George S. Day

Closing the Marketing Capabilities Gap

Marketers are being challenged by a deluge of data that is well beyond the capacity of their organizations to comprehend and use. Their strategies are not keeping up with the disruptive effects of technology-empowered customers; the proliferation of media, channel, and customer contact points; or the possibilities for microsegmentation. Closing the widening gap between the accelerating complexity of their markets and the limited ability of their organizations to respond demands new thinking about marketing capabilities. Three adaptive capabilities are needed: (1) Vigilant market learning that enhances deep market insights with an advance warning system to anticipate market changes and unmet needs, (2) adaptive market experimentation that continuously learns from experiments, and (3) open marketing that forges relationships with those at the forefront of new media and social networking technologies and mobilizes the skills of current partners. The benefits of these adaptive capabilities will only be realized in organizations that are more resilient and free-flowing, with vigilant leadership and more adaptive business models.

Keywords: adaptive marketing capabilities, open marketing, data deluge, market orientation, digital marketing, strategic marketing, market learning

There is a widening gap between the accelerating complexity of markets and the capacity of most marketing organizations to comprehend and cope with this complexity. The increasing demands on marketing organizations are leaving marketers and their firms vulnerable. Most marketers would ruefully endorse this assertion and then acknowledge their uncertainty about how to navigate this reality. The first objective of this article is to diagnose the growing gap between the demands of the market and the capacity of organizations, and especially the marketing function within organizations, to meet those demands and understand why the gap is widening. The drivers are increasing complexity, interacting with an accelerating rate of change in markets and serious organizational impediments to responding. The growing gap is unquestionably costing firms profitability now and competitiveness in the future.

If the gap has become too wide to tolerate, what are companies doing to narrow their capability gap and possibly gain an advantage over slower-moving competitors? The second objective is to specify next practices for narrowing the gap and staying ahead of rivals. This requires expanding the reach of marketing capabilities well beyond the narrow confines of the marketing mix. These marketing capabilities are adaptive and enable the firm to adjust its strategies to fit fast-changing markets. These new or enhanced capabilities add anticipatory and experimental dimensions to the market learning capability and introduce a capacity for "open" marketing that orchestrates the capabilities of network partners. With these adaptive capabilities in place, the existing marketing capabilities also become more responsive to accelerating market changes.

The forces behind the widening gap, and best sources of solutions, are found in the evolution of the Internet and the shrinking cost of communication. The challenge for firms and marketers is to seize the opportunity for advantage out of the confusion created by accelerating market complexity. Their ability to do so will shape the future role and influence of marketing within the organization.

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A Widening Gap

Anecdotal evidence of the rapidly increasing complexity of the market environment is persuasive. The experience of the mobile phone market is illustrative (Court, French, and Knudsen 2006). Ten years ago, wireless carriers managed 3 demographic segments; now there are 20 need and value-based segments. The number of offerings has proliferated into the hundreds, with diverse calling and messaging plans and telephones with a wide variety of capabilities—even the operating system of telephones has become a major differentiator. The number of distribution channels has increased from three to more than ten, including company stores, shared and exclusive dealers, telemarketing agents, and affinity partners. With tailored pricing plans, the number of price points exceeds 500,000 per firm.

Sources of Complexity

Beyond this single industry example, the forces of market fragmentation and rapid change are everywhere. Traditional communication vehicles are being augmented with social media, product placements, event marketing, and viral marketing. Whereas marketers once had to exert significant

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effort to gain feedback from customers, now they struggle to keep up with floods of feedback coming from innumerable channels. A whole industry has been born in the past few years to help firms track and understand what is being said about them, their products, and their competitors in user-generated content and social media channels. An extreme example of this complexity comes from Nestlé's recent experience with an orchestrated campaign by Greenpeace to protest the company's purported use of palm oil from plantations in Indonesia that did not follow industry guidelines for protecting rainforests and orangutans. By most traditional measures, Nestlé responded very well: Within hours of Greenpeace launching the campaign, Nestlé responded by reiterating its commitment to sustainable sources of palm oil, suspended the supplier in question, and announced an audit of all of its palm oil suppliers. However, a low-level marketing staffer overseeing Nestlé's Facebook page engaged in several ill-tempered electronic exchanges with users, which added fuel to the fire, gave the protest legs, and did even more damage to the brand.

Variants on the same story of fragmenting market segments, proliferating digital media, and the rapidly growing number of customer touch points and channels are found in both business-to-business and business-to-consumer markets. The best available evidence (Hagel, Brown, and Davidson 2009) is that changes in customer search and choice behavior, the proliferation of microsegments, the convergence of industries that intensifies competition, and the growing power of channels are gathering strength. The fuel is the plummeting costs of bandwidth, storage, and computing as well as easier wireless connectivity, which has led to increasing use of digital and Internet technologies. The convergence of these forces means that the amount of data collected by companies has turned from a rain shower into a deluge (*The Economist* 2010). The data are generated by systems for tracking costs, operations, customers, and sales in ever-finer detail, as well as newer digital sources like website visits, social network chatter, and public records available on the Internet. These rich records from the immediate past are being enhanced with advanced analytics and predictive modeling to forecast likely outcomes. When the relentless reduction in the cost of search is combined with similar cuts in the cost of distribution, the result is that many mass markets are becoming a mass of niches (Anderson 2006). Regardless of whether you agree with Anderson's contention that "the long tail" will account for a major share of revenue and profits, there is no denying that these niches represent an astonishing variety of potential opportunities for profit—that is, if the right ones can be identified and an appropriate model for delivering value and profiting can be implemented.

The hypothesis that organizations are not keeping pace with market velocity and complexity is more difficult to test. Suggestive evidence comes from several sources. The first is the vast literature on information overload, which describes how an excess of information has resulted in the loss of the ability to make decisions, process information, and prioritize tasks (Eppler and Mengis 2004; Klingberg 2009; Meyer 1998). The second is the equally large literature on organizational adaptation in the face of environmental change (ranging from Miles and Snow [1978] to Hamel [2007]).

Still, there is no longitudinal measure of the size of the gap. Some evidence comes from recent estimates that the amount of data available expanded at an exponential rate from 100 billion gigabytes in 2005 to 1000 billion gigabytes in 2010 (IDC 2007). This suggests an even greater rate of growth than Davenport and Harris's (2007) claim that unique information per person is growing at 50% per year. In contrast, they estimate that information consumption per person is only growing at 2% a year. Taken together, a reasonable case can be made that the deluge of data has run up against the barrier of the limited ability of people and organizations to process it. The evidence suggests that the volume of inbound data and the proliferation of channels is going to continue for the foreseeable future. Absent any breakthroughs in human beings' ability to process data, unless new tools and approaches are adopted, the gap will continue to grow.

Barriers to Adapting

There are other reasons to suggest that the gap is growing and that new approaches are needed to begin closing it. During periods of technological disruption, most organizations have trouble keeping pace. This is true of the effect of the Internet and cheap, ubiquitous communication technologies on the habits and behaviors of consumers and the creation of new business models for reaching these markets. The tendencies toward inertia and sclerotic decision making are fed by lag effects and organizational rigidities.

Organizational rigidities. When an organization masters a capability, it is likely to keep doing it long past the point of obsolescence. The mechanisms of preservation subvert exploration and impede innovation. Why?

- *Path dependency and lock-in*: A capability emerges from a series of path-dependent learning experiences (Liebowitz and Margulies 1994). Successful experiences are reinforcing and repeated, which eventually limits other possible approaches and, at the extreme, locks the organization into a dominant approach. Other approaches are viewed with skepticism because they lack a track record.
- *Inertia and complacency*: For a process such as media selection to qualify as a capability, it must work in a reliable and replicable way in a variety of contexts. This necessary condition gets in the way of adaptation to new circumstances. Mastering the exploitation of an existing activity often crowds out the necessary sensing, experimentation, and exploration that is the essence of a dynamic capability (March 1991). At the extreme, a long period of success can blind the organization to discrepant signals that the capability no longer fits the market.
- *Structural insularity*: Aaker (2009) uses the silo as a metaphor for self-contained functional, country, or product groups with independent operations that lack the desire to share information or work with other silos. Weak signals of the need for change revealed by competitive moves or emerging technologies may reach one silo but not be appreciated or shared further. Aaker also argues that these silos inhibit the development of deep expertise in next-generation marketing capabilities. No single silo can master the new skills and disciplines or afford to acquire them on its own. There are scale economies to capability building. Despite the benefit of specialization and focus, an organization with silos limits the

sort of cross-functional dialogue and learning that creates novel ideas, and thus slows adaptation.

Lagging reactions. How quickly is an organization willing and able to react to verifiable shifts in the market? Even if it can overcome the organizational rigidities, time is not on its side. It takes time to absorb new information, interpret its meaning, and then mobilize a coalition to act. Traditional decision processes are cautious and slow, so by the time a new marketing initiative is finally launched, the market has moved forward to a new state. Meanwhile, the pace of technology has not slowed. Any feedback from the initiative is behind the times and difficult to interpret.

All these problems are exacerbated by an insufficient pipeline of high potential talent to fill the key positions. Many skill sets such as expertise in social networking, deep customer analytics, digital media, and emerging market segments are in short supply (Ready and Conger 2007). The simple fact is, however, that even if talent were available, the marketing capabilities at most firms are not growing commensurate with the challenge. It is little wonder, then, that the gap is growing.

Diagnosing the Gap

Although recognizing the gap is an important step, simply identifying the problem gets us no closer to dealing with it. To begin addressing the gap, we need to understand more deeply why it exists, what its makeup is, and how it can be quantified. This insight then provides the basis for systematically addressing the gap. The best way to understand and begin to close the gap is through the application of capabilities theories. However, today's dominant capability theories—relying on dynamic capabilities—are insufficient to guide firms' efforts to close the gap. Here, I survey the history of the capabilities approach to strategy and the evolution of dynamic capabilities theory and explain its limitations in the face of the capabilities gap.

The Gap Between Environmental Demands and Organizational Capacity

Resource-based or capabilities theories presume that firms within an industry are heterogeneous with respect to the strategic resources they control. Because these resources take a long time to develop, they are also difficult to duplicate, so heterogeneity can be a long lasting source of competitive advantage. The "resource" base comprises assets, which are tangible and intangible endowments such as brands, facilities, intellectual property, and networks that can be valued and traded, and capabilities, which are the glue that brings these assets together and enables them to be deployed advantageously (Day 1994; Dierkx and Cool 1989). Because capabilities are deeply embedded in organizational processes and practice and use cumulative learning and tacit knowledge, they are difficult to copy or value. This article focuses on marketing capabilities because these give the organization the means to adapt to market changes.

The "fit" of these strategic resources with the environment both dictates the survival prospects of the firm and explains relative economic performance (Helfat 2007). We propose that resource heterogeneity is a meaningful common theme for comparing organizational capacity and environmental complexity. The accelerating diversity of market demands on the organization for tailored programs, mass customization, multimedia optimization, and proliferating channels must be met with a set of capabilities appropriate to dealing with them. The greater the mismatch between the increasingly granular and fluctuating demands of the market and the relatively immobile and homogeneous resources available to the firm, the greater the capability gap.

Figure 1 provides an illustrative comparison of the divergence of the resources available to a firm versus what is needed to match or fit the accelerating complexity of the market. This stylized portrayal could easily be extended to show the differences between rival firms in the size of their gap, or between the potential fit (assuming optimal management of capabilities) and the actual fit for each firm.

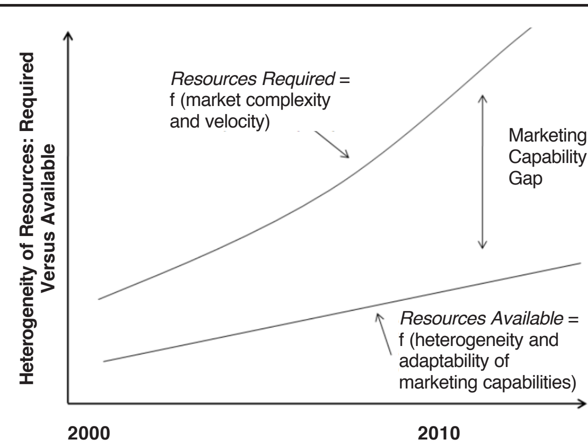
The capabilities approach to strategy locates the sources of a defensible competitive advantage in the distinctive, hard-to-duplicate resources the firm has developed. The early static formulation of resources has evolved to become more dynamic but is still not sufficient to cope with contemporary market realities. To make this case, we first dissect dynamic capabilities and then test them against the exploration versus exploitation framework.

Dynamic Versus Static Capabilities

The original version of the resource-based view (Barney 1991 and Amit and Schoemaker 1993) offers an implicitly static portrayal of organizational capabilities as well-honed and difficult-to-copy routines for carrying out established processes. There was no mechanism for explaining how capabilities were developed or how they adapted to market evolution or nonlinear disruptions such as the Internet (Makadok 2001; Schreyoegg and Kliesch-Eberl 2007; Teece and Shuen 1997). Dynamic capabilities theory was formulated to address this limitation.

Both static and dynamic capabilities theories are attempts to explain sustainable differences in the performance of competitive firms. Whereas competitive advantage can flow at a point in time from scarce capabilities,

FIGURE 1
The Marketing Capabilities Gap (Illustrative)



sustainable advantages require dynamic capabilities to create, adjust, and keep relevant the stock of capabilities. Dynamic capabilities theory puts the spotlight on how an organization acquires and deploys its resources to better match the demands of the market environment. A dynamic capability is "the capacity of an organization to purposefully create, extend, or modify the resource base" (Helfat 2007, p. 5). These are the capabilities that enable organizational fitness (Winter 2005), as well as help shape the environment advantageously.

The main functions of dynamic capabilities (Teece 2009) are (1) sensing environmental changes that could be threats or opportunities, by scanning, searching, and exploring across markets and technologies; (2) responding to the changes by combining and transforming available resources in new and different ways or adding new resources through partnerships or acquisition; and (3) selecting the organizational configuration and business model for delivering value to customers and then capturing the economic profit. A dynamic capability is not an ad hoc solution to a problem but a repeatable and deeply embedded set of skills and knowledge exercised through a process. It enables the firm to stay synchronized with market changes and ahead of competitors.

Are Marketing Capabilities Dynamic?

Whether an organization can keep up with a high-velocity, complex market depends on having the right marketing capabilities. But which marketing capabilities really matter? Indeed, what is the domain of marketing capabilities as a subset of all the capabilities of the firm?

The familiar capabilities of the marketing mix formulation are almost entirely static (Dutta, Zbaracki, and Bergen 2003; Vorhies and Morgan 2005). Thus, the new product development capability involves new products that exploit research and development investments but does not extend to imagining new ways for delivering customer value or reaching the market through new channels. The standard processes for market strategy development and execution also have a static flavor (Vorhies and Morgan 2005) in that they emphasize segmentation, targeting, and the optimal allocation of marketing budgets. Strategic market planning as often practiced is more likely to be an extended budgeting exercise within accepted market definitions than an imaginative rethinking of the business model and served market boundaries that prepares the business for alternative scenarios.

The role of market orientation. Can the capabilities for managing the marketing mix become more dynamic in a supportive organizational setting? Morgan, Vorhies, and Mason (2009) hypothesize that a market orientation has a liberating effect on capabilities, which makes the firm more dynamic. They show that a market orientation—using a market information processing perspective (Hult and Ketchen 2005; Kohli and Jaworski 1990)—interacts strongly with marketing capabilities to enable the firm to better align its resource deployments with the market than rivals. These authors infer alignment from a strong positive relationship of the interaction term with relative performance. A suggested mechanism for the interactive effect is a reciprocal relationship whereby market insights are needed to build marketing capabilities and the exercise of the individual capabilities generates new market insights that enhance a firm's market orientation.

The strategic domain of marketing capabilities. The capabilities for implementing the marketing mix or the four Ps are inherently limited by their functional and tactical bias. A strategic perspective on marketing as a C-suite responsibility broadens the domain to comprise the capabilities for creating customer value (Day and Moorman 2010). There are four elements to this perspective that are strategic imperatives for the organization.

The first imperative is to be a customer value leader with a distinct and compelling customer value proposition. This requires the disciplined choice of where the firm will stake a claim in the market, what value it will offer its target customers, and how the organization will deliver value that is superior to competition. All firms must balance the short and long run. A business strikes the right balance by maintaining its customer value leadership and then investing in a portfolio of innovations that will deliver results in the medium and long run. The second imperative is to innovate new value for customers.

Customer value and innovation benefit the firm when they are transformed into valuable customer and brand assets. The third imperative is to capitalize on the customer as an asset. This requires selecting and developing loyal customers, protecting them from competitive attacks, and then leveraging the asset beyond the core business. Strong brands attract and retain customers and thus need to be explicitly managed. The fourth imperative is to capitalize on the brand as an asset. This means strengthening the brand with coherent investments, protecting it against dilution and erosion, and then leveraging it fully to capture new opportunities.

This expansive view of marketing as a general management responsibility includes capabilities for managing customer service delivery, customer order fulfillment, sales integration, and the capitalization of the customer and brand assets. These are capabilities that span multiple functions (Day 1994). Because they involve key connections with customers and channels, they are at the front lines of the ability of the firm to detect and adapt to changing market conditions.

The superior execution of these strategic capabilities is enabled through deep market insights, which are essential to comprehending complex, diverse, and fast-changing markets. These insights are nourished within market-driven organizations (Day 1994). These firms stand out in their ability to continuously sense and act on emerging trends and events in their markets. In these firms, everyone from frontline salespeople to the chief executive officer is sensitized to listen to latent problems and opportunities. They achieve this with market-driven leadership that shapes an open and inquisitive culture and a well-honed market learning capability that infuses the entire strategy process, including the creation and management of customer and brand assets.

An information processing approach to market orientation that emphasizes the generation, dissemination, and responsiveness to market intelligence (Kohli and Jaworski 1990) is best suited to helping firms respond to fast-changing markets after clear signals have been received. Although market orientation and dynamic capabilities theories are powerful tools for helping firms navigate dynamic markets, they are simply not sufficient for what might be appropriately called the chaotic market environments today. Enhanced capabilities are needed for anticipating trends and events before they are fully apparent and then adapting effectively. This is what it takes to address the marketing capabilities gap.

A New Way of Thinking About the Necessary Capabilities

Dynamic capabilities theory is hampered by an inherent inside-out perspective, which begins with the firm and looks outward from that vantage point rather than starting with the market. A market orientation also has a liability. Although the starting point is the customer and opportunities for advantage, it is subtly susceptible to an exploitative mind-set in practice. This suggests two dimensions for thinking about capabilities: whether the orientation is from the inside-out or the outside-in and whether the function is primarily to exploit existing resources or to explore new possibilities. Crossing these two dimensions in Figure 2 reveals the need for a new class of adaptive capabilities.

Outside-in and inside-out. The essence of the resource-based view is that scarce, inimitable, and valuable resources exist to be used, and the task of management is to improve and fully exploit these resources (Makadok 2002). This leads to an emphasis on internal efficiency improvements and short-term cost reductions. As a starting point for strategic thinking, however, it myopically narrows and anchors the dialogue prematurely.

The dynamic capabilities approach is also susceptible to an implicit inside-out myopia. There is a recognition that sensing and scanning should emphasize the need to "define managerial traits, management systems, and organizational designs that will keep the organization alert to opportunities and threats, enable it to execute on new opportunities, and then constantly morph to stay on top" (Teece 2009, p. 206). However, these actions are initiated by mindful scanning activities mounted by the firm—akin to sending scouting parties into the field with a well-defined mandate. What gets lost is sensitivity to weak signals of impending changes and a willingness to experiment.

In contrast, an outside-in approach to strategy begins with the market. The management team steps outside the boundaries and constraints of the company as it is and looks first to the market: How and why are customers changing? What new needs do they have? What can we do to solve their problems and help them make more money? What new competitors are lurking around the corner and how can we derail their efforts? This perspective expands the strategy dialogue and opens up a richer set of opportunities for competitive advantage and growth.

Jeff Bezos, the founder and chairman of Amazon.com, is a champion of the outside-in approach (Lyons 2010, p. 20). He explained how the company was able to meet the needs of its customers for web services by offering access to their cloud computing network and for a more convenient reading experience with Kindle. He describes it as a "working backward" mentality:

> Rather than ask what we are good at and what else can we do with that skill, you ask, who are our customers? What do they need? And then you say we're going to give that to them regardless of whether we have the skills to do so, and we will learn these skills no matter how long it takes…There is a tendency I think for executives to think that the right course of action is to stick to the knitting—stick with what you are good at. That may be a generally good rule, but the problem is the world changes out from under you if you are not constantly adding to your skill set.

Exploration and exploitation. March (1991) maintains that adaptive processes in an organization require balancing exploration of new possibilities (through experimentation, discovery, risk taking, and flexibility) and exploitation of old certainties. Inherent in exploitation is the quest for efficiency, replicability, and predictability of processes and routines. The requisite conformity and replicability is achieved with lean Six Sigma, reengineering, total quality management, continuous improvement, and aspirational benchmarking. Although both these processes are essential, they compete for scarce resources, with different time schedules in their payoff functions.

The original resource-based view was essentially exploitative. As Barney and Clark (2007, p. 259) note, "The assumption of much of the current theory is that the resources and capabilities that give a firm competitive advantage are relatively fixed in nature." They further argue that, "ironically, even dynamic capabilities versions of resource-based theory are static in this sense. That is, the ability of dynamic capabilities to enable firms to develop new capabilities is also assumed to be fixed." Nonetheless, dynamic capabilities clearly fall toward the exploratory end of the spectrum.

FIGURE 2
Adaptive Versus Dynamic Marketing Capabilities

Orientation \ Function →	Exploiting	Exploring
Inside-out	Resource-based view of the firm	Dynamic capabilities
Outside-in	Capabilities of market-driven organizations	Adaptive marketing capabilities

Both the original (Day 1994) and most subsequent formulations of the capabilities of market-driven organizations have emphasized the exploitative use of existing assets through the coordination of activities. They have overweighted the static attributes of capabilities in terms of their scarcity, immobility, and inimitability. The role of a market orientation was to shift the organization toward an explicit outside-in orientation by making market sensing and customer linking into distinctive capabilities.

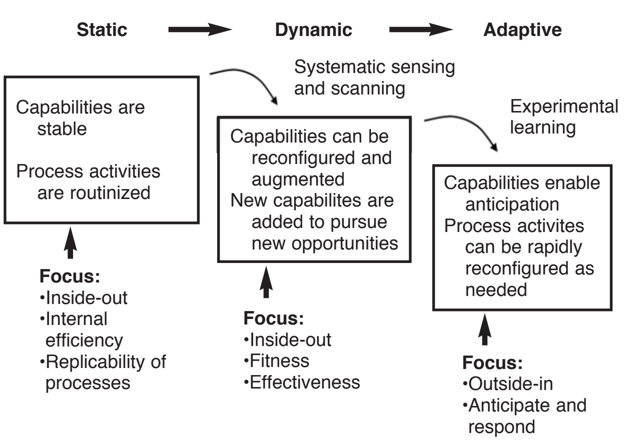
In retrospect, the market-driven approach to marketing capabilities was too hesitant about the exploratory side of the market learning process. Although this approach holds an effective market learning process to be more systematic and thoughtful, there was no built-in dynamic mechanism. Some of the ambivalence is evident in how the typical market learning process was initiated by a decision issue, which then launched a directed inquiry. The intentions were admirable, but any process initiated by an explicit inside-out question is inevitably constrained. Thus, market-driven approaches to capabilities are biased toward an exploitative mind-set.

The inside-out stance of the dynamic capabilities approach inevitably limits the ability of the firm to anticipate rapid market shifts and become more resilient in the face of increasing volatility and complexity. What are needed are adaptive capabilities that augment and extend the existing dynamic capabilities so that rapid adjustments can be made. The most salient distinctions between the three types of capabilities are highlighted in Figure 3. Most organizations will need all three types working together, but closing the marketing capabilities gap will require that more energy be devoted to building adaptive capabilities.

Adaptive Marketing Capabilities

The advance toward adaptive marketing capabilities is driven by necessity and enabled by technology advances. The accelerating velocity and complexity of markets demand enhanced marketing capabilities. Progress with analytical and knowledge-sharing technologies brings these new capabilities within reach. What new marketing capabilities will

FIGURE 3
From Static to Adaptive Capabilities



be needed? How will they be built? How will they help make the entire organization more adaptive?

The remainder of this article draws on relevant theory and experiments by best-practices companies to propose three answers to the preceding questions: First, organizations need to acquire or enhance their adaptive marketing capabilities (vigilant market learning, adaptive experimentation, and "open" marketing that mobilizes dispersed and flexible partner resources). Second, these capabilities have greater leverage when they are used by an adaptive business model and housed in a supportive organization that has a robust market orientation and is structured to be aligned with the market. The essential enabler is vigilant leadership that acknowledges the need for adaptability and drives the capability-building process. Third, the familiar marketing-mix capabilities must become more dynamic and supportive of an adaptive strategy.

Vigilant Market Learning

How can an organization learn to make sense out of an increasingly volatile and unpredictable market? Two principles help shape an answer. The first comes from complexity theory, which demonstrates that all successfully adapting systems transform apparent noise into meaning faster than the apparent noise comes at them (Haeckel 1999). That is, they have cultivated a vigilant learning capability that helps them see sooner. Second, the behavior of the firm must shift from a reactive to a sense-and-respond approach. This means that decisions are driven by current customer requests and behavior and signals about their changing needs. These are familiar tenets of the information processing perspective on market orientation (Kohli and Jaworski 1990). In an era of accelerating complexity, however, deep customer insights must be enhanced with an early warning system and be amplified with emerging technologies for seeking patterns in micro data and sharing insights quickly.

The shape and texture of a capability with an ability to see sooner comes from the literature on organizational vigilance (Day and Schoemaker 2006; Fiol and O'Connor 2003; Levinthal and Rerup 2006). Vigilance is a heightened state of awareness, characterized by curiosity, alertness, and a willingness to act on partial information. Vigilant organizations are distinguished from their vulnerable followers by the following:

- A robust market orientation. This sensitizes them to making decisions from the outside-in.
- Knowing how to ask the right questions to identify what they don't know. This process is aided by scenario thinking to consider multiple possible futures, and a high tolerance for ambiguity.
- Surfacing the insights and overcoming organizational filters. When an organization is surprised by an event or late to comprehend a new pattern in consumer behavior, there is usually someone deep in the organization or the extended network of partners who was plugged into the future and had sensed the threat or opportunity. However, the decision makers didn't know they knew, and they didn't know that they needed to know.
- Defending against individual and organizational biases that inhibit real insight. While groupthink is particularly coercive, the tendency to jump to the most convenient conclusion and

then seek evidence that confirms the judgment distorts the picture. Vigilant organizations work hard to bring together different perspectives on an issue to combat these tendencies.

- Triangulating with multiple inquiry methods to clarify ambiguous signals and then probing deeply to learn more about promising patterns and signals.

Vigilant market learning requires (1) a willingness to be immersed in the lives of current, prospective, and past customers and observe how they process data and respond to the social networking and social media space, without a preconceived point of view; (2) an open-minded approach to latent needs; and (3) an ability to sense and act on weak signals from the periphery. It is the difference between testing copy versions with controlled experiments and continuously trolling the market for ideas, concepts, and formulations that are working or failing. Market learning is not fully realized until the findings are accurately interpreted and adequately shared throughout the organization. Both these requirements are problematic. Managers may misinterpret what they see in favor of what they want to see or dismiss results that challenge the prevailing wisdom. Product, country, and functional silos that are a consequence of decentralization impede the sharing of information and jeopardize marketing efforts.

The same technology advances that spawn the data deluge that impedes understanding and sharing of insights can be used to strengthen the market learning capability. Especially promising are advances in internal (social) networks that enable cross-company, regional, and functional sharing of the organization's market knowledge. Many firms are reaching the point at which all their trend data, market data, and relevant studies can be found with a searchable "mini Google." Early insights into shifts in buying patterns or emerging microsegments are extracted with deep analytics. Intelligent application of such technology tools will ready the organization to act ahead of rivals.

Adaptive Market Experimentation

The adaptability of all learning processes is impeded when there is a limited repertoire of recognized patterns of customer behavior or strategic responses for responding to diversity and fragmentation. Without an expansive map of the possibilities, it is difficult to properly appreciate new media such as mobile marketing or envision unusual microsegmentation approaches. Unfortunately, high-velocity, complex markets also harbor a great deal of strategic dead ends. Think of all the social marketing sites that cannot monetize their base but are valuable test-beds for learning faster what will work.

The best answer is to invest in small experiments that can generate new insights—as long as there is a credible team available to interpret and share the learning. Three conditions must be satisfied: First, nurture an experimental mind-set. This includes a willingness to challenge existing beliefs, such as how consumers can filter increasingly diverse sources of information of varying quality and still make decisions. An essential ingredient is curiosity, which encourages the interrogation of the quasi-experiments in available streams of data to determine which initiatives have been successful or unsuccessful. Second, codify and share insights and successful practices across the organization. This is especially important for global firms such as Vodafone, Diageo, and Unilever serving diverse markets in which market structures and mobile and other communication methodologies are developing at different rates. Third, in the spirit of increasing the variety of approaches, systemically tap a wider array of peer companies, precursors, and network partners to learn from their experience.

The conduct of targeted experiments that can help firms navigate the increasing complexities of fragmenting markets is being aided by technological advances. The familiar quasi-experimental approaches of rapid prototyping (Kelley 2001) and "probe and learn" market studies are being enhanced with new capabilities for conducting rigorous and statistically defensible experiments in which proposed charges are tried out on a small scale. New software tools and advances in database management lead users through the experimental process, keep track of test and control groups, and extract the attributes that affect performances (Davenport 2009). Similarly, researchers are finding inventive ways to extract insights from web interactions. With website morphing (Hauser et al. 2009), the look and feel of a website can be adjusted to match the cognitive style of the visitor (e.g., impulsive versus deliberate, visual versus verbal). These cognitive styles are inferred from clickstream data and offer new insights into emerging segments.

Trial-and-error learning that relies on experimentation is quickly subverted if there is a "fear-of-failure" syndrome. Organizations that reward people for playing it safe and hold the risk takers directly accountable for their mishaps soon discourage learning. Although failures should be avoided if possible, they do have a therapeutic role because they contain valuable lessons. It takes concerted leadership to create a more open climate in which learning from failures is possible and experimentation is a norm.

Open Marketing

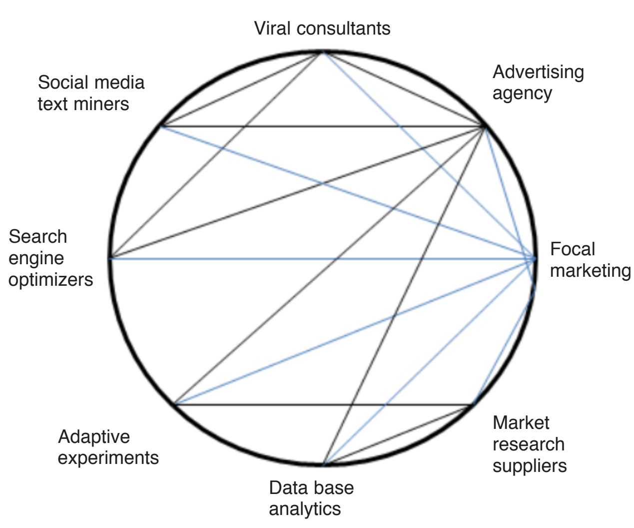
Networks are ubiquitous. Consumers are connected through as many as 250,000 social networking sites (Van den Bulte and Wuyts 2007), companies are moving from supply chains to supply networks, and the focus of innovation is moving outside the firm to networks of partners. Marketing scholars have identified a myriad of possible network structures (Achrol and Kotler 1999). With advances in knowledge sharing, coordination, and pattern recognition technologies, the vertical organization of siloes is being steadily unbundled (Kleindorfer and Wind 2009). This puts a premium on relational capabilities that extend the firm's resources beyond the firm boundaries and enable access to the resources of the partners (Dyer and Singh 1998).

Imagination and necessity will encourage initiatives to leverage networks and "open" up the marketing organization. Not even Procter & Gamble has been able to master the proliferation of fast-moving choices in the new media environment. In an ambitious experiment, the company is changing its lead agency to orchestrate several partner agencies with complementary skills, which in turn use multiple contractors. The benefits to Procter & Gamble include the following: (1) access to a far wider array of informed talent and new capabilities; (2) richer and more variegated, microlevel responses; and (3) an extended periphery that brings new insights back to the company. Unlocking these benefits—while avoiding acute information overload—is increasingly possible as experience in deploying technologies is gained and experiments reveal what is likely to work.

The interwoven nature of open marketing can be seen in the schematic portrayal of some of the partners to be orchestrated in the new media environment. Figure 4 indicates that the focal marketing group is lodged within the marketing function of the firm, controls the budget, and is accountable for the results. Although this "ball of yarn" schematic is dauntingly complex, the effective management of the network requires a new suite of marketing capabilities that will be difficult to learn and more difficult to copy—the prerequisites of a sustainable source of advantage. Few firms will invest to build the necessary architecture and master the coordination, control, and sharing skills needed to act on the insights from their diverse partners while keeping the insights proprietary.

A pivotal question—with an uncertain answer—is whether open marketing will be housed in a familiar self-contained, efficiency-centric, hierarchical model or a more open network structures (Day, Howland, and Parayre 2009). Proponents of the network organization (Gulati 2009) maintain that the traditional model is living on borrowed time and will be overwhelmed by the accelerating pace of change and fragmentation of the market. The forces of inertia, embedded in legacy systems and mental models, will be too difficult to adjust. This makes firms using a traditional model of organization vulnerable to networked competitors who are more nimble. But will the open network model prevail? Advocates argue that it is more flexible and inherently more responsive to changing market requirements: An open system allows for information flow across previously hard boundaries within and outside a firm. Expertise can emerge from myriad sources. If channeled or monitored effectively,

FIGURE 4
Marketing in an Open Network



these can offer tremendous power and insight to an organization. Through a web of partners and collaborators, an open network provides access to a deeper set of resources and specialized skill sets than a closed model. The possibilities are only beginning to be glimpsed through success stories such as Innocentive, Cisco, and Apple and will be greatly facilitated by advances in collaborative, knowledge-sharing technologies.

Offsetting the enthusiasm about open network organizations is the reality that more than half of all alliances and joint ventures disappoint (though the degree of disappointment depends on the prior experience of the partners in managing alliances). There are formidable control and coordination problems to overcome, including monitoring, accountability, and conflicts of interest. The talent needed to manage these networks is still scarce. For these reasons, some observers believe that networks will behave like many other management fads: The first movers who have the right conditions and commitment grab the best partners and succeed, while the imitators fail and become discouraged.

Adaptive Organizations

> If the rate of change inside an organization is less than the rate outside, the end is in sight.… Leaders must develop a sixth sense, an ability to see around the corner.
>
> —Jack Welch (2005)

Those organizations best equipped to adapt to the volatility and complexity of their market will be more resilient, free-flowing, and less hidebound. They will embrace just-in-time decision making, share key activities with network partners, and learn to profit from the greater uncertainty of the new market reality. The ossified strategy process of long internal debates leading to detailed budgets and multiyear plans will be replaced by clarity and consistency in how to achieve customer value leadership and an emphasis on adaptive capabilities, structures, and processes. Organizations can adapt to unprecedented change only when they can address it within a clear strategic framework. Otherwise, they can only watch and react.

Responding Adaptively

Organizations face difficult choices when deciding how to build a capacity for responding more adaptively. A decentralized, "let a thousand flowers bloom" approach leads to the enthusiastic but uncoordinated pursuit of fast-moving and diverse opportunities. The usual consequence is that complexity mushrooms, coordinating costs escalate, scale economies are dissipated, and the brand meaning is diluted.

A more ambitious, clean-sheet approach, which aims simultaneously to maintain discipline while enabling adaptability, poses difficult implementation challenges. The ostensible goal is to build an organization that can make timely adjustments to market shifts while ensuring consistency in pricing, branding, and resource allocation. This admirable goal requires changes in the culture, the enabling business model, and skill sets, which may be beyond the reach of many management teams. Even if they could make the transformation with the aid of advances in technology

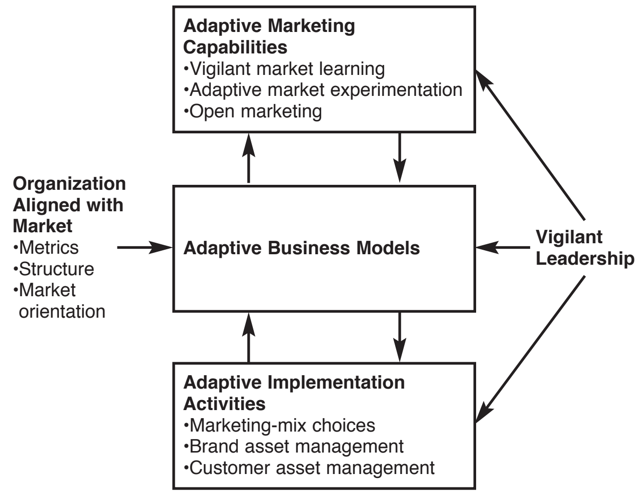
(Court, French, and Knudsen 2006), there will still be uncertainty in the responses of customers and competitors to new marketing initiatives, which puts a premium on flexibility and complicates the allocation of resources and setting of goals, metrics, and incentives.

Valuing variety. Hamel and Valikangas (2003, p. 60) note that genetic variety "is nature's insurance policy against the unexpected. A high degree of biological diversity ensures that no matter what particular future unfolds there will be at least some organisms that are well suited to the new circumstances." This perspective sheds light on what organizations must do to become more adaptable in all their capabilities.

Every manager carries around in his or her head a set of biases, assumptions, and beliefs about how the market works, what customers want, and how these customers process information and make choices. These mental models help make sense of the environment, but when change is rapid, they stand in the way of deep understanding. The problem is exacerbated when everyone in the organization shares the same mind-set and responds in the same way. Systems and learning processes all reinforce certain perspectives and discount or exclude others. Thus, the first step to increasing adaptability is to diversify the talent pool with people that are not wedded to old and unquestioned assumptions. Outsiders or closely connected partners such as advertising agencies bring different life experiences and an openness to divergent information. Of course, there is always the risk that a resistant corporate DNA will reject those outside antibodies. But vigilant leaders recognize the value of diverse insights and keep them from being marginalized (Grove 1999).

Toward adaptive organizations. Relevant theory and the successful experience of next-practice companies point to three necessary conditions for organizations in which adaptive marketing capabilities are likely to flourish: (1) There is a vigilant leadership team, (2) the business model is responsive to fast-changing market signals, and (3) the organization structure is aligned to the market. Although each of these conditions could be the subject of a major treatise, the purpose here is to suggest what is needed in broad brush strokes. The relationship between the key elements is shown schematically in Figure 5.

FIGURE 5
Implementing Adaptive Marketing Capabilities



Vigilant Leadership

A vigilant leadership team nurtures a supportive climate for gathering, sharing, and acting on information from diverse sources. These teams are prepared to devote significant resources to monitoring and anticipating weak signals from the market periphery and create incentives to encourage the front line to keep them informed. The strategic thinking processes of these leaders are flexible and wide ranging (Day and Schoemaker 2006).

Three primary qualities distinguish vigilant leadership teams with an outside-in orientation from those that strive primarily for operational excellence and adopt an inside-out orientation:

- *External focus: openness to diverse perspectives*. The first leadership quality is a deep sense of curiosity and a focus beyond the immediate. These leaders tend to be more open, seek diverse inputs, and foster wide-ranging social and professional networks. In contrast, operational leaders are more focused, emphasize efficiency and productivity, and are more likely to limit their networks to familiar settings.
- *Strategic foresight: probing for second-order effects*. To achieve strategic foresight, vigilant leadership teams use a longer time horizon, employ a more flexible approach to strategy that incorporates diverse inputs, and apply tools such as scenario planning and dynamic monitoring.
- *Enabling exploration: creating a culture of discovery*. Enabling a creative culture is vital for encouraging vigilance and adaptability. This includes creating some slack so employees can explore outside their immediate job activities and encouraging adaptive experiments. Unfortunately, many cultures remain risk averse, with limited flexibility to explore widely.

Adaptive Business Models

A business model describes how a business *creates* the value it provides customers and then *captures* economic profits. It answers Peter Drucker's classic questions: Who is the customer? What does the customer value? What business are we in? It also answers the following fundamental questions: Which activities are performed by the business? What is the economic logic that explains how these activities deliver value to customers? How do we make money? Finally, it captures where and how the firm is embedded in an extended network of customers, suppliers, and partners.

The concept of business model was distorted and abused during the dot.com era (Magretta 2002). Interest has been renewed as scholarly research demonstrates that interdependencies among organizational activities and processes have a bigger impact on performance than the activities and processes in isolation. Meanwhile, rapid advances in communications and information technologies are enabling new ways to speedily rearrange activities and engage partners (Zott and Amit 2008, 2009). Here are two examples of business model designs that offer potential to sharply improve adaptability to fast-changing market signals:

- *Sense and respond*: The paragon of the sense-and-respond model is Zara, the pioneer of cheap chic fashions, whose "fast fashion" model enables it to move clothing designs from sketch pad to store rack in as little as two weeks (Linguiri 2005), in response to customer requests and behavior. These organizations can modularize their activities and processes to create combinations that are responsive to a much wider spectrum of unpredictable customer requests. In contrast, make-and-sell organizations adopt an inside-out stance and schedule their operations according to forecasts of likely demand (Haeckel 1999). The analogue for communication strategies is on-the-spot adjustments of messages and media in response to market signals versus the traditional media plan, which makes spending choices according to a fixed quarterly schedule.
- *Flexible backbone*: The flexible backbone is a hybrid approach providing low-cost support and messaging for some customers and deep collaboration and precise tailoring of offers for other customers (Court, French, and Knudsen 2006). It is built with a flexible cost-efficient backbone for common marketing, sales, and order fulfillment activities that all customers require, such as training, after-sales service, and warranties. Adaptability is provided by front-end LEGO-like modules that are responsive to individual customer's requirements for augmentation, technical support, education, logistics and help with new product development. A further step is the provision of rapid response solutions (Tuli, Kohli, and Bharadwaj 2007), derived from extensive online and/or face-to-face interactions with high-value customers. Advances in systems integration, data analytics, and knowledge-sharing networks greatly facilitate the coordination issues.

Aligning the Organization to the Market

Adaptive marketing capabilities are necessarily cross-functional. Their effectiveness would be compromised if they were solely the province of marketing. Instead, the role of marketing is to orchestrate the multiple outputs needed to understand the market and continuously deliver superior customer value. The challenges are to (1) overcome the entrenched silos that impede a coherent view of the customer and slow decision making (Aaker 2009), (2) infuse the strategy dialogue with deep market insights that help comprehend the new market reality of accelerating complexity, and (3) ensure clear accountability for the total experience of the customer. These are necessary conditions for outside-in strategies.

The appropriate organizing principle for dissolving entrenched organizational boundaries is to align the organization around customers, rather than around products, channels, or brands (Day and Moorman 2010; Gulati 2009). Thus, L'Oréal Consumer Groups will sell L'Oréal Paris eye shadow to teens in Monoprix but offer working mothers a subscription for access to touch-up kiosks in gyms and washrooms in restaurants (Kemp 2009). A variety of transitional designs are feasible, ranging from cross-functional segment teams, to customer managers, to front-back hybrid models. The prototypical outside-in organization with the requisite adaptability will operate as a porous entity held together by sophisticated knowledge-sharing networks and able to forge seamless partnerships with customers, suppliers and information resources—all in the service of a compelling customer value proposition.

Adaptive Implementation Activities

In an adaptive enterprise, in which marketing activities are guided by vigilant learning, adaptive experimentation and open marketing, the familiar marketing mix will be taken to a new level of effectiveness. This will not look like the product, place, price and promotion activities enshrined in decades of textbooks. First, they will be dispersed across the partner network and will play a supportive role as befits their tactical status. Second, they will be far better coordinated and actually deliver on the promise of being "mixed" to maximize their joint efforts. Third, the practice of adaptive experimentation will reveal the effects of intricate combinations of marketing mix activities. Armed with deeper insights, marketers will be better equipped to accept accountability for the impact of their actions on economic profit and the value of the customer and brand assets of the firm.

Closing the Marketing Capabilities Gap

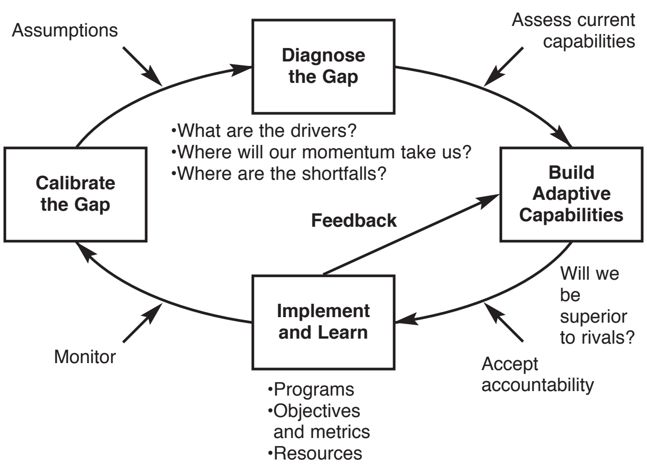
The marketing capabilities gap does not have to continue to widen at its present pace. Next practice companies are learning how to become more vigilant and build adaptability into their marketing capabilities. Companies are sharing these lessons among themselves in numerous industry forums, consulting firms are taking these insights and applying them in other situations, and academics are contributing by extracting patterns of success and failure and drawing generalizations.

There will always be a sizable residual capabilities gap because events in markets are moving at Internet time, consumers are taking greater control, technology continues to advance, and the decision processes of even the most nimble companies cannot keep up. However, should companies even aspire to close the capabilities gap? A more realistic and achievable goal is to close the gap faster than rivals. Mastery of a set of mutually reinforcing adaptive marketing capabilities confers a sustainable first-mover advantage. First, adaptive capabilities employ a great deal of difficult-to-copy tacit knowledge. Second, they require clever investments in technologies and a willingness to open up the business model—all of which take time. Aspiring emulators cannot skip the steps in the learning process. Last, because they are moving down the learning curve ahead of rivals they can keep experimenting and extracting new insights that will help them stay ahead. The purpose of this article is to chart a path for managers and suggest how researchers could undertake enquiries that will guide these managers with relevant insights.

Implications for Managers

The process for developing more adaptive marketing capabilities depends on the size and source of the capabilities gap, the competitive situation, and the commitment of leadership to making the necessary changes. Figure 6 presents the four steps in the process. Many of the features are discussed in previous sections of this article, but three deserve elaboration. First, there needs to be clear accountability for the end-to-end capabilities development process. The tone and rationale needs to be set at the top. An exemplar is

FIGURE 6
The Capability Development Process



Anne Mulcahy (2009), former chairman and chief executive officer of Xerox Corporation, who argues that to create personalized solutions for its data-intensive customers, Xerox needed to invent new market learning capabilities. In her view, market learning starts at the top: "The most important part of my job is listening to customers." The marketing organization has overall accountability for what is learned and how it is used. To keep the management team focused on the market, the top 500 Xerox accounts are assigned to senior officers, and each day, one of these officers is responsible for fixing customer problems.

The likelihood of a successful transformation of the marketing capabilities goes up sharply when the chief marketing officer takes direct accountability as a top-line leader (Aaker 2008; Landry, Tipping, and Kumar 2006; McGovern and Quelch 2004). These are senior and seasoned executives, widely respected inside and outside the firm, with full support of the chief executive officer. Their credibility is enhanced by the depth of talent in their marketing organization and their willingness to be held accountable for the return on investment of marketing spending. They have enough analytical prowess to hold their own with line managers and the chief financial officer. Indeed, the chief financial officer is often their ally. The C-suite has clarity about the strategic role and mission of marketing.

Second, this is a continuous learning process that requires clear objectives and relentless monitoring to determine whether the capabilities are improving and the gap is closing faster than the rivals. This is a significant problem, given how difficult it is for most companies to actually calibrate their capabilities gap. Rather than focus on the size of the gap per se, the emphasis should be on designing a dashboard of metrics that (1) looks backward to diagnose the gap, (2) looks forward to assess the payoff from different initiatives and reveal the rate of improvement, and (3) aligns the organization through incentives used to encourage and reward desired behavior. From the myriad of possible metrics the firm needs to select a small set for its dashboard that reflects its business and its ability to respond adaptively. Some should reveal what the target customers think and what they actually do, and others should reveal actual market performance. The key is to combine measures of ultimate success with intermediate diagnostic metrics that can be used to identify successes and problems.

Last, these general prescriptions need to be tailored carefully to the structure of the market and the firm's strategy. While all markets are subject to greater complexity at higher velocities—and surprises can always come from the periphery—the urgency of the response and the adaptive capabilities to be built or enhanced will differ depending on whether the firm serves mass markets with millions of customers or sells complex systems to a small number of valuable customers (Moore 2006).

Opportunities for Researchers

This article's analysis of the possible organizational responses to the Internet-induced forces of proliferation and complexity, compounded by increased velocity, raises important issues for scholars to consider. The following topics address how to improve the adaptability of marketing organizations.

Understanding the marketing capabilities gap. The notion of a gap between the accelerating demands of the market and the capacity of a marketing organization to comprehend and cope is appealing but speculative. Currently, a quantitative estimate of the size of the gap is out of reach. Nonetheless, much can be done to better understand how fast the demands of the market are expanding relative to the capacity to respond.

On the demand side of the gap, there has been a rapid proliferation of touch points connecting a firm with its customers. Which are most important? How are customers coping with this rich information environment? What coping strategies are they using, and how should firms take advantage of this behavior? Which markets are most susceptible? An understanding of these contingencies could shed light on when the capabilities gap is unacceptably large versus simply troubling.

On the response side of the gap, research is needed on the organizational impediments. What are the respective contributions of lock-in, inertia, coordination, and talent limitations? Previous research has regularly implicated organizational and database silos as impediments. How can useful market insights be rapidly extracted when databases cannot be linked because different functions use different platforms, partners cannot link databases, and the levels of aggregation are different?

Performance consequences of adaptive marketing capabilities. A significant question is whether firms that are adept at vigilant market learning, adaptive market experimentation, and open marketing will outperform their rivals. Answers to this question will require more precise conceptualization of these adaptive capabilities and an understanding of the main contingencies. Further research is also needed on the organizational context of adaptive marketing capabilities, notably the role of business models, vigilant leadership, and organizational alignment. A central presumption of our adaptive perspective is that the marketing mix or downstream view of the role of marketing in organizations has become overly static and tactical. A further, untested proposition is that the capabilities for making and implementing marketing mix decisions will become more effective and timely when guided by adaptive marketing capabilities.

An adaptive perspective on market orientation. The concept of market orientation has served the field of marketing well. After several decades of articulation, application, and research, the contributions to relative performance are well documented. But this concept arose in a simpler and slower-paced era and should be rethought in light of the uncertainties and complexities of contemporary markets. Is the marketing concept better suited to the exploitation of existing markets versus the exploration of emerging markets and volatile customer behavior? As markets (both financial and customer) are beset by turmoil, is a market orientation as presently construed adequate to cope with the greater uncertainty that puts a premium on adaptability?

Marketing capabilities in network organizations. Marketing capabilities in network organizations was a compelling issue for the senior marketing managers who participated in an American Marketing Association (Day, Howland, and Parayre 2009) study of the future of marketing. A key uncertainty in this scenario study was whether marketing activities would be performed in a modified hierarchical structure or network design that shrinks the organization down to the core capabilities and expands the periphery to encompass diverse network partners. In a networked future agency, partners, development partners, marketing researchers, and every conceivable specialized skill set are part of the extended fabric. This is outsourcing on a grand scale, with the intent of making every function more open and adaptable. The field of open innovation has led the way with innovative business models (Chesbrough 2006). We need a complementary development of the concept of open marketing to showcase theoretical possibilities and next-generation marketing:

Globalization and its complications. The forces of proliferation, complexity, and accelerating velocity are playing out on a global tableau. Multinational companies have the added challenge of drawing market insights from diverse geographic markets and responding when these markets have different levels of Internet penetration, access to media, and restrictions. Their experience is that the best ideas come when pieces of knowledge from diverse geographies can interact and inform each other (Santos, Doz, and Williamson 2004). How do firms cope with this level of complexity while they struggle to close the marketing capability gap in their core markets? What is the optimal way to share experience of successes and failures and extract robust insights?

Summary

The familiar saying "Necessity is the mother of invention" holds valuable wisdom. For marketers of all stripes, there is the pressing necessity to respond to the accelerating complexity of their markets which stresses their organizations and potentially places them at a competitive disadvantage. There is a real and expanding gap between the demands of markets and the ability of firms to address the complexity and velocity of change in their markets.

The inventions in response to this necessity for an adaptive response are more problematic. Some firms will tinker at the margins of their marketing activities but otherwise continue with their tried-and-true practices. Such a passive response ensures that their capabilities gap will widen, and they will function far below their potential. It is likely to be an increasingly untenable position as more adroit competitors—or new entrants—exploit the developments in Internet and knowledge sharing technologies to gain an advantage. They will demonstrate the value of microtargeting, building communities of users, and engaging in a dialogue with their customers to magnify the impact of their marketing activities. These more vigilant competitors will see opportunities sooner and put in place the capabilities to respond to whatever direction this market moves.

The field of marketing will raise its game when it moves beyond static marketing activities to adaptive capabilities that fit the new market reality. This will build on insights from the experience of next practice companies, demand a willingness to rethink existing business models, and open up the organization to network partners. We are confident that the disruptive shock to the system from the Internet era will spawn a new generation of insights into how markets work and how organizations can anticipate and respond to fast-moving market signals.

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