on our site, so why should we content ourselves with on-site data?

Web-analytics-based attribution models also tend to break up sources at the *channel level*: organic search, social media, direct traffic, etc. Anyone who's worked for months on driving traffic from Twitter and then had one tweet from Rand break their site can tell you not all social media touches are created equal, so why lump them all into Social Media?



Finally, attribution models are incredibly difficult to implement for *success metrics beyond conversion* (more on that later).

Marketing analytics is about campaigns, not channels

Here at the MozPlex, we've been talking a lot about *marketing analytics*: the way we measure and optimize our marketing activities. I think Joanna put it best [in her post](#): "Marketing analytics is the act of looking past mere website results, and asking yourself, 'How did that marketing campaign really go?'"

Marketing analytics means going beyond the data we can get from our web analytics tool so you can measure off-**site and even offline activities**. Capturing that additional data about how your off-site and on-site marketing activities are performing allows you to test with greater confidence, and as marketers, we should always be testing. It's probably not as simple as "social media doesn't drive as many conversions as organic search." Instead, we can test how to spend our time and money - which levers to pull at which time and in which way - to attract, keep, and delight our customers. At the same time, we can take a cross-channel, holistic view of our efforts to see what messages are resonating best.

All conversions aren't created equal

Of course, one thing we want to do with our marketing efforts is make more money. ROI-driven modeling is always going to be part of what we're measuring. However, modern marketers are driving for more than just the lead or the sale or the free trial. We're looking at micro-conversions like newsletter signups. We're watching and participating in conversations about our brand. We're investing in customer happiness. We're tracking shares, tweets, mentions, and views – and we're keeping an eye on how our competitors are doing, too.

In addition to major conversions, marketing analytics is about tracking *customer loyalty*.

Forever Friends by dprotz, on Flickr

We can often gain as much revenue from keeping our existing customers happy as from getting new ones. What happens after the conversion?

Marketing analytics is also about tracking *brand identity*. This is becoming more and more important as the major search engines focus more and more on brand strength as a quality indicator. This is another area where typical attribution models just don't go far enough. Brand-centric campaigns are as much about generating conversation and positive feelings as they are about directly causing more conversions – this makes it harder to prove value if conversions are your only KPI. Branding has an influence on direct traffic, but it also has a big influence on organic search traffic from branded keywords.

Keyword	Visits	↓
1. (not provided)	517,204	
2. seomoz	16,016	
3. open site explorer	8,462	
4. opensiteexplorer	6,205	
5. seo	5,277	

So, should that traffic still count as organic search, if branding efforts are what inspired the search in the first place? This is another area where a more campaign-centric view can provide more insight than simply attributing conversions to channels.

Getting closer to marketing analytics

We're still in the early days of true marketing analytics, which means we're still mashing up data from a bunch of different tools and struggling to find the right ways to track campaigns. In the meantime, we can start hacking our web analytics' attribution monitoring tools to go beyond simple channel attributions:

Advanced metrics for attribution modeling

- Top referrers (separated out from the rest of referral traffic)
- Top keywords (separated out from the rest of the keywords)
- Long-tail keywords (same deal)
- Top partners and/or affiliates
- (not provided) search traffic
- Branded and non-branded search traffic
- Individual social networks (A friend and a follower may not be the same!)
- Individual feeds
- Individual paid advertising sources

We can also start thinking of (and tracking) our data with a marketing analytics mindset:

Advanced metrics for marketing analytics

- Messages
- Type of touch (Branding? Promotion? Retention? Happiness?)
- Type of product
- Audience
- Time of day
- Conversations

In the end, marketing analytics is more useful than straight-up attribution modeling, because it allows you to view your marketing efforts holistically. When you view individual customer touches as part of a larger whole instead of siloed by medium, you can take a longer and more customer-driven view of your marketing efforts.

What Does the Future Hold for Display Advertising?



Display advertising is a marketer's dream. I mean, it is one ATL activity wherein a brand manager can put his hands up and say – "I will give you an estimate on the number of impressions your ad copy will get, the CTR on it, but I can't give you an estimate on the number of leads this activity will generate for your brand". As a person looking to invest in display advertising, you often wonder, where is my ROI?

Social media platforms might just answer your ROI question. This is how display advertising works presently. Let's take an example of rich media ads you see on Yahoo. You can buy ad space on the website for a day and show your ads to people visiting, say, the Yahoo homepage or show them ads when they sign in, right in their inboxes. Platforms like Yahoo do try their level best to extract some social data from platforms like Facebook and Twitter by asking you to connect your profile to social platforms. Some people also fill up data on their Yahoo profiles – The only basic information that Yahoo asks for is gender and date of birth. But how many of us fill in our date of birth correctly? Let's assume most of us do. So, the only ad targeting data that Yahoo has with it is gender and date of birth. If they get lucky, they have some interest based data thanks largely to social integration.

Marketers buy ad space on the website and their ads start getting served to people visiting the website on that particular day/period. Pretty cool if you are a large brand and your objective is just branding – I saw Microsoft do this a lot, right before and even after launching Windows 8. But you still don't know, what is the return on this investment? Of course there are ways like asking consumers where they heard about your product at the point of sale or conducting a survey on your Facebook/Twitter/LinkedIn community. However, with so much paid media being fed to the digital consumer across different platforms, he might not even remember where/when he first heard about your product!

This is where the **BIG** data that social networks have with them can aid marketing managers. Imagine this, I see an ad on Facebook or LinkedIn and click on it or just see it and take no action. I see the same ad multiple times – take an action or I just see it. At the end of two weeks, I go to an offline store and buy the product. At the point of sale, I am asked for my name, contact number and email id. All that social platforms need to do is get a hold of the data of all purchases in a given period and track it back to the ads served to individuals during that period and give a report to the marketing manager. This way, the marketing manager will be able to know the number of sales made as a result of his advertising efforts. This should put the ROI measurability factor to rest.

However, this needs to be a cautious approach ensuring that user privacy is not violated. The marketing managers can only be allowed to see the final figure – no. of people who bought a product & also saw the ad. The system also needs to be engineered in such a way that no reverse engineering is possible - using "hashed identifiers" maybe.

The reason I believe that only social media platforms are capable of coming up with this kind of a technology is that ads on social platforms are primarily shown to users when they are on the platform and logged onto it – LinkedIn does show its ads on partner websites and even Facebook is in talks to do just that but [Google still controls \(read:owns\) the display network](#).

For [Google](#) to follow this kind of a model would be really difficult because most users are not signed into their Gmail accounts while browsing the internet. And Google is so concerned about user privacy that they don't give you search keyword data for searches made when an individual is logged into his Gmail account! Google+ is the answer perhaps. For someone like Yahoo, they show all their ads on their site but they just don't have enough data! I mean, my profile name on the website is Rohit – just imagine the number of Rohits in India - I can tell you there are millions in my city! One of my colleagues has an id that is "GirlyPink" – Surely she is not giving that Id out at the point of sale :)

In my opinion, this seems the way forward for display advertising – being social. The winners will be platforms with authentic data and the ones which can strike a balance between user privacy and brand integration

Radio Industry Faces Analytics Crossroads

Over time I've seen Radio Ink Publisher Eric Rhoads prod the radio industry to accept new goals. One such moment was pointed to here in [April 2010](#) when he spoke of his neighbor, a business owner, whom he quotes: "I was spending 15, 20, \$25,000 a month on radio and newspapers. Then I discovered search. I spent \$3,000 on search and got more business than I got off of radio and TV."

At the time Eric Rhoads was pointing to a radio industry failure that still has not been addressed - the advertiser movement to new media.

"These [agency] execs said radio is no longer on the radar of many advertisers -- it's not even part of the discussion."

He prodded again: "What if, I thought, I could put together a dream team of advertisers, and ask them why radio is not getting more ad dollars?" And he did.

As four big ad agency heads sat down at the recent "Radio Ink Forecast" conference... well, [let's hear from Eric](#): "Though there were several radio presidents and CEOs who stayed and listened, most of those representing radio's biggest companies were outside of the room."

The visual signal this must have sent to the agency world cannot be repaired. The ignorance generated by radio industry CEOs missing a panel of advertising agency CEOs speak about what radio can do to capture more ad dollars cannot be overstated.

The message missed? "The [agency] panelists told us ratings are not the metrics they're looking for...." ([read the article](#)).

This is where it gets weird; there are radio industry people commenting on this Radio Ink article who are still in denial. One fellow states, "...most of these ad agencies don't 'know' our business...." They do, though, know what they want, and it isn't radio in radio's current state.

Comments on the Comments

For the conspiracy theorists in the group claiming radio is losing because agencies get a higher rate for a more expensive television buy, the cost of constructing an online campaign is not cheap! If the radio industry ever gets over its chant about reaching 93% of Americans weekly, it could handsomely profit from providing digital services.

Please listen: Agencies and advertiser need "proof." CMOs are demanding accountability, because it's being demanded of them.

Rod Schwartz of [Radio Sales Cafe](#) (whom I respect) is missing a valuable point with his thoughts on "branding campaigns" and local advertising. That national advertisers put effort into building brands is acknowledged. But local advertisers run product/price campaigns. Few local radio advertisers invest in building brand.

Another note on this national/local concept: 20 years ago 75% of revenue was local. Today local is so low that RAB doesn't even break it out in its [revenue release](#). National brands use radio. Radio has all but lost local (small/medium small markets excluded).

Within the radio industry there are those who defend its power. None presents data that those four big agency heads request. Nearly all emotionally quip how radio is misunderstood and just needs to tell its story better. Tom Taylor's newsletter "[Now](#)" carried a story about Powell Broadcasting's Ira Rosenblatt stating with confidence, "Maybe the answer to increasing local revenue is as simple as bringing on more sellers." That's the approach Mel Karmazin took at CBS, during radio's first stage of drop in relevance. If this action is carried out, with the same level of account rep education that's present today, you'll create a bigger problem.

Again, quoting Eric Rhoads, "These [agency] execs said radio is no longer on the radar of many advertisers -- it's not even part of the discussion." The radio industry CEOs who missed that panel are part of the reason why. Eric identifies the other part: "Clients simply won't buy unless we first provide proof of radio's relevance and effectiveness."

Radio campaigns can be created which use the power of the internet to deliver response metrics. In certain cases, radio can connect an over-the-air campaign to the cash register, at a premium cost that's enough to give agencies better commission (satisfying the conspiracy theorists). Better analysis of web site visitors and social media use are required, not more words telling ad buyers that they "need" radio because it's ubiquitous.

Mr & Mrs Radio, you're at an analytics crossroads. The longer those defense lines are up, the farther down the relevancy pole you go. It remains your choice.

Discovered: Why Radio Is Not Being Embraced By National Advertisers

For decades, the RAB and others have preached that selling is about being customer-centric. We've all heard it, we've all been trained to interview clients about their needs, and there is not one broadcaster on earth who does not know this to be true. So why is radio not getting its fair share of ad dollars nationwide? I've discovered what is probably the major reason.

A Dream Team

"What if," I thought, "I could put together a dream team of advertisers, and

ask them why radio is not getting more ad dollars?" After all, we in radio think we have a strong story. We think we have decent relationships with listeners. We think we can move product. Unlike other legacy media, it appears radio has not lost its audience. I wondered what we could learn if we somehow got the most important advertisers in the world together in a room, just to talk about radio.

When I raised the idea, I was told, "It will never happen. Why would those people bother to take the time to help radio by answering our questions?"

"But what if I could pull it off?" I asked. "Everyone one in the industry would be there to listen. This could be the most powerful focus group in the history of radio. Every group head would be in the front row, not only to show their support, but to hear what these advertisers are saying."

I like a challenge, so I decided to do it.

A \$100 Billion Panel

At *Radio Ink's* recent Forecast conference, this impossible task was accomplished ... almost. We managed to get five advertising greats in the room and on a panel to tell us exactly how radio can get on their radar. These men represented \$100 billion in advertising and 75 percent of all advertising spending in America. They were:

Bill Koenigsberg, president/CEO and founder, Horizon Media

Tim Spengler, worldwide CEO, Magna Global

Doug Ray, president, Carat

Brian Terkelsen, CEO, Mediavest USA

David Verklin, marketing consultant (panel moderator)

Yes, we pulled it off. We got them there. It was historic. No one before has managed to get all five of these giants on a panel together. Each was willing to speak frankly about radio. As an opportunity, it may have been the most important hour in the history of radio. There was only one thing missing. The group heads in the front row.

Though there were several radio presidents and CEOs who stayed and listened, most of those representing radio's biggest companies were outside of the room. And they did not hear the most important advertiser focus group in the history of radio. Perhaps they had meetings or e-mails or pressing matters to attend to. Perhaps I didn't communicate the real power of this panel.

I'm not being critical of them. I'm sure some of these group heads and advertising executives already know and talk to each other. But if they had stayed in the room, and listened, it would have sent a powerful message.

Critical Feedback

Had the group heads been there, they would have heard that advertisers need to see metrics and measurement techniques that are focused on ROI. The panelists told us ratings are not the metrics they're looking for; they need proof of our ability to move product and engage customers. And they want the research to support it -- information they said no one in radio has provided. And they told us that other media are considerably more sophisticated about offering the proof of ROI agencies need. In other words, these agency heads were saying, "Show us the proof that will give us the confidence to invest."

Though they want radio to come with more ideas, they also said the discussion usually doesn't even get that far. Clients simply won't buy unless we first provide proof of radio's relevance and effectiveness.

These execs said radio is no longer on the radar of many advertisers -- it's not even part of the discussion. When radio does make the media plan, it gets little more than crumbs. Agencies find it hard to understand radio's value proposition, and they can't interest their clients in it, or their creative people. The panelists even said they don't feel they know how to get good radio creative.

Asked if they have radio departments, most said they have small "audio departments," but most of that attention is devoted to online audio.

Koenigsberg said, "The product benefit is just the cost of entry. The consumer wants value exchange. It used to be about reach, now it's about engagement. It used to be about frequency, now it's about relevance. It's no longer cost per point, it's cost per value point. Your story has to be reinvented. You have not figured out how to take the engagement factor and audience engagement and package your story."

Digging Deeper

After this eye-opening panel, I started exploring the problem further and found that what radio is missing is airtight econometric examples of performance or payback. Other mediums, including television and even print, are laser-focused on proving their ability to generate ROI. Radio is not. We've been on the sidelines too long.

When the Internet Advertising Bureau couldn't get advertisers to invest on the Internet, then-CEO Greg Stewart commissioned a cross-media optimization study with more a dozen advertisers, at a cost of millions.

Once the IAB proved to advertisers that the Internet could move product, they worked with the advertisers to identify the optimal spend -- which was more than before the studies. And Internet advertising began to explode.

I am not saying that these studies were the sole reason for Internet advertising's growth, but they played a large role. Stewart has since moved to the Mobile Marketing Association -- and again commissioned a study the power of the medium, which is opening doors that had been closed.

For radio to grow, we need to substantiate our claim that radio not only delivers a positive ROI, but delivers an ROI that is greater than other media options available to advertisers. We are not competing for ad dollars in a vacuum.

Earlier this year, when Facebook was under pressure to demonstrate its ability to generate ROI, the company attacked the issue head-on. According to a report in the *Wall Street Journal*, Facebook personnel were sent to work hand-in-hand with advertisers to figure out how they could deliver greater results. The reason advertisers are flocking to what we call the "shiny new toys" is not because they are new or shiny, but because they are accountable and measurable.

It's Selling 101: Speak the language of the person to whom you are selling. And as an industry, we are not doing that. It is incumbent upon all of us to not only bone up on the topics of econometric modeling, ROI, and payback, but to really focus on how we as an industry can enhance our performance in this arena.

Econometric studies cost a lot of money. But it's also generally true that if you pay a lot of money for insight, you will typically believe what it tells you and act upon it.

Where Is The Radio Econometrics Study?

There is no econometrics study for radio. Why not? We tell advertisers we haven't lost our audiences -- and we haven't, according to Arbitron -- and that we remain strong. We talk about our ratings, but advertisers simply don't care. Pandora can not only give targeted data by neighborhood, it can tell you how many listeners clicked in response to an ad and how many of those went on to make a purchase. That is what advertisers are demanding.

And this is not only a national issue. A lot of business that is classified as "local" on your books is placed directly with your stations by national agencies.

Are We Living In The Past?

The bottom line is that radio's ratings, its audience strength, and its relationship with its listeners are of little value to advertisers unless we can prove it all translates to business. We're using 1970 sales techniques in 2013, and few are paying attention. Media alternatives that have studies to prove their effectiveness are blowing past radio.

We have to prove, via third-party studies, from firms respected by major ad agencies, that radio can provide substantial payback for the investment.

This focus on ROI is being driven by technology, increased media alternatives, and "C suite" expectations. Chief media officers are under tremendous pressure to deliver results from their marketing ad spends. The average life expectancy for CMOs in a job is around 36 months. These are high-paying jobs, they want to keep them, and they realize they need to perform. So they choose their media partners the way we all choose stocks, investing where they'll get the best return.

It's Not About Ratings Anymore

Everything radio does needs to be about audience engagement and return on investment. Instead we're focusing on keeping our PPM numbers high by doing things that likely result in the opposite of consumer engagement. Do we really believe a spot buried in the middle of a commercial-laden stopset is going to drive business? Sure, it's good for PPM listening, but I suspect that if engagement were measured, it would show that is not the optimal environment for an ad.

Some might say Arbitron's study from last year confirmed that much of radio's audience is retained during an ad break, but I would argue that retention doesn't equate to engagement. After listening to Bill Koenigsberg, I suspect that he would agree.

There's a fine balance. We must be passionately driven to deliver results for clients. Ratings are not relevant to a client if you can't prove you'll accomplish their goals. We must start proving it. Saying it is so does not make it so.

Focus On Outcome

Advertisers care about consumers taking action. Radio must stop focusing on features, benefits, audience sizes, targeted audiences, and ratings. Those things only matter after we prove we can provide significant results. We must

focus on outcomes. It's how all advertising is being evaluated today.

Clients only care about what you can do for them. Google Local and others are proving their value proposition and showing exact results. Your local focus needs to be about proof.

The old definition of insanity is to repeat the same behavior while expecting different results. And I believe that's where radio is today. Yes, we're seeing some digital innovation. All that helps, but nothing will bring change faster than a national radio study proving that radio moves the needle.

We all believe radio moves product. Now it's time for radio to step up to the plate and fund a study to prove it. The bottom line is that we need to have enough "science" to convince the CMOs that radio is the right place to spend their limited ad dollars. If we can show the cause and effect, radio's budget will never be cut. It's all about ROI.

YOUR FUTURE REVENUE GROWTH IS ALL ABOUT MORE DATA

How many radio salespeople have you known over the years that have said, "*my job is to sell air*"? Despite not having overnight ratings like TV or instant numbers like the web, radio is still a \$13-\$16 billion industry, depending on who you believe. However today is not ten years ago. Advertisers are more sophisticated. The field of competitors has never been as crowded. And the expectation for results has never been higher. Unfortunately the radio industry has done very little to advance the notion, with solid numbers, that it sells more than air.

How long have some of you been streaming? And there's still no industry standard to show advertisers how many over-the-air listeners and digital listeners your station has and get fairly compensated for those numbers?

At Forecast 2013, Art Thomas (pictured) of UM Global shed additional light on the need for the radio industry to step out of the 90's and into today. As he explains, your future revenue growth with advertisers is completely dependent on providing them better metrics.

Art Thomas works for UM Global in advanced analytics. He specializes in marketing mix modeling, which is a process of collecting data from advertising outlets such as TV, Radio, Newspaper and Digital and then creating econometric models to measure the impact of media while controlling for factors such as other marketing efforts, pricing, competitive activity, exogenous factors and anything else that impacts KPIs. Model results are then used to simulate future outcomes and determine optimal budget allocations for UM clients.

RI: We understand until recently the data radio gave you for your models was old.

Thomas: Radio has been a little behind in the process compared to all the other media channels. For a long time, radio has been using diaries. That model has no way of measuring radio ratings. We are shifting to PPM which means it will be a passive collection model, like Nielsen TV. We did that at a more granular level, so we actually know if they are changing the channel, what they're listening to and how long they are listening to it. It's more accurate. That's important. The granularity. The ability to accurately measure who hears your ads is important in terms of getting yourself noticed within the model.

RI: Are you getting enough information from radio to give them a fair chance when advertisers look at who to buy?

Thomas: It's better now. This is a step in the right direction. People are going to ask for more and more information all the time. TV's been doing this for a really long time and digital just lends itself to it right off the bat. Right away people are able to tell what sites you visited and track progress. That gives them an advantage. Analytics are the main way people make buying decisions. That's the kind of data they want. Radio is catching up. Is it as good as the other ones yet? It's probably still lagging, but it's leaps and bounds from where it was just a little while ago.

RI: How do you determine who gets the budget from the data?

Thomas: The model is able to attribute activity separated out for each media channel. Once we find out how much activity is attributed to radio, we can determine what levels things start to saturate. That's what's important. For instance, if we have a budget of \$10 million, traditionally, about \$1 million of that is put into radio, \$8 million into TV. The key for us is to figure out where TV starts to saturate, where money is being thrown away for nothing. People just tend to use TV as a default all the time. It gets the lion's share of the spending. Part of that is because it's much easier to read and find out where that saturation point is. Once we've done the model, we go through a number of optimizations. We can then say, at certain budget levels, where should we be spending. The optimization tool determines saturation points and where your next dollar is spent best.

RI: How do you determine if you were right or wrong after a campaign?

Thomas: We're accountable for the decisions we make. We model things out and make recommendations but if those recommendations don't work out that reflects badly on us. We validate our models afterwards. We follow up to see if things worked out. The default is usually sales. We base part of our fee on success. If we make decisions and they don't work out we are accountable for that.

RI: What else can radio provide you to sway your decisions? Does it just come down to Arbitron?

Thomas: It really will come down to more data, but it has to be from the ground up a little more. In general, the radio industry, whether it's whoever is programming or someone involved in any kind of decision making needs to be aware that data drives everything now. You can have a gut feeling, you can have a lot of experience that tells you to do one thing or the other, but when it comes down to it, the people making decisions at the agency level are deciding based on data. I just think overall the industry has to have a mindset that it's the way things are going.

RI: So, Radio needs more and better metrics, to understand who the listeners are, where they shop, what time of day they shop, all that and more?

Thomas: Yes. The way we always think about things here is, we take the client's perspective at all times. When it comes to modeling, decisionmaking or analysis, what use is this to the client? At the end, we can say "this is fueling this decision." You have to think about it in those terms even if you are at a lower level, saying "If I am on the agency side, or I am a client, and I am looking at where to invest my money, what can I do to show the money is working as opposed to just that feeling of putting ads in drive-time." That's great, but we need to find a way to

compare that, either across stations, across regions, or across media channels.

RI: You have room full of radio CEO's with a chance to tell them this is what they need to do in order to be seriously considered for bigger ad budgets, what do you say?

Thomas: Be more proactive. A lot of other media channels have representatives that are fresh and new in the agency's mind. They have champions of their industry. They have people talking about what's going on. I think radio is still very passive compared to the representatives we see here everyday. I think knowing your part, your role in this process and become more involved with measurement, with showing that radio does work, that will take you a long way.

NEUROSCIENCE CAN IMPROVE THE ROI ON ADVERTISING: GAYATHRI SWAHAR

Interview with, Director, Nielsen NeuroFocus, India

The New-York based \$5.6 billion [Nielsen Holdings](#) is one the world's leading market research firms. In 2011, it acquired a company called NeuroFocus. [Nielsen NeuroFocus](#) uses [neuroscience](#) techniques - essentially brain mapping and eye tracking - to literally get into the minds of consumers and figure out what they like, don't like or are likely to do among thousands of other thoughts. It helps marketers understand the unarticulated thoughts of consumers which no amount of questioning and interviews can bring out.

These could be about packaging, taste, quality, advertising or any other elements of a product or its communication. *Vanita Kohli-Khandekar* spoke to [Gayathri Swahar](#), director, Nielsen NeuroFocus,

India, on how neuroscience is becoming a marketing tool and (now) an aid for broadcasters coping with the 12-minute-per-hour ceiling on ad time:

How does neuroscience aid marketers?

Usually when we do market research we would ask a questions like 'Do you like my ad? Would you buy my product?' But you really don't know how accurate the answer is. At Nielsen NeuroFocus, we apply the science of neuroscience to research. So, for instance, if we are testing an ad, we will get a group of people in and they are given hats which have 32 nodes that map their brain while they are watching the ad. We blend this with eye-tracking. This measures attention, emotion and memory retention. Then, three direct metrics are derived from it. One, is the ad making you consider or leading you to action? Two, does it have novelty and three, is it easy to understand? It doesn't tell you if an ad has worked or not. What it tells you is what parts of the ad have worked. For example, if you wanted the ad to say that this food brand is healthy or that it reduces work, has that message gone through?

Can it be used across marketing problems and product categories?

We have used it across the globe in automobiles, (mobile) handsets and health food among other categories. Neuroscience can be used for anything from product, packaging to advertising. It plugs into consumers' minds without asking questions.

Why is it useful for broadcasters and marketers facing the 12-minutes-per-hour ad cap?

What we can do with Nielsen NeuroFocus is neurocompression. That means we take a 30-second

commercial and compress it into 10-12 seconds that are most effective, going by the mapping. This improves ROI (return on investment) for marketers and frees up ad inventory for broadcasters. We have used it extensively. And it is, by volumes, one of the largest parts of our business. But the last one year has seen a huge upside because of the 12-minute cap

CONSUMER NEUROSCIENCE-BASED ADVERTISING: MAKING :15 THE NEW :30

MEDIA AND ENTERTAINMENT | 07.30.2013



By Randall Beard, Global Head, Advertiser Solutions for Nielsen

Often treated as an afterthought by marketers and agencies alike, the 15-second TV spot is usually just a cut down version of the 30-second spot, rarely copy tested, but assumed to be at least 50 percent as good as the :30 from which it's derived.

But the truth is that most marketers have no idea how good, or bad, their :15s really are. It's as if everyone just blindly assumes the best, without thinking about the worst. Fifteen-second ads adhere to the same basic principles of success as :30s, but just get much less attention.

AN IMPROVEMENT -- REAL TIME :15 VS. :30 OPTIMIZATION

Things have improved somewhat over the past few years. With the advent of real-time TV ad effectiveness measurement, marketers can now monitor the performance of their :30s and :15s on a weekly or bi-weekly basis, enabling them to understand relative differences in performance.

This allows you to see when your 15s perform well enough to warrant moving out of your :30s and into 100 percent focus on your :15s. But all of this is after the fact. What's really needed is better :15 design beforehand. But how?

CONSUMER NEUROSCIENCE AND COPY TESTING

Consumer neuroscience has had any number of fits and starts over the past few years when applied to marketing. But one area where there has been substantial and undeniable progress is in the area of copy testing. The most advanced technique uses EEG measures of brain activity to understand how viewers are responding to advertising. This approach uses EEG to identify and capture responses to brain stimuli in fractions of a second.

In particular, EEG based copy testing can measure three things extremely well:

1. Attention – When and how much viewer attention is paid to an ad. This is key to knowing if someone even notices or pays attention to your ad in the first place.
2. Memory – Whether a viewer's memory is activated in response to viewing an ad. Without memory, it's unlikely that an ad will influence much future behavior.
3. Emotion – To what degree a viewer is drawn to or pulls away from the ad stimulus. Attention and memory are important, but so is positive emotional attraction.

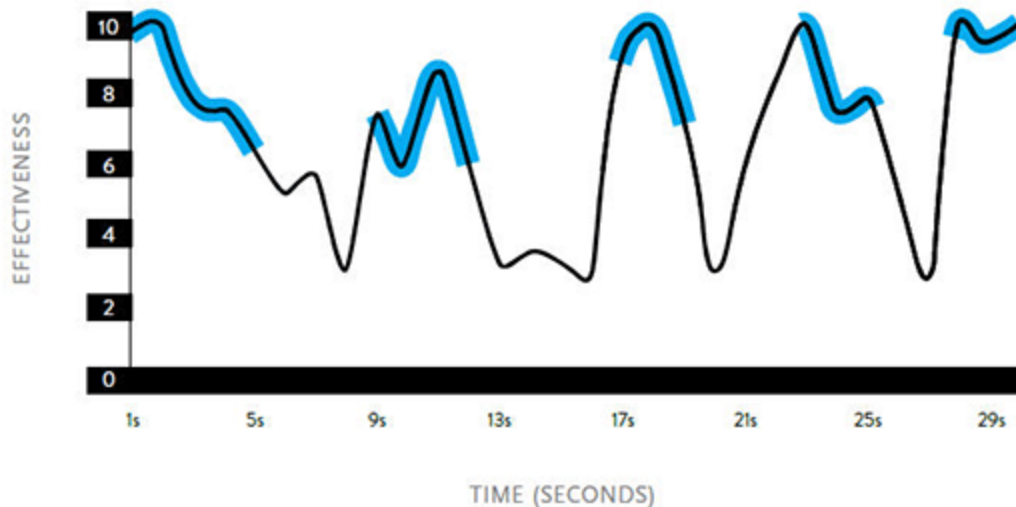
Taken together, these three measures are key to effective ads. They relate directly to whether someone pays attention to the ad, whether the ad is stored in long term memory, and whether the ad elicits a positive emotional response.

Importantly, EEG based copy testing measures viewer's brain waves in milliseconds throughout the commercial. Typically, a viewer's brain waves looks like a series of peaks and valleys as the viewer responds to different parts of the commercial. These peaks and valleys correspond to the parts of the commercial that are most and least effective as measured by attention, memory and emotion.

THE OPTIMAL :15 TV SPOT

Back to the :30 vs. :15 conundrum: how do you design a better :15 TV spot? Well, it's not as difficult as rocket science, but it's essentially an exercise in brain wave assessment. Simply put, you cut out the ad's "valleys" and keep the "peaks."

EEG READOUTS IDENTIFY MORE AND LESS EFFECTIVE PORTIONS OF ADS



Source: Nielsen NeuroFocus



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Consumer neuroscience-based copy testing has advanced to the point where it can algorithmically eliminate the weakest portions of the :30 TV commercial while keeping the strongest ones for the new :15. This re-cut commercial is then edited by the agency creatives for story flow, continuity and visual seamlessness into a final spot.

THE CONSUMER NEUROSCIENCE-BASED :15 TV COMMERCIAL – HOW GOOD?

At this point, you might be asking: “but how good, really, are these cut down neuroscience based ads? It all sounds like a big black box.”

Based on Nielsen NeuroFocus testing of both original :30 TV spots and the EEG-optimized :15s, here’s what we see:

- ~90 percent of neuroscience optimized :15 ads test just as well as their :30 counterparts
- A significant number of optimized :15 ads actually test better than their :30 counterparts

So, the next time you see your ad agency, tell them that you have a “present” for them—consumer neuroscience-based :15s

NEUROSCIENCE SOUNDS GREAT, BUT IT’S NOT THE PANACEA FOR ALL RESEARCH ILLS

From: Engaging thoughts

By [Lyndsay Peck](#)

There was an interesting piece in Marketing Magazine recently by Mhairi McEwan, chief executive and co-founder of Brand Learning, which discussed the way the world of customer insight is being influenced by two apparently conflicting forces: neuroscience and big data.

In her article, McEwan set out the differences between a neuroscientific approach with its subconscious associations, beliefs and emotional triggers influencing our behaviours, and data, where prediction analytics can be used to predict behaviour. Her view is that “neuroscience explains a quick, more intuitive style, whereas big data can drive a slower, more analytic style”.

As researchers and marketers, we are in the business of understanding why consumers do certain things. This is going to be a mix of rational reasons (which can be accessed by direct questions) and less rational reasons (which can’t so easily be accessed by direct questions). The upshot of that is that no one approach used in isolation will give you the rounded findings you need.

There’s no doubt that mention of neuroscientific approaches impresses potential clients. It also gives a clear impression that we as an industry we are progressing, but at present it remains a very small part of research, and actually not used by many. The reality is that the tools at our disposal are only as useful as the questions we ask.

The neuroscientific approach is useful in gauging people’s reactions but it does not give any idea of those reactions within any kind of context or if a subsequent conversation with someone else

causes you to reappraise your thoughts. The data approach may be lacking in this but it will give you more of a balance view based on the responses of many more people.

We need to achieve some balance and recognise that neuroscience is just another tool if you have access to using it. It is not the holy grail of research, as more than one person has espoused at times “it can tell you what people are thinking even when they can’t”. As McEwan’s article points out, for most marketers all tools can be useful; no one tool is the panacea. There is no universally conclusive tool for all situations and, as researchers and marketers, we should always keep that in mind.

A Neuromarketer would say the purpose of advertising is to increase sales, but indirectly, by first creating positive associations with a brand or product in memory. How this happens is thru conditioning, not overt persuasion. Conditioning is a function of emotional connection, repetition and implicit learning. The neuromarketer might mention attention, but see it as an obstacle to ad effectiveness. Advertising works at the point of sale indirectly thru priming- seeing the brand in the store primes the emotional associations created by the advertising.

Two views of advertising:

The direct route- emphasizing attention, conscious processing, logical argument, explicit recall and sales.

The indirect route- emphasizing emotional connections, non conscious processing, priming implicit memory, brand attitudes and sales

The role of creativity in advertising is to get customers to pay attention to these arguments because high attention drives recall which is required at the point of sale to complete the connection. This is called the rational consumer model

Heuristics: judgment and decision making short cuts

Per John Philip Jones (1995) study across 78 brands and 2,000 households. Exposure to ads were tracked over 2 years. He found that households that saw an ad bought 24% of the advertised products than households that did not see the ad. The top 20 ads increased sales by 98%, but the bottom 20% of ads actually generated lower sales, -18% lower than those not exposed to the ad. The next 20% of ads had no impact on sales, the next 20% had 12% higher sales and the next 20% had 30% higher sales. So most of the benefits of advertising went to the top 40% of ads with 40% having no effect or a negative effect.

In some case advertising can't increase sales because all of their competitors are advertising so heavily that their efforts essentially cancel each other out.

Indirect route- largely non conscious, automatic, effortless and driven more by emotion than logic. The indirect route works best when:

The product being advertised and its category are well established and familiar (leveraging existing emotional connections, familiarity).

The ad minimizes information and focuses on an engaging narrative in which the brand plays a central role, reinforcing the emotional connection while minimizing counter- arguing.

The product is inexpensive and purchased frequently and less likely to trigger deliberation and explicit decision making

The ad isn't meant to product a direct response by the consumer but is aimed at building or reinforcing longer term associations with the brand

You only become aware of low attention processing when something happens that escalates it up to high attention, such as when you hear you name spoken in a crowded room. Low attention is also the mode of attention we allocate to other things when paying high attention to one thing.

Most of the advertising is processed low attention rather than high attention. Humans have developed some natural resistance strategies in our non conscious processing of ads. We filter them.

In many cases high attention ads may not be such a good thing. Ads are usually perceived as interruptions. So our default response to any ad that grabs our attention is just as likely to be negative as positive, which is exactly the emotional connection advertisers want to avoid for their products

When relying solely on recall scores to ascertain a mediums effectiveness you are cutting yourself off from measuring implicit memory missing a major way in which advertising actually works in human memory

A large body of research by academics and practitioners has found very little correlation between ad recall and sales or market share.

<http://staging.ipa.autometrics.com>

the Institute of Practitioners In Advertising which contains over 1,400 cases of successful advertising campaigns submitted to the IPA effectiveness awards competition over 3 decades. Researchers classified these ads as emotional, rational or mixed. They found that campaigns containing exclusively emotional content were twice as likely to produce very large profit gains than campaigns that emphasized rational content (31% vs 16%). Campaigns that mixed some emotional content with rational content also performed better than purely rational campaigns (26% vs 16%)

emotional responses are primarily pre-conscious. We have circuitry in our brain that allows us to make rapid emotional assessments of objects in our environment

the mechanism in which conditioning occurs could not be simpler- it's repetition- the repeated presentation of the emotional response and the brand together

conditioning unlike logical persuasion doesn't require attention to create learning. Indeed attention might actually inhibit nonconscious conditioning because it triggers nonconscious correction goals and conscious counter-arguing in the mind of the viewer. This is why researchers such as Dr. Robert Heath argue that attention is not only difficult to achieve for most advertising but would actually be a detriment to advertising effectiveness because it would disrupt the real mechanism by which advertising operates.

Implicit memory has some extraordinary properties. It operates automatically, outside our conscious awareness so we have no direct control over it. It doesn't depend upon attention. It has a huge capacity compared to explicit memory. And it can't be voluntarily recalled, so it remains invisible to all forms of self reported recall testing

WHAT ARE SUBLIMINAL MESSAGES?

I DON'T WANT TO MAKE THIS CONFUSING, SO, IN SHORT, A SUBLIMINAL MESSAGE IS A MESSAGE THAT PASSES UNDER THE

RADAR OF YOUR CONSCIOUS MIND. BASICALLY WHERE THE CONSCIOUSNESS OF A PERSON WOULD ARGUE WITH OR REFUTE SOMETHING, THE UNCONSCIOUS MIND ACCEPTS IT AS FACT. IF THAT STILL DOESN'T MAKE ANY SENSE, LET ME QUOTE MINDFITHYPOTHESIS.COM:—FOR EXAMPLE, IF YOU WERE LISTENING TO A SUBLIMINAL SESSION FOR WEIGHT LOSS AND YOU WERE ABLE TO HEAR THE AFFIRMATIONS “I AM SLIM AND TRIM” YOUR CONSCIOUS MIND WOULD SAY TO ITSELF “WHAT A LOAD OF CRAP I AM FAT AND HATE MY BODY:. THE IDEA IS THAT SINCE YOU ARE UNABLE TO CRITICIZE THE AFFIRMATION WHEN YOU CAN NOT CONSCIOUSLY HEAR IT, IT IS ACCEPTED BY THE SUB CONSCIOUS MIND WITHOUT COMMENT OR REBUTTAL.

THREE TYPES:

A SIGNAL OR MESSAGE DESIGNED TO PASS BELOW (SUB) THE NORMAL LIMITS OF PERCEPTION.

SOMETHING INAUDIBLE TO THE CONSCIOUS MIND, BUT HEARD BY THE UNCONSCIOUS MIND.

AN IMAGE TRANSMITTED BRIEFLY, NOT SEEN CONSCIOUSLY, BUT SEEN UNCONSCIOUSLY.

SO THE BASIC IDEA OF SUBLIMINAL'S IS THAT YOU'RE TARGETING PEOPLE UNCONSCIOUSLY.

WHY 'OVERLEARNING' IS THE KEY TO RIDICULOUS SUCCESS

Annie Murphy Paul, [The Brilliant Blog](#) AUG. 19, 2013, 5:10 PM [4,442](#)

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"Why do I have to keep practicing? *I know* it already!"

That's the familiar wail of a child seated at the piano or in front of the multiplication table (or, for that matter, of an adult taking a tennis lesson). Cognitive science has a persuasive retort: **We don't just need to learn a task in order to perform it well; we need to *overlearn* it.**

Decades of research have shown that superior performance requires practicing *beyond* the point of mastery. The perfect execution of a piano sonata or a tennis serve doesn't mark the end of practice; it signals that the crucial part of the session is just getting underway.

Evidence of why this is so was provided by a study published recently in the *Journal of Neuroscience*. Assistant professor Alaa Ahmed and two of her colleagues in the integrative physiology department at the University of Colorado-Boulder asked study subjects to move a cursor on a screen by manipulating a robotic arm. As they did so, the researchers measured the participants' energy expenditure by analyzing how much oxygen they inhaled and how much carbon dioxide they breathed out. When the subjects first tackled the exercise, they used up a lot of metabolic power, but this decreased as their skill improved. By the end of the learning process, the amount of effort they expended to carry out the task had declined about 20 percent from when they started.

Whenever we learn to make a new movement, Ahmed explains, we form and then update an internal model—a “sensorimotor map”—which our nervous system uses to predict our muscles' motions and the resistance they will encounter. As that internal model is refined over time, we're able to cut down on unnecessary movements and eliminate wasted energy.

Over the course of a practice session, the subjects in Ahmed's study were becoming more efficient in their muscle activity. But that wasn't the whole story. Energy expenditures continued to decrease even after the decline in muscle activity had stabilized. In fact, Ahmed and her coauthors report, this is when the greatest reductions in metabolic power were observed—during the very time when it looks to an observer, and to the participant herself, as if “nothing is happening.”

What's going on here? Ahmed theorizes that even after participants had fine-tuned their muscle movements, the neural processes controlling the movements continued to grow more efficient. The brain uses up energy, too, and through overlearning it can get by on less. These gains in mental efficiency free up resources for other tasks: infusing the music you're playing with greater emotion and passion, for example, or keeping closer track of your opponent's moves on the other side of the tennis court. Less effort in one domain means more energy available to others.

While Ahmed's paper didn't address the application of overlearning to the classroom or the workplace, other studies have demonstrated that for a wide range of academic and professional activities, overlearning reduces the amount of mental effort required, leading to better performance—especially under high-stakes conditions. In fact, research on the “audience effect” shows that once we've overlearned a complex task, we actually perform it *better* when other people are watching. When we haven't achieved the reduction of mental effort that comes with overlearning, however, the additional stress of an audience makes stumbles more likely.

“The message from this study is that in order to perform with less effort, keep on practicing, even after it seems the task has been learned,” says Ahmed. “We have shown there is an advantage to continued practice beyond any visible changes in performance.” In other words: You’re getting better and better, even when you can’t tell you’re improving—a thought to keep you going through those long hours of practice

NEUROSCIENCE AND THE MEDIA PLAN

Brand managers could think about spending more money on cinema, and perhaps a bit less on social media, according to new theories of how our brains process commercial messages.

Marketers and media owners have long known that the media environment influences how people respond to advertising.

An automaker’s ad highlighting a car’s design for example usually works better when placed in magazines or TV shows about design, rather than those about cars.

At the same time, the mood people are in at the time as well as an ad’s sensory impact can also boost effectiveness.

That’s one reason why marketers should think of multiplexes as places to experience well-made commercials, as well as the latest films.

However, that’s not the only reason cinemas are good venues for branding messages, points out Peter Steidl, who has co-authored a new beginners’ guide to neuromarketing.

Research suggests that sensory elements within an ad help reinforce key messages, as long as people have already seen it once in full.

The heightened visual and audio intensity that a cinema provides can be especially effective in making an ad or brand message easier to remember.

Memorable media

Once viewed, at home or on the big screen, these prompts even apply to ads seen at high-speed, as people fast-forward the ad breaks from pre-recorded programs, or those just **heard** as viewers turn to their tablets and smartphones when waiting for a commercial break to end.

“Given the importance of creating a strong ad memory in the first place, we could argue that the role of cinema advertising, and other high-impact media, in the media mix deserves to be re-evaluated,” **proposes Australia-based Steidl, principal and founder of specialist consultancy Neurothinking.**

This can also include other media vehicles where the ads are more closely aligned with the experience as a whole, such as the Super Bowl.

Most ads experienced in a passive environment, including TV and cinema advertising, tend to appeal to the non-conscious part of our brains, Steidl explains.

These indirect routes to action are arguably the most effective kinds of commercial messaging, as the non-conscious mind largely shapes how people think about brands, products and companies.

Attitudes and impulse

While unacknowledged by the conscious brain, this is where most purchase decisions – including what to buy – are made.

Ads experienced in a more active environment, such as online and social media, are better at direct response, and moving people down the path to purchase.

The trouble is, Steidl points out, advertisers tend to use the same yardstick for both to measure media effectiveness.

“The use of recall as a key measure of effectiveness is inadequate or misleading when the marketer is going down the indirect road to effectiveness – which, by the way, is the more promising one for most brands, most of the time,” Steidl says.

Reach remains important

While neuroscience challenges some traditional beliefs about how marketing works, some fundamentals however remain true.

Reach is still critical – limiting the scope for premium media owners on many media plans.

Even more importantly, media thinking counts for little if the creative execution fails to deliver.

Nonetheless, neuroscience – the study of how people react to stimuli – should play a greater role in finetuning both the message and the medium, Steidl argues.

Even good creative should make the most of a particular medium, connecting with the non-conscious as well as conscious parts of the brain.

“Without a strong ad memory, it is becoming increasingly difficult for an ad – and therefore, a brand – to be recognized and processed in the way we want.”

Our brain doesn't lie

DDB was hired by KLM to develop a thematic campaign called “What New Memories Can We Take You To?” The Crossmedia Division of TMG then created and produced an activation campaign for this, the core of which is the KLM Holiday Game, an inventive new online version of the well-known memory game. When players flip a card, they see a photo of themselves/their face at various KLM holiday destinations. Other elements of the activation campaign included newspaper ads, online content and a radio commercial, to get as many people as possible involved in playing the game. Neurensics used its brain-scanning technologies to study the impact of both these campaigns on the consumer brain.

The thematic campaign (TV commercial) scored positively in the brain in terms of the dimensions that affect purchasing behavior. The commercial shows holiday snapshots that come across as stimulating, appealing and rewarding. The results also indicated, however, that the new link between KLM and that holiday feeling (an inspiring trip) was not yet being made. While the holiday-feeling association holds a lot of promise for KLM, it is not yet a trusted representation. The activation campaign (online, print and radio), which was meant to inspire people to play the Holiday Game, *is* working. The campaign has created interest in, and recognition of, the brand *and* a sense of reward in playing the game. The photos in the KLM Holiday Game created by TMG and the involvement with the brand then trigger self-relevance in the brain.

To sum it up, the study demonstrated for the first time that advertisers can gain tremendous added value by having people interact with their brand in a game, especially if they also assign those people a role in it. The campaign that is needed to get participants to play the game must be a part of the communications mix. These findings indicate that TMG's multimedia mix worked in terms of making the KLM activation campaign a success. This, together with the thematic campaign, creates a balanced whole, which activates regions of the brain that are decisive for inducing consumer behavior.



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How can your campaign reach your customer's brain?

The Impact of Mono-media and Multimedia Campaigns on Our Brain – Sanoma Media

An advertising campaign can be rolled out using a variety of media. We know that television spots, Internet banners and print advertisements work, but how they influence the brain and prompt purchasing behavior is a mystery. Sanoma Media thought it would be an interesting exercise to look into the brain and thoroughly examine the effect of these three forms of media.

Twenty unsuspecting participants were invited to take part in the MRI research. They were shown unknown Belgian brands while lying down in the scanner, along with advertising campaigns promoting the brands in television commercials, print advertisements and Internet banners. Our research subjects were naturally convinced at the end of the study that the messages had not had any impact on them. They knew advertising didn't work – maybe on other people but certainly not on them.

It was up to the neuroscientists at Neurensics to prove that advertising does work. And, indeed, the results of the before and after measurements of the advertised brands showed that after a person had been exposed to an advertising campaign, that brand became more attractive and desirable and the brand relevance increased significantly. Without our necessarily being aware of it, advertising therefore makes a brand more important and desirable to us, which makes us more likely to buy it.

What's the best way to advertise a brand then? We showed two kinds of campaigns: those run on a single medium and multimedia campaigns. When advertising messages are rolled out in multiple media – versus sending the same messages out on a single medium – it reinforces self-relevance and social value. If we hear about something from multiple sources, it not only assumes a certain social status, but also becomes relevant to us. In other words, multimedia campaigns work best for brand-building.

Besides the branding impact, we also examined the effects of the advertising itself: the direct effect of advertising on the brain. In this arena, the mono-media campaigns worked best. Hearing the same message over and over again may be boring, but it creates less anxiety for the brain. When this is paired with consistent visuals, people tend to recognize and trust the commercial message more. An action-oriented campaign, one without branding objectives, will be more effective if run in a single medium.

The participants in our study found it all very hard to believe. They had remained convinced that advertising didn't work. On their way out, they grabbed one last cookie from the plate lying there. It had an unusual flavor they'd never tasted before. Where did they know that brand from?

OVERTHINKING CAN BE DETRIMENTAL TO HUMAN PERFORMANCE

Main Category: [Neurology / Neuroscience](#)

Article Date: 09 Aug 2013 - 0:00 PDT

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Current ratings for:

Overthinking can be detrimental to human performance

Patient / Public:

Not yet rated

Healthcare Prof:

Not yet rated

Trying to explain riding a bike is difficult because it is an implicit memory. The body knows what to do, but thinking about the process can often interfere. So why is it that under certain circumstances paying full attention and trying hard can actually impede performance? A new UC Santa Barbara study, published in the *Journal of Neuroscience*, reveals part of the answer.

There are two kinds of memory: implicit, a form of long-term memory not requiring conscious thought and expressed by means other than words; and explicit, another kind of long-term memory formed consciously that can be described in words. Scientists consider these distinct areas of function both behaviorally and in the brain.

Long-term memory is supported by various regions in the prefrontal cortex, the newest part of the brain in terms of evolution and the part of the brain responsible for planning, executive function, and working memory. "A lot of people think the reason we're human is because we have the most advanced prefrontal cortex," said the study's lead author, Taraz Lee, a postdoctoral scholar working in UCSB's Action Lab.

Two previous brain studies have shown that taxing explicit memory resources improved recognition memory without awareness. The results suggest that implicit perceptual memory can aid performance on recognition tests. So Lee and his colleagues decided to test whether the effects of the attentional control processes associated with explicit memory could directly interfere with implicit memory.

Lee's study used continuous theta-burst transcranial magnetic stimulation (TMS) to temporarily disrupt the function of two different parts of the prefrontal cortex, the dorsolateral and ventrolateral. The dorsal and ventral regions are close to each other but have slightly different functions. Disrupting function in two distinct areas provided a direct causal test of whether explicit memory processing exerts control over sensory resources - in this case, visual information processing - and in doing so indirectly harms implicit memory processes.

Participants were shown a series of kaleidoscopic images for about a minute, then had a one-minute break before being given memory tests containing two different kaleidoscopic images. They were then asked to distinguish images they had seen previously from the new ones. "After they gave us that answer, we asked whether they remembered a lot of rich details, whether they had a vague impression, or whether they were blindly guessing," explains Lee. "And the participants only did better when they said they were guessing."

The results of disrupting the function of the dorsolateral prefrontal cortex shed light on why paying attention can be a distraction and affect performance outcomes. "If we ramped down activity in the dorsolateral prefrontal cortex, people remembered the images better," said Lee.

When the researchers disrupted the ventral area of the prefrontal cortex, participants' memory was just slightly worse. "They would shift from saying that they could remember a lot of rich details about the image to being vaguely familiar with the images," Lee said. "It didn't actually make them better at the task."

Lee's fascination with the effect of attentional processes on memory stems from his extensive sports background. As he pointed out, there are always examples of professional golfers who have the lead on the 18th hole, but when it comes down to one easy shot, they fall apart. "That should be the time when it all comes out the best, but you just can't think about that sort of thing," he said. "It just doesn't help you."

His continuing studies at UCSB's Action Lab will focus on dissecting the process of choking under pressure. Lee's work will use brain scans to examine why people who are highly incentivized to do well often succumb to pressure and how the prefrontal cortex and these attentional processes interfere with performance.

"I think most researchers who look at prefrontal cortex function are trying to figure out what it does to help you and how that explains how the brain works and how we act," said Lee. "I look at it at the opposite. If we can figure out the ways in which activity in this part of the brain hurts you, then this also informs how your brain works and can give us some clues to what's actually going on."

The Largest Commercial Brain Research Ever Conducted into the Effect of Advertising

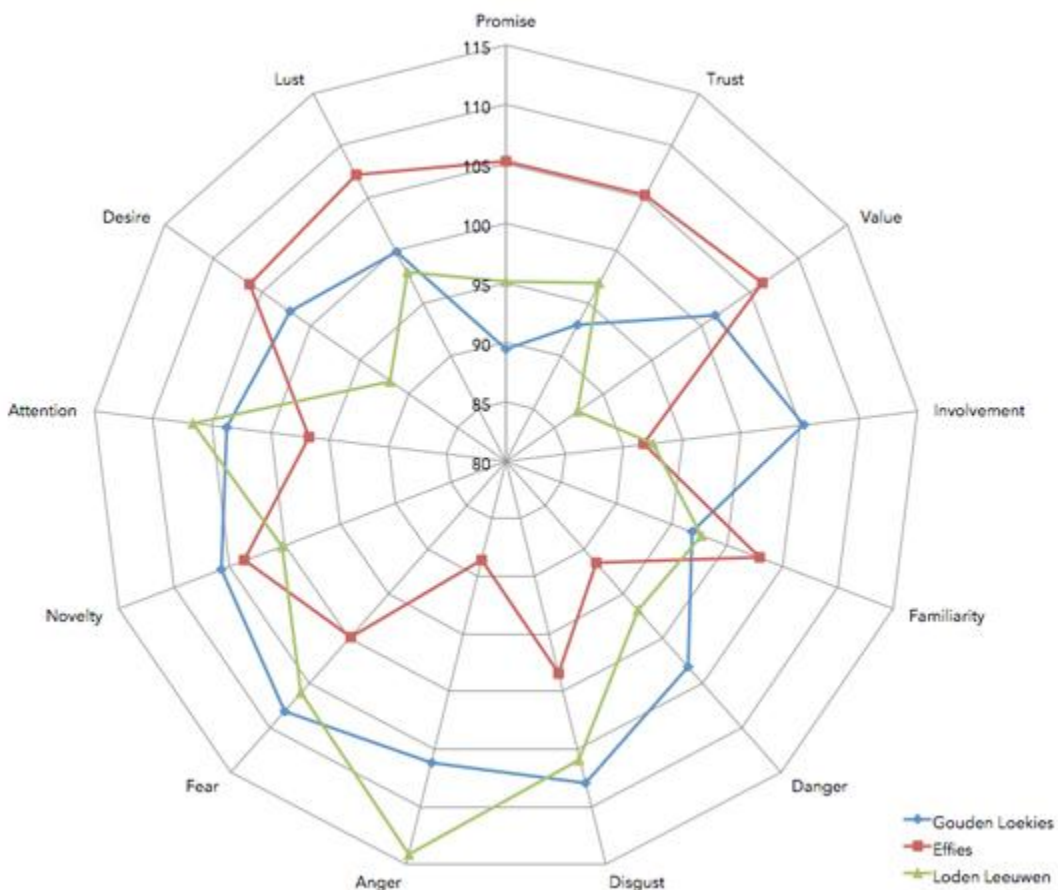
Ask consumers if they are influenced by advertising and you will probably be met with denial. Why, then, are we bombarded with thousands and thousands of advertising triggers every day? Smart marketers know the answer: advertising influences the structures in our brains that unconsciously process thoughts. Using MRI equipment, we are able to see when consumers are incited to exhibit buying behavior. Neurensics therefore decided to conduct a year-long study into the effectiveness of television ads.

In a meta-analysis that involved studying 171 commercials viewed by over 200 subjects, we uncovered the effectiveness of the advertisements. Included in the television spots tested, along with the "normal" ads, were award-winning commercials in three categories: funny ads, irritating ads and Effie nominations for campaigns that were demonstrably effective.

The results indicated that each of the three categories caused a unique pattern in brain activity. The irritating commercials are, indeed, irritating – so much so that they trigger anger. The funny ads have an impact on the

brain, attract attention and are original and fun to watch. Accordingly, they stimulate primarily the regions of the brain that process visual input. Finally, Effie selections have an average impact but excel at triggering positive emotions, while also defusing negative emotions. This is because clearly effective commercials communicate their message in a concrete, appealing and rewarding manner. This is reflected in the increased activity in the auditory regions of the brain: people listen to Effies. Remarkably, Effies receive very consistent scores. An Effie award correlates to a coefficient of 0.8 on the benchmark of effective advertisements.

It is interesting to see what an effective advertisement does to the brain. It provides insight into how advertising works and how to optimize it. In addition, the meta-analysis of post-testing provides input for performing pre-testing. Moving storyboards, animatics or strategic plans can be tested for their efficacy in activating the brain dimensions that correspond to effective commercial communications. This allows us to predict, with reasonable accuracy, how effective a campaign will be.



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"I THINK MOST RESEARCHERS WHO LOOK AT PREFRONTAL CORTEX FUNCTION ARE TRYING TO FIGURE OUT WHAT IT DOES TO HELP YOU AND HOW THAT EXPLAINS HOW THE BRAIN WORKS AND HOW WE ACT," SAID LEE. "I LOOK AT IT AT THE OPPOSITE. IF WE CAN FIGURE OUT THE WAYS IN WHICH ACTIVITY IN THIS PART OF THE BRAIN HURTS YOU, THEN THIS ALSO INFORMS HOW YOUR BRAIN WORKS AND CAN GIVE US SOME CLUES TO WHAT'S ACTUALLY GOING ON."

HOW AND WHY DO YOU MAKE DECISIONS?

by Mhairi McEwan, added 32 hours ago

The world of customer insight is being influenced by two seemingly opposing drivers - neuroscience and big data - that can skew our thinking, writes Mhairi McEwan.

Mhairi McEwan is chief executive and co-founder of Brand Learning.

[@brandlearning](#)

Neuroscience explains that we have subconscious associations, beliefs and emotional triggers that come together to influence the way we behave. Quite separate is the area of big data, where prediction analytics and other software can reveal how people will behave without the existence of a single insight process.

When it comes to decision-making, neuroscience explains a quick, more intuitive style, whereas big data can drive a slower, more analytic style. Marketers will fall somewhere along this intuitive-versus-analytic decision-making spectrum; ask yourself where you sit predominantly.

Intuition-driven

If your instincts tend to guide you, recognise that you may disregard new data sources, using what's readily available and familiar to guide your swiftly made decisions. Moreover, if you're a user of the category you market, you may also rely heavily on your personal insight to guide conclusions.

If this is you, keep in mind that too much subjectivity may create a blind spot to actual and/or emerging customer behaviours that only large sets of objective data reveal.

As an example, marketers in South America noticed that consumers were washing their floors with washing powder. Naturally, marketing's first instinct was to launch a powder-based floor cleaning product. However, a look at the data revealed that most consumers were actually using washing powder for all their cleaning needs – they could afford only one cleaning product and were unlikely to buy a new floor cleaner merely because it was in a powder format.

As a marketer you may trust that your instincts are driven by consumer understanding, but recognise that "fast" does not always mean "good", and one's own experiences or instincts cannot tell the whole story.

Analysis-driven

If you are more analytical, you will relish the increase in available data today, have a systematic approach to its collection and analysis and see it as a vital element in decision-making.

This may lead to slower decisions than among those who are intuition-driven; the sheer amount and variety of data and its analysis means decision-making is drawn out, and the risk is that consumers may have moved on by the time action is taken. More importantly, without a closeness to consumers, the data could be misinterpreted.

Our washing-powder example could easily have worked the other way; an analysis-driven marketer looking exclusively at data showing a high volume of consumers using washing powder on their floors may also have seen this as hard evidence for launching a powder-based floor-cleaning line. However, being more closely connected to the consumer, with an

understanding of their housekeeping, could intuitively have told these marketers that cost may play a role, prompting further digging into the data and a more sound decision.

The balance afforded by taking on board the learnings of both neuroscience and big data allows a marketer to identify his or her personal decision-making style and, therefore, their propensity to be either overly instinctive or to suffer from analysis paralysis. When it comes to homing in on a single consumer insight – or more usually, a range of insights – being equally influenced by neuroscience and data can, ultimately, help marketers make a better decision.

RESEARCHERS PRESENT STRIKING NEW HYPOTHESIS ON WHY WE SLEEP (VIDEO)

The Huffington Post | By [Carolyn Gregoire](#) Posted: 07/28/2013 9:46 am EDT | Updated: 07/28/2013 6:43 pm EDT

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We spend nearly a third of our lives sleeping, yet the reasons *why* we need to are still poorly understood. What we do know is that the brain is highly active during sleep. According to a popular current theory, the resting brain is nearly as busy as the waking brain because during sleep, neural circuits replay memories in order to aid learning by strengthening the circuits. But now researchers are presenting a very different explanation for this activity.

"Every night, while we lie asleep, blind, dumb and almost paralyzed, our brains are hard at work. Neurons in the sleeping brain fire nearly as often as they do in a waking state, and they consume almost as much energy," researchers [Giulio Tononi and Chiara Cirelli of the University of Wisconsin–Madison](#) write in a new [Scientific American](#) feature. "What is the point of this unceasing activity at a time when we are supposedly resting? Why does the conscious mind disconnect so completely from the external environment while the brain keeps nattering on?"

The answer they propose in a new hypothesis is, essentially, that the brain's activity during sleep *weakens* the brain's neural connections, rather than strengthening them, as has generally been thought. Their reasoning is that strengthening the neural connections would saturate the brain's circuitry, consuming so much energy that the brain would struggle to encode new information. The purpose of sleep, they argue, is to bring brain cells back down to their baseline.

Functional magnetic resonance imaging, or fMRI, is a technique for measuring brain activity. It works by detecting the changes in blood oxygenation and flow that occur in response to neural activity – when a brain area is more active it consumes more oxygen and to meet this increased demand blood flow increases to the active area. fMRI can be used to produce activation maps showing which parts of the brain are involved in a particular mental process.

The development of FMRI in the 1990s, generally credited to Seiji Ogawa and Ken Kwong, is the latest in long line of innovations, including positron emission tomography (PET) and near infrared spectroscopy (NIRS), which use blood flow and oxygen metabolism to infer brain activity. As a brain imaging technique FMRI has several significant advantages:

1. It is non-invasive and doesn't involve radiation, making it safe for the subject.
2. It has excellent spatial and good temporal resolution.
3. It is easy for the experimenter to use.

The attractions of FMRI have made it a popular tool for imaging normal brain function – especially for psychologists. Over the last decade it has provided new insight to the investigation of how memories are formed, language, pain, learning and emotion to name but a few areas of research. FMRI is also being applied in clinical and commercial settings.

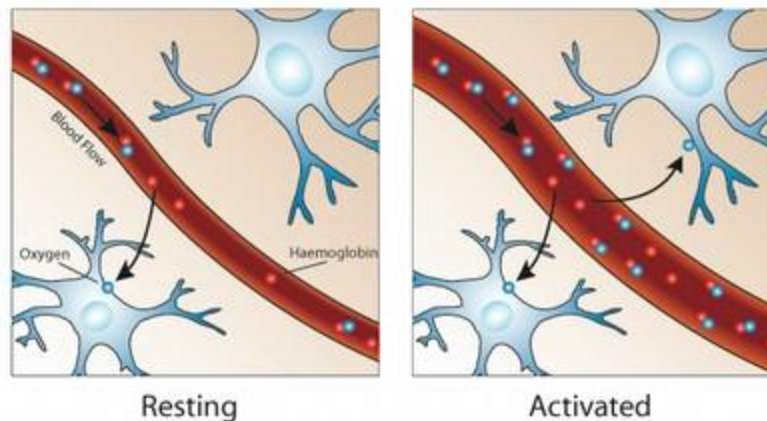
How Does an fMRI Work?

The cylindrical tube of an MRI scanner houses a very powerful electro-magnet. A typical research scanner has a field strength of 3 teslas (T), about 50,000 times greater than the Earth's field. The magnetic field inside the scanner affects the magnetic nuclei of atoms. Normally atomic nuclei are randomly oriented but under the influence of a magnetic field the nuclei become aligned with the direction of the field. The stronger the field the greater the degree of alignment. When pointing in the same direction, the tiny magnetic signals from individual nuclei add up coherently resulting in a signal that is large enough to measure. In fMRI it is the magnetic signal from hydrogen nuclei in water (H₂O) that is detected.

The key to MRI is that the signal from hydrogen nuclei varies in strength depending on the surroundings. This provides a means of discriminating between gray matter, white matter and cerebral spinal fluid in structural images of the brain.

Oxygen is delivered to neurons by hemoglobin in capillary red blood cells. When neuronal activity increases there is an increased demand for oxygen and the local response is an increase in blood flow to regions of increased neural activity.

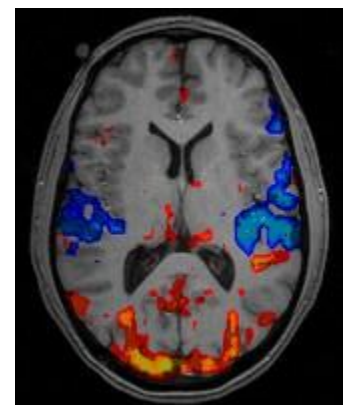
Hemoglobin is diamagnetic when oxygenated but paramagnetic when deoxygenated. This difference in magnetic properties leads to small differences in the MR signal of blood depending on the degree of oxygenation. Since blood oxygenation varies according to the levels of neural activity these differences can be used to detect brain activity. This form of MRI is known as blood oxygenation level dependent (BOLD) imaging.



One point to note is the direction of oxygenation change with increased activity. You might expect blood oxygenation to decrease with activation, but the reality is a little more complex. There is a momentary decrease in blood oxygenation immediately after neural activity increases, known as the “initial dip” in the hemodynamic response. This is followed by a period where the blood flow increases, not just to a level where oxygen demand is met, but overcompensating for the increased demand. This means the blood oxygenation actually increases following neural activation. The blood flow peaks after around 6 seconds and then falls back to baseline, often accompanied by a “post-stimulus undershoot”.

What Does an fMRI Scan Look Like?

The image shown is the result of the simplest kind of fMRI experiment. While [lying](#) in the MRI scanner the subject watched a screen which alternated between showing a visual stimulus and being dark every 30 second. Meanwhile the MRI scanner tracked the signal throughout the brain. In brain areas responding to the visual stimulus you would expect the signal to go up and down as the stimulus is turned on and off, albeit blurred slightly by the delay in the blood flow response.



Researchers look at activity on a scan in voxels — or *volume pixels*, the smallest distinguishable box-shaped part of a three-dimensional image. The activity in a voxel is defined as how closely the time-course of the signal from that voxel matches the expected

time-course. Voxels whose signal corresponds tightly are given a high activation score, voxels showing no correlation have a low score and voxels showing the opposite (deactivation) are given a negative score. These can then be translated into activation maps

HOW TO REPROGRAM YOUR SUBCONSCIOUS MIND

BY [ADMIN](#) ON JULY 17, 2013 IN [PERSONAL DEVELOPMENT](#)

1

Many people go through their lives without understanding why they make the same mistakes, follow the same patterns, and live in the same ruts. They aren't happy with their present situation, but they seem to be unable to make any lasting changes. Are you one of these people?

Perhaps you've attend seminars, read books, and taken courses, but, in the end, fallen back into the same dysfunctional patterns you've always followed! Why does it always turn out this way?

We struggle to make permanent changes in our lives because we input information only into our conscious mind. zzHere's the problem: your conscious mind is not what directs your behaviors and belief system.

To change your behaviors, you must first reprogram the hard-wired center of your mind: the subconscious mind.

How Does Your Subconscious Mind Work?

zzThe subconscious is the largest part of our mind. It contains all the messages we've received throughout our lives. It holds millions and millions of thoughts grouped into clusters that form beliefs, mindsets and character traits.

zzThe relationship between the conscious and subconscious minds is like an iceberg. The conscious mind is represented by the visible tip of the iceberg, while the subconscious is represented by the gigantic lower portion of the iceberg hidden from view.

You can't see the subconscious in action, but it certainly has a major impact on the voyage you take in your life.

zzThe subconscious is the place where all of your learned behaviors reside. Once you learn to walk, you don't need to consider how to lift and place each foot to take the next step, do you? Of course not! Your subconscious mind automatically controls your steps.

Your subconscious learns behavior through repetition and practice. Just as it learned to control your footsteps when you learned to walk, it also controls your footsteps in your life's journey based on what you've reinforced throughout your life.

The good news is you can reprogram your subconscious mind by inputting and reinforcing new thoughts and actions! There are several different techniques you can use to tap into the subconscious mind and reprogram how it works.

Here are some strategies you can use to change your mind and change your life:

1. Affirmations. Affirmations work to change your subconscious mind by using positive, personal, present tense statements to override the embedded negative thinking. By repeating these positive thoughts, you can create new pathways in your subconscious, giving it new attitudes.

Then your subconscious causes you to act in new ways that agree with these new attitudes. For example, repeating: "I choose healthy foods at each meal" can change your mindset about what you eat and why!

2. Visualization. Visualization is the act of creating detailed mental pictures that depict a desired outcome so you can see success for yourself. These images stimulate the subconscious into accepting them as reality, which then directs behavior accordingly. Top athletes around the world use this technique during game-time.

3. Hypnosis. Some types of therapy work with the subconscious mind, including hypnosis. Hypnosis works by easing you into a state of extreme relaxation. Once you're in this state, the conscious mind releases its grip, and the subconscious mind is easier to access.

While under hypnosis, it's much easier to reprogram the subconscious into accepting new thoughts as reality.

4. Subliminal Audios. You can use subliminal audios while you sleep. The conscious mind listens to music or someone speaking on one level, but the subconscious mind hears another layer of information recorded underneath the audible portion.

When awake, the conscious mind is distracted with the audible portion of the audio, making it harder to tap into the subconscious mind.

Using techniques like these can help you reprogram your subconscious mind and remove the burden of the negative thoughts buried there. Imagine the freedom of living your life without the automatic dysfunctional behaviors you've had driving you for years!

When you transform your negative outlook into a positive one, you can accomplish so much more. In doing so, your mind will be released from negative programming, allowing you to excel and succeed throughout your life

ARE WE BECOMING DIGITAL ZOMBIES?

The internet has changed the way we communicate, shop and do business. And now it could be changing the way our brain is wired

- By Nick Harding
- Published: 00:00 July 5, 2013

Eric Schmidt, the executive chairman of Google and an internet guru, is worried. The tech billionaire who has been described as one of the most influential people on the web, is convinced we have still not been able to fathom what the internet is.

“The internet is the first thing humanity has built that humanity doesn’t understand; it is the largest experiment in anarchy that we have ever created,” he says.

If that is not disturbing enough, new research is coming out that says the way we use the net could be dulling our senses and altering the way our brain functions.

Eric isn’t the only one who has sent out a warning signal. His caution is increasingly being mirrored by scientists, writers and commentators who worry that our internet-connected digital world is having a profound effect, not just on the way we conduct our lives, but on the way we think.

Article continues below



They fear that our increasing reliance and use of screen technology is rewiring our brains and argue that the very architecture of the internet and the devices we use to access it – from iPads and laptops to smartphones and games consoles – are eroding our ability to concentrate and to understand and comprehend information. Instead of educating and informing us, the internet, with all its distractions and diversions, is dumbing us down.

This web-wary movement has its roots in a 2008 essay by US writer Nicholas Carr titled *Is Google Making Us Stupid?* Carr reported then that the more he used the internet, the more he felt unable to focus on anything that required deep concentration, such as reading books.

He surmised that he wasn't thinking the way he used to. He subsequently published a well-researched book, *The Shallows*, which looked at the issue in depth and theorised that unlike traditional printed text-based media, such as newspapers and magazines, which require and so promote concentration, the internet makes us think differently because it is designed to be instantly accessible and deliver jolts of information in a range of diverting ways – through text, video, audio and pictures.

Text itself is interspersed with hyperlinks and pop-up boxes that draw readers away in different directions. Carr believes that because we now spend so much time online and use digital devices and online services such as social network sites so frequently (54 per cent of the UAE population is on Facebook), our brains have been changed and no longer register, store and access information in the way they used to.

Building new neural pathways

The problem is exacerbated because commercially the internet is designed to divert attention. Online advertising works on a click-by-click basis. More clicks equals more revenue so websites are designed with lots of extra diversions.

As UK writer Oliver Burkeman wrote in an essay on the subject, “More and more of us are knowledge workers, doing jobs that require deep concentration, yet we do so on machines that seem deliberately designed to interrupt us all the time and keep us on edge. Then in the evenings we try to relax using similar machines, which all too often whip us up into a state that isn't relaxing at all.”

The brain works by adapting to its environment. Every day it builds new neural pathways and makes new connections between brain cells as a result of the stimuli it receives from the environment around it.

The brain gets information from the senses and the more stimulated it is, the more connections it can make. New information connects with old ideas and associations grow, which allow us to develop critical thought and intellectual depth and understanding. This process is called plasticity. It is the process by which we learn and evolve.

And so with each historical technological development, the human brain has been altered – from language to the written word, through to radio and television and subsequently the internet. Mediums that require concentration to access the information they contain, such as books, strengthen the brain's ability to concentrate.

Getting information from the internet, on the other hand, requires little critical thought; it is instant, compulsive and, more often than not, what we receive from it is a deluge of superficial data designed to grab attention. Carr explains that this leads to a process of cognitive overload.

“If your brain is constantly distracted by new information it can never hold any existing piece because in order to make room for something new, you have to get rid of something that is already in there,” he says.

“The experiences we get on the internet are compelling and a lot of us become compulsive in our need to check screens; literally overloading our working memory. It prevents us from weaving together information into knowledge so we peck away at little bits of information without getting the bigger picture.

“The more stimulated you are by information coming from the screen, the less able you are to distinguish important information from trivial information. When you are constantly multitasking and following all these streams of information, what becomes important is simply that information is new and you don’t care whether it is important or trivial, you just want to get the new thing.”

Carr’s description will resonate with those who feel the need to compulsively check emails at short intervals and get anxious when they are away from a mobile phone or Wi-Fi signal and unable to connect to an inbox.

There are few physiological studies into what happens in the brain when we engage with the digital world. Baroness Susan Greenfield, professor of synaptic pharmacology at Oxford University in the UK, believes digital technologies affect the frontal cortex – the area of the brain responsible for cognitive analysis and abstract thought. She suggests that ‘mind change’, brought on by increasing internet use and the popularity of social media sites, will be an issue as serious as climate change.

“As you form neuronal connections, they give you a basis to make the checks and balances to evaluate what information is coming in and appreciate it in a wider context so you can make sense of the world around you and understand what is happening and have a unique and cognitive view of the world rather than a purely sensory one,” she explains.

These connections in our brains make us who we are, the richness of experiences that create them create our personality. If our experience of the world is only cursory, we will develop fewer neural connections.

“Will this be changed by an unprecedented 21st century environment that appears to be going from three dimensions to two and from five senses to just mere hearing and vision?” asks Greenfield. She continues, “If your identity is derived by notoriety on Facebook, by the amount

of comments you get; if you define things as Facebook-worthy, if you are obsessed and incessantly connected, might you not actually feel more isolated?”

So, are Carr and Greenfield correct? Are we becoming a species of digital zombies?

The evidence is inconclusive. There is no doubt that the internet does affect the way we behave in some instances. For example it has been discovered that around 80 per cent of people unconsciously hold their breath when using computers, a condition that has been labelled ‘email apnea’. It is thought they do this to heighten the feeling of apprehension and anticipation they get from the web.

Exploring the pros and cons

For adults, solutions of sorts are being developed through a movement called ‘the slow web’ or ‘contemplative computing’.

Stanford University in the US has a calming technology department that develops hardware and software designed to aid relaxation and concentration for people using the internet. These innovations include sensors that give the wearer rewards for breathing well while working at a screen, apps that aid meditation and ‘zenware’ designed to block distractions.

In some cases the net-effect is positive. A study by researchers at UCLA, who tested a group of middle-aged adults, measured brain activity levels while participants surfed the web. It found that each time participants engaged in a new activity, their stimulation levels rose.

Researchers also found that surfing the internet was, in some ways, more stimulating than reading a book. And computer games have been developed to help people; scientists at the University of Washington developed a game called SnowWorld designed to distract burn patients from their pain while their wounds were dressed.

For some too much screen time can be addictive, however, and research has shown that this addiction can cause sufferers to have more white matter in their brains, which has the effect of reducing the value of real-life experiences. But a recent study conducted by the Social and Public Health Sciences Unit at the University of Glasgow concluded that exposure to television but not games predicted a small increase in conduct problems in young children.

One of the most comprehensive studies into the effect internet use and digital devices have on children was carried out by Professor Tanya Bryron, a clinical psychologist. It acknowledges the link between children’s experience and their brain development.

Prof Byron wrote, “Any significant changes in children’s early experiences in life, such as a significant change in the amount of technology used during childhood, could potentially have a big impact on how the structure and function of the brain develops.

Development in the brain is thought to involve a “Hebbian” process [cells that fire together, wire together], which involves the strengthening of connections that are used and the pruning of excess connections that are not used, so some skills could show a significant increase based on children’s technology use during childhood and this could either be negative (for example, skills such as throwing are less well developed as children are spending so much time engaged in screen time) and/or positive (for example, skills such as attention that benefit from game playing could be better developed).”

The report looked into whether there was any science to support the theory that children who frequently played violent games or witnessed disturbing content online would be prone to copy in the real world what they saw in the virtual world. However, after reviewing results from the most recent research into the subject the report concluded that, in the case of games, there was no evidence to suggest this was the case.

The review did acknowledge that there are issues around internet use and child development but pointed out that the internet can be a positive factor if used sensibly.

More research is called for. While there is no hard proof, the anecdotal evidence from people reporting symptoms ranging from loss of concentration to unconscious breath-holding continues to stack up. And even the tech pioneers have concerns.

“I worry that the level of interruption, the sort of overwhelming rapidity of information is in fact affecting cognition. It is affecting deeper thinking. I still believe that sitting down and reading a book is the best way to really learn something and I worry that we are losing that,” concludes Eric Schmidt

More Senses, Higher Sales Thu, Oct 21, 2010 Neuromarketing What two senses get all the attention in advertising? Sight and sound. Print, broadcast, and digital media usually reach only these two, and often just one. In his new book, *About Face*, Dan Hill spends some time focusing on how reaching the other senses with your marketing can boost sales. Here are a few sensory snippets Hill offers up: Smell A study showed a 40% improvement in the mood of subjects when exposed to pleasant fragrances. Subjects paid \$10 more for shoes in a scented sales area vs. unscented. Only 3% of Fortune 1,000 firms have distinct scents for their brands. Touch Skin is the bodies largest organ. Touch has a profound impact on well-being: massaged babies add weight up to 50% faster than non-massaged babies. Taste People have 10,000 taste buds. Marketers often ignore taste due to health concerns about tasting/ingesting something new. Multisensory Engagement Here’s the kicker: For products where a certain sense was dominant, e.g., taste or smell, Hill’s firm, Sensory Logic, has found that “the smell, taste, and touch of a product create an engagement level that’s three to four times higher than the engagement level stimulated by merely seeing the product being displayed.” Perhaps not every product is a candidate for multi-sensory marketing, but a

little creative thinking can find ways to involve unexpected senses. Hill cites the example of Sony incorporating a bubble-wrap texture in bus-stop ads for its Playstation 2. While that textured surface didn't feel like a game console, it did engage another sense for viewers. (And, perhaps it evoked a little of the excitement we feel when we unbox a new piece of consumer electronics gear.) Another example of seemingly unrelated (but effective) sensory branding is the oft-cited signature scent used by Singapore Airlines. Taste is indeed a challenge. While food stores and restaurants can offer samples (simultaneously reaching touch, smell, sight, and taste), it's more difficult for marketers without that kind of dedicated venue. Mailed or hand-distributed product samples are one popular method, but one firm, First Flavor, is offering Peel 'N Taste strips that would greatly simplify the logistics of reaching consumer taste buds. (Of course, a little flat rectangle doesn't do much for sight, touch, or smell.) Whatever your product, it makes sense (sorry!) to get beyond sight and sound in your marketing.

NIKE AND NEUROSCIENCE: TICK TOCK OR WHY TIMING WILL MAKE OR BREAK YOU

12 Jul 2013

AdNews

Nike's Cannes Titanium & Integrated Lion-winning 'Find Your Greatness' ad by Wieden + Kennedy Portland is a beautiful piece of work which tries to capture the best in all people. Or something like that. But it's also cracked the timing in optimising Nike's branding while serving the interests of the narrative. And it's not that easy. The latest in a series of neuroscience probes from Neuro-Insight and AdNews shows that when it comes to committing brand to memory, timing is everything.

From Neuro Insight:

One of the most challenging imperatives of advertising is to ensure that great storytelling also builds the brand. In classic ad tracking, this is usually picked up in brand linkage metrics or the like. When branding is sub-optimal, it's usually a case of high ad

recognition and poor brand linkage. Even worse, poor branding leads to misattribution to a competing brand in the same category.

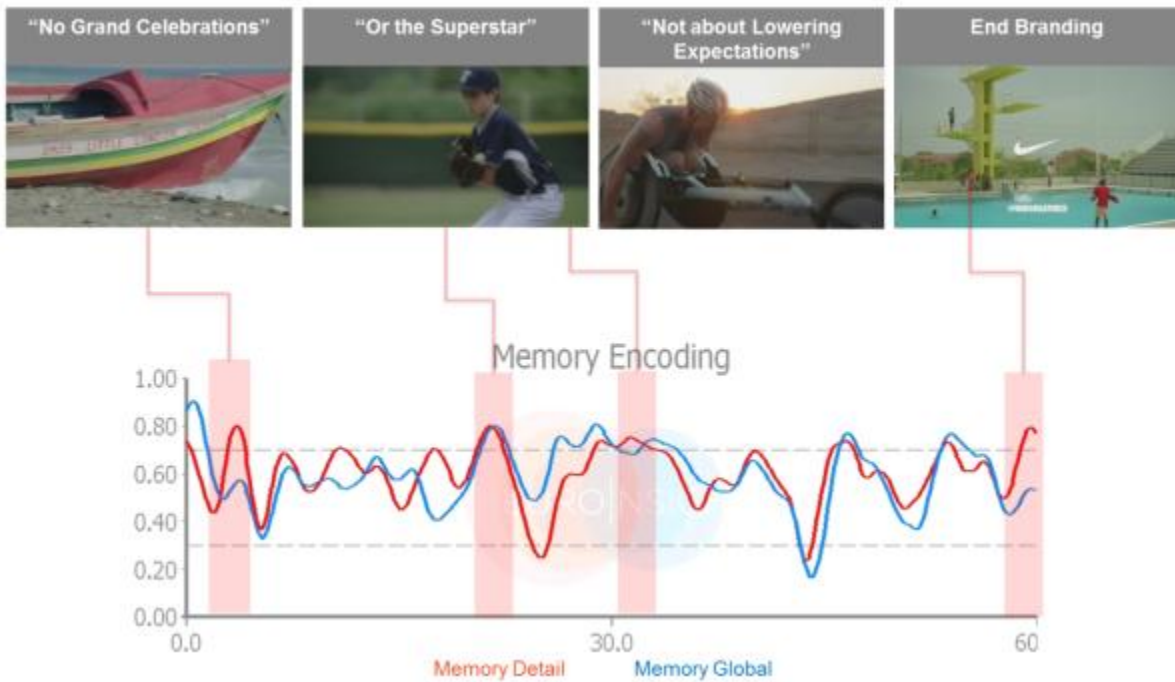
Unfortunately, just because branding occurs 'somewhere' in a TV commercial, there is no certainty that it successfully capitalises on the 'power moments' by being strongly linked to the advertiser's brand. In fact, in some cases branding is moved 'out of way', so as to not detract from a great story. The business case behind great brand performance can come and go in a fraction of a second – Nike's 'Find Your Greatness' ad is a very salient example of this phenomenon.

'Find Your Greatness' is a dramatic example of how these iconic moments in storytelling come and go in a flash. Using second by second neurological analysis of participants' EEG (electroencephalogram) activity, you can see how variable the responses are between males and females in committing this TV ad to memory. Irrespective of how the genders differ through the ad – branding must be committed to memory strongly ie. with high levels of memory encoding.

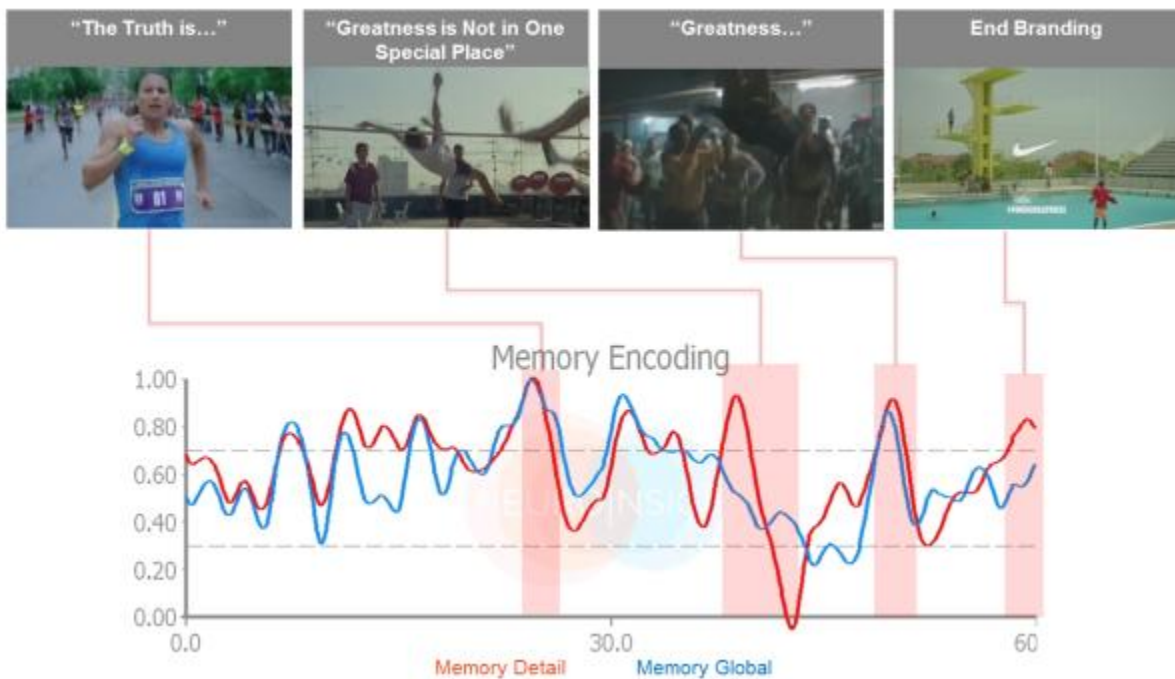
Dramatic Gender Differences

Males' memory encoding was consistently high, and stable, while female's memory encoding data showed a more volatile response. Women responded strongly to some scenes, with quite dramatic dips in memory encoding at other points during the TV ad. Putting gender aside for a moment, our peer-reviewed validation confirms that the number one correlate to marketplace performance of advertising is the strength of memory encoding during specific branding moments in an ad. In other words, for an ad to achieve its commercial brand objectives, it must have high levels of memory encoding during branding.

Male Responses



Female Responses



But Here's the Point - The Business Case Behind Successful Branding



The final end branding execution is highly effective for male and female viewers, with the final plunge driving memory encoding up strongly for one very brief moment. Sixty seconds of engaging advertising, one fleeting moment of branding. One might argue that it takes 60 seconds of intrigue to set these precious 'power moments' up. We would totally agree.

That's all it takes to successfully brand, *if* the ad also has high memory encoding during branding. For Nike - branding worked beautifully. It was placed directly during the final plunge while the little boy was in mid-air. However, it's not uncommon for branding to be placed a moment after these peaks. When this happens, the moment is lost. So much can be gained or lost in these executional nuances. Timing is everything. A fraction of a second could only yield a fraction of the brands' potential performance.

The reasons why we have two halves of the brain are still a mystery.

It is clear that one half cannot be without the other. Experiments have shown that severing the "corpus callosum", the part of the brain that connects the two, leads to chaotic consequences, among them a complete inability to make decisions.

For a long time, researchers believed that our left brain was responsible for analytic thinking, while the right was more about feeling. That theory proved to be too simplistic.

In his widely praised book "The Master and His Emissary – The Divided Brain and the Making of the Western World", the British writer and psychiatrist Iain McGilchrist draws the theory that it is the right half that is in charge.

According to McGilchrist, the right brain sees the world as a whole and establishes the connection to the outside world. The left half breaks things down into its details, takes them apart and analyses them, only to return the analysis to the right half which then integrates it into actual experience.

Psychologically speaking, one might say the the left half approaches life from a cognitive view, while the right focuses on experience. While the left side is elemental in language skills, the right is decyphering metaphors, humor and the implicit. Both perspectives are integral for psychological progress, and one cannot exist without the other.

McGilchrist then develops the plain science of the brain further and applies it to how it parallels the development of Western society. During crucial times of human advancement like the Renaissance or the period of Enlightenment, he writes, the brains halves were integrated and in harmony.

But as soon as regressive periods like the Middle Ages set in, the left brain took over. Even our postmodern age, McGilchrist argues, is dominated by numbers and materialistic thinking. The current economic and financial crisis, with its emphasis on digits

and algorithms, is mostly focused on the abstract and too detached from the real world with its imperfections and inconsistencies.

While the author has plenty of critics in the world of science, his theory adds just another perspective to the field of consciousness research. Here, the current thinking seems to strive for an integration of the symbolic, metaphorical world into the tangible, material world

Let us, for just a moment, consider the traditional ye olde focus group. In the focus group of yore, you'd show participants a product or ad, have them engage with it, and ask what they felt, if there was something that would make it better, and what that would be. Then you'd go and build or adjust a product based on their response. But since its beginnings in the heady, behavioral science-fueled decades past, focus group research has had a fundamental problem at its core.

"The problem with traditional marketing is that, fundamentally, people don't know what they want," says Patrick Renvoise, chief neuromarketing officer and cofounder of Salesbrain, a neuromarketing firm. "If you ask them what they want, they may give you an answer, but since they don't know, that answer won't be valid."

"In a packaging study, for instance, you have people look at packaging and ask them a bunch of questions, but that's not how a decision is made in the grocery store," adds Jake Stauch, founder of Neurospire, a neuromarketing start-up. "You see packaging and you're drawn to it for reasons you don't understand, reasons that happen at a subconscious level."

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Read the new research paper by Loyalty360 – Minimizing Effort to Maximize Loyalty. [Click to download.](#)

The human mind, it would seem, is a complex thing—filled with contradictory desires and a steaming mess of feelings not suited to the simple cleanliness of a predictable business transaction. It's an unpredictable black box. Enter neuromarketing.

Dueling Systems

Neuromarketing seeks to quantify, explain, and exploit the unseen subconscious level. Much of the theoretical framework animating the field is the idea that there are competing cognitive systems at play in decision-making: one that makes intuitive, mood-based, emotional decisions (often referred to as system 1), and a second (system 2) that makes more careful, planned rationally based decisions. Much of this thinking rests on the work of Daniel Kahneman, a

psychologist working in the field of behavioral economics. Kahneman, who won the Nobel Prize in 2002 for economics, believes that system 1 plays a larger role in purchasing decisions than system 2.

An example: Neurospire was asked by a "high-power muscle car brand" to conduct a study on a commercial that highlighted the brand's fuel efficiency and low emissions. The study looked at two sets of subjects, those who owned a car from the brand and those who did not. It showed them the ad and took metrics in real time. For subjects who did own a car from the brand, contrary to what one might expect, there was an adverse response to the ad.

"It seems to water down the brand and maybe the masculinity or the power associated with the car," Stauch says. "That's an interesting insight that wouldn't come out in a focus group. People wouldn't say, 'I want a gas guzzler. I want a car that's bad for the environment.'"

So the brand, in light of that, might not choose to highlight fuel efficiency and emissions if it is trying to get pre-existing owners to buy back into the brand with a newer model.

The system 1/system 2 model, it should be noted, though, is a broad way of thinking about decision-making, not an ironclad explanation.

"We all make decisions based on nondeliberative, nonrational factors," says Dr. Russ Poldrack, professor of neuroscience and psychology at the University of Texas at Austin. "People want a label."

The above model is the first cut, not the final story, as it is "so oversimplified," Dr. Poldrack says. He explains that there are several mechanisms at play, such as habitual actions, along with emotional responses.

The Pepsi Challenge

A perfect example of how these mechanisms play out and against each other took shape in a 2004 study that is largely responsible for the boom in neuromarketing. The study, titled "Neural Correlates of Behavioral Preference for Culturally Familiar Drinks," appeared in the journal *Neuron* and was prepared by Read Montague and his team at Baylor College of Medicine. The team conducted a taste testing between Coca-Cola and Pepsi—much like the "Pepsi Challenge" Pepsi has run since the 1970s—but subjected participants to a functional magnetic resonance imaging (fMRI) evaluation to measure brain activity as they did so. Coca-Cola and Pepsi, the paper says, "are nearly identical in chemical composition, yet humans routinely display strong subjective preferences for one or the other."

The team examined two sets of subjects: one that was given Coke and Pepsi without knowing which they were drinking, and a second that had been told which brand they were drinking.

What the researchers found was that in the blind trial, about half of the respondents said they preferred Pepsi—which you might expect given that they're chemically similar. Generally speaking, the preference each respondent gave was correlated with increased activity in the ventromedial prefrontal cortex—an area of the brain situated just between the eyes and associated with positive value judgments. So if you said you preferred Coke, this area would light up more when you were drinking it as opposed to Pepsi. According to recent findings, the ventromedial prefrontal cortex section seems to play some role in signaling when something is thought of as worth taking a risk on.

"The more you like something, the more activity in that area turns up," Dr. Poldrack explains. "If we have you look at gambles where you could win some amount versus lose another...that brain system turns up the more you could win and down the more you could lose."

In the Baylor study, subjects who had been told they were drinking Coke or Pepsi preferred the Coke three-fourths of the time, as opposed to half of the time for those who weren't aware of it. This cut Pepsi preference in half. The areas that saw increased brain activity also shifted in these cases. More action was seen in the lateral prefrontal cortex, often associated with high-level cognitive powers (such as planning), and the hippocampus, which is associated with memory.

The team concluded that what was happening was subjects who knew they were drinking Coke were drawing on memories and other impressions when forming their opinions. This might suggest that the perpetual market share that Coke enjoys over Pepsi (even Diet Coke sold better than regular Pepsi in 2011 according to *Dayton Business Journal*) has more to do with the ephemeral characteristics that surround the brand of Coca-Cola than the intrinsic taste superiority of the product.

The implications for marketing were obvious. If you were Pepsi, for instance, it would seem your market share problem is one of brand perception, not formula. Knowing this, you might focus on brand and forgo any new formula experiments.

The Scientific Approach

Interest in similar studies arose quickly. If related insights for other markets could be leveraged, they could provide valuable information beyond what traditional market research could accomplish. In the following years, a raft of neuromarketing firms appeared and a fledgling industry was born. Techniques from the experimental sciences began to be packaged together. Among the ones commonly seen are the following:

- Electroencephalography (EEG). This technique records electrical activity (brainwaves) along the scalp produced by the synapses in the brain firing. It's usually done with a cap of electrodes. An EEG can't pinpoint electrical activity to specific points on the brain, but does give a real-time record of a subject's attentiveness and engagement.

- Advanced polygraph. Polygraphs, or lie detectors, use a combination of metrics, such as pulse, blood pressure, and galvanic skin response (GSR), to measure states of arousal. There's quite a bit of crossover in what is measured with EEG. When a polygraph is bundled with an EEG, it's done to build confidence between the two metrics.
-
- Eye-tracking. Cameras are mounted above the eyes and hooked up to computers that measure with precise accuracy where a subject is looking. These data are taken in real time and read against EEG and GSR to pinpoint what a subject is reacting to. This is particularly useful in studies that deal with videos or visual branding materials.
-
- Voice-layering. The voice of the subject is recorded and subjected to software analysis to gauge emotional state based on her tone of voice. This might provide some insights beyond just the literal things subjects say. While not a surefire metric, it does provide a normalized point of reference beyond just the subjective notes from the study.
-
- **FMRI. In this noninvasive technique, blood flow is measured with radio waves.** The waves pick up different responses from oxygen-rich and oxygen-poor blood, and the contrast between the two gives scientists a picture of where oxygen is being deployed—which parts of the brains are active and require more blood to do their work.

A typical study might use EEG, polygraph, and eye-tracking in conjunction to measure participant response to an ad or packaging or whatever is being studied. The trials look a lot like normal focus group studies. Subjects might be shown and asked to engage with two similar products. They're asked a series of questions, as in any focus group, but they're also wearing an electrode cap and an eye-tracking rig, and their pulse and GSR are being taken in real time. These added measures give context to subject responses within a timeline.

A faint tap per se is not an interesting sound; it may well escape being discriminated from the general rumor of the world. But when it is a signal, as that of a lover on the window-pane, it will hardly go unperceived. William James, 1890 [p. 418]

There's such a blizzard of sensory information out there, the brain would be overwhelmed if it weren't for a spotlight process of selective attention that allows us to focus. This means that once we're tuned into certain aspects of the environment, we're left blind to events outside of our selective attention - a phenomenon called "inattention blindness".

Related to this is the idea of attention as a finite resource. It's partly

because our processing powers are depleted by the focus of our attention that we're left blind to that which we ignore. A new study builds on the finite resource element of this story. [Baruch Eitam](#) and his colleagues propose that pure irrelevance is enough to render information invisible even if we have plenty of resources available for processing that information. It brings a new spin to our understanding of "induced blindness" that's not just about attentional load but also about salience and motivation.

Your Brain Sees Even When You Don't

The unconscious processing abilities of the human brain are estimated at roughly 11 million pieces of information per second. Compare that to the estimate for conscious processing: about 40 pieces per second.*

Our conscious processing capacity isn't insignificant, but clearly it's just a retention pond compared to the ocean of the unconscious. And more and more research is uncovering abilities of the unconscious that defy reason. Two recently published studies on how the brain "sees" illustrate the point—the first one is cool, the second borders on incredible.

The first, published in the journal *Psychological Science*, wanted to find out if the brain can track visual targets even when the eyes are duped into believing the targets aren't there. Researchers at the [Brain and Mind Institute at the University of Western Ontario](#) exposed participants to an optical trick known as the "connectedness illusion" that causes viewers to underestimate the number of circles (targets) on a screen.

Two groups of circles are presented, one group on the left side of a screen and one on the right. The circles in one group are connected to tiny lines, but the circles aren't connected to each other. In the other group, the circles are connected to each other via the lines. What consistently happens is that our eyes perceive fewer circles in the connected group than in the disconnected group, even though the number of circles in both groups is exactly the same.

The connectedness illusion is a proven way to trick the eyes, and it worked like a charm in this study: participants didn't see all of the connected circles. But when they were given a task to "act" on the targets, researchers found that participants shifted from visual "seeing" to what you might call *brain-sight*. They were able to strategically plan actions that included all of the targets even though they didn't visually perceive them.

The reason seems to be that visual processing operates along two paths. The first is the one we're most familiar with—how we visually perceive the world. The second is what our brains are unconsciously up to while we're focused on merely "seeing."

Said lead researcher Jennifer Milne, a PhD student at the University of Western Ontario: "It's as though we have a semi-autonomous robot in our brain that plans and executes actions on our behalf with only the broadest of instructions from us."

That was cool, but the next study—published in [The Journal of Neuroscience](#)—flirts with the incredible. Researchers wanted to know if the brain can "see" someone else's actions even when the ability to visually see has been destroyed.

Cortical blindness refers to the loss of vision that occurs when the primary visual cortex no longer functions, generally as the result of injury. There's no longer an ability to visually perceive the world in the sense with which we're most familiar (even though the eyes still technically work), but that doesn't necessarily mean the brain no longer sees.

In this study a patient with full cortical blindness could still react to another person's gaze. While in an fMRI machine, the patient was exposed to gazes directed at him and gazes directed away from him. On the face of it, neither should matter. His visual cortex couldn't perceive any sort of gaze. But the brain scan indicated that another part of his brain definitely could.

The patient's [amygdala](#), the brain area associated with figuring out whether external stimuli is a threat, showed a distinctly different activation pattern when the gaze was directed at the patient than when directed away from him.

In other words, it didn't matter that his visual cortex couldn't catch the gaze—another part of his brain did regardless.

Exactly what's going on here isn't known, but there's a certain intuitive sense about the reaction even as it defies [conscious reason](#). Our brains are adaptive marvels, and adapting around impediments to survival is essentially what our magical cranial clay does. If one system goes down, in this case external visual processing, it makes adaptive sense that another system would fill the gap (how that happens—well, that's the question).

We are only touching the jagged frozen tip of the iceberg with studies like these, and the second one in particular shows just how much we don't know about the brain's unconscious mojo. But we're learning more all the time, and piece by quixotic piece, the puzzle is only getting more intriguing

THE FMRI AS LIE DETECTOR

by [Kecia Lynn](#)

June 4, 2013, 5:36 PM

What's the Latest Development?

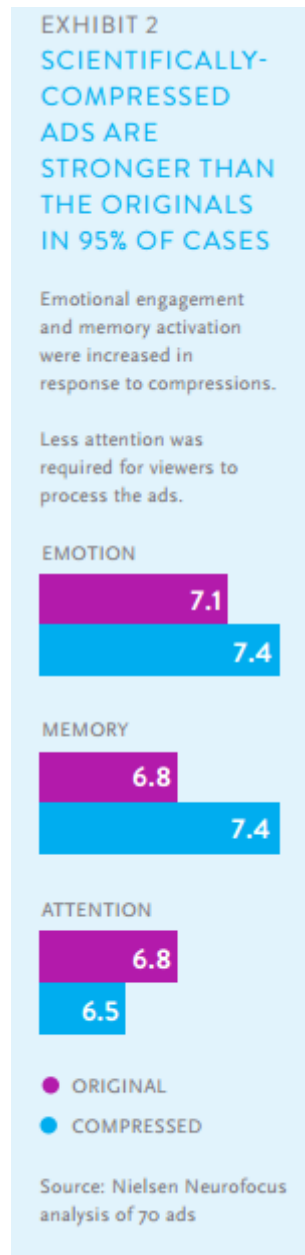
At a panel discussion at last week's World Science Festival, scientists and legal experts met to discuss the implication of putting "brains on trial." According to Stanford neuroscientist Anthony Wagner, functional magnetic resonance imaging (fMRI) scans are now able to detect a lie with between 70 and 90 percent accuracy because of their ability to record changes in specific parts of the brain. A separate study showed that simply looking at an image of a crime scene can cause brain activity that might betray a person's guilt. Neuroscientists are also using scans to identify unique patterns in the brains of young offenders: Although most jurisdictions try those over 18 as adults, the part of the brain involved in impulse control doesn't fully mature until around age 25.

What's the Big Idea?

Advertising

The increasing sophistication of imaging technology could one day make brain scans preferable to eyewitness testimony, which is "notoriously fallible." However, there's still a lot of additional research needed. For example, scientists can't yet distinguish between the brain activity associated with looking at a crime scene and the activity associated with imagining one. Also, there's the accused's right to privacy, says law professor Nita Farahany: "What kinds of constitutional or other legal protections might a person have, which would preclude police from being able to give [them] a brain scan?"

Art or science?



Neuroscience could put the issue to rest by providing brands with hard data about which ad elements cause prospects to react. By honing in on the exact moment that a video ad triggers memories, the second when attention is lost and the components that create emotional engagement, marketers can compress the length of digital content and cap spending.

“There is a significant difference between this scientific approach to ad compression and current industry practice. The latter involves shortening a 30-second ad by applying experience and

personal judgment to trim the story line, reduce repetition and so forth. Scientific ad compression is quite different,” the report states.

Creating short video content that packs a punch

The former allows companies to pinpoint the moments when audiences are most engaged, so ineffective parts of videos can be cut and marketers can shorten their ad spots from 30 to 10 seconds. This might seem too quick for an engaging message, but Nielsen’s studies suggest 90 percent of ads can be effectively relayed in 10 to 15 seconds. Moreover, scientifically compressed ads are stronger than the first versions in 95 percent of cases.

90 percent of ads can be effectively relayed in 10 to 15 seconds.

This could have a significant impact on brands’ bottom lines, considering video content consumption is quickly becoming part of internet users’ daily lives. Vine is gaining momentum with both consumers and brands as a platform that helps share unique perspectives in six seconds or less.

Brafton recently [reported](#) a rise in online [video marketing](#) ad spend. This year, budgets are expected to reach \$4.14 billion, as 75 percent of brands recognize that internet campaigns are equally or more successful than traditional TV strategies.

While marketers might not have access to data from their target audiences’ brains, they can turn to content analytics for metrics about which practices are most effective, when they drive traffic back to home pages and where conversions take place.

NEUROSCIENCE BASED ADVERTISING: MAKING 15’S THE NEW 30’S

By [Randall Beard](#)

inShare

The :15 second TV advertising commercial has a lot in common with cubic zirconium—a cheaper and lower quality “look-alike” that is almost instantly recognizable by anyone as anything but the real thing.

Often treated as an afterthought by Marketers and Agencies alike, the :15 TV spot is usually just a cut down version of the :30, rarely copy tested but assumed to be at least 50% as good as the :30 from which it's derived.

But the truth is that most Marketers have no idea how good or bad their :15's really are. It's as if everyone just blindly assumes the best without thinking about the worst. Fifteen second ads adhere to the [same basic principles of success](#) as :30's but just get much less attention.

[An Improvement—Real Time :15 vs. :30 Advertising Optimization](#)

Things have improved somewhat over the past few years. With the advent of real time TV ad effectiveness measurement, Marketers can now monitor the performance of their :30's and :15's on a weekly or bi-weekly basis so they can understand relative differences in performance.

This enables you to see when your 15's perform well enough to warrant moving out of your :30's and into 100% focus on your :15's. But all of this is after the fact. What's really needed is better :15 design beforehand. But how?

[Neuroscience & Advertising Copy Testing](#)

Neuroscience has had any number of fits and starts over the past few years when applied to Marketing. But one area where there has been substantial and undeniable progress is in copy testing. Possibly the most advanced technique uses EEG measures of brain activity to understand how viewers are responding to advertising. This approach uses EEG to identify and capture responses to brain stimuli in fractions of a second.

In particular, EEG based copy testing can measure three things extremely well:

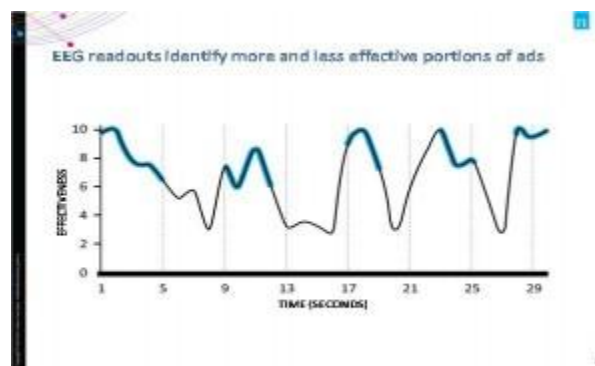
1. Attention — When and how much viewer attention is paid to an ad. This is key to knowing if someone even notices or pays attention to your ad in the first place.
2. Memory — Whether a viewer's memory is activated in response to viewing an ad. Without memory, it's unlikely that an ad will influence much future behavior.
3. Emotion — To what degree a viewer is drawn to or pulls away from the ad stimulus. Attention and memory are important, but so is positive emotional attraction.

Taken together, these three measures are key to effective ads. They relate directly to whether someone pays attention to the ad, whether the ad is stored in long term memory, and whether the ad elicits a positive emotional response.

Importantly, EEG based copy testing measures viewer's brain waves in milliseconds throughout the commercial. Typically, a viewer's brain waves looks like a series of peaks and valleys as the viewer responds to different parts of the commercial. These peaks and valleys correspond to the parts of the commercial that are most and least effective as measured by attention, memory, and emotion.

The Optimal :15 TV Spot

Back to the :30 vs. :15 conundrum: how do you design a better :15 TV spot? Well, it's not as difficult as rocket science, but it's essentially an exercise in brain wave assessment. Simply put, you cut out the ads "valleys" and keep the "peaks."



[Click on visual to enlarge]

Neuroscience based copy testing has advanced to the point where it can algorithmically eliminate the weakest portions of the :30 TV commercial while keeping the strongest ones for the new :15. This recut commercial is then edited by the Agency creatives for story flow, continuity, and visual seamlessness into a final spot.

The Neuroscience Based :15 TV Commercial—How Good?

At this point, you might be asking: "but how good, really, are these cut down neuroscience based ads? It all sounds like a big black box."

Based on Nielsen NeuroFocus (disclosure: I work at Nielsen) testing of both original :30 TV spots and the EEG optimized :15's, here is what we see:

- ~90% of neuroscience optimized :15 ads test just as well as their :30 counterparts.
- A significant number of optimized :15 ads actually test better than their :30 counterparts.

What does this mean for an average Brand Marketer? Let's assume you spend \$20M in TV advertising per year, and that 50% of this, or \$10M is in :30's. Moving all of this \$10M in spend to :15's could save you up to \$5M per year. That's \$5M that you could reinvest in Marketing or drop to profit.

So, the next time you see your Ad Agency, tell them that you have a “present” for them—neuroscience-based :15's. They're definitely a lot more valuable than regular “cubic zirconium” :15's, and, more importantly, viewers will respond as if they're :30 “diamonds in the rough.”

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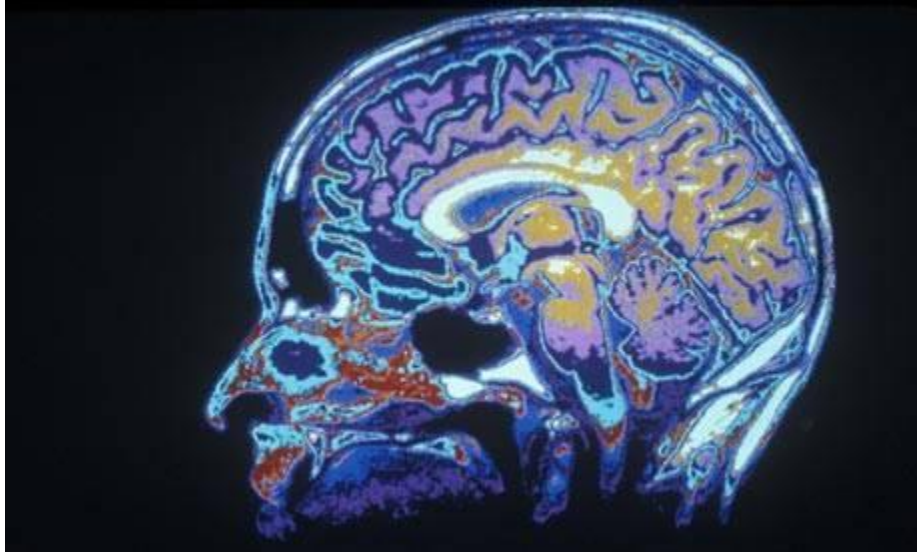


[About Randall Beard](#)

Randall Beard is Global EVP & General Manager at Nielsen IAG, responsible for Consumer Packaged Goods. He is a leading and award winning Chief Marketing Office and General Management executive with 25+ years of global experience. For more about his thinking, visit [Randall Beard's blog](#)

. THINK BRAIN SCANS CAN REVEAL OUR INNERMOST THOUGHTS? THINK AGAIN

Increasing claims for neuroscience – that it can locate jealousy or Muslim fundamentalism – are ludicrous



Brain scans cannot reveal our innermost thoughts. Photograph: Black Star /Alamy

[Raymond Tallis](#)

The grip of neuroscience on the academic and popular imagination is extraordinary. In recent decades, brain scientists have burst out of the laboratory into the public forum. They are everywhere, analysing and explaining every aspect of our humanity, mobilising their expertise to instruct economists, criminologists, educationists, theologians, literary critics, social scientists and even politicians, and in some cases predicting a neuro-savvy utopia in which mankind, blessed with complete self-understanding, will be able to create a truly rational and harmonious future.

So the smile-worthy prediction, [reported in the Huffington Post](#), by Kathleen Taylor, Oxford scientist and author of *The Brain Supremacy*, that Muslim fundamentalism "may be categorised as mental illness and cured by science" as a result of advances in neuroscience is not especially eccentric. It does, however, make you wonder why the pronouncements of neuroscientists command such a quantity of air-time and even credence.

It would be a mistake to assume their authority is based on revelatory discoveries, comparable to those made in leading-edge physics, which have translated so spectacularly into the evolving gadgetry of daily life. There is no shortage of data

pouring out of neuroscience departments. Research papers on the brain run into millions. The key to their influence, however, is the exciting technologies the studies employ, notably various scans used to reveal the activity of the waking, living brain.

The jewel in the neuroscientific crown is functional magnetic resonance imaging (fMRI), justly described by Matt Crawford as "[a fast-acting solvent of the critical faculties](#)". It seems that pretty well any assertion placed next to an fMRI scan will attract credulous attention. Behind this is something that goes deeper than uncritical technophilia. It is the belief that you are your brain, and brain activity is identical with your consciousness, so that peering into the intracranial darkness is the best way of advancing our knowledge of humankind.

Alas, this is based on a simple error. As someone who worked for many years, as a clinician and scientist, with people who had had strokes or suffered from epilepsy, I was acutely aware of the extent to which living an ordinary life was dependent on having a brain in some kind of working order. It did not follow from this that everyday living is being a brain in some kind of working order. The brain is a necessary condition for ordinary consciousness, but not a sufficient condition.

You don't have to be a Cartesian dualist to accept that we are more than our brains. It's enough to acknowledge that our consciousness is not tucked away in a particular space, but is irreducibly relational. What is more, our moment-to-moment consciousness – unlike nerve impulses – is steeped in a personal and historical past and a personal and collective future, in cultures that extend beyond our individual selves. We belong to a community of minds, developed over hundreds of thousands of years, to which our brains give us access but which is not confined to the stand-alone brain. Studies that locate irreducibly social phenomena – such as "love", the aesthetic sense, "wisdom" or "Muslim fundamentalism" – in the function or dysfunction of bits of our brains are conceptually misconceived.

The greatest excitement, orchestrated by the most extravagant press releases, surrounds the discovery of correlations between the responsiveness of certain areas of the brain and particular aspects of our personality. This neo-phrenology is actually based on shakier grounds than is usually appreciated. Few people realise how indirect is the relationship between what the scan detects and what is happening in the brain. There are many steps in the processing of the data that generates the beautiful coloured pictures that command such credence.

The much-touted idea that neuroimaging will soon be able to see "thoughts" – so that brain scans will be mind scans – fails to reflect the fact that even simple thoughts (such as "I live in Stockport") belong to a nexus of significance called a world and have a multitude of meanings and implications. Taylor's neuroscience of fundamentalism is absurd in principle because "fundamentalism" is an ill-defined cluster of propensities that will be realised differently in different people and will anyway be subject to normative judgments by others. It will not boil down to something a scan could pick up, such as overactivity in the brain's Qur'an interpretation centre.

Encouragingly, some scientists have started to sound the alarm, beginning in 2009 with Ed Vul and his co-authors' savage attack in a paper [initially called "Voodoo Correlations in Social Neuroscience"](#). They found serious problems with the localisations observed in such studies. The links between brain regions and feelings such as social rejection, neuroticism and jealousy used methods that artificially inflated the strength of the connection. [Katherine Button](#)'s more recent review of the field in the prestigious *Nature Reviews Neuroscience* is even more devastating. She concludes that the statistical power of most studies is very low. On top of this, there is publication bias towards picking out positive correlations, with little incentive for checking for repeatability after the excitement has died down.

The will to believe that brain scans reveal our deepest secrets and will give us the tools to manipulate our fellow humans for our collective benefit probably has quite deep origins. The idea that we are our brains, and that we are destined to act in certain ways prescribed by this biologically evolved organ, relieves us of some of the responsibility for our behaviour. There is also the erroneous idea that if, as many of us wish, we are to reject a supernatural account of the world, along with the idea of the self as an eternal soul planted in the material body, answerable to god, then we are obliged to embrace a naturalistic account of ourselves as organisms, and the self as identical with the key part of that organism, namely our brain.

This mistake was anticipated by the Oxford philosopher Gilbert Ryle in *The Concept of Mind*: Man need not be degraded to a machine by being denied to be a ghost in a machine. He might, after all, be a sort of animal, namely a higher mammal. There has yet to be ventured the hazardous leap to the hypothesis that perhaps he is man.

Neuroprattle that locates our experiences, propensities and character in the activity of parts of our brain stops us taking this hazardous leap and gets in the way of the humanist project of truly understanding ourselves.

Next time you see a prettily coloured brain scan next to an article burbling on about breakthroughs in understanding our humanity, reach for the salt.

· This article was amended on 2 June 2013, the sentence "We belong to a community of minds, developed over hundreds of thousands of years, to which our brains give us access but which is not confined to the stand-alone brain" initially said it was confined to the stand-alone brain.

Related Links

Brain Science Not Ready to Replace Mad Men

By Sally Satel & Scott O. Lilienfeld Jun 2, 2013 6:00 PM ET

Martin Lindstrom, the globe-trotting Danish branding expert, estimates that a whopping 90 percent of our buying decisions take place at a subconscious level. The author of the 2008 business best-seller "Buyology," Lindstrom advises marketers to cut out the middlemen -- the buyers themselves -- and ask their brains directly: Will you buy our product? Forget focus groups and questionnaires. The brain is the route to the heart's desire.

Lindstrom is part of an upstart generation of Mad Men known as neuromarketers. They apply the tools of neuroscience, such as functional MRI and brain-wave technologies, to learn how consumers' brains react to ads and products.

American businesses spend billions on advertising each year -- \$114 billion in 2011. Yet, according to marketing experts, 80 percent of all new products either fail within six months of launch or fall significantly short of their profit forecasts. Corporations such as Google Inc., Facebook Inc., Motorola Solutions Inc., Unilever and Walt Disney Co. have hired neuromarketers to help them improve those odds. Has it paid off?

Neuromarketing is a controversial practice without an established track record. Many of its purveyors lean heavily on hype. One "buyologist," A.K. Pradeep, head of the U.S. company NeuroFocus, offers its corporate clients "secrets for selling to the subconscious mind." Claims such as these led the journal Nature Neuroscience, in 2004, to editorialize that neuromarketing might be "little more than a new fad, exploited by scientists and marketing consultants to blind corporate clients with science."

Scientific Promise

Still, the fact that an impressive cohort of esteemed scientists has joined the advisory boards of various neuromarketing companies suggests at least some kernel of promise in the enterprise.

For decades, businessmen have sought the advice of psychological experts to unlock the secrets of the consumer mind. In the early 1960s, researchers experimented with pupillometry, or measures of spontaneous pupil dilation, to gauge interest in features of package designs or print advertisements. They examined the skin conductance response, a measure of the sweatiness of the palms, as an indicator of people's emotional response to advertisements, and employed eye tracking to reveal where on a page or TV screen people's eyes traveled.

In the 1970s, researchers first used electroencephalography, which measures the electrical activity of the brain by means of electrodes placed on the scalp, to examine left- and right-brain activations in response to marketing stimuli. A decade later, they added steady-state topography (a cousin of EEG that detects the speed of neural processing) to ascertain whether long-term memory encoding during advertising is linked to changes in consumers' preferences for certain brands. In the end, experts didn't find these approaches particularly revelatory.

More recently, refinements in brain-wave technology (primarily EEG) and the advent of brain-imaging technology have allowed a new biological approach to the consumer mind. In 2004, neuroscientist Read Montague reported an exploration of consumer preference known as the Coke-Pepsi challenge. Montague and his team asked why Coca-Cola consistently dominates the market even though in blind taste tests subjects tend to prefer Pepsi or have no reliable preference. The investigators put subjects in an fMRI scanner, where they received random sips of Coke and Pepsi through long straws, not knowing which brand they were given. When subjects reported liking a beverage, their brains registered an enhanced response in the ventromedial prefrontal cortex, a region that mediates reward.

Brand Preference

When subjects were later shown the brand's label before tasting, however, many changed their preferences. Seventy-five percent of the subjects said they favored the sample preceded by an image of a Coke can. Montague could tell whether subjects were going to pick Coke or Pepsi by whether two of three regions -- the ventral midbrain, the ventral striatum and the ventral medial prefrontal cortex -- showed enhanced activity in response to one brand over the other.

The team concluded that Coke's success was due to its ability to trigger a frisson of emotionally tinged memories, presumably because of its more effective brand marketing.

The Coke-Pepsi study was a media sensation. Advertisers embraced it as a dramatic lesson in the role of emotion in determining the power of branding. Some industry insiders credit the experiment with jump-starting the field of neuromarketing.

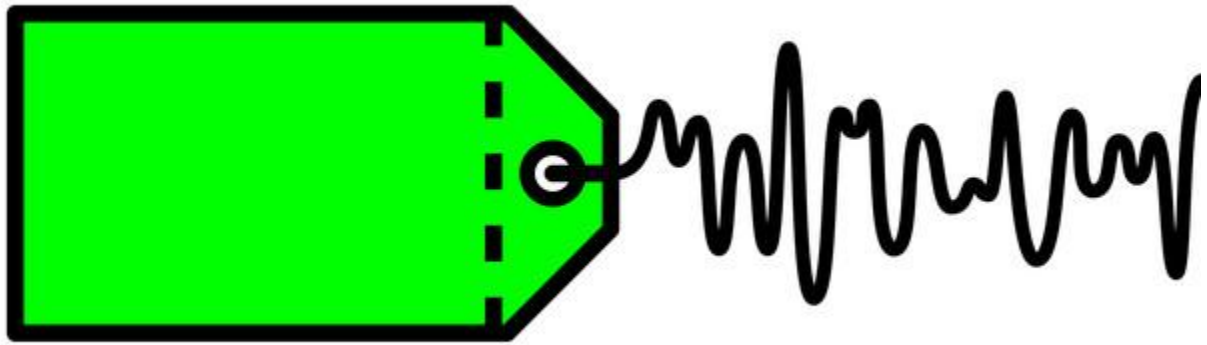


Illustration by O.O.P.S.

But can measuring brain function predict sales or advertising success better than existing methods? To some degree, yes, according to a much-cited 2007 study by neuroscientist Brian Knutson and colleagues. They scanned subjects with fMRI as they viewed pictures of products, including a box of Godiva chocolates, a “Sex and the City” DVD and a smoothie maker. The researchers found that activation in regions associated with anticipating gain (the nucleus accumbens) correlated with product preference, while activation in regions associated with anticipating loss (the insula) correlated with excessive prices. Further, activation in a region implicated in integrating gains and losses (the mesial prefrontal cortex) correlated with reduced prices.

These findings suggested to the team that activation of distinct brain regions related to anticipation of gain and loss precedes, and can be used to predict, purchasing decisions. Their accuracy rate of 60 percent was not vastly greater than chance, although it was a little higher than the accuracy of subjects’ self-reported preferences for the various items just before they pressed the “purchase” button.

Shampoo Commercial

When Pantene, a maker of hair products, wanted to explore women’s “overall feelings about their hair,” in the words of a lead scientist at [Procter & Gamble Co.](#), it enlisted NeuroFocus, whose analysts recorded electrical signals at the surface of women’s heads as they watched a Pantene commercial, creating a millisecond-by-millisecond picture of

brain activity. According to the brain-wave data, the women became “distracted” at the point in the commercial when a model appeared frustrated as she tried to deal with her unruly hair. Procter & Gamble revised the ad to focus more on the model’s hair and less on her facial expression.

How meaningful are such conclusions? The lack of transparency surrounding neuromarketers’ interpretation of the data opens them to challenge by critics. Columbia University researchers recently reviewed the websites of 16 neuromarketing companies and found that few described their methodology with enough detail to verify their claims.

Almost half of the companies didn’t even use EEG or fMRI but rather relied on old technologies such as skin conductance response or measures of pupil size. Moreover, neuromarketing companies’ use of different proprietary formulas for interpreting brain-wave data makes it even more difficult to assess their utility.

NeuroFocus interprets electrical activity over the inferior frontal lobe as reflecting engagement of mirror neurons -- cells that are implicated, some experts contend, in human empathy -- thereby reflecting a subject’s desire to share in the experience of the people depicted in an ad. This is a controversial interpretation because the significance of mirror neurons in humans isn’t well understood.

The caveats don’t end there. Neuromarketers can also run afoul of reverse inference, the common but dubious practice of reasoning backward from regional brain activity to conclude that subjects are thinking certain thoughts or experiencing certain feelings.

Reverse inference found its way into fMRI analysis of the Super Bowl XL halftime ads in 2006. As subjects watched ads that had been broadcast during the game, neuroscientist Marco Iacoboni scanned their brains. He used the term “flop” to describe one FedEx Corp. commercial involving a hapless caveman who is fired by his boss because he didn’t use the carrier to deliver a package. Why? Because when the caveman is subsequently crushed by a dinosaur, the subjects’ amygdalae showed enhanced activity.

Caveman Strategy

“The scene looks funny, and has been described as funny by lots of people,” Iacoboni said, “but your amygdala still perceives it as threatening.” We know, however, that the amygdala does much more than just process fear. Among other things, it mediates response to novelty -- and a new Super Bowl ad is nothing if not new. Should FedEx scrap the ad lest it scare potential customers? Of course not.

Consumers aren't disembodied brains. They juggle their pocketbooks and contemplate other items they have recently bought. Purchasing is a social activity, and people are social creatures, gauging the foreseeable reaction from a spouse ("You bought what!?") and often soliciting advice from family, friends or experts before buying. Shoppers' moods also influence buying behavior. So can the ambient pace of music in a store. In the end, a cacophony of influences impinge on us at once, some canceling out others, some combining in novel ways.

So is neuromarketing "hidden persuasion" or "junk science," as Advertising Age asked in 2007? It is neither. Its premise is sound: namely, that people are drawn to certain products and disposed to purchase them for motives to which they are often not privy. It may turn out that neuromarketing can help generate and test early hypotheses about the optimal way to grab viewers' attention and engage them emotionally. At bottom, however, the predictive value of neural information will take on real marketplace significance only if it outperforms what people say they will buy or what they say they like about a product.

The burden falls on neuromarketing to prove itself. Right now, the promises are bright and shiny, but behind the scenes, the fallacies and pitfalls of overhyped neuroscience remain.

(Sally Satel, a psychiatrist, is a resident scholar at the [American Enterprise Institute](#) for Public Policy Research and a lecturer at [Yale University](#). Scott O. Lilienfeld, a clinical psychologist, is a professor of psychology at [Emory University](#). This is a slightly adapted excerpt from their new book, "Brainwashed: The Seductive Appeal of Mindless Neuroscience," which will be published June 4 by Basic Books. The opinions expressed are their own.)

WE ARE RULED BY THE UNCONSCIOUS MIND

By [GERTI SCHOEN, MA, LP](#)

More and more writers and researchers fall victim to the fascination of the brain and its mysteries. Where do private thoughts end and where does relationship begin? What is time? What happens when we dream?

These are questions that aren't fully answered, even by modern neuroscience. But lots of thinkers won't be deterred by that and create their own ideas about the meaning of it all.

One of them is the very visible, media savvy, jet setting author and neuroscientist [David Eagleman](#), who went public with some of his ideas in the book "[Incognito – The Secret Lives of the Brain](#)".

The book begins with a sobering fact: "Most of what we do and think and feel is not under our conscious control. The conscious you – the I that flickers to life when you wake up in the morning – is the smallest bit of what's transpiring in your brain. Although we are dependent on the functioning of the brain for our inner lives, it runs its own show."

The idea that there is an unconscious mind goes back to Freud and the origins of psychoanalysis. But Eagleman shows us – even without dramatic references to our mother or father – how pervasively unconscious decision making is at work: for example when we feel attracted to someone, buy a book with a certain cover design, or find ourselves unable to resist that piece of cake.

The brain runs mostly on autopilot: it makes us take a step back from a fast approaching car, even though our conscious mind ticks into place seconds later. It makes us turn and seek eye contact when someone intently stares at us from across the room.

We think we have highly original ideas, even though we read about them elsewhere days before, but can't remember that we did. We think we witnessed a certain event without a doubt, only to realize that our subjective perspective colored it in a way that doesn't concur to what others saw.

"Almost the entirety of what happens in your mental life is not under your conscious control, and the truth is that it's better this way", concludes Eagleman.

He rightfully points out that we are better off trusting our bodies when we learn a new athletic discipline, than relying on our minds to count steps or internalize techniques. Rather than thinking about it, we are well advised to just do it.

The point is, there is more to the brain than what we can consciously perceive. We don't have the kind of control over our thoughts and feelings we would like to have.

There is more uncertainty and wonder than we'd like to admit

Understanding How Brain Cells Make Long-Term Memories

June 10, 2013

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Image Credit: [Thinkstock.com](#)

Michael Harper for redOrbit.com – Your Universe Online

Our brain is capable of remembering all sorts of things for very long periods of time, yet the reason and mechanism behind how and why these memories are stored for so long has never been fully understood.

Scientists from the Gladstone Institute in San Francisco now believe they've mapped the process by which the human [brain](#) stores long-term memories in its cells. Senior investigator with Gladstone Institute [Steve Finkbeiner](#) says a protein in the brain called Arc helps regulate the activity of neurons and thereby creates memories in the brain's stores.

Dr Finkbeiner's findings were recently published in the journal [Nature Neuroscience](#).

The research focuses on synapses and their role in the brain. Synapses are tiny connections between [neurons](#) in the brain where information is shared and processed. It's been previously shown in lab rats that as new tasks are learned and new memories are formed, new synapses are created between neurons. During an individual's life, these synapses can be broken or bolstered as new memories and skills are learned or lost. While this is a natural process, overworking these neurons can be dangerous and even lead to epileptic shock.

Scientists then set out to discover why the brain doesn't collapse every time it learns something new and found a mechanism they call "homeostatic scaling." This process gives neurons the ability to protect themselves from becoming overworked as new synapses are formed. Though this mechanism was known to be crucial in how the brain learns and expands its abilities, the exact mechanism behind how it worked continued to elude scientists. They were left with one clue, however: a protein known as Arc.

"Scientists knew that Arc was involved in long-term memory, because mice lacking the Arc protein could learn new tasks, but failed to remember them the next day," [said Finkbeiner](#) in a statement.

“Because initial observations showed Arc accumulating at the synapses during learning, researchers thought that Arc’s presence at these synapses was driving the formation of long-lasting memories.”

Finkbeiner and his team, including lead author Erica Korb, began to observe the movements of the Arc protein in lab animals and petri dishes and found something astonishing.

“When individual neurons are stimulated during learning, Arc begins to accumulate at the synapses – but what we discovered was that soon after, the majority of Arc gets shuttled into the nucleus,” said Korb.

“A closer look revealed three regions within the Arc protein itself that direct its movements: one exports Arc from the nucleus, a second transports it into the nucleus, and a third keeps it there.”

Korb said she believes this tightly regulated system means that it is important and necessary for the brain’s protection and survival.

In the end the team discovered that as synapses are created and memories are formed, a very specific set of genetic switches must be flipped on and off in a precise manner. This genetic switching generates the homeostatic scaling proteins. Finkbeiner and Korb say they found the protein Arc is responsible for directing the scaling process and protecting the neurons. With these synapses protected, memories are stored for a longer period of time. Without the Arc protein kicking off the entire process, memories may never last for any length of time in our brain’s gray matter.

THE STATE OF NEUROSCIENCE IN MARKET RESEARCH

by [Elissa Moses](#), 74 minutes ago

Today every major market research company has Neuroscience offerings, spanning biometrics, facial coding, EEG, implicit association, eye tracking, etc.

The reason for rapid adoption is that they provide a new lens for understanding unconscious consumer response to stimuli which we know from advances in neuroscience is critically important to decision making. Neuro enables fresher, deeper, and richer insights, and can add unexpected perspective to evaluations of advertising, brand perceptions, shopper experience, etc.

As an insider to the early years of Neuromarketing, it was easy to see how some overzealous neuroscientists felt they had discovered the ultimate tools to replace traditional market research methods. This belief was fueled by enthusiasm for neurometrics coupled with serious naiveté about market research.

And yet, neuroscience practitioners have now achieved a more mature perspective. Using the brain processing construct of Nobel Prize-winning Neuro economist Daniel Kahneman, it is understood that Neuro tools tell us completely different information about unconscious, emotional consumer response (System 1) and traditional research approaches address rational and cognitive response (System 2). Both are critical for understanding consumer decision making - especially since the two systems are often fighting one another. That is why it is sometimes so difficult to make up our minds.

The reason traditional market research firms offer neuro tools is simply that *most studies are better off with them*. Moreover, clients have become savvier and now request them. As realization sinks in, researchers cannot continue to address only the rational, conscious side of reaction or the emotional, visceral side. Both are critically important.

But which neuro tools to use?

Now that Neuro tools have been categorically accepted, the key question becomes which tools are best and for which applications. The truth is that they all do slightly different things and they all have plusses and minuses. There is both art and science to knowing which tools are best for given research objectives and client priorities including scalability, cost, timing and consumer comfort. While there may be room for some debate, here are some considerations of what each tool is especially good for:

Biometrics: Stable and sensitive measure of emotional engagement; provides great specificity and overall effect; consumer-friendly, scalable.

Facial Coding: Passive measurement for type of emotional response and emotional valence; secondary indicator of emotional engagement; easy to integrate into surveys; scalable

EEG: Highly sensitive measure of engagement and emotional valence. Provides great specificity. Less consumer friendly and scalable depending upon equipment used

Eye Tracking: Attention and interest; patterns of observation; what is seen, in what order and for how long with great specificity; consumer-friendly and scalable; now available on line, in-store, etc.

Implicit: Understanding unconscious perceptions and impact of stimuli on brands, sensitive for differentiating between brands and ads on key attributes and drivers; easy to include in surveys, scalable and consumer friendly

fMRI: Most sensitive neuro tool relied upon in academic labs for exploratory research on emotional response, engagement and memory; most expensive, least scalable

Two camps exist within the big market research industry players with respect to developing proprietary systems and creating alliances with neuro research boutiques. Our philosophy is to be methodology-agnostic -- to fit client objectives, because we appreciate that they do not all do the same things and have created relationships with the leading Neuro tool experts across the world. This enables us to offer the best methodology for each type of study.

Other companies focus on specific Neuro tools to the extent that they may have developed them in-house or invested in specialty providers.

The large research company advantage

Clients benefit when sourcing Neuro research through established research companies. First, established firms have a deep understanding of quality research. This relates to study design, answering client objectives, consumer comfort, fatigue prevention, projectability, analytic depth and understanding of marketing context.

Second, large market research firms can be objective in their choice of tools and adapt to scientific breakthroughs.

Third, the large firm's volume builds deep experience in Neuro fast, adding depth of expertise for selecting methodologies, designs and analyses. Fourth, large research companies are expert at integrating Neuro with traditional methodologies. Study implications can leverage insights from System 1 and System 2 for the greatest consumer understanding in one report. This leads to economies of scale, study efficiency, norms and potential modeling or Meta analyses, plus a sensitivity toward when to use what tool.

Simply put, integrating Neuro tools with traditional research provides the best solutions today and promises even more valuable insights for tomorrow.

IF YOUR BRAIN WERE A COMPUTER, HOW MUCH STORAGE SPACE WOULD IT HAVE?

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Is it time to move past the idea that our brain is like a computer?

The comparison between the human brain and a computer is not a [perfect one](#), but it does lend itself to some interesting lines of inquiry. For instance: what is the storage capacity of your brain?

The answer to the first question – *how much storage space is there inside the average human head?* – varies considerably, depending on who you ask. Some estimates come in as low as 1 terabyte, or approximately 1,000 gigabytes. These days, you can purchase an external hard drive with twice that capacity for under a hundred bucks.

Another commonly cited estimate puts the figure at closer to 100 terabytes of storage. [Slate's Forrest Wickman](#) explains the reasoning behind this number:

The 4 Biggest Myths About the Human Brain

The human brain contains roughly 100 billion neurons [Ed. note: [closer to 86-billion](#), actually, but now we're just being nitpicky]. Each of these neurons seems capable of making around 1,000 connections, representing about 1,000 potential synapses, which largely do the work of data storage. Multiply each of these 100 billion neurons by the approximately 1,000 connections it can make, and you get 100 trillion data points, or about 100 terabytes of information.

Your brain is home to around 100 billion neurons, all of which are perpetually establishing and breaking connections, known as synapses, with other... [Read...](#)

The reasoning behind the 100-terabyte estimate has its flaws. It assumes, for example, that each synapse stores 1 byte of information. In reality, each one could conceivably store more or less than that. Consider, for example, that a synapse can exist in more states than either on or off. [As we've explained previously](#):

Your basic synapse is a connection between two neurons: a presynaptic neuron, and a postsynaptic neuron. Presynaptic neurons release neurotransmitters, which dock with receptors on the postsynaptic neuron and activate what are known as ion channels in the postsynaptic cell membrane.

Ion channels are like a neuron's gatekeepers; they allow charged atoms such as sodium, potassium and calcium into and out of the cell, and are thought to play an important role in the regulation of synaptic plasticity, i.e. the strengthening or weakening of neuronal connections over time.

All this is to say that when neurons talk to one another, **there's more regulating their communication than a simple on/off switch.**

Most of the computer chips that we use to model brain activity operate in this binary fashion – but the brain probably doesn't work this way.

Consider, also, that synapses are often interdependent, and will rely on one another to convey a single piece of information. While it's logical to assume that the brain's extensive neural networks **greatly improve its processing speed** (a couple years ago, researchers writing in *Science* concluded that the number of nerve impulses executed by one human brain per second is "**in the same ballpark** [as] the 6.4×10^{18} instructions per second that human kind [could] carry out on its general purpose computers in 2007"), it's also possible that they do so at the expense of storage capacity. Then again, Northwestern University psychologist Paul Reber **argues precisely the opposite** – and his storage capacity approximation blows our previous estimates out of the water:

... neurons combine so that each one helps with many memories at a time, exponentially increasing **the brain's memory storage capacity to something closer to around 2.5 petabytes** [1 petabyte \approx 1,000 terabytes]. For comparison, if your brain worked like a digital video recorder in a television, 2.5 petabytes would be enough to hold three million hours of TV shows. You would have to leave the TV running continuously for more than 300 years to use up all that storage.

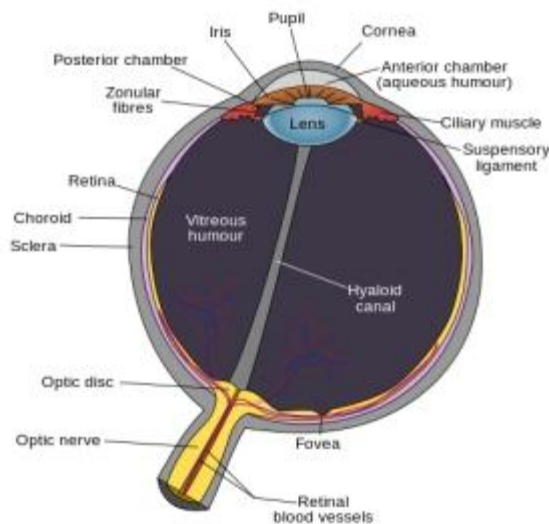
So, which is it? One terabyte? 100 terabytes? 2.5-thousand terabytes? Or can you fit an entire human consciousness into just 300 megabytes (approximately 60 3-minute MP3s), **as suggested in an episode of Caprica?** Perhaps these questions are irrelevant. As Reber himself says: "**if** your brain worked like a digital video recorder, 2.5 petabytes would be enough to hold three million hours of TV shows." We've already established that our brains *don't* work like DVRs, or the vast majority of computers, for that matter, and so down the rabbit hole we go: how much brain-space does a memory occupy? Does a more detailed memory take up more space than a foggy one? Have forgotten memories been deleted, or have they been relegated to some forgotten subfolder in the dusty corners of your consciousness? Does a deeply rooted, subconscious bias take up more space than a transient dream? Is each encoded in different file format? And while we're exploring the brain/computer/file-size/file-type metaphor: what is the cognitive equivalent of a GIF, anyway?

Your Brain Sees Even When You Don't

The unconscious processing abilities of the human brain are estimated at roughly 11 million pieces of information per second. Compare that to the estimate for conscious processing: about 40 pieces per second.*

Our conscious processing capacity isn't insignificant, but clearly it's just a retention pond compared to the ocean of the unconscious. And more and more research is uncovering abilities of the unconscious that defy reason. Two recently published studies on how the brain "sees" illustrate the point—the first one is cool, the second borders on incredible.

The first, published in the journal *Psychological Science*, wanted to find out if the brain can track visual targets even when the eyes are duped into believing the targets aren't there. Researchers at the [Brain and Mind Institute at the University of Western Ontario](#) exposed participants to an optical trick known as the "connectedness illusion" that causes viewers to underestimate the number of circles (targets) on a screen.



How Seeing Changes Your Brain  David

DiSalvoContributor

Two groups of circles are presented, one group on the left side of a screen and one on the right. The circles in one group are connected to tiny lines, but the circles aren't connected to each other. In the other group, the circles are connected to each other via the lines. What consistently happens is that our eyes perceive fewer circles in the connected group than in the disconnected group, even though the number of circles in both groups is exactly the same.

The connectedness illusion is a proven way to trick the eyes, and it worked like a charm in this study: participants didn't see all of the connected circles. But when they were given a task to "act" on the targets, researchers found that participants shifted from visual "seeing" to what you might call *brain-sight*. They were able to strategically plan actions that included all of the targets even though they didn't visually perceive them.

The reason seems to be that visual processing operates along two paths. The first is the one we're most familiar with—how we visually perceive the world. The second is what our brains are unconsciously up to while we're focused on merely "seeing."

Said lead researcher Jennifer Milne, a PhD student at the University of Western Ontario: "It's as though we have a semi-autonomous robot in our brain that plans and executes actions on our behalf with only the broadest of instructions from us."

That was cool, but the next study—published in [The Journal of Neuroscience](#)—flirts with the incredible. Researchers wanted to know if the brain can "see" someone else's actions even when the ability to visually see has been destroyed.

Cortical blindness refers to the loss of vision that occurs when the primary visual cortex no longer functions, generally as the result of injury. There's no longer an ability to visually perceive the world in the sense with which we're most familiar (even though the eyes still technically work), but that doesn't necessarily mean the brain no longer sees.

In this study a patient with full cortical blindness could still react to another person's gaze. While in an fMRI machine, the patient was exposed to gazes directed at him and gazes directed away from him. On the face of it, neither should matter. His visual cortex couldn't perceive any sort of gaze. But the brain scan indicated that another part of his brain definitely could.

The patient's [amygdala](#), the brain area associated with figuring out whether external stimuli is a threat, showed a distinctly different activation pattern when the gaze was directed at the patient than when directed away from him.

In other words, it didn't matter that his visual cortex couldn't catch the gaze—another part of his brain did regardless.

Exactly what's going on here isn't known, but there's a certain intuitive sense about the reaction even as it defies conscious reason. Our brains are adaptive marvels, and adapting around impediments to survival is essentially what our magical cranial clay does. If one system goes down, in this case external visual processing, it makes adaptive sense that another system would fill the gap (how that happens—well, that's the question).

We are only touching the jagged frozen tip of the iceberg with studies like these, and the second one in particular shows just how much we don't know about the brain's unconscious mojo. But we're learning more all the time, and piece by quixotic piece, the puzzle is only getting more intriguing.

**For more on conscious versus unconscious brain processing power, check out Timothy Wilson's excellent book, [Strangers to Ourselves](#).*

SCIENTISTS IDENTIFY EMOTIONS BASED ON BRAIN ACTIVITY

June 19, 2013 — For the first time, scientists at Carnegie Mellon University have identified which emotion a person is experiencing based on brain activity.

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[46](#)

The study, published in the June 19 issue of *PLOS ONE*, combines functional magnetic resonance imaging (fMRI) and machine learning to measure brain signals to accurately read emotions in individuals. Led by researchers in CMU's Dietrich College of Humanities and Social Sciences, the findings illustrate how the brain categorizes feelings, giving researchers the first reliable process to analyze emotions. Until now, research on emotions has been long stymied by the lack of reliable methods to evaluate them, mostly because people are often reluctant to honestly report their feelings. Further complicating matters is that many emotional responses may not be consciously experienced.

Identifying emotions based on neural activity builds on previous discoveries by CMU's Marcel Just and Tom M. Mitchell, which used similar techniques to create a computational model that identifies individuals' thoughts of concrete objects, often dubbed "mind reading."

"This research introduces a new method with potential to identify emotions without relying on people's ability to self-report," said Karim Kassam, assistant professor of social and decision sciences and lead author of the study. "It could be used to assess an individual's emotional response to almost any kind of stimulus, for example, a flag, a brand name or a political candidate."

One challenge for the research team was find a way to repeatedly and reliably evoke different emotional states from the participants. Traditional approaches, such as showing subjects emotion-inducing film clips, would likely have been unsuccessful because the impact of film clips diminishes with repeated display. The researchers solved the problem by recruiting actors from CMU's School of Drama.

"Our big breakthrough was my colleague Karim Kassam's idea of testing actors, who are experienced at cycling through emotional states. We were fortunate, in that respect, that CMU has a superb drama school," said George Loewenstein, the Herbert A. Simon University Professor of Economics and Psychology.

For the study, 10 actors were scanned at CMU's Scientific Imaging & Brain Research Center while viewing the words of nine emotions: anger, disgust, envy, fear, happiness, lust, pride, sadness and shame. While inside the fMRI scanner, the actors were instructed to enter each of these emotional states multiple times, in random order.

Another challenge was to ensure that the technique was measuring emotions per se, and not the act of trying to induce an emotion in oneself. To meet this challenge, a second phase of the study presented participants with pictures of neutral and disgusting photos that they had not seen before. The computer model, constructed from using statistical information to analyze the fMRI activation patterns gathered for 18 emotional words, had learned the emotion patterns from self-induced emotions. It was able to correctly identify the emotional content of photos being viewed using the brain activity of the viewers.

To identify emotions within the brain, the researchers first used the participants' neural activation patterns in early scans to identify the emotions experienced by the same participants in later scans. The computer model achieved a rank accuracy of 0.84. Rank accuracy refers to the percentile rank of the correct emotion in an ordered list of the computer model guesses; random guessing would result in a rank accuracy of 0.50.

Next, the team took the machine learning analysis of the self-induced emotions to guess which emotion the subjects were experiencing when they were exposed to the disgusting photographs. The computer model achieved a rank accuracy of 0.91. With nine emotions to choose from, the model listed disgust as the most likely emotion 60 percent of the time and as one of its top two guesses 80 percent of the time.

Finally, they applied machine learning analysis of neural activation patterns from all but one of the participants to predict the emotions experienced by the hold-out participant. This answers an important question: If we took a new individual, put them in the scanner and exposed them to an emotional stimulus, how accurately could we identify their emotional reaction? Here, the model achieved a rank accuracy of 0.71, once again well above the chance guessing level of 0.50.

"Despite manifest differences between people's psychology, different people tend to neurally encode emotions in remarkably similar ways," noted Amanda Markey, a graduate student in the Department of Social and Decision Sciences.

A surprising finding from the research was that almost equivalent accuracy levels could be achieved even when the computer model made use of activation patterns in only one of a number of different subsections of the human brain.

"This suggests that emotion signatures aren't limited to specific brain regions, such as the amygdala, but produce characteristic patterns throughout a number of brain

regions," said Vladimir Cherkassky, senior research programmer in the Psychology Department.

The research team also found that while on average the model ranked the correct emotion highest among its guesses, it was best at identifying happiness and least accurate in identifying envy. It rarely confused positive and negative emotions, suggesting that these have distinct neural signatures. And, it was least likely to misidentify lust as any other emotion, suggesting that lust produces a pattern of neural activity that is distinct from all other emotional experiences.

Just, the D.O. Hebb University Professor of Psychology, director of the university's Center for Cognitive Brain Imaging and leading neuroscientist, explained, "We found that three main organizing factors underpinned the emotion neural signatures, namely the positive or negative valence of the emotion, its intensity -- mild or strong, and its sociality -- involvement or non-involvement of another person. This is how emotions are organized in the brain."

In the future, the researchers plan to apply this new identification method to a number of challenging problems in emotion research, including identifying emotions that individuals are actively attempting to suppress and multiple emotions experienced simultaneously, such as the combination of joy and envy one might experience upon hearing about a friend's good fortune.

Groundbreaking discoveries such as identifying emotions based on neural activation patterns have helped to establish Carnegie Mellon as a world leader in brain and behavioral sciences. To build on its foundation of research excellence in psychology, neuroscience and computational science, CMU recently launched a Brain, Mind and Learning initiative to enhance the university's ability to innovate in the laboratory and continue to solve real-world problems.

The National Institute of Mental Health funded this research

THE UNCONSCIOUS MIND AT WORK

Posted: 06/19/2013 8:18 pm

What are some ways to spend your time at work productively? Meeting with clients and collaborators is one, surely. Reading reports, likewise. What about socializing at the water cooler? Or practicing your putting?

It's tempting to point at such activities and hiss, "stealing from the company." But what if such distractions are actually an important part of one's job performance, productivity and creativity, perhaps even more important than evenings of overtime spent beating one's head against yet another intractable problem? Luckily for the putting enthusiasts and water-cooler aficionados among us, this may not be far from the truth.

Recent research by psychologist [Ap Dijksterhuis](#) and colleagues shows that periods of distraction from one's tasks can actually help a person tackle them more successfully. Dijksterhuis's work focuses on decision making: Participants in his studies generally begin by reading information describing several cars. One might be fuel-efficient but have uncomfortable seats, for example, while another has great handling but a hideous interior. After reading about the cars, participants are randomly instructed to either sit and think consciously about the cars, turning them over in their minds, or perform a number-memory task involving memorizing sequences of digits. By performing this unrelated "distractor" task, this latter group is prevented from thinking about the cars consciously. Afterward, both groups of participants make their decisions about the cars, which are scored by the researchers: Some cars were described as being better than others, and a savvy critic will judge them accordingly.

So how do participants in these two groups perform? Incredibly, Dijksterhuis's studies have shown that participants who are distracted by the number-memory task usually make better car decisions than participants who spend time consciously thinking. How could this be? The researchers postulated that while participants were consciously performing the number-memory distractor task, their brains were processing information about the cars unconsciously, with participants unaware that this was occurring. This unconscious information processing, termed "unconscious thought," was apparently better suited to the car decisions than was conscious thinking.

But since the publication of Dijksterhuis's [original paper](#) on unconscious thought, there has been endless debate about whether the brain could really be carrying out such sophisticated processing unconsciously. With this controversy in mind, [David Creswell](#), [Ajay Satpute](#), and I used brain imaging to study unconscious thought at Carnegie Mellon University's [Scientific Imaging and Brain Research \(SIBR\) center](#). We used MRI to measure participants' brain activity while they tackled decision problems about cars -- specifically while they performed the number-memory distractor before making their decisions. We weren't interested in brain activity related to the distractor itself, though; we wanted activity related only to unconscious thought. So we used statistical methods to subtract out the brain activity related to the distractor, leaving us with just the unconscious thought-related activity.

We found that [unconscious thought really occurs in the brain](#): Left visual cortex and right prefrontal cortex were active in support of unconscious thought during the distractor. What's really striking, though, is that the brain regions supporting unconscious thought are some of the same regions activated when participants are initially learning the car information: Left visual

cortex and right prefrontal cortex are working when participants are reading about the cars, and then they unconsciously reactivate while participants perform the number-memory task. But recall that this unconscious thought-related brain activity is not activity related to just carrying out the number-memory task: Number-memory task activity occurs in other parts of the brain.

But what if it didn't? What if our distractor just happened to be one that also required left visual and right prefrontal cortex? If we've learned one thing from neuroscience, it's that most every part of the brain is involved in a cornucopia of cognitive functions, and functions that are similar to each other tend to involve a similar set of brain regions. If the distractor was similar enough to reading information about cars (say, reading about boats), it might have recruited left visual and right prefrontal cortex -- and then where would unconscious thought take place? We've collected data hinting that if the distractor is too similar to the information to be processed unconsciously, unconscious processing doesn't happen.

So what does this say for our water-cooler posse? Sometimes, it may be wiser to take a walk than to keep pushing ahead on a problem. And we now suspect that the best break from a problem -- the best distractor -- is one that's completely different from whatever you want your brain to work on unconsciously. So rather than taking a break from emailing a client by emailing your significant other (though hopefully these are already fairly different), try a phone call instead. It's possible that interspersing cognitive breaks ("Brain Breaks," anyone?) throughout your day could give your brain time to unconsciously process all sorts of problems you're facing.

Work environments where this is easy to do are already in vogue. Google's offices are famously fun, and other firms are following suit. In addition to making the workplace more exciting, a rock-climbing wall next to the copy machine might be the perfect place to do some serious unconscious thought. And breaks need not only consist of non-work activities: Switching between sufficiently different work-related tasks, like budgeting and meetings, could do the trick (though you might have less fun).

In fact, the idea of the brain processing complex information unconsciously is hardly new: Freud and Jung posited a complex, unconscious part of the mind whose activities influence our conscious thoughts and behavior. With elegant continuity, then, modern techniques in neuroscience and psychology are beginning to reveal the brain's unconscious inner workings, bringing today's scientists, like those at Carnegie Mellon, face-to-face with the progenitors of our fields.

So the next time your conscious mind is stumped on a problem, pull out those Coltrane records (or MP3s), or grab your putter. Your boss, if he doesn't fire you, may just thank you

Your smartphone, your moods, their market

June 17, 2013 - 8:03 am | Edited by [Frédéric Filloux](#)

Coupled to facial imaging, the smartphone could become the ultimate media analytics tool, for evaluating editorial content or measuring the effectiveness of ads. Obviously, there are darker sides.

When it comes to testing new products, most of us have been through the focus group experience. You sit behind a one-way mirror and watch a handpicked group of people dissect your new concept: a magazine redesign, a new website or a communication campaign. It usually lasts a couple of hours during which the session moderator does his best to extract intelligent remarks from the human sample. Inevitably, the client — you, me, behind the glass — ends up questioning the group's relevance, the way the discussion was conducted, and so on. In the end, everyone makes up their own interpretation of the analyst's conclusions. As usual, I'm caricaturing a bit; plus I'm rather in favor of products pre-tests as they always yield something useful. But we all agree the methods could be improved — or supplemented.

Now consider Focus Group 2.0: To a much larger sample (say few hundreds), you send a mockup of your next redesign, a new mobile app, or an upcoming ad campaign you better not flunk. The big 2.0 difference resides in a software module installed on the tester's smartphone or computer that will use the device's camera to decipher the user's facial expressions.

Welcome to the brave new world of facial imaging. It could change the way visual designs are conceived and tested, making them more likely to succeed as a result . These techniques are based on the work of American psychologist Paul Ekman, who studied emotions and their relation to facial expression. Ekman was the first to work on “micro-expressions” yielding impossible to suppress, authentic reactions.

The human face has about 43 facial muscles that produce about 8,000 different combinations. None of these expressions are voluntary, nor are they dependent on social origin or ethnicity. The muscles react automatically and swiftly — in no more than 10 or 20 milliseconds — to cerebral cortex instructions sent to the facial nerve.



Last month, in Palo Alto, I met [Rick Lazansky](#), a board director at the venture capital firm [Sand Hill Angels](#). In the course of a discussion about advertising inefficiencies (I had just delivered a talk at Stanford underlining the shortcomings of digital ads), Rick told me he had invested in a Swiss-based company called [Nviso](#). Last week, we set up a Skype conference with [Tim Lellewellyn](#), founder and CEO of the company (Nviso is incubated on the campus of the [Swiss Federal Institute of Technology](#) in Lausanne where Dr. Matteo Sorci, Nviso's chief scientist and co-founder used to work.)

Facial Imaging's primary market is advertising, explains the Nviso team. Its technology consists in mapping 143 points on the face, activated by the 43 facial muscles. Altogether, their tiny movements are algorithmically translated into the seven most basic expressions : happiness, surprise, fear, anger, disgust, sadness and neutral, each of them lasting a fraction of a second. In practice, such techniques require careful adjustment as many factors tweak the raw data. But the ability to apply such measurements to hundreds of subjects, in a very short time, insures the procedure's statistical accuracy and guarantees consistent results.

Webcams and, more importantly, smartphone cameras will undoubtedly boost uses of this technology. Tests that once involved a dozen of people in a focus group can now be performed using a sample size measured in hundreds, in a matter of minutes. (When scaling up, one issue becomes the volume of data: one minute of video for 200 respondents will generate over 100,000 images to process.)

Scores of applications are coming. The most solvent field is obviously the vast palette of market research activities. Designers can quickly test logos, layouts, mockups, story boards. Nviso works with Nielsen in Australia and New Zealand and with various advertisers in Korea. But company execs know many others fields could emerge. The most obvious one is security. Imagine sets of high-speed cameras performing real-time assessment at immigration or at customs in an airport; or a police officer using the same technology to evaluate someone's truthfulness under

interrogation. (The [Miranda Warning](#) would need its own serious facelift...) Nviso states that it stays out of this field, essentially because of the high barrier to entry.

Other uses of facial imaging technique will be less contentious. For instance, it could be of a great help to the booming sector of online education. [Massive Open Online Courses](#) (Moocs) operators are struggling with two issues: authentication and student evaluation. The former is more or less solved thanks to techniques such as encoding typing patterns, a feature reliably unique to each individual. Addressing evaluation is more complicated. As one Stanford professor told me when we were discussing the fate of Moocs, "Inevitably, after a short while, you'll have 20% to 30% of the students that will be left behind, while roughly the same proportion will get bored..." Keeping everyone on board is therefore one of the most serious challenges of Moocs. And since Moocs are about scale, such task has to be handled by machines able to deal with thousands of students at a time. Being able to detect student moods in real-time and to guide them to relevant branches of the syllabus' tree-structure will be essential.

These mood-analysis techniques are just nascent. Besides Nviso, several well-funded companies such as [Affectiva](#) compete for the market-research sector. The field will be reinforced by other technologies such as vocal intonations analysis deployed by startups like [Beyond Verbal](#). And there is more in store. [This story](#) of Smithsonian.com titled "*One day, your smartphone will know if you are happy or sad*", sums up the state of the art with mobile apps designed to decipher your mood based on the way you type, or research conducted by Samsung to develop [emotion-sensing smartphones](#). As far as privacy is concerned, this is just the beginning of the end. Just in case you had a doubt...

NEUROSCIENCE TESTS IN-APP WINDOWS 8 ADVERTISING

17 June, 2013 [0 comments](#)

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Microsoft and Nielsen have set out to analyse consumer reactions to Windows 8 in-app advertising with the neuro-testing results to be announced at Cannes.

Early results show companies that advertise in Windows 8 apps experience a “halo effect” where the brand is seen as “more interesting, innovative and compelling” for trying the new platform.

Consumer reactions are gauged by Nielsen’s NeuroFocus testing to measure brain impulses and subconscious reactions.

A video explaining Microsoft’s stance is below.

Matt James, managing director Mi9 Media, said: “Given that ads in apps for Windows 8 are new to market, we are committed to testing and learning what is working in the early stages of development to continually evolve and improve the Windows 8 experience.”

“Our priority is to put the consumer’s needs and motivations at the heart of every ad experience we deliver in Australia. Central to this is going beyond tracking what people do and discovering the actions driving their behaviour.

“It’s pretty exciting to move beyond just asking people what they think of an ad. We can now monitor actual emotional responses and see what a person really feels about the content they see and whether it will increase their propensity to buy something

Predicting Advertising Effectiveness: Facial Coding of 120.000 Video Frames

Posted on Thu, Jun 06, 2013

The advertising and marketing companies have just received a new addition to their repertoire of the neuromarketing tools – automated coding of facial expressions of basic emotions. Three researchers from the Amsterdam School of Communication Research (ASCoR) at the University of Amsterdam (UvA) have demonstrated that the specific patterns of facial expressions **partially** explain the advertisement's effectiveness in the amusing persuasive video stimuli [1]. This study was conducted on a crowdsourcing platform – yielding more than 120.000 frames of facial video-reactions, which in turn were analyzed within a few hours by a facial coding system called **FaceReader [2]**. The software allows automatic analysis for facial expressions of happiness, surprise, sadness, fear, anger, and disgust in a fraction of the time that it would take a team of the independent human facial coders. In the past, it could have taken up to two or three months of tedious manual coding.

The study was published in the conference proceedings of *9th Annual NeuroPsychoEconomics Conference*, with a theme “Bridging Boundaries: Applying Neuroeconomics to Medicine, Social Science and Business,” on 6th June, 2013 in Bonn, Germany by Association for NeuroPsychoEconomics. In the study, ninety U.S. based participants were asked to watch three advertisements that differed in how amusing they were while their facial reactions were video-recorded. After being exposed to the video, they were asked to fill out a self-report on how much they enjoyed the ad and if they liked the presented brand. The researchers - using FaceReader – have analyzed the underlying patterns of the facial reactions and related them to the self-reported scores of the advertisement's effectiveness. Excitingly, they found that the scores on the facial expressions of happiness explain as much as 37% of the variance in the self-reported scores of the attitude toward the ad – the core measurement of the advertisement's effectiveness – in the most amusing video ads. Although the other basic expressions did not contribute to predicting attitude toward the advertisement and the brand in the amusing persuasive stimuli, happiness did partially explain attitude toward the brand. Furthermore, **FaceReader could have reliably distinguished between high, medium, and low amusing persuasive video advertisements.** Importantly, the researchers have also come up with a novel way of linking the FaceReader's continuous interpretation of the subjects' facial expressions with a punctual, static, dependent variable that is the advertisement's effectiveness. However, they also argue that more research is needed, especially testing, if other types of affective stimuli (e.g. gloomy, disgusting, scary, etc.) can be related to constructs typically studied in the advertising research (such as intention to purchase or the actual buying behavior). They also highlight the importance of the cross-validation of FaceReader with other commonly used measures such as AdSAM®, PrEmo or the facial EMG.

This recent study contributes to the growing field of the affective consumer neuroscience, analyzing important data of facial reactions to predict the advertising effects. The experiment strength was the use of the crowdsourcing platform, where it was possible to record the participants in their natural environment, their homes and offices – the usual places where the consumers watch the persuasive video materials. The material gathered through such platforms is

often of poor quality, as it is not possible to control perfectly for the recording conditions as in a laboratory settings. The poor lighting conditions and technical failures on the part of the end-user made it exceptionally hard to analyze the collected material. However, FaceReader has proved to handle this impoverished data exceptionally well, and allowed the researcher to perform a fast, reliable, and automated analysis of facial expressions and basic emotions.

ARTICLE: BIG DATA LOOK SMALL

MARKETERS SHOULD FOCUS MORE ON UNCONSCIOUS MIND, SAYS CONSULTANT

By M. HAFIDZ MAHPAR

Martin: 'If they use you (your product), they don't have to love you'.

hafidz@thestar.com.my

HAVE you ever driven your car and then couldn't recall the last five to 10 km? That demonstrates the power of the unconscious mind, which is also a key factor in your shopping behaviour, according to marketing consultant and author [Dr Neale Martin](#).

Martin, who hails from the United States, is the author of *Habit: The 95% of Behavior Marketers Ignore* (2008), which has been translated into 10 languages and has had several reprints.

With a strong background in psychology, he is prepared to challenge even basic marketing principles that marketers usually take for granted. *StarBizWeek* caught up with Martin in Petaling Jaya when he was here to conduct a training programme.

Martin developed early insights into the power of habits as a counsellor and programme director for alcohol and drug addiction programmes.

From the mid-90s to the early 2000s, he became a futurist for the telecommunications industry, working alongside renowned marketing [professor Jagdish Sheth](#).

Today Martin, who is chief executive officer of Georgia-based Sublime Behavior Marketing, believes that habitual behaviour is responsible for many of marketing efforts' failures.

“Throughout the scientific revolution and the Age of Enlightenment, we thought the rational mind was in charge. What we now realise is that in reality, the unconscious mind is in charge most of the time,” he says.

“This is so revolutionary from a marketing perspective because so much of marketing is based on the idea that the conscious mind is in charge and that people are rational and making conscious decisions. What we've discovered is that people are making unconscious decisions most of the time and that they're not following what we think of as rational decisions.”

While the conscious mind is capable of intentional thought, goal orientation, and abstract reasoning, Martin says it can only think of one thing at a time and tires very easily. When you have repeated a behaviour in a stable context numerous times, the conscious mind will, whenever possible, hand over the decision to the unconscious mind.

“The unconscious mind is processing 11 million more items per second than the conscious mind is; it's processing a lot more information and feeds this information up to the conscious mind. The conscious brain normally just rubber-stamps what the unconscious brain tells it to,” he says.

Autopilot mode

Giving an example from the consumer perspective, Martin says a consumer may think about what detergent brand to buy the first time around, and may ask himself whether the detergent he bought previously was effective when he next buys detergent. But from the third time onwards, he may well be picking up the same detergent over and over.

“Habits are quick to activate (they are activated before conscious thought). They're automatic and they're persistent; they don't go away very easily,” he says.

Marketers often aim to convince consumers of something, such as their product is better, so that the latter will buy it. But Martin says the reality is, most of the time the consumer is buying what she bought last time and she is not thinking about it.

“You may have convinced me but I don't care, because I've already made that decision. And so a lot of time, marketing is actually working opposite the way the customer's brain works,” he says.

Martin says the more complicated one's life is, the more one relies on habits to avoid getting worn out.

“The brain is trying to be efficient and to quickly come to a good decision. Brands are a fantastic habit-forming thing, because once I trust a brand, I don't have to think anymore,” he notes.

“But we have to recognise that the process is not about I (the consumer) having this big relationship with a particular brand, but that there's a cue now – logo, colour, shape of the package – that automatically activates that behaviour.”

Invisible product

Martin cites the misstep that Tropicana Orange Juice did in the United States in 2009 by changing its packaging design (originally the carton had featured an orange skewered by a drinking straw), causing sales to plunge.

“Tropicana became invisible to the shoppers' mind. The customers had orange juice on their list as they went into the store, but they went home without orange juice and didn't know why. Tropicana had removed the cue that activated that behaviour.”

He says it is the unconscious mind that marketers want to train to the point where their brand simply becomes “how you get that thing done.”

Right: Martin's book has been translated into 10 languages.

“It's not whether you love me or promote me (as a brand); it's whether or not I'm so routine in your life that you use me automatically,” he says.

Martin says a lot of times companies think people buy their products because people love their brand. “The truth is, the consumers may not have thought about you in years! And that's okay. If they use you, they don't have to love you.”

Trust, though, is important. “For me to use you (your product) habitually, I would have to trust you. If you ever deceive me, if I ever feel you're taking advantage of me, I can't trust you. If I can't trust you, I can't use you habitually.

“That doesn't mean I won't use you anymore, but I will always have to use you with my conscious mind to activate it. It's like a person you don't trust that you have to do business with or work with.”

While maintaining trust seems very basic, Martin says that in the real world, companies face temptations.

He cites the case of cable news channel CNN hiring former New York [governor Eliot Spitzer](#), who had been embroiled in a prostitution scandal, to host a talk show in 2010.

“The thing about news, you need to trust the news. But CNN also wanted to get ratings and tried to find people who were controversial to make things interesting.

“The CNN brand needs to represent honesty. What does it say about a brand that is supposed to be about trust when it hired a guy who got fired from his job because he lied? And you were putting his face on your brand. To me, that was a horrible marketing decision.”

CNN cancelled the programme less than a year later, reportedly to stabilise sagging TV ratings.

Martin advises marketers to understand that they are not competing against rival brands as much as they are competing against their customers' existing habits.

“You need to understand that no matter what you're trying to accomplish, you have to think behaviourally. So I have to think, How do I disrupt the old behaviour? How do I get you to initiate the new behaviour? And how do I reinforce that behaviour so you'll do that behaviour enough times that I develop a new habit?’

“Most of the time, most companies see that 20% of their customers generate 80% of their revenue, or 20% of their products generate 80% of their revenue. That is habit. Those customers are using those products habitually, and all of those other times, the products are being used either in co-pilot or pilot mode.

“What you're really trying to do is to get more people to use your product habitually. That's how you become successful and make a lot of money, because the consumers are selling the products to themselves. I (marketer) am not trying to expend a lot of money to resell to the same person.”

On neuromarketing, he says EEG (electroencephalography) and other biometrics will become more and more integral to doing good market research with the passing of time.

“Unfortunately, (currently) the hype far exceeds the reality,” says Martin, who sits on the editorial board of *Neuromarketing Theory and Practice Journal*.

According to him, the term *neuromarketing* itself has come under much disrespect because a lot of biometric companies overpromise what they could do. Every one of the technologies has “some real profound limitations.”

Martin, who recommends Nobel Prize in Economics winner Daniel Kahneman's book *Thinking, Fast and Slow* (2011) as the best book on the brain's psychology, is working on his next book which features a new model of consumer behaviour.

“It attempts to understand the unconscious as well as the conscious influences on behaviour in the dynamic marketplace.”

Martin says the conscious mind is very important, but to him, the future of marketing is about how to work with both the unconscious and conscious mind in concert.

“We (marketers) have to do this well if we are going to be successful

How the Brain Really Works

New techniques are letting researchers look at the activity of the whole brain at once

• By ALISON GOPNIK

- [smallerLarger](#) For the last 20 years neuroscientists have shown us compelling pictures of brain areas "lighting up" when we see or hear, love or hate, plan or act. These studies were an important first step. But they also suggested a misleadingly simple view of how the brain works. They associated specific mental abilities with specific brain areas, in much the same way that phrenology, in the 19th century, claimed to associate psychological characteristics with skull shapes.

Most people really want to understand the mind, not the brain. Why do we experience and act on the world as we do? Associating a piece of the mind with a piece of the brain does very little to answer that question. After all, for more than a century we have known that our minds are the result of the stuff between our necks and the tops of our heads. Just adding that vision is the result of stuff at the back and that planning is the result of stuff in the front, it doesn't help us understand how vision or planning work.



John S. Dykes

But new techniques are letting researchers look at the activity of the whole brain at once. What emerges is very different from the phrenological view. In fact, most brain areas multitask; they are involved in many different kinds of experiences and actions. And the brain is dynamic. It can respond differently to the same events in different times and circumstances.

A new study in Nature Neuroscience by Jack L. Gallant, Tolga Çukur and colleagues at the University of California, Berkeley, dramatically illustrates this new view. People in an

fMRI scanner watched a half-hour-long sequence combining very short video clips of everyday scenes. The scientists organized the video content into hundreds of categories, describing whether each segment included a plant or a building, a cat or a clock.

Then they divided the whole brain into small sections with a three-dimensional grid and recorded the activity in each section of the grid for each second. They used sophisticated statistical analyses to find the relationship between the patterns of brain activity and the content of the videos.

The twist was that the participants either looked for human beings in the videos or looked for vehicles. When they looked for humans, great swaths of the brain became a "human detector"—more sensitive to humans and less sensitive to vehicles. Looking for vehicles turned more of the brain into a "vehicle detector." And when people looked for humans their brains also became more sensitive to related objects, like cats and plants. When they looked for vehicles, their brains became more sensitive to clocks and buildings as well.

In fact, the response patterns of most brain areas changed when people changed the focus of their attention. Something as ineffable as where you focus your attention can make your whole brain work differently.

People often assume that knowing about the brain is all that you need to explain how the mind works, so that neuroscience will replace psychology. That may account for the curious popular enthusiasm for the phrenological "lighting up" studies. It is as if the very thought that something psychological is "in the brain" gives us a little explanatory frisson, even though we have known for at least a century that everything psychological is "in the brain" in some sense. But it would be just as accurate to say that knowing about the mind explains how the brain works.

The new, more dynamic picture of the brain makes psychology even more crucial. The researchers could only explain the very complex pattern of brain activity by relating it to what they knew about categorization and attention. In the same way, knowing the activity of every wire on every chip in my computer wouldn't tell me much if I didn't also know the program my machine was running.

Neuroscience may be sexier than psychology right now, and it certainly has a lot more money and celebrity. But they really cannot get along without each other.

A version of this article appeared May 4, 2013, on page C4 in the U.S. edition of The Wall Street Journal, with the headline: The Brain as a Quick-Change Artist.

For the first time in history neuro science has been used for researching the impact of radio ads in the brain. 538, Mindshare and neuromarketing agency scanned the brain activity of 25 male subjects in the age of 20 to 49 years and listeners of 538 for this research. While lying in the fMRI

scanner they listened to radio ads. They thought they were participating in a language study and were asked to do tasks with letters. One task kept their attention away from the ads only slightly, a more difficult task simulated the situation of radio listening as a background activity. This way a conscious and an unconscious listening situation were created. 32 different commercials were tested with different characteristics. This way we also obtained insights about the effectiveness of humor, sound logos, visual transfer and about the differences between tactical ads and brand ads. This research gives us insights which advertisers, media agencies and sales houses can use.

The results

1. Radio Works, both consciously and unconsciously

The way an ad enters the brain (consciously or unconsciously) determines strongly the way it is processed. During conscious listening the listener weighs the value of the facts in the commercial. During unconscious listening the brain is busy with something else and has less capacity to evaluate the arguments given by the commercial and trusts the ad based on prior knowledge of the brand In other words: it is easier to activate the promise of the product in the brain. Also, the listener is 'off guard' as he is not aware that a commercial message is being received. It's not all positive, as expected there is more irritation when auditive stimuli are distracting from a difficult task.

① Brand ads have to create a positive brand awareness. So it could be better to advertise at moments that the listener is busy and 'off guard'. Sales driven ads could benefit more from a conscious contact as more rational arguments must be transferred. Conscious contact means more capacity to process the offer.

2. Visual Transfer is really Emotional Transfer

When there is Visual Transfer the radio ad fits a corresponding tv ad. Listening to the radio ad will bring back the image of the tv ad in the brain, according to established assumptions. This research shows that this is not how transfer works. The transfer doesn't take place in the visual part of the brain (visual cortex), nor in memory areas (hippocampus). Instead, emotions connected to the tv ad, are recalled in the brain when exposed to the radio ad. Positive or negative. This means that tv ads which were not strong on the relevant emotions are better not used for visual/emotional transfer.

① These findings suggest that radio is much more than expected a relevant medium for building brands, extending or intensifying the effect initially built by tv.

3. Sound logo increases effect

A sound logo increases the potential effect of the commercial. There is a better reaction on attention, emotional response and effect. This goes for all brands but especially big strong brands.

① So all advertisers should use a sound logo, for any media channel with an auditive component. This includes tv and prerolls.

Visual transfer does not exist, emotional transfer does

fMRI scanning shows what consumers **subconsciously** hear

For the first time in marketing history the impact of radio advertising on the consumer brain has been explored using fMRI technology, through a collaboration between neuromarketing bureau Neurensics, **Dutch radio station 538 and media giant Mindshare.** The spectacular results of the research provide unique insight into the processing and effectiveness of radio advertising, information relevant to all businesses making use of auditory marketing.

The brains of 25 male subjects were scanned while they listened to radio commercials. Participants were unaware of the true nature of the study; they were lead to believe they were participating in a study about language proficiency. **The most interesting finding of the study is that radio ads have a different impact on the brain when processed consciously or unconsciously. During unconscious processing, the consumer uses simple, automated rules and heuristics that**

fall prey to persuasive advertising. Unconscious processing of radio ads results in greater trust in the communicated message and, consequently, greater anticipated reward or expectation associated with the advertised object. During conscious processing the consumer listens more critically to the commercial arguments: resulting in less trust, but more overall emotional activation. Still, listening to advertising while heavily distracted (unconscious processing) results in greater agitation, or anger.

Small advertising elements have a large effect

In addition to the difference between conscious and unconscious processing, the study also found that radio commercials with a sound logo are more effective in activating brain areas that are relevant in determining purchasing behavior, than commercials without sound logo. This holds true for all tested brands, but it works especially for strong, well-established brands. Humor in radio advertisements results in greater attention and more overall brain activity compared to ads without humor. Humorous radio ads score more extremely (negative/positive), which does not make them necessarily more effective than non-humorous commercials. If the aim is to stand out and create attention, humor is an effective tool. However, the polarizing effects of humor may be detrimental to effective brand building.

Visual transfer does not exist

The last interesting finding concerns visual transfer. Visual transfer is the mental activation of imagery associated with a television commercial upon hearing the corresponding radio advertisement. Or so theory assumed. The current research provides evidence for an emotional, rather than visual transfer of information. The emotional pattern (negative/positive) that a TV-commercial elicits in the consumer's brain is reactivated upon hearing the radio edit. Contrary to theory, the visual cortex (responsible for processing visual information) and memory structures (e.g. hippocampus) are not more active for radio ads with a television commercial, than for radio ads without a television version. The radio ads that have a television version activate the same emotional pattern (negative/positive) as their television counterpart.

Jikke Romijn (Head of research at Mindshare): "These findings are a first in marketing history and highly relevant in the planning and creation of effective radio advertising. Not only do we know how the consumer's brain processes radio commercials, we also know how we can improve the effectiveness of the ads."

4. Humor increases the attention but also polarizes.

Commercials with humor show more attention, more activity in the brain than commercials without humor. Commercials with humor show extreme results, positive and negative. In terms of effectiveness, humor may not always be helpful.

① If primary awareness and attention are the objectives, humor is a great instrument. For brand building campaigns it may be better to stay away from humor.

5. Action gets more reaction than brand advertising

A commercial with a concrete call to action gets more attention and triggers the expected reward and other positive dimensions more easily than ads for brand building purposes. This is probably because of the 'what's in it for me' effect: listeners can easily judge the relevance of the message in their personal situation. This results in lower 'advertising suspicion' too.

① Promotional campaigns can benefit from conscious contacts more, as rational arguments need to be transferred and judged. Brand building ads benefit most when the brain is 'off guard' and implicit brand images can easily be transferred. Emotional transfer with a TV ad and the use of a sound logo greatly enhance this effect.

Your Brain Sees Even When You Don't

Sunday, August 11, 2013 at 02:45PM

The unconscious processing abilities of the human brain are estimated at roughly 11 million pieces of information per second. Compare that to the estimate for conscious processing: about 40 pieces per second.*

Our conscious processing capacity isn't insignificant, but clearly it's just a retention pond compared to the ocean of the unconscious. And more and more research is uncovering abilities of the unconscious that defy reason. Two recently published studies on how the brain "sees" illustrate the point--the first one is cool, the second borders on incredible.

The first, published in the journal *Psychological Science*, wanted to find out if the brain can track visual targets even when the eyes are duped into believing the targets aren't there. Researchers at the [Brain and Mind Institute at the University of Western Ontario](#) exposed participants to an optical trick known as the "connectedness illusion" that causes viewers to underestimate the number of circles (targets) on a screen.

Two groups of circles are presented, one group on the left side of a screen and one on the right. The circles in one group are connected to tiny lines, but the circles aren't connected to each other. In the other group, the circles are connected to each other via the lines. What consistently happens is that our eyes perceive fewer circles in the

connected group than in the disconnected group, even though the number of circles in both groups is exactly the same.

The connectedness illusion is a proven way to trick the eyes, and it worked like a charm in this study: participants didn't see all of the connected circles. But when they were given a task to "act" on the targets, researchers found that participants shifted from visual "seeing" to what you might call *brain-sight*. They were able to strategically plan actions that included all of the targets even though they didn't visually perceive them.

The reason seems to be that visual processing operates along two paths. The first is the one we're most familiar with—how we visually perceive the world. The second is what our brains are unconsciously up to while we're focused on merely "seeing."

Said lead researcher Jennifer Milne, a PhD student at the University of Western Ontario: "It's as though we have a semi-autonomous robot in our brain that plans and executes actions on our behalf with only the broadest of instructions from us."

That was cool, but the next study--published in [The Journal of Neuroscience](#)--flirts with the incredible. Researchers wanted to know if the brain can "see" someone else's actions even when the ability to visually see has been destroyed.

Cortical blindness refers to the loss of vision that occurs when the primary visual cortex no longer functions, generally as the result of injury. There's no longer an ability to visually perceive the world in the sense with which we're most familiar (even though the eyes still technically work), but that doesn't necessarily mean the brain no longer sees.

In this study a patient with full cortical blindness could still react to another person's gaze. While in an fMRI machine, the patient was exposed to gazes directed at him and gazes directed away from him. On the face of it, neither should matter. His visual cortex couldn't perceive any sort of gaze. But the brain scan indicated that another part of his brain definitely could.

The patient's [amygdala](#), the brain area associated with figuring out whether external stimuli is a threat, showed a distinctly different activation pattern when the gaze was directed at the patient than when directed away from him.

In other words, it didn't matter that his visual cortex couldn't catch the gaze—another part of his brain did regardless.

Exactly what's going on here isn't known, but there's a certain intuitive sense about the reaction even as it defies conscious reason. Our brains are adaptive marvels, and adapting around impediments to survival is essentially what our magical cranial clay does. If one system goes down, in this case external visual processing, it makes adaptive sense that another system would fill the gap (how that happens--well, that's the question).

We are only touching the jagged frozen tip of the iceberg with studies like these, and the second one in particular shows just how much we don't know about the brain's unconscious mojo. But we're learning more all the time, and piece by quixotic piece, the puzzle is only getting more intriguing

Hi Bob, I'm back indeed and very much submersed in daily business again. To get back to you on the questions you've asked in your last few mails:

Jikke, can you provide some detail re the two different tasks the participants were asked to do while in the fMRI....thanks....will forward you a copy of the article when completed....thanks!

There were two tasks, one qualified as 'easy, only slightly distracting from the audio signal, to represent the conscious listening condition' and one to represent the subconscious listening while heavily distracted. Both were very simple constructions as people had to be able to do the tasks while lying on their backs in the fMRI-scanner.

In both cases, large black backgrounds were shown on a television screen at the back of the fMR-tunnel, using mirrors to reflect the imago on a screen at the roof of the tunnel above the face of the participant (as no electrical equipment can actually be brought into the tunnel). The screen showed the participants a sequence of random letters, some red and some white. The participant was holding a button in each hand and could react to the letters by pushing the buttons.

Task 1: for each WHITE letter, confirm whether it is a vowel (left hand) or a consonant (right).

Task 2: for each WHITE letter, please push one of the buttons if it is the SAME letter as the WHITE letter you saw two WHITE letters before

Jikke, can you provide more Detail regarding the impact of the audio logo and how you quantified its impact? Per below...

The 16 radiocommercials with the condition 'soundlogo' gave a larger amount of activity on almost all brain dimensions than the 16 radiocommercials without a soundlogo.

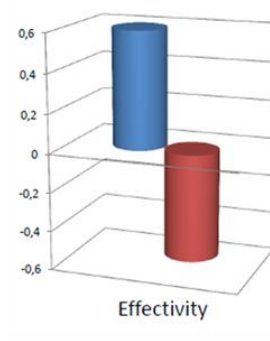
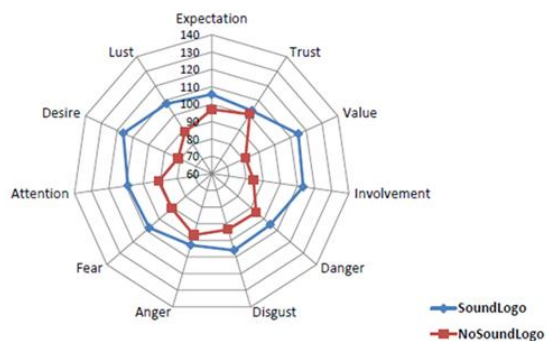
As Neurensics phrased it: "the soundlogo activates an expectation of reward by reviving brand associations that are present in the brain of the listener". This implies that a soundlogo is more effective for brands that have strong and positive brand associations. A soundlogo sparks something that is already there. Therefore: the more well-known the brand, the more useful the use of a soundlogo. That

makes it quite difficult to give a standardized figure to estimate the potential lift from a soundlogo. It also depends on the effect we're looking at ('lift in what?'). On spontaneous brand and advertising awareness, the lift might be substantial and fairly direct. On brand consideration or buying intention, the lift might be less strong, or at least the lift on such parameters would be gravely dependent on the actual proposition/offer in the ad.

How much would it cost us in the U.S. to replicate your neuroscience fMRI study? any ideas?

I honestly don't know.. For us, the costs of the fMRI-scan plus reporting were 60k EUROS, not including an awful lot of project management and co-ordination that we put in as a participant in this study. The radio station participant, 538, also put in a lot of hours, mainly for making the selection of the 32 radio ads. That might be easier in the US as you are so much larger and you probably would have a lot more radio ads to choose from? I would estimate the total commercial value of the whole package at some 80K or 90K in EUROS.

I suppose you could get a more sophisticated estimate of the costs of the scanning part by contacting Neurensics in the US at:



•

- **The value of using recognition is that it taps into both explicit and implicit memory, which means we can get a much better idea of the actual level of advertising exposure that has taken place. By identifying those people who have seen the advertising and subsequently forgotten it we should be able to test directly how effective recall is at evaluating emotive advertising.**

- **A controlled test of Recall vs. Recognition metrics:**
- The critical area of debate in this paper concerns the implication that the processing of Affect has for ad tracking research. If, as is predicted by the Low Attention Processing Model, brand associations and their emotive links endure in memory beyond the point at which conscious recollection of the ad itself disappears, then measures such as claimed ad awareness and detailed recall are likely to underestimate the effectiveness of advertising which has a high affective content. In simple terms, significant numbers of people who have been exposed to the ad and influenced by it will not actively remember it and will therefore not believe the brand has been advertised recently.
- This hypothesis can be tested by collecting both claimed ad awareness and recognition and cross-tabulating them against a dependent measure which links to sales. Sales intention is one possible dependent measure, but Barnard has found that this is more influenced by what was bought last time than by what is likely to be bought next time (33). A better measure is favourability, which has been shown in longitudinal tests to predict future brand choice (34).

10 Truths About the Unconscious You

The center that I cannot find is known to my *unconscious mind*. ~ Auden

What if I told you that your unconscious mind actually *controls* your conscious mind?

Not exactly what you had in mind, now is it?

In my studies of neuroscience and neuro-practices, I've learned truths about our unconscious minds that literally blew me away. Many of the beliefs I'd been taught for decades became little more than urban myth.

I want to share some of these powerful truths with you. The more we understand about our minds, the easier it becomes to step into our full potential. Our minds are designed for each and every one of us to create BIG potential!

Today I'm sharing a list of 10 truths that IMO we all should know. Over the next few weeks, I'll post more about each truth and how it impacts our business and personal worlds. So here goes!

Your Unconscious Mind(UM):

1) Processes all of the data inputs from our five senses.

That's now around 11M bits/second, which is a lot of info to handle. More than any supercomputer out there can manage. Your UM uses deletion, distortion and generalization to manage all that data. *We'll talk more about this process on Wednesday.*

2) Is the master of your conscious mind.

In fact, your conscious mind only gets involved in data processing and responses when the unconscious mind calls upon it. That's when the UM decides it needs logical input to analyze something that's new and different, that doesn't fit the known patterns. Until then, your unconscious rules.

3) Is symbolic.

Your UM stores all of your memories in symbols and images - not in text or paragraph form. That's one reason why visual is a stronger communication/memory system than simple text.

4) Enjoys serving you, but needs clear direction.

Your UM is programmed to serve you. It runs all of your body's systems, instinctually responds to danger and more. It's designed to serve you but it also needs very clear direction. That's where we humans sometimes get in trouble.

5) Does not process negatives.

That's right - your UM does not hear that negation or negative. When you talk or think about what you do not want to happen, it's the same as telling your UM to go out and get that very thing. That's why it's so important to *say what you want*.

6) Takes everything personally.

Since perception is all about our own unique meta programs and processes that are used to analyze, store and respond to information - everything is personal to your UM. Each of us has to consciously strive for objectivity, stepping beyond our unique programs and perspectives to see various viewpoints.

7) Controls and maintains all perceptions.

Our initial perceptions are formed in early childhood. Between the ages of 0-7, every single thing that happens in our world becomes a truth to our UM. We then build on those initial perceptions and they become like fly paper - attracting more experiences that match the perception to make it true.

8) Works on the principle of least effort.

Our minds want to use the least resources possible to manage inputs, run our bodies and more. The smaller the effort, the more mental capacity we have for emergency processing - like when that woolly mammoth charges us or when all heck breaks loose in our business.

9) Maintains instincts and generates habits.

The more we can respond out of habit or instinct, the less energy our UM has to use. We create habit after habit to allow our minds to have excess capacity for those all important moments. The challenge is that those instincts and habits often get in the way of our own best path.

10) Is programmed to constantly seek more and more.

This is why there is always more and more to discover, why we never stop learning and expanding. It's the function of our UM to expand and as such, so does mankind.

Big Decision Ahead? Let Your Subconscious Choose

Written by Brian Krans | Published on February 19, 2013



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TEXT SIZE: AAA

New research shows that our brains continue solving problems subconsciously when we turn our attention to something else.

The more we learn about our brains, the more we find that they work better without our input.

In fact, a great deal of human behavior stems from our subconscious mind. Research into the subconscious has found that it helps to initiate goal-orientated behavior, creativity, insight, memory consolidation, and decision making.

The funny thing about your brain, as researchers from Carnegie Mellon University (CMU) recently discovered, is that it'll keep solving a problem for you while you do something else. In fact, giving your subconscious time to work makes for better decisions.

How You Subconsciously Decide

For most people, picking a new apartment or car is a complicated process fraught with countless unknowns: if you can afford it, if you'll get your money's worth, and if the timing is right.

To see how much influence your subconscious has on this type of decision-making, a research team at Carnegie Mellon enlisted 27 healthy adults to undergo brain-imaging scans during mental testing.

The subjects were given information about cars and other items while connected to a [magnetic resonance imaging, or MRI, machine](#). Before they were allowed to make a decision, they had to memorize a sequence of numbers. Researchers did this to prevent the subjects from actively thinking about the cars.

The brain scans showed that while test subjects were learning about the cars and other items, the visual and prefrontal cortices—the parts of the brain responsible for decision-making and learning—were working as usual.

The surprising part—which researchers say provides the first insight into the way the brain unconsciously processes information—is that these same areas remained active during the number memorization task.

Processing Information in the Background

For lack of a better analogy, it's like when your phone downloads a song while you send a text message. Your phone is focusing on the new information (the text), while it processes something more complicated at the same time.

Even with the memorization distraction, researchers found that allowing the brain to unconsciously process information leads to more clear-headed decisions. Those whose brains showed the most continuing activity during the memory task were more likely to choose the “best” car in the set.

“This research begins to chip away at the mystery of our unconscious brains and decision-making,” J. David Creswell, assistant professor of psychology at CMU, said in a press release. “It shows that brain regions important for decision-making remain active even while our brains may be simultaneously engaged in unrelated tasks, such as thinking about a math problem. What’s most intriguing about this finding is that participants did not have any awareness that their brains were still working on the decision problem while they were engaged in an unrelated task.”

The research was published in the latest issue of the Oxford Journal *Social Cognitive and Affective Neuroscience*.

How to Get the Most Out of Your Subconscious

Sure, you could flip a coin to make a decision, but if you let your whole brain help you make the choice, you’ll most likely be better off.

If you’re about to make a big decision, allow some time for it to “sink in,” as you’ve probably heard before. Let the big decision stew in your subconscious mind. The best part is that your conscious mind can do something better, like watch a movie.

And now that you know the importance of the subconscious in decision-making, be wary of salesmen. If someone is trying to sell you something and doesn’t allow you much time to think—like a one-time-offer or a one-day-sale—you know what they’re up to. They’re hoping for that knee-jerk buying reaction.

Who knows? Maybe buyer’s remorse is merely your subconscious telling you you should’ve slept on it.

NEW DELHI: Chocolates can boost brain power. Exercise makes you feel happy. Pomegranate juice will keep your brain healthy. Recent years have seen a flood of

such studies. It is being called the Golden Age of neuroscience - the study of how the human brain works. Riding on a combination of imaging technology , computing power and genetics , neuroscientists are dizzy with success. And the money is flowing in. President Obama has announced a \$100 million BRAIN Initiative to map every neuron, the European Commission has given a billion euros to build a computer model of all 86 billion neurons in the human brain.

But a study published this week in Nature Reviews Neuroscience has thrown a bucket of cold water on the euphoria . It found that most brain related studies are not reliable and may be exaggerating things. Scientists from the University of Bristol, UK, teamed up with those from Stanford University, the University of Virginia and the University of Oxford to analyze published neuroscience studies and came to a startling conclusion: the average "statistical power" of these studies was just 20%. This means only one in five times will the studies' claim be valid . Most scientists regard an 80% power as sufficient.

Kate Button, one of the authors from Bristol University told TOI that the statistical power of a study is its ability to detect the effect it is looking for. "Power is dependent on both sample size (number of participants) and the size of effect being investigated, with increases in both leading to increased power," she said.

The other problem that Button found is that of exaggeration of effect. The smaller the sample, the more probable it is that a small individual variation will get highlighted as a major effect. "Imagine that antidepressants actually improve mood by 10% on average, but we select a group of people and do a study and find that, in our select sample, it improves mood by 20% on average. This would be an overestimation of the true effect."

Putting these two effects together and you will find the euphoria about neuroscience studies flagging. Button and her colleagues used 49 metastudies published in 2011 that had collated the results of 730 studies on neuroscience themes. The scientists analysed 461 brain imaging studies and found that their statistical power was just 8%. They analyzed 41 rat-in-the-maze type of studies

which study memory functions and found that their average power was between 18 and 31%.

'Neuromarketing': can science predict what we'll buy?

Advertisers have long used science to peer into consumers' brains; today 'neuromarketing' has given them the power to delve into our subconscious, finds Alex Hannaford

In 2008, a team of scientists in Germany published a study showing how the brain unconsciously prepares our decisions: that several seconds before we consciously decide what we're going to do, its outcome can be predicted by looking at unconscious activity in our grey matter.

The researchers, from the Max Planck Institute in Leipzig, told participants in the study that they could freely decide if they wanted to press a button with their left or right hands, whenever they wanted, but they had to remember at which time they felt they had made up their mind. They found that it was possible to predict from their brain signals which option they would choose seven seconds before they consciously made their decision.

"It's all very Minority Report," Steve Sands says, referring to the Tom Cruise film in which a special police department known as "PreCrime" tracks down criminals based on knowledge provided by psychics. "But we're not too far from that now."

In fact, it's incredible how close Sands is. For the past 20 years, from his lab in El Paso, Texas, he's been using technology to look inside our heads and show what consumers really feel, as opposed to what marketers think we feel. Using EEG tests (essentially a plastic swimming cap complete with electrodes to measure brain signals), functional magnetic resonance imaging (fMRI, which measures brain activity by looking at changes in blood flow), and eye-tracking technology, neuromarketing, as it's known, has completely revolutionised the worlds of advertising and marketing.

Sands sits opposite me, looking relaxed in a white shirt and jeans. In his office there's a framed 1995 cover of Newsweek on the wall with the headline: "The new science of the brain: why men and women think differently".

A similar cap worn by those taking part in the experiments for Neuromarketing (Getty Images)

"That's the first cap I made," he says of the EEG-outfitted woman on the cover. Sands used to work with rhesus monkeys in the psychology department at the University of Texas. When his lab closed down he started Neuroscan, which became one of the world's largest suppliers of EEG equipment to research scientists. After selling Neuroscan, Sands and his team started to use the same machines to look at the brain's response to advertising.

He recently finished a one-and-a-half year project for POPAI, an international trade association, for which Sands's researchers used eye-tracking and EEG technology to gain insight into shopper habits. The results were fascinating. Forget scrawled shopping lists on the back of an envelope: Sands found that the vast majority (76 per cent) of US grocery shoppers make their purchase decisions in-store, and that shoppers using non-cash payment methods are most likely to make impulse purchases. So shelf-placement and in-store marketing are more crucial than ever.

Sands's team would pop a pair of eye-tracking glasses on their volunteers (which were in turn wired up to a MacBook Air, carried in a rucksack), then send them off around the store to do their shopping. The researchers then waded through three terabytes of data and analysed 80,000 eye movements from the shoppers that agreed to take part in the study. Sands says a single eye movement takes just 200 milliseconds, the time a product in store gets to persuade a shopper to buy it. "And it only takes one eye movement to change their behaviour," he says.

The researchers noted what Sands calls "approach-avoidance" taking place in the sweets and chocolate aisle, and that the eyes sought out the shopper's favourite sweets, even though they may have decided not to succumb to buying them. "Twenty per cent of eye movements relate to what you're going to buy. The rest are alternatives," Sands says. "We'd watch them pick up a packet of doughnuts, put them back, then walk away. Some came back later and put them in their shopping cart."



EEG shopper.

Sands says one interesting observation was that while the fizzy drinks aisle was the most organised in the entire supermarket, the sweets and chocolate aisle was the least: what Sands describes as “a potpourri of different sizes, shapes and brands that makes a lot of noise”.

“Our brain is looking for something simple, and it’s happiest when it finds what it’s looking for,” he says. “Candy is unusually noisy. The industry doesn’t organise itself as well as the canned drinks one does. Visual clutter really does matter. All you’re doing is frustrating the brain.”

The neuromarketing industry isn’t just interested in what makes shoppers choose the products they do in the supermarket. Much of their work is done before they’ve even walked through the door.

Each year, Sands Research screens the commercials that have aired during the Super Bowl, the FA Cup of American football, to a test group of around 30 people. As in other tests, his team wires each person up to an EEG machine to monitor their brain signals, and each wears a pair of eye-tracking glasses so the Sands researchers can see what, specifically, they’re focusing on.

Super Bowl ads are the most sought-after and expensive slots in the industry. In 2011, among the companies vying for hearts, minds, and cold, hard cash, were Coca-Cola and Volkswagen, both of which came out with brilliant spots. Coca-Cola’s featured two border guards in different military uniforms at some godforsaken desert outpost, who bond over a bottle of Coke.

As for Volkswagen, their ad for the VW Passat saw a pint-size Darth Vader walking down the hallway of his suburban home, attempting to use “The Force” on his parents’ exercise bike, the washing machine — even the family dog. When his father arrived home in his Passat, the boy was almost ready to admit defeat: he ran outside and tried one last time to use his powers on the car, while inside the house his dad saw what he was trying to do and started the car’s ignition with the remote control. The boy turned around, astonished that The Force worked.



"The Force" Volkswagen's advert for the new Passat (Volkswagen)

Of all the ads Sands has ever tested, The Force was, to use the American vernacular, off the charts, achieving the highest “neuro-engagement score” ever. Adweek named it 2011’s best commercial; it won two Gold Lions at Cannes. Before the game even began it had attracted 12 million YouTube views. At the time of writing it’s had almost 58 million.

The man behind the advert was Deutsch LA’s Doug Van Praet. He says Sands’s research demonstrated that The Force ad had an inordinate capacity to engage the brain. “It galvanised our attention, our engagement and our emotion, and it turned out to be a very powerful predictor of end-market performance.” As he writes in his book *Unconscious Branding: How Neuroscience Can Empower (and Inspire) Marketing*, “it drove significant increases in purchase consideration, upped traffic to the VW website by half, and contributed to a hugely successful sales year for the brand.”

Amazingly, it’s taken big business 20-plus years to realise how effective neuromarketing can be. British psychologist Dr David Lewis-Hodgson founded one of the earliest firms, Mindlab International, in the UK in 1988. One of his early “products” was Mindscan, a piece of software which measured the brain’s responses to marketing messages, working on the premise: “What can’t speak, can’t lie.”

Hollywood’s interest was piqued by a 2012 study by Innerscope Research. They showed 40 film trailers to more than 1,000 people, measuring their heart rate, breathing, how much they sweat and motion responses – as well as what they focused on using eye-tracking technology.

Using the results, they found they could predict box office hits. According to Fast Company magazine, “If a film’s trailer fails to reach a specific emotional engagement threshold (65), it will very likely generate less than \$10 million in revenue on opening weekend.” But a film whose trailer exceeds an engagement threshold of 80 “will very likely earn more than \$20 million the first weekend”. Studios such as Fox and Paramount have now started taking neuromarketing very seriously.

And in January, the research agency Millward Brown announced its clients Unilever and Coca-Cola would be using facial coding technology – where emotions are tracked in facial expressions – in all their advertising testing in 2013. According to the company, this would “automatically interpret viewers’ emotional and cognitive states, moment by moment”.

As well as gauging an audience’s reaction to Super Bowl commercials and tracking shoppers in supermarkets, Sands Research also tests ads before they’ve aired, letting agencies know what works and what doesn’t. “By looking at the EEG readout we can tell whether they’re disengaged or engaged,” Sands says. “And we’ve found that storyline wins every time. If you want to lose someone’s attention, have several storylines in your commercial.”

In a small office adjoining his, Sands sits me in front of two computer monitors and hooks me up to a pair of eye-tracking glasses. On the left-hand screen I can see my eyes, with a target indicating where my pupils are as they flit from left to right; on the right-hand screen is an ad for the Hyundai Sonata hybrid. The places on the screen where my eyes land are denoted by a frenetic green dot that jumps around at incredible speeds. When we play back the recording of my viewing session, I seem to have focused on exactly what the advertisers intended: initially the various characters in the commercial, but by far the longest spell is devoted to eyeing up the car itself.

Only when he places an EEG cap on the head of his test subjects, however, can Sands really tell whether they like what they’re seeing. He says he once looked at an ad for a telecoms company and the panel he showed it to had such a negative reaction he had to tell the agency to think again. “There were two competing storylines,” he says. “Young creatives think they’re multitaskers, and this influences how they design things. And it doesn’t work. Simplicity wins every time.”

Using EEG, Sands records the electrical activity of the brain along the scalp. In ads that really engage an audience, a large portion of the cerebral cortex, the part of the brain that plays a role in memory, attention, awareness and thought, is activated. Sands says that during portions of an ad that “work”, the frontal lobe, which deals with emotion and processes information, lights up. On the computer screen, Sands sees a line, much the same as you see on a heart monitor, which shows the exact moments during the commercial that different parts of the brain are engaged.

Sands’s company has also been using EEG technology to gauge taste and smell. “From our experience, people usually tell market researchers what they think they want to hear. We’re social animals and we don’t want to offend anyone.” But by looking at the brain’s response to scents, Sands can tell exactly which fragrance you prefer.

Van Praet acknowledges that neuromarketing is not without its pitfalls; that in studying the human brain, we have to be comfortable with paradox and contradictions. For example, he says you can like an ad and it can create a positive emotion, but if it doesn’t leave you with an appropriate and corresponding set of associations and emotions for that product, it’s no use to the company trying to sell it. He gives an example: Quiznos, the US sandwich chain that now has some locations in the UK.

“They ran an ad that featured cartoonlike rodents, and it was funny as heck,” Van Praet says. “It was very likeable and engaging and people remembered it. But there’s a bad association between rats and food. It wasn’t very successful.”

Seducing The Subconscious

- By Robert Heath

Some observations about effective advertising

based on Robert Heath’s book

Robert Heath, in his book

Seducing the Subconscious suggests

that much of 20

th

Century thinking about how advertising really works –

based on research analysis and case histories of successful campaigns

– can be discounted.

It was long held that a high “attention score” for an ad was a sign of success. Specifically, the strength of an ad was measured by how many copy points a subject could play back. It was also believed that simplicity and directness are highly regarded attributes of a successful ad campaign.

Overly creative, highly stylized ads were considered distracting and lowered the likeness of success. Researchers claimed that if consumers didn’t recite specific characteristics of the ad, repeat details of the primary message, or pay undivided attention to the ad while it played, the campaign would fail.

Robert Heath suggests a different view about what really works in advertising.

His theory: people have a “love-hate” relationship with advertising, and pay minimal attention to ads, as they are felt to be intrusive. In fact, consumers purposely ignore advertising in an attempt to minimize its influence.

Heath contends that the more consumers “ignore” an ad (purposely distancing themselves from conscious involvement)

the

more they subconsciously assimilate the message.

Hence, the more

successful the ad will be in affecting brand preferences and eliciting a positive reaction from the consumer.

Conversely, the more a consumer consciously absorbs and interacts with the ad, the stronger their resistance to the message. And strong resistance, or counter arguments, often lead to discounting what the advertiser is saying, thus rendering the ad neutral or worthless

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The Copywriters Checklist: 20 Tips For More Effective Ads

1

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Go Under The Radar:

Successful advertising effortlessly slips

“under the radar” (i.e. the natural defenses people put up against ads) and influences behavior without the consumer really understanding how it did so.

2

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Strong Brand Claims Arouse Suspicion:

The more advertising

makes us think about a claim, the easier it is to contradict that claim, as the message’s “facts” are coming from an unfamiliar or untrustworthy source.

3

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If It’s Not Creative, It Often Won’t Sell

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Less creative, and less

likable ads threaten a consumer’s senses, making them less likely to consider claims convincing and more likely to counter-argue the message thus discounting what the advertiser is saying. In more

“likable” creative executions, it’s more likely the message will be absorbed.

4

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Creativity Gives Permission:

The more creative and non-threatening the ad, the less attention we pay to the underlying message and effectively give permission to the advertiser to influence our subconscious

5.

Emotion Connects:

Emotion in advertising is a primary influencer, directly guides decisions and makes us subconsciously vulnerable to message registration and less attentive to a counter-argument

6

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Your Product Here:

Product placement is the most subconsciously seductive of all advertising techniques.

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Subconscious Learning Is Key: Implicit or subconscious learning that takes place when we are not aware that we are learning is automatic and has the greatest influence on brand selection.

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We’re Always Learning:

Implicit Learning is the primary, most common way we process advertising as, willingly or not, it is always happening and is never turned off.

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The Passive Connection:

Passive Learning is a semi-conscious level of awareness that connects previous learning and brand association, which is valuable to registering the message.

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Embody Benefits In The Execution:

Identifying brand benefits

through association strengthens the retention of advertising – despite the level of attention paid to the actual ad.

11

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The Power Of The Familiar:

In presenting the brand story, use

familiar, positive sub-conscious influencers that reinforce product acceptability and make the consumer more receptive to the message

12

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Choose An Appropriate Influencer:

Influencers can be based on beliefs, color, sound, music, animals, celebrities, animated characters, tastes, or other attributes. The key is to choose the most positive influencer.

13

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Get To The Implicit Learning Level:

Our subconscious makes no moral judgments, so messaging that reaches the level of implicit learning is likely to effect product preferences

14

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Direct The Message To The Subconscious:

Messages delivered subconsciously have the most impact on our decision-making.

15

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Create Balance Between Selling Components:

The more attention given to a single component of an ad the more it can steal from other important components, like key messaging and brand registration.

16

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Consumers Filter & Rank:

Our mind has a natural “perceptual filtering” mechanism that ranks ad components. Those attributes most important to our subconscious tend to take center stage to support the main selling message

17

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Make Music:

Music makes an emotional connection by providing a subconscious mood to reinforce the selling message.

18

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Symbol As Message:

Symbolism strongly influences

subconscious registration, provided the symbols reflect the main selling message. (e.g. equating the softness of a puppy’s fur to the softness of bathroom tissue.)

19

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Consumers Must Like You

, Not Just Your Product:

A consumer’s fondness toward a company is more impactful in influencing a purchase decision than the level of fondness toward their advertising or product.

20

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Show & Sell!

Don’t merely

say

something about your brand.

Demonstrate it, by using creativity that subconsciously verifies the key messaging. It’s the creativity surrounding the message that builds favorable brand relationships, not the product facts

A Harvard Neuroscience Scheme To Change Decisions In Your Brain

A researcher wants to reverse your choices before you even know you've made them.

By [Rose Pastore](#) Posted 04.11.2013 at 4:30 pm [3 Comments](#)

Brain Power Medi-Mation

This week at the British Neuroscience Association, Harvard scientist Gabriel Kreiman described a rather diabolical-sounding experiment: He wants to reverse someone's decision to push a button before the person is even aware they were going to press it.

Kreiman has already demonstrated he can predict decisions before volunteers become conscious of making them. [Back in 2011](#), he used brain imaging to measure the activity of individual neurons in the brains of 12 people with epilepsy (they already had electrodes implanted to identify the source of seizures.) The volunteers were told they could press a button whenever they liked and to remember the position of a clock's second hand at the moment they decided to act.

Five seconds before the volunteers reported they had decided to press the button, Kreiman noticed electrical activity in the area of the brain involved in initiating movement, called the supplementary motor area, as well as in the brain region that controls motivation and attention, called the anterior cingulate cortex.

Now, Kreiman is taking that experiment a step further. As soon as he sees the telltale brain activity that signals a decision to push the button, he flashes a "stop" sign on a screen in front of the volunteer. "So far all we have is people saying, 'that was weird, you read my mind'," Kreiman says.

So, no mind control yet—just a bit of harmless mind reading. Kreiman says that figuring out the mechanisms of volition could eventually help people with Parkinson's or other diseases in which people lose voluntary movement

Market Leader, Autumn 2004

EMOTIONAL ADVERTISING WORKS

What marketers need to know about low attention processing

Robert Heath
The Value Creation Company

I should start by explaining what low attention processing actually is. In a nutshell: it is now commonly accepted that brands (fmcg) particularly) match each other's functional performance swiftly. In our increasingly time-poor environment this leads to a decline in considered brand choice and a rise in the use of feelings to make brand decisions. Consumers no longer feel they need to seek out information about brands, which in turn inhibits any desire they have to pay active attention to advertising.

However, certain types of advertising are able to operate even at very low attention levels, creating brand associations and emotive values which endure long after the advertising itself has been forgotten. These associations and values can exert a powerful influence on brand choice. Hence we find consumers choosing advertised products, yet unable to recall the advertising and strenuously denying that it has influenced their choice.

I should also take this opportunity to correct a few of the more common misinterpretations of the theory. Firstly, it is called low attention processing rather than low involvement processing. High and low involvement is widely used to refer to the level of interest that consumers have with a product or market category. My theory is about the levels of attention applied to advertising, and perhaps surprisingly, there is absolutely no evidence of a correlation between the two.

Secondly, the theory isn't about brainwashing (Richard Tomkins, Financial Times, 28 May), or the 'irrational mind' (Leader, Marketing Week, 10 June), or advertising that 'slips under the radar of consciousness' (Alan Mitchell, Marketing Week, 10 June). Ads processed without consciousness are classified as subliminal, a form of advertising which is now banned. But frankly it wouldn't matter if subliminal advertising were not banned, because it doesn't work. The thing about low attention processing (LAP) is that consumers are able to see/hear and pay attention to the advertising, but they choose not to. In this context any brainwashing that occurs is being done with the subject's tacit consent. And this lack of attention isn't usually because the advertising is deficient: if anything it is because brands are so successful, and consumers take it on trust that advertising can safely be ignored.

Thirdly, exploiting LAP isn't about wasteful repetition to 'ram home' messages (Alan Mitchell, op. cit.). We are all of us vulnerable to emotional appeals unless we are able to counter-argue them, but counter-argument requires attention. The first couple of times we see an advertisement we often pay a bit more attention to it, and this may enable us to 'rationalise' away the emotional power of the message. But even the lowest weight campaign these days is designed to generate more than two opportunities to see, so for every campaign there will be a lengthy period where the ad is not attended to, and the emotional message cannot be resisted.

For example, most of us have been exposed to British Airways advertising, and some may even be able to hum the music. Rather than do that, get hold of a copy of the opera (Lakme by Delibes) and listen to the duet. It is a beautiful and emotive piece of music and you'll find just listening to it will make you feel relaxed. Now, here's the crunch. Every time you are exposed to a British Airways TV ad that feeling is automatically conveyed and associated in your mind with BA. You have no way of protecting yourself, other than turning down the sound or wearing ear-plugs.

Is this new? Not really: virtually all of the most successful ad campaigns are underpinned by a strong emotional element. Is it legal? Absolutely. Is it ethical? I personally believe it is, unless it is being exploited to sell unethical or harmful products, and there certainly are examples (e.g. cigarettes) where the power of emotion has been, and still is, abused. The more important question is how ethical marketers can exploit LAP, and what it means for the management of their brands.

Exploiting low attention processing

There are two schools of thought over the issue of attention towards advertising. The traditional school sees low attention as the fault of advertising itself. The solution, as has been famously recommended, is to make the ads more attention- getting: 'Instead of showing a big picture of the car, you show a big picture of Marilyn Monroe and a little picture of the car. If that doesn't work, you take some clothes off her.'

This approach is surprisingly popular among the increasingly fee-driven ad agency industry. More attention = more variety = more executions and new campaigns = more fees. But it's a pointless exercise, because the advertising often focuses so much on waking the audience up that it fails to communicate anything at all about the brand. There are sound psychological reasons for this, which emanate from our extraordinary ability to selectively filter out anything we do not want to perceive.

The more enlightened school of agencies and clients see loss of attention as an incurable ailment. What they do is to design into their advertising elements which carry powerful emotive associations that can be processed even at low levels of attention. The BA music is a classic example, as are the soft and lovable Andrex puppy, Tango's irreverent 'orange' people, Tesco's difficult shopper Dottie, the over-sexed Papa & Nicole, the rugged Marlboro cowboy, Hamlet's consolatory 'air on a G string', the Michelin man, and so on. This approach takes more than a little management skill to initiate, and here are some of the rules I recommend.

Rule 1: Learn the language

Words are poor at describing emotional values. For example, persuasion is used to describe everything from a rational argument to anything that shifts attitudes. Few would say the BA music is persuasive, yet it does change attitudes. My best advice is to abandon words and use examples of advertising as your language.

Rule 2: Unique associations and distinctive emotive values

The campaigns mentioned previously all used unusual elements which conveyed distinctive emotional values. The Tango campaign would have achieved nothing if it had shown ordinary people conveying pleasure; instead it showed orange people creating a shock. Likewise Marlboro abandoned traditional smoothness in favour of the unique cowboy, who was visibly tough and self-reliant. Distinctiveness is needed because the memory systems we use when we are processing at low attention are no good at working things out. Subtlety, which works wonderfully when you are paying attention, becomes a meaningless blur when you are not. And sometimes the whole approach backfires. The early executions in the recent NatWest campaign were bleak and depressing, supposedly showing the way that other banks exploit their customers: when processed at low attention, however, the bleak misery reflected back on NatWest itself.

Rule 3: Branding

Many traditional ads try so hard to get the viewer's attention that the brand becomes lost, selectively filtered out from consideration. This is also a pitfall for LAP. Brand name processing at low attention is inefficient, so the brand identity needs to be spoon-fed to the consumer. It is not just a question of name prominence, the branding needs to be structural. For example, I can usually identify a BMW ad from the moment it starts, because of their unique moody style.

Rule 4: Consistency

LAP may not be good for working things out, but it is good at reinforcing and strengthening associations and emotions that have been processed before. To exploit this you need to use the same elements in every ad, a point which is overlooked time and again by advertisers. The Dulux Dog would never have become a symbol of the brand if a different breed were used in each ad, yet we frequently find different music tracks and treatments used on ads in the same campaign. It's as if marketers wanted to make life deliberately difficult for the consumer!

Consistency is particularly important in multimedia campaigns. Too often the top creative team does the TV, but press and radio are farmed out to a second-rank team who come up with a completely different approach. The result is no synergy and wasted opportunity. The only approach that really works is to use the same visuals in TV, press, posters and brochures and the same sounds in TV and radio.

Rule 5: Measurement

When they start out in marketing, everyone is told that advertising has to be remembered in order to be effective. The consequence is that recall is the most common way in which advertising is measured all around the world, and experiments in psychology have proved conclusively that recall is enhanced by attention. So advertising which works at low attention levels will be less well recalled than advertising which works at high attention, no matter how effective it is.

The most common recall metric used in the world is claimed ad awareness, where you prompt the brand name and ask if the respondent has 'seen any advertising recently'. Two recent experiments found that claimed ad awareness suggested ads were ineffective, even when recognition-based metrics showed conclusively that they had worked (Heath & Hyder 2004). Magnify these findings to represent the tens of thousands of brands which are measured each year using claimed ad awareness, and you can see the importance of these results. So if you are using advertising which is designed mainly to influence feelings and emotions, don't rely on metrics like claimed ad awareness to evaluate it. If you do, you will, as many brands have, find yourself throwing away what might actually be a brilliant campaign.

Conclusion

Low attention processing is not going to pass away. Regardless of the popularity of Tivo and other such devices, advertising will continue to intrude on consumers, and the attention they give it will decrease. Marketers who need to sell direct have no choice but to strive for the greatest attention they can achieve. Marketers who want to build their brand values do have a choice. They can fight against the tide of indifference and inattention or they can exploit it, via low attention processing.

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Robert Heath lectures at Bath University School of Management. After graduating from Cambridge he spent 25 years in mainstream marketing and advertising, and in 1998 began an investigation into how advertising is processed at low attention levels. He has published numerous papers and articles and runs The Value Creation Company, visit www.lowattentionprocessing.com

Big Decision Ahead? Let Your Subconscious Choose

Written by Brian Krans | Published on February 19, 2013

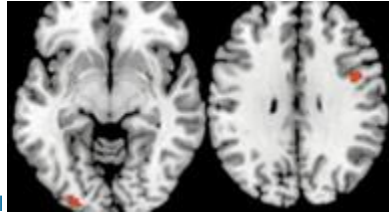


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TEXT SIZE: **AA**A

New research shows that our brains continue solving problems subconsciously when we turn our attention to something else.

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The more we learn about our brains, the more we find that they work better without our input.

In fact, a great deal of human behavior stems from our subconscious mind. Research into the subconscious has found that it helps to initiate goal-orientated behavior, creativity, insight, memory consolidation, and decision making.

The funny thing about your brain, as researchers from Carnegie Mellon University (CMU) recently discovered, is that it'll keep solving a problem for you while you do something else. In fact, giving your subconscious time to work makes for better decisions.

How You Subconsciously Decide

For most people, picking a new apartment or car is a complicated process fraught with countless unknowns: if you can afford it, if you'll get your money's worth, and if the timing is right.

To see how much influence your subconscious has on this type of decision-making, a research team at Carnegie Mellon enlisted 27 healthy adults to undergo brain-imaging scans during mental testing.

The subjects were given information about cars and other items while connected to a magnetic resonance imaging, or MRI, machine. Before they were allowed to make a decision, they had to memorize a sequence of numbers. Researchers did this to prevent the subjects from actively thinking about the cars.

The brain scans showed that while test subjects were learning about the cars and other items, the visual and prefrontal cortices—the parts of the brain responsible for decision-making and learning—were working as usual.

The surprising part—which researchers say provides the first insight into the way the brain unconsciously processes information—is that these same areas remained active during the number memorization task.

Processing Information in the Background

For lack of a better analogy, it's like when your phone downloads a song while you send a text message. Your phone is focusing on the new information (the text), while it processes something more complicated at the same time.

Even with the memorization distraction, researchers found that allowing the brain to unconsciously process information leads to more clear-headed decisions. Those whose brains showed the most continuing activity during the memory task were more likely to choose the “best” car in the set.

“This research begins to chip away at the mystery of our unconscious brains and decision-making,” J. David Creswell, assistant professor of psychology at CMU, said in a press release. “It shows that brain regions important for decision-making remain active even while our brains may be simultaneously engaged in unrelated tasks, such as thinking about a math problem. What's most intriguing about this finding is that participants did not have any awareness that their brains were still working on the decision problem while they were engaged in an unrelated task.”

The research was published in the latest issue of the Oxford Journal *Social Cognitive and Affective Neuroscience*.

How to Get the Most Out of Your Subconscious

Sure, you could flip a coin to make a decision, but if you let your whole brain help you make the choice, you'll most likely be better off.

If you're about to make a big decision, allow some time for it to “sink in,” as you've probably heard before. Let the big decision stew in your subconscious mind. The best part is that your conscious mind can do something better, like watch a movie.

And now that you know the importance of the subconscious in decision-making, be wary of salesmen. If someone is trying to sell you something and doesn't allow you much time to think—like a one-time-offer or a one-day-sale—you know what they're up to. They're hoping for that knee-jerk buying reaction.

Who knows? Maybe buyer's remorse is merely your subconscious telling you you should've slept on it.

Learn More on [Healthline.com](https://www.healthline.com):

Think Twice: How the Gut's "Second Brain" Influences Mood and Well-Being

The emerging and surprising view of how the enteric nervous system in our bellies goes far beyond just processing the food we eat

By Adam Hadhazy

102
inShare



Science at the Winter Olympics There's more to figure skating than spandex and sequins, specifically physics. Learn more about the science behind curling, speed skating and other Olympic events » February 24, 2010

GUT CHECK: A complex, independent nervous system lines the gastrointestinal tract that has been dubbed the "second brain". *Image:*

ISTOCKPHOTO/ERAXION

As Olympians go for the gold in Vancouver, even [the steeliest](#) are likely to experience that familiar feeling of "butterflies" in the stomach. Underlying this [sensation](#) is an often-overlooked network of neurons lining our guts that is so extensive some scientists have nicknamed it our "second brain".

A deeper understanding of this mass of neural tissue, filled with important neurotransmitters, is revealing that it does much more than merely handle digestion or inflict the occasional nervous pang. The little brain in our innards, in connection with the big one in our skulls, partly determines our mental state and plays key roles in certain diseases throughout the body.

Although its influence is far-reaching, the second brain is not the seat of any conscious thoughts or decision-making.

"The second brain doesn't help with the great thought processes...religion, philosophy and poetry is left to the brain in the head," says [Michael Gershon](#), chairman of the Department of Anatomy and Cell Biology at New York–Presbyterian Hospital/Columbia University Medical Center, an

expert in the nascent field of neurogastroenterology and author of the 1998 book *The Second Brain* (HarperCollins).

Technically known as the enteric nervous system, the second brain consists of sheaths of neurons embedded in the walls of the long tube of our gut, or alimentary canal, which measures about nine meters end to end from the esophagus to the anus. The second brain contains some 100 million neurons, more than in either the spinal cord or the peripheral nervous system, Gershon says.

This multitude of neurons in the enteric nervous system enables us to "feel" the inner world of our gut and its contents. Much of this neural firepower comes to bear in the [elaborate daily grind](#) of digestion. Breaking down food, absorbing nutrients, and expelling of waste requires chemical processing, mechanical mixing and rhythmic muscle contractions that move everything on down the line.

Thus equipped with its own reflexes and senses, the second brain can control gut behavior independently of the brain, Gershon says. We likely evolved this intricate web of nerves to perform digestion and excretion "on site," rather than remotely from our brains through the middleman of the spinal cord. "The brain in the head doesn't need to get its hands dirty with the messy business of digestion, which is delegated to the brain in the gut," Gershon says. He and other researchers explain, however, that the second brain's complexity likely cannot be interpreted through this process alone.

"The system is way too complicated to have evolved only to make sure things move out of your colon," says [Emeran Mayer](#), professor of physiology, psychiatry and biobehavioral sciences at the David Geffen School of Medicine at the University of California, Los Angeles (U.C.L.A.). For example, scientists were shocked to learn that about 90 percent of the fibers in the primary visceral nerve, the vagus, carry information from the gut to the brain and not the other way around. "Some of that info is decidedly unpleasant," Gershon says.

The second brain informs our state of mind in other more obscure ways, as well. "A big part of our emotions are probably influenced by the nerves in our gut," Mayer says. Butterflies in the stomach—signaling in the gut as part of our physiological [stress](#) response, Gershon says—is but one example. Although gastrointestinal (GI) turmoil can sour one's moods,

everyday emotional well-being may rely on messages from the brain below to the brain above. For example, electrical stimulation of the vagus nerve—a useful treatment for [depression](#)—may mimic these signals, Gershon says.

Given the two brains' commonalities, other depression treatments that target the mind can unintentionally impact the gut. The enteric nervous system uses more than 30 neurotransmitters, just like the brain, and in fact 95 percent of the body's serotonin is found in the bowels. Because antidepressant medications called selective serotonin reuptake inhibitors (SSRIs) increase serotonin levels, it's little wonder that meds meant to cause chemical changes in the mind often provoke GI issues as a side effect. Irritable bowel syndrome—which afflicts more than two million Americans—also arises in part from too much serotonin in our entrails, and could perhaps be regarded as a "mental illness" of the second brain.

Scientists are learning that the serotonin made by the enteric nervous system might also play a role in more surprising diseases: In a new *Nature Medicine* [study](#) published online February 7, a drug that inhibited the release of serotonin from the gut counteracted the bone-deteriorating disease osteoporosis in postmenopausal rodents. (*Scientific American* is part of Nature Publishing Group.) "It was totally unexpected that the gut would regulate bone mass to the extent that one could use this regulation to cure—at least in rodents—osteoporosis," says [Gerard Karsenty](#), lead author of the study and chair of the Department of [Genetics](#) and Development at Columbia University Medical Center.

Serotonin seeping from the second brain might even play some part in autism, the developmental disorder often first noticed in early childhood. Gershon has discovered that the same genes involved in synapse formation between neurons in the brain are involved in the alimentary synapse formation. "If these genes are affected in autism," he says, "it could explain why so many kids with autism have GI motor abnormalities" in addition to elevated levels of gut-produced serotonin in their blood.

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BRAIN IMAGING SPOTS OUR ABSTRACT CHOICES BEFORE WE DO

- 16:46 10 April 2013 by [Caroline Williams](#)
- For similar stories, visit the [The Human Brain](#) Topic Guide

When it comes to making decisions, it seems that the conscious mind is the last to know.

We already had evidence that it is possible to detect brain activity associated with movement before someone is aware of making a decision to move. Work presented this week at the [British Neuroscience Association](#) (BNA) conference in London not only extends it to abstract decisions, but suggests that it might even be possible to pre-emptively reverse a decision before a person realises they've made it.

In 2011, [Gabriel Kreiman](#) of Harvard University measured the activity of individual neurons in 12 people with epilepsy, using electrodes already implanted into their brain to help identify the source of their seizures. The volunteers took part in the "Libet" experiment, in which they press a button whenever they like and remember the position of a second hand on a clock at the moment of decision.

Kreiman discovered that electrical activity in the supplementary motor area, involved in initiating movement, and in the anterior cingulate cortex, which controls attention and motivation, appeared up to 5 seconds before a volunteer was aware of deciding to press the button ([Neuron](#), doi.org/btkcpz). This backed up earlier fMRI studies by [John-Dylan Haynes](#) of the Bernstein Center for Computational Neuroscience in Berlin, Germany, that had traced the origins of decisions to the prefrontal cortex a whopping 10 seconds before awareness ([Nature Neuroscience](#), doi.org/cs3rzv).

"It's always nice when two lines of research converge and to know that what we see with fMRI is actually there in the neurons," says Haynes.

STOP sign for the brain

Kreiman told the BNA conference that he is now working on predicting decisions in real time, and to see if it is possible to reverse a decision before it hits consciousness – by flashing up the word "stop" on a screen as soon as telltale activity shows up in the brain.

There are no firm results yet, but Kreiman suspects there may be a measureable "point of no return" in the brain. "So far all we have is people saying, 'that was weird, you read my mind'," he says.

If this kind of "mind-reading" is possible, a new study by Haynes, published this week and also presented at the meeting, suggests that it may not be restricted to decisions about moving a finger. Using fMRI, Haynes has found that the very brain areas involved in deciding to move are also active several seconds before a more abstract decision, like whether to add or subtract a series of numbers.

He suggests that the prefrontal and parietal cortex may be general decision-making circuitry, passing activity on to different parts of the brain depending on the task at hand ([PNAS](#), doi.org/k6b). "Perhaps decisions arise from a similar set of areas, then either flow into motor systems, for pressing buttons, or the parietal cortex for doing calculations," he says.

Not hijacking the mind

Unless you happen to have electrodes inserted into your brain, there is no chance of decisions being hijacked by unscrupulous scientists, and Kreiman is keen to point out that he is not bent on world domination. "We're not trying to do mind control; we are trying to find out the mechanisms of volition," he says. "It might help people with Parkinson's disease, where people lose voluntary movement."

As for what it means for one of the longest-running debates in science – the question of whether we do or do not have free will – Haynes is pretty clear. "What we need now is 20 years of serious neuroscience, not more speculation about the handful of studies that have been done so far," he says.

Kreiman agrees, but says that these early results at least bring the question of free will out of the realms of magic and mystery. "There is no magic. There are neurons, and there are ions that flow through membranes, and that is what is orchestrating our decisions," he says. "We don't need to invoke freedom."

SCIENTISTS FIND A WAY TO SEE YOUR DREAMS

By [Michelle Starr](#) | April 8, 2013 | 4

(Credit: Flaming June by Frederic Leighton, oil on canvas, 1895)

Japanese scientists have developed an algorithm that is able to predict what a dreamer sees from their neurological patterns.

At the [ATR Computational Neuroscience Laboratories](#) in Kyoto, Japan, Yukiyasu Kamitani and his colleagues have spent a long time trying to assemble the data they need to image a sleeper's dreams on a screen — and it looks like they might be nearly there.

Using functional magnetic resonance imaging (fMRI), which examines the flow of blood in the brain to monitor activity, the team has managed to create an algorithm that can accurately display in real time what images are appearing in a dream. This is the first time, it is believed, that objective data has been collected from dreams.

Except it's a little more complicated than that. The study is predicated on the idea that our brains repeat activity when repeating thoughts; for example, every time you think about a cat, your brain will behave in the same, or a similar, way. This idea is seen in a 2011 experiment from the University of California that [accurately imaged a person's thoughts](#) as they watched film trailers.

Three test subjects took part in the research, sleeping for three-hour blocks in an MRI machine while attached to an EEG machine, which monitored the electrical activity in the brain. As the subjects drifted into Stage 1 non-REM sleep, their brains exhibited activity; the scientists would wake them up and ask them what they had seen. The process was repeated nearly 200 times for each subject over the course of 10 days.

After this stage, the scientists gathered a collection of images from the web that correlated with the 20 most common categories of images seen by each subject, for example, buildings or people. They showed these images to the subjects while they were awake, still monitoring brain activity, to see if their brains responded the same way to the images both asleep and awake.

In this way, the scientists were able to glean a rough translation of each subject's brain activity, and fed that data into a learning algorithm that could refine its accuracy based on further data. When the subjects were once again connected, sleeping, to the MRI machine, the algorithm scanned their brain activity, producing visualisations. As it turned out, it was only correct 60 per cent of the time — a number that Kamitani believes is significant, since it is too high to be chance.

WHY IDEAS POP INTO YOUR HEAD WHEN YOU'RE TRYING TO FALL ASLEEP

THORIN KLOSOWSKI TODAY 4:00 AM

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You lay down to go to bed, ready to fall asleep quickly and get a good night's rest. Just as you're about to fall asleep, some thought pops into your head, you can't stop thinking about it, and then before you know it the clock reads three in the morning. It's annoying, but Scientific American sheds a little light on why this happens.

Photo by [iamtheo](#)

We all have ideas that pop into our heads throughout the day, but when you're laying down to go to bed it's one of the few times when you're not distracted by anything else. Speaking with [Scientific American](#), Barry Gordon, professor of neurology and cognitive science at John Hopkins University School of Medicine, explains what's going on:

We are aware of a tiny fraction of the thinking that goes on in our minds, and we can control only a tiny part of our conscious thoughts. The vast majority of our thinking efforts goes on subconsciously. Only one or two of these thoughts are likely to breach into consciousness at a time. Slips of the tongue and accidental actions offer glimpses of our unfiltered subconscious mental life... Although thoughts appear to “pop” into awareness before bedtime, their cognitive precursors have probably been simmering for a while. Once those preconscious thoughts gather sufficient strength, the full spotlight of consciousness beams down on them. The mind’s freewheeling friskiness is only partly under our control, so shutting our mind off before we sleep is not possible.

Essentially, when your brain is finally given a moment of a rest, those subconscious thoughts can bubble up to the surface and keep you awake. Unfortunately, you can’t simply switch your brain off just so you can get some sleep. To really avoid those restless nights the best thing you can do is [get better sleep](#) and [train yourself to fall asleep quicker](#). If all else fails, a [a little maths](#) might at least direct that consciousness spotlight onto something more mundane.

[Can we control our thoughts? Why do thoughts pop into my head as I’m trying to fall asleep?](#) [Scientific American]