ORACLE

DATA CLOUD

THE DATA SOURCE

ISSUE NO.3

INSPIRED THINKING

on our Data-Driven World

Stop focusing on impressions and start impressing customers

Finding the signal in the noise
Read more! >>

FALL 2016

ISBN 4324234329

WELCOME

A letter from Oracle Data Cloud

Fall delivers a bounty for marketers each year. The start of the holiday season signifies back-to-school, fall-fashion frenzies and an annual crescendo in consumer spending.

And let's not forget Advertising Week. For one week in NYC, the greatest minds from brands, agencies, publishers and ad-tech firms converge in the city to discuss the latest industry trends and innovations.

Content this year showcases all that we can learn from topics du jour like the 2016 Presidential Election, the Summer Olympics and Pokémon GO. All blended into the familiar and sustained conversations around ad blocking, viewability and bridging the gaps between the digital and offline consumer experience.

Whatever the topic, wherever the venue, we expect to see data take center stage. Why? Because data is the master key to the heart of the customer. It's the art and science of how you connect more deeply with them to figure out their wants and needs. Then, deliver to them in a way that exceeds their expectations and keeps them coming back for more.

The Data Source brings together inspired industry perspectives from data-driven marketing experts to highlight some of the key themes and strategies we believe are essential to maintaining powerful connections with consumers. In other words, to get to the heart of the matter: The heart of the customer.

Seven ways to win Advertising Week with Oracle Data Cloud

1 Take a breather

Head to the Oracle Data Cloud Live Lounge anytime to relax, charge your phone and enjoy some refreshments away from the hustle.

8am–6pm I Mon. 9/26–Thurs. 9/29
Basement I, TheTimesCenter Hall

2 Win your next Facebook campaign

Join a panel of key industry leaders from Heineken, Frito Lay, Facebook, Oracle Data Cloud and Energy BBDO for a discussion around their own successes and best practices from executing data-driven strategies on Facebook.

10:30am I Tues. 9/27
ADARA Stage, TheTimesCenter Hall

3 Snap yourself

Swipe right to get to our custom Oracle Data Cloud filter on Snapchat—take a selfie or a get shot of all the action at TheTimesCenter.

4 Chat with the experts

Want to know what data is hottest right now? Head to our Data Concierge to get all your data questions answered by experts.

5 Grab some SWAG

These aren't your grandmother's free tees—head to our Oracle Data Cloud Data Boutique to score one of our signature data-driven T-shirts.

6 Get creative with Big Data

Get the scoop on how campaign creative is evolving from concept to execution to activation with executives from Dr Pepper Snapple Group (DPSG), AOL, Oracle Data Cloud and Energy BBDO.

2pm I Wed. 9/28
ADARA Stage
TheTimesCenter Hall

7 Mix it up in the Data Lab

Join our Data Hotline team in this exclusive Data 101 workshop as they break down the fundamentals of Data as a Service (DaaS) for today's advertising markets.

bit.ly/data101lab

ORACLE DATA CLOUD

THE DATA SOURCE

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The data-driven CMO

Bruce Rogers is the Chief Insights Officer for Forbes Media responsible for managing Forbes Insights, Thought Leadership in Action research division, as well as the Forbes CMO Practice. He frequently writes and speaks about the emergence of a new type of CMO that is performance driven—"The Transformative CMO." We caught up with him to learn more about the relationship between the CMO and data.

What is the nature of your work with the CMO?

I run our insights practice that develops research-based thought leadership journalism for companies, helping them understand the pain points for C-level executives. And as a subset of that, I run our CMO practice, which is editorial, events and research devoted to marketing leadership. And so I get to spend a lot of time talking to CMOs all over the world around their challenges and the opportunities that they face today, which are many.

And how does data play into some of those challenges for the CMO?

Having a singular view of the customer is a huge challenge for most organizations, and CMOs wrestle with this because they don't always own all the means of production for their own data. Sometimes data sits inside a call center, inside operations, sales or customer care without even taking into account marketing data. So, connecting those dots is a big challenge for marketers, and they certainly express that challenge to me frequently. Having the ability to partner with organizations like Oracle Data Cloud to deliver a unified view of the customer is a huge advantage for marketers today.

How essential is data to today's marketer?

Data is the fuel that runs the modern marketing machine. And without great data, all of the marketing material and content that marketers create is only going to have limited impact and produce limited results. In order for marketing campaigns to make that impact, they need to be delivered in the right context at the right time. This is still aspirational for many organizations but without great data they will fall short.

"

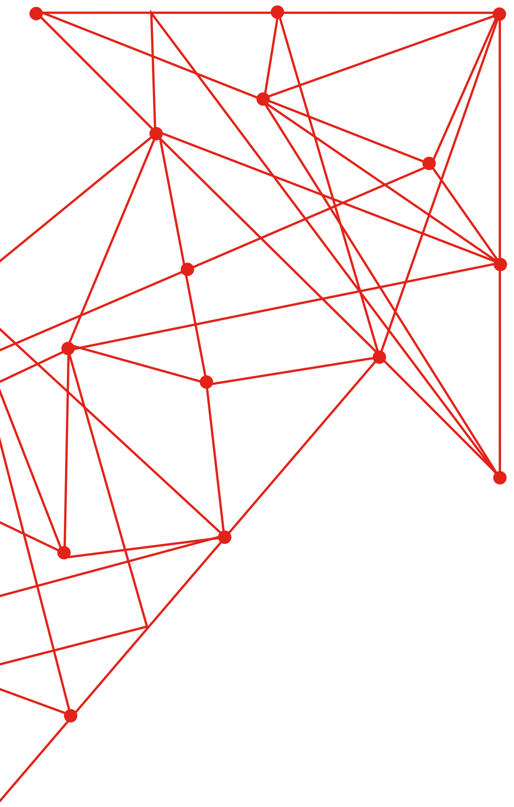
HISTORICALLY, MANY CMOs CAME OUT OF ADVERTISING AGENCIES.

However, in the new era, you will see less and less of this, primarily because there is a shift toward the CMO being more of a general business leader than a creative expert. The transformative CMO will respect the importance of great creative; however, they will have developed broader business skills that includes the ability to accumulate data, analyze customer information, and convert insight into not just creative, but into products, solutions and services that generate customer demand.

Bruce Rogers,Chief Insights Officer, Forbes Media

Data directions:

Tips to get you started on trending tactics



Digital Account-Based Marketing

According to SiriusDecisions, account-based marketing (ABM) adoption among B2B marketers continues to accelerate. In its 2016 report, more than 70% of B2B companies reported having staff that are fully or partially dedicated to driving ABM-specific programs. Additionally, 58% reported having a pilot or test program and 41% have a full program in place. That's a huge jump over 2015 where only 20% of companies reported having full programs in place. B2B marketers report that ABM helps them achieve three important goals: increased revenue, increased pipeline and higher quality leads. It's clear that B2B marketers are placing a high importance on ABM, so what exactly is it?

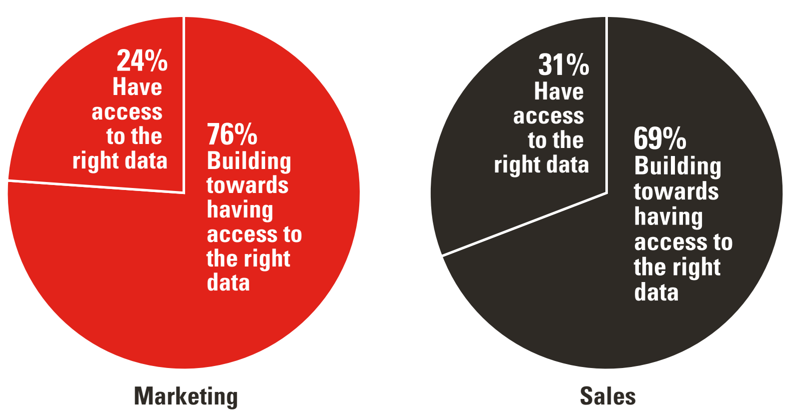
At its core, ABM is a strategy that leverages data and technology to target marketing against specific companies or accounts. ABM addresses an age-old problem of aligning marketing activity with sales objectives. Research shows that brands with tightly aligned marketing and sales teams reach their revenue and profit goals faster. Targeting at the account level enables B2B marketers to reach key decision makers and minimize wasted spend. Focusing on high-value accounts is not a new concept, but advances in marketing data and technology have finally given marketing departments the tools to take this approach at scale across their demand gen efforts. This has prompted increased investment in the tactic and made ABM this year's biggest B2B buzzword.

Bringing digital into your ABM strategy.

ABM can encompass everything from site optimization, advertising, marketing automation to your content development and distribution strategy. Digital ABM brings the practice to digital marketing. Digital is an important channel for B2B marketers, but few have the data, scale, granularity and purchase-based data assets needed to execute ABM to the extent that they'd like to. Pulling your ABM strategy into digital media can create a new, efficient, scalable way to reach millions of relevant business users in the digital channels they use every day. By following a few easy steps you can start taking a data-driven, account-based approach to your digital marketing efforts.

B2B marketing/sales professionals worldwide whose organization has access to the right account-based marketing (ABM) data for marketing vs. sales, March 2016

% of respondents



Source: Avention, "Account-Based Marketing: The Art of the Start," May 24, 2016. www.eMarketer.com

THREE TIPS TO GETTING STARTED

1 **Work with sales to define a target account list.** For example, this could be your company's top 500 accounts, accounts for a specific product line or other criteria that align to your business objectives.

Some brands go a step further and work with predictive analytics companies to optimize their target account list. Predictive analytics partners such as 6Sense, LeadSpace, Infer, etc., help sales and marketing teams find their ideal accounts by analyzing historical win/loss data and using statistical models to find the highest value accounts for that brand. More importantly this combination of predictive and digital makes it possible to now feed back learnings into subsequent account-based programs. For example, learning which companies visited the website after a certain campaign.

2 **Leverage the RIGHT data, build an account-based audience.** The foundation of ABM is data. To focus digital marketing against specific target accounts, you need to identify where people work. Digital ABM solutions leverage annonymized insights from various online, offline, location and CRM databases to determine place of employment. Those insights are then linked to cookies and mobile ad IDs to enable account-based targeting. Provide your target account list to a provider with a digital ABM solution to build your account-based audience.

Data accuracy and scale have historically been a challenge in Digital ABM. Always ask your data provider about the solution's reach and the source and collection methodology of the data. Transparency is a key to ensuring quality.

3 **Plan campaigns, segment your ABM audience.** Once you have built an audience of employees at target accounts, you can begin running digital ABM campaigns across online, mobile, video and social. You can run awareness campaigns against this broad-based audience or do more focused account-based efforts to generate leads. The key is in leveraging the account-based audience as a platform audience to tap into and create various segments that suit your business needs. Working with a customizable solution that combines your account-based audience with a broad range of B2B targeting segments makes this possible. For example, marketers can start with an account based audience and then add additional filters to focus on specific industries, departments, levels of seniority and much more.

With the recent advances in scale and quality of account-based data, digital B2B marketing is in a bit of a renaissance. Whether it's for a single campaign or part of a holistic strategy, digital ABM can help ensure you reach the right decision makers at the companies that matter most to your business.

Successful brands speak

The challenge for B2B marketers has been connecting the account-specific needs of sales with their broader digital marketing campaigns, so their campaigns reach their targets. Oracle Data Cloud is helping us reach the right decision makers in the right companies across the many devices they use at scale.

Sean Beierly, Data Scientist and Marketing Manager at Cisco Systems

Successful brands speak

We are pleased to be working with Oracle Data Cloud to support our enterprise sales efforts with robust data-driven marketing campaigns. Effective B2B marketing requires both accuracy and scale, and Oracle Data Cloud's B2B audience solution provides both the reach and the targeting we need for our account-based marketing efforts.

Patrice Lagrange, Senior Director, Digital Demand Nurturing Services, Hewlett Packard Enterprise

Thinking consumer-first:

Advertising research insights from Gayle Fuguitt, CEO & President, The ARF

Gayle Fuguitt, CEO and President of The Advertising Research Foundation (The ARF), is quite possibly one of the most well-known leaders in the advertising and marketing space. From leading innovative new concepts at General Mills to her influence on the modern structure of The ARF, Gayle has certainly made an unforgettable impact.

Recently, Gayle has announced that she is moving on from the ARF to pursue "new opportunities at a time when analytics has never been more important against an ever-changing media-technology landscape." The Oracle Data Cloud caught up with Gayle to discuss her time at The ARF, thinking consumer-first and all things data-driven.

ORACLE: What will be your most memorable takeaways from your ARF experience and what are your plans for the future?

FUGUITT: There are several initiatives and accomplishments that our team under our Board Chairman, David Poltrack, Chief Research Officer at CBS, and President, CBS Vision and our board of directors have worked on that come to mind. The first is our original research that we just completed called, "How Advertising Works Today," formed by our ground truth experiments from the last 15 years. For this research, we held a definitive study across 5,000 campaigns, with 35 contributing companies, involving $375B in advertising spend to discover essential insights into cross-platform advertising. What we found was that advertising across more platforms is better and that advertisers tend to see a higher ROI—up to 1.6 times higher—combining traditional media with digital media.

We also saw that the advertising industry is literally leaving over $31B in advertising investment on the table, which arguably is going toward discounting brands, because ultimately they need to be investing in more platforms. Organizations such as Oracle Data Cloud can completely appreciate that because you are platform agnostic—but the advertising industry and many advertisers need help to put their measurement-to-decision-making process together. Our study not only offers insights to advertisers, but also a deceptively simple, definitively proven roadmap for success and growth for cross-platform measurement.

I'm also so proud that we were able to expand our global and regional presence (we've now added a West Coast ARF chapter to our 80-year presence in New York City), in addition to expanding our company partnerships. By building on our pre-existing relationships with partners such as Oracle Data Cloud, Facebook, Google, P&G, AT&T, comScore, Unilever, Levi's, CBS, NBC, ESPN, Pinterest, Nielsen and more, The ARF is able to bridge new research studies that expand the industry's knowledge base, benefitting the community as a whole.

ORACLE: In your tenure at General Mills, you built and led their Global Consumer Insights, with a focus on internet, social and mobile solutions. What drove you to see the future of these channels, even before they became the backbone of our data-driven industry?

FUGUITT: It has always been my inclination to look toward the future, especially when it comes to predicting where companies-brands should spend their time, money and resources. I've always asked myself, 'How do we innovate? Where are we going to be in five, ten years and what can we accomplish as a team today and tomorrow to get there?'

Back in 1998, the importance of the Internet to consumers could not be denied—and while we were still calling people on the phone, or surveying people on the street as a data-gathering method, it was apparent to me that new research methods needed to be explored. As it turned out, not only were consumers much more comfortable providing better insights in their own home while online, but we were able to save millions of dollars over the following decade using internet research. Through this new method, we were able to develop a more powerful relationship with the consumer in a way we had never done before.

Fast forward to today's research, from social listening to global mobile, there has been a complete reorientation of the relationship with the consumer. With mobile devices having become an integral part of consumers' lives, it's more important than ever to innovate and embrace new techniques and research for this channel.

ORACLE: You became the first woman to lead The ARF in 2013 and remain an influential industry leader. In 2014, you were inducted into the Market Research Council (MRC) Hall of Fame. What advice would you give to other women in the data industry to make the most of their career?

FUGUITT: I've encouraged both men and women to find a mentor and be a mentor. Working with The ARF team I've been active in building and expanding The ARF's Young Pros group—with a focus on leadership, networking and professional development events. The group's goal is to foster mentorship between young professionals and leading industry minds.

In addition, with The ARF team, I'm so proud to have spearheaded the Women in Analytics Initiative, a grass roots women's leadership effort, which supports female leaders with co-mentoring. Our Women in Analytics events encourage and motivate the women who are driving growth in the fast-growing analytics industry.

I honestly feel as though I'm the luckiest person in the world to have learned from some of the most brilliant industry leaders—both men and women. And one of the key takeaways is the importance of being a good listener. In fact, as a CEO, it is one of the most important assets that you can have. It gives you the opportunity to have your hand on the pulse, know and respect the culture of your company, which in turn enables you to execute the most thoughtful and well-informed decisions with great team support.

ORACLE: For Advertising Week this month, what are some key subjects that you hope will be explored?

FUGUITT: Advertising Week is such a wonderful platform and does a great job of pulling together the biggest and most important issues of the day. For me, cross-platform measurement is evergreen—and of course mobile is a vital topic for advertisers.

There are always those hot button topics such as ad-blocking that definitely need to be addressed—but at the end of the day, we are coming together to discuss creative ways to reach the heads and hearts of the consumer. I'm looking forward to these events.

ORACLE: Can you tell us what The ARF will be working on toward the end of 2016?

FUGUITT: I'll start by saying over the past three and a half years, our team has been able to bring valuable insights forward to understand advertising better. For example, David Poltrack, Chief Research Officer, CBS Corporation and President of CBS VISION has said that our research in "How Advertising Works Today" has been some of the most groundbreaking and insightful research of the last 28 years. It's that kind of feedback that shows the value of The ARF to the community.

As we move towards the end of 2016 and beyond, we will continue on our journey to deliver valuable insights for industry leaders and maintain our level of consistency in providing high-quality, curated research. From our current focus on mobile, to our neuroscience data discoveries, The ARF will continue to discover those vital connections with consumers and provide meaningful solutions that add value to their lives.

About Gayle

Gayle Fuguitt became the first woman to lead The ARF when she became CEO and President in April 2013. During her tenure at General Mills, she was lauded for bringing the voice of the consumer to the decision table. Constantly creating new models to connect and catalyze networks and their technologies into sales growth, she is currently on the Board of the Wharton School of the Future of Advertising, and scheduled to speak in London at their Board Meeting. She is Co-Chair of the Measurement Committee for the ANA, and served on the board and executive committee of The ARF from 2005 to 2012.

She earned her BA in economics and a BS in industrial relations from the University of North Carolina at Chapel Hill, and an MBA with a concentration in marketing research from the University of Wisconsin in Madison. A passionate supporter of non-profits, she remains a trustee at the Minneapolis Institute of Art. Inducted into the Market Research Council, Inc. (MRC)'s Hall of Fame in 2014. As a network orchestrator, Gayle continues to innovate new approaches translating big data into meaningful insights and analytics to drive sales growth across a wide-range of industries.

PROFILE

INDUSTRY VIEWPOINTS

Agency innovation:

Energy BBDO enables client success with data-driven social platform strategies

Q&A with John Ehart

Josh Ehart, Chief Innovation Officer at Energy BBDO, will be joining Oracle Data Cloud on stage at Advertising Week as a panelist for the session, *"Data-driven marketing on Facebook: CPG benchmarks that are changing the game."* The panel will explore success and best practices for data-driven campaign execution on Facebook, specifically for CPG clients. Josh and his team focus on helping brands evolve to execute digital and social marketing strategies that align with ever-changing industry best practices. We caught up with Josh to learn more about how brands are using data to improve social media advertising and how agencies view data adoption among clients.

ORACLE: How advanced are brands' adoption of social platforms like Facebook, Pinterest, Instagram and Twitter to execute data-driven campaigns? Are you seeing advanced understanding, or are most brands still just dipping their toes in the water?

EHART: The general consensus is that brands should be advertising on social and most have a significant presence on these platforms. Within these channels, we have access to an increasing amount and variety of data—the challenge comes from harnessing all of this data to inform marketing decisions. As we begin to have meaningful evaluation of data, brands have generally adopted the use of it for targeting audiences. Using data to drive creative relevance has had slower adoption. Brands are in the process of deciding how specific creative messaging should be, because higher levels of granularity are more expensive.

ORACLE: The agency is the creative nerve center of a campaign. Based on your overall learnings, can you talk a bit about general best practices around what makes creative stand out most on social platforms?

EHART: First, compelling and arresting content are always a best practice. We navigate our social feeds with speed, so creative has to be attention-grabbing and entice the user to slow their scroll. Branded content often relies on music or voice-over to convey a brand message, but you can't just take a TV ad and slap it in a social feed—you need content that is uniquely created for social context and does not rely on sound to be effective.

This is something we are working on closely with our clients and thinking about from the very beginning of our communications planning. Second, the importance of branding has grown over time—a brand's meaning should be embedded in the work and clearly resonate with audiences. If the brand isn't woven into the creative, you are wasting that impression in such a crowded environment.

ORACLE: With digital overall, do most clients understand the true value of using data in their marketing strategy? Are there still clients who don't yet understand its value?

EHART: A lot of brands have access to massive amounts of data about consumers and behavior, but they have kind of just been sitting on it. I think recently the value in diving into this data and using it to inform creative has been more accepted by clients—they're looking to us and asking what data can do for them, which is a major shift in thinking.

There is a wide-open playing field of opportunity here and it's an exciting time to see what we can make happen—beyond just generalized targeting optimizations. It's also partially on us to develop the tools to really utilize data to its fullest. For example, we can post a video online, see how it performs and then make real-time content optimizations to boost viewership or reach, but we need to be on our toes and ready to take these kinds of actions.

ORACLE: What had been the most interesting trend you've seen recently around advertising on social platforms?

EHART: Many brands were raised to believe branding was not a best practice when advertising on social. Putting creative to work without branding is now a misstep in this space—brands need to take credit for high-quality content. The focus now is on how a brand can become a part of the consumer's life in a meaningful, worthwhile way and drive interest and engagement, even in news feeds.

ORACLE: Lastly, what industry topics or trends do you think will be top of mind during Advertising Week?

EHART: There are two topics that I am most interested in: the first is the ongoing conversation about virtual reality (VR). VR is still in its early days and there are many unanswered questions about how brands can integrate it into their strategy. It's important for us to help clients figure out how to make space for VR into their marketing spend, as well as explaining why they should.

The second topic is measuring results: it's still a big opportunity for marketers as we try to help brands cultivate a better understanding of what drives success on social. Social platforms deliver some results metrics and we can measure impact on sales, but creative results are a bigger challenge. The goal is to better understand how creative is delivering on engagement.

Kellogg's defines an "always-on" portfolio with digital measurement and analytics

Q&A with Amaya Garbayo

Amaya Garbayo, Associate Director KNA Media COE at Kellogg North America, defines digital measurement strategies and analytics for the brand. She's leading breakthrough research initiatives that elevate Kellogg's ability to win in the digital marketplace. Most recently, Amaya joined the media team to execute data-driven planning and enhanced media targeting.

ORACLE: How has the use of data affected audience planning for your campaigns?

GARBAYO: We think about communication in a fundamentally different way, since we have the ability to speak to consumers with a deep understanding of who they are—not only demographically, time or location-based, but also through a *"buyer"* lens across categories. A data-driven approach and activation facilitates a change in paradigm from planning by brand and by campaign to an "always on" portfolio—and overcoming organizational boundaries to unlock growth.

ORACLE: How does using audience segmentation help you to be a more efficient marketer?

GARBAYO: Audience segmentation enables Kellogg to communicate to each consumer the right *message,* at the right *time,* the right *number of times,* in the right *content.* It has enabled a more precisely targeted media buy across TV, digital and print with a single message to fully addressable (one-to-one) communication strategy. This is particularly powerful when combined with programmatic buying strategy that provides access to scalable efficient quality inventory against any segment.

ORACLE: What is Kellogg's marketing/advertising goal for 2016, and how do you think data can help you reach it?

GARBAYO: Across the company, each individual brand will have very specific goals and objectives, but the common denominator is to unlock growth through increased HH (household) penetration. The implication is the need to understand more about our current buyers (segments in which we want to minimize churn), versus prospective buyers to engage them with the most appropriate message. Data will help our brands deliver that in various ways: from addressable targeting at scale, to content curating, to real-time measurement and optimization.

ORACLE: What insights have data given you into your customers and how does this help your brand?

GARBAYO: Nowadays, consumer data comes from a large variety of places including non-traditional sources like search and social. In most cases the non-traditional data comes at a fraction of the price of traditional methods, but requires a skilled team, infrastructure and resources to be mined. In particular, audience data insights provided by companies like Oracle Data Cloud helps develop a more complete view of consumers through deep profiling. It provides fast, granular, purchase behavior and attitudinal data about our targets that help shape the way our brands understand their consumers, as well as develop targeting strategy that compliments or drives creative development.

About Amaya

Prior to Kellogg, Amaya Garbayo spent seven years at one of the world largest media agencies, Mindshare (WWP) where she worked with clients including Unilever, Domino's and CVS to establish digital KPIs. She holds a degree in mathematics from the University of Wisconsin–Stevens Point and a Graduate degree in statistics from Baruch College (CUNY).

Data without context is noise

Cory Treffiletti

VP, Marketing & Partner Solutions,
Oracle Data Cloud

I spend a lot of time trying to tell the story about data: What is data, why is it important and how can marketers harness its power to make better campaigns? I have little epiphanies on a regular basis that I like to share in this column. This week, my epiphany was clear: **Data without context is noise.**

Data refers to the information you gather about the consumer. While much of that data is useful, if you look at data in a vacuum, it is far less valuable than when you factor in the context, which provides a dimension that gives meaning to the data that otherwise may not be clear.

Very little data can be considered valuable in a stand-alone format. Some might bring up demographics, but even with demographic data you need the context of time for it to make sense and be accurate.

For example, age and household income are considered standard demographic data, but these can change over time. Household income can change, as can the composition of the household. Age obviously changes over time, and age implies life stage, which has a massive impact on the insights gleaned from the data. The wise guy will make a joke that demographic gender data should or shouldn't change, but in most cases gender data is implied and multiple people can use the same device, so gender is an educated guess and less likely to be accurate, thus less valuable.

What is most valuable are signs of intent and interest, and these are always in flux. Someone who is in market for a car now may not be in a month. Someone who is buying organic food now might change to gluten-free in three weeks. A consumer's motivations and behaviors can change dramatically, and context provides insight into the "how" and the "why" of those changes.

Context, whether personal or global in nature, can have a massive impact on the ways consumers will go about their day and the types of decision they will make. Think about the political climate and how that can impact consumer behavior. Economic stability or instability affects the discretionary expenditures of a household. When a family gets a pet, that changes things. The time of day can have an impact on purchases.

There are tools in the market for layering context over consumer data, but the simplest way to do this is to examine global macro trends that might have an impact and place them over any analysis you might be doing of your audience. You also need to ensure you revisit your audience profiles regularly—potentially on a monthly basis, and even more often if you have a short consideration cycle for your products and services.

VERY LITTLE DATA CAN BE CONSIDERED VALUABLE IN A STAND-ALONE FORMAT

Subtle changes in the market can affect not only who you are targeting, but also which message you decide to display. I often use the analogy that the customer journey is no longer linear, but instead represents as many options as you would have if you were driving from New York to San Francisco. You have many permutations of routes—and each stage of that route can be experienced differently, whether it's day or night, summer or winter or more. The context for that route will affect the path you decide to take. Most marketers have not yet advanced to the complexity of understanding the context as well as the audience they are trying to speak to, much less reacting properly to it.

What is the best way to understand context? Work with your agency analytics team to analyze those macro trends. Work with your key publishers to understand the trends affecting their audience. Work with your data provider to layer that information over the top of your campaign, and learn to optimize often enough to catch those changes in your planning process. If you do these three things, you'll have a step up over your competition.

About Cory

Cory Treffiletti has been a thought leader, executive and business driver in the digital media landscape since 1994. He is currently Vice President of Marketing for Oracle Data Cloud, following the acquisition of BlueKai and his previous role as SVP of Marketing.

Cory also has written a weekly column on digital media, advertising and marketing since 2000 for MediaPost's OnlineSPIN. In addition, Cory is a graduate of the S.I. Newhouse School for Public Communications at Syracuse University and is the author of Internet Ad Pioneers (available on Amazon.com).

Audrey Thompson

Director, Data Science
Oracle Data Cloud

Christa Hammond

Data Scientist
Oracle Data Cloud

The identity graph: Why quality matters for targeting

Audience matters in advertising: even the most clever, compelling and timely placed dog food ad is wasted if shown to a person who doesn't have any pets and has never purchased pet food. Money spent showing this person creative is money wasted by the advertiser because there is very little chance the ad will influence their behavior.

In marketing, targeting helps by identifying the right audience for a given campaign objective— those who are likely to buy, or buy more, because of advertising. By knowing what people buy, what they like to do and what they see online we can create purchase, interest and demographic-based audiences. However, in digital advertising, even the most perfect offline-based audience can be ineffective if you aren't able to find the users online.

So, how can we find these online users? How do we know the devices we are targeting are actually linked to the users we care about? And what difference does it make if those links are incorrect?

Importance of the identity graph in reaching the right users

In order to reach an offline-identified audience in an online space, an identity (ID) graph is used. An ID graph, like the Oracle ID Graph™ from Oracle Data Cloud, enables an audience from one ID space to be translated or converted into another ID space. ID spaces include individuals, cookies (unique identifiers for a web-browsing session), email addresses and mobile ad IDs (unique identifiers for mobile devices). By traversing connections within the ID graph, for example, you can figure out which mobile ad IDs belong to an audience of individual dog owners then serve them advertising as part of a campaign.

When a mobile campaign is executed with a target audience that has been converted to the mobile ad ID space via an ID graph, the key assumption is that these links are correct. That is, the devices we are targeting are, in fact, 100% accurately associated with the users we want to reach. Unfortunately, this assumption is often wrong.

The reality is that all links within an ID graph are not created equal and no link can be assumed to be 100% correct. Even the so-called "deterministic" link of a mobile ad ID to an email address can prove incorrect. Sure, a given mobile ad ID and email address may be observed during an event (an observed "fact"), but how do you know the email address entered is for the owner of the phone? What if they logged into an application with their friend's email address? Or what if they made up the email address? "Deterministic" cannot be assumed to be correct all of the time. This means that all linkages are "probabilistic" and while some connections are highly likely to be correct, others are lower quality and will be wrong more often.

So, what happens when an ID graph compromises on quality? What difference does it make to a campaign's success?

The quality of an ID graph links matters to targeting success

Let's walk through a hypothetical, yet very real, example of why the quality of a link matters and the effect it can have on your campaign.

Let's say you want to reach Dan, a dog owner, as part of a targeted campaign specifically for dog owners. Your ID graph connects Dan to a particular device, which you serve the ad to five times. In real life, though, this device belongs to Jen, who does not own a dog. Now, the dollars spent trying to reach Dan were wasted on Jen who has a near-zero probability being persuaded by the ad to purchase dog food.

So how did this happen? When the devices were identified out of the ID graph, you were told that the device reached belonged to Dan—and we assumed it was correct. Taking a closer look though, we learn that within the ID Graph, the probability associated with the link between Dan and this device was 25%. Had we set a threshold for the quality of our links at, say 80%, we would not have spent money mistakenly reaching Jen's device and instead, we could have spent that money on a device that ties back to a dog owner with a higher probability. Not only that, but now you lost a revenue opportunity: Jen has a near-zero probability of purchasing dog food. Therefore, revenue generated by serving Jen's device is expected to be zero dollars.

Sending five ill-directed advertisements to Jen's device may not cost you a lot, but these poorly spent dollars can certainly add up over the course of a campaign. Let's say you served even one ad to each of 10MM devices in your dog owner campaign, but the probability that each device was attached to a dog owner was 25%. Now you've magnified the "Dan" problem by 10MM and at a $3 CPM (cost per thousand impressions), you've just spent $60K on the wrong devices. If your campaign budget is $200K, almost one-third of your budget is now gone!

If we assume additional incremental sales caused by exposure to the ad averages one cent for each dog owner reached, your expected total incremental sales is only $25K (25% x $0.01 x 10MM)—an overall net loss of $35K. Had you used an ID graph where the probability of those 10MM links being attached to a dog owner was 80 percent, you would have set yourself up for total incremental sales of $80K (80% x $0.01 x 10MM)—an overall net gain of $20K.

Bottom line

While the above is a simplified example from a very complex advertising landscape, the point is this: the quality of the links used to translate from offline to online matter. Particularly when your campaign objective hinges on reaching the right people, asking questions about the quality of the links in the ID graph used to reach your audience is important.

Within the Oracle Data Cloud, the Oracle ID Graph connects information across offline and online ID spaces, with the goal of maintaining an industry-leading, comprehensive, and accurate ID graph in which all links are "probabilistically validated." There is clear value in understanding and using linkage quality when thinking about targeting and we are continually improving our capability in this space with increasing amounts of data and advanced data-science algorithms. While we recognize quantity is also important, we care about quality and so should you. Otherwise, you run the risk of wasting marketing dollars and losing potential revenue because, alas, a person with no dog has no need for dog food.

About Audrey

Audrey Thompson joined Oracle through the Datalogix acquisition in 2015. She leads the Identity Data Science R&D team focused on developing and implementing analytic solutions to improve the ODC Identity Graph. By combining thousands of disparate data sources with analytics, her mission is to create comprehensive and accurate user profiles across both online and offline ID spaces. During her four years with Oracle/Datalogix, she has played a variety of R&D and client-facing analytic roles.

Prior to coming to Datalogix, Audrey was an Associate of the Casualty Actuarial Society and worked for Deloitte Consulting developing and implementing end-to-end underwriting analytics for commercial insurers. She holds an MA in Statistics from Harvard University and BA in Mathematics and Integrated Science from Northwestern University.

About Christa

Christa Hammond is a data scientist at Oracle Data Cloud, where she specializes in thought leadership for the online/offline marketing industry. Her contributions to previous research teams have focused on providing data-driven insight to inform accurate measurement of digital campaign performance. Christa received her BS and MS degrees in statistics from Brigham Young University, and currently enjoys living in stunning Denver, Colorado.

A largely ignored but critical dimension to incorporate in understanding consumers on mobile

Anindya Datta
Founder, CEO, Chairman
Mobilewalla

Understanding and modeling users behind digital devices are the keys to 1:1 marketing. In this era of personal digital devices (PDD), such modeling enables a consumer to be reached uniquely via his or her PDD. Consumer modeling also forms the basis of computing digital audiences, widely used in brand advertising.

Mobile represents an attractive medium for such modeling by understanding customer movements. By being co-located with the consumer at home, in the workplace, while shopping and in entertainment locations, a smartphone also knows what a customer's favorite music and video apps are, in addition to valuable insights into more complex concepts such as voting preferences. As a result, signals sourced from a mobile device are widely used to make judgements about the owner of the device. The most widely used such signals are, "ad requests," generated by app and web usage on smartphones and tablets.

Ad requests are not only information-rich, but are also relatively easy to interpret, given the structure imposed on them by standards bodies (such as the OpenRTB organization). Structured ad requests are most common in the programmatic framework, where exchanges/SSPs aggregate ad requests from a variety of mobile media and push them out as Bid Requests (BRQs) for consumption by DSPs and ad networks. BRQs, accounting for about 50% of all U.S. mobile ad supply, represent a key source of data helpful in modeling and eventually enabling "contextual targeting" of consumers.

Context, in a textbook sense, is a combination of place (location), time and event. Products are best marketed in optimal contexts—for example, we are more likely to respond to an offer of ice-cream on a hot day at a beach than on a rainy, cold evening. Because a mobile device constantly accompanies its user and is therefore present in every "context" in which the user finds themselves, it becomes a powerful way of reaching him contextually. Thus, the ice cream ad can be delivered right to a consumer's mobile at the most optimal location.

State of the art in consumer addressability on mobile includes techniques that target consumers along all three contextual dimensions—a consumer can be served an ad (subject to his/her availability of course) at a specific time (say between 8-8:30PM), at a specific location/place (say at the AT&T Stadium in Dallas) during a specific event (say, a country music concert by Shania Twain). In particular, much innovation have occurred around the location dimension, enabling high precision targeting at arbitrary locations. However, the same is not true for time, as we will argue in this article.

Time is a key dimension—serving the ice-cream ad at noon on a summer day is more likely to be effective than on a winter night. However, time-based ad delivery is largely limited to ensuring that a consumer is reached at a specific time. This is easily achieved in programmatic scenarios by acquiring BRQs from the consumer's device that originated within the desired interval.

Time has another, more powerful use in understanding consumer behavior—it can be used to model habit, aka "persistence of behavior," time and again proven to be a great predictor of future behavior. In politics for example, "persuasion campaigns," attempt to win support from the electorate for policy positions adopted by their candidate. When selecting the target for persuasion campaigns, planning teams identify voters who are most likely to be "persuaded," to maximize the ROI of spend. Picture a conservative candidate attempting to win support based on a conservative social-policy position. An attractive target for such a mobile campaign might be regular churchgoers, a majority of whom have been shown to be sympathetic to conservative social causes and (likely) carry mobile devices.[1]

So let us now consider how a mobile DSP might actually run this campaign. Based on extant locational innovations, it is feasible to precisely geo-fence churches. And, given that attendees typically visit at certain times of the day (say, Sunday mornings), it would be possible to target them at those specific times. In other words, the candidate's media team can push a video explaining policy position to attendees at church events at any or all churches.

No doubt, this is powerful and difficult to pull off with non-mobile digital devices. However, recall that the target was "regular churchgoers." Based on substantial personal experience on working on these types of targeting, this translates to very specific requirements, e.g., individuals who have attended church, once a week, for at least six months.

Effectively, the goal is to identify persistence of behavior; a trait that marketers have long sought to incorporate in audience targeting. Rarely do marketers seek consumers with one-off behavioral traits—when they want to target "Walmart Shoppers," they are not looking for someone who happens to be at a Walmart at a particular time. Rather, they are seeking consumers that shop at Walmart on a regular basis. Indeed, the notion of persistence permeates audience identification—what marketers seek to find are consumers with habitual behavioral traits.

Yet, this is not widely possible today in mobile. Note that the data elements that enable behavioral persistence identification are already embedded in ad requests—timestamps and location. The problem lies not in the availability of the data, rather, with the complexity of the underlying processes necessary to compute persistence. Effectively, the problem is to fold in time, or more scientifically, temporality, into the analysis. To do that, the first thing we must do is to store ad requests over time — to identify regular churchgoers, we must figure out which devices have appeared in churches weekly over a period of six months—this needs at least six months of stored ad requests. Our experience is that two years of stored history is adequate to perform a vast majority of persistence analysis.

This is a gargantuan task, as BRQs vary in size, but let's assume the average BRQ is 4KB. It is also impossible to find reliable estimates of supply volume, but just based on our experience, there are at least 12B ad requests a day in the US, leading to about 48PB of raw data. This translates to 8XB of data in six months, and over 30XB in two years—an amount of data that is impossible to store economically and process effectively. Assuming that significant segments of this data are not useful for audience mapping, and we can throw away, say, 60-70%—even then the size economics don't work. However, longitudinal analysis on accumulated temporal data is essential to capturing persistent behavior.

Is it not feasible to perform such analysis given the virtual impossibility of practical temporal storage of ad supply? We believe compression provides a promising direction. Compression is a well-studied problem and a variety of techniques have been invented for different scenarios, but the reduction factors are small relative to our requirements. A 10:1 reduction is considered a home run in traditional applications (2:1 and 3:1 are more common), whereas we need reductions of 1000:1 or higher to be practical (from XB scale to PB scale.)

At Mobilewalla, we are working hard at inventing entirely new class of "semantic" compression schemes that take advantage of structural uniqueness of ad supply data and make such reductions feasible. The results would be worth this effort.

1 http://www.npr.org/2016/05/16/478176365/many-evangelicals-are-in-an-awkward-place-with-trump-atop-gop

About Anindya

Anindya Datta, the CEO and Chairman of Mobilewalla, is widely regarded as a front-running technologist, leader and innovator, with core contributions to the state of the art in large-scale data management and internet technologies. Mobilewalla has pioneered audience measurement in mobile apps by applying ground-breaking data-science techniques on the industry's largest volumetric database of mobile app data. Prior to Mobilewalla, Anindya founded and ran Chutney Technologies, where he was backed by Kleiner Perkins and evolved into one of the earliest entrants in the application virtualization area. The company was acquired by Cisco Systems in 2005.

Anindya also has been on the faculties of major research universities and institutes in the U.S. and abroad, including the Georgia Institute of Technology, the University of Arizona, the National University of Singapore and Bell Laboratories.

Data-driven creative at scale

Ben Kartzman
CEO, Spongecell

Advertising has been going through some big changes in the last several years. While splashy Super Bowl spots and sexy, pricey branded entertainment executions are still important and have a valid place in the marketer toolbox, the foundation of brand marketer programs are now shifting to an always-on moment marketing approach. Brand reputations and consumer relationships are built at their core through micro-moments that build an ongoing narrative. If you think about Super Bowl spots as the epic *Star Wars* movie that comes along once in a while, think of creative optimization-driven marketing as "The Simpsons," the world's longest-running series. At the core of the enduring appeal of "The Simpsons" is how clever the writing team is in keeping the characters and the storylines rooted in what is topical in the here and now. Because of the advances in creative optimization technology, brands now have the opportunity to engage in storytelling that is always as relevant as that.

Brands are waking up to a new imperative that is driven by the elusive nature of consumer media consumption. With the ongoing proliferation of new platforms like Snapchat, media fragmentation is at an all-time high with no signs of slowing down. Therefore, precision of consistent, personalized communication will prove to be far more effective than the blunt force of water cooler efforts of buying :30 spots on typical network and cable buys. Instead marketers now need to nurture their audiences at the individual level by telling a longer story over an extended period of time utilizing the full range of relevant always-on digital platforms. By engaging in strategic sequential messaging, marketers have the ability to build incremental engagement and credibility at every step of the consumer purchase journey. This new dynamic is in effect creating a throbbing, always current feedback loop that will ensure that marketers are always at the leading edge of consumer needs and desires and their reaction to cultural and social trends.

Advertisers can no longer rely on dictating the conversation with their customer base nor should they want to considering how limiting one-way messaging has traditionally been in terms of the difficulty in gathering and assessing consumer insights. Heading into 2017, the advertising industry is at an exciting crossroads where brands now can step into the role of interactive storyteller instead of just being a unidirectional narrator.

As brands start to truly leverage this golden opportunity in the application of first-party consumer data, they'll be amazed at how their messaging will become more effective, engaging and efficient at uncharted levels. Marketers can now monitor consumer reaction and behavior in real time and in rapid response turn the knob using dynamic creative software technology to adjust or tweak any given messaging on any given platform to shape the story almost instantaneously. This dedication to relevance and utility will certainly not go unnoticed by consumers, whose trust in and affinity for the brand will solidify. Human beings prefer to have a conversation and don't generally appreciate being talked at or even down to. This newfound ability to communicate in a more conversational, personalized tone due to increased relevance at scale is a truly transformational trend.

Marketers can now alter text, images or graphical elements in any given ad or email blast, for example, through the filter of the specific behavioral and demographic parameters of any given individual to optimize relevance and impact. What's even more exciting is that the data-driven methodologies being employed in digital advertising will someday soon be applied to broadcast and cable television at greater scale.

As the entire industry revs up their personalized marketing engines, we will gradually see impressive upticks in brand lift and sales conversion. Simultaneously, we also will be able

MARKETERS HAVE THE ABILITY TO BUILD INCREMENTAL ENGAGEMENT & CREDIBILITY AT EVERY STEP OF THE CONSUMER PURCHASE JOURNEY

to quickly learn which groups of engagers did not convert, and often why they didn't make a purchase. These insights naturally will drive how we re-engage with them the next time, hopefully putting us back into an even stronger position to convert them.

In conclusion, brands now have the ability to revolutionize their marketing programs by building customer relationships starting with the awareness stage to interest to consideration to intent to evaluation to purchase. It's vital to remember that despite the huge leaps in data collection and assessment, it's impossible for brands to fully control for the quality of insights. This highlights how crucial dynamic creative optimization is in this new paradigm because the creative is the one thing that you can control and test against. It's the most important quality control you can have. By embracing these new methods, brands will have the opportunity to generate the same longevity of success as Homer and Bart and the rest of our loveable family from Springfield.

About Ben

Ben Kartzman is CEO and co-founder of Spongecell. Under Ben's leadership, Spongecell has become one of the fastest-growing companies in the U.S. Before co-founding Spongecell, Ben worked at venture-backed Guidester (now Searchandise.net) in product and business development. Prior to that, Ben worked in consulting, first at Bridgeline Software and then at Accenture. Ben graduated with honors from Carnegie Mellon with a dual BS in Human Computer Interaction and Information & Decision Systems.

High-octane holiday marketing:

How real-world transaction data can improve impact and reach

Mike Lemberger

SVP, Global Loyalty Solutions, Visa

The holiday shopping season has grown hyper-competitive and merchants of all sizes are seeking an edge. Traditionally, the conventional marketing wisdom has been to reach shoppers early and often. For example, holiday sales now start even before most students head back to school, while deep discounts on electronics, clothing and other gifts are available throughout the fall.

But savvy merchants might consider back-loading a bigger portion of their digital marketing spend. New tools, relying on real-world transaction data, can be used to help companies better identify consumer shopping habits, reach new and frequent customers and assess the impact of their advertising spend. As it turns out, the numbers suggest that there is an enormous opportunity in targeting shoppers in the weeks after the flurry of Black Friday activity—especially those scrambling for a last-minute deal.

A Visa study of U.S. consumer spending trends during the 2015 holiday season found that procrastination was increasingly popular among shoppers last year.[1] Seven of the top 10 shopping days fell in the second half of December 2015, compared to only four during the prior year, according to the report. And while Black Friday dropped sharply in importance (it ranked as the fifteenth biggest holiday shopping day in 2015, down from the fourth biggest holiday shopping day a year earlier), post-Christmas commerce was unusually strong. The same report found consumers spent roughly 11.4% more between December 26 and December 31, 2015 than they did in the same period in 2014.

The study illustrates how transaction data can keep merchants and marketers ahead of the curve of current spending trends and inform their business and advertising strategies. As the world's largest payment network, Visa processes an average of 150MM transactions every day. That provides us with a unique and near real-time window into consumer spending activity—from where they shop to the time of day that they make purchases.

But while marketers have long relied on demographic and other third-party data to keep close tabs on consumer shopping habits, only recently have they begun to fully harness the power of transaction data to improve their advertising's effectiveness and reach. That is now possible thanks to collaboration between leading publishers, data providers like Oracle Data Cloud and payments networks like Visa.

Working together, we have seamlessly integrated transaction data into existing marketing tools to help merchants succeed. At the same time, we've protected data privacy. Consumer transaction data is aggregated and anonymized at every stage; Visa does not share individual consumer data and all merchant-specific data shared with third parties for targeting or measurement requires explicit merchant consent.

Over the last few years, leading marketers have started using real-world transaction data to inform their digital ad targeting strategies. But that process is now easier and more efficient than ever before. Consider a department store chain that wanted to target those last-minute shoppers with a digital advertising campaign on Facebook. In the past, it might have relied on proxy characteristics such as demographic or behavioral information to segment customers. Now, within minutes, that retailer can add spend-based targeting to a digital campaign thanks to dozens of pre-defined customer segments built on Visa transaction data. It's as simple as selecting an audience from a drop-down list.

What's more, that department store might further refine its digital ad targeting by requesting that Visa build a customized audience—say, focusing on only the highest-spending department store shopper segment who made purchases during the final week of the year. Then, a data provider like Oracle Data Cloud can activate the resulting audience, enabling that retailer to even more precisely deliver highly targeted ads to the last-minute shopper audience on Facebook—or whatever advertising platform, device or channel it chooses.

What is potentially even more game-changing is how transaction-based marketing can help digital advertisers assess the effectiveness of their efforts at driving sales. Despite the growing use of digital advertising, the reality is that most online campaigns are measured based on online conversions—clicks, likes or eCommerce. Yet, the vast majority of retail spending, more than 94%, still happens offline according to the U.S. Department of Commerce. That means advertisers only have a tiny sliver of the picture of how online advertising exposures translate into real-world sales.

Based on insights drawn from consumer transaction data, however, marketers can help close that gap. That's because the payments that flow through Visa's network reflect both online and in-store sales. Think about it as the return leg of the round-trip journey for the targeting example above.

Suppose that same department store wanted to see how effective its Facebook ads were at reaching that last-minute shopper audience and driving incremental spending growth. With the help of a data provider like Oracle Data Cloud, it would harness impression data from Facebook. Then, with anonymized analytics from Oracle Data Cloud and Visa, the advertiser can see a solid estimate of the incremental sales generated by their Facebook ads.

Both the impression and transaction information is anonymized; no individual spending activity is ever disclosed.

Armed with this information, digital advertisers can better determine whether their tactics are working and make mid-course adjustments during a campaign. Plus, it enhances measurement by enabling marketers to see the total return on investment of their digital advertising across all retail channels.

Indeed, this is the transformational power of transaction-based marketing. And it is bound to help merchants make smarter decisions about how they deploy their digital advertising dollars—not only during the upcoming holiday shopping season but in years ahead.

[1] Source: Visa Business & Economic Insights, 2015 Holiday Spending Recap Report, January 2016

About Mike

Mike Lemberger leads Visa's Global Loyalty, Offers and Data Solutions group focused on developing products that support today's digital commerce ecosystem. He has 20 years of experience in product and database design, development and implementation, and has managed the integration of custom-data solutions across multiple industries, including: travel, lodging, dining, retail, communications and entertainment.

Prior to joining Visa, Mike was Vice President of Analytic Capabilities and Data Partnerships for American Express Business Insights. Mike spent five years at GE Capital leading the Decision Sciences Infrastructure group, deploying data and insights across GE's global consumer lending business. He started his career at American Management Systems (now CGI) delivering system and strategy consulting to global communication companies, including: British Telecom, Telstra, AT&T and Verizon.

Mike holds a bachelor's degree in Industrial and System Engineering from Rutgers University.

Mike is an avid soccer player and an all-around sports junkie. A New Yorker at heart, he now lives in the San Francisco Bay Area with his wife and three children.

Insights from EMEA

Conclusive and illusive:

The duality of online shopping data

Joe Stepniewski

Co-Founder & CPO,
Skimlinks

It's said that we make two mistakes with innovation and "disruptive" tech. First, we overestimate the short-term change they will bring. Then, we underestimate how different things will be in future.

eCommerce is a case-in-point, bringing in $1.67T worldwide last year: by 2019 that figure is set to more than double.[1] But what will that number look like ten years from now? And with a whole range of innovations from Augmented Reality (AR) and Virtual Reality (VR) just around the corner, will we even recognize the shopping experience wrapped around it?

Nowhere is the duality of our sector more apparent than in the often-discussed (and often-misunderstood) world of data. But many in the industry still caught between knowing data is the new oil, and simply making any sense of it.

Solving and creating mysteries

The truth is, we've already come a long way in terms of our understanding in certain areas: intent and purchase-based data is a case in point. We're even on the cusp of using it in some really interesting, creative ways. That said, what is also fascinating is that for every mystery data solves, it throws up more unexpected insights that seem to make no sense, or we just have no way of decoding.

A lot of the data in this sector tells us interesting (or confounding) things about what and why we buy. Here are a few of the highlights.

Living room dominoes

Broadly, we see the living room as a starting point for a range of home purchases. It won't amaze anyone that in-market TV buyers are also 19 times more likely to snap up surround sound speakers and DVD/Blu-ray players, or even more so (26 times) a universal remote.

FOR EVERY MYSTERY DATA SOLVES, IT THROWS UP MORE UNEXPECTED INSIGHTS

What might be less obvious is TV buyers' propensity to go the whole hog and re-evaluate broadband and entertainment packages at the same time (seven times the average). While not a total surprise, this is the type of link that could prove invaluable, not least for broadcasters and telcos looking to target their offer more effectively.

Moving from the living room to the kitchen, we find a heady mix of insights on the boil: First, if you're in the process of buying a washing machine or dishwasher, you are eight times more likely to be in market for a coffee machine too. But oddly enough, not a Nespresso—you almost certainly won't buy one of those. However, if it's a Bosch you're looking at buying, the recipe starts to look a little different. In fact, you are almost 60 times as likely to buy a coffee machine, and which brand? You guessed it, within its category, you're eight times more likely to buy a Nespresso machine than another brand. Why could this be?

If a report by the BBC[2] is to be believed, household appliances are the new status symbol. And Bosch and Nespresso are right at the top of the list. Even more so German manufacturer Miele: It should be little surprise then that in-market Miele customers are fully ten times more likely than average to buy a larger range-style oven and an impressive 30 times more likely to buy an even more luxury, status item—a dedicated wine chiller.

Data bubbling

But if data can surprise us, surely it can also work the opposite way—confirming long-held assumptions, removing any last remaining doubt. Surely we should tread with caution here, for fear that analyzing data becomes like search-filter bubbles[3], simply confirming everything we already believe.

That said, let's get the following two findings out the way. One, that female shoppers who buy shoes are 25% more likely to buy men's underwear than their male counterparts. Think about that for a second (or try not to) vis a vis gender stereotypes. Next, try this one on for size: people in market for a motorbike are also 10 times more likely than average to be reading around the subject of divorce.

And from the subject of midlife crisis, what about taking a step back to that earlier, (hopefully) happier time of having a child. It won't surprise anyone that maternity clothing, nursery furniture and babymoon shopping all show a close correlation. Less so, a connection to digital camera buying—which is apparently 15 times more likely in the six weeks after buying nursery furniture. What can we conclude from this? That our sense of the importance of photo quality grows in line with parental responsibility? I'll leave this one to you.

Human behavior

We're constantly learning new and intriguing things from data, which we wouldn't have even seen just a few years ago. But we'd be lying if we didn't admit that for every new insight, the data threw up another trend there's no rational explanation for. The interesting thing is though, it doesn't make that information useless—far from it, in fact. When we speak about data, all we're really talking about is human behavior after all.

And despite eCommerce being set to hit $3.6T by 2019, that is still just less than of 13% of total retail sales. In short, there's probably plenty more revolutionary change just around the corner—and plenty more illuminating and perplexing insights into human nature along the way.

1 According to eMarketer
2 http://www.bbc.co.uk/news/business-34290597
3 https://en.wikipedia.org/wiki/Filter_bubble

About Joe

Joe Stepniewski co-founded Skimlinks when it pivoted from the original Skimbit company in February 2009. He is responsible for strategy, operations, insights and revenue. Previously to Skimlinks he founded SiteRefinery, which acquires under-performing websites/domains and turns them around in terms of traffic, functionality and monetization.

Prior to that, Joe was Head of New Media at Finger Lickin' Records, an independent electronic music label, and also worked at Cisco Systems both in EMEA and Asiapac (i.e., UK and Australia).

Your attribution model is broken

Tom Riordan

Director of Special Operations, TubeMogul, Inc.

For decades, there's a question that has punctuated marketers' nightmares: "Did our advertising work?"

The advent of digital advertising was supposed to provide a respite from the years of relying on GRPs and subscription figures as proxies for effectiveness. Finally, marketers could ascribe a degree of certainty—or, at least, correlation—thanks to relatively new concepts such as cost per acquisition (CPA) and first touch, which were supposed to offer insights that went well beyond reach and frequency.

In the 10 years since, technological innovation has created new possibilities that would have made Erwin Ephron green with envy. Beacons and location-based technologies give brick-and-mortar retail outlets unparalleled insight into how their online marketing drives offline activity. Eye-tracking and heat maps give advertisers a window into user browsing behavior while respecting individual privacy. Even familiar concepts, such as survey retargeting, provide windows into how online ads affect brand awareness and purchase behavior.

But it still feels like we have a tougher time than we should answering that question that keeps CMOs awake at night. Marketers remain hamstrung by models that, despite the improvement they represent over the pre-digital era, fail to properly account for all the variables necessary to accurately understand how marketing spend impacts the bottom line. There are three common biases that occur naturally within CPA-based models.

First, there is an in-market bias. Did an ad drive that sale? Or did the marketer just cookie someone who was already going to buy? Correlation does not equal causation. What many attribution models lack is a way to identify consumers that were already going to purchase. This identification is crucial because targeting certain audiences, including brand loyalists or people who have already visited a web page, naturally correlates with low CPAs.

In-market bias is further exacerbated by the fact that in-market audiences are more measurable than individuals higher up in the funnel. This is why search and direct-response perform so well in many attribution models.

Second, there is also a low-rate bias. The easiest way to get a low CPA is to deliver media as efficiently as possible. Conventional logic argues that one can increase actions by increasing opportunities. This, however, may lead to "cookie bombing," or deliberately delivering media as cheaply as possible without regard for media quality, in terms of viewability or publisher reputation, to audiences that are already on the path to conversion.

Consider this scenario:

	Tactic A		Tactic B	
Spend	$100		$100	
Audience Affinity Pre-Exposure	3 buyers	7 non-buyers	0 buyers	10 non-buyers
Audience Affinity Post-Exposure	3 buyers	7 non-buyers	2 buyers	8 non-buyers
CPA	**$33**		$50	
Actual Lift	0		**+2**	

Without an established control group, CPAs are determined by a simple math equation relating audience targeting and media cost, not incremental revenue or actual ROI; while more impressions usually mean a more efficient CPA, it doesn't always drive actual sales lift.

Finally, there is digital signal bias. While digital channels are estimated to comprise about 30% of total U.S. advertising spend[1], the vast majority of sales still occur offline. Despite this, many advertisers only factor online sales into their attribution models simply because it's easy to tie online spend to online actions.

After accounting for the aforementioned in-market and low-rate biases to help determine causality, marketers also need to include both online and offline sales in the "action" portion of their attribution measurements to get a truly representative picture of their online ad impact.

So what? Well, as Matthew McConaughey mused, sometimes, you gotta go back to move forward. Back to school, specifically. The solution is called experimental design, which posits that for any measurement to be valid, the experimenter needs to control for all the different variables that could affect outcome. Practically, advertisers must establish a baseline control group before they begin their campaign.

I would estimate that less than 10% of marketers actually do this. My guess is that most marketers don't know that this is something they should do, while around 40% know they should but don't know how. The culprit? KPI tunnel vision. Buyers are quick to focus on CPMs, viewability and other metrics with "easy button" implementations instead of taking the extra steps required to measure actual ad effectiveness in a statistically sound way.

The baseline control group helps marketers move past correlation and determine actual causality. It also helps them ascertain actual lift as opposed to just relative lift. Leveraging control groups graduates us from a CPA framework to a cost-per-incremental-action (CPIA) model, which focuses not on how many total sales occurred, but rather how many additional sales occurred that could be specifically attributed to an individual campaign.

These control groups are best achieved through using placebo ads, such as an ad unrelated to the actual brand that will not affect viewer sentiment. In place of placebo ads, marketers can use on/off testing (different media mixes in a single market), matched-market testing (different media mixes delivered with a pulsed flighting strategy) or random A/B creative tests to ascertain relative lift, which only tells a part of the story.

The widespread adoption of experimental design in digital buying is hindered by legacy: "the way things have always been done." Digital buyers traditionally gravitate toward CPA models because targeting and optimization tactics historically favor correlation-based measurement. Many advertisers, especially major CPG companies, are "always on" and can't just turn off a specific market. And onboarding offline sales data into an attribution model can be a daunting task regardless of technical prowess.

Change will not come overnight. But it starts with marketers thinking very critically about why exactly they wouldn't want to test different ways to measure media effectiveness. CMOs that embrace the mindset of experimentation will find themselves much closer to finally closing the loop—and finally get a good night's sleep.

1 http://www.emarketer.com/Article/Total-Media-Ad-Spending-Growth-Slows-Worldwide/1012981

About Tom

Tom Riordan is the Director of Special Operations at TubeMogul, where he consults with brands on how to best use automation and technology to improve their marketing efforts. He has a focus on measurement and attribution solutions. Tom began his career as a digital and TV buyer at Spark in Chicago.

Is TV data ready for primetime?

Mark Risis

Head of Strategy and Business Development, TiVo Research

With TV set-top box viewing segments available in data management platforms like Oracle Data Cloud, it's finally possible to target and measure TV advertising and digital advertising together. But all TV data isn't created equal. In fact, most TV data isn't ready to work seamlessly with digital data. So, before you dive in, it's important to make sure the TV data you select will complement and enhance your media plan.

Here at TiVo Research, we're very familiar with digital set-top box data—after all, we pioneered DVR technology. For nearly a decade, we've used our aggregated and anonymous data to help countless TV networks, agencies and brands evaluate ROI and inform effective media planning by matching our second-by-second TV data to real outcomes like purchase and store visitation.

Our experience helped us pinpoint three key attributes that determine how well TV data will work alongside digital data in planning and measuring cross-platform campaigns: granularity, accuracy and speed. Here's a brief primer on how to evaluate these attributes before adding TV segments to your digital plan.

Granularity

If linear TV advertising is about reaching the masses at the same time, digital advertising is about reaching specific audiences at the right time. Chances are your digital targets are more complex than the age/gender demographics traditionally used to plan TV. That means you need TV data that can approach the specificity of digital data. Ask yourself:

1. **How detailed are the data segments available?**
   Even though TV data is available in state-of-the-art DMPs, there's no guarantee that data providers will give you more than the same demos they've always reported. TiVo Research data regularly adds qualifiers to its segments to improve targeting. Currently, our data allows you to target heavy/light viewers, genre viewers, and viewers by network, program and daypart.

2. **What custom options are available?**
   If you can't get the level of detail you need from TV segments out of the box, check to see if the data provider can produce custom segments. At TiVo Research, we have experience creating a variety of custom TV segments. We can even match our TV data directly to your device IDs, cookies and CRM lists.

Accuracy

Directly matching TV and digital data at the 1:1 level creates the most precise outcome because there's no guessing or extrapolation involved. Still, since the TV data available to us doesn't have the scale of digital data, modeling is inevitable to reach large segments of people. The methods used to collect and match data are crucial, so here are the questions you should ask:

1. **Is the data modeled? If so, at what level?**
   We believe in allowing data to remain unmodeled for as long as possible because the sooner modeling comes into the process, the further your data veers from the original. TiVo Research TV segments are matched deterministically and anonymously to demographic information from Experian. That means we're reporting what actual people are watching instead of making our best guess about the person watching based on look-alikes or the people who live near them. Our data can also match your digital segments directly through a privacy-compliant intermediary.

2. **Where does the data come from? Is it representative of the population?**
   TV data should be geographically representative to account for behavior in every area you're targeting. TiVo Research has data not only from TiVo set-top boxes, but also from Charter Communications and multiple smaller operators, giving us coverage in virtually every DMA. Unlike some of our competitors who use only connected TV data, we have an accurate picture of every TV in a given household.

Speed

Digital ad insertion happens in real-time, but TV advertising is typically bought months or weeks in advance—at upfronts or in the scatter market. If you're purchasing TV segments to inform targeting, you want the data to be as current as possible. You also don't want to wait for custom segments to be created as optimal recency and frequency erode. Ask these questions to evaluate for speed and relevance:

1. **How quickly are custom segments available?**
   Creating segments from TV data can be a lengthy process. Data typically has to be formatted, matched by a third party and run through quality assurance. The longer it takes to create custom segments, the older and less accurate the data becomes. At TiVo Research, we can produce custom segments in a matter of days, depending on the data involved.

2. **How often is data refreshed?**
   The frequency with which data is loaded into data management platforms indicates how fresh the data is. Matching today's digital targets to television viewing data from last year provides considerable room for error. TiVo Research data is refreshed through Oracle Data Cloud, quarterly.

TV viewing data can add inestimable value to your campaign planning and measurement. DMPs such as Oracle Data Cloud's now allow us to integrate reach across television and digital platforms, so we can make advertising as efficient as possible by eliminating wasteful media buys that miss the mark. Make sure you're getting the most out of this game-changing technology by vetting all the TV data you use for granularity, accuracy and speed.

About Mark

Mark Risis is Head of Strategy and Business Development for TiVo Research, a wholly owned subsidiary of TiVo. Mark works with technology partners to create and support innovative cross media advertising and media measurement solutions that bridge TV and digital. Prior to his current position, Mark spent several years in sales and strategy for TiVo's interactive advertising platform. Before TiVo, he managed Brand New World, a digital creative agency and worked at FutureBrand. Mark holds a BS from Duke University.

Targeting bullseyes:

How contextual data is shaping programmatic audio's success

Tim Sims

VP Inventory Partnerships,
The Trade Desk

Digital audio advertising is on the precipice of a major boom period. Just two months ago, Spotify announced that marketers can now target its 70MM ad-supported listeners with audio messages using the same automated, programmatic buying tools that marketers are currently using to purchase display, mobile, video and native inventory elsewhere. In doing so, Spotify blazed the trail with existing programmatic platforms like Triton Digital and AdsWizz, as well as legacy audio publishers like iHeartRadio, in allowing brands to target precise audience groups in real time. Suddenly, there are now millions of global listeners who can be reached via programmatic audio, giving the market the scale necessary to deliver big results for advertisers.

But beyond the mere growth of the marketplace, programmatic audio has a secret weapon that is tough to match in video or display channels: contextual data that tells advertisers exactly what people are doing as they listen. Marketers are now able to hone in on users who are listening to playlists designed for running, working or playing video games, to name a few. By taking advantage of this data for programmatic buying, brands have the unique opportunity to weave relevant messages into the daily routines of their users—without compromising efficiency or scale. Indeed, marketers are only just beginning to scratch the surface of what audio advertising is capable of.

Advertising's most immersive experience

To be sure, audio has always been a powerful advertising medium, dating back to the brand-supported soap operas that kept listeners glued to their transistors during radio's, "Golden Age." Even today, there's just something special about being able to reach people in an intimate environment wherever they go—regardless of whether they're listening in the car on the way to work, on the radio while preparing dinner or over the loudspeakers at the gym. It's no wonder that terrestrial radio has been found by Nielsen[1] to generate an average of more than six dollars in brick-and-mortar retail sales for every one dollar of advertising spend.

But where radio has always been flawed is that even if marketers had a smart media plan, they had no way of deciding exactly who would hear their ads and no way of knowing the circumstances of audience members' listening experience. For instance, if a food brand chose to advertise during a Top-40 radio hour, it couldn't help but spend money to reach people outside of their target demographic. Meanwhile, the advertiser is kept in the dark as to whether the audience of interest is listening while they are working at their office or while they are making dinner at home. In a perfect world, this brand would be able to send different messaging to each target audience segment and avoid advertising waste altogether.

That's where programmatic audio's special combination of listener data comes into play. Using demographic data from a publisher like Spotify, that is verified from a user's log-in information, the brand could immediately target users in their core demographic. Additionally, the advertiser could hone in on Spotify users listening to dinner party playlists like "Dinnertime Acoustics" and present them with messages suggesting a new recipe that includes their product. It could even leverage the app's location data to further personalize its ads with regionally specific content that could help it form a more authentic connection with the person on the other end.

More than anything else, the greatest asset of programmatic audio is that it gives advertisers the information they need to present advertising that improves the user experience instead of interrupting it. Simply put, no other medium allows brands to be as relevant to their customers, or to more seamlessly integrate themselves with what those customers are already doing.

A bright future ahead

In the months and years to come, the programmatic audio opportunity created by contextual data will only grow bigger. As smartphones continue to proliferate around the world, brands will have an even greater opportunity to reach a global audience in the many places people listen to music. And by combining their programmatic audio buys with other kinds of programmatic media like video and display, marketers have the ability to create a truly 360-degree relationship with their target customers at scale.

The future of digital advertising is here—and it sounds pretty great.

[1] http://www.nielsen.com/us/en/insights/news/2014/for-advertisers-radio-is-worth-listening-to.html

About Tim

Tim Sims is the Vice President of Inventory Partnerships at The Trade Desk, a global demand-side platform in the $5B real-time bidding industry. In his role at The Trade Desk, Tim leads the company's strategy and vision to create cutting-edge supply-side collaborations.

Tim also oversees The Trade Desk's industry-shaping publisher management platform, where advertisers can transact with publishers to buy premium inventory through programmatic channels.

Tim is an ad-tech veteran, having previously served as director of business development at OpenX, and director of media at Spot Runner.

Tim is a graduate of Vanderbilt University and lives and works in New York City.

Programmatic branding grows up

Stephen Tarleton
CMO, AffinityAnswers

If you've been anywhere near a Facebook feed this fall, you likely saw at least a few photos of kids heading off to their first day of school. And with each picture comes the predictable comments: "I can't believe how big they are! Please slow down time," or, "They're growing up so fast."[1] It should not be a surprise that kids grow up, yet somehow these social-sharing parents are not prepared.

As marketers, it should be no surprise that programmatic branding is growing up as well: Often the forgotten stepchild to direct response campaigns, it is now earning more and more share of programmatic budgets, which themselves continue to grow to a larger share of total media budgets.[2] Especially impactful are new audience sculpting methods based on mutual affinities and act-alike modeling that are transforming programmatic branding into predictive branding.

Branding goes programmatic

This shift has major implications on brand marketers' media mix. Historically, mass media advertising such as TV has been home to branding and awareness campaigns, while digital—and specifically programmatic—has been the domain of direct response. This makes logical sense. TV delivers large audiences (though with limited targeting capabilities), perfect for top of the funnel messages and for driving brand recall[3]. Programmatic advertising aligns easily with the bottom of the funnel, especially for brands with online purchase channels. Measuring the value of a brand impression is hard, but determining the ROI on a conversion is math that fifth graders can handle (I still can't believe how fast they're growing up—calculating ROI!).

As dollars shift to programmatic, marketers will need to reassess how they execute their branding initiatives in the new-world media mix. Fortunately, programmatic is maturing and is no longer just about direct response: it can now be used to increase brand awareness, preference and recall. Obviously this means a change in the messages and creative used, but just as critical is a change in how audiences are developed.

Audience sculpting using mutual affinity

The early days of programmatic branding audience development looked a lot like traditional advertising audience development. In order to get the scale needed—often tens of millions of people—marketers were forced to take what they could get. This could mean spray-and-pray with no targeting, or broad swaths of demographics (such as males and females 18–54 years old). These methods additionally lend themselves to false impression counts due to a lack of contextual data. What has been missing is an audience sculpting method that provides large reach and also appropriate relevance.

An emerging approach to solve the reach-relevance problem is to use the affinities of your existing customers and fans to target others who may be receptive to your message. To understand your audience, modern marketers can use the vast amounts of public social data as the world's largest focus group. Social engagement provides a way to capture both the conscious and unconscious influence a brand has on consumers. By analyzing the active engagement and affinities of this 2B+ person audience, marketers can predict—at scale—how effective their campaigns will be at moving their target audiences from awareness to consideration and ultimately purchase.

So, let's say you're a CPG brand looking for the right audience for your programmatic branding campaign. If you need a large audience, it can be tempting to just examine the other consumer and entertainment brands your customers like (known as forward affinity). You will certainly find a large audience with this approach, but popularity will drown out relevance and your top affinities will be the celebrities du jour such as Taylor Swift, Beyoncé or Katy Perry.

You can try the reverse approach (reciprocal affinity) and look at brands' audiences that have affinity for your brand. This will deliver a more relevant audience, but will be harder to scale, as many audiences will be smaller than your own. To optimize reach-relevance, you need a combination of both, or mutual affinity. This is the brands that your customers like, whose audiences also have affinity for your brand. Or, to think of it in the parlance of those fast-growing kids, it's like finding out someone you like already has a crush on you.[4]

Act-alike modeling enables predictive branding

Once you understand the top mutual affinities of your brand, you can extend your target audience by finding more people like them. While traditional media uses static look-alike demographics for modeling, social data captures behavior and thus lends itself to act-alike modeling. Act-alike modeling looks at observed consumer engagement behaviors to predict which audiences show affinity towards your brand and thus are likely to respond better than an average population. Instead of just tracking Facebook page likes or Twitter followers, the best result will come from modeling audiences using active social engagements: content likes, photo posts, comments, retweets, replies, hashtags, etc.

While this is easy to describe in theory, real-world execution is difficult and resource intensive. To engineer branding audiences that are likely to engage, you need some data science muscle, plus your own data. For some companies this may be achievable, but for others (especially those disconnected from consumers by their sales channels), it is unrealistic.

But with data services that includes third-party data and modeling (such as Data as a Service (DaaS) from Oracle Data Cloud), brands can now start to sculpt the right audiences based on the mutual affinities they have discovered. The beauty of this methodology is that as you engineer the audience, you are also modeling the likely engagement and affinity levels. Your programmatic branding efforts are now predictive and geared toward the middle of the funnel.

Predictive branding is the future of programmatic branding and its adoption is growing. Scores of brands and agencies already use this methodology as part of their programmatic campaigns. Before long you may even read the comment, "programmatic branding—you grew up way too fast!"

1 I perhaps posted one such photo of my kids, and one of those quotes may have come directly from my mother

2 eMarketer predicts that digital ad spending will surpass TV ad spending in the US in 2017.

3 The most critical marketing metric, as detailed in *How Brands Grow* by Byron Sharp (who appears to love footnotes as much as I do)

4 Except without the little folded-up notes, which I assume have been replaced by Snapchat

About Stephen

Stephen Tarleton is the CMO of AffinityAnswers, a software and data company delivering predictive branding to ad-tech companies, agencies, publishers and brands. Stephen previously led Marketing and Sales at People Pattern, a Mohr Davidow Ventures funded start-up, as well holding marketing leadership roles at Bazaarvoice, Dell, AT&T and Nokia.

Stephen received an MBA at McCombs School of Business at the University of Texas and a BS degree in Electrical Engineering at North Carolina State University. He also serves on the advisory board of Marathon Kids, a nonprofit improving the health and fitness of children all over the world.

Targeting in the age of micro-segmentation:

Good, better and best approaches

Craig Teich

Executive Vice President, Global Sales, Connexity, Inc.

In a world where consumers are exposed to more than 5K ads a day[1] and only engage with about 10 of them, its clear why better targeting is so essential. Luckily, over the past 10 years, our ability to learn about and understand consumers has reached new heights.

Through micro-segmentation, we can leverage audience information to better target, understand and connect with our customers. Let's explore three approaches of audience segmentation and explain when each level of granularity is important (or "good enough") to meet the goals of your campaign.

Good: Demographics are a solid place to start

Targeting groups of people based on demographics such as age, gender or household income is a popular place to begin a segmentation strategy.

Of course, demographic targeting has its critics. In a world of ever-improving marketing personalization, demographics can be considered an over-simplified approach to targeting, because it doesn't address exceptions, complexities and differences among the individuals within a broad bucket. For example, Hitwise (a division of Connexity) found that 32% of people who visit top beauty and cosmetic sites are actually men. This means a beauty brand who markets exclusively to, "women age 18–45," could be leaving out nearly a third of their potential audience.

That being said, the fact that demographic targeting is quite broad also can be an advantage; demographic segments often provide the greatest volume because they encompass such large groups of people. For that reason, demographics can be especially useful for higher-level branding campaigns where you want to achieve greater reach and exposure—at a lower cost.

Better: Getting personal with lifestyles

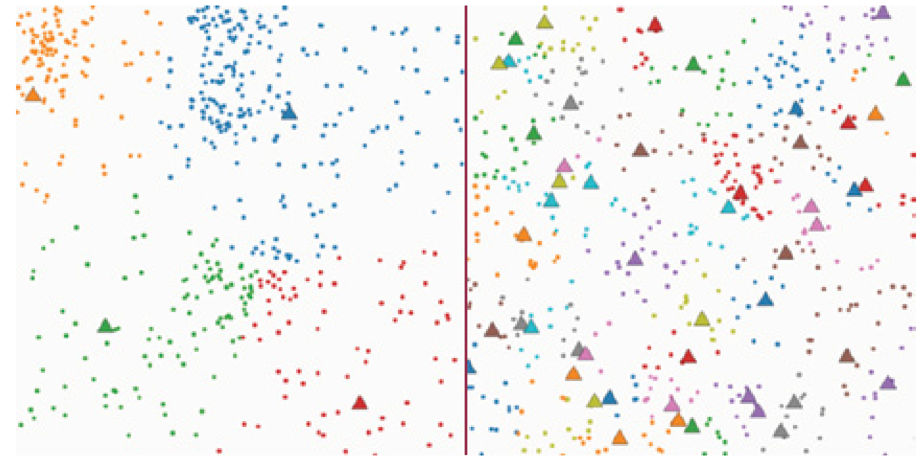
Targeting audiences on the basis of their "persona" can allow marketers to even more accurately understand (and even predict) their behavior. A "persona" is not only defined by demographics, but also can be characterized by a combination of interests, purchases or patterns of behavior, which represent a "lifestyle."

One way marketers identify "lifestyles" is by matching demographics to relevant online behaviors. For example, a make-up brand advertising their latest lipstick line may want to target not just women 18–45, but specifically "beauty maven" personalities; women who have purchased make-up products or consumed content about beauty.

Targeting on the basis of lifestyles can improve the accuracy of your predictions, but they are not foolproof. Consumers' daily lives have become so saturated with media that they can usually spot campaigns that have essentialized them into a "bucketed" persona—and in some cases, they even resent this reductive approach. Not all female "health buffs" will respond to a banner ad promoting, "flat abs now." However, people's attitudes, complexities and purchase intent can come to light when you start moving from tailoring to personalization.

Best: Micro-segmentation is the future

Micro-segmentation involves layering hundreds or even thousands of data points to identify granular clusters of individuals. Rather than looking at target "groups," marketers can layer rich sets of first- and third-party data to identify hyper-relevant segments based on attributes like lifestyle, interests, attitudes, purchase behavior, search behavior, panel data, buyer stage and much more. The result is a rich mosaic of tens, hundreds or thousands of micro-audiences, rather than just 10 or 20 segments.



Moving from broad-based segments (left) to micro-audiences (right) allows for more relevant messaging to smaller "clusters" of people.

Your first-party data—your own customer and visitor information—gives you an excellent jumping-off point for identifying your most valuable segments. For example, in a Big Data report, McKinsey[2] reveals how Tesco uses its own loyalty program and purchase data to analyze the buyer journey that leads up to a transaction: It uses this information to create micro-segments that inform their product mix, pricing and promotional strategy.

The more information a brand has on its customers (as in, the greater number of signals it collects), the more data it has to "pattern match" similar individuals and identify new micro-audiences outside of its own database. In order to identify and target new customers, marketers can leverage third-party data sources to identify consumers with similar attributes to their own best customers.

The trade-offs of granularity

In many instances, micro-segmentation will not be a cost-effective strategy—certainly, no brand can launch tailored campaigns for every single micro-segment in their potential audience. However, in cases where segmenting audiences by demographics and a couple key behaviors or attributes is not enough, marketers can segment based on additional data points to triangulate an even more "ideal" customer.

Let's say a home technology company released a cutting-edge "smart" baby monitor that reads their baby's vitals and syncs them to the cloud. Their research shows fathers are more likely to make household technology decisions, so they begin targeting this segment first, with little success. The marketers then realize that perhaps the average dad isn't ready for such advanced technology. Then, it's time to get more creative. They decide to double down on promotion to a small, specific micro-segment of "Tech Enthusiast Dads." Demographically, they are male, parents and have a high-income—behaviorally, they have purchased baby products and searched, clicked or purchased high-end technology. It costs the company nearly twice as much to target such a narrow micro-segment, but the product is so hyper-relevant to this audience that they convert at 5x the rate of normal dad segments.

Final thoughts

Audience segmentation is a careful balancing act. It's easy to assume relevance and granularity are always important, but micro-segmentation may not always be necessary to achieve the ends you desire. If your goal is to generate brand awareness among a wider audience, it's possible that larger demographic or lifestyle segments will serve the needs of your particular campaign (at a lower cost).

If you do plan to delve into micro-segmentation, strategize based on your main objectives; for example, if your goal is to increase return on ad spend, spend your resources identifying and targeting the micro-segments with higher margins and lower CPAs.

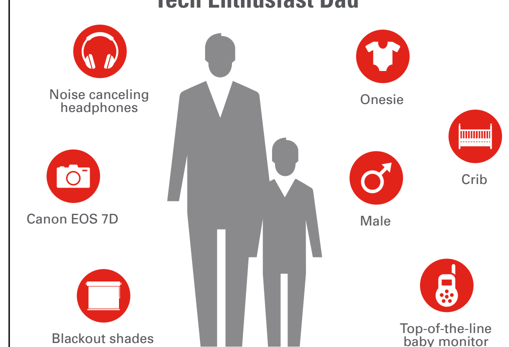
[1] https://sjinsights.net/2014/09/29/new-research-sheds-light-on-daily-ad-exposures/

[2] http://www.mckinsey.com/business-functions/business-technology/our-insights/big-data-the-next-frontier-for-innovation

About Craig

Craig Teich brings 14 years of digital advertising experience to Connexity. Craig envisioned and helped to launch the Audience Solutions division of the company. Prior to joining the team, Craig worked for WildTangent for eight years, introducing several new display advertising models in the online gaming space.

He has extensive experience working with marketers across verticals and has successfully implemented several award-winning campaigns with major brands, including; Unilever, Coca-Cola, Turner Broadcasting, Sprint, Novartis and P&G. Craig is a graduate of the University of Michigan and lives in New York City with his wife and two daughters. While his kids miss the gaming world, his wife couldn't be happier about his new focus on retail!



Can you predict auto loan and credit card demand from mortgage activity?

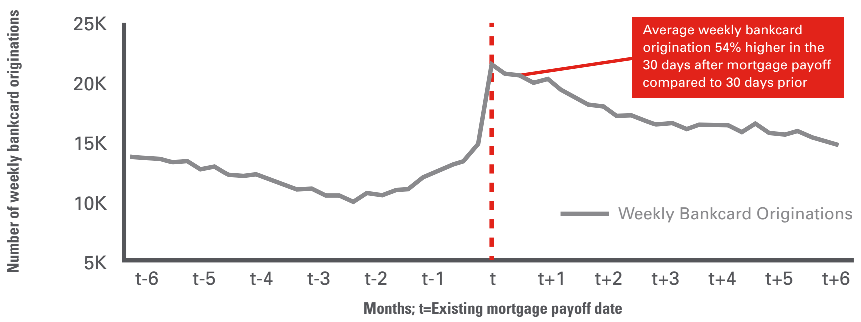
A TransUnion consumer behavior study

Charlie Wise

VP, International Research & Consulting, TransUnion

Weekly Bankcard Originations

(Six months before and after existing mortgage payoff date)



For bankcard and auto lenders looking to make offers to consumers, timing is everything. Make an offer too early and they're likely to forget about you when their actual need arises. Make an offer too late and you've missed the opportunity—and another lender has probably landed a happy new customer.

Finding the right triggers and insights into the correct timing to meet consumer needs is the key to making sure your efforts are not wasted.

Data about extended purchase behaviors can help guide the right offers at the right time. For example, new TransUnion findings show bankcard and auto lenders have an opportunity to leverage behavioral insight from other products—such as mortgage inquiry—which is predictive of increase in bankcard spend and both auto loan and card origination.

This theory was the inspiration behind TransUnion's recent mortgage inquiry study[1], Credit Behavior Before and After Mortgage Event. This study focused on mortgage applicants in the prime or better risk tiers[2] with an existing mortgage—those who are likely moving or refinancing. The goal was to understand if consumers really change credit behavior before and after a mortgage event.

The study included 16.7MM consumers who paid off their mortgages and moved with new mortgages or refinanced existing mortgages between Q1 2013 and Q2 2015 and analyzed the behavior of consumers in the prime or better risk tiers who make up the large majority of the mortgage-seeking population. In fact, 89% of consumers who took on a mortgage to move into a new home belonged to these risk tiers. Approximately 85% of consumers who refinanced their mortgage loans belonged to the prime or better risk tiers.

TransUnion's research[1] found that consumers applying for a new mortgage are on average two to three times more likely to initiate an auto loan or credit card account over the next 12 months. As shown in the first chart, many of these consumers open these accounts as soon as one month after their existing mortgage payoff.

While the research confirmed that consumers do change their credit behavior, it also showed behavior contrary to what lenders might believe.

For example, one long-held assumption among lenders is that new mortgage applicants spend less on their credit cards prior to their mortgage closing event—either to ensure their credit picture does not change or simply because they anticipate spending more once they move into their new home.

Contrary to that view, the study also found consumers actually increase bankcard spend by up to three times in the month prior to mortgage payoff and new mortgage origination, as illustrated in the chart on the right.

There is also a difference in card spending between consumers who are moving compared to those who are refinancing, with the latter category spending more in the months before their mortgage payoff. Consumers who are refinancing may anticipate lower mortgage payments and take advantage of the greater available cash flow by increasing card spending in the months before refinancing.

Personally, the most fascinating part of this research study is the finding that credit card spending increases prior to a mortgage payoff. Knowing these consumers may benefit from increased credit limits on existing cards can present another opportunity to increase business from your customers.

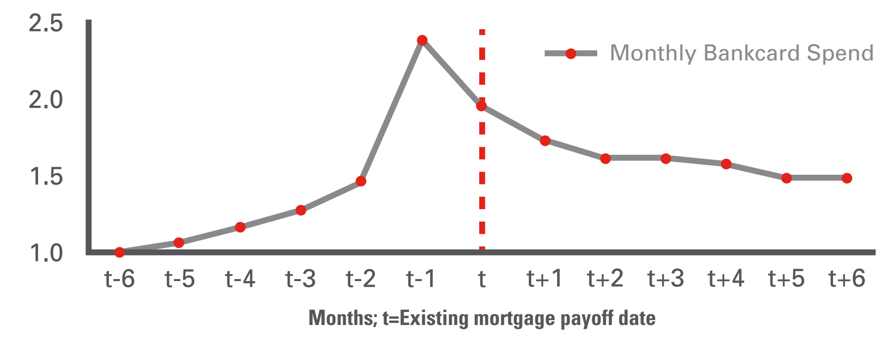
Considering mortgage inquiry activity as an effective early predictor of an increased demand for credit across card and auto loans enables lenders to strategize relevant offerings. Overall, these findings illustrate how necessary it is to look across products to get the full picture[1] of consumer credit behavior.

By using mortgage inquiry data and predictive models in marketing and account management strategies, lenders can identify existing cardholders with mortgage inquiries for proactive credit line increases, something many consumers will welcome leading up to the mortgage event.

Importantly, knowing that consumers either purchasing new homes or refinancing mortgage loans are far more likely to open a new auto loan or credit card soon after this major life event (many within one month), can give lenders valuable information as they look for credit-active consumers with new credit card and auto loan needs.

Monthly Bankcard Spend Indexed to t-6

(Six months prior to mortgage payoff)



Of those who refinanced, a bankcard spending spike was observed prior to payoff. Spending remained elevated after payoff.

To take advantage of this unique insight regarding the relationship between new mortgage activity and credit demand, TransUnion modeled borrowing behavior using precursors to a new mortgage origination (credit behavior changes such as payoffs, utilization shifts and score changes) to develop predictive in-market audiences. These models provide significant predictive power for new mortgage, mortgage refinance, credit card and auto loan borrowing behavior. The resulting audiences, now available through Oracle Data Cloud, give financial services advertisers the ability to reach consumers likely to be in-market for these products early in the consideration stage, before they are likely to begin inquiring for new mortgages, cards or loans.

For more insights on TransUnion's study and additional information on how lenders can use this information, please visit www.transunioninsights.com/mortgageimpact/.

1 http://www.transunioninsights.com/mortgageimpact/?utmsource=adweek&utm_medium=ad&utm_campaign=datacloud091516&utm_source=adweek

2 The VantageScore © 3.0 risk ranges reviewed in the study were for prime or better (scores of 661+). VantageScore risk tier ranges are as follows: Non-prime = 300–660; Prime = 661–720; Prime plus = 721–780; Super prime = 781-850

About Charlie

Charlie Wise is responsible for leading financial services research, industry analysis, sales consulting and thought leadership across TransUnion's international regions. In his prior roles at TransUnion, he drove similar research and consulting efforts for TransUnion's U.S. Financial Services business, and also led business development activities and strategy for TransUnion's CreditVision and Alternative Data credit solutions across the U.S. Information Services business unit. His career includes senior roles in marketing, customer strategy, credit and risk analysis, business development and client management at major financial institutions, including JP Morgan Chase and BMO Harris Bank.

Charlie received an MBA with Distinction from Kellogg School of Management, and holds a BS in Commerce from the University of Virginia's McIntire School of Commerce.

Stop targeting "soccer moms"

Ken Zachmann

SVP/GM Digital Solutions, V12 Group

It wasn't all that long ago when targeting pre-baked or profiled personas was the height of sophistication for most data-driven marketers. On-boarded catalog cooperatives powered what was promised to be the Magic 8-Ball of ad-tech ingenuity. This broad-based and heavily modeled data was our only window into a consumer's offline or "real-world" behavior. Back then, success was swift at the top of the funnel where large marketers could paint their brand across households with a wide, persona-driven-brush. On the other hand, at the lower end of the funnel, this same tactic couldn't quite hit the mark for direct response or highly specific behavioral targets.

Fast forward five years and we data providers are now helping marketers succeed by delivering CRM segmentation, analytics, custom audiences and predicting likely behavior based on measurable results. A good chunk of this success is a nod to higher quality data standards across the board and the move towards more deterministically matched data. But, the critical shift has been up to us, the data providers, working with marketers and agencies, nudging them away from persona-based targeting towards custom segmentation. This level of customization aimed at increasing revenue has provided unprecedented insight to measure viewability, clicks, engagement and conversions that in turn feed future models and help construct a scaffolding for marketers to build a holistic view of their customers and prospects.

This level of custom segmentation has translated into unquestionable increases in revenue across display, device, video and social. Beyond the short-term revenue lift, these insights often jump the siloed walls of a brand's internal marketing channels and provide in-depth knowledge on how to best engage customers and prospects into the ever elusive omni-channel dialogue.

And, it is precisely at the point of engagement where additional custom data must be applied to ensure these audiences are triggered to act when the impression is served. So, what does all this custom offline data have to do with ad engagement you're thinking? A lot.

We've seen all too often that marketers focus all of their efforts on who to target but aren't putting the same level of analytics behind their creative. At this final stage, if marketers aren't using psychographic or personality-based data to optimize creative and landing pages, they're at risk of losing up to 30% or more of the users they put so much effort into reaching. So, before the marketers we work with pull the trigger on any campaign we'll show them how to create, test, optimize and re-test sometimes several thousand pieces of creative and landing pages to target any number of "travel-loving extroverts" or "deal-savvy introverts."

Okay, by now I'm sure you're thinking that offline custom segmentation and optimizing engagement can't be the whole story. After all, there's much to be gleaned from the online data world, right? And, while it's true that interest and intender data does have its place, all too often the performance is just not there and marketers are left wondering why so many "likes" didn't lead to conversions. So yes, layering in these online triggers as additional insights does serve the overall data story. But remember, while the opportunity and allure to test online-only and mobile data continues to grow, it's the offline data that should serve as the foundation of all your data-driven campaigns.

So, I'll leave you with this: You've got thousands of pre-baked personas to choose from and folders of creative to toss up for that next campaign. But, if you really want to improve the effectiveness, efficiency and accuracy of your marketing tactics, you need to gut check your data strategy and remember that offline data is all about action and future behavior is often best predicted by past behavior. And please, let's not spend all this time on creating the perfect custom audience and not give equal attention to building a data-driven creative strategy too.

Oh, and in case you forgot, please… just stop targeting "soccer moms." Let the data experts show you a better path to turning audience data into revenue.

About Ken

As GM of the Digital Solutions division at V12 Group, Ken Zachmann brings 15 years of experience in Digital Media, including data strategy, business development and digital partnerships. Prior to V12 Group, Ken spent five years in business development at Datalogix,. Ken also has six years of brand marketing experience with eBags.com where he managed strategic partnerships for both eBags.com and Tumi.com. Prior to that, Ken was in account management at Commission Junction/Value Click.

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FIVE STRATEGIES EVERY MARKETER NEEDS TO KNOW

1. Make your customers work for you
Your best customers hold the keys to your future revenue. Segment your RFM responders, profile their top shared attributes and create new audiences based around all the attributes you know and all the ones you don't.

2. Build a lifetime value analysis
Now that you know what attributes your best customers share, build a series of online and offline test campaigns, measure results and score your customers to build hyper-focused look-alikes.

3. Quantify your creative
Turn your designers into data-driven artists. Utilize offline and psychographic data to dictate the creative. Build and test custom creative and watch engagement metrics pile up.

4. The match matters
If you're onboarding your CRM data, make sure your on-boarder has the ability to do deterministic matching. A hyper-focused audience will never yield true results if you're targeting household cookies and devices.

5. Test. Optimize. Repeat.
Do this and do it fast. If a campaign, creative or data target is missing the mark, split it, swap it or change the variables to reach that KPI. Data is all too often the first causality of a low-performing campaign. Don't let that happen.

Data and analytics:

A roadmap to marketing ROI

Stephen Zimmerman

Director, Custom Analytics, Experian Marketing Services

Developing a marketing program that prioritizes ROI in a world of "big data" means that today's marketers need quality data and analytics to generate the insights needed for improved campaign performance. However, high-quality insights can be expensive and require significant investment in data quality, data enrichment, predictive analytics and campaign measurement to be successful. Because building an efficient marketing program is so complex, outlined here is a roadmap for an effective data-driven analytics strategy to help you win with customers.

1. ESTABLISH PROCESSES TO IMPROVE AND MAINTAIN DATA QUALITY

Predictive analytics is all about better anticipating the future of your business, and more importantly, your customers and prospects. The art and science of predictive analytics relies on a solid foundation of quality data. In the predictive analytics world, a common phrase is used: "garbage in, garbage out." If your data quality is poor, then any decision-making driven from that data will be poor as well. For example, in recent years the U.S. Postal Service (USPS) estimated that approximately 6.8B pieces of mail could not be delivered as addressed.[1] Considering the costs of processing, printing, assigning postage, mailing, forwarding, returning and disposing of mail pieces sent to wrong addresses, that's a lot of waste. Add in the cost of the flawed analytics and business decisions made from corrupt information and the cost to a marketer can be enormous.

Maintaining data quality starts within your own your customer relationship management (CRM) system. You should establish processes to routinely maintain accurate addresses and identify, aggregate or eliminate duplicate records. Also, be sure to capture mailing addresses or email addresses that can be used for future campaigns. Implementing fundamental data hygiene processes can improve the quality of your data and more importantly, the ways in which you use it in your marketing campaigns.

2. IDENTIFY AND MAINTAIN KEY PERFORMANCE INDICATORS (KPIs)

As today's business intelligence increases in complexity, it's critical that marketers establish key performance indicators (KPIs) that can be easily reviewed on a periodic basis. Typical KPIs include number of responses or visits to a website, opens or view-throughs, transactions and dollars spent by product category and measurements related to marketing goals. As information is collected, it should be aggregated regularly and made available through a reporting template, such as an online dashboard, to monitor and understand customer behavior.

3. DEVELOP A PLAN TO BRING ANALYTICS INTO YOUR BUSINESS

Analyzing data and gathering customer insights can be overwhelming for marketers where vast amounts of information are available at their disposal. Some organizations have few or no statisticians on their staff to analyze data appropriately. Other organizations might share a statistical team with other business functions and receive limited bandwidth to provide necessary marketing insights. Whether using your organization's analytics team, or filling analytical gaps by partnering with a marketing analytics provider, here's a list of analytics services that can help a marketer get started.

- **Profiling and exploratory data analysis.** This is how marketers get to know their customers. From a technical standpoint, a statistician takes a customer file, enriches it with external data assets (think third-party data) and creates a portrait of the customer. It may identify best and worst customers as well as provide demographic and behavioral information that can influence future campaigns.
- **Customer segmentation.** As a marketer, you probably target segmented sections of your customer and prospect universes to provide personalized and relevant messaging based on the makeup of your segments. Attaining these segments is an analytical endeavor. To segment, statisticians use first-party data, third-party data or a combination of the two to determine clusters of customers that are actionable for the marketer. Some examples could be millennials, singles, families or empty nesters. Data compilers have also developed their own segments that can also be leveraged and represent groupings of consumers based on the available data assets at their disposal.
- **Predictive modeling**. Once marketers understand the profile and clustering of their customers, statisticians can develop predictive models that identify high-value targets for campaigns. These are multipurpose, expanding or reactivating customer relationships, identifying customers more likely to defect and requiring intervention and targeting lost customers for reactivation. For acquisition, many data compilers also develop prospect models to identify targets that look like high-value customers.

4. ENRICH YOUR DATA WITH ADDITIONAL THIRD-PARTY DATA

Basic marketing information such as demographics, purchase behaviors, interest, activities and psychographics should be used to help marketers fundamentally understand their current customers. Marketers should have a holistic view of their customers, knowing who their customers are, what they like, how they consume information to make purchase decisions and when they like to be reached. When evaluating different data providers, make sure you can answer these questions:

- **How does the vendor collect and update its data?** Some vendors gather data directly from original sources and regularly refresh and update their data as conditions change. Others act as a broker for another party's data and are not responsible for where the data originated or whether it is current.
- **Are the data assets actual or modeled?** Some data assets, such as age and gender, come from public sources and represent actual data. Other pieces of data, however, may be modeled based on a small sample of data using other data assets and only represents an estimated snapshot of the consumer.

5. CREATE A TEST AND LEARN ENVIRONMENT

Using the aforementioned insights to develop a clear view of your customers is where the fun begins—you develop creative ways of engaging with your clients and prospects to grow your business. However, targeting can only be successful if it's measurable. To do so, you need to analyze data across channels and devices that comes from direct mail, emails, digital advertisements or site activity related to specific promotions through source codes, pixels, an email service provider or media company.

More importantly, part of every marketer's pre-campaign deployment checklist should include control campaigns. Not only are test campaigns considered best practice and need to be conducted, but they also should be designed by a statistician to determine the optimal size needed to make relevant statistical conclusions. Afterwards, the results are analyzed and the marketer can determine what promotions were successful and how to roll out with larger campaigns for the "Champion" while still conducting "Challenger" cells to test other campaign variations. While these steps can seem overwhelming for a marketer working under pressure for results with limited budgets, following these guidelines can help marketers looking to guide their decision-making process using data and analytics.

[1] https://www.uspsoig.gov/sites/default/files/document-library-files/2015/ms-ar-14-006.pdf

About Steve

Steve Zimmerman is a Director of Custom Analytics for Experian Marketing Services Custom Analytics team, and has been with Experian since 2010. In this role, he leverages his knowledge of applied statistics to help Experian's clients analyze, test and implement marketing solutions that deliver measurable business value. Steve oversees all phases of analytical projects including initial consultation, project management, analysis of data, presentation of results and post-campaign assessment. He also supervises other Custom Analytics team members in delivering custom analytical solutions that help clients acquire and retain customers more effectively, and increase profitability and return-on-investment from marketing campaigns. Since joining Experian, Steve has performed analysis for clients in a variety of industries including catalog, retail, publishing, financial, entertainment, not-for-profit and insurance.

Steve brings more than 23 years of industry experience performing statistical analysis in support of database marketing. Prior to joining Experian, he was a Manager of Modeling and Analytics at Zurich Insurance, where he developed a customer database for the business unit, and utilized predictive modeling for the Marketing Research Department to target acquisition, cross-sell and retention initiatives that drove profitable growth. He also held management positions at Discover Card, GE Financial Assurance and The Signature Group, where he utilized his knowledge of predictive modeling, segmentation and database marketing to provide analytical support of marketing initiatives.

Steve has earned a Master of Science in Applied Statistics from Purdue University, and a Bachelor of Science from Creighton University with majors in Mathematics and Statistics. He also earned a Master of Business Administration from Northern Illinois University in 2011.

The data at the center:

Why audience planning and management are the new keys to media buying

Karima Zmerli, PhD

VP Audience Management and DMP Solution Lead, Merkle Inc.

Many marketers talk about audience management as a key function in today's marketing, but few have really adopted audience management as part of the campaign process. In fact, many confuse it with media planning and a large majority are not yet exposed to its meaning.

Today's data is readily available—at the right price and in the right place. So, how should our process and media buy take advantage of it? What is the work flow and who are the new stakeholders involved in the process? We want to address the gap and contribute to the evolution toward a higher adoption of data-driven approaches.

At present, there is still a gap between what can be done versus what is actually being done.

We are all familiar with media planning as a key component of any media-buying process, where an agency, after being briefed about marketing objectives and about the primary target, assign a media planner to identify where to buy media. The planners are mostly looking at syndicated research tools such as Nielsen and comScore to identify which media property and site indexes highest against the target population. This process has literally not changed since the 1960s in the offline channels and the 1990s in digital. Even now, when we have massive data and more tools available to run the process differently and more efficiently, we still rely on the same old syndicated research.

By planning media in this traditional way, we incur a lot of waste (generally between 60-70% of what we serve is going outside of the target population). The reason is that we buy the *where* as a proxy for the *who*; some might say that programmatic solved for that, but I disagree. Programmatic is mostly based on bid algorithm optimizations and doesn't account for the *"who"* in many cases. Only a few tactics in programmatic do a good job of identifying algorithm-based audiences that work really well, but it's more of a targeting tool than a true audience planning and management tool.

Audience planning, as well as audience management, is really about the who that you are going after—the *where* you are buying the audience is a secondary step in this new campaign process.

Audience management is compiled of an approach that enables planning, and that focuses on leveraging data and modeling in order to segment and syndicate to a media platform.

Change is overdue in this area, in that media planning should be proceeded by audience planning as media optimization choices should be proceeded by audience management. Audience planning is leveraging data and analytics to build segments or audiences (lists of users or cookies) that are needed to buy media against.

Optimizing or managing an audience is the process in which a marketing analyst revisits previously built audiences and based on current performance, changes the composition of the audience to make it perform better.

The following are recommended approaches for audience planning:

1. Build personas based on marketing research. This approach is traditionally recommended in brand awareness campaigns to inform creative and media planning. We recommend creating look-alikes and overlaying funnel stages to create segments and well-defined lists of users/cookies (using offline and online data) to be targeted in media and other channels.
2. Use first-party data to build predictive offline and online models and use the models in planning media buying.
3. Leverage third-party data (not just demographics) to size and plan media buying.

These analytical approaches are being used sporadically but not systematically in marketing today. Campaign processes need to change to accommodate these new steps and tasks and make them part of the new way of planning campaigns.

Currently, media processes don't utilize audience planning nor do they rely on audience optimization—that's a big miss. Most of us in the industry focus on optimizing bidding strategies and media tactics by looking at the most cost-effective way to improve a campaign's performance. It is still uncommon to see media planners and analysts optimizing audiences as regularly as they optimize media tactics and bids. In many cases the current processes ignore the audience story.

Audience planning and audience optimization need to be at the center of marketing. They need to be imbedded in the campaign process no matter whether the goal is awareness, engagement or acquisition. For that reason, here is the flow we recommend following when setting up and managing your digital campaign.

Adding audience-related steps will also require re-thinking the skillsets needed to plan, execute and optimize the audience data required to execute successful campaigns. This will include more data scientists and analysts bringing precision and insight into the center of media buying.

About Karima

Karima Zmerli is a passionate data scientist and strategist with more than 10 years experience in digital analytics. Karima joined Merkle after four years at Razorfish where she lead analytics for various Fortune 500 clients. In her current role, Karima leads Digital Data Strategy to help develop Merkle Digital Data offerings and built Audience Management Solution to help boost performance for Merkle clients.

Karima brings a wealth of experience in managing analytics and technology across multiple channels (Display, Search, Mobile, EM, DM, Print, TV and Radio) for Retail, Travel & Entertainment and Financial Services companies, including Citi, Staples, Victoria's Secret, DirecTV, Amex, Delta, TIAA-CREF, GM and GMAC/ally. She holds a PhD in Marketing and is a Fulbright Alumni.

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