

## Ethnography in the Age of Analytics

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*As North America begins to emerge from the global financial crisis of 2008-2009, companies are turning up their investment dollars. This investment includes a renewed focus on what might loosely be called “the customer experience.” In our recent consulting engagements, this focus often comes in the form of a clearly stated client demand for a very unclear concept – a “360 view of my customer.” The metaphor conjures up a pantopticonal image of customer beliefs and behaviors which would precipitate a perfectly calibrated set of products and services. Ethnographic practice would, one would think, be well positioned to support this renewed focus on experience. However, we have found that the conversation about customer experience typically begins – and ends – with analytics and business intelligence. The metaphor of a “360 view of my customer” has led to an emphasis on data acquisition, with less of a focus on experiential understanding. That said, data modeling can be fruitfully employed with the interpretive practices of ethnography – as long as the focus returns to experience and away from data hoarding.*

### CONTEXT

We who are in the business of trying to understand consumer behavior in the service of marketing and commerce face two independent but simultaneous revolutions. First, consumers are spending ever-increasing portions of their lives inhabiting what we could broadly call *the digital space*. Everyone has their favorite stats that support this seismic trend. Some of our recent favorites include:

- Twitter has 190 million users; it has reached over 50 billion tweets; during the recent world cup, Twitter posted 850,000 tweets a second.
- YouTube has over 2 billion videos streamed; there are now more hours of video on YouTube than there are hours of broadcasts since the beginning of television
- Facebook is now the world’s third largest “country”, recently reaching 500 Million members

The point is at once straightforward and hard to fully appreciate: Increasingly, the digital isn’t something that people do, it’s something that people *are*. Understanding consumer behavior therefore involves not just understanding how people are using digital technologies – a question that was ripe on people’s minds a decade ago – but understanding how digital technologies are transforming people’s sense of who they are.

The second revolution is in how technology is able to provide *analytics*<sup>1</sup> – the ability to track and measure consumer behavior in this digital space. In the recent past, tracking and measuring took the form of “recognizing” visitors to a website through cookie-ing or other now standard technology.

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<sup>1</sup> For present purposes, we’ll use “analytics” to denote both web analytics that capture website behavior (and increasingly, mobile and social behavior) and BI tools that typically run on top of customer databases that are capturing offline data (e.g., from credit cards, point-of-sale transactions, and call-centers)

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Today, it means knowing how people explore content on the web, on their phones, in emails, on their social networks, at their ATMs, when they talk to customer service representatives, when they watch streaming videos, when they play games, interact with their televisions, redeem coupons, buy items in a store, and so on. It means, in short, creating a purported “360 degree view of the customer” across all touchpoints that are enabled by technology.<sup>2</sup> We’ll describe some of the standard and emerging capabilities in analytics, but the point here is simply that the ability of these technologies to capture online behavior and make predictions from it is increasingly – and, to some, startlingly – sophisticated.

The implications of these two developments for businesses – and the marketers and merchandisers that work in them – are immense. If you want to better understand your consumer in order to provide them more goods and services, you are witnessing a perfect intersection: people are spending more and more time in spaces where their behavior can be observed and tracked with increasing precision. No wonder, then, that CMOs and CIOs are clamoring for improved analytics capabilities. In our line of work – the marketing and IT space – the chorus is deafening. The promise of a complete view of the customer seems within reach. As a Forrester analyst at a recent conference in New York put it: “Customers are complex beasts – in order to completely understand the customer, we need to pull together all the data we possibly can through analytics – and the time is within reach when we can.”<sup>3</sup>

This demand on the part of clients is met by a rapid flowering of companies that promise real-time, on-demand understanding of consumers – and these companies are being acquired at a rapid pace by global technology and consulting enterprises:

| Company   | Date       | Company Acquired              |
|-----------|------------|-------------------------------|
| Accenture | 05.18.2010 | CadenceQuest                  |
| IBM       | 6.15.2010  | Core Metrics                  |
| IBM       | 10.2.2009  | SPSS                          |
| IBM       | 11.12.2007 | Cognos                        |
| Google    | 3.28.2005  | Urchin (now Google Analytics) |

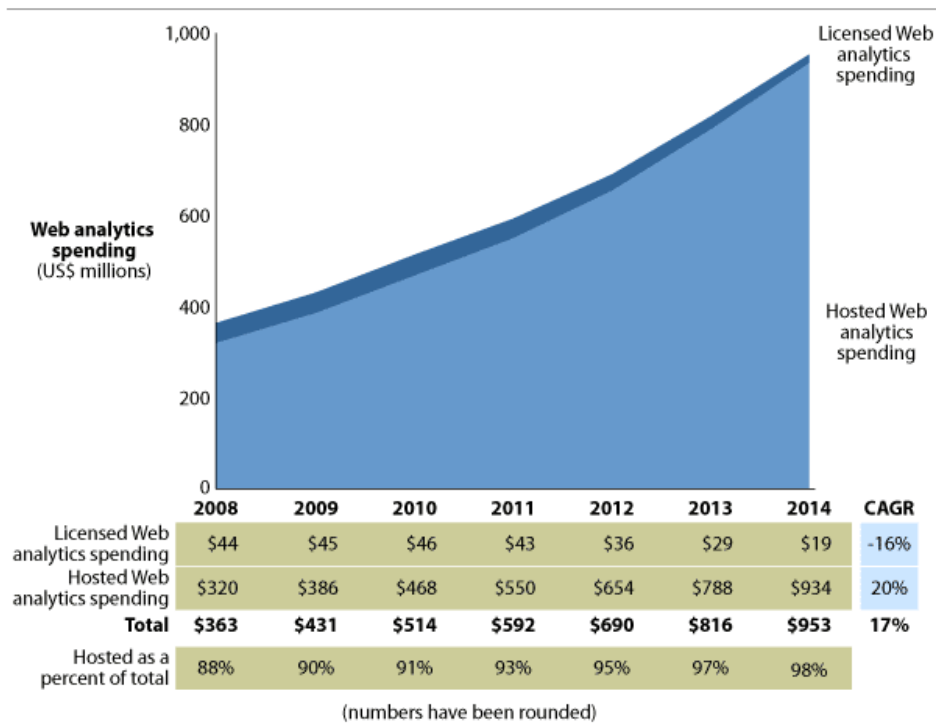
<sup>2</sup> As an exercise, type “360 view of the customer” into a search engine and note the volume of hyperbolic claims to completely understand customer values and behaviors. Many analytics specialists are careful to describe their work in terms of capturing customer activities and recognize this data represents only a part of a holistic view of the customer.

<sup>3</sup> “Using Web Analytics Insight To Inform Cross-Channel Customer Interactions”; Forrester’s Customer Experience Forum 2010, June 29-30, New York, New York, USA. As an interesting side note, the phrase “360 view of the customer” was included in the title of several presentations, and was in the authors’ experience one of the most oft-used shibboleths during the entire conference.

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| Company   | Date       | Company Acquired  |
|-----------|------------|---|
| Twitter   | 6.10.2010  | Smallthought Systems                                      |
| Adobe     | 9.24.2009  | Omniure   |
| Yahoo     | 4.9.2008   | Index Tools (now Yahoo Analytics)                         |
| Microsoft | 05.8.2006  | DeepMetrix Corporation- Gatineau (now adCenter Analytics) |
| Microsoft | 8.13.2007  | aQuantive (Atlas ad serving and analytics)                |
| WPP       | 02.11.2008 | NuConomy  |

Spend on web analytics alone is expected to reach \$1B in the U.S. by 2014 – global figures will obviously be much higher.



Source: Forrester Research Web Analytics Model, 3/09 (US)

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Source: Forrester Research, Inc.

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### FIGURE 1: Forecast of US Web Analytics Spending, 2009-2014

Universities are also recognizing the increasing primacy of analytics in the business world. Over 20 major universities in the U.S., including MIT, the University of Pennsylvania, and Carnegie Mellon University now have marketing analytics programs. DePaul University in Chicago recently started a graduate program in Predictive Analytics.<sup>4</sup> As a recent *Business Week* article put it:

If *The Graduate* were remade today, the new buzzword for the young could be “analytics.” Thanks to the Internet, the world has become a swelling ocean full of data. One grand challenge of our age is to find a way to harness that data. And that’s where the burgeoning field of analytics comes in.<sup>5</sup>

In the U.S., the demand for people skilled in analytics substantially outstrips the supply. IBM recently had over 2500 open job postings for analytics-related positions.<sup>6</sup> Clients are increasingly demanding a robust and comprehensive view of consumer behavior, technologies purport to provide it, and companies are actively looking for people to manage it.

In this growing conversation about applying analytics to enduring questions of customer experience, we have found ethnographic understandings of consumers to have an ever quieter voice. Put differently, the clients we have worked with – including, but not limited to, one of the U.S.’s largest retailers and one of the world’s largest food companies – have increasingly gravitated strongly towards the promise of a “360 View of the Customer”. As people deeply convinced by the value that ethnographic practices can bring to consumer understanding, we have witnessed this development with alarm. We have also successfully fought off the reductive applications of analytics with a number of our clients -- for example, when clients attempt to use transactional data as a simple proxy for the entire customer experience, ignoring customer motivations, attitudes, feelings, etc.). Nevertheless, analytics as a discipline has more and more found the ear of CMOs, CIOs, brand marketers, and merchandisers, and we have had to repeatedly address the question “why do we need anything further?” The old arguments do not convince, and we have found the need for a new way of engaging with the powerful, sophisticated, and valuable set of capabilities that analytics has become. Our question, then, is this: what happens to ethnography in the age of analytics?

### EXAMPLES FROM THE FIELD

What do our clients really mean when they ask for a “360 degree view of the customer?” Let’s look at two examples from the field where the context of the question will help clarify what our clients think they want. We will then turn to what we believe they actually need and how we can close the gap between the two.

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<sup>4</sup><http://www.itworldcanada.com/news/depaul-u-to-offer-grad-program-in-predictive-analytics/140926>

<sup>5</sup>[http://www.businessweek.com/the\\_thread/techbeat/archives/2009/12/want\\_a\\_job\\_analytics\\_is\\_the\\_thing\\_say\\_s\\_ibm.html](http://www.businessweek.com/the_thread/techbeat/archives/2009/12/want_a_job_analytics_is_the_thing_say_s_ibm.html)

<sup>6</sup> *Ibid.*

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### Example 1: “We know what our customers want”

Our first case involves one of North America’s largest “big box” retailers with annual revenues in excess of \$70B. SapientNitro is leading the development of a new eCommerce platform for this retailer, including strategy, creative, and technology (let us call this company “ShopCo”). As one would expect, ShopCo has a very sophisticated Customer Insights organization that conducts consumer research using a variety of quantitative and qualitative methods. One of their primary objectives for the new platform is to design a compelling digital experience based on a deep understanding of their consumers, one that will help create a personal connection to their consumers across multiple digital platforms.

During a planning session prior to entering the concept phase of the program, we were building out a customer research plan to uncover and prioritize user needs that should be incorporated into the design. The plan called for a variety of quantitative (online surveys) and qualitative (webcam diaries, in-home studies, paper prototyping) methods for defining these user needs. In sum, we were devising a standard set of protocols that had proven very effective across many client engagements in conceptualizing breakthrough user experiences.

Towards the end of this planning session, a member of ShopCo’s eCommerce team exclaimed “Why are we spending time learning about our customers in their homes and at their jobs? We know what our customers do – they show us online and in the stores every day!” She then proceeded to list out some of the things they knew about their customers – at a segmentation level, as well as an individual consumer level:

- Purchase history and preference
- Preferred media channels
- Transaction response behavior
- Influence of social media
- Brand affinity
- Loyalty scores

“We know this,” she continued, “When she goes to our website, when she opens an email, when she buys something in one of our stores, when she redeems a coupon online.” Her claims were a bit exaggerated – while ShopCo does indeed have a massive consumer database that captures the types of data above, channel integration is still a significant challenge. But there is no denying that ShopCo is on the path towards a sophisticated data warehouse with associated BI tools.

As the discussion evolved, it was clear that ShopCo’s eCommerce expert wasn’t making the absurd claim that knowing consumers is reducible to categories of data described above. She was making a subtler point that we don’t need to know anything else in order to predict what needs to be predicted – the propensity to purchase – and that the surrounding experience – how the experience is designed, can just be based on design “best practices.” In effect, she was making the claim that understanding *relevant* consumer behavior – behavior relevant to her business – is reducible to the

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measurement and tracking of this behavior across digital channels. That’s all she needs to “know her customer.”

There are many ways in which today’s analytics packages support the types of measurement and tracking described above. While it is beyond the purview of our present discussion to go into detail about these various capabilities – indeed, it is one of our claims that it behooves ethnographers to engage in this investigation directly and alongside analytics specialists – an example might help here. Consider the following scenario: “Nancy,” a ShopCo customer, notices her friend on Facebook has become a fan of ShopCo, so she becomes a fan of ShopCo too. She then visits ShopCo.com through Facebook, which is picked up by FacebookConnect’s API and a web analytics software package (e.g., Unica, Omniture, or Webtrends). While at ShopCo.com, she signs up for its newsletter. Later, she is marketed to via email and ShopCo’s eCRM program, and she is assigned a unique key in this email (a means to identify her as a specific customer). Nancy finds the email offer enticing, so she clicks on it and is immediately tracked by ShopCo’s email marketing engine, which sends out a “thank you” page that contains a conversion pixel – which, in turn, ascribes a “call to action” confirmation that becomes attached to her primary key. When Nancy scans a coupon using her mobile phone on one of ShopCo’s optical scanners, this data is also added to her primary key. When she phones ShopCo’s call center to initiate a return because she didn’t like a product, this, too, is tracked and added to her profile.

This tracking and measurement continues over time across multiple interaction points, leading to an increasingly rich picture of Nancy’s interests, propensity to respond to marketing, and, ultimately, her contribution to ShopCo’s bottom line. Multiply the data collected on Nancy by millions of customers, and ShopCo starts to formulate sophisticated predictive models of segmented consumer behavior, which are continually updated by the stream of further analytics data pouring in. Add to this the data from third-party cookies,<sup>7</sup> and soon we have a tremendous amount of online behavior is tracked and monitored. The appeal to marketers is clear.

The purpose of this example is to illustrate the allure of analytics in solving a problem that marketers face – how to quickly gather data about consumers and how to predict based on the aggregation of this data. Our intent is not to argue that analytics provides a compelling and definitive answer to the question of how to understand customer behavior, only that the current focus on data and measurement *has* largely usurped other conversations about “understanding the customer.” We offer below some suggestions on how to recast these conversations in the service of ethnography. For now, we turn to one more example – one which shows how analytics offers to solve another problem – one of narrowing in on what consumers want.

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<sup>7</sup> Third-party cookies are one way to track a user’s browsing behavior across multiple sites, not just those owned by a specific domain (in our example, say, ShopCo.com). These third-party cookies are commonly used by online advertisers and are typically anonymous (i.e., they contain no private information about a specific user).

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### Example 2: “Test and Learn!”

Our second example comes from a large food company based in North America (let’s call them “Great Grains”) – one that manufactures and markets consumer packaged goods around the world. Because their products are sold through retailers (grocery stores or big box retailers like ShopCo in the above example), they invest heavily in relationship marketing. The focus of this marketing strategy is to build direct relationships with consumers, since the point of purchase consideration is “owned” by intermediaries. To do so, they try to learn as much as possible about what is of importance to their target customer base. Historically, they have invested heavily in a blend of customer research – including quantitative and qualitative market research and ethnographic-based studies.

SapientNitro was engaged by Great Grains to define a new collection of digital food experiences. These food experiences (an iPad app, a mobile app, and a set of Facebook groups) were to be geared towards food lifestyles. One example of such an experience might be “cooking adventures,” which would provide content on new tastes from around the world, trendy ingredients, and so on. Imagine reading about such adventures, getting inspired to explore similar tastes, and ultimately purchasing the right ingredients (some of which would, of course, be Great Grains products). The concept is, of course, standard blog-based marketing. What was new for Great Grains was the idea of moving away from the recipe as the dominant form of digital content to a much broader concept of food-related interests.

To be successful, it was obviously important to match the right content to the right audience. In order to do this, we proposed a program for conducting a short burst of ethnographic-based research (in-context shopping studies, virtual panels) alongside a basic market survey analysis and some secondary research. The intent of this research was to uncover real, compelling interests and needs for the audiences they were targeting.

Throughout the proposal development process, it quickly became evident that the client had little patience for either form of primary research. His repeated challenge to us was: “Why don’t we just test-and-learn?” What he meant by this was: we don’t need to know what interests and motivations our consumers have, beyond what we know from existing market research. We can simply try out ideas on our audiences, measure the impact of the content, design, and features with very fine granularity. Moreover, we can run simultaneous multivariate tests that provide robust, statistically-significant results. These results will be available to us in near-real-time. Finally, we can provide ongoing monitoring and measurement to see how our consumers are responding over the course of time.

The point of this example is to indicate how the terrain of the discussion has shifted to a purely functional understanding of consumer needs: a “360 view of the customer” is defined, not as a deep understanding of the consumer, but rather as a functional measure of what is successful, and what isn’t. Success here is determined not by tapping into unmet needs, or understanding cultural influences, or uncovering contexts of use. It is determined by clearly measurable KPIs: number of emails opened, dwell time, page abandonment rates, number of Facebook likes, number of link-shares, and so on.

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At the end of the day, our proposal for Great Grains was transformed into a project to better define these KPIs and tap into analytics capabilities for tracking and reporting on them. Our point isn't that we failed to provide a compelling picture of the value of ethnographically-based consumer insight – though that may in fact have been the case. Our sense is, rather, that the conversation has changed.

### THE OPPORTUNITY

Our description of analytics overshadowing ethnography certainly must remind of an old argument pitting qualitative versus quantitative methods. If this is just another case of words and pictures coming up against cold, hard numbers, why don't we simply draw out our trusty, rhetorical toolkit to argue for the distinctive value of contextual research? To a certain extent, ethnographers have vacated the field and let analytics experts make the case that they capture what people do, not just what people say they do, synthesize insights from complex, real world behavior and draw on a range of behavior over time (in real time) instead of capturing snapshots of experience.

And yet, the opportunity for ethnography is to understand the sophistication of contemporary analytics programs and reveal where gaps exist. As in our Great Grains example, corporations deploy analytics to enable micro-adaptations of business operations, calibrated continuously via feeds of customer data. If an email campaign doesn't lead to results, modulate the message and run another trial. But what if the more relevant and impactful way to reach the customer is not by email, but at the retail store or during an event? Ethnography can connect what consumers are doing “between” digital interactions. We must seek out ways to insert ourselves, while recognizing the power of analytics.

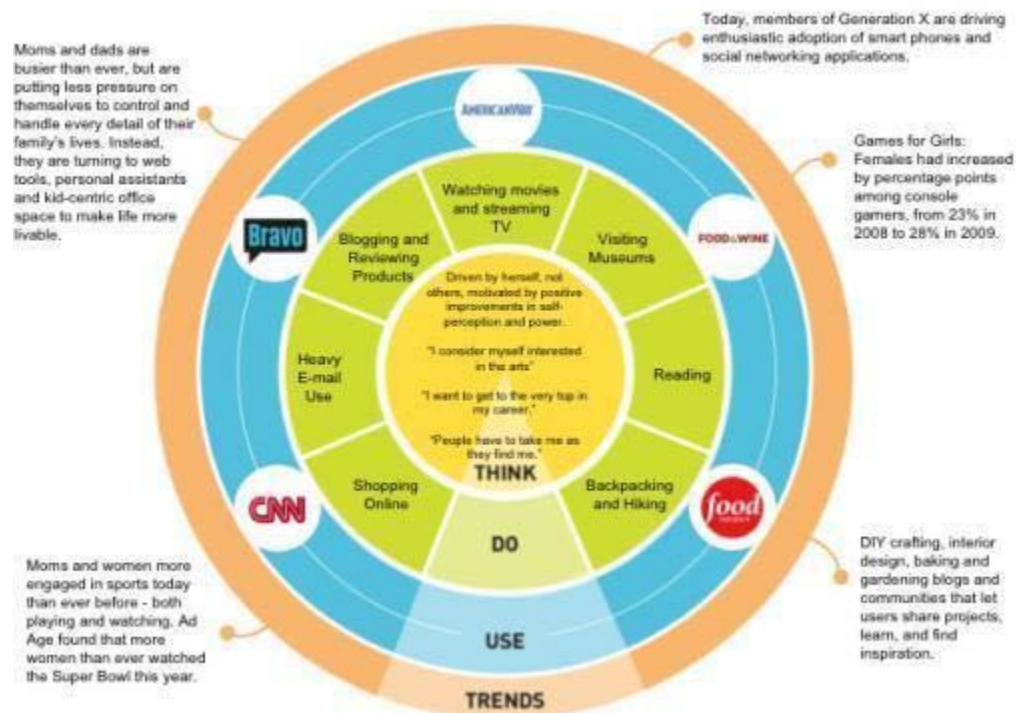
As the ShopCo and Great Grains examples illustrate, we found ourselves – as ethnographers – already on our heels when first meeting with clients to choose how we would learn about and design for their customers. We needed a way to recognize the value of analytics while improving the ability of our clients to gain insights from the data gathered.

One way we have tried to use ethnography to enter and improve the data conversation (i.e., to broaden the set of data inputs) is via a “consumer ecosystem map,” which situates data points (demographics, media preferences, brand choices, aggregated data from online behavior, etc.) within the context of attitudes and motivations, activities, and cultural trends. The model itself provides a snapshot – an abstraction from richer detail available in customary reports and Power Point documents. In figure 2, for example, an “intense baker” is characterized thinly, but usefully for creative directors, brand strategists, customer experience managers, and others. A few quotes from interviews represent how this customer segment thinks, selections from analyzing Simmons data appear as magazines frequently subscribed to, and trends from secondary research are listed to remind of which technology this consumer might adopt. While this ecosystem map alone does not provide the rich detail and narrative of an ethnography, it is an effective counterweight to an excel spreadsheet that contains vast amount of data about relatively narrow behaviors within a much larger experience. Instead of attempting to read “insights” directly from a data “dashboard” – people populating this map



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must abstract the key “data points” believed to be the most compelling. They must argue over what evidence best represents the customer’s experience.



**FIGURE 2. Intense baker: Customer ecosystem model**

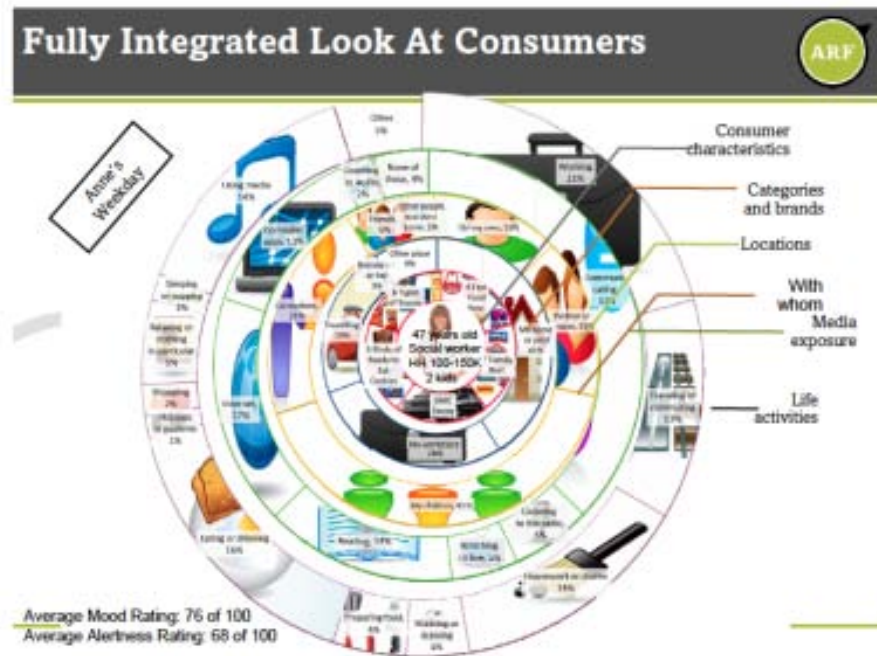
In a similar effort to add useful context to data -- as part of a project to understand the role of media in everyday life (in this case data being logged every 10 seconds from handheld devices over the course of a week), Alice Sylvester at Sequent Partners created an ecosystem map derived from a range of contextual inquiry methods and MRI media data.<sup>8</sup>

Consumer ecosystem maps apply multiple research methods and integrate qualitative and quantitative approaches. But, more importantly, they serve as boundary objects catalyzing conversations between corporate and client stakeholders about what moments matter to customers and how best to marshal resources for enabling or communicating with them. As an ecosystem map is drawn from ethnographic research as well as a wide range of data sources, media sources, surveys and

<sup>8</sup> “A Multi-Dimensional Media Research Tool Full of New Possibilities For Cross-Media Planning & Buying”, Alice Sylvester, Advertising Research Foundation 360 Measurement Day workshop, May 25, 2010.

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social listening audits, etc., creating the map requires a lot of people from different departments to work together: data modelers, social listening monitors, ethnographic researchers, media analysts, market researchers, brand strategists, experience designers, etc. In our own agency, different departments focus on different layers of this ecosystem map, populating the data points most relevant to their own domain (e.g., experience researchers establish what customers are thinking, feeling, doing, and using, media planners draw on Simmons data to identify what magazines the customer reads or



**FIGURE 3: Fully integrated look at consumers**

what TV shows they watch; social media monitors use tools like Sysomos and Radian6 identify where customers convene online and which bloggers they read, other key performance indicators from point-of-sale terminals can be added by data analysts, etc.) The final map is then used to inform strategy and inspire creative ideas and messaging.

Establishing the framework of an ecosystem itself required the interpretive contribution of “experience researchers”, who were accustomed to building “experience models” based on ethnographic research. Much more can be done to build on the “experience modeling” legacy. Ecosystem maps, for example, present only a static snapshot of a target customer segment within a larger context. Other types of experience models -- customer journey maps, opportunity maps, channel models, mode models – would be seen as increasingly relevant with a deeper infusion of different types of data. At the same time, evolving these models in collaboration with analytics experts and data

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modelers would bring to life stories of experience absent from current attempts to capture “holistic customer experience,” opening up ways to explore what the data means beyond how to optimize discrete marketing tactics.

Ecosystem mapping and other means of engaging the “360 degree view of the customer” require that researchers – experts in traditional corporate ethnographic and contextual inquiry methods – learn the methods and aims of data analysis, modeling, and strategy – the domain of the Data and Analytics department – in order to partner with data experts and improve the conversation across disciplines. Experience researchers can also draw upon a tailwind encouraging intra-department conversations: the language of “digital anthropology” permeates the contemporary field of community intelligence and social listening, emphasizing the importance of “being there” even if “there” is a digital place.

We see three paths down which the increasing primacy of analytics could lead. First, we could stay out of the conversation, enabling our clients to view “consumer understanding” as the domain of analytics – nothing else is needed. We think taking this path would be foolhardy, but we cannot be so sanguine as to rule it out as impossible. Second, ethnography and other forms of qualitative research could mount a robust critique that reveals the lacunae in analytics-driven insight. This path will undoubtedly be taken by some, but we who work with marketing and IT organizations have not found this to be a productive course of argument. It will likely fail given the lack of connection to meaningful ROI and the need for web and other tool-based optimization. Third, ethnographers could drive, in partnership with data strategists, a more holistic approach to consumer understanding that engages analytics as one critical input into its interpretive frameworks.

We view the last path as the most fruitful. Analytics has emerged with the potential to reveal aspects of behavior untapped to date. And ethnographers are well positioned to represent consumers’ increasingly digital life due to our proximity to customers in context. To join forces, we have to experiment with new ways of executing and representing our research. To have the ear of data-minded, analytics-driven clients, we must do more than richly describe people using mobile phones, tweeting, and being “social.” As people’s lives unfold along the digital dimension, the promise of ethnographic research in corporations is to generate the frameworks and narratives required to make sense – and value – of the data being generated, captured and mined. And we must mobilize these frameworks collaboratively across capabilities. Ethnographers in the corporate world must continue to focus on our interpretive value: our ability to help reframe business problems and to situate discrete pieces of information in their larger context. But this is something we have always tried to do. What is new, we’ve argued, is the need to engage analytics and analytics teams in the conversation about “customer insight” – about the “360 view of the customer.”