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Marketing's Final Frontier: The Automation of Consumption

Marketing efforts in the past have been inordinately geared to acquiring customers, with insufficient attention given to how best to retain and maintain those customers. As a result, most customer-provider "relationships" are intermittent, stop-and-go affairs. Experience curve effects – the benefits of mutual learning – are lacking, since every transaction is similar to the first transaction. The marketer fails to become more efficient and effective in meeting the customer's needs over time. The automation of consumption is CRM's response to this chronic oversight. But it requires the existence of a high level of mutual trust and respect between customers and marketers. Without trust, both sides will withhold information and access that is essential to value-creation.

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The marketing function has gone through a number of transitions over the years in search of more efficient and more effective operating models. One of the key drivers of change has been the need to create a more efficient match between supply and demand, since many potential sales are lost due to the lack of the right inventory at the right time and place. To this end, many business-to-business companies in the past decade have moved toward the practice of "automatic replenishment" or "vendor-managed inventory," in which manufacturers take on the responsibility for managing inventory at the retail level. Monitoring starting inventory levels and sell-through volumes, manufacturers automatically ship additional merchandise when stock is depleted.

The advantages of this approach are several: stock out situations are greatly reduced, and many administrative costs associated with ordering, invoicing and billing are reduced or eliminated. Implemented effectively, this approach results in higher levels of product availability at the point of purchase with much lower average levels of inventory. The track record has been very strong; 80% of retailers now use some form of automatic replenishment, and companies have reported up to 400% increase in inventory turns and 75% reduction in stock out situations.

Looking for a Better Way in Consumer Markets

Beset with inefficient and ineffective marketing approaches, the consumer market is now ripe for the widespread deployment of this approach. We strongly believe that marketing efficiency as well as effectiveness in consumer markets can be greatly increased through the routinization and automation of purchase and consumption. With creativity, imagination and sound marketing, these arrangements could go considerably beyond "automatic replenishment" and become commonplace in the near future. The pressures that make this an appealing concept have been building for quite some time. Rising incomes, escalating time pressures and a critical mass of affordable and powerful enabling technologies, are driving the trend toward the automation of consumption. The affluent class now represents over 35 million households out of 110 million in the U.S. Purchases of so-called luxury goods and services are growing at about four times the rate of overall spending.

Over 65% of women over the age of eighteen and 75% of mothers will be working full time by 2000, making households more wealthy but time-poor.

The automation of consumption can take place directly between consumers and manufacturers for larger purchases and through intermediaries for smaller purchases. Suppliers of large items or major services will have a great opportunity to become the "one stop shop" supplier of choice for an ever-widening array of goods and services.

The automation of consumption, first and foremost, is aimed at simplifying life for buyers as well as sellers. For example, buyers should be freed of the burden of monitoring inventory levels of frequently purchased goods. It is about understanding customers so deeply and thoroughly that marketers can anticipate their needs and wants, often even before the customers themselves are consciously aware of those needs and wants. It reflects a "customer business development" mindset (becoming common in business marketing situations) applied to the consumer market, wherein marketers and consumers continually look for opportunities to elevate the mutual gains from their relationship. It is, in brief, auto-pilot marketing, in which most human intervention may only be required at take-off (relationship creation) and landing (relationship termination, in the event that it ceases to make economic sense).

Marketing efforts in the past have been inordinately geared to acquiring customers, with insufficient attention given to how best to retain and maintain those customers. As a result, most customer-provider "relationships" are intermittent, stop-and-go affairs. Rather than building on previous interactions, every encounter is treated like a new beginning. It is a well-known principle in physics that it is much harder to get a stationary object to start moving than it is to keep a moving object moving. In other words, "static friction" greatly exceeds "kinetic friction." In most marketing, however, the customer relationship starts from a standstill position every time and is thus subject to a high level of static friction. Experience curve effects, i.e., the benefits of mutual learning, are lacking, since every transaction is similar to the first transaction. The marketer fails to become more efficient and effective in meeting the customer's needs over time. Likewise, customers continue to perform like novices in the relationship.

The current buying mode for many customers is "just in case" purchasing; large amounts of opportunistically-acquired inventory accumulate in the basement. The automation of consumption will lower system-wide costs and improve value delivery to customers. This should result in higher overall profits; a well-honed approach will generally lead to large amounts of new value creation. Consider the benefits from Baxter's ValueLink system, which delivers hospital supplies directly to nurse stations and operating rooms rather than to a central warehouse. This allows hospitals to convert warehouses into clinical space. Likewise, consumers will be able convert inert storage space into usable living space.

Confronting Customer Cynicism

Many marketers may view today's customers as increasingly capricious: fickle, cynical, disloyal. Customers have evolved these defense mechanisms as a natural reaction to decades of marketing manipulation, noise and sheer excess. Through long experience with never-ending promotions and marketing's long history of over-promising and under-delivering, customers have been trained to be highly deal-prone and cynical about marketing claims. They have low and declining brand loyalty, and little tolerance for under-performance. They switch suppliers at the smallest provocation, as evidenced by extremely high churn rates in many industries. In the telecommunications industry, for example, churn rates range from 30-50% a year in sectors such as cellular telephony and small business long distance service.

Customers today also have more knowledge and thus power than ever before. In part, this is due to the sheer availability of more objective information (much of it from new third-party providers) than before. It is also due to customer cynicism; lacking trust in marketers, they feel the need to "arm" themselves with as much unbiased information as possible.

To many traditional marketers, with their antagonist view of customers, this knowledge is a threat; it allows customers to win every round, to "get a better deal" with them each time around. For more enlightened marketers, however, knowledgeable customers are an advantage. If a company is confident that it is delivering good quality and value, it can leverage its customers' knowledge and expertise to mutual advantage. Such customers may be more demanding in terms of quality and value, but typically have fewer requirements for customer service and support.

Consumer Stress and Distress

Our consumption-driven society is taking a heavy toll on many consumers, not because there is too much consumption but because of the additional burden it places on consumers seeking to make reasonably informed purchase decisions. One of the ironies of how markets have evolved in the last few decades is that even as consumers have been presented with many more choices in the marketplace, the actual differences between the offerings have shrunk. With the widespread adoption of standardized production approaches such as TQM (total quality management) and ISO 9000, average product quality has improved, but so has the level of standardization and conformity across products. Even "generic" products offer good quality and a high level of standardized capabilities. Consumers are thus faced with the prospect of engaging in a great deal of shopping behavior (given the abundance of pseudo-choices and seemingly random price differentials across stores and over time) with little incremental value to gain. There is little actual product differentiation (most differentiation today is image-based rather than innovation-based), and almost no customization or personalization in what customers do buy. To make matters worse (for consumers as well as marketers), advertising intensity correlates negatively with real product differentiation, so that the products most often advertised have little meaningful to say.

The result: the true "ROI" (return on investment) on shopping effort is very low, given the amount of time and physical and mental effort expended and the high level of commoditization in many product categories. The greatest tangible benefit of shopping effort to consumers is usually a defensive one:

to ensure that they did not fall victim to opportunistic marketing tactics, and hopefully, to try and take advantage of some ill-conceived tactics. Many customers also face high opportunity costs of shopping effort (alternative uses of time to pursue personal as well as professional goals). If such customers forego extensive shopping effort, they risk being victimized by unscrupulous marketers.

No wonder, then, that consumers find many buying situations stressful – cars, groceries, clothing, financial products – and very few enjoyable. Many are paralyzed by simply too much choice – too many cereals, too many clock radios, too many TV channels. As a result, there is also a large body of evidence (e.g. the University of Michigan's Customer Satisfaction Surveys) that overall customer satisfaction is low and declining in many industries. Not surprisingly, customer loyalty levels are also very low, and most customers feel little long-run loyalty to even preferred suppliers.

Any alternative model, such as the automation of consumption, must be highly efficient in its use of all resources, not just time. It must also be built on a high level of mutual trust and respect, and the nearly complete absence of opportunistic action by both sides.

Success Factors

Mutual Trust and Respect

The automation of consumption requires that there exist a high level of mutual trust and respect between customers and marketers. Without trust, both sides will withhold information and access that is essential to value-creation. Especially early in a customer relationship, it is extremely important that the marketer strive for "zero defects." This requires investment in capable and reliable information systems, with enough built-in redundancy to ensure that customers get exactly (or more than) what they were promised and what they expect. Once a high level of trust is established, customers will develop a degree of tolerance for occasional, unavoidable lapses in service quality. However, marketers must put in place a "recovery strategy" to deal with these lapses, so that they do not lose the customer but in fact establish an even higher level of trust. Respect is another important dimension that is almost completely lacking in most marketer-customer relationships. As legendary advertising pioneer David Ogilvy said, "The consumer is not a moron; she is your wife." Unfortunately, few companies show evidence that they respect their customers, and even fewer customers respect the companies they do business with (let alone admire or feel affection for them). Yet, without mutual respect, a beneficial long-term relationship is unlikely to result.

Mutual Learning and Authenticity

Marketers and consumers both have to invest the time and effort needed to increase their knowledge about each other. Training classes for consumers may become commonplace, as they are for business customers today. Ultimately, if customer relationships are to be long, strong and productive, marketing will need to become humanistically competent as well as technically competent. Consumers want relationships with providers that are authentic and empathetic, a need that grows more important with age. If the promise is the attention of a personal relationship, but the delivery is impersonal, customers will have a hard time feeling human presence in the relationship and the marketers will be back in the era of transaction marketing and non-existant "average" consumers.

Ethical Behavior

With the automation of consumption, there may be many possibilities for unethical opportunistic action on both sides that would violate and ultimately destroy the trust between customers and companies. The customer surrenders the right to make ongoing choices, to verify the accuracy of shipments, to ensure pricing fairness. Companies invest upfront for benefits that they expect to receive later. It is an easy but myopic step for either side to take advantage of this for short-term gain.

High Tech – High Touch Customization and Personalization

Today's customers are increasingly heterogeneous; they do not fit into traditional stereotyped categories, and they certainly do not respond to "mass market" approaches. Marketers must provide customized as well as personalized services to customers. They must also monitor changes in customers' lives to ensure that their services remain relevant and optimized. Along with the use of self-learning expert systems and sophisticated fulfillment systems, marketers must also ensure that there is a human face to their services. The more technology consumers adopt, the more they look to balance this with countervailing human elements. The "dehumanizing" potential of technology is such that marketers must be very careful. Used correctly, technology can add rather than detract from human value. Consumers in an automated consumption relationship will not "harvest" all of their freed-up time for extra work; much of it will be used for meaningful social interaction (rather than anonymous interaction as happens in a supermarket).

Epistemic Value

Like any relationship, one based on the automation of consumption is subject to maturing and the onset of boredom. If the relationship becomes excessively routinized, it will be taken for granted. Marketers must take the lead in revitalizing and "dematuring" relationships, by understanding consumer variety-seeking behavior. For example, as illustrated in the accompanying scenario, they can inject elements of surprise into the service.

Overcoming Innovation Resistance

Consumers everywhere tend to resist change. It is important to understand the "psychology of resistance" and utilize this knowledge in the development and promotion of innovations such as the automation of consumption. A failure to understand the psychology of innovation resistance has led to the failure of numerous innovations. The two psychological

WEB LINK

The concept of automation of consumption is also addressed in:

http://text.CRMproject.com
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constructs that are most useful in understanding the psychology of innovation resistance are: (a) habit toward an existing practice or behavior, and (b) the perceived risks associated with innovation adoption.

The strength of habit associated with an existing practice or behavior is the single most powerful source of resistance to change. Given entrenched habits, individuals are not likely to voluntarily pay attention to innovation communication or try them out. In fact, the perceptual and cognitive mechanisms of such individuals are geared towards preserving the habit. This is because the typical human tendency is to strive for consistency and maintaining the status quo rather than to continuously search for and embrace new behaviors (the exception is among true innovators, who are more likely to be social deviants and abnormal in their epistemic drive). In other words, the formation and sustenance of habits is much more prevalent than innovativeness among people.

The habit toward an existing practice includes all the behavioral steps involved in the process of selecting, acquiring and using an existing alternative. In consumer behavior, it includes all the behavioral acts associated with shopping (time and place choices), procuring (money and effort choices), and consuming (storage, packaging and serving choices) the product. In other words, habit includes the total behavioral stream as a system rather than just the terminal act.

A second major determinant of innovation resistance is the perception of different risks associated with the adoption of an innovation. There are three major types of risks: (i) aversive physical, social or economic conse-

Future Perfect: Assisted Living for All?

In the scenario described below, each paragraph ends with a listing of some of the concepts, issues, and technologies that are involved in each specific scenario:

On the morning of October 23, 2004, John A. Consumer awoke to the sound and smell of his automatic coffeemaker. After he stumbled into the kitchen, John poured himself a cup of coffee, thinking to himself that some of the oldest conveniences were still the best. Of course, this was no 1990's Mr. Coffee machine; this machine had a large canister of gourmet coffee beans on top, a built-in grinder, and it was connected to the filtered water supply. It automatically discarded its coffee grounds into the sink disposal. It was, in short, the perfect appliance – effortless, unobtrusive, and completely reliable.

As he opened the fridge, John marveled anew at how it was always well stocked and had just about everything he could want. The thrice-weekly delivery from the ShopLink service had replenished his fridge and pantry with fresh bread, milk, produce and other items the previous day. They had picked up his laundry and delivered his shirts from the previous trip. They had also left some new firewood by the fireplace, and returned his repaired (and polished) shoes.

It had been two years since John had been inside a supermarket. At first, he thought he would miss it (squeezing the tomatoes and all that). But now he never gave it a second thought. Besides, he had never been very good at picking the sweetest honeydew melons or cantaloupes. Now they were just right every time. And he was actually paying less for his groceries now than he had before. Guess those huge, well-lit, air-conditioned supermarkets cost a lot to run.

In the beginning, John spent about 20 minutes a week placing his online order. As he got more comfortable, though, and as his buying patterns became more discernable to the computer at ShopLink, he found that the shopping list offered to him when he first logged on was actually more appealing than what he would have created himself. Gradually, John had found himself making fewer and fewer changes to the list. About a year after he started using the service, John decided to let it go solo. Now he looked forward to the deliveries, knowing that each one always contained two or three "surprises" that were guaranteed to delight him (if not, he would get his money back, of course). John found that, as a result, he had tried new foods that he never would have thought to try earlier – and liked most of them a lot. Sometimes, it was an exotic fruit, sometimes an unusual kind of cheese, even some new imported beer. Once a month, they even replenished his coffee machine with some great new beans, leaving a little pamphlet about it next to the machine. They did this with all of their "Just for You" selections.

Best of all were the fully prepared meals. John had invited a few friends to come to dinner that night, and he had asked for a meal for six. As he looked at the neatly packed containers and the two bottles of Italian wine, he saw the printed menu that had been sent with the meal. "Rustic Tuscany," it said across the top. John was tempted to open a couple of boxes and take a peek (and perhaps a taste), but he resisted. The price was great – just a little more than it would have cost him just to buy the ingredients. He could have tried to make the meal himself, but the cost of his time (very high) and the value of his cooking expertise (very low) made that an unappetizing proposition.

John took his croissant and coffee into his study and turned on his computer. As was his habit, he started by checking his e-mail. There was an e-mail from Paul Frederick & Co. informing him that they had selected four new shirts they thought he would like. John looked at the high-resolution images on his screen and liked what he saw. If he did nothing, the shirts would show up in his SmartBox in a couple of days, monogrammed and in his size, of course. The next e-mail was from Jaguar. John's current Jag was coming off lease in a couple of months. The e-mail offered him a great lease rate on the hot new S-class that he knew had a long waiting list. But that was only for first-time buyers. If he wanted the car, they would bring it to his house and take away the old quences; (ii) performance uncertainty; and (iii) perceived side effects associated with the innovation.

In order to implement major behavioral change as would be required for the automation of consumption, marketers need to devise sophisticated strategies to break existing consumer habits and supplant them with new ones. They also need to alleviate the actual as well as perceived risks associated with moving to this mode of consumption.

Conclusion

The benefits of the automation of consumption can be summed up in Mobil's phrase in the advertisements for its Speed Pass service: It's "like buying time without paying for it." The automation of consumption can work with all kinds of products, including commodities. The key is that the experience must not be commoditized, even though the core products may well be.

Several objections can be raised about what is described here. First, there is concern that a high level of automation will lead to widespread deskilling and dependence on others rather than self-reliance. This is an interesting philosophical issue, but it goes to the heart of this phenomenon: Ricardo's Theory of Comparative Advantage, which is arguably the basis for much of how our economic life is organized. Clearly, we have already lost skills that our forefathers used to have, but gained new ones.

Second, it is argued that many consumers derive a certain amount of enjoyment and sense of accomplishment by performing these tasks. Clearly, for some consumers, these dimensions are important and will out-

one on the day the lease ended. John was tempted to say "Yes!" on the spot, but he reluctantly decided to think it over a bit. Not that he expected to change his mind...

The third e-mail was from Scott Burka over at Delbe Home Services. This was John's favorite service of all. John had never been much of a handyman or a gardener, though he liked living in a big house and enjoyed looking at a well-tended garden as much as anyone else. For a ridiculously low $125 a year, Delbe completely took over everything to do with the house and the yard. When he had signed up, Scott had done a complete inspection of the house, noting down all the makes, models, and condition of his appliances, heating and air conditioning systems, the condition of his carpets, hardwood floors, roof, outside and inside paint and a dozen other things John did not even know you were supposed to worry about. Delbe then set up a Web page with all of this information and updated it every time any work was done on the house. John rarely felt the need to go to this other "home page." Still, he had it in his bookmarks, and it was sure nice to know that it was there. Once every couple of months, using his own key, Scott came through and did a quick inspection. He sent service people to the house to take care of problems before John even knew he had them. Best of all, he didn't have to wait around for them to show up.

John got a monthly e-mail from Scott updating him on what had been done and what was coming, and the money was paid automatically. The rates were as good or better than those John would have paid had he dealt directly with the service contractors. In return for steady business, Scott had negotiated lower rates with them. If there was ever a problem, Scott handled it with the service technicians. Scott had also arranged for a cleaning service, and he was now looking into offering a bundled cleaning/home maintenance/ insurance package that would be like an HMO for the home. John thought that was a great idea and fully expected to sign up when the service was offered. John had raved so often about Delbe's comprehensive services that literally a dozen of his friends were now customers of Delbe's, or were on a waiting list.

The next message was from John's Personal Financial Manager, with a full report on the previous month's activities in his account. John was starting to feel like one of those mega-rich athletes whose financial affairs are completely handled by a management company, and who simply receive a monthly "allowance" for incidental expenses – except there was no chance that John's money could get sunk into some fly-by-night scam. John was not mega-rich, by any means, though each monthly e-mail provided a gratifying report on his steady progress toward that goal. For a guy who had never quite mastered the art of balancing his checkbook, it was certainly comforting for John to know that all his bills were checked and paid on time.

The only time John needed to think about them was when there was something unusual, in which case the item was automatically flagged for his attention. All of his spending was automatically categorized and entered into his Quicken register, and his monthly reports would on occasion point out that he had exceeded his budget in some category or another. Even his tax return was prepared and filed automatically. John's savings were automatically routed into appropriate investments by the "Financial Engines Investment Advisor," a very popular computerized service developed by a Stanford professor who was an economics Nobel laureate. As with every one of John's automated services, he had been assigned a personal advisor who could answer all his questions. As he grew familiar with the services, John found himself calling less frequently, though his all advisors always sent his personalized greetings on his birthday and other occasions.

The last e-mail was from his car. When he bought the car, John knew that it was equipped with a GPS device as well as the ability to send data and e-mail wirelessly, but didn't think much of it. Not anymore. The car had saved him from some sticky situations more than once. John still found it hard to get used to these e-mails, though. The e-mails came infrequently, only when the car had something on its mind. Today, it had several things to convey. First, it reminded him (somewhat plaintively, he thought) that his lease was about to expire, and what it would cost him to buy the car if weigh other factors. However, we suggest that many of these automated activities will come back (or already exist) in the form of hobbies, which people will engage in for pleasure rather than out of necessity.

Finally, there is concern expressed about the likely loss of jobs and a decline in competitive intensity. The creation of new jobs and the substitution of some jobs for others are both central characteristics of a competitive economy. "Creative destruction" is far preferable in the long run to a "job preservation" mind-set, as that can severely impede progress. The likely lowering of competitive intensity can be argued to be a good thing; there is simply too much frenzied competition in many sectors, with huge amounts of resources deployed simply to counter competitive actions, with little benefit to consumers. The automation of consumption could restore some much-needed stability to business relationships.

Clearly, the automation of consumption is a double-edged sword that could hurt as many marketers as it helps. Only those marketers that are able to make a rational, substantive case to the customer will benefit in a big way. In other words, the adoption of this marketing approach will disproportionately benefit companies with superior offerings, and create a near "winner-take-all" situation. Building on mutual learning and beneficial lock-in, those companies will enjoy the benefits of customer loyalty and longevity. With little random switching and churn, they will enjoy more predictable revenue streams. The automation of consumption is akin to what Seth Godin has called "subscription marketing," wherein customer revenues become a

he wanted to. Second, it reminded him that it was due for an oil change, and that it had already scheduled several possible times with the dealership. John clicked next to the one that worked for him. Finally, the car pointed out that it needed new tires within the next 1,000 miles, and offered a direct link to Costco with the recommended tire size information already incorporated. With a few clicks, John purchased the tires and set up an installation time to coincide with the oil change.

The holiday season was approaching and John was starting to feel a little tense about all the gifts he still had to buy. But he was trying out a new system that he thought would make life a little easier. A nifty new Web site (MsManners.com) reminded him of upcoming occasions for giving gifts, and also suggested some alternative ideas for each one. John had gone through a somewhat lengthy "interview" process when he signed up, and his "agent" knew what he expected to spend on each individual and on a given occasion. It also knew which of the recipients were personal friends, relatives or professional contacts. So far, it had worked well; John had been able to send gifts with a single click, selecting from the offered choices and quickly personalizing a message for each. The company used John's personal font to create "handwritten" messages.

With Christmas looming, John thought he would also try out "wishlist.com," a universal gift registry that he had been subtly promoting to his nieces, nephews, siblings, and others for several months. Wishlist.com was a universal registry; it allowed all people, not just those getting married, to create their own equivalent of a bridal registry. Sure enough, John found that about a dozen of his friends and relatives had in fact signed up. John quickly scanned each person's wish list; he smiled to himself at some of the entries ("Yeah, sure, George, someone's going to buy you a 96-inch HDTV," he thought to himself), but was able to quickly select items that were in his budget range. On two occasions, he decided to split the cost of an especially large gift with several of his relatives.

John glanced up at the clock. It was only 8:30; he still had an hour before he had to make that video conference call to Bucharest. Glancing out the window, John saw a delivery truck pulling away from his driveway – an increasingly familiar sight nowadays. This particular truck was marked "FedEx," but John knew that all the major delivery companies now used each other's trucks to deliver packages, so that the FedEx truck contained many packages that had originated with UPS, the US Postal Service, AirBorne or a variety of other smaller players. It was like completing a long distance phone call; the receiver did not have to be a subscriber of the same company that the sender used.

Putting on his slippers, John went into the garage. A small door in one of the side walls opened directly into his SmartBox, which sat unobtrusively next to his garage (it was even painted a matching color). Punching in his code, he opened the door and entered the small shed. The light went on, and he could see that he had received several packages the previous day, left there by delivery people using a code to enter the SmartBox from the outside. One was from Amazon.com. John had joined their "Must Read" club, though he now downloaded most of his books electronically into his eBook. The difference between this and the old "Book of the Month" club was that the book was specifically chosen for him, rather than the same book going out to everyone. In the one year he had been a member, John had yet to get a book that he hadn't liked a great deal. He didn't know how they did it, but it sure worked. John also saw a package from drugstore.com, containing some toiletries (they always knew when his blades and shaving cream were running low), a couple of prescription refills (he never had to remember to fill those anymore) and a 60-day supply of a customized multivitamin his doctor had emailed in.

As John shaved and showered, he mused about how his life had become so much less crazed and stressful in the last few years. Gone were the weekly grocery shopping trips, the long lines, handling the products a dozen times before he used then, the midnight milk runs. No more marathon bill paying sessions on the last day of the month; John hadn't written a check in years. No more worrying about balancing the checkbook. No more need to keep track of form of annuity. These companies will also be more profitable since they will lower their marketing costs across the board, and will enjoy the benefits of sharper experience curves with individual customers. Over time, companies will learn how to serve these customers more efficiently and effectively, and individual customers will increase their purchases while placing fewer demands on customer service.

Incremental value created must be shared with customers; savvy consumers will demand it. Customers with a high lifetime value to the company will demand and receive special consideration. Currently, investment in customers usually stops after they have become customers, and loyal customers typically subsidize those that are less loyal, as well as the acquisition of new ones. Without being forced, smart companies will proactively invest resources in those relationships with the greatest long-term value.

when the car needed an oil change or new tires (the car "called in" its own service needs, and an email showed up on his computer about when he could bring it in, or have it picked up from the office). Most of all, no more nagging worries about the house; "Do I need to change the air conditioning filter? It is time to service the furnace? Do the gutters need cleaning? Does the lawn need fertilizing? Is that insect damage in the shrubs?" Good old Scott was there to take care of all that.

Thinking back, John found it hard to imagine what life had been like in 1999; it seemed eons ago, a primitive, harried time. Now he had plenty of time to work out, socialize with his friends, even do volunteer work. And yet, he was working as much or more than before, making a lot more money and enjoying it more as well...

Just then, the alarm went off, and John was jolted back into his real reality. He was back in 1999, and as he lay in bed thinking about his day, John groaned to himself. The house was a mess, he needed to do a huge grocery shopping trip, the lawn was too long, it was the last day of the month, he had no clean shirts, and several friends were supposed to come to dinner that evening. How was he going to finish that project at work? Shuddering, John pulled the sheet back over his face and shut his eyes tight, hoping to get back to that beautiful dream.

Epilogue

In addition to the issues discussed in the accompanying paper, this scenario also illustrates the following:

- Scope-based one-stop-shop service provision: We will se the emergence of new kinds of intermediaries, who may be described as customer-focused service integrators. These companies will produce very few products or services themselves; their function will be to own and manage the customer relationship, and serve as the value-adding "hub" around which customers and service providers can interact.
- Responsiveness to special demands as well as routine replenishment: Companies cannot simply optimize for routine replenishment; their systems must be able to effectively respond to special demands.
- Producer economies of scale and the industrialization of service: The automation of consumption can only work if there is net value added. This would happen through the realization of efficiencies by providers that can leverage scale and specialized technologies to deliver higher quality service at lower cost than the alternatives available to the customer.
- Outsourcing of memory functions: Customers need to be relieved of the mental costs of monitoring and scheduling.
- Optimal matching of products and customers: Customers often make sub-optimal decisions in selecting products because they lack the time and/or information to select the right alternative. Automated systems should be able to outperform customers in this regard.
- Mass personalization: Mass customization without personalization is sterile and emotionally uninvolving. Marketers need to be able to offer true personalization.

Everything that is described here is technologically feasible today, and the infrastructure to create and deliver the services exists today or is being developed. Many of the companies mentioned already exist (ShopLink, Paul Frederick, Financial Engines, Delbe, Wishlist.com, SmartBox).

The real challenge is customer behavior: how to get consumers to adopt this way of doing business. Besides the obvious benefits to marketers and consumers, there are also benefits to society in the form of greatly reduced marketing noise and wasted efforts. As Don Peppers has said, today's marketing has simply evolved into targeted harassment.

Clearly, the scenario described here applies to certain segments and not to the market as a whole. However, we do believe it will be quite broad-based, and will encompass middle-income consumers as well as high-income consumers. The cost savings that are inherent in this mode of operating (the reduction of marketing costs, greatly reduced inventory levels and expensive retail real estate, better matching of supply and demand) mean that many of these conveniences can be provided at little or no premium compared to traditional ways; in many cases, they will cost less.

Marketing needs to concern itself with