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Guest Editorial:

The Shape of Marketing Research in 2021

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INTRODUCTION

It is year 2011. A chief marketing officer (CMO) sits at his desk very early one morning. His consumer insights team's deck from a presentation the previous night still is in front of him. The CMO leans back in his chair, takes his glasses off, starts wiping them thoroughly, and dives deep into thought.

It's humbling when I think back 10 years: no broadband, no social media, no smartphones, no 50-inch LED TVs, no DVRs, no e-readers, no iPods, and Google hadn't had its IPO. The term "co-creation" barely was taking off—now my company is into "crowdsourcing" [Howe, 2006; Whitla, 2009]. In the last decade, many industries went through what Andy Grove labeled "strategic-inflection points"—those moments when the balance of forces shifted from the old structure and the old ways of doing business and competing, to new ones [Grove, 1996]: the music business, the book business, the publishing business, even the original Internet leader, AOL. Will my business be next? What will be the "normal" 10 years from now? What will be the "next big things?"

I do know that "digitization of everything" will be the mantra. I am certain the rate of change will keep accelerating—after all, Facebook went from nothing to 500 million users in just 6 years. And we finally realized that we marketers are not in control anymore. I know that Internet access anywhere will be a given; that geo-marketing will be pervasive; that retail environments will be transformed by digital technologies; that smartphone capabilities will be far more advanced; that RFID will have a big impact (even though I can't tell how big); that privacy will be even more of an issue. And none of this even touches changes that won't be driven by technology: the global economic balance of power will shift substantially in the next decade, driven by the BRIC economies and led by China.

I also know that all of this is only the tip of the iceberg—I just can't see the eight-ninths beneath the surface yet.

The basics of marketing don't change: I still need to identify, develop, and market products and services that satisfy customer needs even as they keep me ahead of the competition. I must do a better job in several ways. I need to be better at anticipating the future, at sensing consumer and customer needs, at being faster to market, at communicating and interacting with consumers and customers, at understanding and delivering against consumer needs around the world, and at recognizing potential inflexion points that could either bring great potential or destroy my business.

I wonder what the "new normal" will be...

ECOLOGY OR STRATEGY?**Induced or Autonomous Adaptation**

If nothing else, the "new normal" will offer constant change and adaptation. Focusing on strategic change in companies, some scholars have documented major epochs—periods of quantum change, and reorientations in strategy making—whereas others have documented the ongoing process of strategy making in organizations.

From an organizational strategy perspective, attributing changes to sweeping environmental triggers or long-term strategic planning means taking either an ecological or strategic viewpoint. The ecological-versus-strategic debate centers on the issue of environmental determinism versus strategic choice.

Whether forced by the environment or as the result of strategic planning, adaptation to change triggers sets of activities within a company grouped in an adaptation process. Adapting companies follow either induced or autonomous processes to adapt. The induced process concerns initiatives that are within the scope of the organization's current strategy and build on existing organizational learning whereas the autonomous process concerns initiatives that emerge outside of it and provide the potential for new organizational learning (Burgelman 1991).

The authors form the Engagement and Talent Committee of the Research Transformation Initiative at the Advertising Research Foundation. For more information visit www.thearf.org

Marketing research, as an industry, is faced with having to adapt to environmental changes (mostly technology-driven) with autonomous processes that vary from one company to another.

Technology-driven Adaptation

“Technology-related changes” can be classified as either sustained or disruptive, depending on whether they sustain the industry’s rate of improvement in product performance or disrupt/redefine that performance trajectory (Christensen and Bower, 1996). Companies that master new technologies can benefit from the first-mover advantage, as technological leadership is one of three possible sources of first-mover advantage. First movers are also exposed to free-rider effects, however, and the resolution of technological or market uncertainty drives shifts in technology or customer needs and incumbent inertia (Lieberman and Montgomery, 1988). These are first-mover disadvantages that determine some products that are first to market do not succeed. And, in fact, digital, technology-driven solutions that enable marketing research today have opened the door to innovation in this industry.

Marketing-Research Adaptation Enabling Lead Effect of Marketing Function

By quantifying its value, marketing can focus on its lead effect as opposed to its carryover effect. “Lead effects” are those caused by consumers’ or suppliers’ anticipating changes, also called “anticipatory response effects.” “Carryover effects” are those delayed-response effects that occur between the time marketing decisions are implemented and the time induced purchases occur (Doyle and Saunders, 1985).

Marketing research paves the way to customer relationship building, through which the marketing function introduces the customer to the firm. There is

an increasing body of both academic and trade literature that addresses the strategic role of marketing and how marketing contributes to a firm’s performance (Fine, 2009). Being more profoundly acquainted with its customers, a company further adapts to this relationship and increases performance by developing appropriate strategies that relate to brand building, product development, pricing, promotion, and distribution.

Autonomous technological changes within the marketing research area can help companies capitalize on anticipatory response effects. The recent technological changes in marketing/consumer research have strengthened and enabled the lead effect of marketing.

Marketing Research’s Strategic Inflexion Point

Before we examine how marketing research can adapt to environmental changes and develop autonomous processes, it is important to look back at how the practice has evolved in recent years. In the 1990s, the structure of data feeds for research was straightforward: there was one bucket for company data, retailer data, syndicated marketing and sales data, and syndicated media data. And there was a second bucket for survey research, which came in a number of shapes and sizes. Custom survey research was conducted mostly by phone or in malls; “traditional” qualitative research included primarily focus groups and individual in-depth interviews; syndicated survey research studies rounded out the offerings.

In the years after, growth of Internet access—more to the point, the expanded access offered by the availability of increased bandwidth—began to reshape many industries, including marketing research. Marketing research suddenly grew from a two- to a four-bucket practice. One new bucket contained mountains

of company and syndicated digital data pulled from Web sites and mobile and social media, all of it feeding the analytical left brain. Another new bucket developed from unprompted consumer feedback—data that were not just answers to researchers’ questions. It came from listening, search analysis, ethnographies, virtual shopping, neuroscience, biometrics, eye tracking, metaphor elicitation, emotion mining, behavioral economics and more—all of it feeding the creative right brain.

In addition, the survey research bucket did not stay still—online surveys replaced much of what had been done by phone or in malls; online access panels, custom online panels, and hosted online communities flourished; do-it-yourself surveys sprang up. New online capabilities (such as virtual shopping and online ethnography) emerged (See Figure 1).

What were only data feeds in the 1990s became broader and richer information feeds, with video, pictures, emotions, eye movement, facial tracking, body and brain responses, and more. With so much information has come a powerful mandate to synthesize all this information—to tell stories that can impact business.

A recent IBM study of 1,500 corporate and public-service leaders in 60 nations found that 95 percent of “standout” leaders believe that getting closer to the customer is a top business strategic initiative in the next 5 years. This prioritization, of course, will help drive further research innovation enabled by sustained technological changes.

As we look ahead to 2021, at least two of the trends are readily apparent:

- The volume of available information will continue to grow rapidly, driving the need for synthesis. Hence, processing power will continue to increase and advanced analytics will flourish.

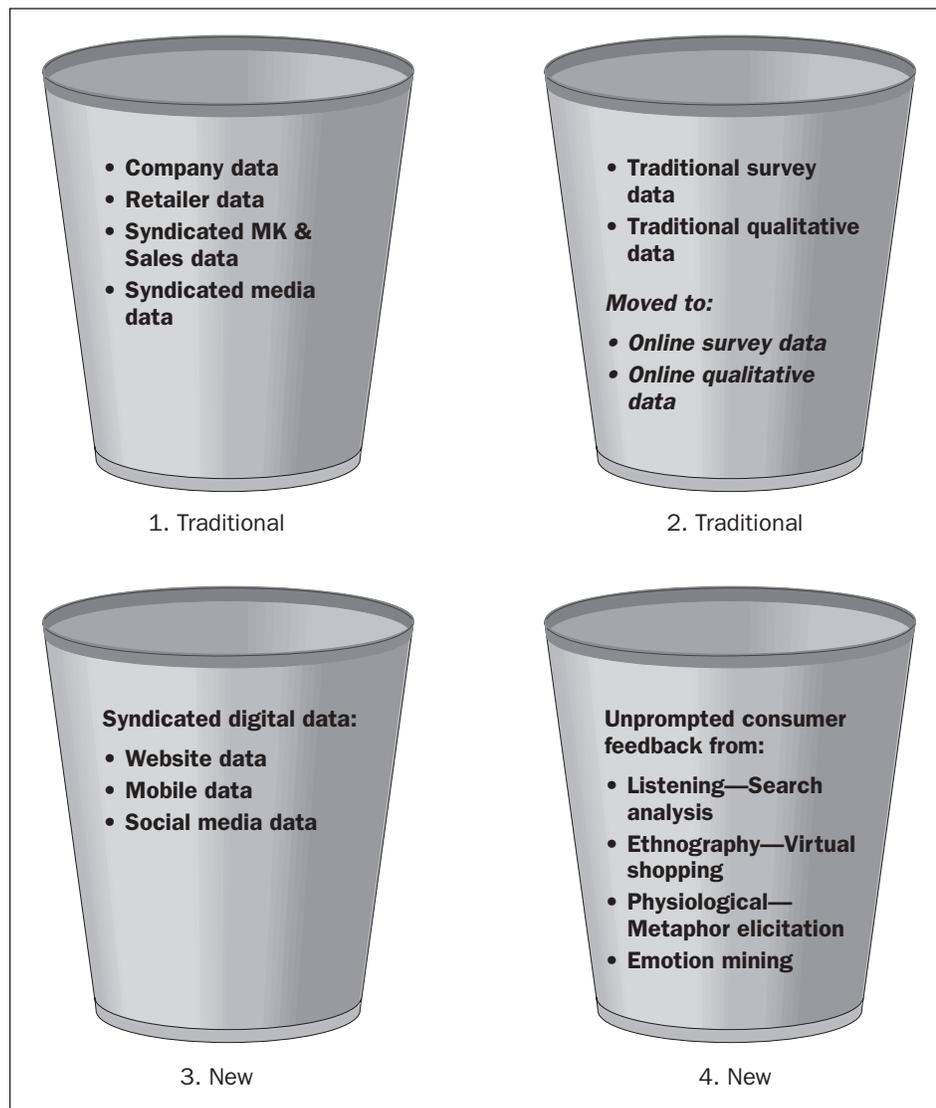


Figure 1 The four buckets of data for marketing research

- The need for closeness to the customer will drive innovation, especially in unprompted consumer research. Corporate leaders will develop fluid, searchable knowledge collection capabilities—an insights-on-demand capability that will not require interruptions to initiate individual studies to answer business questions.

And such changes naturally give rise to questions regarding the future structure of the marketing-research industry. And the questions include the following:

- What will happen structurally to research departments?
- With so much information available to drive competitive advantage, who in the client company will “own” this capability and resource?
- Will client research departments take the lead and have a bigger role?
- Will a chief knowledge officer—perhaps recruited from a management consultancy—take on ownership?
- Will suppliers develop complete capabilities so that client research departments are outsourced entirely?

Some of the answers are unknowable in 2011. For instance, we do not know what might happen outside of the marketing-research industry that will drive autonomous changes.

And technological innovation is yet another obvious unknown. Ten years ago we did not have Facebook, BlackBerries, iPhones, or iPads. What can we look for in the next decades? Much of it cannot even be imagined. We can count, however, on several major innovations in technology; we just do not know what they will be and what impact they will have.

Yet another unknown: Potential new market-research service providers. And more questions:

- Will the market-research industry be an attractive investment for Google?
- Or is Google already a huge market-research company?
- Will other technologically driven companies build out their marketing-consulting capabilities and turn the river of information into a competitive advantage for their clients?
- Will the focus on closeness to the customer attract management consultancies to substantially increase their presence in marketing research?

THE RIVER

To describe the future structure of the marketing-research industry, we introduce the metaphor of the river. The fundamental premise is that research in 2021 will represent a continuous, organic flow of knowledge—a “river” of information. Today, maybe 80 percent of marketing issues are addressed by conducting a market-research project. By 2021, we think that leading-edge companies—probably led by consumer packaged goods and technologically driven enterprises—will look for answers to 80 percent of their marketing issues by “fishing the river” of information.

Value creation will be catalyzed from the organic knowledge housed in the tributaries that feed the river—those points of confluence where tributaries meet; the river itself; and the larger reservoir of knowledge that the rivers flow into. Companies will have invested heavily in information-base development and mining tools, customizing their own rivers that will include both internal and external information (and not just data: ethnographies and videos will all be tributaries flowing into their information river). And these are the enterprises that likely will have self-serve capabilities that enable marketers to get solutions for most of their issues.

This realignment will change the intermediary role of today's marketing research/consumer insight professional. In the new world, knowledge will exist before the business question is formed.

The researcher of the future will be an accomplished navigator of the unpredictable waters in this complex river system.

Fishing the River

As we move toward a river of flowing information, the focus of the marketing-focused organization will be on mastering the strategies and tools for "fishing" the relevant data from the flow of information and channeling the river toward information that is valuable for the firm.

This trend will require firms to develop new tools to collect and distill the flow of information. The use of a diverse set of tools also will require collaboration between different functions in the organization. And that likely will include customer insights, information technology, research and development, and an increased reliance on vendors with highly specialized expertise.

Utilization of the data flow in the river primarily has been reserved to technological information-goods firms that have been well positioned to take advantage of

the benefits offered by the early stages of the river of information flow. As the flow becomes stronger and as more firms are better positioned to take advantage of the information, several data sources and fishing rods are likely to gain popularity.

Some of the data sources and tools certainly will include the following:

- **Mobile Data:** One of the biggest opportunities for marketers is the opportunity to collect real-time geographic information about consumers and to geotarget consumers. Couple GPS-enabled phones penetrating worldwide markets at an exponential rate with an ongoing increase in cellular bandwidth and data-processing speed and the results will be that firms increasingly will be able to target the right consumer not only at the right time but at the right place. Major information firms such as Google and innovative start-ups such as Sense Networks are leading the way in utilizing such readily available data sources in real time.

- **User-generated Content and Text Mining:** Web 2.0 provides gathering places for Internet users in social-network sites, blogs, forums, and chat-rooms. These assembly points leave footprints in the form of colossal amounts of textual data. The difficulty in obtaining insights from online user-generated content is that consumers' postings often are extremely unstructured, large in magnitude, and not easy to syndicate.

Commercial (e.g., Nielsen Online) and academic (e.g., Feldman, Goldenberg, and Netzer, 2010) text-mining tools provide marketers and researchers with an opportunity to "listen" to consumers in the market. By doing so, firms can better understand the topics discussed, consumers' opinions, the market structure, and the competitive

landscape. Such tools provide a great example of a capability that will be further developed to maximize the insights that can be derived in real time from the river's flow of information.

- **Social Networks:** Some of the fastest-growing sources of information flow are the social-networking sites whose most visible—and powerful—presences include Facebook and Twitter. And, in a sense, the development has a strong back-to-the-future element: consumers are turning from searching for information in more formal corpora such as news and search engines back to the traditional approaches of asking their friends their advice. Of course, the networking element means that they have a much wider circle of "friends."

Although social-networking sites have become ubiquitous, the full marketing utilization of these sites is still untapped. The integration of social-networking sites with other sources of information such as online retailers and media sources will amplify the opportunities to derive actionable marketing insights from online word-of-mouth content. For example, such integration poses great opportunity for improving product-recommendation systems (Zheng, Provost, and Ghose, 2007). Furthermore, by observing consumers' social-networking habits and purchase behavior, researchers can leverage the social relationship information to identify and target opinion leaders (Hill, Provost, and Volinsky, 2006).

- **Path Data:** The end of the previous millennium and the commencement of the current one have been characterized by a move from mass television and magazine advertising—and the traditional ratings-measurement systems that supported those media—to online-targeted

advertising measured at the individual consumer level. Firms increasingly are interested not only in understanding the outcome of (or exposure to) the marketing effort but in understanding the *entire process* customers go through in arriving at a decision (Hui, Fader, and Bradlow, 2009a). This interest has been sparked by several technological advances in areas such as radio frequency identification (RFID), video-recognition tools and eye tracking.

RFID technology allows researchers to track consumers in the retail environment—a capability to track items with the goal of improving the efficiency of supply-chain systems (Angeles, 2005). In recent years, however, marketers have started exploring the potential of RFID technology to track consumers in retail environments (Sornesen, 2003; Hui et al., 2009b). Tools such as PathTracker by Sorensen combine RFID and video systems to allow marketers to obtain a full picture of what is happening in the store and enable tracing consumers and product flow. These tools demonstrate the move from in-store traditional observational research of one customer at a time (Underhill, 1999), to a flow of observational research arriving in real time in massive amounts. The difficulty with converting these extremely valuable data into insights lies in the magnitude of data and the complexity of analysis. It will require firms to develop better tools to distill the data to the information necessary for decision making and analyze the data in a meaningful way.

- **Eye Tracking:** The last few years have seen a rapid growth in the commercial and academic use of eye-tracking tools to assess the effectiveness of visual marketing efforts (Wedel and Pieters, 2006). Eye tracking is being used to investigate visual attention to print advertising,

television advertising, Web sites, e-mails, package design, and in-store marketing. These tools have opened a window for marketers to observe the moment-to-moment visual processing of information that precedes the commonly observed consumer behavior and, therefore, allow marketers to better understand the *decision process*.

Currently, most of the commercial applications of eye tracking are performed in lab settings. As eye-tracking technology improves in accuracy and as the cost of the technology decreases, researchers will be able to use eye tracking in real retail environments to achieve higher external validity.

- **Web Browsing:** The use of click-stream data, which contain click-by-click Web page-viewing information, dates back to the introduction of the Internet to the mass market. The utilization of click-stream data, however, to date has been limited by the inability to collect, store, and analyze the data (often in real time). As firms use cross-organizational skills to develop better mechanisms to fish valuable information from the river of information flow and convert these data to insights, the use—and, more important, the value—of click-stream data will proliferate.
- **The Internet of Things:** More and more products now are being embedded with sensors (e.g., RFID and wireless devices) to create a marketplace of interrelated network of products commonly referred to as the “Internet of things” (Chi, Löffler, and Roberts, 2010). Such a network can allow marketers to track consumers geographically and over time. For example, sensors on cars and consumer packaged goods can open new windows into their usage and consumption in addition to the purchase of products.

- **Neuromarketing,** referring to the use of neuroscience for marketing applications, potentially offers the ability to observe directly what consumers are thinking. Neuromarketing often is used to study brain activity to exposure to brands, product designs, or advertising messages (McClure et al., 2004; Renvoisé and Morin, 2007). Neuromarketing is a relatively new tool for marketers, mainly owing to technological barriers, the ability to transform the neuroscience results into actionable business insights, and the high costs of collecting the data. We expect, however, that the next decade will see improvement on all of these fronts, making neuromarketing a common component of the customer-insights tool kit.

Channeling the River: Co-creation

Marketers now have the chance to take a more active role in channeling the river flow to include the type of information they need to enhance their decision making. Firms can involve consumers in the co-creation of products and information. We believe that co-creation is one of the most promising directions for customer insights in the medium and long term. Several avenues for firms to involve consumers in co-creation are likely to emerge in the next decade:

- **Brand Communities:** With emergence of Web 2.0, many consumer goods companies such as Harley-Davidson, Procter & Gamble, and Reebok have started to build their own brand communities (Fournier and Lee, 2009). Brand communities open an opportunity for firms not only to enhance the interactions among consumers but to fully observe these interactions. Furthermore, brand communities open a direct channel of communication between the firm and its customer. This channel of

communication can be used to probe consumers and involve them in business decisions. As consumers move toward obtaining much of the information from other consumers, brand communities are likely to become a major component of the information flow.

- **Online Crowdsourcing:** Crowdsourcing involves a large number of “non-experts” (consumers or employs) in a task traditionally performed by experts. It relies on the notion of the wisdom of the crowds (Surowiecki, 2004), suggesting that consumers, as a crowd, have specialized, accurate knowledge about their needs and are motivated to share this knowledge. Crowdsourcing has been used most successfully to involve consumers or a large community of employs in product innovation (Ogawa and Piller, 2006). Companies such as 3M, Dell, IBM, Procter & Gamble, and Starbucks have developed platforms to elicit user-generated innovation. Several paid crowdsourcing tools (i.e., Amazon Mechanical Turk) have been developed and are likely to gain popularity as tools for utilizing talent from outside the firm (Howe, 2006).
- **Field Experimentation:** Companies such as Capital One, Google, and eBay increasingly are using field experiments on a small fraction of their customers to test new-business concepts (Davenport, 2009). These field experiments have been enabled by the ease of access between companies and large numbers of their customers. Accordingly, such tools currently are reserved for companies that have a large potential customer base and easy access to these consumers. As the channels—and flow of information between firms and consumers—increase, more firms will be able to utilize this valuable decision-making tool.

Synthesis of Data Sources

The large number of data sources described earlier easily might create a problem of information overload. Furthermore, even if a firm is able to distill the flow of information to the relevant and useful information, treating each one of the information sources at isolation limits the firm’s ability to utilize these data. For example, for a firm to utilize geographic information collected from a customer’s mobile phone, the firm needs to match these data with customer’s personal information and transactional data. Similarly, the integration of social network data with marketing data is necessary to convert social networks to a valuable marketing tool.

Such integration often will require crossing inter-organizational boundaries to benefit from a wide variety of skills (e.g., customer insights, database management, and information technology). At present, many firms find it difficult even to share data within the organization, let alone syndicate these data. A necessary condition for a successful use of the flow of information is the ability not only to fish the river for data but to syndicate and merge the various streams of data.

MARKETING RESEARCH IN 2021

We base our forecast on three assumptions:

- **Data**—the raw material for market research—will grow dramatically in volume and become even more inexpensive than it is today.
- **Data mining, social-media listening, Web analytics, point-of-sale data, customer relationship management, insight communities, and neuromarketing** will expand rapidly. These tools will reduce—but not eliminate—the use of survey research.
- **Insights functions and suppliers** will seek to combine the data from

these methods into a holistic insights approach.

From these three assumptions, we can begin to construct a model for marketing research in 2021.

Appropriate Talent Will Be in Demand

First, there will be a compelling need for research professionals who can pull insights from a massive amount of information. This will require some technical mastery of database manipulation—a data-sifting and exploration process—and a significant amount of curiosity and creativity. The good news is that the innate curiosity that will be needed by researchers in 2021 is the same as the innate curiosity that the best researchers display today. The tools may change, but the animating drive remains: we want to explore, discover, and understand. We want to know why.

Insight Management Will Become a Critical Corporate Function

The need for a repository of consumer insights will be intense. The river of consumer insights will be so deep and rushing so quickly that there will need to be a place where the precious insights cache is stored. Insight management will require three advances:

- **Insights functions and suppliers** will need to agree on a definition for an insight. Some exist now, and the VRIO framework (i.e., Value, Rareness, Imitability, and Organizational support) for the definition of an insight is one strong approach. Practitioners will need clarity to screen for and catalog insights.
- **Practitioners** will need to create their own categorization structure or taxonomy for insights. Dr. Brian Smith

and Dr. Paul Raspin's *Creating Market Insight* (Wiley, 2008) have started the process with a model based on three dimensions:

- Continuity or discontinuity with existing knowledge
- Narrow versus broad in its scope
- Transient or lasting in its duration.

The insights and data streams will need to be connected and accessible via an interface that will converge all significant consumer knowledge sources into one online platform. Part of this convergence will include real-time Delphi panels, predictive markets, and proprietary insight communities.

Researchers Will Need to Learn How to Communicate Insights to Senior Management

Corporations in 2021 will need someone—and, possibly, many “someones”—to explore, digest, synthesize, and explain incoming insights to senior leaders. Storytelling and visualization tools will become research imperatives. All the data in the world—and there will be even more in 2021—will be useless without the ability to convey the critical emerging patterns within a succinct story and intuitive charts.

BARRIERS AND ORGANIZATIONAL IMPACT

Marketing researchers will have to adapt beyond adjusting their skills and highlighting the newly gained “powers” to senior leaders. There are a number of barriers to the predicted autonomous adaptation processes:

- **Organizational Resistance:** Throughout an enterprise, there needs to be ongoing, timely access to many sources of information, both internal and external.

Corporations in 2021 will need someone—and, possibly, many “someones”—to explore, digest, synthesize, and explain incoming insights to senior leaders.

In 2011, client research departments would find such access challenging. For the river of information to flow throughout an organization, the idea of information-accessibility will have to have C-suite approval and, ideally, the client research department leader will work at a senior-management level. The other, unfortunate option is territoriality, with people defending their spending silos and approaches.

- **Resistance to “The New”:** The “learning organization” may be an aspiration. Many research executives, however—on both the supply and the client side—are not comfortable changing what they already know how to do well. When people know that a “time-tested” approach works, they are often uncomfortable replacing it.
- **The Institutionalization of Metrics and Norms:** The more deeply embedded in an organization a measure is, the harder it is to change. Research metrics need to be a part of senior-management dashboards to build an institutional “comfort factor” with the familiar.
- **Research Suppliers Must Defend Current Lines of Business:** Suppliers are loathe to replace old systems with better ones when the old are tied into millions of dollars of revenue. That inertia means that suppliers tend to reward innovation that extends existing approaches, often penalizing innovations that challenge existing models.
- **Lack of Buy-in to the Change:** Client buy-in—from the research department to marketing and, finally, to the C-suite—will be a requisite to change. If clients buy in, suppliers will follow. Some suppliers—inside and outside the research industry—will see the opportunity and take a leadership role in developing capabilities.
- **Poor Implementation:** Poor implementation leads to client dissatisfaction that leads to loss of internal support. Carefully targeted early successes need to be coupled with evangelizing successes to build commitment.
- **Talent:** The river concept requires a new way of working with different (or additional) skill sets:
 - The client researcher will need to become more knowledgeable about a wide range of information sources and data mining and steeped in synthesis of information.
 - Providers will need to have specialized capabilities for information-systems design, data mining, and synthesis.
 - Client researchers and suppliers typically have developed as project managers, becoming more proficient at managing projects as their careers developed. The river concept offers a paradigm shift in which researchers will need to become knowledge synthesizers. This will require substantial training, rewriting of job descriptions, and reevaluating hiring criteria.

CONCLUSION

The CMO sits up from his desk. He puts his glasses on, picks up the deck from consumer insights, and starts toward the door.

I need my consumer insights department to up its game if I'm going to keep winning. I need them to help me anticipate the future, to get the big picture so they can add value to strategic issues, to have their finger on the pulse of the consumers around the world, to move a lot quicker than they're used to, to help me be smart in this rapidly changing media and communications environment, and to take a stand and share the risks with me like a real partner. **JAR**

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REFERENCES

ANGELES, REBBECA. "RFID Technologies: Supply-Chain Applications and Implementation Issues." *Information Systems Management* 22, 1 (2005): 51-65.

BURGELMAN, ROBERT A. "Intraorganizational Ecology of Strategy Making and Organizational Adaptation: Theory and Field Research." *Organization Science* 2, 3 (1991): 239-262.

BURKE, RAYMOND R. "The Third Wave of Marketing Intelligence." *Retailing in the 21st Century: Current and Future Trends*, M. Drafft and M. Mantrala, eds. New York: Springer, 2005.

CHRISTENSEN, CLAYTON M., and JOSEPH L. BOWER. "Customer Power, Strategic Investment, and the Failure of leading Firms." *Strategic Management Journal* 17, 3 (1996): 197-218.

CHUI, MICHAEL, MARKUS LÖFFLER, and ROGER ROBERTS. "The Internet of Things." *mckinsey-quarterly.com*, March 2010 [URL: http://www.mckinseyquarterly.com/High_Tech/Hardware/The_Internet_of_Things_2538?gp=1] accessed on January 11, 2011.

DAVENPORT, THOMAS H. "How to Design Smart Business Experiments." *Harvard Business Review*. February (2009): 69-76.

DOYLE, PETER, and JOHN SAUNDERS. "The Lead Effect of Marketing Decisions." *Journal of Marketing Research* 22, February (1985): 54-65.

FELDMAN RONEN, JACOB GOLDENBERG, and ODED NETZER. "Mine Your Own Business: Market Structure Surveillance Through Text Mining." Working Paper, Columbia University, 2010.

FINE, LESLIE M. "The Bottom Line: Marketing and Firm Performance." *Business Horizons* 52 (2009): 209-214.

FOURNIER, SUSAN, and LARA LEE. "Getting Brand Communities Right." *Harvard Business Review* April (2009): 105-111.

GROVE, ANDREW S. *Only the Paranoid Survive*. New York: Random House, 1996.

HILL, SHAWNDRRA, FOSTER PROVOST, and CHRIS VOLINSKY. "Network-based Marketing: Identifying Likely Adopters Via Consumer Networks." *Statistical Science* 21, 2 (2006): 256-276.

HOWE, JEFF. "The Rise of Crowdsourcing." *Wired Magazine* 14, 6 (June) (2006).

HUI, SAM, PETER FADER, and ERIC BRADLOW. "Path Data in Marketing: An Integrative Framework and Prospectus for Model Building." *Marketing Science* 28, 2 (2009a): 320-335.

HUI, SAM, ERIC BRADLOW, and PETER FADER. "Testing Behavioral Hypotheses Using An Integrated Model of Grocery Store Shopping Path and Purchase Behavior." *Journal of Consumer Research* 36, 3 (2009b): 478-493.

LIEBERMAN, MARVIN B., and DAVID B. MONTGOMERY. "First Mover Advantage," *Strategic Management Journal* 9, Special issue (1988): 41-58.

- McCLURE, SAMUEL M., JIAN LI, DAMON TOMLIN, KIM S. CYPERT, LATANE M. MONTAGUE, and P. READ MONTAGUE. "Neural Correlates of Behavioral Preferences for Culturally Familiar Drinks." *Neuron* 44, (2004): 379-387.
- OGAWA, S., and F. PILLER. Reducing the risks of new product development. *MIT Sloan Management Review* 47, (2006): 65-72.
- RENVOISÉ, P., and C. MORIN. *Neuromarketing: Understanding the "Buy Button" in Your Customer's Brain*. Nashville, TN: Thomas Nelson, 2007.
- SMITH, BRIAN, and PAUL RASPIN. *Creating Market Insight*. New York: Wiley, 2008.
- SUROWIECKI, JAMES. *The Wisdom of Crowds: Why the Many Are Smarter Than the Few and How Collective Wisdom Shapes Business, Economies, Societies and Nations*. New York: Doubleday, 2004.
- UNDERHILL, PACO. *Why We Buy: The Science of Shopping*. New York: Simon & Shuster, 1999.
- WEDEL, MICHEL, and RIK PIETERS. "Eye Tracking for Visual Marketing." *Foundations and Trends in Marketing* 1, 4 (2006): 231-320.
- WHITLA, PAUL. "Crowdsourcing and its Application in Marketing Activities." *Contemporary Management Research* 5, 1 (2009): 15-28.
- ZHENG, RONG, FOSTER PROVOST, and ANINDYA GHOSE. "Social Network Collaborative Filtering: Preliminary Results." *Proceedings of the Sixth Workshop on eBusiness (WEB2007)*. Montreal, Canada, 2007.